



CITY OF LOS ANGELES

HARBOR DEPARTMENT



SPECIFICATIONS FOR

TERMINAL ISLAND FACILITIES DEMOLITION AND IMPROVEMENTS

SPECIFICATION NO. 2838

APPL. PORT. PERMITS NO. 201214-193, 190311-032, 210225-035,
220321-062, 221021-178

CONTRACT NO. _____

CONTRACTOR _____

AMOUNT \$ _____

TIME TO COMMENCE _____

TIME TO COMPLETE 450 Calendar Days

BOARD OF HARBOR COMMISSIONERS

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
00012	NOTICE INVITING BIDS	1-5
00022	INFORMATION FOR BIDDERS	1-9
.01	General	1
.02	Form of Proposal	1
.03	Proposal Irregularities and Alterations	1
.04	Proposal Signature(s)	1
.05	Proposal Guaranty	2
.06	Affidavit of Noncollusion	2
.07	Federal Excise Tax	3
.08	Retail Sales or Use Tax	3
.09	Duties	3
.10	Withdrawal of Bid	3
.11	Interpretations and Addenda	3
.12	Bidders to Investigate	4
.13	Existing Information	4
.14	Subcontracts	4
.15	Mandatory Provisions Pertaining to Non-Discrimination in Employment	5
.16	Small, Very Small, Minority, Women, Disabled Veteran, and Other Business Enterprise (SBE/VSBE/MBE/WBE/DVBE/OBE)	5-6
.17	Award of Contract	6-7
.18	Bond Assistance Program	7
.19	Release of Public Records	7
.20	Business Tax	7
.21	Bidders Check List	8-9
00030	BIDDING DOCUMENTS	1-54
.01	Bid Bond	1
.02	Affidavit of Noncollusion	2
.03	Mandatory Provisions Pertaining to Non-Discrimination in Employment	3-22
.04	Mandatory Provisions Pertaining to Non-Discrimination in Employment and Affirmative Action in Hiring Employees	23-24
.05	Equal Benefits Ordinance Compliance Affidavit	25-27
.06	Small Business Enterprise Program (SBEP)	28-32
.07	Contract Solicitations Charter Section 470 (c) (12)	33
.08	Iran Contracting Act of 2010	34
.09	Iran Contracting Act of 2010 Compliance Affidavit	35
.10	Local Business Preference Program (LBPP)	36-40
.11	Contractor Ownership / RAMP Outreach / Local Business Enterprise Affidavit	41-42
.11A	Monthly Subcontractor/Supplier Monitoring Report	43-44
.12	Proposal	45-47
.13	Bid Proposal Line Items	48-54

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
00060	CONTRACT	1-14
1.1	Contract Documents	1
1.2	Work to be Done	1
1.3	Contract Time	2
1.4	Liquidated Damages	2
2.1	Payments to Contractor	3
3.1	Quality of Services	3
3.2	Indemnification	3-4
3.3	Insurance	4-10
3.4	Compliance with Laws	10
4.1	Binding Effect	10
4.2	Notices	11
4.3	Relationship of Parties	11
4.4	Entire Agreement	11
4.5	Legal Justification and Recourse	11
4.6	Time of Essence	12
4.7	Labor Code Section 1861	12
4.8	Assignment of Certain Causes of Action	12
4.9	Termination Due to Non-Appropriation of Funds	12-13
4.10	No Waiver	13
4.11	Joint and Several Obligations of Contractor	13
5.1	Signatures	14
00070	PERFORMANCE BOND	1
00074	PAYMENT BOND	1-2
00078	AFFIDAVITS OF COMPLETION	1-5
00660	SBE/VSBE/MBE/WBE/DVBE/OBE/LBE INFORMATION	1-5
.01	Contractor/Supplier Information Form	1-2
.02	Subcontractor/Supplier Ownership and Local Business Enterprise Affidavit	3-4
.03	Supplier List	5
00860	CONTRACT DOCUMENTS	1-3

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
01000	GENERAL CONDITIONS	1-56
.01	Abbreviations and Definitions	1-6
.02	Time for Submittal of Bonds	6
.03	Performance Bond	6
.04	Payment Bond	6
.05	Responsibility for Loss	6-7
.06	Prevailing Wages	7-9
.07	Wage and Earning Assignment Orders/ Notices of Assignments	9
.08	Working Hours	9
.09	Apprentice Utilization on Public Works	10
.10	Non-Discrimination Provisions	10
.11	Board Right to Terminate Contract	10-11
.12	Assignments	11
.13	Cancellation for Default	12-13
.14	Other Contracts	14
.15	Contract Documents Complementary	14
.16	Precedence of Documents	15
.17	Standard Specifications	15
.18	Reference Specifications	15
.19	Electronic Copies of Contract Documents Furnished	15
.20	Responsibility of Costs and Materials	16
.21	Shop Drawings and Materials Samples	16-17
.22	Source Inspections and Samples for Testing	18-19
.23	Defective Materials and Construction	19
.24	Protection of Materials	20
.25	Authority of Engineer	20
.26	Subsurface Data and Physical Conditions	20-21
.27	Protection of Existing Utilities	21
.28	Harbor Datum	21-22
.29	Surveying and Staking	22
.30	Inspection of Work	23
.31	Field Office Trailer and Field Personnel	23
.32	Character of Workers and Discipline Among Employees	24
.33	Changes in Work	24
.34	Cost-Plus Change Order Work (Change Orders)	25-28
.35	Authority for Adjustments	28-30
.36	Force Account Work	30
.37	Request for Additional Compensation	31
.38	Emergency Work	31-32
.39	Temporary Suspension of Work	32
.40	Unauthorized Work	32
.41	Contractor to Abide by Applicable Laws	32-33
.42	Explosives	33
.43	Proprietary Names and Substitutions	33-34

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
.44	Patent Rights	34
.45	Housekeeping and Maintenance of Surface Areas of Project Site and any Laydown Area(s)	35
.46	Protection of Harbor Waters	35
.47	Project Site and any Laydown Area(s) Security	35
.48	Public Convenience and Protection	36
.49	Temporary Utilities	36
.50	Sanitation	36
.51	Railroad Tracks	37
.52	Construction Schedule	37
.53	Extensions of Time and Compensable Delays	38-39
.54	Liquidated Damages	40
.55	Partial Acceptance and Use	40-41
.56	Partial Payments	41-44
.57	Acceptance and Final Payment	45
.58	Affidavit of Completion	46
.59	Guarantee	46-47
.60	No Personal Liability	47
.61	No Estoppel	47
.62	Potentially Significant Cultural Material	48
.63	State Tidelands Grant	48
.64	Responsibility for Subcontractors	48
.65	Contractor's Liability for Hazardous Wastes or Hazardous Substances	49
.66	Time and Materials Form	50
.67	Daily Field Report	51
.68	Laydown Area(s)	52-56
01000A	SUPPLEMENTARY CONDITIONS	1-5

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES

DIVISION 01 - GENERAL REQUIREMENTS

01 11 00	Summary of Work	1-2
01 14 13	Location and Access.....	1-2
01 14 19	Site Conditions.....	1-3
01 31 13	Coordination	1-6
01 31 25	Internet – Based Project Management.....	1-2
01 32 16	Construction Schedules	1-18
01 32 33	Photographic Documentation.....	1-5
01 35 43	Environmental Construction Requirements.....	1-7
01 41 00	Regulatory Requirements	1-19
01 74 20	Construction and Demolition Waste Management.....	1-10
01 78 39	Project Record Documents	1-3
01 89 00	Site Construction Performance Requirements.....	1-6

DIVISION 02 – EXISTING CONDITIONS

02 00 01	Basic Site Materials and Methods.....	1-6
02 41 13	Selective Site Demolition	1-3
02 41 16	Structure Demolition	1-9
02 61 14	Excavating, Stockpiling, and Disposing of Chemically Impacted Soil.....	1-19
02 82 13	Asbestos Abatement.....	1-37
02 83 00	Lead Remediation.....	1-29

DIVISIONS 03 AND 04 – NOT USED

DIVISION 05 – METALS

05 05 14	Treating Damaged Galvanizing	1-2
05 12 02	Structural Steel	1-17
05 12 24	Structural Steel Tests and Inspections	1-4
05 50 00	Metal Fabrications	1-19
05 50 01	Guard Posts.....	1-2

DIVISIONS 06 THROUGH 08 – NOT USED

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
DIVISION 09 – FINISHES		
09 90 01	Painting for Exterior Improvements	1-6
09 96 00	High-Performance Coatings.....	1-11
DIVISIONS 10 THROUGH 25 – NOT USED		
DIVISION 26 – ELECTRICAL		
26 00 01	Basic Electrical Materials and Methods	1-8
26 01 27	Field Tests	1-3
26 05 19	Low-Voltage Electrical Power Conductors and Cables	1-14
26 05 21	600 Volt or Less Rated Wiring System.....	1-4
26 05 26	Grounding and Bonding for Electrical Systems.....	1-3
26 05 33	Raceways and Boxes for Electrical Systems	1-8
26 05 34	Outlet, Junction, and Pull Boxes	1-2
26 05 35	Concrete Pull Boxes	1-3
26 05 41	Rigid Galvanized Steel Conduit	1-4
26 05 42	PVC Conduit	1-3
26 05 45	Underground Electrical Work	1-8
26 05 53	Identification for Electrical Systems	1-4
26 12 12	Transformers	1-2
26 24 16	Panelboards.....	1-3
26 27 14	Electricity Meter	1
26 27 26	Wiring Devices.....	1-7
26 50 00	Lighting	1-4
26 56 14	Steel Light Pole.....	1-2
26 56 15	Wooden Poles	1-2
26 56 58	Outdoor Lighting Fixtures.....	1-4
DIVISIONS 27 THROUGH 30 – NOT USED		
DIVISION 31 – EARTHWORK		
31 00 00	Earthwork.....	1-12
31 05 20	Filter Fabric.....	1
31 23 19	Dewatering.....	1-2
31 23 33	Trenching and Backfilling.....	1-5
31 50 01	Excavation Safety Requirements.....	1-2

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
DIVISION 32 – EXTERIOR IMPROVEMENTS		
32 11 24	Crushed Miscellaneous Base	1-5
32 12 17	Asphalt Concrete Paving	1-7
32 13 14	Concrete for Exterior Improvements	1-11
32 17 23	Pavement Markings	1-6
32 31 13	Chain Link Fences and Gates.....	1-12
DIVISION 33 – UTILITIES		
33 05 97.23	Underground Utility Warning Tape.....	1-2
33 40 01	Storm Drainage.....	1-6
DIVISION 34 – TRANSPORTATION		
34 11 26.13	Track Rail Ballast.....	1-5
DIVISIONS 35 THROUGH 48 – NOT USED		

TABLE OF CONTENTS
BIDDING REQUIREMENTS

SECTION	TITLE	PAGES
Appendix "A"		
	Project Labor Agreement (PLA) and POLA Construction Careers Policy	
Appendix "B"		
	Mitigation Monitoring and Reporting Program	
Appendix "C"		
	Environmental Compliance Tracking (ECT) Form	
Appendix "D"		
	Los Angeles Harbor Department Import Material Checklist	
Appendix "E"		
	Army Corps of Engineers Permit	
Appendix "F"		
	Los Angeles Regional Water Quality Control Board (LARWQCB) Clean Water Act Section 401 Water Quality Certification and Order	
Appendix "G"		
	Electrical Safety Policy – Implementation Plan	
Appendix "H"		
	Waste Management Plan (WMP) and Solid Waste Diversion and Disposal (SWDD) Report Forms	
Appendix "I"		
	Los Angeles Harbor Department (LAHD) Standard Plans	
Appendix "J"		
	Sample - Best Management Practices Plan	

- 01 The HARBOR DEPARTMENT of the CITY OF LOS ANGELES, California, invites electronic bids in accordance with Specification No. 2838 for TERMINAL ISLAND FACILITIES DEMOLITION AND IMPROVEMENTS.
- 02 Project consists of Berths 208-209 Container Freight Station Building Demolition, 1050 South Ways Street Starkist Demolition and Storage Lot Conversion, South Seaside Avenue Storm Drain Restoration, Southwest Marine Administration Building Demolition and Pavement Improvements, and 1025 South Seaside Avenue Demolition and Lot Conversion. Berths 208-209 Container Freight Station Building Demolition consists of demolition of an approximately 62,000 square feet, 30 feet tall former container freight station (CFS) building; concrete paving repairs; asbestos abatement; lead remediation; and miscellaneous utility work in accordance with Drawing No. 1-3502. 1050 South Ways Street Starkist Demolition and Storage Lot Conversion consists of demolition of buildings including asbestos abatement and lead remediation, structures, and timber dock associated with former Starkist Cannery, grading of site, installation of crushed miscellaneous base with stabilizing agent, and installation of permanent perimeter fencing and lighting for temporary equipment storage in accordance with Drawing No. 1-3571. South Seaside Avenue Storm Drain Restoration consists of construction of storm drain system in accordance with Drawing No. 1-3572. Southwest Marine Administration Building Demolition and Pavement Improvements consists of demolition, asbestos abatement, and lead remediation of 5,000 square feet wood framed building including foundation, grading, and paving of site with asphalt concrete in accordance with Drawing No. 1-3573. 1025 South Seaside Avenue Demolition and Lot Conversion consists of demolition, asbestos abatement and lead remediation of 10,500 square feet metal framed building including foundation, mechanical, and electrical equipment, grading, and paving of site with asphalt concrete in accordance with Drawing No. 1-3574.
- 03 Contract Documents are available in Department's Web-based Bid Management System called "Construction Division Business Opportunity Network (CDBON)" utilizing an online bid management system at <https://www.portoflosangeles.org/business/contracting-opportunities/construction-bids>. Bidders shall be required to register to download Drawings, Specifications, Addenda, and other important documents. A plan holders list can be accessed without registering. For information concerning bids, call Department at (310) 732-3522.
- 04 A pre-bid conference shall be held on August 6, 2025 at 9 a.m. at Port of Los Angeles Administrative Offices, Room number 403 located at 425 South Palos Verdes Street, San Pedro, California 90731. Matters relating to the submittal of bids and other contents of Specifications shall be discussed. A job site walk shall be available for Bidders after the scheduled pre-bid conference.
- 05 Bids must be submitted online via Port of Los Angeles CDBON system on or before 2:45:00 p.m. (PST/PDT) on September 3, 2025 at which time, bid results shall be available for viewing.

- 06 Each bid must be accompanied by a scanned copy of the following: a check certified by a responsible financial institution, or a cashier's check issued by a responsible financial institution, or by a satisfactory bid bond, payable to the order of City of Los Angeles Harbor Department, for an amount not less than 10 percent of the aggregate sum of the bid, as a guarantee that Bidder shall enter into Contract if awarded, and furnish the required bonds. Bid bond shall be placed with insurance carriers which are rated VII, A- or better in Best's Insurance Guide. If a Best's Insurance Guide rating is not available, then the proposed carrier must meet comparable standards in another rating service satisfactory to City.
- 07 The provisions of Sections 10.8 through 10.11 and 10.13 of Los Angeles Administrative Code pertaining to nondiscrimination and affirmative action shall be a part of said Contract. Portions of these provisions are summarized in Subsections 00030.03 and 00030.04 of BIDDING DOCUMENTS Section which set forth requirements Bidder must acknowledge.
- 08 City of Los Angeles Harbor Department is committed to creating an environment that provides all individuals and businesses open access to the business opportunities available at Port of Los Angeles in a manner that reflects the diversity of City of Los Angeles. Port of Los Angeles Small Business Enterprise Program (SBEP or "Program") as defined in Subsection 00030.06 of BIDDING DOCUMENTS Section was created to provide additional opportunities for small businesses to participate in any and all contracts. It has been determined that based on Work to be performed in Contract, Small Business Enterprise participation shall be a minimum of 17%, of which 4% shall be Very Small Business Enterprise participation.
- 09 The first 3 apparent low Bidders shall submit the following documents with original signatures within 4 Business Days after bids are closed. Information from other Bidders shall be requested only if they are being considered for an Award of Contract. Other Bidders shall submit this information within 4 Business Days of receiving a written request from Engineer.
- a Original of a check certified by a responsible financial institution, or a cashier's check, or bid bond in conformance with Subsection 06 above.
 - b Affidavit of Noncollusion.
 - c Contractor/Supplier Information Form, refer to Subsection 00660.01.
 - d Subcontractor/Supplier Ownership and Local Business Enterprise Affidavit for each subcontractor and supplier, refer to Subsection 00660.02.
 - e Electrical Safety Policy form.
 - f CEC Form 50, prime contractor's certification.

- g CEC Form 55 with subcontractor's and principals of subcontractor's information (if subcontractor and principal of subcontractor information were not submitted at time of bid). Failure to submit the information within 4 Business Days after bids are closed or within 4 Business Days after receiving written request from Engineer shall be cause to deem bid nonresponsive. Refer to BIDDING DOCUMENTS Section, Subsection 00030.07, Contract Solicitations Charter Section 470 (c) (12) Subsection, Paragraph C.
- 10 At time of bid, Bidders must be registered on City's Contracts Management and Opportunities Database, Regional Alliance Marketplace for Procurement (RAMP) – a free service provided by the Mayor's Office of Economic Development and the Minority Business Opportunity Committee.
- Bidders, subcontractors, and suppliers identified in the bid submittal as SBE or VSBE must be certified at time of bid, as applicable. Bidders, subcontractors, and suppliers must submit a copy of SBE certificate or VSBE certificate from the agency utilized to obtain certification as SBE or as VSBE to Engineer within 4 Business Days of close of bids in order to be acknowledged within the bid as SBE or VSBE. Refer to <https://kentico.portoflosangeles.org/getmedia/aea536e1-5d48-440a-8857-c55907e3dc74/contracting-proprietary-sbe-cert-application> for certification instructions.
- Within 30 Calendar Days after close of bids, subcontractors and suppliers must be registered on RAMP. In addition, within 30 Calendar Days after close of bids, Bidders, subcontractors, and suppliers identified in the bid submittals as SBE or VSBE must be verified on RAMP as SBE (Proprietary) or VSBE (Harbor), as applicable.
- RAMP is accessible at <https://www.rampla.org/s/>. Bidders, subcontractors, and suppliers are advised that there is an application process required to become certified as SBE (Proprietary) and as VSBE (Harbor), and that time is of the essence.
- 11 Contract may be awarded at any time during a period of 90 Calendar Days after date of close of bids. The right is reserved to reject any and all bids.
- 12 The successful Bidder shall possess an active Class A California Contractor's License at the time of Award.
- 13 The successful Bidder shall, within 14 Calendar Days after Notice of Award, provide acceptable bonds and insurance on the forms provided as required in CONTRACT Section and GENERAL CONDITIONS Section.
- 14 The successful Bidder shall, within 30 Calendar Days after Notice of Award, enter into the written Contract.

- 15 A performance bond in the amount of the full Contract price shall be provided. A payment bond in the amount of 100 percent of Contract price shall also be provided in case of an award in excess of \$25,000. Performance bond and payment bond shall be placed with insurance carriers which are rated VII, A- or better in Best's Insurance Guide. If a Best's Insurance Guide rating is not available, then the proposed carrier must meet comparable standards in another rating service satisfactory to City. Bidders may be eligible for participation in City's Bond Assistance Program referenced in Subsection 00022.18.
- 16 The prevailing rate of per diem wages and rates for legal holidays and overtime work for each craft, classification or type of workers needed in the execution of any contract to let under Specifications has been determined by the Director of the Department of Industrial Relations of the State of California pursuant to the provisions of the Labor Code of the State of California. Copies of the applicable Determinations by the said Director are on file in Construction Division and are hereby incorporated and made a part hereof as though the same were fully set forth in this Section. The State of California has approved City's Labor Compliance Program of enforcement of State prevailing wage laws and shall allow City to retain all penalty assessments for violation of these laws.
- 17 Pursuant to notice requirements effective January 1, 2015, all contractors and subcontractors must register with and meet requirements of the State of California Department of Industrial Relations using the online application before bidding on public works contracts in California. For the online application, visit <http://www.dir.ca.gov/Public-Works/PublicWorks.html>.
- a No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 (with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1[a]).
 - b No contractor or subcontractor may 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.
 - c Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- 18 In accordance with Board of Harbor Commissioners' Resolution No. 6315, Electrical Safety Policy, adopted October 27, 2004, the successful Bidder shall comply with the required qualifications for jobsite workers, as specified in BASIC ELECTRICAL MATERIALS AND METHODS Section (PART 1, Quality Assurance Article, Paragraph B, Jobsite Workers and subparagraphs).

- 19 Board of Harbor Commissioners of City of Los Angeles adopted Resolution No. 6328 on January 12, 2005, agreeing to adopt the provisions of Los Angeles City Ordinance 172,908, as amended, relating to Equal Benefits (Section 10.8.2.1. et seq. of Los Angeles Administrative Code) as a policy of Harbor Department. Contractor shall comply with the policy detailed in Subsection 00030.05 Equal Benefits Ordinance Compliance Affidavit of BIDDING DOCUMENTS Section.
- 20 In accordance with Board of Harbor Commissioners' Resolution No. 17-8164, Approval of Port-Wide Project Labor Agreement (PLA), adopted September 7, 2017, and in accordance with Board of Harbor Commissioners' Resolution Nos. 18-8319 and 18-8320, approval of Construction Careers Policy, adopted July 17, 2018, included as Appendix "A" of Specifications, Contractor and all subcontractors, prior to start of Work, shall sign a Letter of Assent (Attachment A of Appendix "A") agreeing to the terms of PLA. Contractor shall further comply with the terms of Attachment "B" (Drug and Alcohol Testing Policy) and fill out Attachment "C" (Request/Verification for Craft Employees) during the course of Project.
- 21 Iran Contracting Act of 2010: Harbor Department shall enforce Iran Contracting Act of 2010 requirement provisions included as Subsection 00030.08 of BIDDING DOCUMENTS Section of Specifications. Bidder shall fill out and submit at time of bid Iran Contracting Act of 2010 Compliance Affidavit included as Subsection 00030.09 of BIDDING DOCUMENTS Section of Specifications.
- 22 Local Business Preference Program (LBPP) shall apply to Project. Refer to Subsection 00030.10 of BIDDING DOCUMENTS Section.
- 23 Submit questions to <https://www.portoflosangeles.org/business/contracting-opportunities/construction-bids>. Questions submitted less than 2 Business Days before close of bids may or may not be answered as time permits. Responses to questions shall be posted on Construction Division Business Opportunity Network (CDBON) at <https://www.portoflosangeles.org/business/contracting-opportunities/construction-bids>. The responses to questions may be updated at any time prior to the day bids are due. This shall be the only means used to communicate with Bidders other than by addendum. Department assumes no liability for Bidder's failure to attend the pre-bid conference or to review Construction Division Business Opportunity Network to obtain responses to Bidder's questions.

EUGENE D. SEROKA
Executive Director

Dated 7/18/2025

01 GENERAL

- a Information in this Section supplements or further explains information in NOTICE INVITING BIDS Section.

02 FORM OF PROPOSAL

- a Bids shall be tendered online via CDBON, in conformance with Subsection 00012.03, of NOTICE INVITING BIDS Section.
- b All required fields in Bid Proposal Line Items shall be filled in on the forms provided online.
- c All documents listed in Subsection 00022.21, "Bidder's Check List", shall be submitted in conformance with the instructions provided in Subsection 00022.21.

03 PROPOSAL IRREGULARITIES AND ALTERATIONS

- a Bidders are prohibited from altering BIDDING DOCUMENTS Section. Any alterations or changes made to BIDDING DOCUMENTS Section shall render the bid informal and subject to rejection.

04 PROPOSAL SIGNATURE(S)

- a If the bid is made by an individual, the signature must be the full name of Bidder, whose address must be given.
- b If the bid is made by a partnership, it must be signed by each partner or accompanied by proof that the persons signing the bid are authorized to bind the partnership. The name and address of the partnership and the address of the persons signing must be provided.
- c If the bid is made by a corporation, it must be signed by a person authorized to do so by bylaw or resolution of that corporation.
- d A corporation submitting a bid may be required, before Contract is finally awarded, to furnish a certificate as to its corporate existence, and satisfactory evidence as to the officers or officer authorized to execute the bid on behalf of the corporation.

05 PROPOSAL GUARANTY

- a The bid shall be accompanied by a scanned copy of the following documents: A certified check or a cashier's check issued by a responsible financial institution, payable to the order of City of Los Angeles Harbor Department, or by a satisfactory bond, for an amount equal to at least 10 percent of the total amount of the bid, as a guaranty that the Bidder shall, within thirty (30) Calendar Days after Notice of Award, enter into Contract with City and furnish all required bonds for Work contemplated. The originals shall be submitted with the documents listed in Subsection 00012.09 of NOTICE INVITING BIDS Section.
- b If a certified or cashier's check is tendered as a proposal guaranty, Bid Bond form may be disregarded. In all other instances, the bond form provided with BIDDING DOCUMENTS Section shall be signed by the Bidder and its surety(ies).
- c Upon execution of Contract and provision of the necessary bond(s) and insurance by the successful Bidder, the check or the amounts thereof and the bonds of the unsuccessful Bidders shall be returned or released.

06 AFFIDAVIT OF NONCOLLUSION

- a Affidavit of Noncollusion form provided with BIDDING DOCUMENTS Section, properly executed, a scanned copy must be submitted with the bid. The signature on the affidavit must be subscribed and sworn to before a notary public.
- b Any bid made without such affidavit, shall not be considered. Any Bidder making a false affidavit may be excluded from future bidding on contracts with City.
- c If at any time it is found that the person, firm, or corporation, to whom Award of Contract has been made, did, in submitting the bid, collude with any other party or parties, then Contract shall be voided. Work shall be re-advertised. Contractor and Contractor's bondspersons shall be held liable to City for all loss or damage which it may suffer thereby.
- d The original shall be submitted with the documents listed in Specifications as Subsection 00012.09 of NOTICE INVITING BIDS Section.

07 FEDERAL EXCISE TAX

- a Prices quoted by Bidder shall be exclusive of federal excise taxes pursuant to exemption of political subdivisions of a State under federal law.
- b City, when requested, shall furnish Contractor a Certificate of Exemption from federal excise tax covering materials and equipment to be furnished pursuant to Specifications.

08 RETAIL SALES OR USE TAX

- a Purchases under Specifications are subject to the full application of California State and Los Angeles City and County sales or use tax.
- b Prices quoted in BIDDING DOCUMENTS Section shall be construed as including all applicable taxes regardless of whether or not sales or use tax is stated separately by Bidder.

09 DUTIES

- a Prices quoted by Bidder shall include all applicable duties, including import duties.

10 WITHDRAWAL OF BID

- a A Bidder may withdraw a bid, without prejudice, at any time prior to bid closing. The Withdraw button on CDBON online system shall become available from the time a bid is submitted to any time prior to the close of bids.

11 INTERPRETATIONS AND ADDENDA

- a Should a prospective Bidder find discrepancies in or omissions from Specifications or other Contract Documents, or should there be doubt as to their intended meaning, Bidder may submit to Engineer a written request for an interpretation and clarification. Bidder submitting the request is responsible for the prompt delivery and timeliness of any such request.
- b Any interpretation of or change in Contract Documents shall be made only by addendum issued to each person or entity to whom Specifications have been issued, and shall become a part of any contract awarded. City shall not be responsible for any oral or other explanations or interpretations. Receipt of any such addenda by Bidder must be acknowledged on Proposal form in the space provided.

12 BIDDERS TO INVESTIGATE

- a Bidder's submittal of a bid constitutes its acknowledgement that Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality and quantities of Work to be performed and materials to be furnished, and as to the requirements of Specifications. The submission of the bid shall constitute prima facie evidence that Bidder has made such examination.

13 EXISTING INFORMATION

- a Engineer shall make available to all prospective Bidders, prior to the receipt of bids, all information in possession of Department as to subsoil conditions in the vicinity of Work, topographical maps, or other information that might assist Bidder in properly evaluating the amount and character of Work that may be required. Any additional subsurface exploration shall be done at Bidder's sole cost and expense.

14 SUBCONTRACTS

- a Section 10.14 (as amended) of Los Angeles Administrative Code requires each Bidder to submit with the bid the names and addresses of subcontractors whose Work shall be in excess of one-half of 1 percent of Bidder's total bid or \$10,000, whichever is greater, and shall indicate that portion of Work which shall be done by each subcontractor so listed. The successful Bidder shall make no substitutions of subcontractors so listed except as provided for in said ordinance. For the purpose of Article 15, the terms and definitions of Section 10.14 (as amended) of Los Angeles Administrative Code shall apply.
- b Not more than 50 percent of the monetary value of Work shall be subcontracted. The listing of more than 50 percent may result in the rejection of the bid.
- c Bidder shall be fully responsible to City for its acts and/or omissions and for the acts and/or omissions of persons directly employed by Bidder. Additionally, Bidder shall be fully responsible to City for the acts and/or omissions of subcontractors and of persons or entities either directly or indirectly employed by subcontractors. Nothing contained in Contract Documents shall create or be construed as creating a contractual relationship between any subcontractor of Bidder and City.
- d Each Bidder must complete, sign, notarize, and submit as part of the bid Contractor Ownership / RAMP Outreach / Local Business Enterprise Affidavit included in Specifications as Subsection 00030.11 of BIDDING DOCUMENTS Section. Each Bidder shall also submit with the bid the subcontractor list entered online as provided on CDBON.

15 MANDATORY PROVISIONS PERTAINING TO NON-DISCRIMINATION IN EMPLOYMENT

Unless otherwise exempt, this Contract is subject to the applicable non-discrimination, equal benefits, equal employment practices, and affirmative action program provisions in Los Angeles Administrative Code (LACC) Section 10.8 et seq., as amended from time to time.

- a Contractor shall comply with the applicable non-discrimination and affirmative action provisions of the laws of the United States of America, the State of California, and City. In performing this Contract, Contractor shall not discriminate in any of its hiring or employment practices against any employee or applicant for employment because of such person's race, color, religion, national origin, ancestry, sex, sexual orientation, gender, gender identity, age, disability, domestic partner status, marital status or medical condition.
- b The requirements of Section 10.8.2.1 of LAAC, Equal Benefits Ordinance, and the provisions of Section 10.8.2.1(f) are incorporated and made a part of this Contract by reference.
- c The provisions of Section 10.8.3 of LAAC are incorporated and made a part of this Contract by reference and shall be known as the "Equal Employment Practices" provisions of this Contract.
- d The provisions of Section 10.8.4 of LAAC are incorporated and made a part of this Contract by reference and shall be known as the "Affirmative Action Program" provisions of this Contract.

16 SMALL, VERY SMALL, MINORITY, WOMEN, DISABLED VETERAN, AND OTHER BUSINESS ENTERPRISE (SBE/VSBE/MBE/WBE/DVBE/OBE)

- a It is the policy of City of Los Angeles to provide Small Business Enterprises (SBE) and Very Small Business Enterprises (VSBE), including Minority Business Enterprises (MBEs), Women Business Enterprises (WBEs), Disabled Veteran Business Enterprise (DVBE), and Other Business Enterprises (OBEs) an equal opportunity to participate in the provision of goods and services under Contract. Department strongly encourages Contractor to include MBE, WBE, and DVBE participation to the fullest extent possible.
- b To be eligible for an award of contract, each Bidder shall complete, sign, notarize, and submit as part of the bid Contractor Ownership / RAMP Outreach / Local Business Enterprise Affidavit included in Specifications as Subsection 00030.11 of BIDDING DOCUMENTS Section.

00022.16 Cont'd.

- c As part of the bid, each Bidder shall complete and submit subcontractor list in CDBON. As part of the bid, each Bidder shall complete and upload into CDBON the Supplier List in Subsection 00660.03 of SBE/VSBE/MBE/WBE/DVBE/OBE/LBE INFORMATION Section listing suppliers necessary to meet SBE/VSBE participation requirements in conformance with Subsection 00030.06 of BIDDING DOCUMENTS Section.
- d Within 4 Business Days after bids are closed, each Bidder shall submit Contractor/Supplier Information Form included in Specifications as Subsection 00660.01 of SBE/VSBE/MBE/WBE/DVBE/OBE/LBE INFORMATION Section.
- e Contractor Ownership / RAMP Outreach / Local Business Enterprise Affidavit and Contractor/Supplier Information Form when signed, shall signify Bidder's intent to comply with Small Business Enterprise Program described in Specifications.
- f In accordance with Section 4104 of the Public Contracting Code of the State of California, as amended, information is required to be entered in CDBON for each subcontractor who shall perform Work (including Contingency and Allowance Item Work) amounting to more than one half of one percent (0.5%) of the Total Base Bid or \$10,000 (whichever is greater).

17 AWARD OF CONTRACT

- a Award of Contract shall be in accordance with the provisions of this Subsection.
 - 1 Award of Contract, if award is to be made, shall be to the lowest and best regular, responsible Bidder furnishing satisfactory security for its performance and complying with Small Business Requirement taking into account Local Business Preference, if applicable.
 - 2 The right is reserved to reject any and all bids, or to reject any item or items therein and to waive any informality in the bid.
- b Bidder to be awarded Contract must be capable of performing the various items of Work bid upon. Bidders may be required to submit, before Award of Contract, satisfactory evidence covering experience on similar Work, a list of machinery, plant and other equipment available for the proposed Work, and such statements of their financial resources as may be deemed necessary. If the available evidence of competency of any Bidder is not satisfactory, the bid of such Bidder shall be rejected.

00022.17 Cont'd.

- c City may reject bids which have prices shown on Bid Proposal Line Items that are obviously unbalanced.
- d The bid of any party who has been delinquent or unfaithful in the performance of any former contract with City may be rejected.

18 BOND ASSISTANCE PROGRAM

- a Bond Assistance Program (BAP) is designed to assist small, local, minority, women, and disadvantaged businesses in removing potential barriers of surety bonding by providing technical, administrative assistance, and other resources to these companies. For information on BAP, please contact Tricia Carey at (310) 732-7656 or email tcarey@portla.org.

19 RELEASE OF PUBLIC RECORDS

- a City seeks to conduct its business publicly. The law generally provides that information given to City is a public record. In limited circumstances, information such as trade secrets and certain financial data may be treated confidentially. Bidder should be aware that the information provided to City may be available for public review. Therefore, information which Bidder desires to retain as confidential should not be produced unless expressly requested by City. If City receives a request to produce such information, it shall notify Bidder of such request. If Bidder instructs that the information not be released, City shall withhold the information provided Bidder expeditiously seeks and successfully obtains a court protective order to prevent such a release.

20 BUSINESS TAX

- a In accordance with City of Los Angeles Municipal Code, a Business Tax Registration Certificate (BTRC) must be obtained and a business tax must be paid by every person engaged in business as a contractor in City of Los Angeles. Contractor shall obtain a BTRC number and pay tax due to City of Los Angeles Office of Finance, (844) 663-4411. BTRC number must be clearly shown on all invoices submitted for payment.

21 BIDDERS CHECK LIST

a Bidders may use the following checklist to verify BIDDING DOCUMENTS Section has been completed.

b Please check under the appropriate column:

*Upload: Complete included document, attach supporting documents as indicated, scan, and upload to CDBON online system. Hard copies are to be submitted within 4 Business Days of bid closing.

**Online: Enter information directly into online form in CDBON online system.

		<u>Upload*</u>	<u>Online**</u>
1	PROPOSAL GUARANTY*		
	(a) Is the amount at least 10% of the total bid?	_____	
	(b) If surety bond, is it properly filled in and signed by surety?	_____	
	(c) If certified or cashier's check, is it enclosed with bid?	_____	
2	AFFIDAVIT OF NONCOLLUSION*		
	(a) Is affidavit properly filled in and signed?	_____	
	(b) Is affidavit notarized?	_____	
3	EQUAL BENEFITS ORDINANCE COMPLIANCE AFFIDAVIT*		
	(a) Is the affidavit completed and signed?	_____	
	(b) Are the forms enclosed with the bid?	_____	
4	CONTRACT SOLICITATIONS CHARTER SECTION 470 (c) (12)*		
	(a) Are City Ethics Commission (CEC) Forms 50 and 55 completed and signed? (If CEC Form 55 is submitted without subcontractor information, Bidder shall submit updated CEC Form 55 as stated in NOTICE INVITING BIDS Section.)	_____	
	(b) Are the forms enclosed with the bid?	_____	
5	IRAN CONTRACTING ACT OF 2010 COMPLIANCE AFFIDAVIT*		
	(a) Is the affidavit completed and signed?	_____	
	(b) Is the affidavit enclosed with the bid?	_____	

000022.21 Cont'd.

		<u>Upload*</u>	<u>Online**</u>
6	CONTRACTOR OWNERSHIP / RAMP OUTREACH/ LOCAL BUSINESS ENTERPRISE AFFIDAVIT*		
	(a) Is affidavit properly filled in and signed?	_____	
	(b) Is affidavit notarized?	_____	
7	SUBCONTRACTOR/SUPPLIER INFORMATION*/**		
	(a) Has Bidder listed the name and business address of each applicable subcontractor?		_____
	(b) Has Bidder included the dollar amount in the appropriate column for each subcontractor?		_____
	(c) Has Bidder accurately described Work to be done by said subcontractor(s)?		_____
	(d) Has Bidder completed Supplier List in Subsection 00660.03?	_____	
8	PROPOSAL **/*		
	(a) Has Bidder acknowledged receipt of addendum/addenda?		_____
	(b) Is Bidder's contractor's license number and expiration date provided?	_____	
	(c) Is proposal properly signed and dated?	_____	
	(d) Has Bidder inserted its Tax Identification Number?	_____	
	(e) Has Bidder identified the type of business and named the Partners or Corporate Officers?	_____	
	(f) Has Bidder completed and signed the Headquarters Location Form?	_____	
9	BID PROPOSAL LINE ITEMS**		
	(a) Has Bidder filled in a price for each bid item?		_____

END OF SECTION

01 BID BOND

*Bond portion of form need not be executed when bid is accompanied by a certified check or a cashier's check issued by a responsible financial institution.

WE, the undersigned principal and surety _____
acknowledge ourselves jointly and severally bound to City of Los Angeles, in the
sum of _____ dollars (\$ _____) to be paid to said
City if the foregoing bid shall be accepted and the proposed contract awarded to
said Bidder, and said Bidder shall fail to execute Contract and furnish and execute
such bond(s) as are specified in the foregoing NOTICE INVITING BIDS Section;
otherwise, this obligation be void.

Dated: _____, 20____.

Bidder's Name _____

By _____

(Surety) _____

(Surety) _____

NOTE: Surety must be in the form of a certified check, cashier's check, or a
corporate surety bond. A personal surety bond is not acceptable.
Annual bidder's bonds are acceptable. Cash is acceptable although
not recommended.

If a check is submitted, state number _____

and amount \$ _____.

If an annual bid bond is used, state name of company _____

bond number _____

and unencumbered amount _____.

02 AFFIDAVIT OF NONCOLLUSION

STATE OF _____
 COUNTY OF _____

_____, being first duly sworn,
 composes and says that Bidder is

(insert "sole owner", "partner", "president", "secretary", or other proper title) of _____

(insert name of Bidder)

who submits herewith to City of Los Angeles the attached bid:

(1) That Bidder is the person whose name is signed to the hereto attached Proposal form; that said bid is genuine; that the same is not sham or collusive; that all statements of fact therein are true; that such proposal was not made in the interest of or behalf of any person, partnership, company, association, organization or corporation not therein named or disclosed.

(2) That Bidder has not directly or indirectly by agreement, communication, or conference with anyone attempted to induce action prejudicial to the interests of the public body which is to award Contract or any other bidder, or anyone else interested in the proposed Contract; that Bidder has not in any manner sought by collusion to secure an advantage over any other bidder.

(3) That prior to the date and time of deadline for bid submittal the said Bidder:

- (a) did not, directly or indirectly, induce or solicit anyone else to submit a false or sham bid;
- (b) did not, directly or indirectly, collude, conspire, connive or agree with anyone else that said Bidder or anyone else would submit a false or sham bid, or that anyone should refrain from bidding or withdraw bid;
- (c) did not, directly or indirectly, submit the bid price entered on the attached Bid Proposal Line Items form or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporations, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any individual or group of individuals, except to the awarding authority or to any person or persons who have a partnership or other financial interest in the business of said Bidder.

Signed:

Subscribed and sworn to before me

 (Title)

this ____ day of _____, 20____
 (Seal of Notary)

 Signature of Notary

03 MANDATORY PROVISIONS PERTAINING TO NON-DISCRIMINATION IN EMPLOYMENT

Pursuant to Los Angeles Charter and Administrative Code, Division 10 Chapter 1, Article 1, Section 10.8 et seq. it is the policy of City of Los Angeles to require each person or entity contracting for goods or services to comply with the Non-discrimination, Equal Employment practices, and Affirmative Action Program provisions of City of Los Angeles.

Sec. 10.8 Mandatory Provisions Pertaining to Non-discrimination in Employment in the Performance of City Contracts.

The City of Los Angeles, in letting and awarding contracts for the provision to it or on its behalf of goods or services of any kind or nature, intends to contract only with those contractors that comply with the non-discrimination and affirmative action provisions of the laws of the United States of America, the State of California and the City of Los Angeles. The City and each of its awarding authorities shall therefore require that any person, firm, corporation, partnership or combination thereof that contracts with the City for services, materials or supplies, shall not discriminate in any of its hiring or employment practices, shall comply with all provisions pertaining to non-discrimination in hiring and employment, and shall require Affirmative Action Programs in contracts in accordance with the provisions of this Code. The awarding authority and/or Office of Contract Compliance of the Department of Public Works shall monitor and inspect the activities of each contractor to determine that they are in compliance with the provisions of this chapter.

Although in accordance with Section 22.359 of this Code, the Board of Public Works, Office of Contract Compliance, is responsible for the administration of the City's Contract Compliance Program, accomplishing the intent of the City in contract compliance and achieving non-discrimination in contractor employment shall be the continuing responsibility of each awarding authority. Each awarding authority shall use only the rules, regulations, and forms provided by the Office of Contract Compliance to monitor, inspect, or investigate contractor compliance with the provisions of this chapter.

00030.03 Cont'd.

Each awarding authority shall provide immediate notification upon award of each contract by that awarding authority to the Office of Contract Compliance. Each awarding authority shall call upon the Office of Contract Compliance to review, evaluate, and recommend on any contractual dispute or issue of noncompliance under the provisions of this chapter. The Office of Contract Compliance shall be notified by each awarding authority of any imminent announcement to bid, to allow the Office of Contract Compliance the opportunity to participate with the awarding authority in the monitoring, review, evaluation, investigation, audit and enforcement of the provisions of this chapter in accordance with the rules, regulations and forms promulgated to implement the City's Contract Compliance, Equal Employment Practices Program.

Sec. 10.8.1. Definitions.

Except for Section 10.8.2.1, the following definitions shall apply to the following terms used in this article:

"Awarding Authority" means any Board or Commission of the City of Los Angeles, or any authorized employee or officer of the City of Los Angeles, including the Purchasing Agent of the City of Los Angeles, who makes or enters into any contract or agreement for the provision of any goods or services of any kind or nature whatsoever for, or on behalf of, the City of Los Angeles.

"Contract" means any agreement, franchise, lease or concession, including agreements for any occasional professional or technical personal services, for the performance of any work or service, the provision of any materials or supplies, or the rendition of any service to the City of Los Angeles or to the public, which is let, awarded or entered into with, or on behalf of, the City of Los Angeles or any Awarding Authority thereof. Contracts where the provisions of this article would conflict with federal or state grant funded contracts, or conflict with the terms of the grant or subvention, as determined by the DAA, are exempt.

"Contractor" means any person, firm, corporation, partnership, or any combination thereof, who enters into a contract with any Awarding Authority of the City of Los Angeles.

"Designated Administrative Agency (DAA)" means the Department of Public Works, Office of Contract Compliance created by Article X of Chapter 13 of Division 22 of the Los Angeles Administrative Code. That office is also known as the Department of Public Works, Bureau of Contract Administration.

00030.03 Cont'd.

"Domestic Partners" means, for purposes of this article, any two adults, of the same or different sex, who have registered with a governmental entity pursuant to state or local law authorizing this registration or with an internal registry maintained by an employer of at least one of the domestic partners.

"Employment Practices" means any solicitation of, or advertisement for, employees, employment, change in grade or work assignment, assignment or change in place or location of work, layoff, suspension or termination of employees, rate of pay or other form of compensation including vacation, sick and compensatory time, selection for training, including apprenticeship programs, any and all employee benefits and activities, promotion and upgrading, and any and all actions taken to discipline employees for infractions of work rules or employer requirements.

"Minority" is defined to mean "minority person" as the phrase is defined in Subsection (f) of Section 2000 of the California Public Contract Code, as amended from time to time.

"Subcontractor" means any person, firm or corporation or partnership, or any combination thereof, who enters into a contract with a Contractor to perform or provide a portion or part of any Contract with the City.

Sec. 10.8.1.1. Summary of Thresholds.

The following thresholds will be used to determine the non-discrimination and affirmative action requirements set forth in this chapter for each type of contract.

Non-discrimination Practices as outlined in Section 10.8.2 of this Code apply to all contracts.

Equal Employment Practices as outlined in Section 10.8.3 of this Code apply to all construction contracts of \$1,000 or more and all non-construction contracts of \$1,000 or more.

Affirmative Action Program as outlined in Sections 10.8.4 and 10.13 of this Code applies to all Construction Contracts of \$25,000 or more and all non-Construction Contracts of \$25,000 or more.

00030.03 Cont'd.

Sec. 10.8.2. All Contracts: Non-discrimination Clause.

Notwithstanding any other provision of any ordinance of the City of Los Angeles to the contrary, every Contract which is let, awarded or entered into with or on behalf of the City of Los Angeles, shall contain by insertion therein a provision obligating the Contractor in the performance of such Contract not to discriminate in his or her Employment Practices against any employee or applicant for employment because of the applicant's race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status, domestic partner status or medical condition. All Contractors who enter into such Contracts with the City shall include a like provision in all subcontracts awarded for work to be performed under the Contract with the City. Failure of the Contractor to comply with this requirement or to obtain the compliance of its Subcontractors with such obligations shall subject the Contractor to the imposition of any and all sanctions allowed by law, including, but not limited to, termination of the Contractor's Contract with the City. Nothing contained in this Contract shall be construed in any manner so as to require or permit any act which is prohibited by law.

Sec. 10.8.2.1. Equal Benefits Ordinance.

- (a) Legislative Findings. The City awards many contracts to private firms to provide services to the public and to City government. Many City contractors and subcontractors perform services that affect the proprietary interests of City government in that their performance impacts the success of City operations. The City holds a proprietary interest in the work performed by many employees employed by City contractors and subcontractors. In a very real sense, the success or failure of City operations may turn on the success or failure of these enterprises, for the City has a genuine stake in how the public perceives the services rendered for them by these businesses.

Discrimination in the provision of employee benefits between employees with domestic partners and employees with spouses results in unequal pay for equal work. Los Angeles law prohibits entities doing business with the City from discriminating in employment practices based on marital status and/or sexual orientation. The City's departments and contracting agents are required to place in all City contracts a provision that the company choosing to do business with the City agrees to comply with the City's nondiscrimination laws.

00030.03 Cont'd.

It is the City's intent, through the contracting practices outlined in this Ordinance, to assure that those companies wanting to do business with the City will equalize the total compensation between similarly situated employees with spouses and with domestic partners. The provisions of this Ordinance are designed to ensure that the City's contractors will maintain a competitive advantage in recruiting and retaining capable employees, thereby improving the quality of the goods and services the City and its people receive, and ensuring protection of the City's property.

- (b) Definitions. For purposes of the Equal Benefits Ordinance only, the following shall apply.
- (1) Awarding Authority means any Board or Commission of the City, or any employee or officer of the City, that is authorized to award or enter into any Contract, as defined in this ordinance, on behalf of the City, and shall include departments having control of their own funds and which adopt policies consonant with the provisions of the Equal Benefits Ordinance.
 - (2) Benefits means any plan, program, or policy provided or offered by a Contractor to its employees as part of the employer's total compensation package. This includes but is not limited to the following types of benefits: bereavement leave, family medical leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits, and travel benefits.
 - (3) Cash Equivalent means the amount of money paid to an employee with a Domestic Partner (or spouse, if applicable) in lieu of providing Benefits to the employee's Domestic Partner (or spouse, if applicable). The Cash Equivalent is equal to the direct expense to the employer of providing Benefits to an employee for his or her Domestic Partner (or spouse, if applicable) or the direct expense to the employer of providing Benefits for the dependents and family members of an employee with a Domestic Partner (or spouse, if applicable).
 - (4) City means the City of Los Angeles.
 - (5) Contract means an agreement the value of which exceeds \$25,000. It includes agreements for work or services to or for the City; for public works or improvements to be performed; agreements for the purchase of goods, equipment, materials, or supplies; or grants to be provided, at the expense of the City or to be paid out of monies under the control of the City. The term also includes a Lease or License, as defined in the Equal Benefits Ordinance.

00030.03 Cont'd.

- (6) Contractor means any person or persons, firm, partnership, corporation, joint venture, or any combination of these, or any governmental entity acting in its proprietary capacity that enters into a Contract with any Awarding Authority of the City. The term does not include Subcontractors.
 - (7) Designated Administrative Agency (DAA) means the Department of Public Works, Bureau of Contract Administration.
 - (8) Domestic Partner means any two adults, of the same or different sex, who have registered as domestic partners with a governmental entity pursuant to state or local law authorizing this registration or with an internal registry maintained by the employer of at least one of the domestic partners.
 - (9) Equal Benefits Ordinance means Los Angeles Administrative Code Section 10.8.2.1, *et seq.*, as amended from time to time.
 - (10) Equal Benefits means the equality of benefits between employees with spouses and employees with Domestic Partners, between spouses of employees and Domestic Partners of employees, and between dependents and family members of spouses and dependents and family members of Domestic Partners.
 - (11) Lease or License means any agreement allowing others to use property owned or controlled by the City, any agreement allowing others the use of City property in order to provide services to or for the City, such as for concession agreements, and any agreement allowing the City to use property owned or controlled by others.
 - (12) Subcontractor means any person or persons, firm, partnership, corporation, joint venture, or any combination of these, and any governmental entity, that assists the Contractor in performing or fulfilling the terms of the Contract. Subcontractors are not subject to the requirements of the Equal Benefits Ordinance unless they otherwise have a Contract directly with the City.
- (c) Equal Benefits Requirements.
- (1) No Awarding Authority of the City shall execute or amend any Contract with any Contractor that discriminates in the provision of Benefits between employees with spouses and employees with Domestic Partners, between spouses of employees and Domestic Partners of employees, and between dependents and family members of spouses and dependents and family members of Domestic Partners.

00030.03 Cont'd.

- (2) A Contractor must permit access to, and upon request, must provide certified copies of all of its records pertaining to its Benefits policies and its employment policies and practices to the DAA, for the purpose of investigation or to ascertain compliance with the Equal Benefits Ordinance.
- (3) A Contractor must post a copy of the following statement in conspicuous places at its place of business available to employees and applicants for employment: "During the performance of a Contract with the City of Los Angeles, the Contractor will provide equal benefits to its employees with spouses and its employees with domestic partners." The posted statement must also include a City contact telephone number which will be provided each Contractor when the Contract is executed.
- (4) A Contractor must not set up or use its contracting entity for the purpose of evading the requirements imposed by the Equal Benefits Ordinance.
- (d) Other Options for Compliance. Provided that the Contractor does not discriminate in the provision of Benefits, a Contractor may also comply with the Equal Benefits Ordinance in the following ways:
 - (1) A Contractor may provide an employee with the Cash Equivalent only if the DAA determines that either:
 - a. The Contractor has made a reasonable, yet unsuccessful effort to provide Equal Benefits; or
 - b. Under the circumstances, it would be unreasonable to require the Contractor to provide Benefits to the Domestic Partner (or spouse, if applicable).
 - (2) Allow each employee to designate a legally domiciled member of the employee's household as being eligible for spousal equivalent Benefits.
 - (3) Provide Benefits neither to employees' spouses nor to employees' Domestic Partners.
- (e) Applicability.
 - (1) Unless otherwise exempt, a Contractor is subject to and shall comply with all applicable provisions of the Equal Benefits Ordinance.

00030.03 Cont'd.

- (2) The requirements of the Equal Benefits Ordinance shall apply to a Contractor's operations as follows:
 - a. A Contractor's operations located within the City limits, regardless of whether there are employees at those locations performing work on the Contract.
 - b. A Contractor's operations on real property located outside of the City limits if the property is owned by the City or the City has a right to occupy the property, and if the Contractor's presence at or on that property is connected to a Contract with the City.
 - c. The Contractor's employees located elsewhere in the United States but outside of the City limits if those employees are performing work on the City Contract.
- (3) The requirements of the Equal Benefits Ordinance do not apply to collective bargaining agreements ("CBA") in effect prior to January 1, 2000. The Contractor must agree to propose to its union that the requirements of the Equal Benefits Ordinance be incorporated into its CBA upon amendment, extension, or other modification of a CBA occurring after January 1, 2000.
- (f) **Mandatory Contract Provisions Pertaining to Equal Benefits.** Unless otherwise exempted, every Contract shall contain language that obligates the Contractor to comply with the applicable provisions of the Equal Benefits Ordinance. The language shall include provisions for the following:
 - (1) During the performance of the Contract, the Contractor certifies and represents that the Contractor will comply with the Equal Benefits Ordinance.
 - (2) The failure of the Contractor to comply with the Equal Benefits Ordinance will be deemed to be a material breach of the Contract by the Awarding Authority.
 - (3) If the Contractor fails to comply with the Equal Benefits Ordinance the Awarding Authority may cancel, terminate or suspend the Contract, in whole or in part, and all monies due or to become due under the Contract may be retained by the City. The City may also pursue any and all other remedies at law or in equity for any breach.

00030.03 Cont'd.

- (4) Failure to comply with the Equal Benefits Ordinance may be used as evidence against the Contractor in actions taken pursuant to the provisions of Los Angeles Administrative Code Section 10.40, *et seq.*, Contractor Responsibility Ordinance.
- (5) If the DAA determines that a Contractor has set up or used its Contracting entity for the purpose of evading the intent of the Equal Benefits Ordinance, the Awarding Authority may terminate the Contract on behalf of the City. Violation of this provision may be used as evidence against the Contractor in actions taken pursuant to the provisions of Los Angeles Administrative Code Section 10.40, *et seq.*, Contractor Responsibility Ordinance.

(g) Administration.

- (1) The DAA is responsible for the enforcement of the Equal Benefits Ordinance for all City Contracts. Each Awarding Authority shall cooperate to the fullest extent with the DAA in its enforcement activities.
- (2) In enforcing the requirements of the Equal Benefits Ordinance, the DAA may monitor, inspect, and investigate to ensure that the Contractor is acting in compliance with the Equal Benefits Ordinance. Contractor's failure to cooperate with the DAA may result in a determination by the DAA that the Contractor is not in compliance with the Equal Benefits Ordinance, which may subject the Contractor to enforcement measures set forth in Section 10.8.2.1(h).
- (3) The DAA shall promulgate rules and regulations and forms for the implementation of the Equal Benefits Ordinance. No other rules, regulations, or forms may be used by an Awarding Authority of the City to accomplish this contract compliance program.

(h) Enforcement.

- (1) If the Contractor fails to comply with the Equal Benefits Ordinance:
 - a. The failure to comply may be deemed to be a material breach of the Contract by the Awarding Authority; or
 - b. The Awarding Authority may cancel, terminate or suspend, in whole or in part, the contract; or
 - c. Monies due or to become due under the Contract may be retained by the City until compliance is achieved;

00030.03 Cont'd.

- d. The City may also pursue any and all other remedies at law or in equity for any breach.
 - e. The City may use failure to comply with the Equal Benefits Ordinance as evidence against the Contractor in actions taken pursuant to the provisions of Los Angeles Administrative Code Section 10.40, et seq., Contractor Responsibility Ordinance.
- (i) Non-applicability, Exceptions, and Waivers.
- (1) Upon request of the Awarding Authority, the DAA may waive compliance with the Equal Benefits Ordinance under the following circumstances:
- a. The Contract is for the use of City property, and there is only one prospective Contractor willing to enter into the Contract; or
 - b. The Contract is for needed goods, services, construction of a public work or improvement, or interest in or right to use real property that is available only from a single prospective Contractor, and that prospective Contractor is otherwise qualified and acceptable to the City; or
 - c. The Contract is necessary to respond to an emergency that endangers the public health or safety, and no entity which complies with the requirements of the Equal Benefits Ordinance capable of responding to the emergency is immediately available; or
 - d. The City Attorney certifies in writing that the Contract involves specialized litigation requirements such that it would be in the best interests of the City to waive the requirements of the Equal Benefits Ordinance; or
 - e. The Contract is (i) with a public entity; (ii) for goods, services, construction of a public work or improvement, or interest in or right to use real property; and (iii) that is either not available from another source, or is necessary to serve a substantial public interest. A Contract for interest in or the right to use real property shall not be considered as not being available from another source unless there is no other site of comparable quality or accessibility available from another source; or

00030.03 Cont'd.

- f. The requirements of the Equal Benefits Ordinance will violate or are inconsistent with the terms or conditions of a grant, subvention or agreement with a public agency or the instructions of an authorized representative of the agency with respect to the grant, subvention or agreement, provided that the Awarding Authority has made a good faith attempt to change the terms or conditions of the grant, subvention or agreement to authorize application of the Equal Benefits Ordinance; or
 - g. The Contract is for goods, a service or a project that is essential to the City or City residents and there are no qualified responsive bidders or prospective Contractors who could be certified as being in compliance with the requirements of the Equal Benefits Ordinance; or
 - h. The Contract involves bulk purchasing arrangements through City, federal, state or regional entities that actually reduce the City's purchasing costs and would be in the best interests of the City.
- (2) The Equal Benefits Ordinance does not apply to contracts which involve:
- a. The investment of trust monies, bond proceeds or agreements relating to the management of these funds, indentures, security enhancement agreements (including, but not limited to, liquidity agreements, letters of credit, bond insurance) for City tax-exempt and taxable financings, deposits of City's surplus funds in financial institutions, the investment of City monies in competitively bid investment agreements, the investment of City monies in securities permitted under the California State Government Code and/or the City's investment policy, investment agreements, repurchase agreements, City monies invested in U.S. government securities or pre-existing investment agreements;
 - b. Contracts involving City monies in which the Treasurer or the City Administrative Officer finds that either:
 - (i) No person, entity or financial institution doing business in the City, which is in compliance with the Equal Benefits Ordinance, is capable of performing the desired transaction(s); or
 - (ii) The City will incur a financial loss or forego a financial benefit which in the opinion of the Treasurer or City Administrative Officer would violate his or her fiduciary duties.

00030.03 Cont'd.

- (3) The Equal Benefits Ordinance does not apply to contracts for gifts to the City.
- (4) Nothing in this Subsection shall limit the right of the City to waive the provisions of the Equal Benefits Ordinance.
- (5) The provisions of this Subsection shall apply to the Equal Benefits Ordinance only. The Equal Benefits Ordinance is not subject to the exemptions provided in Section 10.9 of this Code.
- (j) Consistency with Federal or State Law. The provisions of the Equal Benefits Ordinance do not apply where the application of these provisions would violate or be inconsistent with the laws, rules or regulations federal or state law, or where the application would violate or be inconsistent with the terms or conditions of a grant or contract with the United States of America, the State of California, or the instruction of an authorized representative of any of these agencies with respect to any grant or contract.
- (k) Severability. If any provision of the Equal Benefits Ordinance is declared legally invalid by any court of competent jurisdiction, the remaining provisions shall remain in full force and effect.
- (l) Timing of Application.
 - (1) The requirements of the Equal Benefits Ordinance shall not apply to Contracts executed or amended prior to January 1, 2000, or to bid packages advertised and made available to the public, or any bids received by the City, prior to January 1, 2000, unless and until those Contracts are amended after January 1, 2000 and would otherwise be subject to the Equal Benefits Ordinance.
 - (2) The requirements of the Equal Benefits Ordinance shall apply to competitively bid Contracts that are amended after April 1, 2003, and to competitively bid Contracts that result from bid packages advertised and made available to the public after May 1, 2003.
 - (3) Unless otherwise exempt, the Equal Benefits Ordinance applies to any agreement executed or amended after January 1, 2000, that meets the definition of a Contract as defined within Subsection 10.8.2.1(b).

00030.03 Cont'd.

Sec. 10.8.3. Equal Employment Practices Provisions.

Every non-construction and construction Contract with, or on behalf of, the City of Los Angeles for which the consideration is \$1,000 or more shall contain the following provisions, which shall be designated as the Equal Employment Practices provision of such contract:

- A. During the performance of this Contract, the Contractor agrees and represents that it will provide Equal Employment Practices and the Contractor and each Subcontractor hereunder will ensure that in his or her Employment Practices persons are employed and employees are treated equally and without regard to, or because of, race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status or medical condition.
 - 1. This provision applies to work or service performed or materials manufactured or assembled in the United States.
 - 2. Nothing in this section shall require or prohibit the establishment of new classifications of employees in any given craft, work or service category.
 - 3. The Contractor agrees to post a copy of Paragraph A., hereof, in conspicuous places at its place of business available to employees and applicants for employment.
- B. 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 their race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status or medical condition.
- C. At the request of the Awarding Authority or the DAA, the Contractor shall certify in the specified format that he or she has not discriminated in the performance of City Contracts against any employee or applicant for employment on the basis or because of race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status, or medical condition.
- D. The Contractor shall permit access to, and may be required to provide certified copies of, all of his or her records pertaining to employment and to employment practices by the awarding authority or the DAA for the purpose of investigation to ascertain compliance with the Equal Employment Practices provisions of City Contracts. Upon request, the Contractor shall provide evidence that he or she has or will comply therewith.

00030.03 Cont'd.

- E. The failure of any Contractor to comply with the Equal Employment Practices provisions of this contract may be deemed to be a material breach of City Contracts. The failure shall only be established upon a finding to that effect by the Awarding Authority, on the basis of its own investigation or that of the DAA. No such finding shall be made or penalties assessed except upon a full and fair hearing after notice and an opportunity to be heard has been given to the Contractor.
- F. Upon a finding duly made that the Contractor has failed to comply with the Equal Employment Practices provisions of a City Contract, the Contract may be forthwith cancelled, terminated or suspended, in whole or in part, by the Awarding Authority, and all monies due or to become due hereunder may be forwarded to, and retained by, the City of Los Angeles. In addition thereto, the failure to comply may be the basis for a determination by the Awarding Authority or the DAA that the said Contractor is a non-responsible bidder or proposer pursuant to the provisions of Section 10.40 of this Code. In the event of such a determination, the Contractor shall be disqualified from being awarded a Contract with the City of Los Angeles for a period of two years, or until the Contractor shall establish and carry out a program in conformance with the provisions hereof.
- G. Notwithstanding any other provision of this contract, the City of Los Angeles shall have any and all other remedies at law or in equity for any breach hereof.
- H. The Board of Public Works shall promulgate rules and regulations through the DAA, and provide necessary forms and required language to the Awarding Authorities to be included in City Request for Bids or Request for Proposal packages or in supplier registration requirements for the implementation of the Equal Employment Practices provisions of this Contract, and such rules and regulations and forms shall, so far as practicable, be similar to those adopted in applicable Federal Executive orders. No other rules, regulations, or forms may be used by an Awarding Authority of the City to accomplish the contract compliance program.
- I. Nothing contained in this Contract shall be construed in any manner so as to require or permit any act which is prohibited by law.
- J. By affixing its signature on a Contract that is subject to this article, the Contractor shall agree to adhere to the Equal Employment Practices specified herein during the performance or conduct of City Contracts.

00030.03 Cont'd.

- K. Equal Employment Practices shall, without limitation as to the subject or nature of employment activity, be concerned with employment practices, including, but not limited to:
1. hiring practices;
 2. apprenticeships where approved programs are functioning and other on-the-job training for non-apprenticeable occupations;
 3. training and promotional opportunities; and
 4. reasonable accommodations for persons with disabilities.
- L. All Contractors subject to the provisions of this section shall include a similar provision in all subcontracts awarded for work to be performed under the Contract with the City, and shall impose the same obligations including, but not limited to, filing and reporting obligations, on the Subcontractors as are applicable to the Contractor. Subcontracts shall follow the same thresholds specified in Section 10.8.1.1. Failure of the Contractor to comply with this requirement or to obtain the compliance of its Subcontractors with all such obligations shall subject the Contractor to the imposition of any and all sanctions allowed by law, including, but not limited to, termination of the Contractor's Contract with the City.

Sec. 10.8.4. Affirmative Action Program Provisions.

Every non-construction and construction Contract with, or on behalf of, the City of Los Angeles for which the consideration is \$25,000 or more shall contain the following provisions which shall be designated as the Affirmative Action Program provisions of such Contract:

- A. During the performance of a City Contract, the Contractor certifies and represents that the Contractor and each Subcontractor hereunder will adhere to an Affirmative Action Program to ensure that in its employment practices, persons are employed and employees are treated equally and without regard to or because of race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status, domestic partner status or medical condition.
1. This section applies to work or services performed or materials manufactured or assembled in the United States.
 2. Nothing in this section shall require or prohibit the establishment of new classifications of employees in any given craft, work or service category.

00030.03 Cont'd.

3. The Contractor shall post a copy of Paragraph A., hereof, in conspicuous places at its place of business available to employees and applicants for employment.
- B. The Contractor shall, 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 their race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status, domestic partner status or medical condition.
- C. At the request of the Awarding Authority or the DAA, the Contractor shall certify on an electronic or hard copy form to be supplied, that the Contractor has not discriminated in the performance of City Contracts against any employee or applicant for employment on the basis or because of race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status, domestic partner status or medical condition.
- D. The Contractor shall permit access to, and may be required to provide certified copies of, all of its records pertaining to employment and to its employment practices by the Awarding Authority or the DAA for the purpose of investigation to ascertain compliance with the Affirmative Action Program provisions of City Contracts and, upon request, to provide evidence that it has or will comply therewith.
- E. The failure of any Contractor to comply with the Affirmative Action Program provisions of City Contracts may be deemed to be a material breach of a City Contract. The failure shall only be established upon a finding to that effect by the Awarding Authority, on the basis of its own investigation or that of the DAA. No finding shall be made except upon a full and fair hearing after notice and an opportunity to be heard has been given to the Contractor.
- F. Upon a finding duly made that the Contractor has breached the Affirmative Action Program provisions of a City Contract, the Contract may be forthwith cancelled, terminated or suspended, in whole or in part, by the Awarding Authority, and all monies due or to become due hereunder may be forwarded to and retained by the City of Los Angeles. In addition thereto, the breach may be the basis for a determination by the Awarding Authority or the Board of Public Works that the Contractor is a non-responsible bidder or proposer pursuant to the provisions of Section 10.40 of this Code. In the event of such determination, the Contractor shall be disqualified from being awarded a contract with the City of Los Angeles for a period of two years, or until he or she shall establish and carry out a program in conformance with the provisions hereof.

00030.03 Cont'd.

- G. In the event of a finding by the Fair Employment and Housing Commission of the State of California, or the Board of Public Works of the City of Los Angeles, or any court of competent jurisdiction, that the Contractor has been guilty of a willful violation of the California Fair Employment and Housing Act, or the Affirmative Action Program provisions of a City Contract, there may be deducted from the amount payable to the Contractor by the City of Los Angeles under the contract, a penalty of ten dollars for each person for each calendar day on which the person was discriminated against in violation of the provisions of a City Contract.
- H. Notwithstanding any other provisions of a City Contract, the City of Los Angeles shall have any and all other remedies at law or in equity for any breach hereof.
- I. The Public Works Board of Commissioners shall promulgate rules and regulations through the DAA and provide to the Awarding Authorities electronic and hard copy forms for the implementation of the Affirmative Action Program provisions of City contracts, and rules and regulations and forms shall, so far as practicable, be similar to those adopted in applicable Federal Executive Orders. No other rules, regulations or forms may be used by an Awarding Authority of the City to accomplish this contract compliance program.
- J. Nothing contained in City Contracts shall be construed in any manner so as to require or permit any act which is prohibited by law.
- K. By affixing its signature to a Contract that is subject to this article, the Contractor shall agree to adhere to the provisions in this article for the duration of the Contract. The Awarding Authority may also require Contractors and suppliers to take part in a pre-registration, pre-bid, pre-proposal, or pre-award conference in order to develop, improve or implement a qualifying Affirmative Action Program.
 - 1. The Contractor certifies and agrees to immediately implement good faith effort measures to recruit and employ minority, women, and other potential employees in a non-discriminatory manner including, but not limited to, the following actions as appropriate and available to the Contractor's field of work. The Contractor shall:
 - (a) Recruit and make efforts to obtain employees through:
 - (i) Advertising employment opportunities in minority and other community news media or other publications.

00030.03 Cont'd.

- (ii) Notifying minority, women, and other community organizations of employment opportunities.
 - (iii) Maintaining contact with schools with diverse populations of students to notify them of employment opportunities.
 - (iv) Encouraging existing employees, including minorities and women, to refer their friends and relatives.
 - (v) Promoting after school and vacation employment opportunities for minority, women, and other youth.
 - (vi) Validating all job specifications, selection requirements, tests, etc.
 - (vii) Maintaining a file of the names and addresses of each worker referred to the Contractor and what action was taken concerning the worker.
 - (viii) Notifying the appropriate Awarding Authority and the DAA in writing when a union, with whom the Contractor has a collective bargaining agreement, has failed to refer a minority, woman, or other worker.
- (b) Continually evaluate personnel practices to assure that hiring, upgrading, promotions, transfers, demotions and layoffs are made in a non-discriminatory manner so as to achieve and maintain a diverse work force.
 - (c) Utilize training programs and assist minority, women, and other employees in locating, qualifying for and engaging in the training programs to enhance their skills and advancement.
 - (d) Secure cooperation or compliance from the labor referral agency to the Contractor's contractual Affirmative Action Program obligations.
 - (e) Establish a person at the management level of the Contractor to be the Equal Employment Practices officer. Such individual shall have the authority to disseminate and enforce the Contractor's Equal Employment and Affirmative Action Program policies.
 - (f) Maintain records as are necessary to determine compliance with Equal Employment Practices and Affirmative Action Program obligations and make the records available to City, State and Federal authorities upon request.

00030.03 Cont'd.

- (g) Establish written company policies, rules, and procedures which shall be encompassed in a company-wide Affirmative Action Program for all its operations and Contracts. The policies shall be provided to all employees, Subcontractors, vendors, unions and all others with whom the Contractor may become involved in fulfilling any of its Contracts.
 - (h) Document its good faith efforts to correct any deficiencies when problems are experienced by the Contractor in complying with its obligations pursuant to this article. The Contractor shall state:
 - (i) What steps were taken, how and on what date.
 - (ii) To whom those efforts were directed.
 - (iii) The responses received, from whom and when.
 - (iv) What other steps were taken or will be taken to comply and when.
 - (v) Why the Contractor has been or will be unable to comply.
- 2. Every contract of \$25,000 or more which may provide construction, demolition, renovation, conservation, or major maintenance of any kind shall also comply with the requirements of Section 10.13 of the Los Angeles Administrative Code.
- L. The Affirmative Action Program required to be submitted hereunder and the pre-registration, pre-bid, pre-proposal or pre-award conference which may be required by the Awarding Authority shall, without limitation as to the subject or nature of employment activity, be concerned with such employment practices as:
 - 1. Apprenticeship where approved programs are functioning, and other on-the-job training for non-apprenticeable occupations;
 - 2. Classroom preparation for the job when not apprenticeable;
 - 3. Pre-apprenticeship education and preparation;
 - 4. Upgrading training and opportunities;

00030.03 Cont'd.

5. Encouraging the use of Contractors, Subcontractors and suppliers of all racial and ethnic groups; provided, however, that any contract subject to this ordinance shall require the Contractor, Subcontractor or supplier to provide not less than the prevailing wage, working conditions and practices generally observed in private industries in the Contractor's, Subcontractor's or supplier's geographical area for such work;
 6. The entry of qualified women, minority and all other journeymen into the industry; and
 7. The provision of needed supplies or job conditions to permit persons with disabilities to be employed, and minimize the impact of any disability.
- M. Any adjustments which may be made in the Contractor's work force to achieve the requirements of the City's Affirmative Action Program in purchasing and construction shall be accomplished by either an increase in the size of the work force or replacement of those employees who leave the work force by reason of resignation, retirement or death and not by termination, layoff, demotion or change in grade.
- N. This ordinance shall not confer upon the City of Los Angeles or any Agency, Board or Commission thereof any power not otherwise provided by law to determine the legality of any existing collective bargaining agreement and shall have application only to discriminatory employment practices by Contractors engaged in the performance of City Contracts.
- O. All Contractors subject to the provisions of this article shall include a similar provision in all subcontracts awarded for work to be performed under the Contract with the City and shall impose the same obligations including, but not limited to, filing and reporting obligations, on the Subcontractors as are applicable to the Contractor. Failure of the Contractor to comply with this requirement or to obtain the compliance of its Subcontractors with all such obligations shall subject the Contractor to the imposition of any and all sanctions allowed by law, including, but not limited to, termination of the Contractor's Contract with the City.

04 MANDATORY PROVISIONS PERTAINING TO NON-DISCRIMINATION IN EMPLOYMENT AND AFFIRMATIVE ACTION IN HIRING EMPLOYEES

Sec. 10.13. Mandatory Provisions Pertaining to Non-discrimination in Employment and Affirmative Action in Hiring Employees in the Performance of Work on Certain City Construction Contracts.

- A. Notwithstanding any other provision of this division to the contrary, every construction Contract involving an expenditure of \$25,000 or more of City funds, except in cases of urgent necessity, as provided in Section 371 of the Charter of the City of Los Angeles and except as provided in Section 10.9 of this Code, shall contain these provisions as part of the Contract. By affixing its signature on a Contract, the Contractor shall agree to adhere to these provisions for the duration of the Contract.
- B. Anticipated Utilization. At the request of the Awarding Authority or DAA, the Contractor must set forth anticipated minority, women, and all other staffing utilization by the Contractor and all Subcontractors on each project constructed by the City using those trades within the area of jurisdiction of the Los Angeles Building and Construction Trades Council within the City of Los Angeles in each work class and at all levels in terms of staff hours. The anticipated levels of minority, women and other staffing utilization shall be the levels at which each of those groups are represented in the relevant work force in the Greater Los Angeles Area as determined by the U.S. Bureau of the Census and made available by the DAA. Attainment of the anticipated levels of utilization may only be used as an indicia of whether the Contractor has complied with the requirements of this section and has applied its Affirmative Action Program in good faith and in a non-discriminatory manner. Failure to attain the anticipated levels of utilization shall not, by itself, disqualify the Contractor for award of a Contract or subject the Contractor to any sanctions or penalties.

In no event may a Contractor utilize the requirements of this section in such a manner as to cause or result in discrimination against any person on account of race, color, religion, national origin, ancestry, sex, sexual orientation, age, disability, marital status, domestic partner status or medical condition.

- C. The Contractor shall make a good faith effort with respect to apprenticeship and training programs to:
1. Recruit and refer minority, women and other employees to such programs;
 2. Establish training programs within the company and/or its affiliates that will prepare minority, women and other employees for advancement opportunities; and

00030.04 Cont'd.

3. Abide by the requirements of the Labor Code of the State of California with respect to the provision of apprenticeship job opportunities.
- D. No contract shall be executed until the appropriate Awarding Authority of the City of Los Angeles, and the Federal funding agency (if Federal funds are involved), has determined in writing that the Contractor has executed and filed with the Awarding Authority and the DAA any federal or state requirements.
- E. It shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for referral, exclusive or otherwise, failed to refer minority, women, or other employees.
- F. Subject to this subsection, the Contractor shall execute further forms and documentation at times and as may be required by the appropriate Awarding Authority.
- G. Where the Contractor has failed to comply with the requirements contained in this section, any and all sanctions allowed by law may be imposed upon the Contractor.
- H. The DAA shall be responsible for administering the City's Contract Compliance Program in the manner described in Sections 22.359 through 22.359.2 of this Code.
- I. All Contractors subject to the provisions of this section shall include a similar provision in all subcontracts awarded for work to be performed under the Contract with the City and shall impose the same obligations, including, but not limited to, filing and reporting obligations, on the Subcontractors as are applicable to the Contractor. Failure of the Contractor to comply with this requirement or to obtain the compliance of its Subcontractors with all such obligations shall subject the Contractor to the imposition of any and all sanctions allowed by law including, but not limited to, termination of the Contractor's Contract with the City.

05 EQUAL BENEFITS ORDINANCE COMPLIANCE AFFIDAVIT

- A Administered by City of Los Angeles Department of Public Works, Bureau of Contract Administration, Office of Contract Compliance, located at 1149 S. Broadway, Suite 300, Los Angeles, CA 90015, Phone; (213) 847-2625, email address: bca.eeoe@lacity.org.
- B Contractor must be certified as complying with Los Angeles Code Section 10.8.2.1, Equal Benefits Ordinance, prior to the execution of a City agreement. This form must be returned to City department awarding the agreement.

00030.05 Cont'd.

EBO COMPLIANCE**City of Los Angeles**

Department of Public Works Bureau of
Contract Administration Office of Contract
Compliance

1149 S. Broadway, Suite 300, Los Angeles, CA 90015
Phone: (213) 847-2625 E-mail: bca.eeoe@lacity.org

EQUAL BENEFITS ORDINANCE COMPLIANCE AFFIDAVIT

Prime contractors must certify compliance with Los Angeles Administrative Code (LAAC) Section 10.8.2.1 et seq. prior to the execution of a City agreement subject to the Equal Benefits Ordinance (EBO).

SECTION 1. CONTACT INFORMATION

Company Name: _____ RAMP Company ID _____

Company Address: _____

City: _____ State: _____ Zip: _____

Contact Person: _____ Phone: _____ E-mail: _____

Approximate Number of Employees in the United States: _____

Approximate Number of Employees in the City of Los Angeles: _____

SECTION 2. EBO REQUIREMENTS

The EBO requires City Contractors who provide benefits to employees with spouses to provide the same benefits to employees with domestic partners. Domestic Partner means any two adults, of the same or different sex, who have registered as domestic partners with a governmental entity pursuant to state or local law authorizing this registration, or with an internal registry maintained by the employer of at least one of the domestic partners.

Unless otherwise exempt, the contractor is subject to and shall comply with the EBO as follows:

- A. Contractor's operations located within City limits, regardless of whether there are employees at those locations performing Work on City Contract; and
- B. Contractor's operations located outside of City limits if the property is owned by City or City has a right to occupy the property, and if Contractor's presence at or on the property is connected to a Contract with City; and
- C. Contractor's employees located elsewhere in the United States, but outside of City Limits, if those employees are performing Work on City Contract.

Contractor must post a copy of the following statement in conspicuous places at its place of business available to employees and applicants for employment:

"During the performance of a Contract with City of Los Angeles, Contractor shall provide equal benefits to its employees with spouses and its employees with domestic partners."

00030.05 Cont'd.

SECTION 3. COMPLIANCE OPTIONS

I have read and understand the provisions of Equal Benefits Ordinance and have determined that this company shall comply as indicated below:

- ☐..... I have no employees.
- ☐..... I provide no benefits.
- ☐..... I provide benefits to employees only. Employees are prohibited from enrolling their spouse or domestic partner.
- ☐..... I provide equal benefits as required by City of Los Angeles EBO.
- ☐..... I provide employees with a "Cash Equivalent." Note: The "Cash Equivalent" is the amount of money equivalent to what your company pays for spousal benefits that are unavailable for domestic partners, or vice versa.
- ☐..... All or some employees are covered by a collective bargaining agreement (CBA) or union trust fund. Consequently, I shall provide Equal Benefits to all non-union represented employees, subject to the EBO, and shall propose to the affected unions that they incorporate the requirements of the EBO into their CBA upon amendment, extension, or other modification of the CBA.
- ☐..... Health benefits currently provided do not comply with the EBO. However, I shall make the necessary changes to provide Equal Benefits upon my next Open Enrollment period which begins on (Date) _____.
- ☐..... Our current company policies, i.e., family leave, bereavement leave, etc., do not comply with the provisions of the EBO. However, I shall make the necessary modifications within three (3) months from the date of this affidavit.

SECTION 4. DECLARATION UNDER PENALTY OF PERJURY

I understand that I am required to permit City of Los Angeles access to and upon request, must provide certified copies of all company records pertaining to benefits, policies and practices for the purpose of investigation or to ascertain compliance with Equal Benefits Ordinance. Furthermore, I understand that failure to comply with LAAC Section 10.8.2.1 et seq., Equal Benefits Ordinance may be deemed a material breach of any City contract by Awarding Authority. Awarding Authority may cancel, terminate or suspend in whole or in part, the contract; monies due or to become due under a contract may be retained by City until compliance is achieved. City may also pursue any and all other remedies at law or in equity for any breach. City may use the failure to comply with Equal Benefits Ordinance as evidence against Contractor in actions taken pursuant to the provisions of the LAAC Section 10.40, et seq., Contractor Responsibility Ordinance.

_____ shall comply with Equal Benefits Ordinance requirements

Company Name

as indicated above prior to executing a contract with City of Los Angeles and shall comply for the entire duration of the contract(s).

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am authorized to bind this entity contractually.

Executed this ____ day of _____, in the year 20____, at _____, _____
(City) (State)

Signature

Mailing Address

Name of Signatory (please print)

City, State, Zip Code

Title

EIN/TIN

Form OCC/EBO-Affidavit (Rev 6/21/12)

06 SMALL BUSINESS ENTERPRISE PROGRAM (SBEP)

A POLICY STATEMENT

City of Los Angeles Harbor Department is committed to creating an environment that provides all individuals and businesses open access to the business opportunities available at Port of Los Angeles in a manner that reflects the diversity of City of Los Angeles. Port of Los Angeles Small Business Enterprise Program (SBEP or the "Program") was created to provide additional opportunities for small businesses to participate in any and all contracts.

It is the policy of Harbor Department to solicit participation in the performance of all service contracts by all individuals and businesses, including but not limited to, small business enterprises (SBEs), very small business enterprises (VSBEs), women-owned businesses (WBEs), minority-owned businesses (MBEs), and disabled veterans business enterprises (DVBE). Program shall allow Department to target more effectively small and very small business participation (including MBEs, WBEs, and DVBEs). It is also the intent of Department to make it easier for small and very small businesses to participate in Department contracts by providing education and assistance on how to do business with City, including, but not limited to, ensuring that payments to small and very small businesses are processed in a timely manner.

City's Contracts Management and Opportunities Database, Regional Alliance Marketplace for Procurement (RAMP) is a free service provided by the Mayor's Office of Economic Development and the Minority Business Opportunity Committee. In order to ensure the highest participation of SBE/VSBE/MBE/WBE/DVBEs, all Bidders shall utilize RAMP, at <https://www.rampla.org/s/>, to outreach to potential subcontractors and suppliers. Bidders shall go on RAMP and notify subcontractors and suppliers that they shall be bidding and are looking for subcontractors and suppliers.

Bidders must be registered on RAMP at time of bid. Subcontractors and suppliers must be registered on RAMP within 30 Calendar Days after bids are closed.

00030.06 Cont'd.

Bidders, subcontractors, and suppliers identified in the bid submittal as SBE or VSBE must be certified at time of bid, as applicable. Bidders, subcontractors, and suppliers must submit a copy of SBE certificate or VSBE certificate from the agency utilized to obtain certification as SBE or VSBE to Engineer within 4 Business Days of close of bids in order to be acknowledged within the bid as SBE or VSBE. Refer to <https://kentico.portoflosangeles.org/getmedia/aea536e1-5d48-440a-8857-c55907e3dc74/contracting-proprietary-sbe-cert-application> for certification instructions.

Within 30 Calendar Days after close of bids, Bidders, subcontractors, and suppliers identified in the bid submittal as SBE or VSBE must be verified on RAMP as SBE (Proprietary) or VSBE (Harbor), as applicable.

B SMALL BUSINESS REQUIREMENT

SBEP, which has a very small business enterprise component, is a results-oriented program, requiring contractors who receive contracts from Department to perform outreach and utilize certified small and very small businesses.

Any bid submitted which fails to meet the small and very small business requirement as shown in NOTICE INVITING BIDS Section shall result in rejection of the bid. If no bids are submitted that meet the small and very small business participation identified above, all bids shall be rejected by Department.

For purposes of calculating small and very small business participation in order to meet the requirement, the following shall apply:

- 1 At the time of bid, SBE and VSBE participation levels shall be based on the percentage of total Contract amount (including Allowance Items) to be paid to SBE and VSBE subcontractors and suppliers.
- 2 If the prime contractor is an SBE, or VSBE, small or very small business participation is shown as 100%.
- 3 100% of payments to SBE or VSBE truckers and suppliers.
- 4 Final SBE and VSBE participation levels shall be based on the percentage of final Contract amount, including the utilized Allowance Item amounts.

00030.06 Cont'd.

Definitions:

Small Business Enterprise (SBE): Harbor Department, and other City of Los Angeles Proprietary Departments, defines an SBE as an independently owned and operated business that is not dominant in its field and meets criteria set forth by the Small Business Administration in Title 13, Code of Federal Regulations, Part 121, generally meeting SBA established size standards for most industries in the economy. Size standards can be accessed on the SBA Website at www.sba.gov/ca/la.

Very Small Business Enterprise (VSBE): Harbor Department, and other City of Los Angeles Proprietary Departments, defines a VSBE based on the State of California's micro-business definition which is (1) a small business that has average annual gross receipts of \$5,000,000 or less within the previous 3 years, or (2) a small business manufacturer with 25 or fewer employees.

A Minority Business Enterprise (MBE) is defined as a business in which a minority owns and controls at least 51% of the business. A Woman Business Enterprise (WBE) is defined as a business in which a woman owns and controls at least 51% of the business. For the purpose of this Project, a minority includes:

- (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 or other Spanish Culture or origin, regardless of race);
- (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, The Indian Subcontinent, or the Pacific Islands); and
- (4) American Indian or 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).

A Disabled Veteran Business Enterprise (DVBE) is defined as a business in which a disabled veteran owns at least 51 percent of the business, and the daily business operations are managed and controlled by one or more disabled veterans.

00030.06 Cont'd.

An OBE (Other Business Enterprise) is any enterprise that is not a SBE, VSBE, DVBE, MBE, or WBE.

Bidder shall be responsible for determining SBE and VSBE status of its subcontractors and suppliers for purposes of meeting the small and very small business requirements. Bidders, subcontractors, and suppliers identified in the bid submittal as SBE or VSBE must be certified at time of bid, as applicable Bidders, subcontractors, and suppliers must submit a copy of SBE certificate or VSBE certificate from the agency utilized to obtain certification as SBE or VSBE to Engineer within 4 Business Days of close of bids in order to be acknowledged within the bid as SBE or VSBE. All business participation shall be determined by the percentage paid to SBEs and VSBEs of the total amount of compensation under Agreement.

Contract Requirements:

Bidder shall complete, sign, notarize, and submit as part of the bid Contractor Ownership/RAMP Outreach/Local Business Enterprise Affidavit form included in Specifications as Subsection 00030.11 with a complete description of Work or supplies to be provided by each and the dollar amount of each such transaction entered in the online subcontractor list provided on CDBON and on the Supplier List in Subsection 00660.03 of SBE/VSBE/MBE/WBE/DVBE/OBE/LBE INFORMATION Section. Subcontractors and suppliers shall complete, sign, notarize, and submit Subcontractor/Supplier Ownership and Local Business Enterprise Affidavit and Contractor/Supplier Information Form included in Subsection 00660.01 of SBE/VSBE/MBE/WBE/DVBE/OBE/LBE INFORMATION Section for each subcontractor and supplier by the time required in Subsection 00012.10 of NOTICE INVITING BIDS Section with a complete description of Work or supplies to be provided by each and the dollar amount of each such transaction. Contractor/Supplier Information Form, when signed, shall signify Contractor's intent to comply with SBE requirement. Within 30 Calendar Days after bids are closed, Harbor Department shall verify SBE and VSBE status of Bidders, subcontractors, and suppliers.

Contractor shall not substitute an SBE or VSBE firm without obtaining prior approval of City and amending its Contract. A request for substitution must be based upon demonstrated good cause. If substitution is permitted, Contractor shall endeavor to make an in-kind substitution for the substituted SBE or VSBE.

00030.06 Cont'd.

During the performance of Contract, Contractor shall complete and submit to Engineer, a Monthly Subcontractor/Supplier Monitoring Report included in Specifications as Subsection 00030.11A. Engineer shall make the report available to Contractor in electronic/digital format. The completed report shall be submitted to Engineer on the form provided in Subsection 00030.11A of this Section. Among other information, the completed form shall reflect payments made to all (SBE/VSBE/MBE/WBE/DVBE/OBE) subcontractors and suppliers to date. The subcontractors or suppliers listed in Monthly Subcontractor/Supplier Monitoring Report shall be the same as those entered in the online subcontractor list provided on CDBON and submitted as part of the bid. All subcontractors/ suppliers shall be listed on the report, regardless of level of activity to date (even if payment to date is zero). The correctly completed report shall be submitted by Contractor at the beginning of each month.

In the event of Contractor's noncompliance during the performance of Contract, Contractor shall be considered in material breach of Contract. In addition to any other remedy available to City under Contract or by operation of law, City may:

- 1 Withhold invoice payments to Contractor until noncompliance is corrected, and assess the costs of City's audit of books and records of Contractor and its subcontractors and suppliers.
- 2 Disqualify Contractor from participation in City contracts for a period of up to five (5) years in the event Contractor falsifies or misrepresents information contained in any form or other willful noncompliance as determined by City.

07 CONTRACT SOLICITATIONS CHARTER SECTION 470 (c) (12)

- A Persons who submit a bid for this solicitation (Bidders) are subject to Charter Section 470 (c) (12) and related ordinances. As a result, Bidders may not make campaign contributions to and or engage in fundraising for certain elected City officials or candidates for elected City office from the time they submit the bid until either the contract is signed by City of Los Angeles, or the bid is withdrawn by Bidder, or City rejects all bids, whichever is earlier. The prohibitions continue for 12 months after Contract is signed by City for successful Bidder, and principals, subcontractors of at least \$100,000, and principals of such subcontractors.
- B Bidders must submit signed CEC Form 50 through CDBON at the time of bid. Bids submitted without signed CEC Form 50 shall be deemed nonresponsive. The original signature copy shall be submitted with the 4-day documents in conformance with NOTICE INVITING BIDS Section, Subsection 09.
- C Bidders must submit signed CEC Form 55 (which requires bidders to identify their principals) through CDBON at the time of bid. The original signature copy shall be submitted with the 4-day documents in conformance with NOTICE INVITING BIDS Section, Subsection 09. Bidders shall notify their principals and subcontractors in writing of the restrictions and include the notice in contracts with subcontractors. Bidders shall also identify their subcontractors performing \$100,000 or more in Work on Contract, and the principals of these subcontractors. Bidders are only required to identify vendors or suppliers who provide additional services and \$100,000 or more in materials or equipment. Bidders are not required to identify vendors or suppliers if no services are provided. Bids submitted without signed CEC Form 55 that, at a minimum, contains required information for Bidder and its principals shall be deemed nonresponsive. If required information for any subcontractors and principals of subcontractors is not included on CEC Form 55 at the time of bid, updated CEC Form 55 containing all required information shall be submitted by apparent low Bidder, or other Bidders when requested by Engineer, within 4 Business Days of the date and time of deadline for bid submittal or the bid shall be deemed nonresponsive.
- D Bidders who fail to comply with City law may be subject to penalties, termination of Contract, and debarment. Additional information regarding these restrictions and requirements may be obtained from City Ethics Commission at (213) 978-1960 or <https://ethics.lacity.org/>.
- E CEC Forms 50 and 55 may be obtained from City Ethics Commission at <https://ethics.lacity.org/contracts/bidders/>.

08 IRAN CONTRACTING ACT OF 2010

- A California Legislature adopted the Iran Contracting Act of 2010 to respond to policies of Iran in a uniform fashion (PCC § 2201(q)). Iran Contracting Act prohibits Bidders engaged in investment activities in Iran from submitting bids for, or entering into or renewing contracts with public entities for goods and services of one million dollars (\$1,000,000) or more (PCC § 2203(a)). In accordance with California Public Contract Code Sections 2200-2208, Bidders submitting bids for, entering into, or renewing contracts with Harbor Department for goods and services estimated at \$1,000,000 or more are required to complete, sign, and submit Iran Contracting Act of 2010 Compliance Affidavit included as Subsection 00030.09 of this Section.

09 IRAN CONTRACTING ACT OF 2010 COMPLIANCE AFFIDAVIT (California Public Contract Code Sections 2200-2208)

California Legislature adopted Iran Contracting Act of 2010 to respond to policies of Iran in a uniform fashion (PCC § 2201(q)). Iran Contracting Act prohibits Bidders engaged in investment activities in Iran from submitting bids for, or entering into or renewing contracts with public entities for goods and services of one million dollars (\$1,000,000) or more (PCC § 2203(a)). A Bidder who "engages in investment activities in Iran" is defined as either:

- A Bidder providing goods or services of twenty million dollars (\$20,000,000) or more in the energy sector of Iran, including provision of 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
- A Bidder that is a financial institution (as that term is defined in 50 U.S.C. § 1701) that extends twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that person shall use the credit to provide goods or services in the energy sector in Iran and is identified on a list created by the California Department of General Services (DGS) pursuant to PCC § 2203(b) as a person engaging in the investment activities in Iran.

Bidder shall certify that at the time of submitting a bid for a new contract or for the renewal of an existing contract, he or she is not identified on the DGS list of ineligible businesses or persons and that Bidder is not engaged in investment activities in Iran in violation of Iran Contracting Act of 2010.

California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts (PCC § 2205).

To comply with Iran Contracting Act of 2010, Bidder shall complete and sign ONE of the options shown below and submit with the bid.

OPTION #1: CERTIFICATION

I, the official named below, certify that I am duly authorized to execute this certification on behalf of Bidder or financial institution identified below, and that Bidder or financial institution identified below is not on the current DGS list of persons engaged in investment activities in Iran and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person or vendor, for 45 days or more, if that other person or vendor shall use the credit to provide goods or services in the energy sector in Iran and is identified on the current DGS list of persons engaged in investment activities in Iran.

Name of Bidder/Financial Institution (Printed): _____

Signed by: _____
(Authorized Signature)

(Printed Name)

(Title of Person Signing)

OPTION #2: EXEMPTION

Pursuant to PCC § 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 submit a bid for, or enter into, or renew, a contract for services. If Bidder or financial institution identified below has obtained an exemption from the certification requirement under Iran Contracting Act of 2010, Bidder or financial institution shall complete and sign below and attach documentation demonstrating the exemption approval.

Name of Bidder/Financial Institution (Printed): _____

Signed by: _____ (Authorized Signature)

(Printed Name)

(Title of Person Signing)

10 LOCAL BUSINESS PREFERENCE PROGRAM (LBPP)

- A LBPP is based on findings that significant benefits are associated with local business preference programs. These benefits include an increase in local jobs and expenditures in the local private sector. Recognizing that (1) Harbor Department operations impact the five regional counties, especially the movement of goods throughout the southland; (2) Harbor Department conducts business with companies in all 5 counties; (3) having these businesses in close proximity to Port of Los Angeles, makes port operations more efficient; (4) these counties are currently experiencing high commercial real estate vacancy rates and high unemployment rates, LBPP aims to encourage businesses to compete for City contracting opportunities, to locate operations in the area, to encourage existing Local Business Enterprises (LBEs) to refrain from relocating to less expensive areas, and to increase local jobs and expenditures.
- B Exemption:
- 1 Any contracts that involve an expenditure of state or federal grant funds, or contracts with any funds not entirely within the control of Harbor Department are exempt from LBPP, as well as any other contract when it is in the best interest of Harbor Department to exempt such contract prior to the date and time of deadline for bid submittal. Refer to NOTICE INVITING BIDS Section for information on whether LBPP applies to Project.
- C Local Business Preference Program (LBPP): The following sets forth the specific requirements of LBPP:
- 1 Los Angeles Harbor Department defines an LBE as:
- a A business headquartered within Los Angeles, Orange, Riverside, San Bernardino, or Ventura Counties. "Headquartered" shall mean that the business physically conducts and manages all of its operations from a location in the above-named counties; or
- b A business that has at least 50 full-time employees, or 25 full-time employees for specialty marine contracting firms, working within the boundaries of Los Angeles, Orange, Riverside, San Bernardino, or Ventura Counties. A specialty marine contracting firm is a firm whose work is marine improvements, which is defined as work over, under or adjacent to water, such as dredging, installing wharves, piles, electrical above water, water systems above water, and the like.

00030.10 Cont'd.

2 Local Business Preference:

- a LBPP allows LBE bidders to receive an 8 percent preference for any contract opportunity that is competitively awarded. The local preference is applicable to all construction contracts greater than \$150,000. When applying the preference to construction contracts awarded based on low bid, the total price bid by an LBE shall be reduced by 8 percent. The reduced bid amount shall be deemed the amount bid by that bidder; however, the resulting contract price shall be the amount bid by the successful bidder prior to allocating the local preference percentage. The maximum preference shall not exceed \$1,000,000.
- b Below is an example of how the local preference is applied to contracts awarded on a low-bid basis:

	Non-local Firm	Local Firm A	Local Firm B
Original Bid	\$10,500,000	\$11,000,000	\$12,750,000
8% Preference	N/A	(\$880,000)	(\$1,000,000) *
Final Bid	\$10,500,000	\$10,120,000	\$11,750,000

*Maximum Preference

In the example above, Local Firm A was the lowest bidder after applying the local preference. Although the final bid amount is \$10,120,000, Harbor Department would award a contract based on the original bid in the amount of \$11,000,000. Harbor Department would have expended \$500,000 more on the project as a result of the local preference, when compared to the bid submitted by the non-local firm.

3 Local Subcontractor/ Supplier Preference:

- a LBPP allows non-local bidders to receive up to a maximum 5 percent preference if the bidder identifies local subcontractors or suppliers that shall perform Work under Contract. LBPP allows for 1 percent preference, up to a maximum of 5 percent, for every 10 percent of Work that is subcontracted to or supplied by LBEs. The maximum preference shall not exceed \$1,000,000.

00030.10 Cont'd.

- b LBPP applies only to first tier local subcontractors. LBPP applies also to local suppliers if they are first tier.
- c The following is an example of non-local bidders with LBE subcontractors as applied to contracts awarded on a low bid basis.

00030.10 Cont'd.

	<u>Non-Local Firm A</u>	<u>Non-Local Firm B</u>	<u>Non-Local Firm C</u>	<u>Local Firm D</u>
Original Bid	\$13,900,000	\$13,600,000	\$14,200,000	\$14,500,000
Preference %	3%	0%	5%*	8%
Preference	(\$417,000)	\$0	(\$710,000)	(\$1,000,000)*
Final Bid	\$13,483,000	\$13,600,000	\$13,490,000	\$13,500,000

*Maximum preference

		<u>Sub-bid</u>	<u>Percent of bid</u>	<u>Percent Preference</u>
<u>Firm A's Subs</u>	LBE Sub A1	\$1,500,000	10.79%	
	LBE Sub A2	\$2,000,000	14.39%	
	LBE Sub A3	\$1,600,000	11.51%	
	Subtotal	\$5,100,000	36.69%	3%
	Non LBE Sub A4	\$1,150,000	8.27%	
	Non LBE Sub A5	\$700,000	5.04%	
	Subtotal	\$1,850,000	13.31%	
portion by prime		\$6,950,000	50.00%	
	TOTAL	\$13,900,000	100.00%	
	Adjusted Bid	\$13,483,000		

		<u>Sub-bid</u>	<u>Percent of bid</u>	<u>Percent Preference</u>
<u>Firm B's Subs</u>	Non LBE Sub B1	\$1,020,000	7.50%	
	Non LBE Sub B2	\$1,110,000	8.16%	
	Non LBE Sub B3	\$990,000	7.28%	
	Non LBE Sub B4	\$3,680,000	27.06%	
	Subtotal	\$6,800,000	50.00%	0%
portion by prime		\$6,800,000	50.00%	
	TOTAL	\$13,600,000	100.00%	
	Adjusted Bid	\$13,600,000		

		<u>Sub-bid</u>	<u>Percent of bid</u>	<u>Percent Preference</u>
<u>Firm C's Subs</u>	LBE Sub C1	\$900,000	6.34%	
	LBE Sub C2	\$1,000,000	7.04%	
	LBE Sub C3	\$2,390,000	16.83%	
	LBE Sub C4	\$4,230,000	29.79%	
	Subtotal	\$8,520,000	60.00%	5%
portion by prime		\$5,680,000	40.00%	
	TOTAL	\$14,200,000	100.00%	
	Adjusted Bid	\$13,490,000		

00030.10 Cont'd.

- d In the previous example, Non-Local Firm A was the lowest bidder after applying the preference for local subcontractors. Although the final bid amount is \$13,483,000, Harbor Department would award a contract based on the original bid in the amount of \$13,900,000. Harbor Department would have expended \$300,000 more on the project as a result of the local preference, when compared to Non-Local Firm B. Note that fractions of a percent are rounded down when calculating percent preference.
- D In order for Harbor Department staff to determine the appropriate LBE preference, Bidders shall complete, sign, notarize and submit Contractor Ownership/RAMP Outreach/Local Business Enterprise Affidavit in Subsection 00030.11 of BIDDING DOCUMENTS Section, fill out subcontractor list online provided on CDBON, fill out Contractor/Supplier Information Form in Subsection 00660.01 and complete, sign, notarize and submit Subcontractor/Supplier Ownership and Local Business Enterprise Affidavit in Subsection 00660.02.

In the event Contractor claims a Local Business or local subcontractor/supplier preference in its bid and is awarded Contract, if at any time during the term of Contract, Contractor fails to remain in compliance with the requirements of the claimed preference, Contractor shall be considered in material breach of Contract. In addition to any other remedy available to Department under Contract or by operation of law, Department may withhold payments to Contractor or recover previous payments in the amount of the preference claimed in Contractor's bid and assess the costs of Department's audit of books and records of Contractor and its subcontractors/suppliers. In the event Contractor falsifies or misrepresents information contained in any form or other willful noncompliance as determined by Department, Department may disqualify Contractor from participation in Department contracts for a period of up to five years.

11 CONTRACTOR OWNERSHIP / RAMP OUTREACH / LOCAL BUSINESS ENTERPRISE AFFIDAVIT

AFFIDAVIT

"The undersigned declares under penalty of perjury pursuant to the laws of the State of California that the following is true and correct and include all material information necessary to identify and explain the operations of

Name of Firm

as well as the ownership thereof. Further, the undersigned agrees to provide Harbor Department, upon request, complete and accurate information regarding ownership in the named firm, and all of its domestic and foreign affiliates, any proposed changes of the ownership and to permit the audit and examination of firm ownership documents, and the ownership documents of all of its domestic and foreign affiliates, in association with this Contract."

Furthermore, the undersigned certifies that it has utilized RAMP to outreach to potential SBE/VSBE/MBE/WBE/DVBEs for potential subcontracting opportunities associated with this bid.

Please indicate the ownership of your company as defined in Subsection 00030.06 of BIDDING DOCUMENTS Section:

| Small Business Enterprise (SBE) | Yes/No (Circle One)

| Very Small Business Enterprise (VSBE) | Yes/No (Circle One)

Is Your Firm an MBE Yes/No WBE Yes/No DVBE Yes/No OBE Yes/No (Circle as appropriate)

Local Business Preference Program: Please indicate the local business enterprise (LBE) status of your company as defined in Subsection 00030.10 of BIDDING DOCUMENTS Section:

LBE (Circle One)
Non-LBE (Circle One)

If you are a non-LBE, please indicate below whether you are claiming a Local Subcontractor Preference (as defined in Subsection 00030.10 of BIDDING DOCUMENTS Section) and, if so, the preference percentage claimed (maximum preference of 5 percent).

Local Subcontractor Preference: _____ percent preference (enter percent claimed)

_____ Not claiming Local Subcontractor Preference (check if not claiming preference)

Signature _____ Title _____

Printed Name _____ Date Signed _____

NOTARY

(State of California)

County of _____)

00030.11 Cont'd.

On _____ before me, _____
Date Here insert Name and Title of the Officer

personally appeared _____
Name(s) of Signer(s)

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

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

WITNESS my hand and official seal.

Place Notary Seal Above

Signature _____
Signature of Notary Public

11A MONTHLY SUBCONTRACTOR / SUPPLIER MONITORING REPORT

SAMPLE MONTHLY SUBCONTRACTOR/SUPPLIER MONITORING REPORT

Instructions: Please indicate the SBE/VSBE/MBE/WBE/OBE/DVBE participation levels achieved for the month of _____ covered by the referenced contract number.

Contract No.	Spec. No.	Division	Contract Administrator
Contractor	Group*		Contract Title/Project
Original Contract Amount	\$10,000,000.00	Contract Start Date	Contract End Date
Total Earned Value to Date	\$ 6,000,000.00		

Original Proposed Subcontractor Percentages SBE 22.00% VSBE 7.00% MBE 20.00% WBE 20.00% OBE 60.00% DVBE 0.00%
Contract-required minimum percentages (in parentheses) (21%) (6%)
The VSBE and Total SBE min-required percentages above, are not additive. The Total SBE percentage includes VSBE participation.

					PROPOSED		ACTUALS		
	Name of Subcontractor	Type of Work Performed	SBE/VSBE	MBE/WBE/OBE/DVBE	Original Proposed Amount	Original Proposed Percentage	Earned Value to Date	Earned Value to Date Percentage	Total Earned Value Percentage
1	Construction Firm A	Asphalt Paving	VSBE, SBE	MBE, WBE	\$300,000.00	3.00%	\$150,000.00	50.00%	2.50%
2	Construction Firm B	Demolition	VSBE, SBE	OBE	\$200,000.00	2.00%	\$25,000.00	12.50%	0.42%
3	Supplier No. 1	Concrete Piles	VSBE, SBE	OBE	\$200,000.00	2.00%	\$75,000.00	37.50%	1.25%
VSBE Subtotal:					\$700,000.00	7.00%	\$250,000.00	35.71%	4.17%
1	Construction Firm C	Low Voltage Electrical	SBE	WBE, DVBE	\$500,000.00	5.00%	\$100,000.00	20.00%	1.67%
2	Supplier No. 2	Precast Concrete Pipe	SBE	MBE	\$1,000,000.00	10.00%	\$250,000.00	25.00%	4.17%
3			SBE			0.00%		#DIV/0!	0.00%
SBE Subtotal (Exclusive of VSBE):					\$1,500,000.00	15.00%	\$350,000.00	23.33%	5.83%
Total SBE (Inclusive of VSBE):					\$2,200,000.00	22.00%	\$600,000.00	27.27%	10.00%
1	Construction Firm D	Concrete Pumping	No	OBE	\$500,000.00	5.00%	\$400,000.00	80.00%	6.67%
2	Construction Firm F	Concrete Sawing	No	MBE	\$500,000.00	5.00%	\$500,000.00	100.00%	8.33%
3			No			0.00%		#DIV/0!	0.00%
4			No			0.00%		#DIV/0!	0.00%
5			No			0.00%		#DIV/0!	0.00%
Non-SBE Total:					\$1,000,000.00	10.00%	\$900,000.00	90.00%	15.00%

Directions:
Original Proposed Percentage =
Earned Value to Date Percentage =
Total Earned Value Percentage =

Original Proposed Amount / Original Contract Amount
Earned Value to Date / Original Proposed Amount
Earned Value to Date / Total Earned Value to Date

*Group = SBE / VSBE / MBE / WBE / OBE / DVBE

00030.11A Cont'd.

MONTHLY SUBCONTRACTOR/SUPPLIER MONITORING REPORT

Instructions: Please indicate the SBE/VSBE/MBE/WBE/OBE/DVBE participation levels achieved for the month of _____ covered by the referenced contract number.

Contract No.	Spec. No.	Division	Contract Administrator
Contractor	Group*		Contract Title/Project
Original Contract Amount	Contract Start Date	Contract End Date	
Total Earned Value to Date			
Original Proposed Subcontractor Percentages	SBE 0.00%	VSBE 0.00%	MBE 0.00%
Contract-required minimum percentages (in parentheses)	(0%)	(0%)	WBE 0.00%
			OBE 0.00%
			DVBE 0.00%

The VSBE and Total SBE min-required percentages above, are not additive. The Total SBE percentage includes VSBE participation.

					PROPOSED		ACTUALS		
	Name of Subcontractor	Type of Work Performed	SBE/VSBE	MBE/WBE/OBE /DVBE	Original Proposed Amount	Original Proposed Percentage	Earned Value to Date	Earned Value to Date Percentage	Total Earned Value Percentage
1			VSBE, SBE						
2			VSBE, SBE						
3			VSBE, SBE						
VSBE Subtotal:									

1			SBE						
2			SBE						
3			SBE						

SBE Subtotal (Exclusive of VSBE):

Total SBE (Inclusive of VSBE):

1			No						
2			No						
3			No						
4			No						
5			No						

Non-SBE Total:

Directions:
Original Proposed Percentage =
Earned Value to Date Percentage =
Total Earned Value Percentage =
*Group = SBE / VSBE / MBE / WBE / OBE / DVBE

Original Proposed Amount / Original Contract Amount
Earned Value to Date / Original Proposed Amount
Earned Value to Date / Total Earned Value to Date

12 PROPOSAL

Los Angeles, California

To Board of Harbor Commissioners:

The undersigned, having carefully examined Contract Documents for Specification No. 2838 at Port of Los Angeles, and having personally visited the site of Work and having become familiar with the conditions based upon the site visit and review of the reference materials, hereby proposes to furnish all materials and perform all Work required to complete Project in accordance with Contract Documents, within the time set forth in Contract for the Grand Total stated in CDBON's bid item online form.

The undersigned represents all Work indicated in Contract Documents is included within the scope of Work of Contract, is included in the Grand Total for the item(s) stated in the online form, and shall not be construed to be extra Work for which extra compensation can be claimed.

The undersigned has carefully checked all figures inserted in the online form and understands that Board shall not be responsible for any errors or omissions on the part of the undersigned in making the bid.

The undersigned agrees upon acceptance of the bid for all Work indicated on Contract Documents, to enter into and execute an agreement, of which the documents listed in the table of contents of said Specification No. 2838 shall be made a part, at the Grand Total stated in the online form, and to furnish and execute such bonds and insurance as required.

The undersigned furthermore agrees that in case of default in execution of such agreement, or in furnishing the required bonds, the security accompanying this Proposal and the money payable thereon shall be forfeited and remain the property of Department. Such forfeiture shall not preclude recovery of any sum over and above the amount posted or guaranteed to which Department sustains damage by reason of such default or failure to contract.

The undersigned agrees that Board reserves the right, in its sole discretion, to accept or reject the bid, without price escalation, at any time within ninety (90) days after date and time of deadline to submit bids.

00030.12 Cont'd.

The undersigned acknowledges receipt of all addenda and accepts all conditions contained therein.

Contractor's License No. _____ Expiration Date _____

By _____
Signature

Signature

Address _____

Contractor declares that its authorized Taxpayer Identification Number (TIN) is _____. The above signed understands no payments shall be made under Contract without a valid TIN number.

Bidder Is* _____

If a partnership, state names of partners. If a corporation, state names of president and secretary.

The representations made herein are made under penalty of perjury.

*Corporation, Partnership, Limited Partnership, Individual

*If Bidder is a corporation, bid must be signed by a person authorized to do so by bylaw or resolution of that corporation.

*If Bidder is a partnership, bid must be signed by all partners unless bid is accompanied by proof that signing partner(s) is (are) authorized to bind partnership.

00030.12 Cont'd.

LOS ANGELES HARBOR DEPARTMENT
HEADQUARTERS LOCATION FORM

AT THE REQUEST OF A LOS ANGELES CITY COUNCIL MOTION, ALL BIDDERS SHALL SUBMIT THE FOLLOWING INFORMATION AT THE TIME OF BID OR PROPOSAL SUBMITTAL. THIS IS FOR INFORMATION ONLY AND SHALL IN NO WAY AFFECT CONTRACT SELECTION PROCESS.

DATE: _____ SPECIFICATION NO. 2838PROJECT TITLE: TERMINAL ISLAND FACILITIES
DEMOLITION AND IMPROVEMENTS

COMPANY NAME: _____

CONTACT PERSON: _____

COMPANY HEADQUARTERS ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

COMPANY LOCATION ADDRESS _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NUMBER: _____ NUMBER OF EMPLOYEES: _____

PERCENTAGE OF EMPLOYEES WHO RESIDE IN THE CITY OF LOS ANGELES %

NAME/TITLE

13 BID PROPOSAL LINE ITEMS

The bid proposal line items are located on Construction Division Business Opportunities Network (CDBON) online system. Enter bidder's unit prices in the online form. The extended prices for each bid item are automatically calculated by CDBON's online system based on unit prices entered. The Grand Total is automatically summed from the extended prices. A printed version of the bid proposal line items is included at the end of this Subsection of BIDDING DOCUMENTS Section of Specifications for information only.

CONTINGENCY ITEM(S)

Work described in the contingency item(s) in the online form may or may not be necessary depending on conditions discovered in the field after Contract award. If Engineer determines that field conditions justify Work listed in the contingency items, the prices for the contingency items shall be used to adjust Contract amount for Work ordered by Engineer.

ALLOWANCE ITEM(S)

Work described in the allowance item(s) in the online form may or may not be necessary depending on conditions discovered in the field after Contract Award. If field conditions justify Work listed in the allowance items, Engineer shall issue a written authorization to proceed with Work item(s) described in the online form. Work under allowance items is exclusive of Work required elsewhere in Contract Documents unless specifically referenced. All Work performed under these allowance items shall be performed either on a negotiated cost basis prior to performing Work in accordance with the provisions of Subsection 01000.35 "Authority for Adjustments", or on a Time and Material basis in accordance with the provisions of Subsection 01000.34 "Cost-Plus Change Order Work (Change Orders)" of GENERAL CONDITIONS Section. Upon completion of Contract, any unused allowance remaining under each allowance bid item shall be credited back to Department.

Award: Award, if made, shall be made to a single Contractor. The lowest bidder shall be based on the sum of all the items for which a bid is requested, including all contingency items regardless of whether all of those items are actually awarded, and Local Business Preference indicated below. The awarded Contractor's bid results provided in CDBON online system shall be inserted at the end of Subsection 00030.13 and shall become part of any Contract awarded.

00030.13 Cont'd.

LOCAL BUSINESS PREFERENCE (Not to Exceed \$1,000,000. Reduction amount shall be applied, if necessary, by Harbor Department)

Prime is Local Business (8 percent preference)
OR

Prime is not a Local Business but subcontractor(s) or supplier(s)
is(are) Local Business(es) (up to 5 percent preference. Not to Exceed
\$1,000,000)

The subcontractor percent preference shall be applied by Department as
described in Subsection 00030.10.

REDUCED BID AMOUNT (The reduced bid amount shall be used for Award purposes)

Section	Item Code	Item Description	Unit Of Measure	Quantity	Unit Price
Main Bid	1	Lump Sum Construction: For furnishing transportation, labor, materials, equipment, mobilization, demobilization, and incidentals necessary to complete Work, exclusive of Work covered by items 2 through the last item of Bid Proposal Line Items	Lump Sum	1	
Main Bid	2	Miscellaneous Demolition and Removals: For furnishing transportation, labor, materials, and equipment to perform miscellaneous demolition, disposal, and removals including but not limited to removal of universal waste including electronic waste	Lump Sum	1	
Main Bid	3	Electrical System: For furnishing transportation, labor, materials, and equipment to construct the electrical system including lighting, product's manufacturer's certification, quality assurance, warranty verification, and training, permits, and testing	Lump Sum	1	
Main Bid	4	Low Impact Development (LID) Trenches: For furnishing transportation, labor, materials, and equipment to construct low impact development (LID) storm drain improvements and related appurtenances, including additions to or deductions from the approximate quantity stipulated	Linear Feet	2550	
Main Bid	5	Storm Drainage System: For furnishing transportation, labor, materials, and equipment to construct storm drainage system	Lump Sum	1	
Main Bid	6	Chain Link Fence (8-Feet High): For furnishing transportation, labor, materials, and equipment to furnish and install 8 feet high chain link fence with 3-strand barbed wire, including additions to or deductions from the approximate quantity stipulated	Linear Feet	2500	
Main Bid	7	Chain Link Fence (6-Feet High): For furnishing transportation, labor, materials, and equipment to furnish and install 6 feet high chain link fence with 3-strand barbed wire, including additions to or deductions from the approximate quantity stipulated	Linear Feet	100	

Main Bid	8	Chain Link Fence on K-Rail: For furnishing transportation, labor, materials, and equipment to furnish and install chain link fence on K-rail, including additions to or deductions from the approximate quantity stipulated	Linear Feet	800	
Main Bid	9	Rolling Chain Link Gate: For furnishing transportation, labor, materials, and equipment to furnish and install rolling chain link gate V track 25 feet wide by 8 feet high with 1-foot-high barbed wire extension, including additions to or deductions from the approximate quantity stipulated	Each	2	
Main Bid	10	Asphalt Concrete Pavement: For furnishing transportation, labor, materials, and equipment to furnish and place asphalt concrete pavement including tack coat, including additions to or deductions from the approximate quantity stipulated	Tons	1100	
Main Bid	11	Crushed Miscellaneous Base: For furnishing transportation, labor, materials, and equipment to load, unload, place, and compact crushed miscellaneous base, including additions to or deductions from the approximate quantity stipulated	Cubic Yards	8650	
Main Bid	12	Stabilized Crushed Miscellaneous Base: For furnishing transportation, labor, materials, and equipment to furnish and install stabilized crushed miscellaneous base, including additions to or deductions from the approximate quantity stipulated	Cubic Yards	7800	
Main Bid	13	Import Fill: For furnishing transportation, labor, materials, and equipment to furnish, place, grade, and compact in place fill soil, including additions to or deductions from the approximate quantity stipulated	Cubic Yards	900	
Main Bid	14	Asbestos Abatement and Lead Remediation: For furnishing transportation, labor, materials, and equipment to abate asbestos containing materials (ACM) and asbestos containing waste and remediate lead containing materials	Lump Sum	1	

Main Bid	15	RCRA Hazardous Waste Soil: For furnishing transportation, labor, materials, and equipment to excavate, characterize, stockpile, haul away, and dispose of RCRA hazardous waste soil at a licensed and Class I lined landfill acceptable to Department, including additions to or deductions from the approximate quantity stipulated	Tons	100	
Main Bid	16	Non-RCRA Hazardous Waste Soil: For furnishing transportation, labor, materials, and equipment to excavate, characterize, stockpile, haul away, and dispose of California hazardous waste soil (non-RCRA) at a licensed and Class I lined landfill acceptable to Department, including additions to or deductions from the approximate quantity stipulated	Tons	530	
Main Bid	17	Non-Hazardous Waste Soil from a TSCA Regulated Site Containing PCBs (Less than 50 PPM): For furnishing transportation, labor, materials, and equipment to excavate, characterize, remove and dispose of non-hazardous waste soil from a TSCA regulated site containing PCBs less than 50 PPM at a Class I lined landfill acceptable to Department, including additions to or deductions from the approximate quantity stipulated	Tons	1120	
Main Bid	18	Non-Hazardous Waste from a TSCA Regulated Site Containing PCBs (Less than 50 PPM): For furnishing transportation, labor, materials, and equipment to excavate, characterize, remove and dispose of non-hazardous waste from a TSCA regulated site containing PCBs less than 50 PPM including but not limited to concrete, clay pipe, and other debris at a Class I lined landfill acceptable to Department, including additions to or deductions from the approximate quantity stipulated	Tons	350	
Main Bid	19	Concrete Paving Repairs: For furnishing transportation, labor, materials, and equipment to furnish and place concrete paving including reinforcement, including additions to or deductions from the approximate quantity stipulated	Cubic Yards	200	

Main Bid	20	Photographic Documentation: For furnishing transportation, labor, materials, and equipment to furnish, install, and operate system for photographic documentation	Lump Sum	1	
Main Bid	21	Excavate, Stockpile, Sample, Test, Characterize, Grade, and Transport Soil from the Starkist site to the Southwest Marine Administration Building site: For furnishing transportation, labor, materials, equipment, and incidentals necessary to excavate, stockpile, sample, test, characterize, and transport soil to the Southwest Marine Administration Building Site, including additions to or deductions from the approximate quantity stipulated	Cubic Yards	450	
Contingency Item	22	Excavate and Dispose of Non-Hazardous Waste Soil: For furnishing transportation, labor, materials, and equipment to excavate, sample, test, characterize, stockpile, haul away, and dispose of off Department property non-hazardous waste soil, including additions to or deductions from the approximate quantity stipulated	Tons	630	
Contingency Item	23	Qualified Precipitation Event (QPE) Sampling and Testing for Ph and Turbidity: For furnishing transportation, labor, materials, and equipment to sample during rainy days Project stormwater effluent at a minimum of 4 locations during each qualified precipitation event and test for pH and turbidity, including additions to or deductions from the approximate quantity stipulated	Sampled Rainy Days	30	
Contingency Item	24	Subgrade Stabilization: For furnishing transportation, labor, materials, and equipment to excavate, remove, and dispose of unsuitable subgrade to furnish, place, and compact subgrade stabilization material, 1-inch nominal gradation, including additions to or deductions from the approximate quantity stipulated	Cubic Yards	500	
Allowance Item	25	Work Associated with Regulatory Agency Change and Additional Requirements: Bidder shall include in the bid the listed allowance to perform work as required by agencies due to regulatory changes and additional requirements as directed by Engineer	Lump Sum	1	300000

Allowance Item	26	Unforeseen Contaminated and Hazardous Soil and Groundwater: Bidder shall include in the bid the listed allowance to remove and dispose of contaminated and hazardous soil and groundwater as directed by Engineer	Lump Sum	1	300000
Allowance Item	27	Unforeseen Utility and Substructure Modifications, Abandonment, Removals, and Additions: Bidder shall include in the bid the listed allowance to perform unforeseen utility and substructure modifications, abandonment, removals, and additions as directed by Engineer	Lump Sum	1	450000
Allowance Item	28	Internet-Based Project Management: Bidder shall include in the bid the listed allowance to provide internet-based project management as directed by Engineer	Lump Sum	1	50000
Allowance Item	29	Tenant-Requested for Changes: Bidder shall include in the bid the listed allowance to perform tenant-requested changes as directed by Engineer	Lump Sum	1	300000
Allowance Item	30	Premium Time for Schedule Acceleration/Overtime: Bidder shall include in the bid the listed allowance to account for labor premium time pay differential for schedule acceleration or overtime as directed by Engineer	Lump Sum	1	250000
Allowance Item	31	Unforeseen Asbestos, Lead, and Universal E-Waste Remediation: Bidder shall include in the bid the listed allowance to perform removal of unforeseen asbestos containing material, lead paint, and universal e-waste as directed by Engineer	Lump Sum	1	100000

END OF SECTION

THIS CONTRACT (hereinafter referred to as "Contract") is made and entered into by and between City of Los Angeles, a Municipal Corporation (herein called "City"), acting by and through its Board of Harbor Commissioners (hereinafter called "Board"), and ____

____ (hereinafter referred to as "Contractor"). The effective date of this Contract (hereinafter referred to as "Effective Date") is the date of execution by Executive Director upon authorization of Board, subject to the provisions of Charter Section 245 of City of Los Angeles. Unless terminated as herein provided, the term of this Contract shall not exceed three (3) years commencing on Effective Date.

WITNESSETH

In consideration of the covenants and conditions hereinafter contained, IT IS MUTUALLY AGREED BETWEEN CONTRACTOR AND CITY AS FOLLOWS:

ARTICLE 1. CONTRACTOR'S OBLIGATIONS

Section 1.1 CONTRACT DOCUMENTS

- A This written agreement executed by Contractor and City together with the documents listed in Section 1.1B are Contract. Contractor has read and understands each and every provision of Contract Documents and its assent to and signature of this written agreement shall be deemed to constitute assent to and signature of all Contract Documents.
- B Specification No. 2838, together with documents listed in Table of Contents and defined in GENERAL CONDITIONS Section of said Specifications shall constitute Contract Documents.
- C Contract Documents are complementary and require complete and finished Work. Anything shown or required of Contractor, in any one or more of said documents, shall be as binding as if contained in all said documents.

Section 1.2 WORK TO BE DONE

Contractor, with full knowledge of the kind, quantity and quality of Work, materials, and services required, at Contractor's sole cost and expense, except as may be herein otherwise expressly specified, and in strict conformity with Specification No. 2838, for TERMINAL ISLAND FACILITIES DEMOLITION AND IMPROVEMENTS shall carry out Contract as awarded. Contractor shall complete Work in accordance with Section 1.3 Contract Time of this Section.

Section 1.3 CONTRACT TIME

- A Contract Time for performance of Work under Contract shall be 450 Calendar Days commencing on the date stated in Notice to Proceed (NTP). Work shall be completed in conformance with the following milestones:
- 1 Contract Time for completion of Milestone No. 1 shall be 180 Calendar Days commencing on the date of NTP.
 - 2 Contract Time for completion of Milestone No. 2 shall be 450 Calendar Days commencing on the date of NTP.
 - 3 Contract Time for completion of Milestone No. 3 shall be 150 Calendar Days commencing on the date of NTP.
 - 4 Contract Time for completion of Milestone No. 4 shall be 240 Calendar Days commencing on the date of NTP.

Section 1.4 LIQUIDATED DAMAGES

- A Contractor and City agree that, in the event that Work contemplated hereunder is not completed within the time required, it shall be impracticable and extremely difficult to determine or fix City's actual damage and therefore City shall be entitled to liquidated damages in the amount stipulated below for each and every Calendar Day the execution of said Work exceeds the time allowed for that purpose. Contractor agrees to all of the other terms of the liquidated damages provision set forth in GENERAL CONDITIONS Section of Specifications.
- 1 Completion of Work specified in Section 1.3, Paragraph A1: \$2,100.
 - 2 Completion of Work specified in Section 1.3, Paragraph A2: \$1,900.
 - 3 Completion of Work specified in Section 1.3, Paragraph A3: \$1,900.
 - 4 Completion of Work specified in Section 1.3, Paragraph A4: \$1,400.

ARTICLE 2. COMPENSATION

Section 2.1 PAYMENTS TO CONTRACTOR

In consideration for all labor, materials, and equipment furnished hereunder, and subject to Contractor's full compliance with the terms and conditions of Contract Documents, City shall pay Contractor the amount set forth in the "Bid Proposal Line Items," which is attached hereto and by this reference incorporated herein. Payments shall be made as set forth in GENERAL CONDITIONS Section.

ARTICLE 3. OPERATIONS

Section 3.1 QUALITY OF SERVICES

Work performed by Contractor shall be strictly in accordance with Drawings and Specifications, copies of which are on file in the office of Engineer. Said Work shall be performed in a manner which is consistent with Applicable Laws as defined in GENERAL CONDITIONS Section of Specifications in the construction industry.

Section 3.2 INDEMNIFICATION

- A Except as may arise from the sole or active negligence or willful misconduct of City, Contractor shall at all times relieve, indemnify, defend, protect, and save harmless City and any and all of its boards, officers, agents, and employees from any and all claims and demands, actions, proceedings, losses, liens, costs and judgments of any kind and nature whatsoever, including cost of litigation (including all actual litigation costs incurred by City, including but not limited to costs of experts and consultants), for death of or injury to persons or damage to property including property owned by or under the care and custody of City, and for civil fines and penalties, that may arise from or be caused directly or indirectly by:
- 1 Any dangerous, hazardous, unsafe or defective condition of, in or on Project Site and any Laydown Area(s), of any nature whatsoever, which may exist by reason of any act, omission, neglect, or any use or occupation of such premises by Contractor, its officers, agents, employees, subcontractors, or invitees;
 - 2 Any undertaking of Work, or operation conducted upon or any use or occupation of Project Site and any Laydown Area(s) by Contractor, its officers, agents, employees, subcontractors, or invitees under or pursuant to the provisions of Contract or otherwise;
 - 3 Any act, error, omission, willful misconduct, or negligence of Contractor, its officers, agents, employees, subcontractors, or invitees, arising from the use, operation, or occupancy of Project Site and any Laydown Area(s).

- 4 Any failure of Contractor, its officers, agents, employees, subcontractors, or invitees to comply with any of the terms or conditions of this Contract or any Applicable Laws; or
 - 5 The conditions, operations, uses, occupations, acts, omissions or negligence referred to in Subdivisions (1), (2), (3), and (4) above, existing or conducted upon or arising from the undertaking of Work or use or occupation of Project Site and any Laydown Area(s) by Contractor on any other area within the Harbor District, as defined in Charter of City, including the approaches, channels, turning basins, and other waters.
- B Contractor also agrees to indemnify City and pay for all damage or loss suffered by City and Department, including but not limited to damage to or loss of property, to the extent not insured by City, and loss of City revenue from any source, caused by or arising out of the conditions, operations, uses, occupations, acts, omissions or negligence referred to in Section 3.2 of this Section. The term "persons" as used in this Section shall include, but not be limited to, officers and employees of Contractor.
- C Contractor shall also indemnify, defend, and hold City harmless from any and all claims, judgments, damages, penalties, fines, costs, liabilities, or losses which arise during or after the term of this Contract as a result of Contamination for which Contractor is otherwise responsible for under the terms of this Contract. This indemnification of City by Contractor includes, without limitation, costs incurred in connection with any investigation of site conditions or any clean up, remedial, removal, or restoration work required by any federal, state, or local governmental agency because of Contamination present in the soil or groundwater on or under Project Site and any Laydown Area(s).
- D The indemnity obligations under Section 3.2 shall survive the expiration date of this Contract.
- E Notwithstanding the provisions of Section 3.2, nothing contained herein shall be interpreted or enforced in violation of California Civil Code Section 2782.

Section 3.3 INSURANCE

- A In addition to, and not as a substitute for, or limitation of, any of the indemnity obligations imposed by Section 3.2 of this Section, Contractor shall procure and maintain at its sole cost and expense and keep in force at all times during the term of this Contract the following insurance requirements of this Section.

- B Commercial general liability or marine general liability insurance, including contractual liability and property damage insurance, written by an insurance company authorized to do business in the State of California, or approved by the California Department of Insurance as a surplus lines insurer eligible to do business in California, rated VII, A- or better in Best's Insurance Guide (or an alternate guide acceptable to City if a Best's Rating is not available) with Contractor's normal limits of liability but not less than Five Million Dollars (\$5,000,000) for injury or death to one or more persons out of each accident or occurrence and Five Million Dollars (\$5,000,000) for bodily injury and property damage for each occurrence / Five Million Dollars (\$5,000,000) general aggregate. Additionally, each policy shall include an additional insured endorsement (CG 2010) naming City of Los Angeles Harbor Department, its officers, agents, and employees as Primary additional insureds. Contractor shall further procure and maintain, either by an endorsement thereto or by a separate policy, fire legal liability insurance with a minimum limit of Five Hundred Thousand Dollars (\$500,000) covering legal liability of Contractor for damage or destruction to the works, buildings, and improvements owned by City provided that said minimum limits of liability shall be subject to adjustments by Executive Director to conform with the deductible amount of the fire insurance policy maintained by Board, with waiver of subrogation in favor of Contractor so long as permitted by Board's fire insurance policy, upon thirty (30) days' prior written notice thereof to Contractor at any time during the term of this Contract. Contractor shall delete railroad exclusion when Work is within 50 feet of railroad tracks.
- C Contractor shall procure and maintain fire and extended coverage insurance covering One Hundred percent (100%) of the replacement value of the works, buildings, and improvements erected or owned by Contractor on Project Site and any Laydown Area(s), with such provision in the policies issued to cover the same, or in riders attached thereto, as shall provide for all losses to be payable to Board to be held in trust for reconstruction. In the event of loss or damage by fire to any of such works, buildings, or improvements, Contractor shall undertake replacement or reconditioning of such items within ninety (90) days following any such loss. As Contractor undertakes such replacement or reconditioning, such proceeds shall be released by Board to Contractor as payments are required for said purpose. Upon the completion of such replacement or reconditioning to the reasonable satisfaction of Executive Director, any balance thereof remaining shall be paid to said Contractor forthwith.

- D Where Contractor utilizes any vehicles, Contractor shall procure and maintain at its sole cost and expense, and keep in force at all times during the term of this Contract, automobile insurance with limits of liability not less than One Million Dollars (\$1,000,000) covering injuries or death resulting from each accident or claim arising out of any one claim or accident. This insurance shall cover all owned, non- owned, and/or hired automobiles. Additionally, each policy shall include an additional insured endorsement (CG 2010) naming City of Los Angeles Harbor Department, its officers, agents, and employees as Primary additional insureds.
- E Where Contractor operates watercraft, Contractor shall procure and maintain protection and indemnity coverage with limits of One Million Dollars (\$1,000,000) per occurrence for bodily injury, illness, death, loss of or damage to the property of another including masters and members of the vessel crew, and Jones Act risks or equivalent thereto internationally. City shall be named as an additional insured. Additionally, each policy shall include an additional insured endorsement (CG 2010) naming City of Los Angeles Harbor Department, its officers, agents, and employees as Primary additional insureds.
- F Where Contractor's operations involve the storage or use of any type of hazardous materials or pollutants, Contractor shall procure and maintain environmental impairment liability insurance which shall include coverage for bodily injury, property damage, including third-party claims for on-site and off-site bodily injury and property damage, clean-up, and defense of suits, with a limit of at least Two Million Dollars (\$2,000,000) per occurrence, which is to remain in effect at least five (5) years after Termination Date. Additionally, each policy shall include an additional insured endorsement (CG 2010) naming City of Los Angeles Harbor Department, its officers, agents, and employees as Primary additional insureds.
- G Contractor shall secure the payment of compensation to any employees injured while performing work or labor necessary for and incidental to performance under this Contract in conformance with Section 3700 of the California Labor Code. Contractor shall file with City one of the following:
- 1 A certificate of consent to self-insure issued by the Director of Industrial Relations, State of California;
 - 2 A certificate of Workers' Compensation insurance issued by an admitted carrier; or
 - 3 An exact copy or duplicate thereof of the policy certified by the Director of Industrial Relations or the insurer.

- 4 Such documents shall be filed prior to Contractor's occupancy of Project Site and any Laydown Area(s). Where Contractor has employees who are covered by the United States Longshore and Harbor Workers' Compensation Act ("USLHWC Act"), Contractor shall furnish proof of such coverage to City. It is suggested that Contractor consult with its insurance professional of its choosing to determine whether its proposed operation methods shall render its employees subject to coverage under the USLHWC Act. All Workers' Compensation insurance submitted to City shall include an endorsement providing that any carrier paying benefits agrees to waive any right of subrogation it may have against City.
- H Except as provided in Paragraph 1 below, Contractor shall, at Contractor's sole cost and expense, provide all risk builder's risk insurance covering loss, damage or destruction of property, including material in transit and stored on and off Project Site and any Laydown Area(s), satisfactory to City, in an amount at least equal to the value of the construction and materials on hand. Contractor's insurance broker or agent shall submit for approval said insurance to City's online insurance compliance system KwikComply™ <https://kwikcomply.org/>. Acceptable evidence of coverage shall name City as an additional named insured and as loss payee as its interest may appear.
- 1 Contractor need not provide all risk builder's risk insurance for fills; excavations; rock work; concrete or masonry walls and bulkheads retaining earth; foundations entirely below ground or in earth fill; pipe, sewer systems, conduit, and electric light and power systems entirely below ground or submerged; ballast and grading for railroad tracks on or in earth; pavements, sidewalks and pits on solid earth or in fill outside of buildings; incombustible poles, area lighting and metal fencing not attached to exterior or interior of buildings. Contractor is not relieved of the obligation to rebuild these improvements when damaged.
 - 2 An installation risk or "floater" policy, written to cover only specific types of equipment during construction, may be provided to cover damage to work or high valued equipment or materials.

- I Limits for coverage required under Section 3.3 of this Section shall provide first dollar coverage except that Executive Director may permit a self-insured retention or self-insurance in those cases where, in his or her sole judgment, such retention or self-insurance is justified by the net worth of Contractor. The self-insured retention or self-insurance shall provide that any other insurance maintained by City's Harbor Department shall be excess of Contractor's insurance and shall not contribute to it. In all cases, regardless of any deductible, retention, or self-insurance, Contractor shall have all the obligations of an "insurer" under the California Insurance Code and said insurance shall be deemed to include a defense of suits provision and a severability of interest clause.
- J If Contractor maintains higher limits than the minimums shown above, City requires and shall be entitled to coverage for the higher limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.
- K Policies submitted pursuant to Section 3.3 of this Section shall, in addition, provide the following coverage either in the original policy or by endorsement substantially as follows:
 - 1 "Notwithstanding any inconsistent statement in the policy to which this endorsement is attached, or any endorsement or certificate now or hereafter attached hereto, it is agreed that City of Los Angeles, acting by and through its Harbor Department, Board of Harbor Commissioners, and its officers, agents, and employees, are additional insureds hereunder, except to the extent prohibited by Applicable Laws, and that coverage is provided for contractual obligations, operations, uses, occupations, acts, and activities of all the insureds under this Specification, and under any amendments, modifications, extensions, or renewals of said Contract regardless of whether such contractual obligations, operations, uses, occupations, acts, and activities occur on Project Site and any Laydown Area(s) or elsewhere."
 - 2 "The coverage provided by the policy to which this endorsement is attached is primary coverage and any other insurance carried by City is excess coverage."
 - 3 "In the event of one of the named insureds incurring liability to any other of the named insureds, this policy shall provide protection for each named insured against whom claim is or may be made, including claims by other named insureds, in the same manner as if separate policies had been issued to each named insured. Nothing contained herein shall operate to increase the insurance company's limit of liability."

- L All insurance procured by Contractor shall comply with the following:
- 1 For each insurance policy, Contractor shall give to Board of Harbor Commissioners a 10-days prior notice of cancellation or reduction in coverage for nonpayment of premium, and a 30-days prior notice of cancellation or reduction in coverage for any other reason, by written notice via registered mail and addressed to City of Los Angeles Harbor Department, Attn: Risk Manager and City Attorney's Office, 425 S. Palos Verdes Street, San Pedro, California 90731.
 - 2 Electronic submission is the required method of submitting Contractor's insurance documents. KwikComply is City's online insurance compliance system which is designed to be used by insurance brokers and agents to submit client insurance certificates directly to City. Contractor's insurance broker or agent shall obtain access to KwikComply at <http://kwikcomply.org> and follow the instructions to register and submit the appropriate proof of insurance on Contractor's behalf.
 - 3 Prior to the expiration of each policy, Contractor shall show through submitting to KwikComply that the policy has been renewed or extended or, if new insurance has been obtained, submit the appropriate proof of insurance to KwikComply. If Contractor neglects or fails to secure or maintain the required insurance, or if Contractor fails to submit proof of insurance as required above, City's Harbor Department may, at its option and at the sole cost and expense of Contractor, obtain such insurance for Contractor.
 - 4 Executive Director, at his or her discretion, based upon recommendation of Risk Manager of City's Harbor Department, may request that Contractor increase or decrease amounts and types of insurance coverage required hereunder at any time during the term hereof by giving written notice to Contractor; provided that Contractor shall be entitled to an equitable adjustment under Contract to reimburse Contractor for any increase in the cost of such insurance to Contractor resulting from the requested changes.
 - 5 Upon request by City, Contractor must furnish a copy of the binder of insurance and/or full certified copies of any or all policies of insurance required herein. Contractor's obligation to provide such copies shall survive the expiration of this Contract regardless of whether City's request is made prior to or after the expiration of this Contract.

- 6 The approval of insurance by Risk Manager shall be a condition precedent to the right of Contractor to demand or receive payment for Work under Contract requiring such insurance. No request for payment shall be processed until the required insurance has been approved by Risk Manager, and no Project Site and any Laydown Area(s) access shall be permitted until such approval has been given.
 - 7 All insurance policies and surety bonds which Contractor is required to provide pursuant to Specifications, including, but not limited to, workers' compensation, liability, protection and indemnity, and builder's risk policies shall be placed with insurance carriers which are rated VII, A-, or better in Best's Insurance Guide. If a Best's Insurance Guide rating is not available, then the proposed carrier must meet comparable standards in another rating services satisfactory to City.
- M Contractor shall report to Engineer immediately and in writing to Executive Director within fifteen (15) days after it, its officers, or its managing agents have knowledge of any accident or occurrence involving death of or injury to any person or persons, or damage in excess of Ten Thousand Dollars (\$10,000) to property, occurring upon Project Site and any Laydown Area(s), or elsewhere within the Harbor District, if Contractor's officers, agents, or employees are involved in such an accident or occurrence. Such report shall contain to the extent available: (1) the name and address of the persons involved; (2) a general statement as to the nature and extent of injury or damage; (3) the date and hour of occurrence; (4) the names and addresses of known witnesses; and (5) such other relevant information as may be known to Contractor, its officers, or its managing agents.

Section 3.4 COMPLIANCE WITH LAWS

During the performance of Contract, Contractor shall comply with all Applicable Laws as defined in GENERAL CONDITIONS Section of Specifications. Contractor shall also comply with the provisions of all permits.

ARTICLE 4. MISCELLANEOUS

Section 4.1 BINDING EFFECT

Contract is to be binding on the heirs, successors and assigns of the parties hereto and is not to be assigned by either party without first obtaining the written consent of the other.

Section 4.2 NOTICES

Any notice, request, demand or other communication required or permitted hereunder shall be deemed to be properly given when deposited in the United States mail, postage prepaid, addressed as follows:

To City:
Executive Director
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, California 90731

To Contractor:

Nothing contained herein shall preclude the giving of notice in any other manner allowed by law.

Section 4.3 RELATIONSHIP OF PARTIES

Nothing contained in Contract shall be construed as creating the relationship of employer and employee, master and servant, or principal and agent between the parties hereto. Contractor is an independent contractor and shall have no right or authority to assume or create any obligation, expressed or implied, on behalf of City.

Section 4.4 ENTIRE AGREEMENT

Contract, together with all other Contract Documents, constitutes the entire agreement between the parties hereto, and all other representations or statements heretofore made, verbal or written, are merged herein, and Contract may be amended only in writing and executed by duly authorized representatives of the parties hereto.

Section 4.5 LEGAL JUSTIFICATION AND RECOURSE

Contract shall be deemed entered into in Los Angeles, California, and shall be governed and construed in accordance with the laws of the State of California. In the event any provision hereof is held to violate any applicable law by a court of competent jurisdiction, such provision shall be deemed null and void to the extent thereof, without affecting the balance of Contract. If either party brings any action or proceeding to enforce, protect, or establish any right or remedy arising out of or based upon Contract, including but not limited to the recovery of damages for its breach, or based upon the claim that extra Work was performed, whether mandated by Contract or not, neither party in said action or proceeding shall be entitled to recover any attorney's fees. Each party hereby expressly waives the benefit of any California statute which would permit the award of any attorney's fees to a prevailing party in an action.

Section 4.6 TIME OF ESSENCE

Time is of the essence in Contract.

Section 4.7 LABOR CODE SECTION 1861

Contractor hereby certifies it is aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and that Contractor shall comply with such provisions before commencing the performance of Work of Contract.

Section 4.8 ASSIGNMENT OF CERTAIN CAUSES OF ACTION

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, Contractor or subcontractor/supplier offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to Contractor, without further acknowledgment by the parties.

Section 4.9 TERMINATION DUE TO NON-APPROPRIATION OF FUNDS

Contract is subject to the provisions of Los Angeles City Charter which, among other things, precludes City from making any expenditure of funds or incurring any liability, including contractual commitments, in excess of the amount appropriated therefor.

Board, in awarding Contract, is expected to appropriate sufficient funds to meet the estimated expenditures through June 30 of the current fiscal year and to make further appropriations in each succeeding fiscal year during the life of Contract. However, they are under no legal obligation to do so.

City of Los Angeles, its boards, officers, and employees are not bound by the terms of this Contract or obligated to make any payment thereunder in any fiscal year in which Board does not appropriate funds therefor. Contractor is not entitled to any compensation in any fiscal year in which funds have not been appropriated in Contract by Board.

Although Contractor is not obligated to perform any Work under Contract in any fiscal year in which no appropriation for Contract has been made, Contractor agrees to resume performance of Work required by Contract on the same terms and conditions for a period of 60 days after the end of the fiscal year if an appropriation therefor is approved within that 60-day period. Contractor is responsible for maintaining all insurance and bonds during this 60 days period. The time for performance shall be extended during this period until the appropriation is made; however, such extension of time is not compensable.

If in any subsequent fiscal year funds are not appropriated for Work required by Contract, Contract shall be terminated. However, such termination shall not relieve the parties of liability for any obligation previously incurred.

Section 4.10 NO WAIVER

No waiver by either party at any time of any terms or conditions of this Contract shall be a waiver at any subsequent time of the same or any other term or condition. No breach of a covenant, term, or condition of this Contract shall be deemed to have waived by City unless the waiver is in writing and executed by City.

Section 4.11 JOINT AND SEVERAL OBLIGATIONS OF CONTRACTOR

If more than one individual or entity comprises Contractor, the obligations imposed on each individual or entity that comprises Contractor under this Contract shall be joint and several.

Section 5.1 SIGNATURES

IN WITNESS WHEREOF, the parties hereto have executed Contract on the day and year hereinbefore written.

(SEAL)

THE CITY OF LOS ANGELES,

by its Board of Harbor
Commissioners

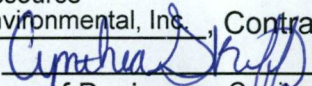
Contracting
Corp.

By _____
Executive Director

Date _____

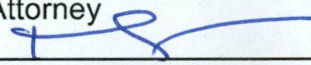
ATTEST:

 Secy.
Richard Miller, Secretary/ CEO/ COO

Resource
Environmental, Inc., Contractor
By  Cynthia Skiff, President
Place of Business Cerritos, CA

Contractor's License
No. 864417
Exp. Date 09/30/2026
Los Angeles, California

Contract and bonds approved
as to form.

HYDEE FELDSTEIN SOTO
City Attorney
By  _____
Assistant/Deputy
Los Angeles, California

*Contract approved by Board of Harbor Commissioners at its meeting of
_____, 20__.

Secretary, Board of Harbor Commissioners

*Approval of contract by Board of
Harbor Commissioners required for
all contracts where the sum involved
exceeds \$150,000.

CALIFORNIA ALL- PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

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

State of California }

County of Los Angeles }

On November 19, 2025 before me, Chase Tinsley, Notary Public,
(Here insert name and title of the officer)

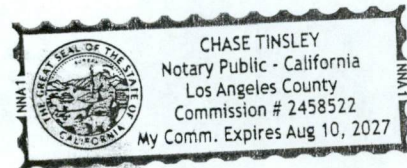
personally appeared Cynthia Skiff,
who proved to me on the basis of satisfactory evidence to be the person(s) whose
name(s) (s) are subscribed to the within instrument and acknowledged to me that
he/she/they executed the same in his/her/their authorized capacity(ies), and that by
his/her/their signature(s)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

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

WITNESS my hand and official seal.

Chase Tinsley
Notary Public Signature

(Notary Public Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date _____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
☐ Corporate Officer

(Title)

- ☐ Partner(s)
☐ Attorney-in-Fact
☐ Trustee(s)
☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknowledgments from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they~~, is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

CALIFORNIA ALL- PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

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

State of California }

County of Los Angeles }

On November 19, 2025 before me, Chase Tinsley, Notary Public,
(Here insert name and title of the officer)

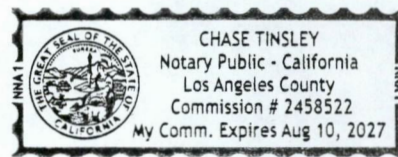
personally appeared Richard Miller,
who proved to me on the basis of satisfactory evidence to be the person(s) whose
name(s) is/are subscribed to the within instrument and acknowledged to me that
he/she/they executed the same in his/her/their authorized capacity(ies), and that by
his/her/their signature(s)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

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

WITNESS my hand and official seal.

Chase Tinsley
Notary Public Signature

(Notary Public Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date _____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
☐ Corporate Officer

(Title)

- ☐ Partner(s)
☐ Attorney-in-Fact
☐ Trustee(s)
☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

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- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they~~, is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
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- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____

 as principal _____, and _____
 as surety(ies) are held and firmly bound unto THE CITY OF LOS ANGELES,
 CALIFORNIA, a municipal corporation, in the penal sum of _____

 dollars (\$_____) lawful money of the United States, for the payment of which
 sum well and truly to be made, we bind ourselves, our heirs, executors, administrators
 and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH: that whereas the principal
 entered into a certain contract, hereto attached, with City, for _____

NOW THEREFORE, if said principal(s) shall fail to faithfully perform and fulfill all
 the undertakings, covenants, terms, conditions and agreements of said Contract during
 the original term of said Contract and any extensions thereof that may be granted by City,
 with or without notice to the surety(ies), and during the life of any guaranty required under
 Contract, or shall fail to faithfully perform and fulfill all the undertakings, covenants, terms,
 conditions and agreements of any and all duly authorized modifications of said Contract
 that may hereafter be made, notice of which modifications to the surety(ies) being hereby
 waived, said surety(ies) shall fully and faithfully carry out and perform all of the terms,
 covenants and conditions of said Contract upon its part to be performed and if surety(ies)
 does so, then this obligation to be null and void, otherwise to remain in full force and
 effect, and in addition thereto, in case suit is brought upon this bond, the judgment
 rendered against the principal or surety(ies), or both, a reasonable attorney's fee, to be
 fixed by the court, taxed as costs and included in the judgment rendered therein,
 otherwise this obligation to be void.

It is further agreed that this bond guarantees compliance with all applicable
 provisions of Section 17.00 et seq. and Section 62.105 through 62.118 of the Municipal
 Code of CITY OF LOS ANGELES.

IN WITNESS WHEREOF, the above-bounded parties have executed this
 instrument under their several hands and seals this ____ day of _____, 20__.

(Principal) _____

ATTEST

(Surety) _____

(Surety) _____

(Corporate Seal)

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____

as principal (s) and _____
_____ as surety(ies) _____
are held and firmly bound unto THE CITY OF LOS ANGELES, a municipal corporation,
acting by and through its Board of Harbor Commissioners, and any person or party named
below in the penal sum equal to: _____

dollars (\$_____) in lawful money of the United States, and the payment of which
shall and truly be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

THAT WHEREAS, the principal (s) entered into a certain contract attached hereto
with City for _____

NOW, THEREFORE, if said principal (s) as Contractor (s) or subcontractor (s) fail
(s) to pay for any services provided by mechanics, material suppliers, contractors,
subcontractors, lessors of equipment, artisans, architects, registered engineers, licensed
land surveyors, machinists, builders, teamsters or dray, or fail (s) to pay all persons and
laborers of every class performing labor upon or bestowing skill or other necessary
service on, or furnishing materials or leasing equipment to be used or consumed in or
furnishing materials or leasing equipment to be used or consumed in or furnishing
appliances, teams or power contributing to a work or improvement or fail (s) to pay for the
value of such labor done or materials furnished and for the value and use of such
appliances, equipment, teams or power, whether done or furnished at the instance of City
or of any person acting by its authority or under it as contractor or otherwise, or fail (s) to
pay for amounts due under the Unemployment Insurance Code of the State of California
with respect to work, or labor performed by any such claimant during the original term of
said Contract and any extension thereof that may be granted by City with or without notice
to the surety(ies) or during the life of any guarantee required under Contract, or fail (s) to
pay for any amounts required to be deducted, withheld and paid over to the Franchise
Tax Board from the wages of Contractor and subcontractors/suppliers pursuant to that
portion of the Revenue and Taxation Code, imposing liability for failure to deduct,
withhold, and pay employee taxes, with respect to such work and labor, then in such
event said surety(ies) shall pay the same in an amount not exceeding the sum of _____

_____ dollars (\$_____) and, in addition
thereto, in case suit is brought upon this bond and judgment rendered against the principal
(s) or surety(ies), or both, a reasonable attorney's fee to be fixed by the court, taxed as
costs and included in the judgment rendered therein; otherwise this obligation to be void.

It is understood and agreed by principal (s) and surety(ies) herein that by its terms, this payment bond shall insure to the benefit of any person named in Section 9100 of the California Civil Code so as to give a right of action such persons or their assigns in any suit brought upon this payment bond.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several hands and seals this ____ day of _____, 20__.

ATTEST

(Principal)_____

(Surety) _____

(Surety) _____

(Corporate Seal)

INDIVIDUAL FORM

AFFIDAVIT OF COMPLETION OF WORK
UNDER SPECIFICATION NO. 2838
CONTRACT NO. _____

(STATE OF CALIFORNIA)
(COUNTY OF LOS ANGELES)

_____, being first duly sworn, deposes
(Affiant)

and says:

Affiant is Contractor under Contract No. _____, and makes the following statements:

That, in accordance with the provisions under Subsection 01000.58 of GENERAL CONDITIONS Section of Specification No. 2838 which Specifications is a part of Contract No. _____, by and between City of Los Angeles and Affiant, to the best of my knowledge and belief, Work specified in said Specifications and said Contract has been completed in strict accordance with Drawings and Specifications therefor, that no lawful debts for labor or material are outstanding, and that no federal excise tax has been included in Contract price;

That all request for funds under Items of Contract, including Changes in Work, and under all billings of whatsoever nature are accurate, complete and final and that no additional compensation over and above the final payment now pending shall be requested or is due under Contract or under any adjustment issued thereunder;

That, in accordance with said Subsection 01000.58, upon receipt of said final payment now pending, Affiant acknowledges that City, Board thereof, Executive Director, Engineer and any and all authorized employees of City shall thereby be released from any and all claims or liability on account of Work performed under Contract or any additions thereof.

(Affiant)

Subscribed and sworn to before me
this _____ day of _____, 20__.

Notary Public in and for said County of
Los Angeles, State of California
Form 298-E
11-12-73

CO-PARTNERSHIP FORM

AFFIDAVIT OF COMPLETION OF WORK
UNDER SPECIFICATION NO. 2838
CONTRACT NO. _____

(STATE OF CALIFORNIA)
(COUNTY OF LOS ANGELES)

_____, a co-partner in the firm of
(Affiant)

_____, a co-partnership, being first
(Contractor)

duly sworn, deposes and says:

Affiant is one of the co-partners of _____ and makes
(Contractor)

the following statements and has the authority to do so for and on behalf of _____

(Contractor)
a co-partnership, and Affiant personally;

That in accordance with the provisions under Subsection 01000.58 of GENERAL
CONDITIONS Section of Specification No. 2838, which Specifications is a part of
Contract No. _____, by and between City of Los Angeles and _____

(Contractor)
to the best of my knowledge and belief, Work specified in said Specifications and said
Contract has been completed in strict accordance with Drawings and Specifications
therefor, that no lawful debts for labor or materials are outstanding, and that no federal
excise tax has been included in Contract price;

That all requests for funds under Items of Contract, including Changes in Work, and under
all billings of whatsoever nature are accurate, complete and final and that no additional
compensation over and above the final payment now pending shall be requested or is
due under Contract or under any adjustment issued thereunder;

That, in accordance with said Subsection 01000.58, upon receipt of said final payment now pending, Affiant acknowledges for himself/herself and for the _____,

(Contractor)

that City, Board thereof, Executive Director, Engineer, and any and all authorized employees of City shall thereby be released from any and all claims or liability on account of Work performed under Contract or any additions thereof.

(Affiant)

Subscribed and sworn to before me
this _____ day of _____, 20__.

Notary Public in and for said County of
Los Angeles, State of California
Form 297-E
11-12-73

CORPORATE FORM

AFFIDAVIT OF COMPLETION OF WORK
UNDER SPECIFICATION NO. 2838
CONTRACT NO. _____

(STATE OF CALIFORNIA)
(COUNTY OF LOS ANGELES)

_____, the _____ of _____,
(Affiant) (Title) (Contractor)
a corporation, being first duly sworn, deposes and says:

Affiant is the _____ of _____
(Title) (Contractor)
and makes the following statements for and on behalf of _____,
(Contractor)
a corporation.

That, in accordance with the provisions under Subsection 01000.58 of GENERAL
CONDITIONS Section of Specification No. 2838, which Specifications is a part of
Contract No. _____, by and between City of Los Angeles and _____

(Contractor)

to the best of my knowledge and belief, Work specified in said Specifications and said
Contract has been completed in strict accordance with Drawings and Specifications
therefore, that no lawful debts for labor or materials are outstanding, and that no federal
excise tax has been included in Contract price;

That all requests for funds under Items of Contract, including Changes in Work, and under
all billings of whatsoever nature are accurate, complete and final and that no additional
compensation over and above the final payment now pending shall be requested or is
due under Contract or under any adjustment issued thereunder;

That, in accordance with said Subsection 01000.58, upon receipt of said final payment now pending, Affiant acknowledges for himself/herself and for _____,

(Contractor)

that City, Board thereof, Executive Director, Engineer, and any and all authorized employees of City shall thereby be released from any and all claims or liability on account of Work performed under Contract or any additions thereof.

(Affiant)

Subscribed and sworn to before me
this _____ day of _____, 20__.

Notary Public in and for said County of
Los Angeles, State of California
Form 308-E
11/12/73

01 CONTRACTOR/SUPPLIER INFORMATION FORM

DEPARTMENT USE ONLY		
Contract No.:	Award Date:	Contract Term:
Contract Title:	Award Total:	

PRIME CONTRACTOR

Business Name: _____ Award Total: \$ _____
 Owner's Ethnicity: _____ Gender: _____ Group: SBE VSBE MBE WBE DVBE OBE
 (Circle all that apply)
 Local Business Enterprise: YES _____ NO _____ (Check only one)
 Primary NAICS Code: _____
 Address: _____
 City/State/Zip: _____
 Telephone: () _____ FAX: () _____
 Contact Person/Title: _____
 Email Address: _____
 State Contractor's I.D. _____ DIR Registration No. _____
 RAMP Company ID _____

SUBCONTRACTOR/SUPPLIER INFORMATION FORM (CIRCLE ONE)

Business Name: _____ Award Total: \$ _____
 Owner's Ethnicity: _____ Gender: _____ Group: SBE VSBE MBE WBE DVBE OBE
 (Circle all that apply)
 Local Business Enterprise: YES _____ NO _____ (Check only one)
 Primary NAICS Code: _____
 Address: _____
 City/State/Zip: _____
 Telephone: () _____ FAX: () _____
 Contact Person/Title: _____
 Email Address: _____
 State Contractor's I.D. _____ DIR Registration No. _____
 RAMP Company ID _____
 Description of Work to be Performed _____
 or Items Being Supplied: _____

SUBCONTRACTOR/SUPPLIER INFORMATION FORM (CIRCLE ONE)

Business Name: _____ Award Total: \$ _____
 Owner's Ethnicity: _____ Gender: _____ Group: SBE VSBE MBE WBE DVBE OBE
 (Circle all that apply)
 Local Business Enterprise: YES _____ NO _____ (Check only one)
 Primary NAICS Code: _____
 Address: _____
 City/State/Zip: _____
 Telephone: () _____ FAX: () _____
 Contact Person/Title: _____
 Email Address: _____
 State Contractor's I.D. _____ DIR Registration No. _____
 RAMP Company ID _____
 Description of Work to be Performed _____
 or Items Being Supplied: _____

SUBCONTRACTOR/SUPPLIER INFORMATION FORM (CIRCLE ONE)

Business Name: _____ Award Total: \$ _____
 Owner's Ethnicity: _____ Gender: _____ Group: SBE VSBE MBE WBE DVBE OBE
 (Circle all that apply)
 Local Business Enterprise: YES _____ NO _____ (Check only one)
 Primary NAICS Code: _____
 Address: _____
 City/State/Zip: _____
 Telephone: () _____ FAX: () _____
 Contact Person/Title: _____
 Email Address: _____
 State Contractor's I.D. _____ DIR Registration No. _____
 RAMP Company ID _____
 Description of Work to be Performed _____
 or Items Being Supplied: _____

Authorized signature_____
Date

Refer to Subsection 00030.06 for SBE, VSBE, DVBE, MBE, WBE, and OBE definitions
 and refer to Subsection 00030.10 for definition of Local Business Enterprise (LBE).

**02 SUBCONTRACTOR/SUPPLIER OWNERSHIP AND LOCAL BUSINESS
ENTERPRISE AFFIDAVIT****AFFIDAVIT**

"The undersigned declares under penalty of perjury pursuant to the laws of the State of California that the following information and information contained on the attached Contractor/Supplier Information Form is true and correct and includes all material information necessary to identify and explain the operations of

Name of Firm _____

as well as the ownership thereof. Further, the undersigned agrees to provide, upon request, either through the prime contractor or, directly to Harbor Department, complete and accurate information regarding ownership in the named firm, and all of its domestic and foreign affiliates, any proposed changes of the ownership and to permit the audit and examination of firm ownership documents, and the ownership documents of all of its domestic and foreign affiliates, in association with this Contract."

Please indicate the ownership of your company as defined in Subsection 00030.06 of BIDDING DOCUMENTS Section:

Small Business Enterprise (SBE)	Yes or No	(Circle One)
Very Small Business Enterprise (VSBE)	Yes or No	(Circle One)

Is your firm a DVBE MBE WBE OBE (Circle at least one)

Please indicate the local business enterprise (LBE) status of your company as defined in Subsection 00030.10 of BIDDING DOCUMENTS Section:

LBE	(Circle One)
Non-LBE	(Circle One)

Signature _____ Title _____

Printed Name _____ Date Signed _____

NOTARY

State of California

County of _____

On _____ before me, _____
Date Here insert Name and Title of the Officer

personally appeared _____
Name(s) of Signer(s)

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

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

WITNESS my hand and official seal.

Place Notary Seal Above Signature _____

Signature of Notary Public

03 SUPPLIER LIST

Supplier information is required for calculation of SBE and VSBE participation. Photocopy this form for additional firms. Please list SBE and VSBE Suppliers that are being used to achieve the minimum required SBE and VSBE participation levels.

Supplier Name and Location		Amount	SBE Yes or No	VSBE Yes or No	Local Business Yes or No
Name					
Address					
City, State, Zip					
Phone					
Description of Items Being Supplied:					

Name					
Address					
City, State, Zip					
Phone					
Description of Items Being Supplied:					

Name					
Address					
City, State, Zip					
Phone					
Description of Items Being Supplied:					

SUBTOTAL	DEPARTMENT USE ONLY				

END OF SECTION

01 DRAWINGS

Drawings listed in this Section, together with any drawings, standards, and reports referred to on the listed Drawings, show Work contemplated and are a part of Contract Documents.

<u>Drawing No.</u>	<u>Title</u>
1-3502	Berths 208-209 Container Freight Station Building Demolition
1-3571	1050 South Ways Street Starkist Demolition and Storage Lot Conversion
1-3572	South Seaside Avenue Storm Drain Restoration
1-3573	Southwest Marine Administration Building Demolition and Pavement Improvements
1-3574	1025 South Seaside Ave – Demolition and Lot Conversion

02 REFERENCE REPORTS*

*All Reference Reports listed are available for review in the online bid package. Refer to NOTICE INVITING BIDS Section for more information.

1. Site Investigation Report prepared by Eco & Associates, Inc., Former Star-Kist Factory Facilities, dated September 23, 2019.
2. Soil Management Plan prepared by Eco & Associates, Inc. Former Star-Kist Factory Facilities, dated January 10, 2020.
3. Environmentally Regulated Materials (ERM) Survey Report, Pre-Demolition Asbestos and Lead Survey for Star-Kist Plant 4, by Citadel EHS, Project No. 0862.1015.0, and dated October 7, 2020 revised February 10, 2021.
4. Soil Management Plan for Former Southwest Marine Property prepared by The Source Group Inc. (SGI), a division of Apex Companies, LLC (Apex), revised August 2022.
5. Asbestos, Lead Based Paint, and Polychlorinated Biphenyls Survey Report for Former Southwest Marine Facility – Compressor Building prepared by Apex Companies, LLC, dated March 20, 2023.
6. Summary Report Results of Soil Sample Collection and Analysis Planned Storm Drain Re-Alignment Former Southwest Marine Facility prepared by Apex Companies, LLC, dated March 20, 2023.
7. Pre-Demolition Lead/Asbestos Survey for Building One Administration 985 South Seaside Avenue, conducted on July 20, 2021, prepared by California Asbestos Consultants.
8. Recommendations for PCB Dust, Window Putty Removal and Lead Based Paint Stabilization of Concrete Floor Former Southwest Marine Facility Compressor Building, prepared by Apex Companies, LLC on May 11, 2023.

9. Asbestos Survey for City of Los Angeles Harbor Department, 500 Pier "A" Street Compressor & Steam Building Fire Station & Sub Station No. 6, prepared by National Econ Corporation on April 20, 2017.
10. Lead Survey for City of Los Angeles Harbor Department, 500 Pier "A" Street Compressor & Steam Building Fire Station & Sub Station No. 6, prepared by National Econ Corporation on April 20, 2017.
11. Hazardous Materials Survey, Star-Kist Former Plant Building 1050-1054 Ways Street, Terminal Island, CA. Inspection Date December 13-16, 2010, prepared by TRC. Project No. 178160.
12. Hazardous Materials Survey, Star-Kist Green Warehouse, Distribution Center, and Cold Storage Buildings 916, 938, and 950 Barracuda Street, Terminal Island, CA. Inspection Date February 23, 2011, prepared by TRC. Project No. 178160.
13. Roof Core Thickness Sampling for Buildings 2, 3, 4, 5, 8 & 9 for 1050 S. Ways Street, Terminal Island, CA prepared by Asbestos Instant Response, Inc. dba Air Demolition & Environmental Solutions dated February 16, 2024.
14. Environmental Assessment, CFS Building Demolition and Lot Conversion Berths 208-209 San Pedro, California dated June 22, 2023, prepared by Pacific Edge Engineering Inc. App 221021-178H-PD#16.

03 REFERENCE DRAWINGS*

*All Reference Drawings listed are available for review in the online bid package. Refer to NOTICE INVITING BIDS Section for more information.

<u>Drawing No.</u>	<u>Title</u>
4682	Vicinity of Berths 118-121 Borrow and Fill Areas
6609	New Fish Harbor Cannery Sewer Plan & Profile
6980 D-4452	Terminal Way & South Seaside Avenue Sewer District
11850	Water Service Map
44224	Sardine St-Fish Harbor Sanitary Sewer
1-1386	Plans of San Pedro Yard Terminal Island Calif Bethlehem Steel 1977
1-1388	Berth 240Z – Backland Paving & Wharf Improvements
1-2744	Berth 258 – Road Realignment
1-2881	Fiber Optic Network – Phase 2
1-850	Berths 207 Through 209 Container Equipment Maintenance (C.E.M.) Shops, Offices and Tower
1-851	Container Freight Station – Rear Berths 207-209
1-853	Site Improvements Berths 207-209
1-854	Site Improvements – Berths 207-209
1-921-26	Existing Gas Line Locations
6-1052	Pier No.4 Extension – Bethlehem Steel Corporation
6-1090	The Pac. Tel. & Tel. Co.
88-4136	Can Making Plant Compressor & Compound Rm Plan
88-4246	Can Making Plant Machine Shop, Storage and Office
88-5658	Bridge Connection, Sections, Elevations, & Details

88-6958	Chilling Room Pipe Bridge Across Barracuda Street
88-7041	Two Story Office Addition and Remodeling
88-73	Plant No. 4 French Sardine Company Terminal Island, CA 5/7/1951
88-7496/6-1573	Die Shop, Restrooms and Offices Addition, 9/5/80
88-7836	Replacing of Existing Trusses with Tapered Structural Girders at Cooling Room Area, 12/14/82

END OF SECTION

01 ABBREVIATIONS AND DEFINITIONS

a ABBREVIATIONS:

AASHTO:	American Association of State Highway and Transportation Officials
ACI:	American Concrete Institute
ANSI:	American National Standards Institute
AREMA:	American Railroad Engineering and Maintenance of Way Association
ASTM:	American Society for Testing and Materials
AWPA:	American Wood Protection Association
AWPB:	American Wood Preservers Bureau
AWS:	American Welding Society
AWWA:	American Water Works Association
CRSI:	Concrete Reinforcing Steel Institute
DBE:	Disadvantaged Business Enterprise
DWP:	Department of Water and Power
ICEA:	Insulated Cable Engineers Association
IES:	Illumination Engineering Society
IEEE:	Institute of Electrical and Electronics Engineers
LAHD:	Los Angeles Harbor Department
LBE:	Local Business Enterprise
MBE:	Minority Business Enterprise
NEC:	National Electrical Code
NEMA:	National Electrical Manufacturers Association
NFPA:	National Fire Protection Association

01000.01 Cont'd.

OBE:	Other Business Enterprise
OSHA:	Occupational, Safety, and Health Administration
POLA:	Port of Los Angeles
PVC:	Polyvinyl chloride
RS:	Reference Specifications
SBE	Small Business Enterprise
SSPC:	Society for Protective Coatings
UDBE:	Underutilized Disadvantaged Business Enterprise
UL:	Underwriters Laboratories, Inc.
VSBE:	Very Small Business Enterprise
WBE:	Women Business Enterprise

b DEFINITIONS:

Applicable Laws: Any and all federal, state, county, or governmental agency laws, statutes, ordinances, standards, codes, rules, ordinances, resolutions, orders, or requirements adopted or implemented under color of law, in effect at any point during the term of Contract, pertaining to: Project, performance of Work by Contractor and/or those operating for or on behalf of Contractor, operation and occurrences on Project Site; use, occupancy, and/or condition of Laydown Area(s) and Contract Documents.

Award: The acceptance, by City, of the successful Bidder's proposal.

Backland: The area of a marine terminal's property behind the wharf where cargo, containers, chassis and other equipment are stored and other non-water invasive equipment and facilities are located.

Bidder: The person, firm, or corporation submitting a bid for Work.

Board: Board of Harbor Commissioners; the body vested with the control and management of Harbor Department of City of Los Angeles, as created by and operating under City Charter.

01000.01 Cont'd.

Business Day: Monday, Tuesday, Wednesday, Thursday, and Friday during working hours (8 am to 5 pm with a non-paid 1-hour break), with the exception of City of Los Angeles holidays.

Calendar Day: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. The term day(s) whether used on Drawings or Specifications are consecutive Calendar Days unless otherwise specified.

Changes in Work: A written order from City to Contractor covering changes in Drawings, Specifications, or Bid Proposal Line Items quantities and establishing the basis of payment and Contract Time adjustments, if any, for Work affected by such changes. Change Orders (COs) as defined in Cost-Plus Change Work Order (Change Orders) Subsection of this Section, and Authorities for Adjustment (AFAs) as defined in Authority for Adjustments Subsection of this Section, is considered to be Changes in Work.

City: City of Los Angeles, California.

Consultant: A firm under contract or agreement with Department to perform services.

Contamination: A spill, discharge, or release of any Environmentally Regulated Material.

Contract Documents: "Contract Documents" shall consist of Notice Inviting Bids, Information for Bidders, Bidding Documents, Contract, Performance Bond, Payment Bond, Affidavits of Completion, SBE/VSBE/MBE/WBE/DVBE/OBE/LBE Information, and Contract Documents Sections of this Specification No. 2838 together with Contractor supplied documents required by these sections, and Specifications, Drawings, standard plans, and reference specifications referenced in Specifications or on Drawings, the appendices, addenda, permits, and Changes in Work.

Contract: The written agreement executed by Contractor and City covering Work not to exceed three (3) years commencing on Effective Date.

Contractor: The individual, firm, or corporation with whom Contract is made, or its legal representative.

Contract Time: The number of Calendar Days, stated in Contract Time Article of CONTRACT Section, allowed for completion of Work including any maintenance or plant establishment period and authorized time extensions. The first Notice to Proceed (NTP) shall specify the date on which Contract Time begins.

days: See definition for Calendar Day.

01000.01 Cont'd.

Department: Harbor Department of City of Los Angeles.

Drawings: The official drawings or exact reproductions approved by Engineer, which show Project Site and any Laydown Area(s), character, dimensions, and details of Work.

Effective Date: The date of execution of Contract by Executive Director upon authorization of Board, subject to the provisions of Charter Section 245 of City of Los Angeles.

Engineer: Chief Harbor Engineer of Construction Division of Department or designated representative.

Environmentally Regulated Material: Any material, pollutant, hazardous or toxic substance, material, or waste at any concentration, that is or becomes regulated by the United States, the State of California, or any local or governmental authority having jurisdiction over Project Site and any Laydown Area(s) and/or Contractor's undertaking of Work. Environmentally Regulated Materials shall mean: (i) "hazardous substance" as defined by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); (ii) "hazardous waste" as defined in Resource Conservation and Recovery Act (RCRA); (iii) Any pollutant, contaminant, or hazardous, dangerous, or toxic chemical, material, or substance, within the meaning of any other applicable federal, state, or local law, regulation, ordinance, or requirement (including consent decrees and administrative orders imposing liability or standard of conduct concerning any hazardous, dangerous, or toxic waste, substance, or material, now or hereinafter in effect); (iv) Radioactive material, including any source, special nuclear, or byproduct material as defined in the Atomic Energy Act of 1954 (42 USCS §§ 2011 et seq.) in its present or successor form; (v) Asbestos in any form or condition; (vi) Polychlorinated biphenyls ("PCBs") and any substance or compound containing PCBs; and (vii) Petroleum products.

Executive Director: Executive Director of Department or designated representative.

Inspector: An authorized representative of Engineer assigned to make all necessary inspections and tests of Work performed and being performed, and of the materials furnished and being furnished by Contractor.

Landside: Project activity approach from land, for example, pile driving from landside.

01000.01 Cont'd.

Laydown Area(s): Specific area or real property, ground, pavement, or water access expressly identified either on Drawings if applicable or in writing by Executive Director, located near or at Project Site, designated for the following uses and no others: delivery, storage, and handling of the materials and equipment to be installed or constructed as part of Work, field offices, parking, and access.

Notice of Award: The letter informing Contractor that Award of Contract has been made. The date on the Notice of Award starts the 30-day period for execution of Contract and the 14-day period for submittal and approval of acceptable bonds and insurance.

Notice(s) to Proceed: The letter(s) from Engineer which notify(ies) Contractor of the effective date Contract Time shall begin, and authorizes Work or items of Work to be started.

Project: The structure or improvement to be constructed in whole or in part, through the performance of Contract.

Project Site: The entire area of real property on which Work is to be performed. Area or areas where Project materials and equipment, as described in NOTICE INVITING BIDS Section and SUMMARY OF WORK Section of Specifications are installed or constructed.

Proposal: The written offer of Bidder (when submitted on the approved proposal form) to furnish the necessary materials, and perform Work in accordance with Contract Documents.

Specifications: The portion of Contract Documents containing written technical descriptions, instructions, provisions, general conditions, supplementary conditions, and detailed requirements pertaining to materials, methods, and manner of performing Work and to the quality of Work to be furnished and installed under Contract. Standards for specifying materials and testing which are cited in Specifications by reference shall have the same force and effect as if included in Contract Documents.

Substantial Completion: Upon satisfactory completion of Work, Engineer shall issue a Substantial Completion letter to Contractor to indicate a stop in Contract Time and that Work is acceptable for its intended use. Such Substantial Completion letter may include a list of punch list items that must be completed by Contractor prior to final acceptance of Work by Department.

Superintendent: Contractor's executive representative who is present on Project Site and any Laydown Area(s) during construction, authorized to receive and fulfill instructions from Engineer, and who shall supervise and direct the construction.

01000.01 Cont'd.

Waterside: Project activity approach from water, for example, pile driving from waterside.

Work: The furnishing of labor, materials, tools, equipment, and incidentals necessary and convenient to Contractor's performance of all duties and obligations imposed by Contract. Unless otherwise noted, Work shall be performed on Project Site and any Laydown Area(s).

02 TIME FOR SUBMITTAL OF BONDS

- a Within 14 days of Notice of Award, and prior to, or concurrently with execution of Contract, Contractor shall furnish City a performance bond and a payment bond.

03 PERFORMANCE BOND

- a A satisfactory performance bond in a form approved by the City Attorney shall be furnished as a guarantee of the faithful performance of Contract in the sum of 100 percent of the total amount of Contract.
- b The form of bond is included in Section 00070.
- c No payment shall be made to Contractor until Contractor's performance bond has been approved by the City Attorney.

04 PAYMENT BOND

- a If bid exceeds \$25,000, a satisfactory payment bond in a form approved by the City Attorney shall be furnished in the sum of 100 percent of the total amount of Contract to secure payment of all claims, demands, liens or charges of the State of California, of material suppliers, mechanics, or laborers employed by Contractor or by any subcontractor.
- b The form of bond is included in Section 00074.
- c No payment shall be made to Contractor until Contractor's payment bond has been approved by the City Attorney.

05 RESPONSIBILITY FOR LOSS

- a During use and occupancy of Project Site and any Laydown Area(s) and progress of Work under Contract and until its final acceptance, Contractor shall have the charge and care thereof and shall take every necessary precaution against injury or damage to any part thereof by the action of the elements, or from any other cause whatsoever whether arising from the execution or from the non-execution of Work.

01000.05 Cont'd.

- b Contractor shall, at Contractor's sole cost and expense, except as provided in Paragraph c of this Subsection, rebuild, repair, restore and make good all injuries or damages to any portion of Work from any and all causes before its completion and final acceptance, and shall deliver Work complete in accordance with the terms of Contract.
- c Contractor shall not be required to pay more than 5% of the contracted amount to rebuild, repair, restore, and make good all injuries or damages to any portion of Work, built in accordance with accepted and applicable building standards, Drawings, and Specifications, that has been damaged by an earthquake in excess of a magnitude of 3.5 on the Richter scale or tidal wave.

06 PREVAILING WAGES

- a Contractor shall pay the general prevailing rate of per diem wages and rates for legal holiday and overtime work currently being paid in the area where Work is being performed.
- b Pursuant to the provisions of the Labor Code of the State of California, the general prevailing rate of wages for each craft, classification or type of workers needed in the execution of contracts under the jurisdiction of Board, shall be those rates as determined by the Director of the Department of Industrial Relations of the State of California. Copies of the applicable Determinations by the said Director are on file in Construction Division and are hereby incorporated and made a part hereof the same as though fully set forth herein. Copies of the applicable Determinations may be obtained at or by request to Department.
- c When Contractor has been determined to be in violation of Section 377 of City Charter making applicable the provisions of the California Labor Code relating to the payment of not less than the prevailing per diem wages on public works, deductions may be made from moneys due or to become due Contractor in the amount of twice the difference between such stipulated prevailing rates, and the amount paid to each wage worker for each Calendar Day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate.
- d Contractor shall also comply with Section 1775 of the Labor Code providing for a penalty per day as determined by the Labor Commissioner for each Calendar Day, or part thereof, for which each worker was paid less than the prevailing wage.

01000.06 Cont'd.

- e Contractor and subcontractors shall keep an accurate record showing the names and occupations of all workers employed by them in connection with any Work done under Contract, and the per diem wages paid to each of such workers, and shall keep such record open at all reasonable hours to the inspection of Board and to the State Division of Labor Law Enforcement. Contractor in all other respects shall comply with Section 1776 of the Labor Code.
- f No later than the end of the work day following the day on which Work was performed by Contractor, or any subcontractor, Contractor and applicable subcontractor(s) shall complete and furnish Contractor Daily Field Report, included as Subsection 67 of this Section, to Inspector. When Work has been performed, Contractor shall submit a form regarding all employees and equipment at Project Site and any Laydown Area(s) on the work day, and Contractor shall submit a separate form for each subcontractor regarding each subcontractor's employees and equipment at Project Site and any Laydown Area(s) on the work day. Each field report shall:
 - 1 Identify Project title, Specification number, name of Contractor or subcontractor, and date on which Work was performed.
 - 2 Show the names of the workers and identify their applicable company affiliation (Prime Contractor, subcontractor, supplier, or vendor).
 - 3 Show the labor classification for each worker. If worker is an operating engineer or teamster, Contractor or subcontractor must indicate which piece of equipment was operated by the worker.
 - 4 Show the Start Time and End Time for the worker listed, as well as the total hours worked by the worker on the work day.
 - 5 Show the type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, utilized on the work day.
 - 6 Contain the printed name and title for Contractor or subcontractor representative, and shall be dated and signed by same.
- g Contractor shall submit the original (wet signature by Contractor or subcontractor) to Inspector for review. If additional space is needed, a second form, with pages numbered accordingly, can be completed.

01000.06 Cont'd.

- h Inspector shall compare Inspector's records with the report submitted by Contractor, discuss any apparent discrepancies with Contractor, and reconcile the report (and have it re-submitted, if necessary). Once the report is agreed upon by Contractor and Inspector, Inspector prints his/her name on the report and dates and signs the report. Each party shall retain a copy of the report, signed by both parties.
- i Certified payrolls from Contractor and all subcontractors shall be submitted to City weekly through the Department of Public Works Bureau of Contract Administration's Online Certified Payroll System (OCPS) and shall be accompanied by a Statement of Compliance, signed electronically on OCPS by Contractor or Contractor's agent attesting that the payrolls are correct and complete and the wage rates contained therein are not less than those set by the applicable wage determinations incorporated into Contract. City reserves the right to reject incomplete payroll reports and request re-submittal of complete reports.

07 WAGE AND EARNING ASSIGNMENT ORDERS/NOTICES OF ASSIGNMENTS

- a Contractor and its subcontractors shall comply with all applicable state and federal employment reporting requirements for Contractor's and/or subcontractor's employees.
- b Contractor and/or subcontractor shall certify that the principal owner(s) are in compliance with any Wage and Earnings Assignment Orders and Notices of Assignment applicable to them personally. Contractor or subcontractor shall comply with all lawfully served Wage and Earnings Assignment Orders and Notices of Assignments in accordance with California Family Code §§5230 et. seq. Contractor or subcontractor shall maintain such compliance throughout the term of Contract.

08 WORKING HOURS

- a Work shall be accomplished during daylight hours. Night work shall only be allowed, if in the opinion of Engineer, Work does not:
 - 1 conflict with noise laws, ordinances, regulations, City code, or
 - 2 create unsafe working conditions or poor quality control provisions.
- b Requests for night work shall be made 48 hours prior to the desired start of the night work.

09 APPRENTICE UTILIZATION ON PUBLIC WORKS

- a Contractor shall comply with the Provisions of Labor Code, State of California, Section 1777.5 relating to apprentice employment and training. Contractor shall assume full responsibility for compliance with said Section with respect to all apprenticeable occupations upon Project.
- b Section 1777.5 does not apply to prime contracts involving less than \$30,000.

10 NON-DISCRIMINATION PROVISIONS

- a Contractor shall agree to City of Los Angeles Non-discrimination provisions as provided in Subsections 00030.03 and 00030.04 of BIDDING DOCUMENTS Section.

11 BOARD RIGHT TO TERMINATE CONTRACT

- a Board may terminate Contract at its own discretion without liability to Contractor for damages when conditions encountered during Work make it impossible or impracticable to proceed, or when City is prevented from proceeding with Contract by act of God, by law, or by official action of a public authority.
- b Upon termination, Contractor may receive payment on the basis shown below in consideration of its irrevocable written agreement to release any and all claims and/or causes of action against City arising out of or related to such termination and to indemnify and hold City harmless from any and all liability, claims and/or causes of action arising from or related to such termination. City shall prepare such written agreement.

- 1 Termination occurs prior to the Notice to Proceed date
Subject to Contractor's full satisfaction of the requirements of Paragraph b of this Subsection, Contractor shall be entitled to payment as shown below.

<u>Value of Contract</u>	<u>Payment Due to Contractor</u>
\$0 to \$1,000,000	10% of Contract amount
\$1,000,001 to \$5,000,000	\$100,000 plus 5% of Contract amount above \$1,000,000
\$5,000,001 to \$10,000,000	\$300,000 plus 2.5% of Contract amount above \$5,000,000
\$10,000,001 to \$50,000,000	\$425,000 plus 1% of Contract amount above \$10,000,000
\$50,000,001 to \$100,000,000	\$825,000 plus 0.5% of Contract amount above \$50,000,000
Above \$100,000,000	\$1,075,000 regardless of Contract amount

01000.11 Cont'd.

- 2 Termination occurs after the Notice to Proceed date
 Subject to Contractor's full satisfaction of the requirements of Paragraph b of this Subsection, Contractor shall be entitled to the estimates and payment for all Work done to the date of termination, if any, plus a percentage of the value of Work remaining (determined by subtracting payments made, or due, from Contract price), as shown below.

<u>Value of Work Remaining</u>	<u>Payment Due to Contractor</u>
\$0 to \$1,000,000	10% of value of Work remaining
\$1,000,001 to \$5,000,000	\$100,000 plus 5% of value of Work remaining above \$1,000,000
\$5,000,001 to \$10,000,000	\$300,000 plus 2.5% of value of Work remaining above \$5,000,000
\$10,000,001 to \$50,000,000	\$425,000 plus 1% of value of Work remaining above \$10,000,000
\$50,000,001 to 100,000,000	\$825,000 plus 0.5% of value of Work remaining above \$50,000,000
Above \$100,000,000	\$1,075,000 regardless of value of Work remaining

12 ASSIGNMENTS

- a Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of Contract, or rights, title or interest in or to the same or any part thereof, without the previous consent in writing of Executive Director endorsed upon or attached to the copies of Contract filed in Office of Board of Harbor Commissioners.
- b Nothing herein contained shall be construed to hinder, prevent or affect an assignment by Contractor for the benefit of Contractor's creditors; and no right under Contract shall be asserted against City, in law or in equity, by reason of any so-called assignment of Contract, or any part thereof, unless authorized as aforesaid by the written consent of Executive Director.
- c Any assignment of money shall be subject to all proper setoffs and withholdings in favor of City and to all deductions provided for in Contract. All money withheld whether assigned or not, shall be subject to being used by City for completion of Work, should Contractor be in default.

13 CANCELLATION FOR DEFAULT

- a If Contractor fails to begin Work within the time stipulated, or if Work to be done under Contract is abandoned by Contractor, or if Contract is assigned or Work sublet by Contractor otherwise than as herein specified, or if at any time Engineer shall be of the opinion, and shall so certify in writing to Executive Director, that the performance of Contract is unnecessarily or unreasonably delayed, or that Contractor is willfully violating any of the conditions or covenants of Contract or is executing the same in bad faith, or not in accordance with the terms thereof, Executive Director may notify Contractor not to resume, or to discontinue, all Work, or any part thereof, under Contract, by a written notice served upon Contractor.
- b Executive Director shall advise the bondsperson(s) or surety(ies) guaranteeing faithful performance of Contract, of the suspension and reasons therefor, and shall notify said bondsperson(s) or surety(ies) that they shall be given fourteen days within which to arrange for the completion of Work in accordance with the terms and provisions of Contract by another contractor or firm of contractors, satisfactory to Executive Director. If such bondsperson(s) or surety(ies) requests additional time in which to arrange for completion of Work, Executive Director may, in its sole and absolute discretion, extend such time period; however, Executive Director is under no obligation to do so.
- c Should the bondsperson(s) or surety(ies) fail to effect satisfactory arrangements within the period hereinbefore stipulated, Executive Director shall thereupon have the right without further notice, to exclude Contractor, bondsperson(s) or surety(ies) and any subcontractor or employee upon the line of work from Project Site and any Laydown Area(s) and take possession of all material and equipment, and complete Work by City forces or by letting the unfinished Work to another contractor, or by a combination of such methods.

01000.13 Cont'd.

- d The cost of completing Work shall be charged against Contractor and the surety or bondspersons to the extent of their liability. If Department is required to complete Work or satisfy other Contract obligations because of the surety or bondspersons' failure to comply with the bond obligations, then bondspersons or surety shall, nevertheless, immediately reimburse City all costs in excess of Contract amount which City is obligated to pay in order to complete Work. If surety or bondspersons fail to pay such amount immediately upon City's demand, then City shall be entitled to collect interest from bondspersons or sureties on the amounts City is required to pay excess of Contract amount. The interest rate which surety or bondspersons shall pay shall be 2% in excess of the interest rate charged by Bank of America from time to time for prime commercial loans of ninety (90) day maturities. The interest rate shall accrue on all amounts City has had to pay excess of Contract amount from the date of City's payment. Engineer's certificate as to the amount of Work done, the cost, and the excess cost, if any, of completing Work specified by Contract shall be conclusive and binding upon Contractor's assignees and sureties.
- e If the surety or bondspersons assumes any part of Work, it shall take Contractor's place in all respects for that part, and shall be paid by City for all work performed by it in accordance with Contract. If the surety or bondspersons assumes the entire Contract, all money due Contractor at the time of Contractor's default shall be payable to the surety as Work progresses, subject to the terms of Contract.
- f In lieu of the provisions of this Subsection for setting aside Contract and completing Work for proper cause, City may pay Contractor for the parts already done according to the provisions of Contract and Specifications and may treat the parts remaining undone as if they had never been included or contemplated by Contract. No claim under this provision shall be allowed Contractor for prospective profits on work uncompleted by Contractor.
- g The provisions of this Subsection shall be in addition to all other rights and remedies available to City under law.

14 OTHER CONTRACTS

- a City reserves the right to have Work done in or about Project Site and any Laydown Area(s) as provided for in Contract, by persons, firms, or corporations other than said Contractor, or to perform the same by force account under the direction and supervision of Engineer.
- b Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall properly connect and coordinate Work with others.
- c If any part of Contractor's Work depends upon the work of any other contractor for proper execution or results, Contractor shall inspect and promptly report to Engineer any defects in such work that render it unsuitable for such proper execution and results. Failure to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper.

15 CONTRACT DOCUMENTS COMPLEMENTARY

- a Contract Documents are intended to be complementary and to describe and provide for a complete Project. Anything in Specifications and not on Drawings; or on Drawings and not in Specifications, shall be considered as though shown or mentioned in both.
- b Information included by specific reference in any of Contract Documents shall be a part of Contract Documents as though reproduced in entirety in the document where the reference occurs.
- c While it is believed that much of the information pertaining to conditions which may affect the cost of Work shall be shown on Drawings or indicated in Specifications, City does not warrant the completeness or accuracy of such information. It is Contractor's responsibility to ascertain the existence of any conditions affecting the cost of Work which would have been disclosed by reasonable examination of Project Site and any Laydown Area(s) and Contract Documents.
- d All contact information, website addresses, and related references are provided for convenience only, but it is Contractor's responsibility to obtain the current applicable phone numbers, addresses, and websites in the event that those provided are no longer current.

16 PRECEDENCE OF DOCUMENTS

- a If there is a conflict between Contract Documents, the document listed herein as higher in precedence shall control.
- b The precedence shall be as follows (ranking 1 as highest):
 - 1 Permits and Permit Documents
 - 2 Specifications (in total)
 - 3 Drawings
 - 4 Standard Plans
 - 5 Reference Specifications
- c Authorizations for Adjustments, Cost-plus Change Orders, supplemental agreements, and approved revisions to Drawings and Specifications shall take precedence over documents listed.
- d Detailed and large-scale Drawings shall have precedence over general and small-scale Drawings. Drawings shall have precedence over shop drawings.
- e Reference drawings are included for information only. Such information is given as being the best factual information available without the assumption of responsibility for its accuracy or for any conclusions that Contractor might draw therefrom.

17 STANDARD SPECIFICATIONS

- a Standard Specifications, such as ASTM, ACI, and ANSI, referenced herein shall be of the edition and supplements current as of the date of advertising for bids unless otherwise specified herein.

18 REFERENCE SPECIFICATIONS

- a Whenever the words "Reference Specifications" (sometimes abbreviated RS) are used, either in Specifications, or on Drawings, it shall mean "GREEN BOOK - STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," edition and supplements current as of the date of advertising for bids unless otherwise specified herein.

19 ELECTRONIC COPIES OF CONTRACT DOCUMENTS FURNISHED

- a Engineer shall furnish to Contractor, free of charge, electronic files in pdf format of Contract Documents reasonably necessary for the execution of Work.
- b These Contract Documents are the property of Department, and shall not be reused on other work.

20 RESPONSIBILITY OF COSTS AND MATERIALS

- a Unless otherwise specifically stipulated elsewhere in Contract Documents, Contractor shall provide at its sole cost and expense all materials, labor, water, tools, equipment, light, power, transportation, and other facilities, utilities, and incidentals necessary for the execution and completion of Work.
- b Unless otherwise specifically stipulated elsewhere in Contract Documents, all materials, parts, and equipment incorporated in permanent Work shall be new and free from defects.

21 SHOP DRAWINGS AND MATERIALS SAMPLES

- a Shop drawings shall consist of drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data prepared by Contractor or any subcontractor, manufacturer, supplier or distributor, to illustrate some portion of Work not covered in necessary detail by Drawings furnished by Department.
- b Samples shall consist of physical examples required by Contract to be furnished by Contractor to illustrate materials, labor, and equipment to conform to Specifications, and to establish standards by which completed Work shall be judged for acceptability. These samples are distinguished from test samples obtained for laboratory analysis and destructive testing.
- c Contractor shall review and stamp with approval and submit with reasonable promptness and in orderly sequence so as to cause no delay in Work or in the work of any other contractor, all shop drawings and samples required by Contract Documents and subsequently by the course of construction.
- d By approving and submitting shop drawings and samples, Contractor thereby represents that it has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or shall do so, and that each shop drawings and samples has been checked and coordinated with the requirements of Work and of Contract Documents.

01000.21 Cont'd.

- e Engineer shall review and approve shop drawings and samples only for conformance with the design concept of Project and with the information given in Contract Documents. Review time shall be 28 Calendar Days, unless otherwise stated in Specifications. The time for City to review items does not commence until Contractor's submittal (or re-submittal, addressing Engineer's corrections/comments resulting from Engineer's review of previous submittal) is complete. Engineer's approval of a separate item shall not indicate approval of an assembly in which the item functions. One copy of all submittals shall be returned to Contractor.
- f At the time of submission, Contractor shall inform Engineer, in writing, of any deviation in the shop drawings and samples from the requirements of Contract Documents.
- g Contractor shall make any corrections required by Engineer and shall resubmit the required number of corrected copies of shop drawings and samples until approved. Contractor shall direct specific attention in writing to revisions on resubmitted shop drawings other than the corrections requested by Engineer on previous submissions.
- h Engineer's approval of shop drawings and samples shall not relieve Contractor of responsibility for any deviation from the requirements of Drawings and Specifications found in the shop drawings and samples unless Contractor has informed Engineer in writing of such deviation at the time of submission and Engineer has given written approval of the specific deviation in letter form separately from any notations on the shop drawings. Engineer's approval shall not relieve Contractor of any responsibility for errors or omissions in the shop drawings and samples.
- i No portion of Work requiring shop drawing and sample submission shall commence until the submission has been approved by Engineer. All such portions of Work shall be in accordance with approved shop drawings and samples.
- j The cost of furnishing shop drawings and samples shall be considered as included in the prices bid for Work and no addition to Contract price shall be made therefor.

22 SOURCE INSPECTIONS AND SAMPLES FOR TESTING

- a Unless otherwise specified, inspection is required at the source for asphalt concrete paving mixtures, structural concrete, metal fabrication, metal casting, welding, concrete pipe manufacture, concrete piles, steel piles, steel pipes, sheet steel piling, protective coating application, and similar shop or plant operations. Steel pipe in sizes less than 18 inches in diameter and vitrified clay and cast iron pipe in all sizes are acceptable upon certification as to compliance with Specifications, subject to sampling and testing by Engineer. Standard items of equipment such as electrical motors, conveyors, elevators, plumbing fixtures, and other similar equipment, are subject to inspection at Project Site and any Laydown Area(s). Special items of equipment such as designed electrical panel boards, large pumps, gangways, floating docks, marine fenders, and other similar equipment, are subject to inspection at the source.
- b Before incorporation in Work, Contractor shall submit samples of materials required by Contract Documents. Contractor shall deliver the materials for testing to the place and at the time designated by Engineer.
- c Contractor shall notify Engineer in writing at least 15 days in advance, of Contractor's intention to use materials for which tests may be necessary, to allow sufficient time to perform the tests. The notice shall name the proposed supplier and source of the materials.
- d Unless otherwise specified, all testing and inspection within 75 miles of Department Administration Building shall be performed by Engineer, at no expense to Contractor.
- e Unless otherwise specified, when Contractor intends to purchase materials, fabricate products, or equipment from sources located more than 75 miles from Department Administration Building, an independent inspector or accredited testing laboratory (approved by Engineer), shall be provided by Contractor at Contractor's sole cost and expense, to inspect and test the materials, equipment, or process. Approval of the independent inspector or accredited testing laboratory shall be obtained before producing any material or equipment. The independent inspector or accredited testing laboratory shall evaluate the materials for conformance with the requirements of Drawings and Specifications. The independent inspector or accredited laboratory shall forward evaluation and test reports to Engineer, with copies provided to Contractor. No materials or equipment shall be shipped nor shall any processing, fabricating, or treating of materials be done without proper inspection by the independent inspector or accredited testing laboratory. Approval by the independent inspector or accredited testing laboratory shall not relieve Contractor of responsibility for complying with the requirements of Contract Documents.

01000.22 Cont'd.

- f Testing of the materials furnished by Contractor shall be made by Engineer in accordance with commonly recognized standards or national organization and such special methods and tests as are in use by Engineer in accordance with provisions of Specifications. If materials should fail any tests, retesting shall be performed by Engineer and paid for by Contractor.
- g Engineer may waive the materials testing and inspection requirements of Specifications and accept the manufacturer's written certificate of compliance that the materials to be supplied meet the requirements. Materials test data may be required by Engineer to be included with the submittal.

23 DEFECTIVE MATERIALS AND CONSTRUCTION

- a Materials and labor not conforming to the requirements of Specifications shall be considered defective and shall be subject to rejection. Defective Work or materials, whether in place or not, shall be removed immediately from Project Site and any Laydown Area(s) by Contractor, when so directed by Engineer.
- b Contractor shall be required, at Contractor's sole cost and expense, to replace any inferior material, or correct any imperfect Work whenever discovered, as ordered by Engineer.
- c If Contractor fails to replace any defective or damaged Work or material after reasonable notice, Engineer may withhold payments until the defective or damaged Work or material is replaced.
- d No material furnished or Work to be done is to be considered as accepted which may be defective or deficient in any of the requirements of Specifications, whether or not due to any negligence of Inspector, or other authorized person, to point out such defect or deficiency during the execution of Contract.

24 PROTECTION OF MATERIALS

- a Contractor shall provide and maintain storage facilities and employ such measures as shall preserve the specified quality and fitness of materials to be used in Work. Stored materials shall be reasonably accessible for inspection. Contractor shall also adequately protect new, existing Work and all items of equipment until completion of Contract and acceptance by Executive Director.
- b Contractor shall be held responsible for all materials furnished by City after such are delivered at Project Site and any Laydown Area(s) and deductions shall be made from any money due or to become due Contractor to make good any shortages and deficiencies from any cause whatsoever which may result after such delivery, or for any demurrage charges due to delinquency in unloading. In case of suspension of Work from any cause whatever, Contractor shall be responsible for all materials whether furnished by Contractor or by City, and shall properly store such if necessary.

25 AUTHORITY OF ENGINEER

- a Board has the final authority in all matters affecting Work covered by Contract Documents. Within the scope of Contract, Engineer shall have the authority to enforce compliance with Contract Documents. Contractor shall promptly comply with instructions from Engineer and Engineer shall have the executive authority to enforce and make effective such decisions and orders.
- b On all questions relating to quantities, the acceptability of material, equipment, or Work, the execution, progress or sequence of Work and the interpretation of Contract Documents, the decision of Engineer is final and binding, and shall be precedent to any payment under Contract, unless otherwise ordered by Board.

26 SUBSURFACE DATA AND PHYSICAL CONDITIONS

- a Engineer shall make available all information in Department's possession on subsoil conditions in the vicinity of Work. Any additional subsurface exploration shall be done by Contractor at Contractor's sole cost and expense.
- b All soil test hole data, water table elevations, and soil analyses apply only at the location of the test holes and to the depths indicated. The indicated elevation of the water table is that existing at the date the test hole data was determined. A difference in elevation between groundwater shown and groundwater actually encountered during construction shall not be considered as a basis for extra compensation.

01000.26 Cont'd.

- c Contractor shall promptly, and before such conditions are disturbed, notify Engineer in writing of: 1) Subsurface or physical conditions at Project Site and any Laydown Area(s) differing materially from those indicated in Contract Documents or as given by survey points and instructions, 2) Unknown physical conditions at Project Site and any Laydown Area(s), of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in Contract, or 3) Material that Contractor has suspected to possibly be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law. Engineer shall promptly investigate the conditions, and if Engineer finds that such conditions do so materially differ, or do involve hazardous waste and cause an increase or decrease in the cost of, or the time required for, performance of Contract, an equitable adjustment shall be made in accordance with applicable Contract provisions. Any request by Contractor for adjustment hereunder shall not be allowed unless written notice as herein required has been given. In the event that a dispute arises between City and Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in Contractor's cost of, or time required for, performance of any part of Work, Contractor shall not be excused from any scheduled completion date provided for by Contract but shall proceed with all Work to be performed under Contract. Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

27 PROTECTION OF EXISTING UTILITIES

- a Contractor is responsible for the protection of utilities and pipelines shown on Drawings, or otherwise made known to Contractor, which are designated to be protected or to remain in service. If service is interrupted, or utilities damaged by Contractor's operations, Contractor shall restore service and repair the utility to the satisfaction of the owner at Contractor's sole cost and expense.

28 HARBOR DATUM

- a All depths and elevations given in Specifications or shown on Drawings are referenced to the plane of the National Geodetic Vertical Datum of 1929 (NGVD 29), Mean Lower Low Water (MLLW) which is assumed as elevation 0.00.

01000.28 Cont'd.

- b The approximate range of tides, based on this datum is as follows:

Lowest Tide	-2.5 feet
Mean Lower Low Water	0.0 feet
Mean Sea Level.....	+2.8 feet
Mean Higher High Tide	+5.4 feet
Highest Tide	+7.5 feet

29 SURVEYING AND STAKING

- a Unless otherwise specified, Engineer shall provide and be responsible for surveying needed to construct Project. Contractor shall be responsible for preserving construction survey stakes and marks for the duration of their usefulness. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be by Engineer at the sole cost and expense of Contractor.
- b Contractor shall notify Engineer at least two working days before survey services shall be required in connection with the laying out of any portion of Work. Contractor shall dig all holes necessary for line and grade stakes.
- c Unless otherwise specified, stakes shall be set and stationed by Engineer for curbs, headers, sewers, storm drains, rough grade, and a corresponding cut or fill to finished grade (or flow line) indicated on a grade sheet.
- d Grades for underground piping and conduit shall be set at the surface of the ground. Contractor shall transfer them to the bottom of the trench.
- e For all buildings and structures, including wharves, Engineer shall furnish land surveys, base lines, and stakes for locating the principal component parts of Work together with a suitable number of bench marks. Contractor shall develop and make all detail surveys, lines, and elevations as necessary.
- f Contractor shall check all the dimensions as a whole and in detail, and shall layout and become responsible for the exact position and elevation of all part of the structures.

30 INSPECTION OF WORK

- a All Work done and all material furnished shall be subject to the inspection and approval of Engineer, and Contractor shall perform Work only in the presence of Engineer.
- b Work done without proper inspection shall be subject to rejection. Engineer shall at all times have access to Work during its preparation and construction. Contractor shall furnish to Engineer equipment and facilities required for inspection of Work in accordance with the requirements and intentions of Contract Documents.
- c The inspection of Work shall not relieve Contractor of any obligation to fulfill all conditions of Contract as prescribed.
- d If any Work should be covered up without approval or consent of Engineer, it must, if required by Engineer, be uncovered for examination and properly restored at Contractor's sole cost and expense.
- e Re-examination of any Work may be ordered by Engineer, and, if so ordered, Work must be uncovered by Contractor. If such Work is found to be in accordance with Contract Documents, City shall pay the cost of the re-examination and replacement Work. If such Work is not in accordance with Contract Documents, Contractor shall pay such costs.

31 FIELD OFFICE TRAILER AND FIELD PERSONNEL

- a Contractor shall be responsible for providing, maintaining, and paying all costs associated with administering and managing Contract, including field and home office personnel, materials, equipment, tools, construction trailers, and any other items necessary until the end of Contract Time including maintenance or plant establishment period.
- b Contractor shall provide at all times during construction a competent Superintendent and necessary assistants satisfactory to Engineer. Superintendent shall represent Contractor and all direction given to Superintendent shall be binding as if given to Contractor.
- c Contractor's Superintendent shall be assigned solely to Project and be present on Project Site and any Laydown Area(s) for the entire duration of Contract Time including maintenance or plant establishment period. Contractor's Superintendent shall not be replaced without notifying and obtaining approval of Engineer in writing at least 14 Calendar Days in advance.
- d All requests from Contractor for directions, clarifications, or field instructions and all response thereto shall be in writing.

32 CHARACTER OF WORKERS AND DISCIPLINE AMONG EMPLOYEES

- a Contractor shall, at all times employ sufficient labor for completing Work in the manner and time required by Contract Documents.
- b All workers shall have sufficient skill and experience to properly perform work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform such work satisfactorily.
- c Contractor shall at all times enforce discipline and order among employees, and shall avoid employing on Work any person not skilled in the work assigned.
- d Any person employed who is found to be incompetent, intemperate, troublesome, disorderly, or who fails or refuses to perform Work properly and acceptably, shall be immediately removed from Work by Contractor and not be reemployed on Work.

33 CHANGES IN WORK

- a City reserves the right, without notice to the sureties, at any time during the life of Contract and without invalidating same, to change Drawings, Specifications, character of Work, quantity of Work, or time within which Contract is to be completed, provided the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the total Contract price. Should it become necessary to exceed this limitation, the change shall be by written supplemental agreement between Contractor and City, unless both parties agree to proceed with the change by Change Order.
- b In giving instructions, Engineer shall have authority to make Changes in Work not involving extra cost when such changes are necessary or expedient to the satisfactory performance and completion of Work.
- c Engineer, by written order to Contractor, approved by Executive Director, shall have authority to implement Changes in Work, and/or to grant extensions of time, provided that Changes in Work and/or extensions of time which increase or decrease Contract price by more than \$150,000 in any one authorization, and all time extensions in excess of one year, shall become effective only after authority is granted by Board.
- d Except in an emergency endangering life or property, no Changes in Work involving additions to Contract price shall be made unless in pursuance of such written order, and no claim for an addition to Contract price shall be valid unless the additional Work was so ordered.

34 COST-PLUS CHANGE ORDER WORK (CHANGE ORDERS)

- a If it is impossible or impracticable to ascertain the total cost of Changes in Work to be done before such Work is begun, or if no agreement can be reached on Changes in Work and additions to Contract price, then Engineer may issue a Cost-Plus Change Order (Change Orders) instructing Contractor to do Work, indicating expressly and unmistakably the intention to treat the items as Changes in Work, setting forth the kind, character and limits of Work as far as can be ascertained, the terms under which changes to Contract price shall be determined and the estimated total change in Contract price anticipated thereunder. Change Order shall be fully executed by Department and accepted by Contractor before any Work is started on the items covered by the order. Such Change Order shall become the basis for a later Authority for Adjustment when the amount of adjustment to Contract price can be determined, and the prior approval of Change Order shall be considered necessary authority within the limits of the estimated change in Contract price. Without additional authority, no costs exceeding the estimated amount shall be paid.
- b Contractor shall maintain records sufficient to distinguish the direct cost of Change Order Work from the cost of other operations.
- c Costs in a Change Order shall be determined as follows:
 - 1 Labor costs shall be based on the prevailing wage scale for each craft or type of worker. Cost of payroll taxes and insurance, health and welfare, pension and vacation are allowable, subject to Contractor's submitting adequate documentation to substantiate cost.
 - 2 Material costs shall be the cost of all materials purchased by Contractor and used in Cost-Plus Change Order Work and shall be the actual cost of such materials, including sales taxes, freight and delivery charges. City reserves the right to approve materials and sources of supply of materials furnished by Contractor, or, if necessary, to facilitate the progress of Work, to furnish the materials to Contractor.
 - 3 Contractor shall be allowed rental for the time that machinery or equipment is required based on the applicable Equipment Rental Rates published by the State of California, Department of Transportation, Division of Construction, current on date of performance of Work; when machinery and equipment not so listed is required, a reasonable rental shall be allowed. In addition, Contractor shall be allowed reasonable move-in and move-out charges on heavy equipment.

01000.34 Cont'd.

- 4 Equipment and tools having a replacement value of \$500 or less, whether or not consumed by use, shall be considered small tools and no payment shall be made therefor.
- d Contractor shall notify Inspector at the beginning of each day when Change Order Work is being performed. Contractor shall describe the personnel involved, whether by Contractor forces or by its subcontractors at any tier. Failure to notify Inspector prior to the start of Change Order Work serves as Contractor's waiver to claim for compensation on that day.
- e At the end of each day when Change Order Work is performed, Contractor [not subcontractor(s)] shall furnish to Inspector, on Port of Los Angeles Construction Division Time and Material Form, reports of Cost-Plus Work for that day. Form is included at the end of this Section.

The reports shall:

- 1 Identify party (Contractor or subcontractors at any tier) performing Work.
- 2 Show names of workers, classifications, and hours worked.
- 3 Describe and list quantities of materials used.
- 4 Show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable.
- 5 Describe other services and expenditures in such detail as Engineer may require.

An attempt shall be made to reconcile the report daily, and it shall be signed by Inspector, the subcontractor performing Work (if applicable) and Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through Contractor.

In the event that more than one Change in Work is performed by Contractor in a Calendar Day, Contractor shall maintain separate records of labor, construction equipment, and materials for each such change. In the event any subcontractor of any tier shall provide or perform any portion of any changed work, Contractor shall require that each such subcontractor maintain records in accordance with this Subsection.

01000.34 Cont'd.

- f All Change Order reports to be submitted on the day that Work is performed, shall be signed by the subcontractor (if applicable) and Contractor or authorized representative, and witnessed by Inspector. Engineer's signature on the report shall indicate agreement with the information reflected therein (except when disagreements remain and each party has placed notes as to the disagreement on the form), not that Contractor is entitled to payment of the costs in the report.
- g A subsequent report, also on Port of Los Angeles Construction Division Time and Material Form, shall be submitted by Contractor to Engineer within 5 Business Days after the date that Work was performed. In addition to the information included in the report required on the day that Work is performed, this subsequent report shall itemize all costs for labor, materials, and equipment rental and give a total of costs to date for Change Order Work. This report shall be accompanied by all receipts, delivery tickets, and other documentation that verifies the identified costs.
- h Engineer shall compare Engineer's records with Contractor's reports, make the necessary adjustments, and compile the costs of Change Order Work. When such corrected reports are agreed upon and signed by both parties, they shall become the basis of payment. The total cost to City for Work covered by Change Order directive shall under no circumstances exceed a price that is reasonable, competitive and fair to City given the amount of and type of Work involved and the circumstances under which the change is performed. In the event that Contractor shall fail or refuse, for any reason, to maintain or make available for inspection, review, and/or reproduction of such records, adjustments to Contract price or Contract Time, if any, on account of any change to Work may be deemed waived for that day. Contractor's obligation to maintain back-up records hereunder is in addition to, and not in lieu of, other Contractor obligations under Contract Documents with respect to Changes in Work.
- i Contractor is responsible for tracking costs and for notifying Engineer in writing when costs approach 50% and 75% of the estimated total change in Contract price set forth in Change Order. In addition, if Changed/Extra Work cannot be completed within the estimated total change in Contract price set forth in Change Order, Contractor shall notify Engineer in writing, and in a timely manner, that the limit requires an increase. City shall only reimburse eligible costs up to the estimated total change in Contract price set forth in Cost-Plus Change Order.
- j City may authorize and approve payment for necessary services and expenditures other than labor, materials, and equipment rentals.

01000.34 Cont'd.

- k Materials, equipment rental, and other costs shall be substantiated by vendors' invoices submitted with the current reports; or, if not then available, shall be submitted with subsequent reports. If vendors' invoices are not submitted within 30 days after completion of the Cost-Plus Work or if in the opinion of Engineer the cost of materials is excessive, then the cost of such items shall be deemed to be the lowest current wholesale prices at which the items are available in the quantities required, delivered to Project Site and any Laydown Area(s), less cash or trade discounts.

35 AUTHORITY FOR ADJUSTMENTS

- a An Authority for Adjustment (AFA) is a document that changes Work and adjusts Contract price. An AFA may be utilized in one of the following manners:
 - 1 A written order implementing Changes in Work for which a total cost has been negotiated prior to the issuance of the order. It is issued by Engineer and expressly indicates the intention to treat the items described therein as Changes in Work. It shall also contain the terms and amount of adjustment to Contract price. In this case, AFA shall be issued and executed before any work is started on the items covered by the order.
 - 2 To finalize (or close-out) one or more Change Orders, or Work initially authorized by Change Order.
 - 3 To adjust the estimated quantities of unit price bid items, and contingency items to agree with the actual quantities required. No mark-up fees shall be allowed for these adjustments.
- b Mark-up fees in an Authority for Adjustment for paragraphs a, 1 (negotiated AFAs) and a, 2 (finalized Change Orders) above shall be determined as follows:
 - 1 When extra Work is performed by one or more subcontractors other than Contractor, total mark-up fees shall be 15 percent, broken down as follows: 10 percent for the one or more subcontractors performing Work, and 5 percent for Contractor and all upper tier subcontractors, as shown in Example 1 below.

01000.35 Cont'd.

Example 1:

Value of extra Work:	\$100,000
Mark-up fees shall be broken down as follows:	
10 percent of value of extra Work for one or more Subcontractors performing Work	\$ 10,000
5 percent of value of extra Work for Contractor and all upper tier subcontractors	\$ 5,000
Total AFA amount	\$115,000

- 2 When Work is performed by Contractor only, mark-up fees shall be 10 percent, as shown in Example 2 below.

Example 2:

Value of extra Work:	\$100,000
Mark-up fees shall be 10 percent of value of extra Work performed by Contractor	
	\$ 10,000
Total AFA amount	\$110,000

- 3 When part of Work is performed by Contractor and part of Work is performed by one or more subcontractors, mark-up fees shall be as shown in Example 3 below.

Example 3:

Value of extra Work:	\$100,000
Assume \$40,000 performed by Contractor and \$60,000 performed by one or more subcontractors.	
For \$40,000 performed by Contractor, mark-up shall be 10 percent of value of extra Work performed by Contractor	\$ 4,000
For \$60,000 performed by one or more subcontractors, mark-up fees shall be as follows:	
10 percent of value of extra Work for one or more subcontractors performing Work	\$ 6,000
5 percent of value of extra Work for Contractor and all upper tier subcontractors	\$ 3,000
Total AFA amount	\$113,000

- 4 No percentage shall be paid to Contractor for any material furnished by Department. Where the portion of a change involves credit items for Contract Work not being performed by Contractor or subcontractor on any tier, Contract Work not being performed shall be deducted prior to adding the mark-up fee.

01000.35 Cont'd.

- 5 Mark-up fees shall apply to labor premium time for Change Order Work, when labor premium time is approved by Engineer.
 - 6 Contractor's mark-up fee percentage shall be considered to include all costs over and above the direct cost of the changed Work, including, but not limited to, the cost of preparing and furnishing all required reports and records sufficient to distinguish the direct cost of Change Order Work from the cost of other operations, overhead, profit, bond premium adjustment, insurance, field and office supervision, preparation of estimates, engineering, scheduling, use of small tools, incidental job burdens, general home office expenses, any impact costs, and other miscellaneous costs.
- c Should any lump sum bid item be eliminated in its entirety, or otherwise reduced in scope of Work, payment shall be made to Contractor for Contractor's actual costs incurred in connection with the elimination or reduction in scope of Work. Allowances for overhead and profit shall be based on the actual cost incurred and shall be determined pursuant to Cost-Plus Change Order Work (Change Orders) Subsection. Contractor shall not be entitled to retain any overhead or profit mark up for the reduced quantity of Work eliminated by Engineer.
 - d If material conforming to Drawings and Specifications is ordered by Contractor for use in the bid item prior to the date of notification of elimination or scope reduction by Engineer, and if the order for the material cannot be canceled or returned without charge, payment shall be made to Contractor for the actual cost or charges for the material. In this case, if the material cannot be returned and payment has been made, the material shall become the property of Department. Department shall also pay Contractor reasonable and necessary charges for handling said material.

36 FORCE ACCOUNT WORK

- a If no agreement can be reached on Changes in Work and additions to Contract price, or Contractor refuses to accept an Authority for Adjustment or Cost-Plus Change Order, Executive Director shall have the right to have Work in question done by persons, firms or corporations other than Contractor, or to perform the same by utilizing either City's own forces or forces of Contractor on the basis specified in Authority for Adjustments Subsection and Cost-Plus Change Order Work (Change Orders) Subsection of this Section.

37 REQUEST FOR ADDITIONAL COMPENSATION

- a If Contractor alleges that instructions issued after the date of Contract shall result in increases in Contract price, Contractor shall give Engineer written notice thereof within seven Calendar Days after the receipt of such instructions, and in any event before proceeding with Work, except in an emergency endangering life or property. The procedure for accounting for costs shall then be as provided in Cost-Plus Change Order Work (Change Orders) Subsection of this Section. No such notice or request for additional compensation resulting therefrom shall be considered unless Contractor complies with the requirements of this Subsection.
- b If Contractor submits a request to Engineer, for additional compensation for any kind of extra Work, said request when filed shall include all necessary evidence to support it. Engineer shall have the right to audit Contractor's request, including the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to verify all costs incurred or which may be incurred and for which a request has been submitted. The right to audit shall include the right to inspect Contractor's plants, or such parts thereof as may be or have been engaged in the performance of Contract.
- c Contractor further agrees that the right to audit encompasses all subcontracts and is binding upon all subcontractors. The rights to examine and inspect herein provided shall be exercisable through such representatives as Engineer chooses, during Contractor's normal business hours at the office of Contractor. Contractor shall make available to Engineer for auditing all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of records requested to Engineer. Contractor shall keep all such books and records locally.

38 EMERGENCY WORK

- a In an emergency endangering life or posing clear and imminent danger of grievous property damage, Contractor, without special instructions or authorization from Engineer, shall act to prevent such loss or injury until such time as Engineer can be contacted for an assessment of the situation. Contractor shall also so act, without appeal, if so authorized or directed by Engineer. Any compensation requested by Contractor on account of such emergency work, shall be determined by negotiation and agreement between Contractor and City.

01000.38 Cont'd.

- b Contractor shall maintain records sufficient to distinguish the direct cost of emergency work from the cost of other operations and shall itemize all costs for labor, material, and equipment rental in connection with emergency work.

39 TEMPORARY SUSPENSION OF WORK

- a Engineer may at any time suspend Work, or any part thereof, by giving notice to Contractor in writing ordering suspension of Work for such period as deemed necessary when, in Engineer's opinion, the suspension is necessary to protect the interest of City for any reason whatsoever.
- b Contractor shall comply immediately with any written order of Engineer suspending Work. Such suspension shall be without liability to Contractor on the part of City excepting only for such liability as specified in Extensions of Time and Compensable Delays Subsection of this Section.

40 UNAUTHORIZED WORK

- a Construction or demolition beyond the lines given and grades shown on Drawings, or any extra Work done without written authority, shall be considered as unauthorized and at the sole cost and expense of Contractor, and shall not be measured or paid for. Construction so done may be ordered removed and demolition so done may be ordered restored at Contractor's sole cost and expense.
- b Upon failure on the part of Contractor to comply with any order of Engineer made under the provisions of this Subsection, Engineer shall have authority to cause the order to be done by others, and to deduct the costs from any money due or to become due Contractor.

41 CONTRACTOR TO ABIDE BY APPLICABLE LAWS

- a At all times in its performance of Contract, Contractor, at Contractor's sole cost and expense, shall comply with all Applicable Laws pertaining to Work, Project Site and any Laydown Area(s). Contractor is presumed to know both the existence and applicability of such Applicable Laws.
- b Contractor shall adhere to the provisions of the California Labor Code including but not limited to those provisions concerning minimum wages, the 8-hour day and 40-hour week, overtime, Saturday, Sunday, and holiday work. Contractor shall forfeit to City the penalties prescribed in the California Labor Code for violations.

01000.41 Cont'd.

- c Contractor shall have at Project Site, copies, or suitable extracts of: Construction Safety Orders and General Industrial Safety Orders issued by the State Division of Industrial Safety. Contractor shall comply with provisions of these and all other applicable laws, ordinances, and regulations.

42 EXPLOSIVES

- a Explosives may be used only when authorized in writing by Engineer, or as otherwise stated in Contract Documents. Explosives shall be handled, used, and stored in accordance with all applicable regulations.
- b Engineer's approval of the use of explosives shall not relieve Contractor from the liability or responsibility for claims arising from the use, handling, transportation, or storage of explosives by Contractor or from blasting operations.

43 PROPRIETARY NAMES AND SUBSTITUTIONS

- a Whenever any equipment, material, or process is indicated or specified by patent or proprietary name, or by name of manufacturer, such reference is used to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, such references shall be deemed to be preceded by the words "equal and similar to". Contractor may offer any equipment, material, or process for which Contractor submits data supporting that such are substantially equal to that indicated or specified. Final determination of the acceptability of such substitute items shall rest with Engineer. Engineer may consider the strength, appearance, durability, reliability, dimension, finish, efficiency, maintainability, service history, life cycle cost, and other characteristics of the proposed substitute in making that determination.

01000.43 Cont'd.

- b A substitute item shall be a standard, catalogued product of a company regularly engaged in the manufacture of such items. No custom or prototype substitutes shall be accepted. Contractor shall certify that a substitute item shall perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance, and be suited to the same use as the specified item. Contractor shall identify all differences between the proposed substitute and that specified, and state whether or not acceptance of the proposed substitute shall require a change in Contract Documents to adapt the design to the proposed substitute. Any redesign or Changes in Work resulting from acceptance of a substitute shall be at the sole cost and expense of Contractor. Contractor shall furnish such data concerning and perform such testing of the proposed substitute as may be required by Engineer to evaluate the substitute item and determine if it is substantially equal. Additional information requested by Engineer shall be furnished by Contractor within 10 Calendar Days of such request.
- c Offers of substitute items shall be made within the first 25 percent of Contract Time. Where CONTRACT Section requires multiple Contract Times, offers of substitute items shall be made within the first 25 percent of Contract Time for the items of Work in which the substituted items are proposed to be incorporated. Contractor shall allow Engineer 28 Calendar Days review time to evaluate substitute items unless otherwise stated in Specifications. No extension of Contract Time shall be authorized for any circumstance developing from the provisions of this Subsection. Failure to comply with the provisions of this Subsection shall be sufficient cause for rejection of a proposed substitute.

44 PATENT RIGHTS

- a Contractor agrees to save, keep, hold harmless, and fully indemnify City and any of its officers or agents from all damages, cost, or expenses in law or equity that may at any time arise or to be set up for any infringement of the patent rights of any person or persons, or corporations in consequence of the use by City, or by any of its officers or agents, of articles supplied under Contract, and of which Contractor is not the patentee or assignee, or which Contractor is not lawfully entitled to sell.
- b The patent fees or royalties on any patented article or process which may be furnished or used in Work shall be considered as included in the cost of the various items of Work and no separate or extra payment shall be made therefor, regardless of whether notice of patent has or has not been included in any of the documents.

45 HOUSEKEEPING AND MAINTENANCE OF SURFACE AREAS OF PROJECT SITE AND ANY LAYDOWN AREA(S)

- a Throughout all phases of construction, including suspension of Work, and until final acceptance of Project, Contractor shall keep the surface of Project Site and any Laydown Area(s) clean and free from rubbish and debris. Contractor shall also abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary. The use of water resulting in mud on streets and paved areas shall not be permitted as a substitute for sweeping or other methods.
- b Care shall be taken to prevent spillage on haul routes. Any such spillage shall be removed immediately and the area shall be cleaned.
- c Should conditions warrant, Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles as necessary to keep paved areas acceptably clean wherever construction, including restoration, is incomplete.
- d Contractor shall not discharge smoke, dust, or any other air contaminants into the atmosphere in such quantity as shall violate the regulations of any legally constituted authority.
- e Prior to completion of Work, Contractor shall remove all plant, tools, equipment and materials, and shall thoroughly clean Project Site and any Laydown Area(s) and leave it with a neat, clean appearance to the satisfaction of Engineer.

46 PROTECTION OF HARBOR WATERS

- a Contractor shall keep materials away from drainage structures and the harbor. Contractor shall not allow lumber, blocking, chips, loose piles, rubbish, and all flotsam, jetsam, and contaminants of whatever nature to be deposited in harbor waters. If any of the above should be found floating near Project Site and any Laydown Area(s) or submerged which might detrimentally affect navigation or water quality, it shall be immediately removed by Contractor.

47 PROJECT SITE AND ANY LAYDOWN AREA(S) SECURITY

- a Contractor shall keep Project Site and any Laydown Area(s) secure at all times. Contractor shall provide the security fencing, either temporary or permanent to meet this requirement.

48 PUBLIC CONVENIENCE AND PROTECTION

- a Contractor shall be responsible for protection of public and private property adjacent to Project Site and any Laydown Area(s) and shall exercise due caution to avoid damage to such property.
- b The access rights of the public and lessees of adjacent property shall be considered at all times. Unless otherwise authorized, traffic shall be permitted to pass through Work or an approved detour shall be provided.
- c Unless otherwise authorized, Work shall be performed in only one-half of a roadway at one time. One-half shall be kept open and unobstructed until the opposite side is ready for use. If one-half a street only is being improved, the other half shall be conditioned and maintained as a detour.
- d Contractor shall provide and maintain all necessary barriers, guards, lights, signs, temporary crossings, flag persons and watchpersons, advise the public of detours and construction hazards and comply with all applicable State, County, and City requirements for closure of streets and Federal and State requirements for use of navigable waters. Contractor shall also be responsible for compliance with additional public safety requirements which may arise during construction. Contractor shall furnish and install, and upon completion of Work, promptly remove all signs and warning devices.
- e Contractor shall not interfere with navigation.

49 TEMPORARY UTILITIES

- a Contractor shall furnish, install, maintain, and remove all temporary light, power, and water, including piping, wiring, lamps, and other equipment, necessary for Work. Contractor shall not draw water from any fire hydrant, except to extinguish a fire, without first obtaining permission from the water agency concerned.

50 SANITATION

- a Contractor shall provide and maintain enclosed toilets for the use of employees engaged in Work. These accommodations shall be maintained in a neat and sanitary condition. They shall also comply with all applicable laws, ordinances, and regulations pertaining to the public health and sanitation.
- b Sewage flows shall not be interrupted. Should Contractor disrupt existing sewer facilities, sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. Sewage shall not be permitted to flow in trenches, be covered by backfill, or flow into Harbor waters.

51 RAILROAD TRACKS

- a City does not guarantee that railroad tracks shall be free from trains and standing cars. Contractor shall exercise such care as shall prevent the displacement, injury or obstruction of any railroad tracks encountered in Work. In case it shall be necessary to protect, raise, lower, displace, or remove railroad tracks for the proper construction of Work, Contractor shall notify the operating railroad and obtain all necessary permission to perform the track work, or have Work performed, as the case may require.

52 CONSTRUCTION SCHEDULE

- a Unless otherwise specified, Contractor shall submit a proposed construction schedule to Engineer for review not later than 15 Calendar Days after Notice to Proceed. Failure to submit a schedule within the stated time may result in the withholding of the first progress payment.
- b The schedule shall identify all major construction elements, their start date and duration and shall reflect completion of all Work under Contract within the specified time and in accordance with Specifications.
- c Seven copies of the schedule shall be submitted on substantial paper of a reasonable and convenient size for handling and filing. Language, symbols, and notations shall be those commonly employed in construction scheduling.
- d The time base for reporting construction tasks shall be a regular working day taking into consideration all non-working days.
- e The time base for reporting milestones shall be Calendar Days.
- f The schedule shall be revised and updated monthly to reflect adjusted event dates, activity completions, additions to Work and late completion time. The schedule shall be revised and resubmitted for Engineer's review whenever Contractor desires to make changes in methods of operation, and whenever the schedule fails to reflect the actual progress.
- g Contractor shall include the cost of scheduling and updating the schedule in the prices bid for Work.

53 EXTENSIONS OF TIME AND COMPENSABLE DELAYS

- a Contractor's obligations for the performance and completion of Contract within Contract Time are of the essence of Contract. Contractor shall complete the performance of Contract within the time stipulated or within such time as may be extended by City pursuant to Changes in Work Subsection of this Section. Contractor shall be responsible for providing, maintaining, and paying all costs associated with administering and managing Contract including field and home office personnel, materials, equipment, tools, construction trailers, and any other items necessary until the end of Contract Time including any maintenance or plant establishment period.
- b Extension of time, when granted, shall be based upon the effect of delays to Project as a whole and shall not be granted unless it can be shown that such delays did, in fact, delay the progress of Project as a whole.
- c The time of completion shall be extended only if, in the opinion of Engineer, Contractor is necessarily delayed in completing Contract by a cause that meets all of the following conditions:
 - 1 Such cause is beyond Contractor's control and arises without Contractor's fault;
 - 2 Such cause arises after the opening of bids and neither was nor could have been anticipated before bid opening. Tide conditions shall be conclusively deemed to have been anticipated before opening of bids.
 - 3 The effect of such cause could not be anticipated and avoided or mitigated by the exercise of all reasonable precautions, efforts and measures by Contractor, including re-planning, scheduling, and rescheduling.
- d Notwithstanding the provisions of Paragraph c.2 of this Subsection above, a time extension may also be granted for delays caused by precipitation or Stage II Smog Alerts (at the South Coast Air Quality Management District Source Receptor Area 4) subject to the other requirements of this Subsection. However, Contractor shall not be entitled to compensation or additional payment due to such delays.
- e Requests for extension of time for Changes in Work shall be negotiated at the time of ordering such changes or after the effects of mitigating rescheduling have become known.

01000.53 Cont'd.

- f An extension of time granted shall not release the sureties from their obligations. Work shall continue and be carried on in accordance with all the provisions of Contract and said Contract shall be and shall remain in full force and effect during the continuance and until the completion and final acceptance of Work covered by Contract unless formally suspended or annulled in accordance with the terms of Contract.
- g Neither the granting of an extension of time beyond the date fixed for the completion of any part of Work nor the doing and acceptance of any part of Work or materials specified by Contract after the time specified for the completion of Work, shall be deemed to be a waiver by City of City's right to abrogate Contract for abandonment or failure to complete within the time specified, or to impose and deduct damages as may be provided.
- h As between Contractor and City, Contractor assumes the risk of any and all costs, expenses and liabilities which Contractor may incur in connection with all suspensions of, or delays in, performance of Contract, regardless of the length thereof, arising from all causes whatsoever including impacts by third parties, except that Contractor may be compensated for delays caused solely by the failure of City to furnish necessary rights of way, failure to provide materials shown in Contract Documents to be furnished by City, for its own convenience or benefit. If Contractor sustains loss as a consequence thereof which could not have been avoided by the judicious handling of forces, equipment and plant, there may be paid to Contractor such amount as Engineer finds to be fair and reasonable compensation for such part of Contractor's actual loss as was unavoidable. In no case, however, shall any compensation be made to cover loss of anticipated profits or indirect losses of any kind. If delays are caused by reasons other than those mentioned specifically in this Subsection, an extension of time may be granted, but Contractor shall not be entitled to compensation or additional payment due to such delays.
- i If Contractor desires an extension of time or compensation for a qualifying delay, Contractor shall, within 30 Calendar Days after the beginning of the delay, file with Engineer a written request and report as to the cause and extent of the delay. The request must be made at least 15 Calendar Days before the specified completion date. Failure by Contractor to file these items within the times specified shall be considered grounds for refusal by City to consider such request.

54 LIQUIDATED DAMAGES

- a If Contractor fails to complete Work covered by Contract Documents, or any portion thereof, in accordance therewith, within the time for completion stipulated, or within the time for such completion as extended, Contractor shall pay to City the sum stipulated in Contract, for each and every Calendar Day the time consumed in the execution of said Work may exceed the time allowed for that purpose, which said sum is agreed upon, fixed and determined by the parties hereto, as the liquidated damages that City shall suffer by reason of said delay and default. It is expressly understood that it shall be impracticable and extremely difficult to determine or fix the actual loss that City shall suffer by reason of delay in the performance of Work hereunder. City may deduct and retain the amount of such liquidated damages out of any money which may be due or become due Contractor. Such liquidated damages shall be City's sole monetary remedy for delay unless a court of competent jurisdiction finds the liquidated damages provisions in Contract to be invalid or unenforceable, in which case City shall retain all other remedies in law or equity, including without limitation the right to prove and recover actual damages due to delay.
- b In the computation of liquidated damages for delay in completion of Work, the time taken by City or allowed a new contractor to whom award may be made for the completion of Contract, as well as the time required for advertising and awarding such new contract, shall be added to the time consumed by the original Contractor up to the date that City shall have notified the original Contractor to suspend Work, and from such total there shall be deducted the time allowed to the original Contractor for completing Work under Contract.
- c Contractor shall not be assessed liquidated damages for delay in completion of Project caused by the failure of City or the owner of existing public utilities encountered to relocate same in a timely manner if such utilities are not identified on Drawings or in Specifications.

55 PARTIAL ACCEPTANCE AND USE

- a At any time prior to final acceptance, City reserves the right to take over and utilize all, or any portion of, the permanent construction which has been completed, if Engineer determines that such portion of the permanent construction is not required for the operations of Contractor or the use thereof is urgently needed by City. Engineer shall notify Contractor in writing identifying the specific portion or portions of the completed Work to be so utilized or otherwise placed into service. At Engineer's discretion, City may start the guarantee period on the portion of Work being utilized from the date of such acceptance.

01000.55 Cont'd.

- b Such action by City shall relieve Contractor of responsibility for injury or damages to said completed portions of the improvement resulting from use or from the action of the elements or from any other cause, except injury or damage resulting from Contractor's operation or negligence. Contractor shall not be required to re-clean such portions of the improvement before final acceptance, except for cleanup made necessary by Contractor's operations.
- c At Executive Director's discretion, City may, prior to final acceptance of Contract, upon issuance of substantial completion of Project, release a portion of the retention monies being held.
- d Nothing in this Subsection shall be construed as relieving Contractor from full responsibility for correcting defective Work or materials.
- e In the event City exercises its right to place into service and utilize all or part of any completed permanent construction, as between City and Contractor, Contractor shall be responsible for only those injuries to persons or property caused by any willful or negligent act or omission of Contractor, subcontractor, their officers, employees or agents or those injuries for which Contractor, subcontractor, their officer, employees or agents would be strictly liable or liable under a warranty.

56 PARTIAL PAYMENTS

- a In the event of a lump sum bid on all or any portion of Work upon which partial payments are to be made, Contractor shall, before the first payment becomes due, submit to Engineer a detailed schedule of prices for such units of Work as may be specified by Contractor for permanent Work accomplished and material worked into permanent place. The schedule of prices submitted shall be checked by Engineer, and, if in Engineer's opinion such unit prices appear to be reasonable and properly balanced, they shall be approved and used in the preparation of the monthly estimates. The sum of all extensions, based upon the quantities of the various items for the entire Work covered by Contract and the unit prices as approved, shall be equal to the total amount of Contract.

01000.56 Cont'd.

- b Contractor shall, within two weeks after issuance of Notice to Proceed, submit to Engineer a list of rates, without markup set forth in Authority for Adjustments Subsection Paragraph b of this Section, of pay for all labor classifications [for Contractor and subcontractors (listed and not listed) at every tier] as well as hourly equipment costs (rental rates or otherwise). The list of labor rates and equipment costs submitted shall be checked by Engineer, and, if in Engineer's opinion such rates and costs appear to be reasonable, they (along with Engineer's estimate of material costs, or latest verifiable information on material costs) shall be approved and used for reference when evaluating requests for monthly partial pay for Cost-Plus Change Order Work. It is the responsibility of Contractor to request any consideration for rates that represent an increase from those presented, and agreed upon prior to the first payment. This list shall not replace Contractor's obligation to provide backup records for Cost-Plus Work nor allow Contractor to receive compensation for Cost-Plus Work greater than Contractor's actual cost plus markup under Authority for Adjustments Subsection of this Section.
- c On or about the first of each calendar month, Engineer shall make an estimate in writing of all permanent Work accomplished and material permanently installed and the total amount of Work done up to the time of such estimate, and the value thereof based upon the unit price stated in the Bid Proposal Line Items or upon the prices agreed in the breakdown of a lump sum or sums stated in the Bid Proposal Line Items. When provided for in Specifications, and subject to the limitations and conditions of Acceptance and Final Payment Subsection of this Section, the cost of materials and equipment delivered but not yet incorporated in Work shall be included in the progress estimate. Contractor shall submit receipts from suppliers identifying the materials and equipment as paid for prior to the item being included in the progress estimate. The progress estimate shall be submitted to Engineer as a payment request. Upon receipt of a properly presented payment request, Engineer shall process the payment in conformance with California Public Contract Code Section 20104.50 for on time and prompt payment to Contractor. The following is a summary of California Public Contract Code Section 20104.50. For the full text, refer to California Public Contract Code Section 20104.50.
 - 1 If City fails to make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from Contractor for this Contract, City shall pay interest to Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.
 - 2 Upon receipt of a payment request, City shall act in conformance with both of the following:

01000.56 Cont'd.

- a) Each payment request shall be reviewed by City as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.
 - b) Any payment request determined not to be a proper payment request suitable for payment shall be returned to Contractor as soon as practicable, but not later than 7 days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
- 3 The number of days available to City to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which City exceeds the 7-day return requirement set forth in Subparagraph 2 of Paragraph c of this Article.
- 4 A progress payment includes all payments due to Contractor, except that portion of the final payment designated by Contract as retention earnings.
- 5 A payment request shall be considered properly executed if funds are available for payment of the payment request, and payment is not delayed due to an audit inquiry by the financial officer of City.
- d From each progress estimate, 5 percent of the amount attributable to Work, including Changes in Work and/or Authorities for Adjustment issued after the original Contract Award, shall be deducted and retained by City, and the remainder less the amount of all previous payments shall be paid to Contractor.
- e Contractor shall have the right to substitute approved securities equivalent to the amount retained or request that Department deposit the amount retained in an interest bearing account. The substitution of securities or the deposit of the amount retained shall be at the expense and request of Contractor.
- 1 If Contractor requests to substitute securities equivalent to the amount retained, City shall place the amount retained on deposit with a state or federally chartered bank as escrow agent after approved securities have been likewise deposited by Contractor. The escrow agent shall thereafter pay the amount retained to Contractor. Contractor shall be the beneficial owner of any securities deposited subject to Paragraph (f) of this Subsection.

01000.56 Cont'd.

- 2 If Contractor requests City to deposit the amount retained in an interest bearing account with a state or federally chartered bank as escrow agent, City shall do so and the escrow agent shall then pay all interest on said account to Contractor. Contractor shall be the beneficial owner of said account subject to Paragraph (f) of this Subsection.
- f Thirty-five Calendar Days following acceptance of Work by Executive Director and upon receipt of written notification of such fact from City, escrow agent shall release to Contractor the securities which have been placed on deposit or the amounts deposited in the interest bearing account. City has the right to order escrow agent to continue to retain necessary securities or deposits sufficient to cover such amounts required by law to be withheld pursuant to properly executed and filed notices to stop payment or as may be authorized by Contract to be further retained.
- g Securities eligible for substitution are those listed in Government Code Section 16430 and also bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and City.
- h The escrow agent shall be authorized by Contractor to convert deposited securities or interest bearing accounts to cash in the event of default by Contractor and distribute the cash as instructed by City.
- i Unless otherwise provided, no payment shall be made for materials delivered to Project Site and any Laydown Area(s) but not incorporated in Work.
- j Payment shall not be made for materials wasted or disposed of in a manner not called for under Contract. This includes rejected material not unloaded from vehicles, materials rejected after having been placed and material placed outside of the pay lines. Such quantities shall not be included in the pay quantities. No compensation shall be allowed for disposing of rejected or excess material.
- k No estimate or payment shall be required to be made when, in the judgment of Engineer, Work has not proceeded in accordance with the provisions of Contract. The value of any material or Work included in partial estimates, which may subsequently become lost, damaged, or unsatisfactory, shall be deducted from succeeding partial estimates.

57 ACCEPTANCE AND FINAL PAYMENT

- a When Work has been satisfactorily completed, Engineer shall determine the quantity of Work performed and prepare the final estimate of the value including all Changes in Work subject to Changes in Work Subsection Paragraphs a through d of this Section, for acceptance by Executive Director (or Board, if necessary).
- b The quantities listed in Bid Proposal Line Items do not govern final payment. Payments to Contractor shall be made only for the actual quantities of Contract items constructed in accordance with Drawings and Specifications. All prior partial estimates and payments shall be subject to correction in the final estimate of payments.
- c At the expiration of 35 Calendar Days from the date of acceptance of Work by Executive Director, the amount deducted from the estimates and retained by City shall be certified by Engineer as due and in the normal course of City business shall be paid to Contractor except such amounts as are required by law or as are authorized by Contract to be further retained.
- d If a notice to stop payment is filed with City due to Contractor's failure to pay for labor or materials used in Work, money due for such labor or materials, plus 25 percent prescribed by law, shall be withheld from payment to Contractor. In accordance with Section 9364 of the California Civil Code, Executive Director may accept a bond by a corporate surety in lieu of withholding payment.
- e It is mutually agreed between the parties to Contract that no certificate given or payment made under Contract, except the final certificate or final payment, shall be conclusive evidence of the performance of Contract, either wholly or in part, against any claim of City, and no payments shall be construed to be an acceptance of any defective Work or improper materials.
- f When Contractor has exceeded Contract Time and has not yet received an extension of time to complete Contract so that liquidated damages may be assessed, Engineer may withhold an additional amount of money to cover the amount of liquidated damages that shall accrue based on Contractor's estimated Contract completion time as confirmed by Engineer.

58 AFFIDAVIT OF COMPLETION

- a Contractor shall, upon completion of Work, including final clean up and demobilization, submit to Engineer (using Forms 298-E, 297-E, or 308-E in Section 00078) a sworn affidavit to the effect that: "to the best of Contractor's knowledge and belief, Work specified in said Specifications and said Contract has been completed in strict accordance with Drawings and Specifications therefor, that no lawful debts for labor or materials are outstanding, and that no federal excise tax has been included in Contract price; that all requests for funds for undisputed Work under Contract, including Changes in Work, and under all billings of whatsoever nature are accurate, complete and final and that no additional compensation over and above the final payment shall be requested or is due under Contract or under any adjustment issued thereunder for said undisputed Work; and that upon receipt of final payment, Contractor and subcontractors acknowledge that City, Board, Executive Director, Engineer, and any and all employees of City and their authorized representatives shall thereby be released from any and all claims or liability for additional sums on account of undisputed Work performed under Contract". Disputed Contract claims in stated amounts may be excluded by Contractor from the operation of the release.

59 GUARANTEE

- a Unless provided elsewhere in Specifications, Contractor guarantees all equipment, materials, and work furnished on the job against defective workmanship, material, construction and labor for a period of one year from the date of acceptance of Project by Executive Director (following completion of Project). If the supplier or manufacturer of material or equipment provides a warranty or guarantee, Contractor's guarantee shall be in addition to any warranty or guarantee of the supplier or manufacturer and Contractor shall be a co-guarantor of such equipment and materials for a period of one year from the date of acceptance of Project by Executive Director. Contractor shall supply Department with all warranty and guarantee documents relevant to equipment and materials incorporated in Project and guaranteed by their suppliers or manufacturers.
- b It shall be understood that the surety for the performance bond submitted in conformance with the terms of Contract by Contractor for Project is liable on its bond for all obligations of Contractor including guarantee provisions.

01000.59 Cont'd.

- c Contractor further agrees, that within ten Calendar Days after being notified in writing by Engineer of any Work not in accordance with requirements of Contract or any defects in Work, Contractor shall commence and prosecute with due diligence all Work necessary to fulfill the terms of this guarantee, and to complete Work within a reasonable period of time, and in the event Contractor fails to so comply, Contractor does hereby authorize City to proceed to have such Work done at Contractor's sole cost and expense and Contractor shall pay the cost thereof upon demand. City shall be entitled to all costs, including reasonable attorney's fees, necessarily incurred upon Contractor's refusal to pay the above costs.
- d Notwithstanding the foregoing subsections in the event of an emergency constituting an immediate hazard to the health or safety of City's employees, property or licenses, City may undertake at Contractor's sole cost and expense, without prior notice, all Work necessary to correct such hazardous condition when it was caused by Work of Contractor not being in accordance with the requirements of Contract.

60 NO PERSONAL LIABILITY

- a No member of Board or Executive Director, Engineer, any other officer, agent, or authorized employee of City, shall be personally responsible for any liability arising under Contract.

61 NO ESTOPPEL

- a City shall not, nor shall any department or officer thereof, be precluded or estopped by any return or certificate made or given by Engineer or other officer, agent, or employee of City under any provisions of Contract from at any time (either before or after the final completion and acceptance of Work and payment therefor) pursuant to any such return or certificate showing the true and correct amount and character of Work done, and materials furnished by Contractor or any person under Contract or from showing at any time that any such return or certificate is untrue and incorrect, or improperly made in any particular, or that Work and materials, or any part thereof, do not in fact conform to Specifications; and City shall not be precluded or estopped, notwithstanding any such return or certificate and payment in accordance therewith, from demanding and recovering from Contractor such damages as it may sustain by reason of Contractor's failure to comply with Specifications.

62 POTENTIALLY SIGNIFICANT CULTURAL MATERIAL

- a If potentially significant cultural material is discovered while excavating, Contractor shall immediately cease excavation in the area of discovery and shall not resume excavation in the area until ordered to do so by Engineer. When Contractor is ordered to resume excavation operations, such operations shall be conducted as directed by Engineer.
- b "Potentially significant cultural material" as used in this Subsection means artifactual material 50 years old or older.
- c Any delays to Project as a whole, caused by compliance with this Subsection shall entitle Contractor to an extension of time equivalent to the period of that delay.

63 STATE TIDELANDS GRANT

- a Contract is entered into in furtherance of and as a benefit to the State Tidelands Grant and the trust created thereby. Therefore, Contract is at all times subject to the limitations, conditions, restrictions, and reservations contained in and prescribed by the Act of the Legislature of the State of California entitled "An Act Granting to City of Los Angeles the Tidelands and Submerged Lands of the State Within the Boundaries of Said City," approved June 3, 1923, (Stats. 1929, Ch. 651), as amended, and provisions of Article VI of the Charter of City of Los Angeles relating to such lands. Contractor agrees that any interpretation of Contract and the terms contained herein must be consistent with such limitations, conditions, restrictions, and reservations.

64 RESPONSIBILITY FOR SUBCONTRACTORS

- a Contractor shall be fully responsible to City for its acts and/or omissions and for the acts and/or omissions of persons directly employed by Contractor. Additionally, Contractor shall be fully responsible to City for the acts and/or omissions of subcontractors and of persons or entities either directly or indirectly employed by subcontractors. Nothing contained in Contract Documents shall create or be construed as creating a contractual relationship between any subcontractor of Contractor and City.

65 CONTRACTOR'S LIABILITY FOR HAZARDOUS WASTES OR HAZARDOUS SUBSTANCES

- a As to Environmentally Regulated Materials whose existence on Project Site and any Laydown Area(s) commenced prior to the effective date of Contract, City shall not seek to hold Contractor liable as an owner, operator, generator, or discharger of such Environmentally Regulated Material.
- b Provided that it has complied with all provisions of Contract, including but not limited to Protection of Harbor Waters Subsection of this Section, after final completion and acceptance of Work in strict accordance with Contract Documents, subject to its continuing obligations under Contract Documents (including, without limitation, its obligations under any representations, warranties, and guaranties with respect to Work performed and under Protection of Harbor Waters Subsection of this Section), Contractor shall not be responsible to City for the performance of any further remedial action, removal actions, or cleanup of hazardous waste or hazardous substances at Project Site and any Laydown Area(s) that City may be ordered, directed, or required to perform by any governmental authority after the date of final completion and acceptance of Work.
- c Nothing in this Subsection shall limit or restrict the liability or responsibility of Contractor (or any of its subcontractors, consultants, employees, or agents) in the event of any failure to perform or comply with the terms of Contract, any negligence in the performance of Work, or any willful misconduct in connection with the performance of Work, nor shall this Subsection in any way limit or restrict Contractor's responsibilities under Contract and applicable law in connection with the handling, transporting, storing, or disposing of hazardous waste or hazardous substances and/or the arranging therefor.

66



Page ____ of ____

TIME AND MATERIAL FORM

Project Title: _____
 Spec No: _____ Plan Ref: _____ RFI No.: _____
 Contract No.: _____ Spec Ref: _____

Description of Work:

LABOR

[illegible]

Labor Subtotal:

EQUIPMENT

[illegible]

Equipment Subtotal:

MATERIAL

Description	Hours	Unit Rate	Amount

Material Subtotal:

Total Amount (Labor/Equipment/Material):

Signature acknowledges verification of labor and equipment quantities only. Costs and contract allowability are subject to audit verification in accordance with contract terms. Any costs determined not to be allowable for payment shall be deducted from the time sheet prior to final resolution of the change order.

PORT OF LOS ANGELES INSPECTOR (PRINT NAME)

PORT OF LOS ANGELES INSPECTOR SIGNATURE _____

67 DAILY FIELD REPORT

Contractor Daily Field Report

Page _____ of _____

PROJECT TITLE: _____

SPEC NO.: _____

CONTRACTOR/SUBCONTRACTOR: _____

WORK DATE: _____

TYPE ¹	EMPLOYEE NAME	CLASSIFICATION	EQUIP # ²	START TIME	END TIME	TOTAL

#	QTY	EQUIPMENT DESCRIPTION	HRS	#	QTY	EQUIPMENT DESCRIPTION	HRS
2				12			
3				13			
4				14			
5				15			
6				16			
7				17			
8				18			
9				19			
10				20			

Contractor's Authorized Representative: _____

PRINT NAME AND TITLE HERE

SIGNATURE _____ DATE _____

Los Angeles Harbor Department - Construction Division

To be completed by the Project Inspector Only

INSPECTOR: _____

PRINT NAME HERE

SIGNATURE _____

DATE RECEIVED _____

NOTE 1: TYPE: P- Prime; SC - Subcontractor; S-Supplier; V - Vendor

NOTE 2: EQUIP # - Required if labor classification is Operating Engineer or Teamster

68 LAYDOWN AREA(S)

- a Contractor use and occupancy of Laydown Area(s) shall not be revocable during the duration of Contract. Contractor shall not be required to provide payment or compensation for use and occupancy of Laydown Area(s).
- b Contractor acknowledges and agrees that Laydown Area(s) is suitable for the use intended and accepts use and occupancy of Laydown Area(s) subject to each and every term and condition of the Port of Los Angeles Tariff No. 4 (Tariff) <https://www.portoflosangeles.org/business/tariff>, as applicable to Laydown Area(s), as if fully set forth herein. Contractor shall not alter or construct on Laydown Area(s) without first obtaining a Harbor Engineer Permit except for those alterations set forth in this Contract, and complying with Applicable Laws. Contractor shall not cause or permit any Environmentally Regulated Material to be generated, brought onto, handled, used, stored, transported from, received, or disposed of (hereinafter sometimes collectively referred to as "handle" or "handled") in or about Laydown Area(s) except for limited quantities of standard office and janitorial supplies containing chemicals categorized as Environmentally Regulated Material and except as permitted, required, or necessary in conformance with Contract Documents, if any. Contractor shall handle all such Environmentally Regulated Material in strict compliance with Applicable Laws in effect during Contractor's occupancy.
- c Contractor is aware that City's Department of Water and Power, other utility, or other maintenance or service from or on behalf of City, may need to service or repair certain facilities on Laydown Area(s). If such repair is necessary, Contractor agrees to relocate all of its equipment and other personal property to provide such personnel adequate access. Contractor agrees to complete such relocation within 24 hours of receiving notice from City except in case of emergency. Contractor shall be entitled to an equitable adjustment in Contract Time and/or price for delays as a result of the need to relocate equipment to provide access for any repairs that are beyond the control and without the fault of Contractor and is for City's own convenience or benefit.

01000.68 Cont'd.

- d Contractor shall remediate or cause the remediation of any Contamination that occurs in, on, under, or about Laydown Area(s), whether caused by Contractor or any third-party acting for or on behalf of Contractor during Contractor's occupancy, including Contamination of improvements, adjacent harbor waters, soil, sediment, groundwater, or air, or of adjacent Laydown Area(s) (including soil, sediment, groundwater, or air) and including Contamination that is considered a nuisance under Applicable Laws. Remediation shall be to the reasonable satisfaction of City, and the requirements of the applicable governmental agencies including the Regional Water Quality Control Board, by removing or effecting the removal of all Contamination including but not limited to contaminated soil, water, groundwater, sediment, or other material it may place or cause to be placed on site such that no encumbrances, such as deed or land use restrictions, be imposed on Laydown Area(s) as a result of such Contamination. In fulfilling the obligations of this Article, Contractor shall also comply with any other conditions reasonably imposed by City. If Contractor knows or has reasonable cause to believe that Contamination has occurred in, on, under, or about Laydown Area(s), Contractor shall immediately give written notice to City. Contractor shall not be responsible for any Contamination existing on, below, or about Laydown Area(s) prior to the NTP, including contamination as depicted in the baseline report.

01000.68 Cont'd.

- e Contractor bears responsibility for full compliance with any and all Applicable Laws regarding the use, storage, handling, distribution, processing, and/or disposal of Environmentally Regulated Material including Contamination, regardless of whether under Applicable Laws the obligation for such compliance or responsibility is placed on the owner of Laydown Area(s), on the owner of any improvements on Laydown Area(s), on the user of Laydown Area(s), or on the user of any improvements on Laydown Area(s). Contractor shall only be responsible for Contamination caused by Contractor, or any third party acting for or on behalf of Contractor and shall not be responsible for any preexisting Contamination on Laydown Area(s) prior to Contractor's first occupancy thereof. Contractor agrees that any claims, damages, fines, or other penalties asserted against or levied on City and/or Contractor as a result of noncompliance with any Applicable Laws by Contractor under this Contract shall be the sole responsibility of Contractor and that Contractor shall indemnify and hold City harmless from any and all such claims, damages, fines, penalties, and/or judgments, as well as any costs expended to defend against such claims, damages, fines, and penalties and/or judgments, including attorneys' and experts' fees. City, at its sole option, may, after providing Contractor with a reasonable opportunity to defend such claims, damages, fines, penalties, and/or judgments pay the claims, damages, fines, penalties, and/or judgments resulting from Contractor's noncompliance with any of the aforementioned authorities, and Contractor shall indemnify and reimburse City for any such payments.
- f In discharging Contractor's obligations under this Subsection only, if Contractor disposes of any Contamination, within 30 days of Contractor's receipt of original documents, Contractor shall provide City copies of all records, including a copy of each uniform hazardous waste manifest indicating the quantity and type of material being disposed of, the method of transportation of the material to the disposal site, and the location of the disposal site. Neither City, Port of Los Angeles, nor Los Angeles Harbor Department shall appear on any manifest document as a generator of such material. Contractor shall not be responsible for preexisting contamination. Contractor shall only be responsible for contamination caused by Contractor, or any third-party acting for or on behalf of Contractor, and shall not be responsible for any preexisting contamination on Laydown Area(s) prior to Contractor's first use and occupancy thereof.

01000.68 Cont'd.

- g In discharging Contractor's obligations under this Subsection, Contractor shall perform any tests using a State of California Department of Health Services certified testing laboratory or other similar laboratory upon City's written approval. By signing this Contract, Contractor hereby irrevocably directs any such laboratory to provide City, upon written request from City, copies of all of its reports, tests results, and data gathered. As used in this Subsection, "Contractor" includes agents, employees, contractors, subcontractors, and/or invitees of Contractor.
- h Contractor shall implement City's Harbor Department's policies, known as Best Management Practices, in order to reduce the potential for pollutants to enter Harbor waters, as follows:
 - 1 Facility Operations: Clean and maintain facility regularly. Use dry cleaning methods whenever possible; avoid washing areas down. Do not allow sweepings or sediment to enter the storm drain or the Harbor. Collect wash water for disposal or direct to a clarifier. Do not encourage scavengers. Do not feed birds, feral cats, sea lions, or other scavengers. Recycle whenever possible.
 - 2 Maintenance Operations: Use drip pans to prevent any drips or leaks from contacting the ground during maintenance and fueling operations. Clean spills or drips immediately using dry methods. Use spill cleanup kits to confine or contain spills. Do not hose down equipment or allow process water to enter the storm drain or the Harbor. Place tarps beneath maintenance and repair operations to prevent materials such as paint chips and metals from contacting the ground.
 - 3 Material and Waste Handling and Storage: Train employees responsible for waste management on handling and disposal procedures. Store all hazardous and universal waste in accordance with all federal, state, and local regulations. Store all materials and waste inside and in secondary containment. If stored outside, store only in designated, covered, and contained areas. Store waste in covered, leak proof, labeled containers. Keep lids closed on all outdoor containers including dumpsters. Store all oily products (e.g. engines), batteries, tires, and metal off the ground and under cover when stored outdoors.
 - 4 Except as may be otherwise provided in this Contract, Contractor's obligations in this Article shall survive the Termination Date of this Contract.

01000.68 Cont'd.

- i Upon completion of Work, subject to Protection of Harbor Waters Subsection of Specifications, Contractor shall quit and surrender occupancy and use of Laydown Area(s) to City and shall, without cost to City, remove any and all its property and restore Laydown Area(s) to the same or as good condition as the same were in at the time of the first occupancy thereof, allowing for normal wear and tear, by Contractor. Contractor may incur additional charges and/or withholding of payment if Contractor fails to fully restore Laydown Area(s) to the reasonable satisfaction of Executive Director prior to completion of Work.
- j Restoration of Laydown Area(s) must be completed at the time Contractor submits to Engineer the Affidavit of Completion (Affidavit of Completion Subsection of this Section and Forms 298-E, 297-E, or 208-E in AFFIDAVITS OF COMPLETION Section of Specifications).

END OF SECTION

- I. The following language is being added as Subsection 01000.69 of GENERAL CONDITIONS Section pursuant to California Public Contract Code Section 9204.

69 CALIFORNIA PUBLIC CONTRACT CODE SECTION 9204

- (a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.
- (b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.
- (c) For purposes of this section:
 - (1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
 - (A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.
 - (B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
 - (C) Payment of an amount that is disputed by the public entity.
 - (2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.
 - (3) (A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

- (B) "Public entity" shall not include the following:
- (i) The Department of Water Resources as to any project under the jurisdiction of that department.
 - (ii) The Department of Transportation as to any project under the jurisdiction of that department.
 - (iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.
 - (iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.
 - (v) The Military Department as to any project under the jurisdiction of that department.
 - (vi) The Department of General Services as to all other projects.
 - (vii) The High-Speed Rail Authority.
- (4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.
- (5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.
- (d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.
- (B) The claimant shall furnish reasonable documentation to support the claim.

- (C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.
 - (D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.
- (2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.
- (B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

- (C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
 - (D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
 - (E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.
- (3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
 - (4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
 - (5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

- (e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.
- (f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.
- (g) This section applies to contracts entered into on or after January 1, 2017.
- (h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.
- (i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2027, deletes or extends that date.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Scope of Work: Contractor shall perform Work necessary to complete Contract in satisfactory manner. Furnish transportation, labor, materials, equipment, mobilization, demobilization, and incidentals necessary to perform Work as indicated on Drawing Nos. 1-3502, 1-3571, 1-3572, 1-3573, and 1-3574 including but not limited to the following:
1. Secure necessary and permits, perform coordination Work, regulatory requirements, and site environmental requirements for Project.
 2. Demolition and removal Work including but not limited to demolition of buildings, industrial structures, timber pier, tanks, silos, cooling towers, concrete pads, concrete and asphalt concrete pavements, curbs, gutters, bollards, chain link fencing, railroad tracks, guard posts, dock boards, and other improvements.
 3. Asbestos abatement.
 4. Lead paint removal.
 5. Excavate, remove, and dispose of existing substructures and utilities including cut and cap/plug existing utilities, sewer, electrical, and water lines.
 6. Excavate, characterize, stockpile, haul away, and dispose of RCRA and non-RCRA hazardous waste soil at a licensed and Class I lined landfill acceptable to Department.
 7. Excavate, characterize, remove, and dispose of non-hazardous waste and waste soil containing PCB's less than 50 parts per million (PPM) from a TSCA regulated site.
 8. Fill, compact, and grade voids and excavations caused by the demolition and removal Work.
 9. Load, transport, place, grade, and compact earth fill and crushed miscellaneous base (CMB) material as indicated on Drawings.
 10. Load, transport, and place ballast rock material into Low Impact Development (LID) storm drain catch basins as indicated on Drawings.
 11. Construct asphalt and reinforced concrete pavement.

12. Construct light pole footings and install perimeter light poles.
13. Remove existing chain-link fence, install new chain-link fencing and fence on k-rail, and rolling chain link gates as shown on Drawings.
14. Provide water trucks to distribute dust control and erosion control binding agent over graded area.
15. Construct electrical system.
16. Construct storm drainage systems including but not limited to storm drains, catch basins, and maintenance holes.
17. Site cleaning and removal of debris, equipment, and excess material from Project Sites upon completion of Work.
18. Other Work as shown on Drawings.

1.2 WORK BY OTHERS

- A. Utility relocation and trenching to be coordinated with respective agencies as shown on Drawings, including but not limited to:

1. AT&T

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 LOCATION OF PROJECT

- A. Project is located in the Terminal Island District in the Port of Los Angeles.

1.2 ACCESS TO PROJECT

- A. Directions to 1050 South Ways Street - Starkist Demolition and Storage Lot Conversion:

1. From the north, take the Harbor Freeway (I-110) south to San Pedro. Continue on Vincent Thomas Bridge towards Terminal Island. Exit Ferry Street, turn left onto Ferry Street, turn right onto Terminal Way, turn left onto Earle Street, turn right onto Cannery Street, and turn left onto Barracuda Street to gated security entrance.
2. From the south, take the San Diego Freeway (I-405) north to Long Beach Freeway (I-710) south. Continue onto CA-47 S/Seaside Fwy and take the Ferry Street exit, turn left on Ferry Street, turn right onto Terminal Way, turn left on Earle Street, turn right onto Cannery Street, and turn left onto Barracuda Street to gated security entrance.

- B. Directions to 985 South Seaside Avenue Building Demolition and Pavement Improvements, 1025 South Seaside Avenue-Demolition and Lot Conversion, and South Seaside Avenue Storm Drain Restoration Projects:

1. From the north, take the Harbor Freeway (I-110) south towards San Pedro. Continue on Vincent Thomas Bridge towards Terminal Island and exit Ferry Street. Turn left on Ferry Street, turn right onto Terminal Way, and continue onto South Seaside Avenue to Project Sites.
2. From the south, take the San Diego Freeway (I-405) north to Long Beach Freeway (I-710) south. Continue onto CA-47 S/Seaside Fwy and take the Ferry Street exit. Turn left onto Ferry Street, turn right onto Terminal Way, continue onto South Seaside Avenue to Project Sites.

- C. Directions to Berths 208-209 Container Freight Station Building:

1. From the north, take the Harbor Freeway (I-110) south towards San Pedro, take exit 1A for CA-47 toward Vincent Thomas Bridge/Terminal Island/Long Beach then continue onto CA-47 North/Seaside Fwy. Use the right two lanes to take the CA-47 North Ramp to CA-103 N/Piers A S T, turn left onto Pier South Ave, and turn left onto New Dock Street.

2. From the south, take the San Diego Freeway (I-405) north to Long Beach Freeway (I-710) south and continue onto CA-47 South/Seaside Fwy. Use the right lane to take exit 1 for CA-47 N toward CA-103 N/Piers A S T

D. For Berths 208-209 Container Freight Station Building Demolition, access to and from Project Site and any Laydown Area(s) by Contractor's personnel and equipment shall be coordinated with representatives of YTI, the terminal operator. (Refer to COORDINATION Section).

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Requirements concerning the following:
 - 1. Existing surface conditions
 - 2. Existing subsurface conditions
 - 3. Character of geotechnical materials
 - 4. Restrictions upon Contractor's use of Project Sites and any Laydown Area(s)
 - 5. On-site traffic control
 - 6. Utility availability
 - 7. Allowable loads on existing structures
- B. Contractor shall review information provided and resource materials referred to in this Section, concerning geotechnical reports, existing surface and subsurface improvements and systems at Project Sites) and any Laydown Area(s), and temporary utility points of connection.
- C. Contractor shall visit Project Sites and any Laydown Area(s) and determine the conditions which may affect Work. Refer to LOCATION AND ACCESS Section for Project Site(s) and any Laydown Area(s) access.

1.2 EXISTING SURFACE CONDITIONS

- A. Project Sites contain various existing improvements and structures including asphalt concrete and concrete pavements, light poles, chain link fencing and gates, railroad tracks, abandoned underground tanks, electric transformers, fire hydrants, guard posts, and other improvements.
- B. Streets around Project Sites and any Laydown Area(s) are usually heavily traveled. Trucks for the adjacent Everport Container Terminal at Berths 226 through 236 and Fenix Marine Services Container Terminal at Pier 300 queue on Ferry Street and Terminal Way. Trucks for the adjacent YTI Terminal queue on New Dock Street.

1.3 EXISTING SUBSURFACE CONDITIONS

- A. Project Sites and any Laydown Area(s) contain underground utilities and substructures that are either abandoned or still in service. Refer to CONTRACT DOCUMENTS Section for list of reference drawings. Refer to BASIC SITE MATERIALS AND METHODS Section for additional requirements.

1.4 CHARACTER OF GEOTECHNICAL MATERIALS

- A. For Drawing No. 1-3571, Eco & Associates, Inc. has prepared a geotechnical investigation of Project Site dated September 23, 2019, Project Number ECO-19-144. The Site Investigation Report is included in the bid package.

1.5 CONTRACTOR'S USE OF SITE

- A. Contractor's storage site shall be located within Project Sites and any Laydown Area(s). Security of Project Sites and any Laydown Area(s) shall be the responsibility of Contractor.
- B. Upon completion of Work, remove temporary facilities and utility installations, equipment, tools, excess materials, and debris from Project Sites and any Laydown Area(s) and leave Project Sites and any Laydown Area(s) in clean condition. Clean grease and oil spills and concrete waste in conformance with REGULATORY REQUIREMENTS Section.

1.6 ON-SITE TRAFFIC CONTROL

- A. For Drawing No. 1-3502, obtain approval from Engineer and tenant for Contractor's equipment and vehicle traffic routes within terminal limits.
- B. Provide temporary traffic controls such as flag persons, signs, and barricades necessary to control traffic on Department property during the phases of construction, including traffic movements of adjacent contractor's activities through Project Sites and any Laydown Area(s), in conformance with the California Manual of Uniform Traffic Control Devices (California MUTCD).
- C. Regulate speed on Project Sites and any Laydown Area(s) to avoid generating dust or spillage.
- D. Traffic speeds on unpaved roads shall be reduced to 15 miles per hour (mph) or less.
- E. Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.

1.7 UTILITY AVAILABILITY

- A. Fire hydrants available for construction water points of connection are located on Barracuda Street near the former Star-Kist property and S Seaside Avenue within the former Southwest Marine property. For Drawing No. 1-3502, fire hydrants are located in areas surrounding the existing Container Freight Station building. Contact the Wharfinger's Office through Engineer to arrange temporary water points of connection and metering.

1.8 ALLOWABLE LOADS ON EXISTING STRUCTURES

- A. The existing pier at 1050 South Ways Street is not in a safe condition. It cannot support any type of loads.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Notification and coordination requirements:

1. Marine coordination
2. Coordination with tenant

B. Project meetings

1.2 NOTIFICATION AND COORDINATION REQUIREMENTS

- A. Coordinate Work with other contractors, tenants, and City workers who may be working in or are adjacent to Project Sites and any Laydown Area(s).
- B. Coordinate Work with Department tenants having utilities or pipelines on Project Sites and any Laydown Area(s) or occupying facilities adjacent to Project Sites and any Laydown Area(s).
- C. Coordinate installation and location of temporary utilities with Engineer and tenants.
- D. Contractor shall furnish the tenants with a construction schedule for Work within the tenant's areas.
- E. Instructions or orders received by Contractor from regulatory agencies, tenants, utility, or pipeline owners that are in conflict with this Section shall be brought to the immediate attention of Engineer.
- F. Coordinate construction activities with adjacent contractors and Department Construction and Maintenance (C&M) crews through Engineer as shown on Drawings and described in this Section.
- G. For electrical power shut down, contact Department's C&M Division by contacting Engineer 2 working days before shut-down is needed.
- H. Other contractors, C&M crews, or tenants shall be working at irregular time intervals within Project Site and any Laydown Area(s) limits concurrent with Contractor's Work.
 1. There shall be no additional charge resulting solely from the presence of other entities authorized by Engineer to work within Project Sites and any Laydown Area(s) limits.

- I. Representatives of the following agencies, tenants, and companies shall be notified in writing, as applicable, 10 working days before Work is started in areas affecting them, unless Engineer directs otherwise:

<u>Company or Agency</u>	<u>Contact</u>	<u>Telephone</u>
South Coast Air Quality Management District (SCAQMD) Toxics Section		(909) 396-2327 fax (909) 396-3342
City of Los Angeles Fire Department	Battalion Chief	(310) 548-7516
Electrical Power - Los Angeles Department of Water and Power	Chris Rodriguez	(310) 522-1709
Electrical Service - Department Construction and Maintenance Division		through Engineer
Water Service - Los Angeles Department of Water and Power	Luisito Ramos	(213) 367-1217
Water Service - Department Construction and Maintenance Division		through Engineer
Gas Service - Southern California Gas Company	Louie Flores	(310) 605-4172
Gas Service - Department Construction and Maintenance Division		through Engineer
AT&T-Manager for utility pole removal, conduit, and vault work	Ernesto Astorga	(310) 308-0197
Telephone Service - AT&T	Business Office	(800) 310-2355

<u>Company or Agency</u>	<u>Contact</u>	<u>Telephone</u>
AT&T building service cable, AT&T backbone cable and adjustment of phone company maintenance holes	Kosal Sieng	(310) 200-7228
Removal and installation of phone booths:		(800) 924-3666
CalTrans (Vincent Thomas Bridge painting and scaffold crew)	Bill Hansel	(310) 548-1271
11th US Coast Guard District Waterways Management	Waterways Aids to Navigation (W.A.N.) and	(310) 521-3860
	Notice to Mariners	
U.S. Coast Guard Sector Los Angeles - Long Beach	Captain of Port of Los Angeles Captain Ryan Manning	(310) 521-3606
Pacific Harbor Lines (PHL)	Monte Stokes	(310) 984-5780
Al Larson Boat Shop		(310) 514-4100
So Cal Ship Services	Jeremiah Macaulay	(310) 613-2499
Innovative Terminal Services Incorporated	Kent Phillips	(310) 549-8030
YTI	Ken Fletcher	(310) 427-2295

J. Department Emergency Contacts:

<u>Company or Agency</u>	<u>Contact</u>	<u>Telephone</u>
Port Police	Watch Commander Emergencies	(310) 732-3491 (310) 732-3500
Port Pilots	Chief Pilot Dispatch (24 hours)	(310) 732-3808 (310) 732-3805

K. Emergency spill contacts-in the event of a spill in harbor waters:

<u>Company or Agency</u>	<u>Contact</u>	<u>Telephone</u>
U.S. Coast Guard National Response Center		(800) 424-8802
U.S. Coast Guard Command Duty Office		(310) 521-3805
Office of Emergency Service		(800) 852-7550 or (916) 845-8911
Department of Fish and Wildlife	24 hour contact number	(916) 445-0045
Los Angeles County Fire Department Hazardous Materials Unit	Emergency Response Coordinator	(323) 890-4317

L. Excavating and Digging:

- Contractor shall provide 2 working days notice prior to excavation work.

<u>Company or Agency</u>	<u>Contact</u>	<u>Telephone</u>
Underground Service Alert (USA)		(800) 422-4133 or 811

1.3 PROJECT MEETINGS

- A. Preconstruction Meeting: Attend preconstruction meeting scheduled by Engineer. Meeting activities:
 - 1. Contractor shall introduce Project team and present a preliminary schedule, activity coding plan, and work force requirements.
 - 2. Engineer shall review administrative procedures with Contractor.
 - 3. A representative of City of Los Angeles Office of Contract Compliance shall present labor compliance requirements.
 - 4. Other Project stakeholders may also attend preconstruction conference, including tenant at Project Sites and any Laydown Area(s) and tenants adjacent to Project Sites and any Laydown Area(s).

1.4 MARINE COORDINATION

- A. Notify the following in writing 10 working days prior to starting Work on water:
 - 1. Port Pilots
 - 2. United States Coast Guard (USCG), in conformance with REGULATORY REQUIREMENTS Section
 - 3. Port Police Office
 - 4. Wharfinger's Office through Engineer
 - 5. Other terminals adjacent to Work
- B. Coordinate with affected agencies, including USCG and Department Port Pilots, for navigation restrictions.

1.5 COORDINATION WITH TENANTS

- A. The adjacent tenants' and terminal's operations shall continue uninterrupted. Coordinate construction activities with the tenants to avoid interference with operations.
 - 1. In the event of a conflict, tenant requirements shall have priority over Contractor's requirements in areas of active operations.
 - 2. Contractor's personnel shall present valid photo identification at entry gates upon demand. Vehicles shall have plaques or markings identifying company.

3. Do not interfere with ship berthing, ship loading and unloading, and facility maintenance activities. Contractor shall obtain tenant's ship berthing schedule and moor floating plant outside of area required for tenant to moor vessels. Relocate interfering floating plant, materials and equipment on and under wharf as required prior to ship berthings.
- B. Obtain weekly ship berthing schedule from tenant and re-confirm daily. Tenant shall provide 2-day advance confirmation of ship schedules. Work is allowed when no ship is berthed.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Computer system requirements to use an Internet-based project management system.

1.2 INTERNET-BASED PROJECT MANAGEMENT SYSTEM

- A. Project shall use an Internet-based project management system, PMWeb, to submit and process for approval the following including, but not limited to:
 - 1. Requests for Information (RFIs) and RFI responses.
 - 2. Shop drawings and shop drawings responses.
 - 3. Change Request Forms Time and Materials (T & M)
 - 4. Contractor Daily Reports
- B. Shop drawings shall also be submitted in conformance with Subsection 01000.21 of GENERAL CONDITIONS Section.
- C. Department shall provide Contractor access to the system at no charge.
- D. Department shall provide Contractor training on how to use the system. Contractor's personnel shall have basic working knowledge of computers (i.e., mouse operation, using a browser) to effectively learn the system during the training session.

1.3 USER ACCESS

- A. Department shall control Contractor's access to the system and assign user profiles to a maximum of 4 authorized Contractor personnel. User profiles shall define levels of access, determine function-based authorizations, and determine user privileges. Contractor's access to the system shall be sufficient to perform Work required in this Section.
- B. Contractor shall generate (including the use of a scanner where electronic files are not available) and send electronic files for the correspondence listed in Paragraph A of Internet-Based Project Management System Article of this Section.
- C. Subcontractors and suppliers shall not be given direct access to the system. Information exchanged between Contractor, subcontractors, and suppliers

shall be the responsibility of Contractor. Direct communication through the system shall only occur between Engineer and Contractor.

- D. Any correspondence or information entered into the system shall become an official document and shall be included in Project file.
- E. Comments made by Engineer on Contractor-submitted correspondence shall not relieve Contractor from compliance with requirements of Contract Documents.

1.4 COMPUTER SYSTEM REQUIREMENTS

- A. Contractor shall have access to the Internet, using the latest version of any of the following browsers:
 - 1. Google Chrome
 - 2. Apple Safari
 - 3. Microsoft Edge

1.5 CONTRACTOR RESPONSIBILITY

- A. Contractor shall be responsible for maintenance of Contractor's hardware, software, and connectivity to the Internet. Department shall not be responsible for any delays associated from the use of the system including, but not limited to, hardware or software problems, slow response times, downtime periods, connection problems or loss of information. Under no circumstances shall the use of the system be grounds for a time extension or cost adjustment to Contract.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section modifies Construction Schedule and Extension of Time and Compensable Delays Subsections of GENERAL CONDITIONS Section. Work includes but is not limited to:
 - 1. Provide scheduler.
 - 2. Prepare, submit, update, and revise Construction Schedules and reports.
 - 3. Attend meetings.
- B. This Section provides technical requirements for preparation and reporting of the construction schedule.

1.2 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Include cost of the scheduler, office, materials, supplies, and other necessary expenses as a line item in the Schedule of Values for the Lump Sum Construction bid item of Bid Proposal Line Items. Include line items for Baseline Schedule, Monthly Updates, and Weekly Schedules. Monthly Updates shall have a minimum value of \$10,000 per month for the duration of Project on Schedule of Values.
 - 2. If the schedules and reports are not prepared, submitted, and updated as specified in any particular month, City shall withhold payment of the scheduling line item for that month.

1.3 ABBREVIATIONS AND DEFINITIONS

- A. Refer to Abbreviations and Definitions Subsection of GENERAL CONDITIONS Section for definitions for Calendar Day; Changes in Work; City; Contract; Contract Documents; Contractor; Contract Time; days; Drawings; Engineer; Notice of Award; Notice to Proceed; Project; Specifications; Superintendent; and Work.
- B. Abbreviations:
 - 1. CPM: Critical path method
 - 2. NTP: Notice to Proceed

C. Definitions:

1. Activity: A portion of Work which requires time and resources (labor, equipment, and/or material) to complete.
2. Baseline: The approved as submitted Preliminary Baseline which addresses Engineer's comments and contains corrections to previous submittals.
3. Construction Schedule(s): The detailed Activity level plans required by this Section.
4. Current Revised Baseline: The present replacement schedule for the Baseline or a previously revised Baseline, which was revised in conformance with the Schedule Revisions Article of this Section.
5. Days: Consecutive Calendar Days.
6. Milestone: A start or completion date defined or inferred by Contract or Drawings as calculated from NTP, start/end of phase, or Contract completion. The time base for Milestones shall be in conformance with GENERAL CONDITIONS Section.
7. 90-Day Schedule: Contractor's detailed activity level schedule for the first 90 Calendar Days of Contract, which addresses comments, and contains requested corrections to previous submittals.
8. Preliminary Baseline: Contractor's initially submitted detailed Activity level plan for constructing Project.
9. Weekly Schedule: A schedule showing the actual and the planned Activities, including changed Work, of the week before and the 2 weeks succeeding the date of the weekly meeting.

1.4 SUBMITTALS

- A. Submit the name, qualifications, education, and experience (including references and lists of prior projects) of the scheduler, and a detailed description of the scheduling system to be used no later than 14 Calendar Days after Notice of Award.
- B. Submit the documents listed in Table 1 at the end of this Section prior to the time and at the frequency required.
- C. Present Weekly Schedule at each weekly meeting.

1.5 QUALITY ASSURANCE

- A. Qualifications: Scheduler shall have a minimum of 5 years experience in preparing and maintaining CPM schedules and reports in Primavera P6 for projects of similar size, value, type, and nature. Scheduler shall be on Project Site a minimum of 8 hours per week to attend weekly meetings and to monitor, revise, and update the schedules, curves, and reports for the duration of Contract.

1.6 MEETINGS

- A. Pre-Construction Scheduling Conference: Present and discuss proposed scheduling system and scheduling method, the sequence of operation, proposed Activity coding, cost, labor, and equipment loading, procedures for updating and revising schedules, and required submittals. Engineer shall schedule and conduct pre-construction scheduling conference with Contractor's project manager, Superintendent, and scheduler prior to pre-construction meeting. Activity code breakdown structure shall be discussed and agreed to at this meeting.
- B. Weekly Meetings: Meet with Engineer to assess progress of Work once each week, on a day established by Engineer.
- C. Preliminary Baseline Conflict Resolution Meetings: Attend meetings with Engineer, major subcontractors, and suppliers to resolve any conflicts between Preliminary Baseline and the intent of Contract. Engineer shall schedule meeting.
- D. Monthly Schedule Update Meetings: On a monthly basis, meet with Engineer for the purpose of updating the schedule and reports. Schedule the meeting at least 7 Calendar Days prior to the required date for submittal of the updated schedule and reports. This meeting shall also include a discussion of schedule revisions that are proposed to be included in the monthly schedule update.

1.7 METHOD OF SCHEDULING

- A. Prepare and maintain Construction Schedules, which represent the plan to complete Work within Contract Time. Construction Schedule shall provide Engineer with a basis to monitor progress of Work.
- B. Use CPM and show schedule in time-scaled precedence diagramming format. Time-scale the schedules in Calendar Days from NTP. Show Milestones and Activities on the schedule.

- C. Use a scheduling software and a computer hardware system commensurate with the size of Project. The scheduling software shall be Primavera P6 version 8.2 or later.
- D. Float is a resource available to both parties and is not for the exclusive benefit or use of either Contractor or City. Float created during Project through the actions of either party remains for the benefit of either party unless expressly agreed in advance by both parties in writing to be for the sole benefit of one party. Use of float suppression techniques such as preferential sequencing or logic, special lead/lag logic restraints, imposed dates, and extended Activity durations are prohibited and are cause for rejection of the schedule.
- E. A Baseline showing early completion of Contract shall not be accepted by City. Schedule updates showing early completion of Contract may be accepted by City. If schedule updates show early completion of Contract, the updated schedules shall show the time between early finish and Contract Time as Project float. City shall not move liquidated damages to the early completion date. City shall not pay for extended overhead for schedule changes or additional Work that does not increase Contract Time.
- F. The schedule shall contain Activities for Milestones and for Contract Work, which includes Bid Item Work, Contingency Bid Item Work, and once authorized, any Allowance Bid Item Work. Work shall be broken down into Activities. Activity details shall assure the schedule provides an appropriate basis for monitoring and evaluating the progress of Work.
 - 1. No Work activity, except submittals required to comply with Construction General Stormwater Permit and Stormwater Pollution Prevention Plan (SWPPP) Article of REGULATORY REQUIREMENTS Section, can start before Notice to Proceed unless specifically authorized in advance by Engineer.
 - 2. No Work activity can exceed 28 Calendar Days (20 Work days) in duration unless specifically authorized in advance by Engineer.
 - 3. Only Activity Types "Start Milestone", "Finish Milestone", and "Task" can be used unless specifically authorized in advance by Engineer. Level of Effort (LOE) activities may be used to summarize Work as needed to produce Summary Level Schedules for presentation purposes.
 - 4. Time base for Activities of Contractor shall be in conformance with the GENERAL CONDITIONS Section.

5. Activities shall have both Predecessor and Successor Logic Ties that accurately represent the sequence and interdependence of activities; except the first Start Milestones which does not have predecessor ties and the last Finish Milestones which does not have successor ties.
 - a. FS 0 (zero) logic ties are preferred.
 - b. If SS successor logic ties are used, then there shall also be an FF or an FS logic tie in order for the backward pass to calculate correctly.
 - c. If the lag values are not equal to zero (0), a written justification of each non zero lag shall be submitted with the first submittal of the Construction Schedule. (There shall be no exceptions to this requirement). Negative lags may not be used.
 - d. SF – Start to Finish logic ties are not acceptable
6. Provide the following minimum information for each Activity:
 - a. Identification Number: Each activity shall have a unique Activity Identification Number (P6 default allows 20 characters):
 - 1) The first 2 digits shall be the last 2 numbers of Project Specification Number.
 - 2) The remaining digits are for Contractor's numbering sequence. Department requires that the last digit always be a zero (0) in case that the activity needs to be subdivided in the future.
 - b. Description: Each Work activity shall have a unique Activity Name. This activity description shall tell:
 - 1) What type of Work is being performed: i.e. drive, install, excavate, and the like.
 - 2) What is being Worked on: i.e. piles, electrical conduit, and the like.
 - 3) Where Work is being performed: e.g. Bent #18-Compressed Air Building, and the like.
 - 4) Examples: Drive Piles - Bent #18 or Install Electrical Conduit - Compressed Air Building

- c. Calendar: Two standard Global calendars shall be defined in addition to the calendars used by Contractor for their Work activities for Department and shall be named "POLA Calendar 1", "POLA Calendar 2".

- 1) "POLA Calendar 1" shall be a 365 / 366 Calendar Day calendar with a 7 day Work week and no holidays. This calendar shall be used for milestones, approval activities, and third party activities.
- 2) "POLA Calendar 2" shall be a 5 day per week single shift Work day calendar with holidays.

Note: The union holidays currently recognized by Department are:

New Year's Day - 01 January

Memorial Day - Last Monday of May

Independence Day - 04 July

Labor Day - First Monday of September

Veterans Day - 11 November

Thanksgiving Day - Fourth Thursday of November

Day after Thanksgiving - Day after Thanksgiving Day

Christmas Day - 25 December

- 3) Contractor may, with the prior concurrence of Department, add other holidays and/or other calendars for special Work shifts such as 6 day single shift, 5 day double shift, and the like. Additional calendars shall be defined as PROJECT CALENDARS and shall be named with the 4-digit Project Specification number to associate it with the specific project to which it applies.
 - 4) The calendars assigned in the schedule shall have consistent Work periods (i.e. 0800h to 1700h with a non-Work period from 1200h to 1300h).
- d. Original Duration: The minimum unit of time is 1 day. Activities shall have a duration of no less than 1 and no more than 28 Calendar Days for on-site operations.

- 1) Denote Activities that require unusual shift Work, such as, 2 shift days, 6-day weeks, or so forth, by a different calendar code for each type of shift.
 - 2) Activities of others shall be in Calendar Days.
 - 3) Upon approval of the baseline schedule the original duration shall remain unchanged. Changes of duration shall be reflected in adjustment of remaining duration.
 - 4) No fractional durations for activity durations, total float values, nor lags shall be allowed in the schedule.
 - 5) No fractional dates shall be allowed in the schedule.
 - 6) Presence of fractional durations or dates shall be cause for rejection of the schedule without additional review.
- e. Code Activities and Milestones: Each activity shall have activity coding.
- 1) Activity code fields shall be defined as “global type” activity code fields.
 - a) The first 4 characters of the activity field name shall be Project Specification Number [SPEC].
 - b) “EPS type” activity codes shall not be used.
 - 2) As a minimum, the following code fields shall be included:
 - a) [SPEC] BIDI – POLA Bid Item Number.
 - b) [SPEC] RESP – Responsibility – which entity: Contractor, subcontractor, supplier, Department, and the like, is responsible for the activity.
 - c) [SPEC] PHAS – Phases – a breakdown of Work into the following contractually definable phases:
 - 1 General Conditions
 - 2 General Requirements
 - 3 Contract Work
 - 4 Contract Close Out

- d) [SPEC] AREA – Locations – a further breakdown of Phase Code into sub-Phases such as Contract Milestones, Permits / Prepare and Submit, Review and Approve, Procure and Deliver Materials / Geographical Contract Work Areas.
 - e) [SPEC] STEP – Steps – a further breakdown of Area Codes for Geographical Contract Work into Sub-Areas.
 - f) [SPEC] ITEM – Specification Section Number – POLA Specification Number for Work being performed.
 - g) [SPEC] CONO – Change Order Number – PCO No., CO No., or AFA No. Assign base activities the value “000”.
- 3) Note: Contractor’s plan for Phase, Area, and Step Codes to be utilized in the schedule as well as a Map or Drawing showing the exact location of Area and Step codes which are “geographical in nature” shall be submitted at Pre-Construction Meeting, and shall be approved by Engineer prior to Engineer’s review of the first Baseline Construction Schedule. There shall be no exceptions to this requirement unless approved in writing by Engineer.
7. Activities shall be resource and cost-loaded to generate the reports and curves specified in Construction Curves and Reports Article of this Section.
- a. Any required resource-loading and cost-loading shall be performed using the "Resources" feature in Primavera P6.
 - b. "Expense" feature shall not be used to perform cost-loading in the schedule.
 - c. Contractor shall include an explanation of the cost-loading methodology and resource-loading methodology in the schedule narrative.
- G. Activities shall include, but not be limited to, the following:
- 1. Work represented by bid items on Bid Proposal Line Items, including contingency bid items and allowance bid items shall be included after authorized by Engineer.
 - 2. Prepare and Submit and Review and Approve Activities for required shop drawing and material samples.

3. Procure, including order, manufacture, test, and deliver critical material and major components, including material to be furnished by City as set forth in Contract.
 4. Obtain permits.
 5. Mobilize and move-in.
 6. Construct temporary installations and support facilities.
 7. Demolish and remove existing improvements.
 8. Coordinate with other contractors under separate contract with City, tenants, utilities, and Work by others adjacent to Work.
 9. Excavation, backfill, and other earthwork.
 10. Construct other items.
 11. Construct items by subcontracting.
 12. Required inspections by other City departments or third parties and inspect/correct/pass.
 13. Perform required tests and return results.
 14. Obtain approval from and issue notices required by, regulatory agencies or other third party.
 15. Correct punch list and obtain acceptance of Work, including commissioning, start-up, and testing.
 16. Final clean-up and demobilize.
 17. Perform Changes in Work upon issuance of directive by Engineer.
 18. Activities required to complete Work comprised in Construction Schedule.
- H. Show Milestones on the schedules and shall be identified, described, and coded similar to Activities.
- I. Define the sequence of Work by assigning predecessor/successor logic relationships to Activities and Milestones.
- J. Use the same Activity and Milestone identification numbers, descriptions, and codes in Construction Schedules.

K. Present submittals in the forms required by Table 1 at the end of this Section.

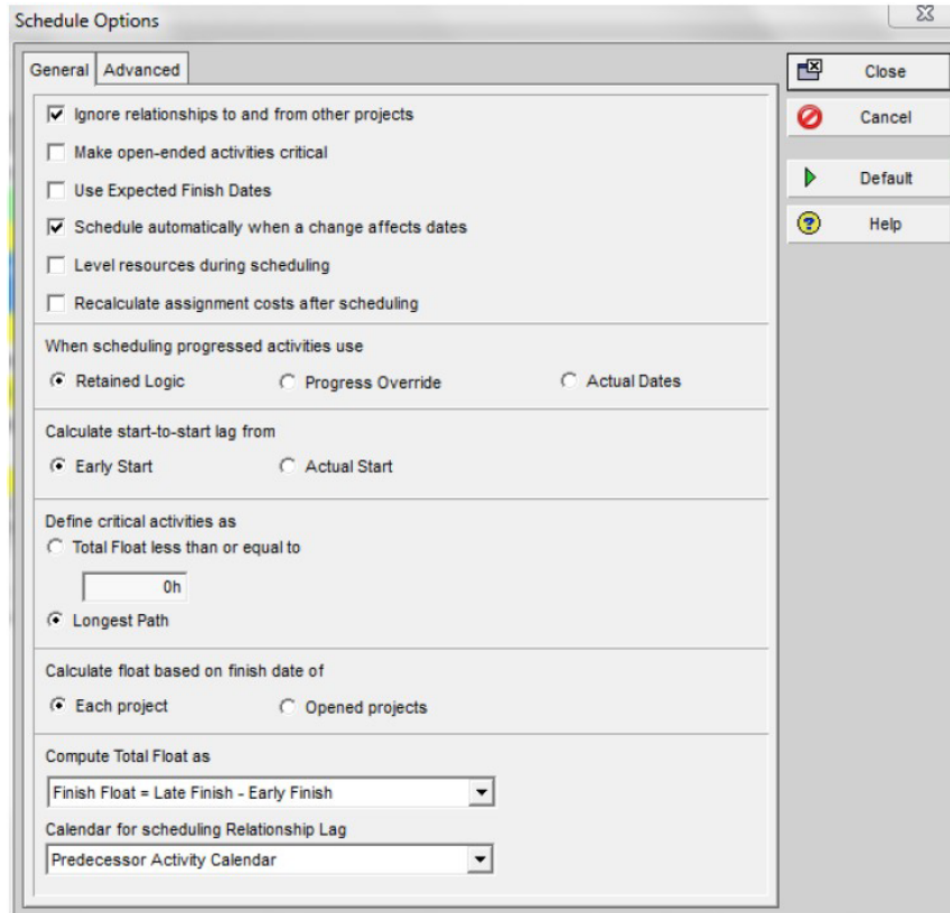
1. Export the native P6 schedule in .XER file format and submit Construction Schedule in electronic file format as specified in Paragraph 1.7C of this Section.
2. Plot Construction Schedules and curves on standard size cut paper sheets not larger than 22 inches by 34 inches. Each sheet shall have a title block on the lower right-hand corner and a timeline. Plots shall be time scaled to show a continuous flow of information from left to right. Identify the critical path clearly on each sheet.
3. Reports shall be on 8 1/2 inch by 11 inch paper.

1.8 CONSTRUCTION SCHEDULES

A. Prepare Construction Schedules as detailed in Method of Scheduling Article of this Section and as detailed in this Article.

1. Schedules shall be calculated using "Schedule Options" which is found in Primavera P6 under Tools – Schedule - Options:
 - a. Ignore relationships to and from other projects - On
 - b. Automatic scheduling and leveling - Off
 - c. When scheduling activities apply - Retained logic
 - d. Calculate start to start lag from - Early start
 - e. Schedule interruptions - Interruptible
 - f. Show open ends as - Non critical
 - g. Calculate total float as - Finish float

P6 Schedule Options shall be set as follows:



2. Calculate/plot Critical Paths using “Longest Path Option” which is found under Tools – Schedule... [F9] - Options – Define critical activities as Longest Path (click on the radial button).
3. Data Date for Monthly Updates of Construction Schedule shall be the first Calendar Day of the following month (i.e. the Data Date of the July Update shall be 01 August). Note: When statusing Prepare and Submit, Review and Approve, or Procure Activities in Monthly Updates, add Submittal Number to Activity Description.

4. Construction Schedules (Baseline, Monthly Updates, Recovery, and the like) submitted shall have a unique four character Project ID. The first 2 characters shall be the last 2 digits of Project Specification Number. The last 2 characters can be either numbers or letters, but the schedules shall “sort” in the order in which they are submitted, with no duplication of names. Department suggests that the numbering start with SNA1. (SN=Spec No.) For example, if Project Specification Number is 2711, then Project ID would start with 11.
5. Construction Schedule submittals (Baseline, Monthly Update, Revision, Recovery, and the like) shall have a unique PROJECT NAME that includes the project title and a clear description of the schedule version (e.g.: May 2012-2 [2nd submittal of the May Update].) Note: When assigning baselines for schedule comparison, only Project name is available to identify which version is assigned.
6. Default P6 system settings may be used with the following provisions:
 - a. Admin Preferences (found under Admin – Admin Preferences) – Earned Value settings shall reflect:
 - 1) Technique for computing performance percent complete as Activity percent Complete.
 - 2) Technique for computing Estimate to Complete (ETC) as ETC= remaining cost for activity.
 - 3) Earned Value Calculation – When calculating earned value from a baseline use Budgeted values with current dates.
 - b. Financial Periods (found under Admin – Financial Periods) for Department are defined as monthly with the 1st as the start of a period and the last day of the month as the end. For stored period performance the project data date shall be indicated as the date on which to store data.
 - c. User Preferences, (found under EDIT – User Preferences) - Resource Analysis shall reflect:
 - 1) Time Distributed Data shall be displayed based on Remaining Early Dates.
 - 2) Interval for time distributed resource calculations shall be Month or Week as approved by Engineer.

7. Export P6 Data to provide backup files for submittal. Each schedule submittal shall include:
 - a. The data backup exported in either Primavera PM / MM – (XER) (version 8.2 or later) or Primavera PM – (XML) file format.
 - b. Schedule layout definition files exported from Open Layout (found under View – Layout – Open Layout) files shall be named “layout_name.PLF”.
 - c. If layouts are based on specific project data filters, ensure applicable filters are saved as a layout prior to exporting Project for transfer.
 - d. Layouts may be defined as either “all users” or “project layouts”.
 8. Schedule report definition files used to create submitted reports as exported from Reports (found under Tools – Reports – Reports) files are named “report_name.ERP”. [Remember to save any included filters as layouts prior to exporting the report definition file].
- B. Weekly Schedule shall be in bar chart format, or any other format that is acceptable to Engineer. For the report period, show the actual start and finish dates for completed Activities, the actual start date and remaining duration of Activities in progress and the forecast start date and original duration for planned Activities. Show the percent complete of Activities. Activities may be subdivided in Weekly Schedule to more accurately monitor progress. Each activity in Weekly Schedule shall have a reference to an activity in approved Baseline Schedule. Weekly Schedule shall detail construction activities to be performed during the 1 week immediately before, and the 2 weeks immediately following the weekly construction progress meeting date. Weekly Schedule shall also include the major long lead procurement and submittal activities.
- C. 90-Day Schedule shall show Activities forecasted to occur within the first 90 Calendar Days of Contract, and any Activity that shall or may affect completion dates. These Activities include, but are not limited to planning, mobilizing, submitting key shop drawings and samples, fabricating and delivering key and long-lead procurement elements. In addition, identify and show Activities that shall or may affect, or be affected by, activities of City, other City contractors, utilities, tenants, and/or other third parties. Activities and logic of 90-Day Schedule shall be the basis of the first 90 days of Preliminary Baseline.

- D. Baseline Schedule shall show Activities included in 90-Day Schedule as well as Activities required to complete Work.
- E. The monthly update shall be a statused submittal of 90 Day Schedule, Baseline, Current Revised Baseline, or the last approved update. The data date shall be the first day of the month following the month of the update. The information supplied in Weekly Schedule or other approved sources, shall be the basis of the actual start and finish dates or remaining duration of Activities, that were worked on or completed during the month.
 - 1. Contractor's project manager, scheduler, and representatives of major subcontractors shall jointly review and approve the schedules, updates, and computer tabulations for accuracy prior to submittal.
 - 2. Submit the as-built update prior to submittal of the affidavit of completion but after correction of punch list items and final cleanup. Show actual start and finish dates for Activities. Submittal of the as-built update is a condition precedent to acceptance of Work by City.
 - 3. Engineer shall review and respond to the schedule portion of the update within 14 Calendar Days of receipt.
- F. The submittal of schedules defined in Paragraphs A, B, and C of this Article, shall include a statement signed by the approved scheduler certifying that scheduler has prepared and reviewed the schedules to ensure conformance with the requirements of this Section.

1.9 CONSTRUCTION REPORTS

- A. Narrative Report:
 - 1. Narrative report shall describe differences between Baseline or Current Revised Baseline, or previous month's update as approved, and the current update including reasons for the differences. Include an explanation of potential delays and/or problems, estimated impact on performance and the overall Project completion date, and planned corrective action.

B. Variance Report:

1. Variance report shall compare Baseline, Current Revised Baseline, or most recently approved update with the current update, and shall list Activities, which have been delayed 20 or more working days, and Activities with 10 days or less total float which have incurred any delay. The report shall include:
 - a. Activity identification number and description.
 - b. Early start/finish dates shown on Baseline or Current Revised Baseline.
 - c. Current early start/finish dates.
 - d. Working days remaining to complete Activity.
 - e. Percent completion of Activity.
 - f. Reason for the delay in "Remarks" column.

1.10 SCHEDULE REVISIONS

A. Revisions to the schedule may become necessary when:

1. Conditions such as weather, material availability, labor availability, field conditions, Engineer direction, or other factors differ from the conditions assumed in the schedule;
2. Changes in Work occur; or
3. Progress falls behind schedule for reasons attributable to Contractor.

B. When necessary, make revisions as provided in this Article in lieu of the provisions in GENERAL CONDITIONS Section. Request time extensions in conformance with Contract Time Extensions Article of this Section.

C. Schedule Revisions may be included in the monthly schedule update submittals. The changes shall be consistent with the changes discussed at Monthly Schedule Update Meetings, referenced in Paragraph 1.6D of this Section. Provide a written narrative that lists the changes to the schedule update along with an explanation of the changes made in the schedule update, such as:

1. Justification for the revision,

2. Evidence supporting such revision as allowable, and
 3. A detailed precedence analysis schedule report of Activities changed or affected by the proposed revision.
- D. Provide a detailed precedence analysis for Activities changed or affected when Engineer directs a schedule revision.
- E. Contractor initiated schedule revision shall not increase the original or current Contract Time.
- F. When the request is approved by Engineer, reflect the changes in the most recently approved schedule update which shall become Current Revised Baseline.

1.11 CONTRACT TIME EXTENSIONS

- A. Request time extensions in conformance with Extensions of Time and Compensable Delays Subsection of GENERAL CONDITIONS Section by submitting:
1. A notice of delay or request of an extension of time shall be submitted to Engineer within the time stipulated in Extension of Time and Compensable Delays Subsection, Paragraph i of GENERAL CONDITIONS Section;
 2. A time impact analysis reporting the cause of and responsibility for the delay; and
 3. A detailed precedence analysis schedule report of the fragnet quantifying the delay.
- B. A fragnet is a sequence of new and/or revised Activities and logic that ties a delay into the construction sequence, and mathematically demonstrates the impact of the delay on the end date of Work.
- C. If the time impact analysis and fragnet are approved, the fragnet shall be analyzed as follows:
1. If approved before or while the delay is occurring, the fragnet shall be analyzed in the approved monthly update of the month before the time impact analysis was approved.
 2. If approved after the delay is complete, analyze the fragnet in the approved monthly update of the month before the delay was completed.

- D. Insert the approved fragnet in the update defined above and succeeding updates to and including the current monthly update. The modified schedule shall become Current Revised Baseline.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

Table 1 Submittal and Frequency Due Date			
Submittal Name	Form of Submittal	Submittal Due	Frequency
1. Scheduler and Scheduling System	Written Report	14 Calendar Days (CD) after Notice of Award	Until approved
2. 90-Day Schedule	Electronic	21 CD after NTP	Until approved and monthly thereafter until Baseline approved*
3. Preliminary Baseline Schedule	Electronic	45 CD after NTP	Once until approved*
4. Baseline Schedule	Plot and electronic	7 CD after acceptance of Preliminary Baseline	Once until approved*
5. Monthly Updates/ Schedule Revisions a. Schedule b. Narrative Report c. Variance Report	a. Plot and electronic b. Written Report c. Written Report	7 CD after the end of the update month	Monthly after Baseline established*
6. Weekly Schedules	Bar Chart	At weekly meeting	Weekly*
7. Time Impact Analysis	Plot and electronic [supporting evidence, precedence analysis]	14 CD after approval of request or direction	As needed*
8. As-built Update Schedule	Plot and electronic	After Work is completed and prior to Project closeout	Once until approved*
9. Resubmittal of rejected submittal	Plot and electronic	7 CD after receipt of comments	As needed*

1. *Resubmit rejected submittals as provided in Item 9 of Table 1

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Photographic documentation via an Internet-based interface through a managed service.
- B. Photographic documentation shall be provided for 1050 South Ways Street Starkist Demolition and Storage Lot Conversion.

1.2 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Photographic Documentation bid item of Bid Proposal Line Items.

1.3 SUBMITTALS

- A. Camera Specifications: Provide specifications on the camera, lens, enclosure, power source, Internet connection, web interface, and software.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. EarthCam <https://www.earthcam.com>

2.2 SYSTEM REQUIREMENTS

- A. The indoor/outdoor camera system shall consist of a tamper and impact resistant enclosure with integrated camera, wiper, and weather resistant powder coated aluminum housing to be mounted on a fixed pole.
- B. The camera shall take high-resolution 18 megapixel digital images every 15 minutes and provide a live video feed.
- C. The camera shall upload images over a wireless cellular modem, or an RJ-45 hardwired connection to a digital subscriber line (DSL) or cable modem.
- D. The content shall be sent to a secure, password-protected website with an interface and online software features provided by the vendor as a managed service.
- E. The system shall operate on 120 volts alternating current (VAC) or by solar power provided by the vendor with sufficient battery capacity to operate 24 hours per day.

2.3 EQUIPMENT

- A. Camera: Integrated 18 megapixel, high-definition camera and lens assembly consisting of a camera with a remotely controlled focal length lens with the following features:
 - 1. Minimum Resolution: 5184 times 3456 pixels equals 18 megapixels.
 - 2. Lens: Adjustable optical zoom. Digital zoom shall not be used to produce original images.
 - 3. Compression: Joint Photographic Experts Group (JPEG).
 - 4. IP Addressing: Dynamic or Static.
 - 5. Auto Features: Focus, ISO light sensitivity, shutter speed, and white balance.
- B. Camera Enclosure: Powder coated aluminum and weather resistant housing, with the following features:
 - 1. Anti-fog lens or thermostatically controlled heater and blower.
 - 2. Impact resistant viewing window.
 - 3. Minimum IP66 weather rating.
- C. Quantity of Cameras: 2
- D. Data Connection: Provide 1 of the following:
 - 1. Via built-in cellular data connection provided and maintained by the system vendor.
 - 2. Via an RJ-45 Ethernet data connection over broadband or satellite Internet access provided and maintained by Contractor.

2.4 INTERFACE AND ONLINE SOFTWARE

- A. Remote Access: Contractor's system vendor shall provide an Internet based interface and online software as a managed service, to allow the viewing of high-definition digital still images captured and stored, from any location with Internet access via a secure password protected website.
 - 1. Maintain images on the system vendor's website for reference available continually during the life of Project and for not less than 60 days after completion and acceptance of Project by Department.

B. Online Interface Features:

1. Software delivered by vendor as a managed service.
2. Displays company logo and project name.
3. Calendar based navigation system for selecting specific images.
4. Multifunction image browsing.
5. Pan, tilt and zoom control capability within a high-definition image.
6. A multi-view screen to view the cameras on a project at the same time.
7. Share Image Tools: Save, print, and email.
8. Display image and camera location on a map and satellite view.
9. Time lapse features including instant time lapse play back.
10. Images are the copyright of Department and protected on secure servers owned and operated by the system vendor.
11. At the completion of Project, provide Engineer a time lapse video of Project using at least 1 image per day of the entire Project. The video shall either be saved on a portable universal serial bus (USB) hard drive, which shall become property of Department, or transmitted via a secure file transfer protocol (FTP) site.
12. At the completion of Project, provide Engineer still images taken of Project in the original high resolution digital JPEG format. The images shall either be saved on a portable USB hard drive, which shall become property of Department, or transmitted via a secure FTP site. Provide the date and time each photograph was taken in file metadata.

PART 3 – EXECUTION

3.1 INSTALLATION

A. General:

1. Mount cameras on existing high mast light poles in an operating terminal or nearby location, as directed by Engineer.
2. Install camera system in conformance with manufacturer's printed instructions, State of California and City of Los Angeles codes and requirements.

3. Install units plumb and level and at proper angle to provide maximum field of view of on-site operations.
4. Securely and rigidly anchor products in place.
5. Connect cameras to power.

B. Position camera so that field of view covers intended area of Project Site.

1. Install camera at elevation that shall provide uncompromised visual coverage, as approved by Engineer.
2. Install camera so that position of sun shall not come into direct contact with field of view of camera at any time during construction.

3.2 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show Work. Photographs with blurry or out-of-focus areas shall not be accepted.
- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
1. Date and Time: Include date and time in file name for each image.

3.3 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Preinstallation Testing: Test camera on-site at ground level prior to mounting unit in its intended elevated position.
 - a. Contact system vendor not less than 24 hours in advance of installation for testing.
 - b. Connect unit.
 - c. After 30 minutes, contact system vendor and require system vendor to remotely confirm that camera is operating properly.
 - d. Install cameras in approved locations.

3.4 ADJUSTING

- A. Engage a factory authorized service representative to instruct Contractor's personnel on procedures to adjust camera equipment and methods of determining optimum alignment and adjustment of components.

3.5 MAINTENANCE

- A. Maintain camera equipment in good operating condition on a 24-hour basis until removal.
- B. Ensure lens and enclosure clarity and photo quality on a 24 hour basis.
- C. Clean installed items using methods and materials in conformance with the manufacturer's written instructions.
- D. Clean camera system components including camera housing windows, lenses, and monitor screens.
- E. Engage a factory authorized service representative to instruct Contractor's personnel on procedures and schedules for troubleshooting and maintaining equipment.

3.6 TERMINATION AND REMOVAL

- A. Removal of Camera System:
 - 1. Upon completion and acceptance of Project by Department, and upon written notification, Contractor shall terminate and remove cameras including associated appurtenances and mounting equipment.
 - 2. Upon removal, cameras, associated appurtenances and mounting equipment shall become property of Contractor and shall be removed off Department property.
- B. Leave area clean; repair and return to original condition existing improvements damaged by the installation of cameras.

END OF SECTION

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Environmental mitigation measures and requirements during construction of Project in accordance with Drawing No. 1-3574.

1.2 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Show cost of the mitigation monitor, technical specialists, office, materials, supplies, and other necessary expenses as a line item on the schedule of values for the Lump Sum Construction bid item of Bid Proposal Line Items.
 - 2. Include a line item for monthly mitigation measure compliance documentation on the schedule of values for the Lump Sum Construction bid item of Bid Proposal Line Items.

1.3 SUBMITTALS

- A. Submit to Engineer an Environmental Compliance Plan (ECP) 3 weeks prior to start of construction. Plan shall contain information showing how Contractor shall achieve compliance with each mitigation measure in this Section. Compliance forms for the mitigation measures applicable to Project are included as Appendix "B" of Specifications.
 - 1. Submit completed mitigation monitoring and reporting forms prior to the start of construction and at the end of construction.
 - 2. Submit backup documentation monthly demonstrating compliance with the mitigation measures as applicable and, in particular, as indicated in Environmental Compliance Tracking (ECT) Form (refer to sample form in Appendix "C" and fill in form in PMWeb), including California Air Resources Board Executive Order, Engine Model Summary Template, vehicle registration card, photos of equipment with equipment identification number, and the like; and monitoring logs and reports.
- B. Submit qualifications of mitigation monitor and technical specialists as specified in this Section.
- C. Submit pre-construction survey for nesting birds to Engineer as required by Protection of Nesting Birds Article of this Section.

1.4 PROJECT ENVIRONMENTAL REQUIREMENTS

- A. Comply with the mitigation measure requirements outlined in Appendix "B" of Specifications throughout the construction of Project.
- B. Contractor shall provide and pay for the services of a qualified mitigation monitor to implement and monitor compliance with the mitigation measures and other environmental requirements required for Project.
- C. Contractor shall provide and pay for the services of technical specialists as required for Project.

1.5 MITIGATION MONITOR QUALIFICATIONS AND RESPONSIBILITIES

- A. The mitigation monitor shall have the following qualifications:
 - 1. At least 2 years of recent experience in mitigation monitoring services on large and complex construction projects, port, or marine related experience.
 - 2. Environmental Engineering, Environmental Science or related degree, advanced degree.
 - 3. Experience and knowledge of local/state/federal laws and regulations, including but not limited to: California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), California Air Resources Board (CARB), South Coast Air Quality Management District (SCAQMD), Los Angeles Regional Water Quality Control Board (LARWQCB), and Occupational Safety and Health Administration (OSHA) regulations.
 - 4. General understanding of environmental issues related to cultural resources, hazards, land use, and noise.
 - 5. Air quality technical experience in diesel engines and emissions, including emission control devices, construction equipment, and on-road trucks.
 - 6. Experience with hazardous materials and soil and groundwater contamination.
 - 7. Experience with AQMD Rule 403 and Dust Control Plans.
 - 8. Experience with Storm Water Pollution Prevention Plans (SWPPPs) and storm water Best Management Practices (BMPs).

9. Ability to understand and interpret construction documents and permit requirements (plans, specifications, schedules, and regulatory permits, and the like).
 10. Demonstrated planning, organizational, and problem-solving skills.
 11. Ability to prepare written reports in a clear and concise manner.
 12. Ability to communicate effectively and in a professional manner with Harbor Department staff, regulatory agencies, and community groups.
- B. The mitigation monitor's responsibilities shall include but not be limited to the following:
1. Develop a compliance monitoring protocol or Environmental Compliance Plan and schedule which addresses applicable mitigation measures and environmental requirements, throughout the duration of Project. Refer to Appendix "B" of Specifications.
 2. Conduct pre-construction and regular coordination meetings to inform and train construction personnel about mitigation requirements.
 3. Retain technical specialists such as qualified archaeologists, paleontologists, and biologists to provide monitoring services for specific mitigation measures, as applicable. Specialists retained shall meet the specific qualifications outlined for each specialist type.
 4. Organize and complete recordkeeping and documentation for compliance with applicable mitigation measures and environmental requirements, including back-up and verification documentation to be easily accessible upon request by Engineer.
 5. Document and report non-compliance issues to Engineer. Substitute of or deviation from a specified mitigation measure or environmental requirements requires approval by Engineer.
 6. Resolve non-compliance issues.
 7. Compile, certify, and submit monitoring verification documentation to Engineer upon Project completion.
 8. Coordinate with Engineer to facilitate auditing and reporting to Harbor Department Board of Commissioners, including spot checks of compliance actions and documentation.

- C. The mitigation monitor shall be on site a minimum of 20 hours per week for the duration of Contract.

1.6 TECHNICAL SPECIALIST QUALIFICATIONS

A. Archaeology:

1. The minimum professional qualifications in archaeology are a graduate degree in archaeology, or anthropology plus:
 - a. At least 1 year of full-time professional experience or equivalent specialized training in archaeological research, administration, or management;
 - b. At least 4 months of supervised field and analytic experience in general North American archaeology; and
 - c. At least 1 year of full-time professional experience at a supervisory level in the study of archaeological resources of the prehistoric period.
 - d. Demonstrated ability to carry research to completion.
 - e. Current membership in an archaeological organization with a code of ethics or code of conduct. (e.g. Register of Professional Archaeologists, Archaeological Institute of America, Society for American Archaeology).

B. Paleontology:

1. A graduate degree, from an accredited organization, in paleontology, or related field, including geology, biology or zoology, with a specialization in paleontology;
2. At least 1 year full time professional experience, or equivalent specialized training in paleontological research (i.e., the identification of fossil deposits, application of paleontological field and laboratory procedures and techniques, and curation of fossils specimens), administration, or management;
3. At least 4 months of supervised field and analytic experience with demonstrated knowledge of Southern California paleontology and geology; and
4. Demonstrated ability to carry research to completion.

C. Historic Architecture:

1. The minimum professional qualifications in historic architecture are a professional degree in architecture and a State of California license to practice architecture, plus 1 of the following:
 - a. At least 1 year of graduate study in architectural preservation, American architectural history, preservation planning; or
 - b. At least 2 years of full-time professional experience on historic preservation projects.
 - c. Graduate study or experience shall include detailed investigations of historic structures, preparation of historic structures research reports, and preparation of plans and specifications for preservation projects.

D. Biological and Marine Resources:

1. Protected Species Observer:
 - a. In order to perform monitoring to minimize impacts during pile driving activity, a qualified biologist shall be a National Oceanic and Atmospheric Administration (NOAA) approved Protected Species Observer. It is incumbent upon the qualified biologist to contact NOAA's National Marine Fisheries Service Southwest Regional Office and obtain their approval to serve as Protected Species Observer for the specified Project. The biologist shall have at least 1 year of experience monitoring for potential impacts from pile driving in harbor environments similar to Port of Los Angeles or work under the direct supervision of a qualified biologist with at least 3 years of experience observing in harbor environment.
2. Bird Nest Surveys:
 - a. The minimum professional qualifications for a biologist are a graduate degree in ornithology, wildlife biology, vertebrate field biology, or a closely related field, in addition to:
 - 1) At least 3 years of professional experience studying birds and performing nest surveys;

- 2) At least 1 year of experience in coastal Southern California, including sufficient local field experience in identification of flora or fauna, particularly rare, endangered, and threatened species, with knowledge of their local range-wide population status and trends.
 - b. If a project includes a federal/state-listed endangered, threatened, or other special-status species, the qualified biologist shall also possess the applicable Endangered Species Act (ESA) Section 10(a)(1)(A) recovery permit. If such a recovery permit does not exist for the species of concern, the qualified biologist's previous experience shall include at least 3 years documentable experience monitoring or managing projects that include this specific species.
3. Turbidity Monitoring for Impacts to Shallow Water Habitat – California Least Tern Foraging:
 - a. In order to perform turbidity monitoring for impacts to shallow water habitat with regard to California least tern foraging habitat, a qualified biologist shall also possess the applicable ESA Section 10(a)(1)(A) recovery permit or at least 3 years documentable experience monitoring or managing projects that include California least tern.

1.7 PROTECTION OF NESTING BIRDS

- A. To comply with state and federal laws protecting nesting birds, Contractor shall have a qualified biologist conduct pre-construction surveys for nesting birds before any construction activity that disturbs vegetation, trees, or soil is performed between February 1st and September 15th. Conduct pre-construction survey within 1 week prior to vegetation, tree, or soil disturbing activity.
- B. Biologist shall determine during pre-construction survey if deterrents are necessary to prevent future nesting. Contractor shall install deterrents as directed by Engineer.
- C. If nesting birds are detected, Contractor shall implement no-disturbance buffers until the nests have fledged. The size of the buffers shall be based on the judgment of a qualified biologist. The biologist shall determine the buffer based on the species ecology, its tolerance to disturbance, and the type of construction activity that is occurring. Periodic monitoring shall be conducted to ensure the nest is not disturbed.

- D. If a potentially active nest is encountered during construction, Contractor shall immediately cease Work in the area and immediately notify Engineer of the discovery. Contractor shall not resume Work in the area until after consultation with a qualified biologist and directed to do so by Engineer. When Contractor is directed to resume construction, such operations shall be conducted as directed by Engineer.
- E. Applicable laws including but not limited to Federal Migratory Bird Treaty Act; California State Codes 3503 and 3503.5.

1.8 CEQA COMPLIANCE

- A. Contractor shall comply with any mitigation measures, lease measures, standard conditions of approval, permit conditions and/or best management practices outlined as part of an associated CEQA assessment, when applicable.
- B. Applicable laws include, but are not limited to California Public Resources Code 21000 et seq. and California Code of Regulations 15000 et seq.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Permit and fee requirements
- B. Government agency notifications, fees, and license requirements required for Project
- C. Submittal requirements for permits and notifications
- D. Contractor shall pay costs of fines, including fines against Department, resulting from Contractor's non-compliance with permit requirements or failure to procure appropriate permits.

1.2 CITY OF LOS ANGELES PERMITS

- A. Contractor shall obtain and Department shall pay for City of Los Angeles permits required by Department of Building and Safety (LADBS), Fire Department, and Department of Public Works. Payment shall be made by an Interdepartmental Order (IDO) to these departments. Engineer shall obtain plan check unless specified otherwise.
 - 1. City of Los Angeles Department of Building and Safety permit applicants are required to present the following prior to the issuance of permits:
 - a. Worker's Compensation Insurance Certificate.
 - b. Contractor's license.
 - c. City of Los Angeles Business Tax Identification Number.
 - 2. Coordinate payment with Engineer. Permits required include but are not limited to the following:
 - a. Demolition Permit (C-21 contractor license required to pull permit)
 - b. Sewer Cap Permit
- B. Obtain City of Los Angeles Department of Public Works, Bureau of Street Services Overload permit where hauled material dimensions exceed overlength, overwidth, or overheight criteria, or materials are subject to other permit requirements.

- C. On-site inspection approval from Department shall be required for hot work. Secure a hot work permit for welding, cutting, burning, pitch heating, riveting, grinding, drilling, and other fire and spark producing operations from Port Police Office at (310) 732-3973 or (310) 732-3500 at 330 South Centre Street, San Pedro, California 90731 two working days prior to start of hot work. There is no fee for this permit.
 - 1. Furnish safety devices, extinguisher, and fire watch as required by permit.
 - 2. Exercise caution in welding and cutting operations to avoid fire.

1.3 CALIFORNIA AIR RESOURCES BOARD (CARB) REQUIREMENTS

- A. On-road vehicles shall comply with CARB Clean Truck Check (Heavy Duty Inspection and Maintenance Regulation) and Advanced Clean Fleets Regulation
 - 1. Prior to start of Work, submit to Engineer proof of compliance required by CARB for Contractor and subcontractors. Follow applicable regulatory requirements for retention of paperwork.
- B. Off-road equipment shall comply with CARB off-road equipment regulations including but not limited to: In-Use Off-Road Diesel and Large Spark Ignition Regulations.
 - 1. Prior to start of Work, submit to Engineer proof of compliance required by CARB for Contractor and subcontractors. Follow applicable regulatory requirements for retention of paperwork.
 - 2. Prominently display appropriate signage in conformance with CARB In-Use Off-Road Diesel Regulation (<https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation>) on Project Site. Signage shall state the following:

“Who does the In-Use Off-Road regulation apply to? The In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) applies to all self-propelled off-road diesel vehicles 25 horsepower or greater and most two-engine vehicles (except onroad two-engine sweepers) owned or operated in California. This includes vehicles that are rented or leased (rental or leased fleets).”

1.4 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) REQUIREMENTS

- A. Obtain pertinent SCAQMD permits and comply with SCAQMD rules and permit requirements, including, but not limited to, the following:
1. Submit to South Coast Air Quality Management District (SCAQMD) a notification form (SCAQMD Rule 1403) 10 working days prior to start of chemically-impacted soil cleanup or abatement order soils remediation Work. Obtain forms from the SCAQMD Enforcement Division, Toxics Section.
 2. Refer to ASBESTOS ABATEMENT Section or LEAD REMEDIATION Section for SCAQMD notification and other asbestos and lead-related permits.
 3. Obtain and pay for SCAQMD permits under Rules 201, 203, 222, and/or 2202 for affected classes of equipment, including but not limited to, internal combustion engines greater than 50 brake horsepower which are not used as vehicle propulsion (air compressors, generators, winch motors, and the like).
 - a. California Air Resources Board permits may be obtained for eligible portable engines in lieu of SCAQMD permits.
 4. Comply with SCAQMD Rules 401, Visible Emissions and 402, Nuisance.
 5. Comply with City of Los Angeles Municipal Code Section 91.108.13 and SCAQMD Rule No. 403, Fugitive Dust.
 - a. Contractors performing Large Operations as defined by SCAQMD Rule No. 403 shall prepare and obtain SCAQMD approval of a fugitive dust control plan prior to start of Work.
 - b. Implement SCAQMD's Best Available Control (BAC) measures in Table 1 of Rule 403. Large construction projects (on a property which contains 50 acres or more of disturbed surface area) shall also follow Rule 403 Tables 2 and 3.
 6. Comply with SCAQMD Rule 1166 Volatile Organic Compound Emissions from Decontamination of Soil.
 7. Abrasive Blasting: Select materials and methods that comply with SCAQMD Rule 1140 Abrasive Blasting.

8. Comply with SCAQMD Rule 1466 Control of Particulate Emissions from Soils with Toxic Air Contaminants.

1.5 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), FIRE, AND OTHER SAFETY REQUIREMENTS

- A. Comply with State of California Construction Safety Orders and General Industry Safety Orders issued by Department of Industrial Relations, Division of Occupational Safety and Health; and Safety and Health Regulations for Construction administered by United States Department of Labor, Occupational Safety and Health Administration (OSHA).
- B. Hazardous Substances: Also known as hazardous materials, are defined in California Health and Safety Code 25501 (n). Hazardous substances include those shown in "Director's List" from Department of Industrial Relations pursuant to Hazardous Substances Information and Training Act, and those described in Part 172 of Title 49 of the Code of Federal Regulations (CFR), Department of Transportation Hazardous Materials List.
 1. Examples of hazardous substances commonly used in construction projects include, but are not limited to, the following:
 - a. Toxic materials (pesticides, herbicides, epoxies, curing compounds, and paints),
 - b. Corrosive materials with pH of 2 or less (muriatic and other acids),
 - c. Corrosive materials with pH of 12.5 or more (soda lye and lime),
 - d. Ignitable materials (gasoline and diesel fuel, propane, and solvents),
 - e. Reactive materials (chlorine), or
 - f. Any other material for which a Safety Data Sheet (SDS) has been prepared.
 2. Handle hazardous substances in conformance with applicable federal, state, and local regulations.
 3. Make current and accurate copies of SDS available at Project Site for each hazardous substance to be used at Project Site.
 - a. Train employees that handle hazardous substances and hazardous wastes in procedures for handling such materials. Refer also to Hazardous Waste Article of this Section.

4. Store hazardous substances in conformance with California Health and Safety Code and City of Los Angeles Fire Code requirements.
 - a. Comply with California Health and Safety Code, Division 20, Chapter 6.95, Section 25500. Contractor shall file a Hazardous Materials Business Plan through California Environmental Reporting System (CERS) as implemented by City of Los Angeles Fire Department and associated Certified Unified Program Agency (CUPA) at http://fire.lacounty.gov/wp-content/uploads/2019/08/lacofd-CERS-User-Guide_Part3.pdf if on-site storage of hazardous substances exceeds the following quantities:
 - 1) Liquids: 55 gallons
 - 2) Gas: 200 cubic feet
 - 3) Solids: 55 pounds
 - b. On-site storage refers to the uninterrupted presence of hazardous substances at Project Site for 30 Calendar Days or more, including refills or replacement of stock.
5. Protect hazardous substance storage containers from wind and rain. Place secondary containment beneath containers or equipment to capture drips and spills.
6. Clean up spills immediately. Place absorbent material on residue from small spills and dispose of wastes in conformance with federal, state, and local regulations and with Hazardous Waste Article of this Section. Submit spill cleanup method to Engineer upon request.
7. Depending on the extent, volume, and discharge to surface or subsurface waters from the spill, Contractor shall comply with notification and reporting requirements.

1.6 HAZARDOUS WASTE

- A. General: Hazardous waste is defined by Health and Safety Code 25117 and, California Code of Regulations, Title 22 Division 4.5, Chapter 11 Article 2, Section 66261.10 et. Seq. Notify Engineer of observances or occurrences of hazardous waste. Comply with federal, state, and local reporting requirements. Continued Work at the affected area of Project Site shall require the approval of Engineer.

1. Prior to performing any Work in affected areas, prepare a Project Site-specific Safety and Health Program pursuant to Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements in California Code of Regulations CCR Title 8 Section 5192. Upon generating hazardous waste, Contractor shall furnish Safety and Health Plan for Project Site and submit to Engineer within 2 Calendar Days of generation.
 2. Workers shall be trained in conformance with CCR Title 8 Section 5192.
 3. Dispose of hazardous wastes at licensed facility that is permitted to receive hazardous waste (recycling and disposal) as approved by Engineer.
 4. Submit copies of documents to Engineer, including hazardous waste manifests indicating the amount, nature, and disposition of the hazardous waste within 10 Calendar Days of disposal, as required by law and regulations.
 5. Refer to EXCAVATING, STOCKPILING, AND DISPOSING OF CHEMICALLY IMPACTED SOIL Section for additional requirements.
- B. Pre-Existing Hazardous Wastes: City shall retain title to pre-existing hazardous waste removed from Project.
1. Store and manage hazardous wastes discovered on-site during the course of construction and resulting from construction activities in conformance with California Health and Safety Code. Protect hazardous waste storage containers from wind and rain in conformance with applicable laws and regulations. Place secondary containment beneath receptacles to capture drips and spills.
 2. In handling City's materials, City acknowledges that for the purposes of Contract, it retains generator status and shall be the primary or designated generator, shall obtain the necessary United States Environmental Protection Agency (U.S. EPA) identification number, and sign the transportation manifests as owner of the material.
 3. Pay fees required for the disposal of hazardous waste.
- C. Contractor-Generated Hazardous Wastes: Contractor shall retain title to hazardous waste generated from supplies and equipment brought on Project Site and any Laydown Area(s).

1. Contractor shall bear costs, including disposal fees and taxes, for managing and disposing of hazardous waste generated from supplies and equipment brought on Project Sites and any Laydown Area(s).

1.7 CHEMICALLY IMPACTED SOIL AND WATER

- A. Notify Engineer of observances or occurrences of soil and/or groundwater contamination. Engineer shall notify Port Police, Director of Environmental Management, and Risk Manager. Continued Work at the affected area of Project Site shall require the approval of Engineer.
- B. Remove chemically impacted soil and groundwater as directed by Engineer and in conformance with applicable federal, state, and local regulations, including, but not limited to, South Coast Air Quality Management District (SCAQMD); California Environmental Protection Agency (EPA), Department of Toxic Substances Control (DTSC); State Water Resources Control Board (SWRCB); and City of Los Angeles Fire Department. Dispose of chemically impacted soil and groundwater as directed by Engineer.
- C. Obtain permits for excavation and disposal of chemically impacted soil and water.
- D. Refer to Hazardous Waste Article of this Section for further requirements if the contamination is determined to be hazardous.
- E. For chemically-impacted soil and water, prepare a Project Site-specific Safety and Health Plan in conformance with requirements of Hazardous Waste Article of this Section.

1.8 OFF-SITE TRAFFIC REQUIREMENTS

- A. Minimize interference with the existing traffic patterns on surrounding publicly traveled streets and access roads.
 1. Provide traffic control barriers, lights, detours, markings, and construction signage on publicly traveled streets advising of construction in conformance with California Manual of Uniform Traffic Control Devices (California MUTCD).
 - a. 7 Calendar Days prior to start of construction, provide advance construction signs in accordance with City of Los Angeles Standard Plan S-791-1.

2. Route vehicles hauling materials to minimize traffic conflicts and congestion.
 3. Trucks hauling dirt, sand, or gravel shall comply with SCAQMD Rule 403 Best Available Control measures and the following additional requirements:
 - a. Maintain at least 6 inches of freeboard.
 4. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads in conformance with Construction Stormwater Pollution Control Article of this Section.
 5. Stabilize the materials while loading, unloading, and transporting to reduce fugitive dust emissions.
 6. Belly-dump truck seals shall be checked regularly to remove trapped rocks to prevent spillage.
 7. Comply with track-out regulations in conformance with SCAQMD Rule 403, regardless of project size.
- B. Rush Hour Construction Ban: Work in the public right-of-way on City of Los Angeles streets is prohibited during the morning and evening rush hours, from 6:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 7:00 p.m. The ban includes both actual construction on City streets as well as the staging of equipment and materials, even if construction is not in the public right-of-way.
1. Construction activities related to emergency maintenance and repair are exempted from the rush hour construction ban. Verify emergency status with Engineer.
- C. Refer to SITE CONDITIONS Section for additional requirements.
- 1.9 CONSTRUCTION STORMWATER POLLUTION CONTROL
- A. Minimum Water Quality Protection Requirements:
1. Comply with the following minimum standards of good housekeeping:
 - a. Earth, construction materials, sediments, trash, construction-related wastes, other potential pollutants, or stockpiles of these materials shall not be transported by wind or blower, storm or wash water from Project Site and any Laydown Area(s) via sheetflow, swales, area drains, natural drainage, storm drains, or streets.

- b. Handle hazardous materials in conformance with Occupational Safety and Health Administration (OSHA), Fire, And Other Safety Requirements Article of this Section, and applicable federal, state, and local regulations.
- c. Retain concrete wastes on-site until concrete wastes can be appropriately disposed or recycled. Accumulated concrete wastes on Project Site and any Laydown Area(s) shall become property of Contractor and shall be recycled in conformance with Contractor's Waste Management Plan (WMP) as described in CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT Section of Specifications. On-site washout shall be allowed only in designated areas away from drains, ditches, and streets.
- d. Deposit trash and construction-related solid wastes in covered and labeled receptacles. Prevent dispersal of trash by wind and prevent rainwater percolation through trash.
- e. Handle and dispose of hazardous wastes in conformance with Hazardous Waste Article of this Section and applicable federal, state, and local regulations.
- f. Prevent tracking of sediments and other materials from Project Site and any Laydown Area(s) by vehicle traffic. Stabilize construction entrance roadways to inhibit sediments from being deposited into the public ways. Comply with the provisions of Housekeeping And Maintenance of Surface Areas of Project Site and any Laydown Area(s) Subsection of GENERAL CONDITIONS Section.
- g. Non stormwater runoff from equipment and vehicle washing and any other activity shall be contained at Project Site and any Laydown Area(s).
- h. Best Management Practices (BMPs) Requirements: Installed BMPs shall be as defined by and in conformance with "California Stormwater Best Management Practices Handbook" and SWRCB. Contractor shall obtain a copy of "California Stormwater Best Management Practices Handbook". Visit <https://www.casqa.org/resources/bmp-handbooks>.

- i. Inspect Project Site and any Laydown Area(s) prior to storm event predictions to ensure that BMPs are properly installed. Conduct routine inspections of Project Site and any Laydown Area(s) to ensure that Best Management Practices are adequate to prevent any debris, particulates or fluids from leaving the lay down area and/or entering Port waters.
 - j. Soil and debris piles shall be underlain with 2 layers of Visqueen and shall be covered with Visqueen weighted down with sandbags. Create temporary berms around piles to prevent stormwater infiltration of storage materials. Routinely observe the water surface to look for sheen, debris, or particulates from Project Site and any Laydown Area(s). Immediately cease Work on piles should a pollutant enter the water and notify Engineer.
- B. Small Project Erosion Control Measures:
- 1. Small project description: Erosion prevention measures required for projects disturbing less than 1 acre of soil and are not otherwise permitted with LADBS nor covered under Construction General Permit (CGP).
 - 2. Small project BMPs requirements: Install the following BMPs as defined by and in conformance with California Stormwater Best Management Practices Handbook:
 - a. Sediment control practices: Street Sweeping, SE-7. Perimeter of disturbed soil area: Silt Fence, SE-1 for slopes up to 4:1 (H:V). For slopes exceeding 4:1, Sandbag Barrier, SE-8 and Fiber Rolls, SE-5.
 - b. Storm drain catch basin within drainage catchment of disturbed soil area: Storm Drain Inlet Protection, SE-10.
 - 1) Provide inlet protection at catch basins within drainage catchment regardless of whether or not the catch basins are within Project Site limits.
 - c. Waste management control practices: Material Delivery and Storage, WM-1; Material Use, WM-2; Stockpile Management, WM-3, Spill Prevention and Control, WM-4; Solid Waste Management, WM-5; and Concrete Waste Management, WM-8.
 - d. Tracking control practices: Stabilized Construction Entrance and Exit, TC-1; Stabilized Construction Roadway, TC-2, and Entrance Outlet Tire Wash, TC-3.

3. Contractor shall prepare and submit to Engineer a Best Management Practices Plan (BMPP). A sample BMPP is included in Appendix "J" of Specifications, which includes a BMP layout map and a list of BMPs to be used on-site during the duration of Project.
 4. Inspect Project Site and any Laydown Area(s) prior to storm event predictions to ensure that BMPs are properly installed. Inspect Project Site and any Laydown Area(s) during and after each significant storm event where surface runoff is observed to maintain and repair damaged BMPs.
 5. To purchase a copy of the California Stormwater Best Management Practices Handbook, visit <https://www.casqa.org/resources/bmp-handbooks/construction>.
- C. Refer to Construction General Stormwater Permit and Stormwater Pollution Prevention Plan (SWPPP) Article of this Section for projects disturbing 1 acre or more of soil.

1.10 CONSTRUCTION GENERAL STORMWATER PERMIT AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

- A. Project has 1 acre or more of disturbed soil and is subject to U.S. EPA National Pollution Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) (CGP) Order WQ 2022-0057-DWQ NPDES No. CAS000002 adopted on September 9, 2022 and any subsequent iterations for stormwater discharges associated with construction activity. Contractor shall comply with the requirements of CGP. CGP and attachments can be found at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html
- B. Project was determined by Engineer to be Risk Level 1.
- C. Although Project was determined to be Risk Level 1, visual monitoring and reporting requirements included in Attachments D, D.1, and D.2 of CGP and shall be in conformance with Risk Level 2 requirements.
- D. Effluent monitoring and sampling requirements shall be in conformance with Attachments D, D.1, and D.2 of CGP.
- E. Stormwater discharges and authorized non-stormwater discharges shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117.3 and 40 CFR 302.4.

- F. Comply with Total Maximum Daily Load (TMDL) Implementation Requirements in Attachment H of CGP.
- G. Submit to Engineer the names and qualifications of Qualified SWPPP Developer (QSD) and Qualified SWPPP Practitioner (QSP) within 14 Calendar Days after issuance of Notice to Proceed date.
 - 1. QSD shall write, amend, and certify SWPPP documents.
 - 2. QSP shall perform visual observations of discharges, field BMP inspections, perform sampling and analysis, Pre-Qualifying Precipitation Event (QPE) inspections, and train employees on BMPs.
- H. Stormwater Pollution Prevention Plan:
 - 1. Plan Description:
 - a. Design, submit, implement, and document Project Site-specific SWPPP plan in conformance with CGP to control stormwater pollution from sediments and construction materials leaving Project Site and any Laydown Area(s). For additional information on plan preparation, visit SWRCB website at www.swrcb.ca.gov. Refer also to City of Los Angeles Bureau of Sanitation, Watershed Protection Division, at www.lastormwater.org and California Stormwater Quality Association (CASQA), "California Stormwater Best Management Practice Handbooks", telephone number (650) 366-1042. Website address: www.casqa.org.
 - 2. Plan Requirements:
 - a. Prepare SWPPP as follows:
 - 1) Supply information required by SWRCB in SWPPP and submit to Engineer, for review and approval, 30 Calendar Days prior to grading or other soil disturbing construction activities. Refer to SWPPP Requirements and Qualifying Precipitation Events (QPE) Paragraph of this Article for additional requirements.
 - a) Include Project Site-specific BMP layout map.
 - b) Failure to submit SWPPP to Engineer may be cause for withholding of payment.
 - b. Construction Project Site and any Laydown Area(s) Monitoring Program:

- 1) Develop and implement Construction Site Monitoring Program (CSMP) as part of SWPPP in conformance with the requirements of Attachments D, D.1, and D.2 of CGP. CSMP shall be Project Site and any Laydown Area(s)-specific and shall include monitoring procedures and instructions, pre-earthwork drawings, construction and earthwork drawings, location maps, forms, and checklists.
 - 2) Perform required monitoring and inspections, including non-compliance reporting, conforming to Project's Risk Level. Refer to Attachments D, D.1, and D.2 of CGP.
- c. Maintain a copy of the reviewed SWPPP plan at Project Site.
3. Electronically submit other Permit Registration Documents (PRDs) to Engineer, including Site Map; Project Site and any Laydown Area(s)-specific Stormwater Pollution Prevention Plan; and Signed Certification Statement.
 - a. Include check payable to State Water Resources Control Board to cover fee due per project, per year of construction activity starting at Notice to Proceed. Engineer shall file the completed PRDs (including fee) with State Water Resources Control Board, per project per year of construction activity. Include in fee amount the base cost, per acre cost, and applicable surcharge. Allow Engineer at least 14 days prior to commencement of construction activities for filing PRDs and at least 7 days prior to commencement of construction activities to send the check.
 - b. Contact Engineer to obtain Waste Discharge Identification (WDID) number.
 - c. Electronic file of Notice of Intent (NOI) and listing of fees can be found at:
https://www.waterboards.ca.gov/resources/fees/water_quality/#stormwater
4. Sampling, Testing, and Action Levels:
 - a. Comply with applicable TMDL Implementation Requirements in Attachment H of CGP, including TMDL-specific additional BMPs and site pollutant modeling, numeric action levels, and numeric effluent limitations.

5. Inspection, Maintenance, and Repair:

- a. Implement and maintain the reviewed SWPPP BMPs at Project Site and any Laydown Area(s) year-round in conformance with SWRCB requirements.
- b. Perform self-inspection of BMPs prior to and during anticipated storm events.
- c. Complete self-inspection checklists and logs required by SWRCB for each inspection and maintain at Project Site for Engineer's review for Contract duration.
 - 1) Adequate checklist and log maintenance, and approval of them, shall be a condition to approval of rain delay schedule extensions.
- d. QSD and QSP shall perform on-site inspections as listed in CGP.

6. Contractor shall show Waste Discharge Identification number (WDID) to LADBS as proof of submittal of NOI whenever Contractor is required to get a permit from LADBS.

7. Refer to Attachment B of CGP for definitions of Numeric Effluent Limitation and Numeric Effluent Limitation Exceedance.

I. Qualified Precipitation Event (QPE):

1. QSP shall conduct a pre-QPE inspection within 72 hours prior to any weather pattern that forecasts having a 50 percent or greater Probability of Precipitation (PoP) of 0.5 inches or more in a 24-hour period.
2. Obtain precipitation forecast information from National Weather Service of the National Oceanic and Atmospheric Administration (NOAA) Forecast Office.
3. Submit pre-QPE to Engineer for all phases of construction.
4. Refer to Attachments D, D.1, and D.2 of CGP for additional requirements.

J. Maintain a paper or electronic copy of CGP records at Project Site. Submit records on a monthly basis to Engineer during the course of construction and, for Annual Report, prior to September 1 of each year, the collection of the year's records since September 1 of the previous year and, upon Substantial Completion of Project, remaining un-submitted records for Project. Include:

1. A summary and evaluation of sampling and analysis results, including original laboratory reports.
2. The analytical methods, method reporting units and method detection limits of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).
3. A summary of corrective actions taken during the reporting period.
4. Identification of any compliance activities or corrective actions that were not implemented.
5. A summary of violations of CGP.
6. The individuals who performed the facility inspections, sampling, visual observation (inspections), and measurements.
7. The date, place, time of facility inspections, sampling, visual observation (inspections), and measurements including precipitation (rain gage).
8. The visual observations and sample collection exception records and reports specified in Attachments D, D.1, and D.2 of CGP.
9. Training information consisting of:
 - a. Documentation of training for individuals responsible for activities associated with compliance with CGP.
 - b. Documentation of training for individuals responsible for BMP installation, inspection, maintenance, and repair.
 - c. Documentation of training for individuals responsible for overseeing, revising, and amending SWPPP.
10. Photographs of BMPs before, during, and after storm events.
11. Chain of custody forms.

K. Terminating Permit Coverage:

1. To file Notice of Termination (NOT), notify Engineer upon completion of construction and land disturbing activities and provide the following documents to Engineer:
 - a. Completed NOT

- b. QSP-prepared final NOT inspection with QSP name and valid QSP certificate number
- c. Final Project Site and any Laydown Area(s)-specific map
- d. Photos demonstrating final stabilization and implementation of post-construction BMPs and low impact development

L. Prohibited Discharges:

- 1. The following discharges are prohibited:
 - a. Debris and trash, in conformance with SWRCB Resolution 2015-0019 as applicable to construction stormwater discharges including the following:
 - 1) Dischargers shall implement, operate, and maintain trash management, treatment, and institutional controls to eliminate debris and trash from stormwater discharges and authorized non-stormwater dischargers consistent with the prohibition of the discharge of debris and trash regulated by CGP.
 - b. Treatment chemicals except as authorized in Attachments F and G of CGP;
 - c. Wastewater from washout or cleanout of areas, structures or equipment with concrete, grout, stucco, paint, or other construction materials;
 - d. Form-release oils and curing compounds;
 - e. Fuels, oils, fluids, or other materials used in vehicle and equipment operation and maintenance;
 - f. Soaps, solvents, or detergents (used in vehicle equipment washing or external building wash down, and the like); and
 - g. Toxic or hazardous substances (asbestos, lead, mercury, or PCBs).

1.11 TREATED WOOD AND TREATED WOOD WASTE

- A. Railroad ties, timber piles, timber wharf framing, and utility poles present within the facilities are considered, upon disposal, to be treated wood waste (TWW) containing creosote, pentachlorophenol, or waterborne preservative (such as Ammoniacal Copper Zinc Arsenate (ACZA)) which the State of California has determined to be potentially hazardous. Remove, manage, and dispose of TWW materials at California Regional Water Quality Control Board (CRWQCB) approved and licensed landfills in conformance with Alternative Management Standards (AMS). Contractors performing treated wood removal and TWW disposal shall have a HAZ certification from California Contractors State License Board.
 - 1. Confirm with Engineer the latest Department of Toxic Substances Control (DTSC) requirements prior to starting demolition.
- B. Submit 2 copies of the manifest from the transporter to Engineer including weigh tickets.
- C. Refer also to Hazardous Waste Article of this Section.

1.12 CORPS OF ENGINEERS PERMIT

- A. Department has obtained permit No. SPL-2022-00686-TS from Department of the Army, Corps of Engineers (Corps Permit), for wharf maintenance Work. A copy of Corps Permit requirements is included in Specifications as Appendix "E". Comply with these requirements and furnish controls necessary to accomplish Work in conformance with the requirements. Make timely notifications and meet the Conditions of the Corps Permit.
- B. Refer to United States Coast Guard Permits Article for additional marine construction requirements.
- C. Refer to National Marine Fisheries Service/California Department of Fish and Game Requirements Article of this Section for *Caulerpa taxifolia* and eelgrass survey requirements.

1.13 UNITED STATES COAST GUARD PERMITS

- A. Contact 11th Coast Guard District, Waterways Aids to Navigation Office to obtain temporary Aids to Navigation authorization and to issue Notice to Mariners. Refer to COORDINATION Section for contact information.

1. File Aids to Navigation application form immediately after Award of Contract or 30 Calendar Days prior to the start of construction, whichever is later. Comply with Aids to Navigation Office requirements.
 2. File Notice to Mariners form at the Aids to Navigation Office 14 Calendar Days, minimum, prior to watercraft mobilization. Report changes to anticipated weekly Work schedule as soon as changes are known.
 - a. Provide facsimile (fax) copy of Notice to Mariners to Coast Guard Captain of Ports of Los Angeles and Long Beach. Refer to COORDINATION Section for contact information.
 3. Remove temporary aids to navigation connected with Contract upon completion of Project.
- B. Display signal lights and conduct marine operations in conformance with General and Special Conditions of Corps Permit and U.S. Coast Guard.
- C. Throughout the period of operation of Contractor's equipment, maintain lights between hours of sunset and sunrise upon floating plant and equipment connected with Work, and upon buoys or moorings of such size and locations that could endanger or obstruct navigation.
- D. Furnish and set lights, buoys, and other required aids to navigation in conformance with United States Coast Guard regulations.
- E. If night Work is permitted, illuminate floating plant from sunset to sunrise. Submit a sketch to Engineer showing the location of lights and buoys, and other floating equipment being used during Project 30 Calendar Days prior to start of Work.
- F. Refer to Corps of Engineers permit included as Appendix "E" of Specifications for additional marine construction requirements.
- 1.14 LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD (LARWQCB) PERMIT
- A. Clean Water Act Section 401 Water Quality Certification and Order:
1. Department shall obtain Los Angeles Regional Water Quality Control Board (LARWQCB) Clean Water Act Section 401 Water Quality Certification and Order WDID: 4WQC40123078. A copy of the order is included in Appendix "F" of Specifications.

2. Comply with the special conditions and requirements of LARWQCB Clean Water Act Section 401 Water Quality Certification and Order. Contractor shall perform the monitoring, sampling, testing, reporting, and other incidentals that are required to comply with LARWQCB Clean Water Act Section 401 Water Quality Certification and Order through an independent test laboratory. Results and reports shall be submitted by Department to LARWQCB. Contractor shall coordinate with Department to facilitate the performance of the monitoring, sampling, and reporting Work required by LARWQCB.

1.15 MITIGATION MONITORING AND REPORTING PROGRAM

- A. Comply with the requirements of Mitigation Monitoring and Reporting Program included as Appendix "B" of Specifications. Refer to ENVIRONMENTAL CONSTRUCTION REQUIREMENTS Section for additional requirements.

1.16 NATIONAL MARINE FISHERIES SERVICE/CALIFORNIA DEPARTMENT OF FISH AND GAME REQUIREMENTS

- A. Surveys for the presence of *Caulerpa taxifolia* and eelgrass is required prior to dredging and other significant ocean bottom-disturbing activities.
 1. Department shall conduct the *Caulerpa taxifolia* surveys not more than 90 days and not less than 30 days prior to the activity. Notify Engineer when the 90-day period prior to the activity shall begin.
 2. Department shall conduct the eelgrass surveys during the active growth period, March 1st to October 31st, and should be considered valid for a period of 60 days.

1.17 OTHER REQUIREMENTS

- A. Refer to ASBESTOS ABATEMENT Section for additional requirements.
- B. Refer to LEAD REMEDIATION Section for additional requirements.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Procedures for ensuring optimal diversion of construction and demolition waste generated by Project and documentation procedures for tracking waste generation and diversion.
 - 1. Project shall promote City's sustainable building efforts by creating a resource-efficient and environmentally sensitive Project and maintaining optimum control of Construction and Demolition (C&D) waste generated during Project.
 - 2. Project shall use products with post-consumer recycled content to the greatest extent feasible. Refer to California Department of Resources Recycling and Recovery's (CalRecycle's) website for information about recycled content construction products.

1.2 ABBREVIATIONS

- A. CalMAX: California Materials Exchange
- B. CalRecycle: California Department of Resources Recycling and Recovery
- C. C&D: Construction and Demolition
- D. CCR: California Code of Regulations
- E. CDRG: Construction and Demolition Recycling Guide
- F. LEA: Local Enforcement Agency
- G. SWDD Report: Solid Waste Diversion and Disposal Report
- H. WMP: Waste Management Plan

1.3 DEFINITIONS

- A. Certified C&D Waste Processing Facility or Certified C&D Waste Processor: A solid waste processing facility that accepts loads of C&D waste for the purpose of recovering re-usable and recyclable materials and disposing of the non-recyclable residual material. A Certified C&D Waste Processing Facility has been certified by City of Los Angeles (City) Bureau of Sanitation to have a facility specific recycling rate for C&D waste. For information on becoming a certified C&D waste processor, refer to:
https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r/s-lsh-wwd-s-r-cdr?_adf.ctrl-state=1d5d9u35ny_1&_afLoop=4798033367694392&_afWindowMode=0&_afWindowId=null#!%40%40%3F_afWindowId%3Dnull%26_afLoop%3D4798033367694392%26_afWindowMode%3D0%26_adf.ctrl-state%3D1d5d9u35ny_5. See CDRG for information on the current list of certified processors and recycling facilities.
- B. Class III Landfill: A landfill that accepts non-hazardous solid waste such as household, commercial, and industrial solid waste. A Class III landfill is regulated by LEA and shall have a CalRecycle solid waste facilities permit.
- C. Construction and Demolition Recycling Guide (CDRG): A publication by City of Los Angeles Department of Public Works, Bureau of Sanitation, Solid Resources Citywide Recycling Division. CDRG can be found at:
<https://www.lacitysan.org/cs/groups/pressrelease/documents/document/y250/mdgy/~edisp/cnt082545.pdf>.
- D. C&D Waste or Mixed C&D Waste or C&D Debris or Mixed C&D Debris: Solid waste and recyclable materials, and building materials from construction, deconstruction, remodeling, repair, or demolition of buildings and other structures, do not contain hazardous waste (as defined in CCR Title 22, Section 66261.3, et seq.), and contain no more than 1 percent putrescible wastes by volume, calculated on a monthly basis. C&D waste includes, but is not limited to: asphalt, concrete, Portland cement, brick, lumber, drywall, roofing material, ceramic tile, pipe, glass, carpet, and associated packaging.
- E. Deconstruction: The process of taking apart a structure with the primary goal of preserving the value of useful building materials, so that they may be reused or recycled.
- F. Disposal: Acceptance of solid waste at a legally operating facility for the purpose of landfilling.

- G. Diversion: Activities that result in reducing the amount of solid waste disposed at a landfill. This can include source reduction activities, composting, recycling, and reuse.
- H. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert debris is taken for the purpose of filling an excavation, shoring, or another soils engineering operation.
- I. Inert Debris: Solid waste and recyclable materials that are source separated or separated for reuse and 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. Inert debris may not contain any putrescible wastes. Inert debris includes but is not limited to concrete, asphalt, crushed glass, fiberglass, asphalt or fiberglass roofing shingles, brick, slag, ceramics, plaster, clay, and clay products.
- J. Inert Debris Engineered Fill Operation (IDEFO): An activity exceeding 1 year in duration in which only the following inert debris may be used: fully cured asphalt, uncontaminated concrete (including steel reinforcing rods embedded in the concrete), crushed glass, brick, ceramics, clay and clay products, which may be mixed with rock and soil. Those materials are spread on land in lifts and compacted under controlled conditions to achieve a uniform and dense mass which is capable of supporting structural loading, as necessary, or supporting other uses such as recreation, agriculture, and open space in order to provide land that is appropriate for an end use consistent with approved local general and specific plans (e.g. roads, building sites, or other improvements) where an engineered fill is required to facilitate productive use(s) of the land.
- K. Non-Permitted Solid Waste Hauler: A company that does not possess a valid and current solid waste from individuals or businesses in City of Los Angeles.
- L. Permitted Solid Waste Hauler: A company that possesses a valid and current solid waste hauler permit from City of Los Angeles to collect and transport solid waste from individuals or businesses in City of Los Angeles. Refer to: https://www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-s-c-whp?_adf.ctrl-state=jir2v5wt_2037&_afLoop=14808459037152891&_afWindowMode=0&_afWindowId=null#!%40%40%3F_afWindowId%3Dnull%26_afLoop%3D14808459037152891%26_afWindowMode%3D0%26_adf.ctrl-state%3Djir2v5wt_2041.

- M. Recycling: The process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products that meet the quality standards necessary to be used in the marketplace.
 - 1. On-site Recycling: Materials that are sorted and processed for use in an altered form in Project, (e.g. concrete is crushed for use as base for a parking lot on Project 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.
- N. 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 CalRecycle or be regulated by LEA.
- O. Reuse: Materials that are recovered for use in the same form. This includes materials that are reused on-site or off-site.
- P. Salvage: Materials recovered for reuse or sale or donation to a third party.
- Q. 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.
- R. Source-Separated Materials (Construction and Demolition Waste): 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 an inert debris recycling facility to be crushed into road base material. Note: Contractor may be able to save money on collection fees for source-separated material. Source-separated material is not subject to City's 10 percent AB 939 fee.
- S. Solid Waste: Shall mean waste that CalRecycle has deemed acceptable for disposal at a Class III Landfill and shall not include source-separated material.

- T. 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 them to a landfill for disposal or recovering some materials for reuse or recycling. Transfer stations shall be permitted by CalRecycle and regulated by LEA.
- U. Solid Waste Hauler or Waste Hauler: Shall mean any person engaged in the business of providing or responsible for the collection, removal, or transportation of Solid Waste, Construction and Demolition Waste, Source-Separated Materials.
- V. Solid Waste Hauler Permit, Waste Hauler Permit, or AB 939 Compliance Permit: Persons who collect, remove, or transport Solid Waste, including Construction and Demolition Waste, Source-Separated Materials or co-mingled recyclables, generated with City, shall obtain, in addition to other required permits, and AB 939 Compliance Permit from City of Los Angeles, Department of Public Works Bureau of Sanitation.

1.4 DIVERSION REQUIREMENTS

- A. Each construction or demolition Project shall reuse or recycle a minimum of 80 percent of the inert debris and 65 percent of the remaining construction and demolition waste generated by Project.
- B. Each construction or demolition Project shall dispose of construction and demolition waste generated from Project in conformance with City's C&D Waste Recycling Ordinance (Ordinance No. 181519). Los Angeles Municipal Code requires that mixed C&D waste generated within City of Los Angeles be taken to a City Certified C&D Waste Processing Facility and source separated C&D waste be taken to a recycling facility or City Certified C&D Waste Processing Facility. Further, C&D waste can only be legally collected, removed, or transported by City of Los Angeles Permitted Solid Waste Haulers. If Contractor plans on collecting, removing, or transporting its own waste, Contractor shall first apply for and obtain a Solid Waste Hauler Permit from Solid Resources Citywide Recycling Division (SRCRD) of the Bureau of Sanitation.
- C. Failure to meet the C&D waste recycling requirements as detailed in Paragraphs 1.4 A and B of this Article shall result in the assessment of penalties up to \$5,000 per each load of mixed C&D waste not taken to City Certified C&D Waste Processing Facility. Further, collecting, removing, or transporting C&D waste within City without a valid Solid Waste Hauler Permit is a criminal misdemeanor subject to fines and/or imprisonment.

1.5 SUBMITTALS

- A. Waste Management Plan (WMP): Conduct a Project Site assessment and estimate the types and quantities of materials, generated during Project, that are anticipated for on-site or off-site processing, recycling, or reuse.
1. Not more than 10 working days after Notice to Proceed, submit to Engineer a written WMP, Attachment A, based on forms in Appendix "H" of Specifications. The plan shall show a minimum 80 percent recycling for inert debris expected from Project and 65 percent recycling for the remaining C&D waste expected from Project. Submit the plan in the format as shown on Attachment A provided in Appendix "H" of Specifications. Instructions for filling out the form are in Attachment A, Instruction Sheet for Waste Management Plan included in Appendix "H" of Specifications. Work shall not begin until Engineer approves WMP for Project.
 2. If Contractor expects a circumstance that Contractor believes makes it infeasible to comply with the Diversion Requirement, Contractor may submit a written request for an exemption at the time WMP is submitted. If the exemption request is not approved by Engineer, revise and resubmit a WMP.
 3. if City determines that it is infeasible for Contractor to meet Diversion Requirement due to unique circumstances, City shall determine the maximum feasible diversion rate for each material and shall indicate this rate on WMP submitted by Contractor. City shall return a copy of WMP to Contractor marked "Approved for Infeasible Exemption". Contractor shall be required to meet the maximum feasible diversion rates as approved by City. If Contractor fails to meet revised rates, Contractor shall be subject to the stipulated penalties. Exempt Projects are required to keep and submit documentation for Project. This includes receipts, WMP, SWDD Reports, and supporting documentation as required in this Section.
 4. City's approval of Contractor's WMP shall not otherwise relieve Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.

- B. Solid Waste Diversion and Disposal Report (SWDD Report): One week prior to the first of every month, and prior to Engineer's monthly progress estimate for payment, Contractor shall prepare and submit to Engineer a written SWDD Report quantifying material generated, diverted, and disposed in Project during the time period covered by SWDD Report and progress payment. Part 3 of each SWDD Report is a cumulative history of the diversion and disposal for Project. Submit the report in the format provided in Attachment B included in Appendix "H" of Specifications. Failure to submit the report and the supporting documentation shall render the application for progress payment incomplete and delay payment until the proper documentation is submitted. The supporting documentation includes manifests, weight tickets, receipts, reports, invoices, and other supporting documents specifically identifying the projects, the recyclables and solid waste generated by Project, and where the material was sent. Instructions for filling out the forms are in Attachment B, Instruction Sheet for Solid Waste Diversion & Disposal Report included in Appendix "H" of Specifications. Together, all of the SWDD Reports shall cover the complete time period of Project. The final SWDD Report and supporting documentation shall be submitted within 30 Calendar Days of substantial completion of Project but before Affidavits of Completion are submitted.
- C. Substitutions: Should Contractor desire to use materials, equipment, or products that meet the requirements of these specifications but are more environmentally responsive, Contractor shall submit these substitutions in conformance with Proprietary Names and Substitutions Subsection of GENERAL CONDITIONS Section.

1.6 PENALTY

- A. If the diversion requirement has not been met, a per ton penalty shall be applied to the disposed material over that allowed in approved WMP.
- B. The penalty shall be calculated as follows: Tons over that allowed in the approved WMP times the per-ton penalty in effect at the time Contract was awarded. The penalty may not exceed the total payment retention for Project.
- C. Tons of mixed C&D waste either not hauled to City Certified C&D Waste Processing Facilities or hauled by non-permitted waste haulers shall be assessed a per-ton penalty. The penalty may not exceed the total payment retention for Project.
- D. The penalty is \$100 per ton.

- E. The recommended penalty shall be determined by Bureau of Contract Administration and Bureau of Sanitation and shall be considered by Board of Harbor Commissioners at the time of Project closeout.

1.7 WASTE MANAGEMENT PLAN SUBMITTAL MEETING

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

1.8 REUSE, SALVAGE, AND RECYCLING OPTIONS

- A. Construction projects shall make use of as many reuse and salvage options as is feasible. One option is CalMAX, a free program sponsored by CalRecycle. The most recent issues of CDRG, contains contact information for non-profit organizations, salvage facilities, and other reuse organizations.
- B. Recycling shall include both on-site and off-site recycling of source-separated materials, as well as mixed C&D waste recycling efforts.
- C. On-site recycling programs shall produce a quality product to meet Specifications identified in Contract Documents, subject to approval. Estimate the amount of material to be used in Project and include a program for off-site recycling of any excess material that cannot be used in 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, concrete block, slump stone (decorative concrete block)
 - 3. Rock
 - 4. Wood (lumber)
 - 5. Green material (i.e. tree trimmings)
 - 6. Other materials, as appropriate, such as red clay brick, building fixtures, architectural details, drywall, carpet, carpet padding, and corrugated cardboard.

- E. Mixed C&D Waste Recycling: Develop and implement a program to transport commingled construction and demolition materials that cannot be feasibly source-separated to Certified C&D Waste Processing Facility.
- F. Certified C&D Waste Processing Facility: These facilities have facility recycling rates, established by City of Los Angeles for mixed C&D waste. Mixed C&D waste taken to these facilities are considered to have been recycled at the rate of the certified processing facility. For example, 100 tons of material taken to a facility with an 80 percent recycling rate results in 80 tons of recycling and 20 tons of disposal for Project. A list of these facilities and their recycling rates is in the most recent issue of CDRG.
- G. Recycling, Reuse, Mixed C&D Waste Processing, and Salvage Facilities: CDRG is incorporated in this Section by reference and contains information about processing, recycling, reuse, and salvage facilities.
- H. Revenue: Revenue or savings obtained from recycled, reused, or salvaged materials shall accrue to Contractor unless otherwise noted in Contract Documents. Note: Contractor may be able to save money on collection fees for source-separated material. Source-separated material is not subject to City's 10 percent AB 939 fee.
- I. AB 939 Fee: AB 939 fee is assessed on solid waste hauled within City of Los Angeles in conformance with Section 66.32 of Los Angeles Municipal Code.
 - 1. Solid waste haulers hauling material from City of Los Angeles locations must be permitted in conformance with Section 66.32 of City of Los Angeles Municipal Code.
 - 2. Source-separated material is not assessed this fee.

1.9 HAULING AND DISPOSAL OPERATIONS

- A. Hauling: Arrange the collection and hauling of C&D waste by a solid waste hauler that is permitted by City of Los Angeles in conformance with Section 66.32 of Los Angeles Municipal Code.
- B. Recycling and Processing Facilities: Transport C&D waste to recycling or processing facilities. Contractor shall be familiar with the requirements for acceptance of C&D waste at the recycling and processing facilities before the material is delivered. The most recent issue of CDRG, includes a partial list of these facilities. Always call facilities in advance.

CONSTRUCTION AND
DEMOLITION WASTE
MANAGEMENT

- C. Disposal Facilities: Transport C&D waste that cannot be accepted at a recycling or processing facility, to a transfer station or disposal facility that can legally accept the materials for the purpose of disposal. A load of C&D waste may be taken to a disposal facility only after it has been rejected by 2 different certified processing facilities and the driver is in possession of both rejection slips. The rejection slips and the weight ticket from the final destination shall be kept together and submitted to Contractor and copy furnished to Engineer.
- D. Project Site Disposal: Do not burn, bury, or otherwise dispose of solid waste on the Project Site.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Procedures and requirements for preparation and submittal of "As-Built" set of Record Documents including, but not limited to, Drawings and Specifications utilizing Bluebeam Revu Complete Annual Subscriptions and AutoCAD.

1.2 PRICE AND PAYMENT PROCEDURES

- A. A \$5,000 per month minimum shall be included as a line item in the Schedule of Values of the Lump Sum Construction bid item of Bid Proposal Line Items for project record documents. Project Record Documents are considered complete when approved by Engineer.

1.3 SUBMITTALS

- A. Engineer's approval of the up-to-date status of Record Documents is a prerequisite for the approval of requests for progress payments.
- B. Project Record Documents shall be updated daily for review and approval and shall consist of marked up Drawings and Specifications utilizing Bluebeam. Submit the final Record Documents, consisting of marked up Drawings, Specifications, and additional drawings to Engineer in Bluebeam and AutoCAD for approval upon completion of Project and prior to submitting Affidavit of Completion.

1.4 DESCRIPTION - PROJECT SET RECORD DOCUMENTS

- A. Following Award of Contract, secure from Engineer (at no charge) 1 complete set of "As Bid" Drawings and conformed Specifications to be the basis of Project Set Record Documents.
- B. Provide 4 Bluebeam Revu Complete Annual Subscriptions for Department for the duration of Contract Time and for an additional 6 months.
- C. Engineer shall create and manage a Bluebeam Revu Studio Session. Contractor shall make entries to project record documents within the Bluebeam Revu Studio Session. Contractor shall coordinate with Engineer for a list of Revu attendees.
- D. Following Award of Contract, Engineer shall provide a complete set of "As Bid" Drawings and conformed Specifications in digital portable document format (PDF) via Bluebeam Revu Studio Session and full size hard-copy format to be the basis of Project Set Project Record Documents.

- E. Project Set Record Documents shall be identified with the title "RECORD DOCUMENTS - PROJECT SET". Project Set shall be used for no purpose other than the entry of data and review by Engineer.

1.5 ENTRIES ON JOB SET

- A. The following entries shall be made on Bluebeam:
 - 1. Enter changes on Drawings and Specifications, as applicable.
 - 2. Describe and date changes by note and graphic line. Emphasize entry by a "cloud" around the affected area or areas. In the event of overlapping changes, different colors may be used for each change.
 - 3. Include changes clearly marked on Drawings from sources, including responses to Requests for Information (RFIs), product substitutions, and delta revision changes transmitted from Engineer.
 - 4. Note authority and reason for each change.
 - 5. Reference change on any other affected sheets.
 - 6. Enter make and model of equipment installed in the Project.
 - 7. Maintain record documents "as-current" continually and available for examination by Engineer, upon request.
- B. The following entries shall be made on AutoCAD and shall include hard-copy and electronic AutoCAD files of "As-Builts":
 - 1. Note actual location (dimension, elevations, depths, stations) of substructures constructed (including pile tip elevation, sewer wyes and laterals, utility stubouts, and Work shown schematically) and existing substructures encountered during construction. Call for survey to determine as-built alignment and elevation as required before concealing Work.

1.6 CONVERSION OF SCHEMATIC LAYOUTS TO AS-BUILT DRAWINGS

- A. Where Work is shown on Drawings by use of a schematic diagram, supplement the diagram or provide a new drawing, in a manner approved by Engineer, to show the actual dimensioned locations, elevations, and details of Work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Specific measures and practices to protect the environment, be socially responsible, provide for the economic development of Port of Los Angeles and include air quality, materials management, energy use, health and safety, and labor sustainability measures in accordance with Drawing Nos. 1-3502, 1-3571, 1-3572, 1-3573 and 1-3574.

1.2 REFERENCES

- A. FGC Division 4 Part 2 Chapter 1 - Birds and Mammals.

1.3 SUBMITTALS

- A. Provide a list of equipment prior to entering Project Sites.
- B. Submit backup documentation monthly demonstrating compliance with the environmental measures, including but not limited to project conditions, as applicable and, in particular, as indicated in the Environmental Compliance Tracking (ECT) Form (refer to sample form in Appendix "C" of Specifications and fill in form in PMWeb), including the California Air Resources Board Executive Order, Engine Model Summary Template, vehicle registration card, photos of equipment with equipment identification number, and the like, and monitoring logs and reports.
- C. Submit pre-construction survey for nesting birds to Engineer as required by Protection of Nesting Birds Article of this Section.

1.4 DEPARTMENT DIESEL FUEL REQUIREMENTS

- A. Project shall require ocean-going vessels to use 0.1 percent sulfur fuel in main and auxiliary engines and boilers in conformance with California Air Resources Board (CARB) regulations.
- B. Project shall require diesel-fueled harbor craft and off-road equipment to use renewable diesel in conformance with CARB regulations.
- C. When possible, use renewable diesel instead of conventional diesel for on-road diesel vehicles.

1.5 DEPARTMENT EQUIPMENT REQUIREMENTS

A. Vessels:

1. Ships and barges delivering construction materials to Project Site shall comply with the expanded Vessel Speed Reduction Program (VSRP) within 40 nautical miles of Point Fermin. Information about VSRP can be found here: <https://www.portoflosangeles.org/environment/air-quality/vessel-speed-reduction-program>.

B. Harbor Craft:

1. Harbor craft engines used during the construction phase of Project shall, at a minimum, meet or exceed California Air Resources Board (CARB) Commercial Harbor Craft (CHC) Regulation requirements, or cleaner.
2. Idling shall be restricted to a maximum of 15 minutes when not in use.
3. The above requirements (Paragraph B.1 of Department Equipment Requirements) shall be met, unless Contractor is able to provide proof of compliance with CARB CHC in the form of:
 - a. Approved Alternative Control of Emissions (ACE) plan from CARB for the vessel(s) used in Project.
 - b. Approved Compliance Extension (CE) from CARB for the vessel(s) used in Project. Vessel(s) with this extension can only be used up to the expiration of CARB CE. CARB CE shall be swapped out when replacement vessel(s) have been put in service.

C. On-Road Trucks:

1. On-road trucks, including import haulers, used during the construction phase of the proposed Project shall meet or exceed CARB on-road vehicle emission requirements unless Contractor is able to provide proof that any of these circumstances exist:
 - a. On-road truck used in the proposed Project has received an exemption from CARB.
 - b. On-road truck is not subject to current CARB regulatory requirements.
2. Trucks hauling materials such as debris or fill materials shall be fully covered to prevent unintentional discharge of materials onto roads, highways, streets, and the like while operating off Department property.

3. Idling shall be restricted to a maximum of 5 minutes when not in use.
4. A copy of each unit's certified EPA rating, BACT documentation, and CARB or South Coast Air Quality Management District (SCAQMD) operating permit and/or compliance certification to applicable regulations shall be provided at the time of mobilization of each applicable unit of equipment.
5. For duration of Project, report trucks subject to CARB truck reporting requirements as part of Contractor's fleet of vehicles, not as part of Department's fleet of vehicles.

D. Diesel Powered Off-Road Construction Equipment:

1. Diesel powered off-road construction equipment is defined as any self-propelled land vehicle used for construction purposes, including earth movers, using diesel fuel, having a manufacturer's maximum gross vehicle weight rating of 6,000 pounds (2,721.5 kg) or more, with a power rating greater than or equal to 25 horsepower (hp).
2. Shut down engines on construction equipment when not in use for more than 5 minutes.
3. Construction equipment shall incorporate, where feasible, emissions-savings technology such as alternative fuels, hybrid drives, and specific fuel economy standards.
4. Equipment Engine Specifications:
 - a. Off-road diesel-powered construction equipment greater than or equal to 25 hp shall meet Tier-4 off-road emission standards and/or CARB requirements. Use the emission standard that has the least amount of allowable emissions for this type of equipment.
5. The above Equipment Engine Specifications measures shall be met, unless one of the following circumstances exists, and Contractor is able to provide proof that any of these circumstances exist:
 - a. A piece of specialized equipment is unavailable within 200 miles of Port of Los Angeles, including through a leasing agreement.
 - 1) If this circumstance exists, the equipment must comply with one of the options contained in the Step Down Schedule as shown in

Table A of this Section. At no time shall equipment meet less than the current CARB requirements.

- b. Reassess the availability of construction equipment on an annual basis. For example, if a piece of equipment is not available prior to December 31, 2018, Contractor shall reassess this availability on January 1, 2019.

Table A: Compliance Step Down Schedule

Compliance Alternative	Engine Standard	CARB-Verified DECS	PM Emissions* g/bhp-hr	NOx-Emissions g/bhp-hr
1	Tier 4	N/A	0.01	0.3
2	Tier 3	Level 3	0.02	2.9
3	Tier 2	Level 3	0.02	4.47
Equipment less than Tier 2 or lower than current CARB requirements is not permitted.				

*Stated emission levels are for engine horsepower ratings of 176 bhp and above. Emission levels for engine bhp ratings below 176 hp are marginally higher. (0.02-0.08 g/bhp-hr depending on hp, Tier and VDEC level)

6. Provide a copy of each unit's certified EPA rating, Verified Diesel Emission Control Strategy (VDECS), proof of use of renewable fuels, and CARB or SCAQMD operating permits and compliance certificates to applicable regulations at time of mobilization of each applicable unit of equipment.
7. Show proof of compliance with the In-Use Off-Road Diesel Regulation for Contractor and subcontractor off-road diesel-powered fleet prior to commencing Work.
8. For duration of Project, report off-road diesel-powered equipment subject to CARB reporting requirements as part of Contractor's fleet of vehicles, not as part of Department's fleet of vehicles.

E. Fugitive Dust Control:

1. Water active grading sites at a maximum of 2-hour intervals to control fugitive dust. Applies to sites when vehicles or equipment is in the process of ground disturbance activities. Maintain the soil in a moist condition when not actively working such as nights, weekends, and holidays to prevent fugitive dust from leaving Project Site. In the event a

more restrictive site-specific fugitive dust control requirement is needed or regulated, the site-specific requirement shall govern.

2. Apply approved non-toxic chemical soil stabilizers to inactive construction areas or replace groundcover in disturbed areas.
3. Provide temporary wind fencing around sites being graded or cleared.
4. Suspend soil disturbance activities when winds exceed 25 miles per hour (mph) or when visible dust plumes emanate from a Project Site. Stabilize disturbed areas if construction is delayed.
5. Cover open storage piles (greater than 3 feet tall and a total surface area of 150 square feet) with a plastic tarp or chemical dust suppressant.
6. Haul waste materials off-site immediately.
7. Pave road and road shoulders where feasible.
8. Sweep streets at the end of each day if visible soil is carried onto paved roads on-site or roads adjacent to Project Site to reduce fugitive dust emissions.
9. Appoint a construction relations officer to act as a community liaison concerning on-site construction activity, including resolution of issues related to PM 10 generation.
10. Refer to REGULATORY REQUIREMENTS and SITE CONDITIONS Sections for additional requirements.

1.6 PROTECTION OF NESTING BIRDS

- A. To comply with state and federal laws protecting nesting birds, Contractor shall have a qualified biologist conduct pre-construction surveys for nesting birds before any construction activity that disturbs vegetation, trees, or soil is performed between February 1st and September 15th. Conduct pre-construction survey within 1 week prior to vegetation, tree, or soil disturbing activity.
 1. The minimum professional qualifications for biologist are a graduate degree in ornithology, wildlife biology, vertebrate field biology, or a closely related field, in addition to:
 - a. At least 3 years of professional experience studying birds and performing nest surveys;

- b. At least 1 year of experience in coastal Southern California, including sufficient local field experience in identification of flora or fauna, particularly rare, endangered, and threatened species, with knowledge of their local and range-wide population status and trends.
- B. Contractor shall provide and pay for the services of the biologist as required for Project.
- C. If a project includes a federal/state-listed endangered, threatened, or other special-status species, the qualified biologist shall also possess the applicable Endangered Species Act Section 10(a)(1)(A) recovery permit. If such a recovery permit does not exist for the species of concern, the qualified biologist's previous experience shall include at least 3 years documentable experience monitoring or managing projects that include this specific species.
- D. Biologist shall determine during pre-construction survey if deterrents are necessary to prevent future nesting. Contractor shall install deterrents as directed by Engineer.
- E. If nesting birds are detected, Contractor shall implement no-disturbance buffers until the nests have fledged. The size of the buffers shall be based on the judgment of a qualified biologist. The biologist shall determine the buffer based on the species ecology, its tolerance to disturbance, and the type of construction activity that is occurring. Conduct periodic monitoring to ensure the nest is not disturbed. The biologist shall recommend a monitoring schedule subject to approval by Engineer.
- F. If a potentially active nest is encountered during construction, Contractor shall immediately cease Work in the area and immediately notify Engineer of the discovery. Contractor shall not resume Work in the area until after consultation with a qualified biologist and directed to do so by the Engineer. When Contractor is directed to resume construction, such operations shall be conducted as directed by Engineer.
- G. Applicable laws include but are not limited to Federal Migratory Bird Treaty Act; Fish and Game Code (FGC) FGC Division 4 Part 2 Chapter 1 - 3503 and 3503.5.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Basic site materials, methods, and requirements to locate, protect, repair, remove, replace, and dispose of existing surface and subsurface conditions and improvements at Project Sites, including existing utilities, structures, and substructures.
- B. Basic materials and methods common to new Project Site construction.

1.2 RELATED SECTIONS

- A. Section 02 41 13 - Selective Site Demolition
- B. Section 02 41 16 - Structure Demolition
- C. Section 02 61 14 - Excavating, Stockpiling, and Disposing of Chemically Impacted Soil

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be included in the Lump Sum Construction bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
- B. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
- C. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- D. Reference Specifications (RS):
 - Section 201 - Concrete, Mortar, and Related Materials
 - Section 306 - Open Trench Conduit Construction
 - Subsection 306-3.3 - Removal and Abandonment of Existing Conduits and Structures

Section 401 - Removal

Subsection 401-2 - Asphalt Concrete Pavement

Subsection 401-3.1 - Concrete Pavement

1.5 SUBMITTALS

- A. Submit cement-sand slurry mix design to Engineer for review.

1.6 EXISTING SUBSURFACE CONDITIONS

- A. Locations of existing pipelines, utilities, and substructures shown on Drawings are approximate only.
- B. Keep existing services and facilities in operation except when Engineer permits shutdown in writing, and then only after temporary services have been provided.
- C. Refer to SITE CONDITIONS Section for additional requirements.

PART 2 - PRODUCTS

2.1 CEMENTITIOUS SLURRY MATERIAL

- A. Cement-Sand Slurry: Class 100-E-100 in conformance with RS Subsection 201-1.1.2, Table 201-1.1.2.

PART 3 – EXECUTION

3.1 VERIFICATION OF SITE CONDITIONS

- A. Notify Underground Service Alert 2 working days prior to commencing demolition, excavating, trenching, drilling, or similar underground Work.
- B. Contact owners of existing lines and substructures that may interfere with Work.
- C. Determine and mark locations of substructures not marked by owners. In addition to the substructure information shown on Drawings, maps and reference drawings showing record locations of substructures are available for review in the office of Engineer. Refer to CONTRACT DOCUMENTS Section for reference drawing numbers. Department neither belongs to Underground Service Alert nor participates in its activities. Department does not mark substructures in the field.

- D. Hand-dig excavations to design depths where alignments shown on Drawings occur within 5 feet radially of existing utilities. Hand-dig until the existing utility is located.

3.2 PROTECTION OF EXISTING FACILITIES

- A. Protect existing facilities adjacent to Work to avoid damage. Repair or replace existing structures and improvements located above or below ground which are damaged or removed as a result of Contractor's operations wherever such existing improvements are not specifically designated to be permanently removed. Structures to protect and repair include, but are not limited to, asphalt concrete and concrete pavement, pipelines, wires, cables, electrical pull boxes, conduits, vaults, and maintenance holes. Repairs and replacements shall be made at Contractor's sole cost and expense and shall be equal to existing improvements and shall match existing in finish and dimension.
 - 1. Replacement asphalt concrete pavement shall be 1 inch greater in thickness than the existing pavement that was removed.
 - 2. Damaged Pipelines:
 - a. Replace damaged pipeline section(s) up to and including the joints at the end of the damaged section(s).
 - b. Replace damaged joint materials.
- B. Place barricades and install warning lights around excavations.
- C. Exercise extreme caution when working in the vicinity of existing power poles and light poles designated to remain. Support Department of Water and Power and other utilities' poles and guy wires as occur adjacent to excavations in conformance with the requirements of the utility owning the pole.

3.3 BASIC PAVEMENT REMOVAL METHODS

- A. Perform asphalt concrete pavement removal in conformance with RS Subsection 401-2 and, where the removal line shall be a join line, saw cut line to full depth to provide a butt joint.
- B. Concrete pavement removal shall conform to RS Subsections 401-3.1, except that the saw cut shall be made to a depth of 3 inches. Assume that concrete slabs are reinforced.

- C. Removal Work performed beyond the lines and grades shown on Drawings, or beyond limits described in excavation and demolition submittal approved by Engineer, shall be considered to be unauthorized and at the sole cost and expense of Contractor. Engineer may order Contractor to restore such removals in conformance with Protection of Existing Facilities Article of this Section.

3.4 BASIC BACKFILL AND COMPACTION METHODS

- A. Earth soil compaction shall be 95 percent relative compaction for top 12-inches and 90 percent relative compaction below that unless indicated otherwise on Drawings or Specifications. Exceptions:
 - 1. Compaction recommendations from Project geotechnical report.
 - 2. Soil requiring 95 percent compaction throughout as required by City of Los Angeles Building Code, Chapter 70 "Fills" Section, as determined and directed by Engineer.
- B. Jetting and flooding is not permitted for compaction of trench backfill. Mechanical compaction of soil is required.
- C. Removal areas 5 feet by 5 feet or less and surrounded by pavement to remain in place on 3 or 4 sides shall be backfilled with cement sand slurry up to the bottom of proposed pavement.

3.5 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Engineer shall take samples of the soil to be compacted to determine the optimum moisture content and maximum dry density of the soil in conformance with ASTM D1557.
 - 2. Department shall perform field testing of compacted soil in conformance with American Society for Testing and Materials (ASTM International) standards, including ASTM D6938 (nuclear methods) or ASTM D1556/D1556M (sand-cone method). Department shall perform compaction tests, 1 time, at no expense to Contractor. Department shall perform retests required due to inadequate compaction at Contractor's sole cost and expense. Contractor shall allow 2 working days in construction schedule for tests to be run and results to be furnished.
 - a. Make requests for testing 24 hours in advance through Engineer.

3.6 INTERFERING SUBSTRUCTURES

- A. Consult Engineer immediately for directions whenever substructures not shown on Drawings interfere with or affect Work. Contractor shall propose means and methods to Engineer to deal with the interferences. Engineer shall make final decision on method of correction or protection to be used.
1. If interfering substructures must be removed, the following shall be done before removing or cutting the substructures:
 - a. Tap the line and determine if the line contains any kind of liquid or gaseous material.
 - b. If storm drain or sewer lines are empty or filled with concrete or mud slurry, lines may be cut, removed, and capped or plugged, in conformance with RS Subsection 306-3.3.
 - c. Test conductors in conduits appearing to be abandoned and verify that conductors are de-energized. Remove de-energized conductors. Report energized conductors to Engineer and cease removal Work until Engineer authorizes Work to resume.
 - d. Consult Engineer for methods of handling other substructures.
 - e. Notify Engineer to identify contents of unknown line if it is found to contain liquid or gaseous material. Remove contents and dispose in conformance with applicable regulations. Such Work shall be considered a Change in Work and payment shall be determined in conformance with GENERAL CONDITIONS Section.
 - f. Test pipeline coatings for asbestos-containing materials (ACM) or other toxic substances. Remove, handle, and dispose of hazardous pipeline coatings in conformance with applicable regulations. Such Work shall be considered a Change in Work and payment shall be determined in conformance with GENERAL CONDITIONS Section. A description of Work shall be submitted to Engineer when Work is complete.
 2. Evacuated lines or remaining portions of abandoned lines shall be capped or removed as described in this Article for empty lines.

3.7 OWNERSHIP AND DISPOSAL

- A. Asphalt concrete and other bituminous pavement, concrete rubble, unreinforced concrete, rocks, concrete masonry, and reinforced concrete demolished at Project Site shall become property of Contractor and shall be recycled in conformance with Contractor's Waste Management Plan (WMP) as described in CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT Section of Specifications.
 - 1. The following materials shall be disposed of as specified in Paragraph 3.7B of this Article: Bricks; concrete-filled steel posts; heavily reinforced concrete items, such as concrete piles, concrete railroad ties, creosote-contaminated asphalt concrete cold millings from between railroad tracks with timber ties, and wire-mesh-reinforced concrete.
- B. Materials to be removed other than those shown on Drawings to remain or be salvaged, or listed in Salvage Article of SELECTIVE SITE DEMOLITION and STRUCTURE DEMOLITION Sections, shall become the property of Contractor and shall be disposed of off Department property in conformance with Contractor's Waste Management Plan.

3.8 CHEMICALLY IMPACTED SOIL

- A. Refer to EXCAVATING, STOCKPILING, AND DISPOSING OF CHEMICALLY IMPACTED SOIL Section.

3.9 MAINTENANCE AND REPAIR

- A. Unpaved access roads servicing Project may become unstable during rainy weather. Maintain unpaved access roads to allow passage of Contractor's as well as Department's trucks and passenger vehicles at Contractor's sole cost and expense.
- B. Maintain continuity and integrity of permanent fences and temporary construction fences. Immediately replace fence sections damaged or missing during construction prior to close of the regular working day upon which damage occurred.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Selective demolition and removal Work including disposal but not limited to the following:
 - 1. Concrete demolition and removals
 - 2. Asphalt concrete and concrete pavement removals
 - 3. Curbs, ramps, gutters, driveways, and sidewalks removals
 - 4. Railroad track and ties removals
 - 5. Chain-link fencing and related footings removals
 - 6. Guard posts and related footings removals
 - 7. Sign posts and related footings removals
 - 8. Pavement markings removals
 - 9. Wheel stops removals
 - 10. Landscape and tree removals
 - 11. Polychlorinated biphenyl (PCB) miscellaneous waste removals including but limited to concrete, pipe, and other miscellaneous items as shown on Drawings.
 - 12. Dock board removals
- B. Develop waste management plan in conformance with CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT Section.

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 02 41 16 - Structure Demolition
- C. Section 31 00 00 - Earthwork
- D. Section 31 50 01 - Excavation Safety Requirements

1.3 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the corresponding bid items of Bid Proposal Line Items.

1.4 REFERENCES

A. Reference Specifications (RS):

Section 306 - Open Trench Conduit Construction

1.5 SUBMITTALS

- A. Procedures, equipment to be used, and operational sequences.
- B. Submit prior to start of Work photographs of existing damage to structures adjacent to but not a part of Work where such damage could be misconstrued as caused by Contractor.

1.6 TRAFFIC MAINTENANCE

- A. Refer to SITE CONDITIONS and REGULATORY REQUIREMENTS Sections.

1.7 SALVAGE

- A. Refer to STRUCTURE DEMOLITION Section.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Refer to REGULATORY REQUIREMENTS and COORDINATION Sections for South Coast Air Quality Management District (SCAQMD) notification and permit requirements.

PART 2 - PRODUCTS

2.1 BACKFILL MATERIALS

- A. Fill, where required for backfill of voids, shall be in conformance with EARTHWORK Section.

PART 3 - EXECUTION

3.1 DEMOLITION AND REMOVALS

- A. Refer to STRUCTURE DEMOLITION Section.

- B. Repair or replace surface and subsurface improvements removed or damaged as a result of Contractor's operations in conformance with BASIC SITE MATERIALS AND METHODS Section.

3.2 SAFETY AND PROTECTION

- A. Refer to STRUCTURE DEMOLITION Section.

3.3 OWNERSHIP AND DISPOSAL

- A. Refer to BASIC SITE MATERIALS AND METHODS Section for requirements concerning ownership and disposal criteria for demolished materials.

3.4 BACKFILL EXCAVATIONS

- A. Mechanically backfill voids in subgrade areas in conformance with BASIC SITE MATERIALS AND METHODS Section.

3.5 CONDUIT AND SUBSTRUCTURE ABANDONMENT

- A. Interfering conduits and substructures not shown on Drawings shall be handled in conformance with BASIC SITE MATERIALS AND METHODS Section.
- B. Seal conduits, storm drain, and sanitary sewer pipes where abandonment is required on Drawings in conformance with RS Subsection 306-3.3. Refer to Drawings for capping of other underground pipes.
- C. For Drawing No. 1-3573, AT&T service conduit shall be terminated above distribution conduits in the box to prevent water flowing from the box and down service conduit toward the building.

3.6 TOXIC MATERIAL REMOVALS

- A. Dispose of creosote, pentachlorophenol, or ACZA-containing materials, including timber power poles and railroad ties, in conformance with REGULATORY REQUIREMENTS Section. Unless indicated otherwise on Drawings or reference drawings, assume timber railroad tie spacing at 19 1/2 inches on center for existing track system embedded in asphalt concrete.

3.7 HIGH VOLTAGE POWER POLES

- A. Refer to BASIC SITE MATERIALS AND METHODS Section for Work around existing power poles and light poles.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Structure demolition, removal, disposal, and salvage and other requirements to perform Work of this Section.
 - 1. Demolition and removal of existing structures and buildings flush to the top of floor slab. Removals include, but are not limited to, electrical and mechanical equipment, fixtures, building improvements, universal waste including electronic waste (e-waste) and other related appurtenances.
 - a. The building as shown on Drawing No. 1-3502 is the former Container Freight Station (CFS) Building at 935 East New Dock Street, San Pedro. The building is a single-story steel framed structure with aluminum siding and roofing. The interior of the building is approximately 62,000 square feet and the overall building footprint, including the building canopy, is approximately 95,000 square feet.
 - 2. Demolition and removal of existing structures and buildings, complete, including entire foundation system to the bottom of footings and slabs as shown on Drawings.
 - a. Removals include, but are not limited to, electrical and mechanical equipment, fixtures, building improvements, universal waste including electronic waste (e-waste) and other related appurtenances.
 - b. Building description(s):
 - 1) The buildings as shown on Drawing No. 1-3571 is the former Starkist Cannery Plant at 1050 South Ways Street, San Pedro. The cannery complex consists of interconnected building structures with varying roof shapes, heights, and construction materials including but not limited to concrete foundations, tilt-up concrete walls, metal framing and siding, and brick walls. The main warehouse is approximately 250,000 square feet and other buildings and items to be demolished are approximately 116,000 square feet including but not limited to the demolition of silos, mechanical and electrical equipment, and metal conveyor.

- 2) The building as shown on Drawing No. 1-3573 is the former Southwest Marine Administration Building at 985 South Seaside Avenue, San Pedro. The building is a two-story wood framed structure with an approximate 3-feet to 4-feet deep crawl space and is approximately 5,000 square feet.
 - 3) The building as shown on Drawing No. 1-3574 is the former Compressor Building at 1025 South Seaside Avenue, San Pedro. The building is a single-story steel framed structure and is approximately 10,500 square feet. The foundation is a concrete slab with an average thickness of 18 inches.
- c. Refer to CONTRACT DOCUMENTS Section for reference drawings.
3. Shut off and remove existing utility services within Project Sites limits prior to demolition as follows:
 - a. Electrical service
 - b. Gas service
 - c. Water service
 - d. Telephone service
 - e. Other utilities as shown on Drawings
 4. Remove asbestos containing materials in conformance with ASBESTOS ABATEMENT Section.
 5. Implement employee protective measures and interim protection conforming to California Code of Regulations, Title 8, for lead-based paint related Work.
 6. Lead-based paint abatement in conformance with LEAD REMEDIATION Section.
 7. Abandon, cap, or plug conduits and substructures.
 8. Other removal Work as shown on Drawings.
 9. Remove excess material from Project Site upon completion of Work.
- B. Remove entire timber pier structure with attached steel conveyor.

- C. Develop waste management plan in conformance with CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT Section.

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 02 82 13 - Asbestos Abatement
- C. Section 02 83 00 - Lead Remediation
- D. Section 31 00 00 - Earthwork
- E. Section 31 50 01 - Excavation Safety Requirements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

- 1. Buildings and Structures:

- a. Buildings and Structures Removals: Payment to demolish and remove buildings and structures, rail tracks, and appurtenances. Payment shall be made under the Miscellaneous Demolition and Removals bid item of Bid Proposal Line Items.

- 2. Timber Pier:

- a. Timber Pier and Steel Conveyor Removal: Measurement and payment to remove steel conveyor attached to pier, timber deck, beams, joists, cleats, and mechanical and electrical systems shall be made under the Miscellaneous Demolition and Removals bid item of Bid Proposal Line Items.

- b. Timber Pile Removal: Contractor shall make count of timber piles and timber fender piles that are extracted, removed from Project Site, and disposed of as shown on Drawings and as specified in this Section and REGULATORY REQUIREMENTS Section. Make count on an "each" basis in the presence of Engineer at the time Work is being performed. Count shall include timber piles broken off after satisfactory extraction attempts were made, as witnessed and approved by Engineer. Cost for containment boom deployment during timber pile removals shall be included. Payment shall be paid under the Miscellaneous Demolition and Removals bid item of Bid Proposal Line Items. No payment shall be made for piles broken off, removed, and disposed without prior satisfactory extraction attempts approved by Engineer.
- 3. Remove Timber Pile Stubs: Measurement and payment to remove timber pile stubs broken off by others prior to Contract Work shall be performed in the same manner and with the same restrictions as for Timber Pile Removal including costs for boom deployment. Payment shall be made under the Miscellaneous Demolition and Removals bid item of Bid Proposal Line Items. No payment shall be made for piles broken off, removed, and disposed without prior satisfactory extraction attempts approved by Engineer.

1.4 REFERENCES

- A. 29 CFR 1926.200 - Accident prevention signs and tags.
- B. ANSI Z535.5 - Safety Tags and Barricade Tapes (for Temporary Hazards).
- C. Reference Specifications (RS):
 - Section 300-4 - Unclassified Fill
 - Section 300-5 -Borrow Excavation
 - Section 306 - Open Trench Conduit Construction

1.5 SUBMITTALS

- A. Demolition procedures, equipment to be used, and operational sequences.
- B. Submit prior to start of Work photographs of existing damage to structures adjacent to but not a part of Work where such damage could be misconstrued as caused by Contractor.

1.6 TRAFFIC CONTROL

- A. Refer to SITE CONDITIONS and REGULATORY REQUIREMENTS Sections.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Refer to REGULATORY REQUIREMENTS and COORDINATION Sections for South Coast Air Quality Management District (SCAQMD) notification and permit requirements.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Demolition Work shall not exceed the limits shown on Drawings.
- B. Control dust in conformance with REGULATORY REQUIREMENTS Section.
- C. Items not shown on Drawings or mentioned in Specifications, which are encountered during Contractor's operations shall be brought to the attention of Engineer. Engineer shall determine the disposition of the items.
- D. Obtain permission from Engineer and terminal manager, if need arises, to traverse adjacent portions of the terminal or other properties with outriggers, swinging cranes, or other heavy equipment. Refer to SITE CONDITIONS Section, Contractor's Use of Site Article.
- E. Should Contractor decide to move any large items intact off Project Site, Contractor shall make arrangements for permits, clearances, and utilities.
- F. Remove vermin infested and harmful materials from Project Site. Dispose of materials in conformance with applicable health regulations to protect workers, tenants, and the public.
- G. Perform demolition and removals under Engineer's inspection in conformance with applicable safety standards and requirements.
- H. Burning of material on-site is prohibited.
- I. No debris shall be allowed to enter harbor waters.
- J. Repair or replace surface and subsurface improvements removed or damaged as a result of Contractor's operations in conformance with BASIC SITE MATERIALS AND METHODS Section.

- K. Perform pavement removals in conformance with BASIC SITE MATERIALS AND METHODS Section.

3.2 SAFETY AND PROTECTION

- A. Protect existing buildings, structures, substructures, and other improvements within and adjacent to Project Site in conformance with BASIC SITE MATERIALS AND METHODS and EXCAVATION SAFETY REQUIREMENTS Sections.
- B. Provide, erect, and maintain barriers, barricades, lighting, and guard rails as required to protect general public, workers, and adjoining properties.
- C. Cease operation and notify Engineer immediately if demolition appears to endanger life, facilities, or property. Do not resume operations until safe conditions have been restored and Engineer has authorized in writing the resumption of Work.
- D. Post hazard warning signage compliant with requirements of 29 CFR 1926.200 and recommendations of ANSI Z535.5 at perimeter fence. Promptly remove signage after Engineer verifies that demolition hazards no longer exist.
- E. Refer to REGULATORY REQUIREMENTS Section for additional requirements in the event that hazardous wastes are discovered.

3.3 UTILITIES

- A. Contractor shall arrange with City of Los Angeles Department of Water and Power to de-energize and remove electrical and underground service conductor prior to proceeding with the demolition. Verify that the electrical system is de-energized prior to starting demolition.
- B. Arrange with City of Los Angeles Department of Water and Power to shut off water service and remove meter prior to starting demolition.
- C. Arrange with Department Construction and Maintenance (C&M) Division through Engineer to shut off water gate valves.
- D. Arrange with Southern California Gas Company to shut off the gas service and remove meter prior to starting demolition.
- E. Arrange with Department Construction and Maintenance (C&M) Division through Engineer to shut off gas service.

- F. Note that utility service lines are manifolded with other buildings on common meters which shall remain in service. Do not call for utility company meter shut-offs and do not interrupt power service within active terminal areas.
- G. Coordinate with the telephone company to have overhead telephone service drop wires and utility pole removed, prior to start of demolition.
- H. Cut, remove, and cap electrical, alarm, computer, telephone conduits, and wiring in accordance with Drawings. Pull wires from remaining conduits.
- I. For trenching and electrical Work shown on Drawing No. 1-3573, prior to demolition of building and trenching, coordinate with AT&T.

3.4 SALVAGE

- A. No on-site sale of salvage shall be allowed. No removals shall be made from Project Sites by any person other than Contractor or employees of Contractor.
- B. Refer to CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT Section.

3.5 OWNERSHIP AND DISPOSAL

- A. Refer to BASIC SITE MATERIALS AND METHODS Section for requirements concerning ownership and disposal criteria for demolished materials.

3.6 BACKFILL EXCAVATIONS

- A. Mechanically backfill voids in subgrade areas in conformance with BASIC SITE MATERIALS AND METHODS Section. Backfill with native material in conformance with EARTHWORK Section.
- B. Filled areas within and around demolished building and structure footprints shall be graded to retain stormwater on Department property in conformance with EARTHWORK and REGULATORY REQUIREMENTS Sections unless indicated otherwise on Drawings.

3.7 INTERFERING CONDUITS AND SUBSTRUCTURES

- A. Interfering conduits and substructures shall be handled in conformance with BASIC SITE MATERIALS AND METHODS Section.

3.8 CAPPING OF UTILITY SERVICES

- A. Obtain sewer cap permits and inspections in conformance with REGULATORY REQUIREMENTS Section.

- B. Cut, remove, cap, or plug sewer, water, fire sprinkler, gas, and other piping that are within 5 feet below finished grade. Abandon-in-place existing structures below the 5 feet limit unless noted otherwise on Drawings.
- C. Seal conduits, storm drain, and sanitary sewer pipes in conformance with RS Subsection 306-3.3. Refer to Drawings for capping of other underground pipes.
 - 1. Seal outfalls and seawall penetrations that exclusively serviced demolished buildings.

3.9 ASBESTOS AND LEAD BASED PAINT ABATEMENT

- A. Perform asbestos abatement prior to any demolition procedures. Refer to ASBESTOS ABATEMENT Section for requirements.
- B. Perform lead based paint abatement prior to any demolition procedures in conformance with LEAD REMEDIATION Section.
- C. Intact lead-based paint has been discovered in painted surfaces. Implement employee protective measures and interim protection conforming to California Code of Regulations, Title 8, Section 1532.1, including protective gear and monitoring during lead-based-paint-related Work. Lead-based-paint-related Work tasks may include, but are not limited to, manual demolition of structures, manual scraping, heat gun applications, power tool cleaning without dust collection systems, abrasive blasting, welding, cutting, and torch burning. Lead-based paint survey is available in the office of Engineer.

3.10 PILE REMOVAL

- A. Remove timber piles as shown on Drawings. Remove pile stubs which extend 2 feet or more above the mudline or rock slope as directed by Engineer.
 - 1. Use a vibratory extractor. Jetting of piles shall not be permitted.
 - 2. A minimum of 2 attempts to extract the pile shall be made, even if the first attempt results in the pile breaking.
 - 3. If, in Engineer's judgment, Contractor has made 2-satisfactory extraction attempts and the pile still breaks, remove upper portion of pile completely and abandon stub in place if the stub extends no more than 2 feet above the mudline or rockline. If the stub extends more than 2 feet, make additional attempts to extract the pile.

4. If, in Engineer's judgment, Contractor has made satisfactory extraction attempts and pile remains unbroken but fails to start withdrawing, perform jetting upon Engineer's approval. Do not jet without Engineer's prior approval of jetting procedures submittal.
 5. Intentional snapping or breaking of timber piles is prohibited.
 6. Retrieve timber pile debris after each extraction. Refer to Toxic Material Removal Article of this Section for creosote-containing materials disposal.
- B. Deploy containment boom during timber pile removal Work. Boom shall be of sufficient length to enclose Project Site and pile driving equipment including crane boom.
1. Clean floating debris from the water surface immediately upon discovery.
 2. Remove debris from harbor waters.
- C. Perform abandonment-in-place of existing piles in accordance with Drawings.

3.11 TOXIC MATERIAL REMOVALS

- A. Dispose of creosote, pentachlorophenol, or ACZA-containing materials, including timber wharves, timber piles, timber power poles, and railroad ties, in conformance with REGULATORY REQUIREMENTS Section. Unless indicated otherwise on Drawings or reference drawings, assume timber railroad tie spacing at 19 1/2 inches on center for existing track system embedded in asphalt concrete.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Design, qualifications, and permit requirements for staging areas and stockpiles, excavating and stockpiling potential chemically impacted soil (potential CIS) and chemically impacted soil (CIS) as directed by Engineer where unexpectedly encountered during performance of Work scope including but not limited to:
 - 1. Personnel qualifications
 - 2. South Coast Air Quality Management District (SCAQMD) permit requirements
 - 3. Safety and health requirements
 - 4. Soil excavation requirements
 - 5. Soil staging and stockpiling requirements
 - 6. Soil sampling, characterization, testing, and profiling requirements
 - 7. Air emission monitoring requirements
 - 8. Stormwater runoff control requirements
 - 9. Leachate and stormwater collection and disposal requirements
 - 10. Backfill requirements
 - 11. Disposal or recycling facility acceptance and manifest requirements
 - 12. Transportation requirements
 - 13. CIS loading and unloading requirements

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 02 41 13 - Selective Site Demolition
- C. Section 02 41 16 - Structure Demolition
- D. Section 31 00 00 - Earthwork

1.3 PRICE AND PAYMENT PROCEDURES

- A. The following shall be considered incidental to Work described in each bid item and no additional payment shall be made for the following Work:
1. Staging area construction including construction, inspection, and maintenance of soil cells and stockpiles.
 2. Air quality monitoring and other CIS and potential CIS Work area maintenance.
 3. Stormwater best management practices.
 4. Sampling, characterizing, testing, and profiling associated with CIS and potential CIS disposal.
 5. Sampling, characterizing, and disposing of Contractor's waste materials and decontamination of Contractor's equipment and disposal of decontamination wash water associated with CIS and potential CIS excavating, stockpiling, and disposal.
 6. Loading, hauling, and unloading of soil to and from excavation and stockpile sites.
 7. Disposing of Work and staging area materials.
 8. Permits.
 9. Documentation.
- B. Measurement and Payment:
1. Unforeseen Contaminated and Hazardous Soil and Groundwater (Allowance): Quantities of leachate and contaminated stormwater liquids shall be measured by the number of gallons shown on the tickets from the disposal or recycling facility. Payment shall be made on either a negotiated lump sum basis or a time-and-materials basis for any portion of Work described in this Section that is authorized in writing by Engineer.
 2. For Drawing No. 1-3502, Pacific Edge Engineering, Inc. has conducted an environmental assessment that is included as part of the bid package for the following bid items:

EXCAVATING, STOCKPILING, AND
DISPOSING OF CHEMICALLY
IMPACTED SOIL

- a. Non-RCRA Hazardous Waste Soil: The quantity of non-RCRA hazardous waste soil excavated, stockpiled, characterized, and disposed of off Department property at a Class I landfill facility acceptable to Department. Payment shall be based on tonnage tickets from disposal facility accompanied by waste manifest signed by receiving disposal facility. Payment shall be made under the Non-RCRA Hazardous Waste Soil bid item of Bid Proposal Line Items.
3. For Drawing No. 1-3571, Eco & Associates, Inc. has conducted a site investigation. Refer to the Site Investigation Report that is included as part of the bid package for the following bid items:
 - a. RCRA Hazardous Waste Soil: The quantity of RCRA hazardous waste soil excavated, stockpiled, characterized, and disposed of off Department property at a Class I landfill facility acceptable to Department. Payment shall be based on tonnage tickets from disposal facility accompanied by waste manifest signed by receiving disposal facility. Payment shall be made under the RCRA Hazardous Waste Soil bid item of Bid Proposal Line Items.
 - b. Non-RCRA Hazardous Waste Soil: The quantity of non-RCRA hazardous waste soil excavated, stockpiled, characterized, and disposed of off Department property at a Class I landfill facility acceptable to Department. Payment shall be based on tonnage tickets from disposal facility accompanied by waste manifest signed by receiving disposal facility. Payment shall be made under the Non-RCRA Hazardous Waste Soil bid item of Bid Proposal Line Items.
4. For Drawing Nos. 1-3572 and 1-3574, The Source Group (SGI), a division of Apex Companies, LLC has prepared a Soil Management Plan (SMP) that is included as part of the bid package for the following bid items:

EXCAVATING, STOCKPILING, AND
DISPOSING OF CHEMICALLY
IMPACTED SOIL

- a. Non-Hazardous Waste Soil Containing PCBs Less than 50 parts per million (PPM) from a TSCA Regulated Site: The quantity of non-hazardous waste soil containing PCBs less than 50 ppm from a TSCA regulated site excavated and disposed of off Department property in plastic lined trucks at a Class I landfill facility acceptable to Department. Payment shall be based on tonnage tickets from disposal facility accompanied by waste manifest signed by receiving disposal facility. Payment shall be made under the Non-Hazardous Waste Soil from a TSCA Regulated Site Containing PCBs (Less than 50 PPM) bid item of Bid Proposal Line Items.
 - b. Non-Hazardous Waste Containing PCBs Less than 50 ppm from a TSCA Regulated Site: The quantity of non-hazardous waste containing PCBs less than 50 ppm from a TSCA regulated site removed and disposed of off Department property in plastic lined trucks at a Class I landfill facility acceptable to Department. Payment shall be based on tonnage tickets from disposal facility accompanied by waste manifest signed by receiving disposal facility. Payment shall be made under the Non-Hazardous Waste from a TSCA Regulated Site Containing PCBs (Less than 50 PPM) bid item of Bid Proposal Line Items.
5. If CIS or potential CIS is excavated beyond the limits set by Engineer, associated costs for excavation, stockpiling, loading, transporting, and disposing of such CIS or potential CIS shall be borne by Contractor.
 6. CIS and potential CIS payable quantities are subject to reduction if improperly covered stockpiles are exposed to rainfall, wind erosion, and blowing wind which could result in a public health problem.

1.4 REFERENCES

- A. 8 CCR 5192 - Hazardous Waste Operations and Emergency Response.
- B. 22 CCR Division 4.5 - Environmental Health Standards for the Management of Hazardous Waste.
- C. 29 CFR 1910 - Occupational Safety and Health Standards.
- D. 40 CFR - Protection of Environment.
- E. 40 CFR 761 - Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions.

F. 49 CFR - Transportation.

1.5 ABBREVIATIONS

- A. HAZWOPER: Hazardous Waste Operations and Emergency Response
- B. PCB: Polychlorinated biphenyl
- C. RCRA: Resource Conservation and Recovery Act
- D. TPH: Total Petroleum Hydrocarbons
- E. TSCA: Toxic Substances Control Act

1.6 SUBMITTALS

- A. Submit the following to Engineer prior to starting Project excavation or earthwork:
 - 1. Contractor's qualifications for handling and disposing of CIS, environmental sampling, sample collection and handling, sample preservation and storage, decontamination, and chain of custody procedures including applicable certificates, licenses, personnel training records, and HAZWOPER training certificates (including current 8-hour annual refresher certificates, if applicable) for each person working on Project Site(s).
 - 2. Credentials of project manager and Project Site superintendent or foreperson for excavating, stockpiling, and disposing of CIS.
 - 3. Sketch of stockpile design including foundation material with method of protecting liner against liner equipment damage, liner thickness, berm materials and height, and spacing of toe of stockpile to berm, cover material and thickness, and sand bag layout. The design and construction of the containment area shall be in conformance with regulatory requirements.
- B. Submit the following to Engineer prior to starting potential CIS excavating and stockpiling Work:
 - 1. Sketch of proposed location(s) on Project Site of temporary storage cells showing also distances to existing storm drain catch basins and the harbor pier head or shoreline. Show location of storage tanks for leachate and stormwater pumping.

EXCAVATING, STOCKPILING, AND
DISPOSING OF CHEMICALLY
IMPACTED SOIL

2. Proposed Project Site Specific Safety and Health Plan in conformance with REGULATORY REQUIREMENTS Section.
 3. Method for equipment decontamination after completion of potential CIS and CIS Work. Include structural best management practices (BMPs) such as rumble plates and bermed wash down area. Refer to REGULATORY REQUIREMENTS Section, Construction General Stormwater Permit and Stormwater Pollution Prevention Plan (SWPPP) Article for more information. Include wheel washer locations at stockpile and excavation sites.
 4. Method for equipment decontamination after completion of PCB Work in conformance with 40 CFR 761.
 5. Sampling procedure, characterization, testing, and profiling plan for CIS and potential CIS.
 6. Sampling procedure and characterization plan for leachate liquids and name of independent test laboratory.
 7. Submit BMPs for containing CIS and wash water within staging area.
 8. Method for maintenance of separate stockpile sites for each excavation site.
- C. Submit to Engineer during excavating and stockpiling:
1. Documentation of daily potential CIS quantities excavated and CIS quantities stockpiled.
 - a. Laboratory test reports associated with any samples collected at Project Site within 48 hours of receipt of final copies from the laboratory.
 - b. Records of daily calibration and direct readings for instrumentation maintained by Contractor. Submit daily to Engineer.
- D. Submit to Engineer prior to loading and transporting CIS:
1. Name of proposed disposal or recycling facility.
 - a. Depending upon the deposition location, approval from Los Angeles Regional Water Quality Control Board (LARWQCB) may be necessary.

2. Manifest forms prior to initiating transportation of CIS in conformance with Disposal, Acceptance, and Manifest Requirements Article of this Section.
 3. Copies of information supplied to the disposal or recycling facility for the purpose of securing acceptance of the waste material.
 - a. Provide final analytical characterization information. Draft data is not acceptable.
 4. Waste acceptance pre-approval documentation received from the disposal or recycling facility(s).
 5. Results of characterization of liquids collected from behind stockpile berms and from potential CIS excavation locations.
 6. Results of characterization of waste material generated during decontamination of equipment.
- E. Submit to Engineer during disposal or recycling of CIS:
1. Waste acceptance documentation received from the disposal or recycling facility (e.g., weight tickets, manifests, certificate of destruction or reuse).
- F. Submit the following to Engineer after Work is complete:
1. Provide as-built drawings of excavation areas including volume estimates and global positioning system (GPS) location information.
- G. Submit upon Engineer's request:
1. Copy of State of California Contractor's license with hazardous substance removal certification required to excavate, stockpile, and dispose of CIS.
 2. Copy of the disposal or recycling facility permit with applicable limits and conditions.

1.7 QUALIFICATIONS

- A. Project Site superintendent or foreperson overseeing Work of this Section shall have not less than 5 years experience in excavating, stockpiling, loading, transporting, and disposing of CIS.
- B. Work associated with CIS shall be done under the direct supervision of a State of California registered geologist or professional engineer who has at least 5 years of experience in overseeing CIS operation.

- C. Contractor shall have and maintain plan, programs, training, and medical surveillance requirements under 29 CFR 1910 and 8 CCR 5192. Prepare and implement a Project Site Specific Safety and Health Plan for Contractor employees.
- D. Personnel performing Work at Project Site under this Section shall be 40 hour Occupational Safety and Health Administration (OSHA) health and safety trained, complete with 8-hour annual refresher, supervisor training, respirator fit testing, and other training and certifications required under 29 CFR 1910.

1.8 SEQUENCE OF ACTIVITIES

- A. Submit to Engineer stockpile design and credentials prior to earthwork and trenching Work.
- B. Notify Engineer at least 2 working days before excavation, stockpile, and sampling activities.
- C. Notify Engineer in conformance with this Section and REGULATORY REQUIREMENTS Section of unexpected discovery of potential CIS. Basis of identification:
 - 1. Discolored soil
 - 2. Odoriferous soil
- D. Confirm existence of CIS or potential CIS with a photo ionization detector (PID) or other devices and tests and determine approximate limits of CIS or potential CIS excavation.
 - 1. Notify Engineer and adjust limits during course of CIS or potential CIS excavation based on periodic Project Site inspections.
- E. Engineer authorizes Contractor to excavate, stockpile, and dispose of CIS. Contractor shall not start CIS or potential CIS excavation without Engineer's written authorization.
- F. Contractor excavates CIS or potential CIS and places in stockpiles conforming to this Section and located in storage cells within staging area location approved by Engineer.
- G. After each storage cell is filled, Contractor samples, characterizes, tests, and profiles material in stockpiles and provides information to Engineer.
 - 1. Contractor samples and characterizes leachates.

2. Sample frequency for potential re-use soil to be used as fill shall be in conformance with Paragraph 3.4 A.4 of EARTHWORK Section.

- H. Contractor continues excavating and stockpiling CIS or potential CIS in accordance with Drawings until Engineer tells Contractor that CIS or potential CIS excavation is complete.
- I. Contractor obtains Engineer's approval of disposal or recycling facility location.
- J. Contractor disposes of CIS at approved off-site disposal location.
- K. Contractor returns approved soil to Project Site as fill or disposes as directed by Engineer.

1.9 WASTE DISPOSAL SERVICE PROVIDERS

A. The following disposal facilities are acceptable to Department at the time of bid. After Contract is awarded, Contractor may propose additional disposal facilities but Department reserves the exclusive right to reject any proposed facilities for any reason at its sole discretion.

1. RCRA Hazardous and TSCA Waste for Landfill or Treatment:

- a. Chemical Waste Management - Kettleman Hills, Kettleman City, California
- b. Clean Harbors Buttonwillow, LLC, Buttonwillow, California (very limited TSCA)
- c. US Ecology Nevada, Beatty, Nevada

2. Non-RCRA Hazardous (California Haz) Waste for Landfill:

- a. Chemical Waste Management - Kettleman Hills, Kettleman City, California
- b. Clean Harbors Buttonwillow, LLC, Buttonwillow, California
- c. US Ecology Nevada, Beatty, Nevada

3. Non-Hazardous Contaminated Waste for Landfill:

- a. Simi Valley Landfill - Waste Management, Simi Valley, California
- b. Sunshine Canyon Landfill - Republic Services, Sylmar, California

4. Non-Hazardous Contaminated Waste for Thermal Desorption Recycling (non-hazardous TPH contaminated soil):
 - a. Soil Safe, Inc., Adelanto, California
5. Treated Weathered Wood Waste (railroad ties, etc.)
 - a. Simi Valley Landfill - Waste Management, Simi Valley, California
 - b. Sunshine Canyon Landfill - Republic Services, Sylmar, California
6. RCRA Hazardous Waste Liquid, Non-RCRA (California Haz) Waste Liquid, and/or Non-Hazardous Waste Liquid:
 - a. World Oil Recycling, Compton, California
 - b. Clean Harbors, Wilmington, California
7. Non-Hazardous Waste Containing PCBs less than 50 PPM from a TSCA Regulated Site for Landfill or Treatment:
 - a. Chemical Waste Management - Kettleman Hills, Kettleman City, California
 - b. Clean Harbors Buttonwillow, LLC, Buttonwillow, California (very limited TSCA)
 - c. US Ecology Nevada, Beatty, Nevada

PART 2 - PRODUCTS

2.1 DESIGN REQUIREMENTS

- A. Design staging area as follows:
 1. Staging Area:
 - a. Locate on Project Site as far as possible from storm drain catch basins and from pierhead and harbor shoreline.
 - b. Locate upon existing pavement if sufficient area is available.
 2. Enclose staging area perimeter with 8 foot high temporary chain link fence. Locate storage cells within fenced area. Each cell shall be capable of containing 1 potential CIS or CIS stockpile.

3. Show location of storage tank for leachate and stormwater retained in CIS excavation.
 4. Include perimeter berm surrounding entire staging area in addition to berms surrounding each stockpile.
- B. Design stockpile system based on materials and equipment specified in PART 2 of this Section as minimum requirements. Adjust according to results of Engineer's characterization if required. Address the following additional considerations:
1. Foundation: Where staging area must be located on dirt grade, design protection against equipment damage to liners through protective layers inserted above liners.
 2. Liners: Design to prevent cross-contamination of native soil beneath stockpile and to seal berm from migration of leachate and stormwater run off from covered stockpile.
 3. Berm: Design to retain leachate from stockpile and stormwater.
 - a. If soil from Project Site are proposed for use in berm construction, do not use potential CIS or CIS.
 4. Covers: Design to prevent volatile organic compound (VOC) emissions, rain infiltration, and to be resistant to both wind and VOC emissions damage.

2.2 MATERIALS

- A. Sandbags:
1. Fabricate from woven, ultraviolet-resistant materials that are sufficiently close knit to prevent fines from migrating out through the bag, with bags tied tightly closed.
 - a. Burlap bags, if used, shall be lined with plastic.
 - b. Tires and lined paper bags shall not be used.
 2. Sand shall be non-CIS, 100 percent passing No. 8 sieve.
 3. Each bag shall weigh 40 to 60 pounds when filled.
- B. Storage Cell Foundation:

1. Existing asphalt concrete or concrete pavement.
 2. Bare dirt grade condition: Protection to liner shall be minimum, 2 inches sand on 8 ounce per square yard geotextile over liner.
- C. Liners: 60 mil high density polyethylene (HDPE), minimum.
- D. Berm: Minimum height: 12 inches.
- E. Covers: 18 mil polyolefin minimum.
- F. Truck Bed Liners: 3 mil polyethylene, minimum.

2.3 EQUIPMENT

- A. Provide and maintain equipment, including health and safety monitoring equipment, dust monitoring equipment, and emission control equipment, necessary to complete this Work scope.
- B. Leachate and stormwater collection and storage:
1. Minimum storage tank capacity shall be 550 gallons.
 - a. Tanks shall have sample ports and minimum 2-inch diameter drain valves to facilitate characterization and disposal of accumulated liquid.

PART 3 – EXECUTION

3.1 INSTALLATION - GENERAL

- A. Contractor shall adequately protect its workers and subcontractors from exposure to CIS and potential CIS.
- B. Use a water truck for dust control during CIS and potential CIS excavating, stockpiling, and loading activities.
- C. Provide hazardous material identification information to personnel involved in equipment handling, shipping, and disposing of potential CIS and CIS.
- D. Use excavating, handling, and loading methods and equipment that minimize disturbance to CIS and potential CIS and to areas beyond the limits of CIS and potential CIS excavation Work.
- E. Obtain and comply with applicable SCAQMD Permits and Rules. Refer to REGULATORY REQUIREMENTS Section.

EXCAVATING, STOCKPILING, AND
DISPOSING OF CHEMICALLY
IMPACTED SOIL

- F. Material or soil that become contaminated as a result of Contractor's negligent operations shall be removed and recycled or disposed of at no additional cost to Department.
- G. CIS and potential CIS excavating, loading, and hauling equipment shall be decontaminated prior to leaving immediate loading area or Project Site for excavation of non-CIS in conformance with method approved by Engineer.
 - 1. Waste materials generated during decontamination of equipment shall be recycled and disposed of off Department property in conformance with local, state, and federal regulations and guidelines.
 - 2. Decontamination records shall be maintained for TSCA-regulated wastes in conformance with 40 CFR.
- H. Handle PCB contaminated soil in conformance with 40 CFR 761.

3.2 SOIL EXCAVATION

- A. Segregate potential CIS from non-CIS and place excavated potential CIS in storage cells.
 - 1. Exercise caution during handling and transporting of materials so as not to cross-contaminate surrounding areas.
 - 2. Coordinate with Engineer to obtain characterization and determination of appropriate recycling or disposal options in conformance with local, state, and federal regulations.
 - 3. Place soil confirmed by Engineer to be CIS in different storage cell in staging area than potential CIS.
- B. Notify Engineer immediately in the event that potential CIS is encountered outside the approximate limits previously identified. Segregate suspicious potential CIS in these areas from non-CIS.
- C. Materials generated from the demolition of existing structures, i.e. concrete, asphalt, piping, steel or wood framing and the like, shall be decontaminated, if necessary, prior to recycling or disposal. Such material is not considered CIS and shall be segregated from potential CIS during performance of Work.
Refer to SELECTIVE SITE DEMOLITION, STRUCTURE DEMOLITION, and REGULATORY REQUIREMENTS Sections for additional information.

- D. Stop Work and notify Engineer if free product liquids are encountered during excavation of potential CIS or if groundwater is encountered in a known CIS area.

3.3 SOIL STAGING AND STOCKPILING

- A. Construct storage cell(s) for CIS or potential CIS at the staging area location(s) within Project Site limits approved by Engineer.
 - 1. Store excavated CIS or potential CIS in temporary storage cell(s) for 30 days, maximum, prior to transporting to disposal or recycling facility.
 - 2. Create separate storage cells for each distinct area within Project Site where CIS or potential CIS was discovered. Do not mix CIS or potential CIS from separate discovery areas or previously identified CIS areas.
- B. The purpose of the temporary storage cell(s) shall be to:
 - 1. Allow for Department characterization of potential CIS as well as to provide a mechanism to reduce or eliminate air and stormwater pollution from the stockpiles.
 - 2. Prevent CIS or potential CIS from encountering non-CIS.
 - 3. Prevent migration of liquid from surrounding areas into CIS or potential CIS and CIS.
 - 4. Prevent migration of liquid and air emissions from CIS or potential CIS to the surrounding areas.
- C. Storage Cell Construction:
 - 1. Install temporary chain link fencing and entrance gates at the perimeter of staging area to prevent unauthorized entry. Install signs on fencing and entrance gate identifying the contents of the temporary storage cells and Contractor's emergency telephone numbers.
 - 2. Storage cell foundation shall consist of existing asphalt concrete or concrete pavement. Obtain Engineer's approval of foundation design for stockpile on exposed dirt grade prior to constructing foundation.
 - 3. Construct perimeter barrier berm around entire staging area.
 - 4. Install temporary plastic liner to ensure that CIS and potential CIS does not contact surrounding materials.

EXCAVATING, STOCKPILING, AND
DISPOSING OF CHEMICALLY
IMPACTED SOIL

- a. For bare dirt conditions, remove rocks and other sharp objects greater than 3/4 inch in diameter from dirt prior to placing liners.
 - b. For bare dirt conditions, install sand and geotextile or other membrane as approved by Engineer to protect liner from damage.
 - c. Engineer reserves the right to take samples, beneath Contractor's proposed staging area location before and after creation of stockpiles to verify that adjacent grade has not been cross-contaminated.
5. Install a berm around each of the storage cell(s) sufficient to contain soil, sediment, and liquid, and to prevent stormwater runoff from flowing into or away from stockpiles.
- a. Extend liner up and over inside and outside faces of berm to prevent migration of liquids under the berm.
 - b. Anchor berm and liner with sandbags.
6. Do not overfill cells with CIS and potential CIS. Maintain minimum of 18 inches from toe of stockpile to inside edge of berm.
7. Keep stockpiles covered with plastic to prevent odors and dust emissions in conformance with applicable local, state, and federal regulations and guidelines.
- a. Lap plastic to prevent entrance of stormwater into stockpile.
 - b. Remove and replace stockpile covers to allow Engineer access upon request of Engineer.
 - c. Remove stockpile covers to allow Engineer access for sampling upon request of Engineer. Replace covers after Engineer's sampling is complete.
8. Anchorage: Secure berm and liner with sandbags. Secure cover from wind uplift with sandbags regularly spaced from top to bottom of stockpile suspended by ropes or by other method approved by Engineer from top of stockpile. Secure edges of liner and cover. Remove and replace broken sandbags immediately.
- D. Install BMPs approved by Engineer and use decontamination practices that prevent potential CIS from leaving the staging area.

1. Inspect vehicles prior to leaving the staging area to ensure that no potential CIS adheres to the wheels or undercarriage of equipment.
- E. Inspect stockpiles on a daily basis to verify that stockpiles remain covered in order to prevent odorous and dust emissions in conformance with the terms of SCAQMD permits and other applicable local, state, and federal regulations. Verify emission levels by daily Photoionization DetectorPID monitoring. Replace covers whenever emissions exceed permit requirements or when VOC emission damage or other damage becomes evident.
- F. Repair or replace perimeter controls, liners, or covers as needed, or as directed by Engineer to keep them functioning properly.
- G. Remove sediment and soil coming from stockpile when accumulation reaches 1/3 of the perimeter berm height.

3.4 AIR EMISSION MONITORING

- A. Air monitoring shall comply with local, state, and federal regulations and guidelines.
- B. Monitor air quality continuously during excavation operations at potential CIS and CIS locations.
- C. Provide field screening and monitoring equipment to monitor for:
 1. Worker safety
 2. Air monitoring permit requirements
- D. In conformance with SCAQMD Rule 1166, use a PID, capable of detecting volatile organic vapors to a minimum of 1 ppm, to assess potential soil contamination levels. Soil with PID readings of 50 ppm or greater (measured at a distance of no more than 3 inches from the surface of the soil material) shall be deemed VOC-impacted soil and shall be excavated and managed in conformance with this Section.
- E. Conform to requirements of SCAQMD Rule 1466. Refer also to REGULATORY REQUIREMENTS Section regarding Rule 1466.

3.5 STORMWATER CONTROL

- A. Control perimeter of CIS and potential CIS excavations to prevent stormwater runoff from flowing into or out of excavated areas.

- B. Implement structural stormwater best management practices (BMPs) to divert flows from exposed CIS and potential CIS, temporarily store flows, or otherwise prevent runoff and the discharge of pollutants from CIS and potential CIS excavation areas.
 - 1. Refer to Construction Stormwater Pollution Control and Construction General Stormwater Permit and Stormwater Pollution Prevention Plan (SWPPP) Articles of REGULATORY REQUIREMENTS Section for additional BMP information.
 - 2. Remove accumulated stormwater from potential CIS excavation areas in conformance with Leachate and Stormwater Handling Article of this Section.

3.6 LEACHATE AND STORMWATER HANDLING

- A. Remove, store, sample, characterize, and recycle or dispose of stormwater that enters any excavation containing CIS and potential CIS as well as leachate and stormwater collected behind stockpile berms.
- B. Construct collection sumps to facilitate removal of any accumulated stormwater and liquid leachate between toe of stockpile and inside edge of perimeter berms. Locate collection sumps at the low point between each berm and stockpile.
- C. Construct collection sump at low point of CIS and potential CIS excavation locations.
- D. Install transfer pumps in each of the collection sumps and connect piping to temporary storage tank(s) for transfer of accumulated liquid.
- E. Use vacuum truck to collect leachate from stockpiles, stormwater accumulated behind stockpile berms, in potential CIS and CIS excavations, and from temporary storage tanks.
 - 1. Pump accumulated leachate and stormwater weekly or as directed by Engineer.
- F. Contractor shall obtain characterization of liquids.
- G. Dispose or recycle liquids at location approved by Engineer.

3.7 BACKFILL

- A. Soil determined by Engineer to be non-CIS may be considered for reuse within Project Site limits where fill is required. Refer to EARTHWORK Section for information on import fill and excavated soil to be re-used as fill.
- B. Potential CIS and CIS shall not be used as backfill and shall be properly recycled or disposed of at a disposal facility approved by Engineer.
- C. Under no circumstances shall Contractor blend or mix excavated potential CIS or CIS with other soil or material. Do not add potential CIS or CIS to characterized stockpiles.

3.8 DISPOSAL, ACCEPTANCE, AND MANIFEST REQUIREMENTS

- A. Classification of waste materials shall be in conformance with 40 CFR and 22 CCR Division 4.5.
- B. Obtain written approval from Engineer on the acceptability of the proposed disposal or recycling facility prior to transporting CIS. Depending upon the facility, approval from LARWQCB may be necessary.
- C. Upon receipt of written approval from Engineer and a minimum of 2 working days prior to initiation of soil loading, transporting, and disposing activities, prepare manifests designating the recycling or disposal facility and properly describe the waste in conformance with 49 CFR or 22 CCR Division 4.5 (whichever is applicable) for Engineer's review.
 - 1. Engineer shall notify Contractor of errors or inadequacies, if any.
 - 2. Engineer shall designate a representative to be present during soil loading and transporting activities in order to sign the manifests.
- D. Department of Toxic Substances Control (DTSC) Form 8022A/Environmental Protection Agency Form 8700-22 (California Uniform Hazardous Waste Manifest) is required for manifesting of hazardous waste, unless the receiving state requires otherwise.
 - 1. Non-hazardous wastes shall be manifested using a non-hazardous waste form. These are usually supplied by the receiving recycling or disposal facility.
- E. Engineer shall supply Generator's U.S.EPA ID Number required on the waste manifest. Refer to REGULATORY REQUIREMENTS Section for additional requirements.

- F. Dispose of CIS in conformance with applicable bid item of Bid Proposal Line Items.
- G. Dispose of soil transported to the temporary storage cell(s) that is determined by Engineer not to be CIS at facility approved by Engineer.

3.9 SOIL TRANSPORTATION REQUIREMENTS

- A. Select transporter with a current DTSC registration certificate, current Certificate of Compliance for vehicles and containers, adequate insurance coverage, and applicable Department of Transportation and Public Utilities Commission licenses.
- B. Comply with Department of Transportation requirements for packaging, labeling, and marking to ensure that the transport vehicles are correctly placarded.
- C. Cover transported materials appropriately to minimize loss of material during transportation due to leaking, spilling, falling, or blowing in conformance with REGULATORY REQUIREMENTS Section.
- D. Transport soil off-site with no free liquids to avoid spillage on roads. Beds of trucks transporting CIS shall be lined and covered.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Insurance, permits, notifications, incidentals, and other miscellaneous requirements necessary to perform asbestos abatement and disposal of asbestos containing materials (ACM) and asbestos containing waste located within Project Site limits including its removal, transportation, and disposal as required by federal, state, and local requirements and statutes.
- B. For Drawing No. 1-3502, Pacific Edge Engineering, Inc. has prepared the Environmental Assessment for the CFS Building Demolition and Lot Conversion at Berths 208-209. The report is included in the bid package.
- C. For Drawing No. 1-3571, Citadel EHS has prepared the Environmentally Regulated Materials (ERM) Survey Report Pre-Demolition Asbestos and Lead Survey for StarKist Plant 4. The report is included in the bid package.
- D. For Drawing No. 1-3573, California Asbestos Consultants has prepared the Pre-Demolition Lead/Asbestos Survey for the former Southwest Marine Administration Building. The report is included in the bid package.
- E. For Drawing No. 1-3574, Apex Companies, LLC has prepared the Asbestos, Lead Based Paint, and Polychlorinated Biphenyls Survey Report for Former Southwest Marine Facility - Compressor Building and Recommendations for PCB Dust, Window Putty Removal and Lead Based Paint Stabilization of Concrete Floor Former Southwest Marine Facility Compressor Building. The reports are included in the bid package.

1.2 RELATED SECTIONS

- A. Section 02 41 16 - Structure Demolition

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Asbestos Abatement and Lead Remediation bid item of Bid Proposal Line Items.

1.4 REFERENCE STANDARDS

- A. It is the responsibility of Contractor to know the current regulations controlling Work and to perform Project related Work in conformance with such regulations that provide for worker and public safety against asbestos exposure.
- B. Regulations, Standards, and Codes (General):
 - 1. General applicability of federal, state, and local regulations, standards, and codes governing asbestos abatement, transport, and disposal, except to the extent that more explicit or more stringent requirements are written directly into Contract Documents, applicable regulations, standards, and codes have the same force and effect and are made a part of Contract Documents as if copied directly into Contract Documents, or as if published copies are bound herewith.
 - 2. Contractor shall perform Work in compliance with applicable federal, state, and local regulations, standards, and codes governing asbestos abatement, transport, and disposal of asbestos containing/contaminated materials.
 - 3. Requirements include obtaining permits, licenses, inspections, releases, and similar documentation, as well as payments, statements, and similar requirements associated with codes, regulations, and standards.
 - 4. The most recent edition of any relevant regulation, standard, document, or code shall be in effect.
- C. The references listed below form a part of this Section to the extent referenced. The current issue of each document shall govern. Where conflict among requirements with these Specifications exists, the more stringent requirements shall apply. The publications are referenced in the text by basic designation only.

1.5 REFERENCES

- A. 8 CCR 1529 - Asbestos.
- B. 8 CCR 3203 - Injury and Illness Prevention Program.
- C. 8 CCR 3220 - Emergency Action Plan.
- D. 8 CCR 3221 - Fire Prevention Plan.

- E. 8 CCR 5208 - Asbestos.
- F. 29 CFR 1926.1101 - Asbestos.
- G. 40 CFR 61.152 - Air-cleaning.
- H. ANSI/ASSP Z9.2 - Fundamentals Governing the Design and Operation of Local exhaust Ventilation Systems.
- I. ANSI/ISEA Z87.1 - American National Standard Occupational and Educational Personal Eye and Face Protection Devices.
- J. ANSI/ISEA Z89.1 - American National Standard for Industrial Head Protection.
- K. ASTM F2412 - Standard Test Methods for Foot Protection.
- L. ASTM F2413 - Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear.
- M. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.
- N. UL 586 - High Efficiency, Particulate, Air Filter Units.

1.6 DEFINITIONS

Abatement: Procedures to control fiber release from asbestos-containing material. Includes removal, encapsulation, enclosure, repair, demolition, and renovation activities.

Abatement Activities: Activities from the initiation of Project Site preparation through certification by Asbestos Management Consultant (AMC) that the area is clean, based on visual inspection and air clearance criteria.

Abatement Area: An area where asbestos removal or other abatement procedures are being performed; an abatement area is considered a contaminated area between the time preparation begins to the time the area meets the clearance air monitoring standards.

Air Lock: A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area.

Air Monitoring: The process of measuring the asbestos fiber content of a specific volume of air collected during a stated period of time. The procedure utilized for this Project follows National Institute For Occupational Safety And Health (NIOSH) Standard Analytical Method for Asbestos in Air, Method 400 and AHERA standards. Pre-abatement sample analysis will be performed using Phase Contrast Microscopy.

Air Sampling Professional: The professional contracted or employed to supervise air monitoring and analysis schemes. This individual is also responsible for recognition of technical deficiencies in worker protection equipment and procedures during both planning and on-site phases of an abatement project. Acceptable air sampling professionals include industrial hygienists, environmental engineers, and environmental scientists with equivalent experience in asbestos air monitoring and worker protection. Air sampling professionals working in State of California must be certified by Division of Occupational Safety and Health.

Ambient Air Monitoring: Measurement or determination of airborne asbestos fiber concentrations outside the abatement area, but in the general vicinity of Project Site.

Amended Water: Water to which a surfactant has been added.

Asbestos: To include chrysotile, amosite, crocidolite, fibrous tremolite, fibrous anthophyllite, and actinolite.

Asbestos-Containing Material(s) (ACM): U.S. Environmental Protection Agency (US EPA) definition: Material composed of asbestos of any type in an amount greater than 1 percent and by weight, either alone or mixed with other fibrous or non-fibrous materials. Occupational Safety and Health Administration (OSHA) definition: Material composed of asbestos of any type in an amount greater than 0.1 percent by weight, either alone or mixed with other fibrous or non-fibrous materials.

Asbestos-Containing Waste Material: Asbestos-containing material or asbestos-contaminated objects requiring disposal.

Asbestos-Contaminated Objects: Any objects that have more than 1/10 of 1 percent asbestos on external or internal surfaces.

Asbestos Management Consultant (AMC): AMC shall act as agent for Department as final authority concerning technical matters of asbestos abatement requirements.

Authorized Visitor: A person approved by AMC, representatives of Engineer, or representatives of any regulatory or other agency having jurisdiction over Project.

Baseline Monitoring: A measurement or determination of airborne asbestos fiber concentrations for Project Site prior to the start of abatement activities.

City: Refer to GENERAL CONDITIONS Section for definition.

Clean or Decontaminate: To make a surface free of fibers by thoroughly HEPA-vacuuming or wet cleaning with sponges or mops.

Clean Room: A non-contaminated area or room that is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment.

Construction Barrier: A fixed or movable barrier that is 8'-0" in height consisting of 3-5/8 inch metal studs 26 gauge framed at 16 inches on center with 5/8 inch Type X gypsum board screwed on exterior side. Tape and spackle 1 coat sharp edges. Brace as necessary.

Contained Work Area: Work Area which has been isolated, plasticized, and equipped with a decontamination enclosure system.

Contractor: Refer to GENERAL CONDITIONS Section for definition.

Curtained Doorway: A portal that allows ingress or egress from 1 room to another while permitting minimal air movement between the 2 rooms. It is typically constructed by placing 2 overlapping sheets of plastic over an existing or temporarily framed doorway, securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite vertical side of the doorway. Other effective designs shall be permissible on approval by AMC.

Department: Refer to GENERAL CONDITIONS Section for definition.

Disturb: To alter, change, or stir ACM during activities such as, but not limited to, removal, encapsulation, enclosure, or repair.

Encapsulant (Sealant): Liquid material that can be applied to other solid material to reduce the possible release of fibers from the solid material, either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the solid material and binding its components together (penetrating encapsulant).

Encapsulation: A procedure to coat or saturate material with an encapsulant to control the possible release of fibers into the ambient air.

Engineer: Refer to GENERAL CONDITIONS Section for definition.

Equipment Room: A room that is part of the worker decontamination enclosure system with provisions for storage of contaminated clothing and equipment.

Fixed Items: Walls, ceilings, floors, equipment, furniture, or other objects that cannot be removed from the abatement area.

HEPA Filter: A high-efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97 percent of particles greater than 0.3 micron in size and meeting requirements of UL 586.

HEPA-Filtered Vacuum: A vacuum cleaner designed for and equipped with a HEPA filter.

Isolation: The sealing of openings into a Work Area with critical barriers, isolation barriers, and plasticizing.

Isolation Barrier: The containing of a Work Area by installing 2 layers of 6 mil. plastic sheeting, mechanically supported, totally isolating Work Area from adjacent non-Work Areas. Openings into Work Area larger than 32 square feet with any one dimension greater than 4 feet shall be framed 16 inches on center with nominal 2 inch by 4 inch wood studs or 3-5/8 inch 26 gauge metal studs.

Log: An official record of activities that occurred during Project. It shall identify AMC, Contractor, and workers and shall contain other pertinent information as required by law or requested by ACM.

Movable Object: A piece of equipment or furniture in Work Area that can be removed from Work Area.

Outside Air: The air outside buildings and structures.

Plasticize: To cover floors, walls, and other structural elements of a Work Area with 6 mil. plastic sheeting as herein specified with seams securely taped.

Pressure Differential System: A portable exhaust system equipped with HEPA filtration. The system shall be capable of maintaining a minimum pressure differential of minus 0.05 inch of water gage in a Work Area relative to adjacent areas and make 1 complete air filtration every 15 minutes in Work Area.

Removal: The stripping of any ACM from surfaces of components of a facility.

Replacement Material: Any material that does not contain asbestos and that is used to replace ACM.

Shower Room: A room between the clean room and the equipment room in the worker decontamination enclosure having hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination.

Surface Barriers or Protective Coverings: The placement of sheet plastic on the walls, floors, and other fixed objects within the abatement area to prevent contamination from subsequent Work.

Surfactant: A chemical agent added to water to improve penetration into ACM and thereby reduce the generation of airborne asbestos fibers.

Water Filtration System: A local water-filtering system capable of trapping and retaining 99.9 percent of asbestos fibers greater than 3 microns in size.

Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools that have been dampened with water and afterwards disposing of the cleaning tools as asbestos contaminated waste.

Work Area: A location in which ACM has been designated for abatement under Contract.

Worker Decontamination Enclosure System: A decontamination system consisting of a clean room, a shower room, and an equipment room separated from each other and from Work Area by curtained doorways. It is used for worker exits from Work Area and for equipment and materials leaving Work Area.

1.7 NOTIFICATIONS AND PERMITS

- A. Contractor shall make required written notifications to regulatory agencies including the following:

1. South Coast Air Quality Management District 21865 East Copley Drive
Diamond Bar, CA 91765

Notification shall meet the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1403.

2. California Division of Occupational Safety and Health Asbestos Project-Site Notification 2100 East Katella Ave., Room 125 Anaheim, CA 92806

Notification shall be in conformance with Section 341.9 of Title 8 of California Code of Regulations.

- B. Contractor shall obtain and pay for permits required for Work of this Section.

1.8 SUBMITTALS

- A. Prior to commencement of asbestos abatement Work, submit to Engineer 1 copy (3 ring bound) of the following documentation:

1. Written notification to the following regulatory agencies:
 - a. SCAQMD
 - b. California Division of Occupational Safety and Health (Cal-OSHA)
2. Proof that required permits, site location, and arrangements for transport and disposal of asbestos containing waste materials have been made.
Submit copies of waste haulers Hazardous Waste Transporter Registration and Environmental Protection Agency Acknowledgement of Notification of Hazardous Waste Activity.
3. Written asbestos abatement Work plan identifying removal procedures, non-asbestos debris handling procedures, and asbestos containing/contaminated debris cleanup and disposal procedures.
4. Shop drawings of negative pressure air filtration exhaust manifold.
5. Shop drawings of worker decontamination enclosure system.
6. Proof of legal right to use patented equipment or processes.
7. Manufacturer's certification that HEPA vacuums, differential pressure air filtration devices, and other local exhaust ventilation equipment conform to ANSI/ASSP Z9.2.

8. Bar chart construction schedule indicating mobilization, Work Area preparation, asbestos removal, final clearance air monitoring, and demobilization dates for each task.
 9. Documentation that Contractor's employees, including foreperson, supervisor, and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of abatement activities, have received training as required by 29 CFR 1926.1101 and 8 CCR 1529.
 10. Documentation from physician that employees or agents who may be exposed to airborne asbestos fibers in excess of background levels have received medical monitoring to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. Contractor shall be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g. high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform Work activities. Medical monitoring shall be performed in conformance with the requirements of 8 CCR 1529 .
 11. Documentation of respirator fit-testing for Contractor employees and agents who must enter Work Area. This fit-testing shall be in conformance with qualitative procedures as required by OSHA regulations or be quantitative in nature.
 12. Documented NIOSH approvals for respiratory protective devices used on site, including manufacturer's certification of HEPA filtration capabilities for cartridges and filters.
 13. Emergency preparedness plan as required by Emergency Planning Article of this Section.
 14. Contractor's site specific Fire Prevention Plan that complies with 8 CCR 3221 and City of Los Angeles Fire Department Requirement No. 68.
 15. Contractor's Injury Illness Prevention program that complies with 8 CCR 3203.
- B. During abatement activities submit to AMC documentation that includes, without limitation, the following:
1. Work Area entry/exit log book. Log book shall record name, affiliation, time in, and time out for each entry into Project Site.

2. Logs documenting filter changes on respirators, HEPA vacuums, differential pressure air filtration devices, water filtration device, and other engineering controls.
3. Safety Data Sheets (SDS) for solvents, encapsulant, wetting agents, and replacement materials, as necessary.
4. Required OSHA air monitoring results. Results shall be available prior to the start of the following shift and within 24 hours of completion of the last shift.
5. Accident or incident reports where injury or damage has occurred on or to Department's property.
6. Transport manifests, trip tickets, and disposal receipts for asbestos waste materials removed from Work Area within 24 hours of the transport. Send to Engineer.

1.9 QUALITY ASSURANCE

- A. Contractor shall be licensed by State of California, Contractors State License Board, and be registered to perform asbestos related Work with Division of Occupational Safety and Health, Department of Industrial Relations. At a minimum contractor shall hold the following license classifications:
 1. ASB - Asbestos Certification Supplement
- B. Transportation of Friable and Non-Friable ACM: Contractor shall itself be, or have a subcontractor that is, a registered hazardous waste transporter with State of California, Department of Toxic Substances Control (DTSC).
- C. Work shall be supervised by experienced persons trained, knowledgeable, and qualified in the techniques of asbestos abatement, removal, and subsequent cleaning of contaminated areas, transportation, and disposal of asbestos-containing waste and asbestos-contaminated materials.

1.10 RESTRICTED HOURS OF WORK AND ACCESS

- A. Work Hours: Asbestos abatement and related Work activities shall be performed Monday through Friday between the hours of 8 a.m. and 4:30 p.m. unless otherwise approved by Engineer.

1.11 EMERGENCY PLANNING

- A. Develop emergency planning and procedures in conformance with 8 CCR 3220.
- B. Emergency procedures shall be in written form and prominently posted. Contractor shall ensure that persons entering Work Area read these procedures and understand Project Site layout, location of emergency exits, and emergency procedures.
- C. Emergency planning shall include considerations of fire, explosion, electrical hazards, slips, trips and falls, confined spaces, and heat related injury. Written procedures shall be developed and employee training in procedures shall be provided by Contractor.
- D. Employees shall be trained in evacuation procedures in the event of Work place emergencies.
 - 1. For non-life-threatening situations, employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting Work place to obtain proper medical treatment.
 - 2. For life-threatening injury or illness, worker decontamination shall take least priority. After measures to stabilize the injured worker, remove the injured worker from Work place and secure proper medical treatment.
 - 3. Telephone numbers of emergency response personnel shall be prominently posted in the clean and equipment rooms.

1.12 ASBESTOS MANAGEMENT CONSULTANT (AMC) SERVICES

- A. Department shall contract with an independent, third party AMC to perform the services as specified in this Section. AMC shall handle technical matters relating to asbestos abatement requirements. AMC's responsibilities shall include but not be limited to:
 - 1. Participate in pre-Project and weekly progress meetings.
 - 2. Review and recommend to Engineer for approval, Contractor submittals, proposed methods for establishing Contained Work Areas, Decontamination Enclosure System, and Differential Pressure System as well as equipment to be used.

3. Review, and recommend to Engineer for approval, proposed methods and procedures for abatement Work.
4. Discuss, and report to Engineer, potential problems arising from the use of methods and procedures agreed upon or not at pre-Project meeting.
5. Visually observe the progress of Work activities, including but not necessarily limited to:
 - a. Verify warning signs and warning barriers are posted in appropriate locations.
 - b. Verify daily that Contractor's employees have met training requirements; disallow entry for workers who do not meet or cannot prove qualifications.
 - c. Verify contained Work Area and decontamination enclosure system are installed in accordance with approved design.
 - d. Verify agreed upon abatement methods and procedures are being followed.
 - e. Report to Engineer daily and notify Contractor of unacceptable methods and procedures or unacceptable results of Contractor.
 - f. Report to Engineer if Contractor fails to correct unacceptable methods and procedures or unacceptable results.
 - g. Conduct periodic reviews of isolation and critical barriers to determine if they are complying with Specifications.
 - h. Report to Engineer if Contractor varies from agreed upon or specified scope of Work, schedule, and personnel.
 - i. Verify that damages caused during the performance of Work are acceptably repaired.
 - j. Verify materials delivered to Project Site are those approved or specified for use on Work.
 - k. Verify that Contractor performs OSHA required personnel air monitoring.
6. For purposes of Project, "unacceptable methods and procedures, and unacceptable results" is to mean methods and results other than:

- a. Those recommended by the manufacturer of the approved products and materials.
 - b. Those required by pertinent regulations of governmental agencies having jurisdiction.
 - c. Those required by this Section and those agreed upon at pre-Project meeting.
7. Failure of AMC to notice unacceptable methods and procedures or unacceptable results during the progress of Work shall not absolve Contractor from responsibility to complete Work in conformance with the specified requirements and agreed methods.
 8. Provide laboratory testing and ensure that the laboratory shall handle and analyze air samples in conformance with applicable standards.
 - a. Contractor shall provide sufficient electrical power and connections (including supplying generators if necessary) to allow Project Environmental Consultant to collect air samples.
 9. Perform pre-abatement environmental air monitoring prior to Work Area preparation to establish ambient air baseline fiber concentrations.
 10. Perform environmental air monitoring throughout Project to ensure that Work is done in conformance with the following airborne fiber concentration limits:

Outside Work Area 0.01 fibers/cc, Downwind negative air exhaust 0.01 fibers/cc, General Work Area (PAPR) 0.50 fibers/cc.

If, at any time, the airborne fiber concentration level exceeds 0.01 fibers per cubic centimeter of air outside Work Area, Work shall immediately cease, except for corrective action, until airborne fiber concentration levels are established below the specified limit. If, at any time, the airborne fiber concentration level exceeds 0.50 fibers per cubic centimeter of air inside Work Area, Work shall immediately cease except for corrective action, until airborne fiber concentration levels are established below the specified limit.

11. Perform aggressive air monitoring following final cleanup to ensure that the final decontamination levels have been met. Containment barriers and negative pressure equipment shall remain in use until the final air clearance criteria (1,800 liter sample) of less than 0.01 fibers per cubic centimeter of air is obtained.
12. The following shall apply for air monitoring:
 - a. Air tests shall use NIOSH Analytical Method 7400 (Phase Contrast Microscopy).
13. If, at any time, Engineer or AMC decides that Work practices are violating Specifications, or State, federal, or local regulations to the extent of potential endangerment of building users, workers, Department employees, or the public, Engineer shall immediately notify Contractor that operations shall cease until corrective actions are taken by Contractor. Written confirmation shall follow within 24 hours of the verbal notice. Contractor shall take such corrective actions before proceeding with Work. Loss or damage due to Stop Work Order(s) shall be Contractor's responsibility. A Stop Work Order, issued by Engineer or AMC shall become effective immediately. Abatement Work shall not recommence until authorized by Engineer.
14. Upon completion of the abatement portion of Project, AMC shall submit a comprehensive report (Job Book) covering activities performed under this Section.

1.13 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in the original packages, containers, or bundle bearing the name of the manufacturer, brand name (where applicable), and model. Polyethylene sheet in a roll size shall be delivered to Project Site with factory label indicating 6 mil.
- B. Handle and store materials in conformance with manufacturer's written instructions.
- C. Protect materials from moisture and extremes of hot and cold.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Damaged or deteriorated materials shall not be used and shall be promptly removed from the premises. Material that becomes contaminated with ACM shall be packaged and legally disposed of in an approved manner.
- B. Materials and equipment shall comply with Specifications; relevant federal, state, and local codes; and industry standards.
 - 1. Plastic, spray-on strippable coatings, and structural materials used shall be UL certified as fire retardant or non-combustible. SDS for fire retardant materials shall be submitted prior to use.
 - 2. Wood shall be pressure impregnated and certified as fire retardant.
 - 3. Polyethylene sheeting used for worker decontamination enclosure systems, Work Area preparation, and isolation barriers shall be opaque or black in color and shall be a minimum of 6 mil in thickness.
 - 4. Duct tape shall be 2 inch or wider and capable of sealing joints of adjacent sheets of polyethylene, and attachment of polyethylene to finished or unfinished surfaces of dissimilar materials, and capable of adhering under both dry and wet conditions, including the use of amended water.
 - 5. Disposal bags shall be of 6 mil polyethylene, pre-printed with labels as required by EPA regulation 40 CFR 61.152 (b) (I) (iv) or applicable Cal-OSHA requirements.
 - 6. Disposal drums shall be metal, fiberglass, or plastic with locking ring tops.
 - 7. Stick-on warning labels in conformance with US EPA or Cal-OSHA.
 - 8. Use warning signs as required by Cal-OSHA.
- C. Removal, Encapsulation, and Replacement:
 - 1. Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, mixed in conformance with manufacturer's written instructions.
 - 2. Encapsulating agent to be applied shall adhere to the substrate surfaces from which asbestos containing material has been stripped.

3. Encapsulants shall not be flammable and shall not be solvent based or use a vehicle consisting of hydrocarbon.
4. Encapsulating agents applied to areas to be re-sprayed with fireproofing shall neither affect the re-sprayed fireproofing ability to bond to the substrate, nor reduce UL rating of the fireproofing.
5. Solvents shall be non-toxic, non-noxious, nonflammable (flash point in excess of 200 degrees Fahrenheit), non-reactive with or damaging to materials it shall come in contact with and approved for indoor use by regulatory agencies. Provide ventilation of Work Area as required by manufacturer. Vent exhaust to the exterior of the building and in a manner that shall not result in adverse affects to other areas of the facility, adjacent facilities, or the general public. SDS shall be submitted prior to using any encapsulating agent.

2.2 EQUIPMENT

A. General:

1. Furnish a sufficient quantity of differential pressure air filtration devices equipped with HEPA filtration and operated in conformance with ANSI/ASSP Z9.2 (local exhaust ventilation requirements) and EPA guidance document EPA 560/5-83-002 Guidance for Controlling Friable Asbestos Containing Materials in Buildings. Differential air filtration devices shall be exhausted directly to the exterior of the building. To calculate total air flow requirement:

$$\text{Total ft}^3/\text{min} = \text{Vol. of Work Area (in ft}^3\text{)} / 15 \text{ min}$$

To calculate the number of units needed for the abatement:

$$\text{Number of units needed} = [\text{total ft}^3/\text{min}] / [\text{capacity of unit in ft}^3/\text{min}]$$

2. For small enclosures and glove bags, a HEPA filtered vacuum system shall be used to provide differential air pressure.
- B. Use a manometer to monitor differential pressure 3 times each Work shift (i.e. beginning, middle, and end of each shift) within removal area to ensure that a minimum pressure drop 0.02 inches of water is maintained across critical or isolation barriers.

1. Furnish, at a minimum, full face HEPA equipped "Type B" powered air purifying respirators (PAPR) to abatement workers for use during friable asbestos containing or contaminated material removal/handling activities.
 - a. Half-face air purifying respirators equipped with HEPA filters may be used during Work Area preparation activities, flooring material removal, roofing removal, glove bag removal, and window putty removal.
 - b. Half-face air purifying respirators equipped with dual HEPA/organic cartridges shall be employed when conducting removal activities using any solvent-based mastic remover.
2. Furnish respirators to the abatement workers. The respirators shall have been tested and approved by NIOSH for use in asbestos-contaminated atmospheres.
3. Furnish full body disposable protective clothing, including head, body, and foot coverings to abatement workers and authorized visitors in sizes adequate to accommodate movement without tearing.
4. Furnish additional safety equipment (e.g. hard hats meeting the requirements of ANSI/ISEA Z89.1, eye protection meeting the requirements of ANSI/ISEA Z87.1, safety shoes meeting the requirements of ASTM F2412 and ASTM F2413, disposable gloves), as necessary, to abatement workers and authorized visitors.
5. Furnish non-skid foot wear to abatement workers and authorized visitors. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
6. Furnish a sufficient supply of disposable mops, rags, and sponges for Work Area decontamination.

C. Removal:

1. Furnish a sufficient quantity of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, and the like).
 - a. Brushes used for removing loose asbestos containing material shall have nylon or fiber bristles, not metal.
2. Furnish rubber dustpans and rubber squeegees for Work Area cleanup.

3. Furnish a sufficient supply of HEPA filtered vacuum systems for Work Area cleanup.

D. Encapsulation:

1. Furnish amended water/encapsulant sprayers with pumps capable of providing 500 pounds per square inch (psi) at the nozzle tip at a flow rate of 2 gallons per minute.

PART 3 - EXECUTION

3.1 COMMENCEMENT OF WORK

A. Work shall not commence until the following items have been completed:

1. Enclosure systems have been constructed and tested.
2. At least one 3-stage decontamination unit with shower facility is operational.
3. Pressure differential systems are functioning adequately.
4. Pre-abatement submissions, notifications, and permits have been provided.
5. Equipment for abatement, cleanup, and disposal are on hand.
6. Worker training, medical examination, and respirator fit testing (and certification) is completed.
7. Contractor receives permission from Engineer to commence abatement.

3.2 NOTICES AND POSTINGS

- A. Post in the clean room area of the worker decontamination enclosure a list containing the names, addresses, and telephone numbers of Contractor, asbestos abatement supervisor, Engineer, AMC, and emergency contact numbers.
- B. Post at Project Site a list of persons authorized to enter Work Area.
- C. Additional postings shall include:
1. Visitor entry and exit log.
 2. Employee daily sign in/out log.

3. Work Area entry and exit procedures.
4. Emergency procedures.
5. One copy of Cal-OSHA and SCAQMD Rule 1403 regulations.

3.3 WORK AREA SECURITY

- A. Work Area shall be restricted only to authorized, trained, and protected personnel, including Contractor, Contractor's employees, Engineer, AMC, State, and local inspectors.
- B. Entry into Work Area by unauthorized individuals shall be reported immediately to Engineer.
- C. Access to Work Area shall be through a worker decontamination system located at the designated entrance to Work Area. Other means of access shall be locked or blocked by the erection of drywall, plywood, or particle board barriers so as to prevent entry to or exit from Work Area, except for emergency exits which shall not be locked from the inside but shall be sealed with polyethylene sheeting and tape until needed.
- D. Contractor shall be responsible for Project Site security during abatement operations in order to protect Work efforts and equipment.

3.4 FIRE PROTECTION

- A. Prepare a site specific written Fire Prevention Program in conformance with 8 CCR 3221 and Los Angeles City Fire Department Requirement No. 68.
- B. Plastic, spray-on strippable coatings, and structural materials used in the asbestos abatement process shall be UL approved and certified as fire retardant or noncombustible when tested in conformance with NFPA 701.
- C. Combustible rubbish and debris, including properly bagged asbestos shall be properly disposed of at the end of each working day.
- D. A minimum of one 4A/60BC dry-chemical extinguisher shall be maintained at each of the following locations:
 1. At each corner of Work Area. Where no clear corners exist, 4 extinguishers shall be placed around the exterior wall of Work Area so that they are approximately 25 percent of the total distance apart.

- a. Exception: Where the total abatement containment area is less than 1,000 square feet, provide two 4A/60BC extinguishers. Extinguishers shall be clearly identified with red tape.
- 2. Contractor shall ensure that on site personnel are aware of the location and proper use of extinguishers and other fire and life safety equipment.
- E. Maintain fire and life safety information in Project log.
- F. A statement shall be prepared at the conclusion of each Work day, signed by Contractor, confirming that a survey of Project Site has been made and that any unsafe fire and life safety conditions have been rectified.
- G. Any Work requiring open flame shall require a fire watch standing by with a 2A/60BC extinguisher until completion of said open flame Work.
- H. Existing fire detection, alarm systems, connections, and standpipes shall remain in place, active, and unobstructed. Any alteration to this equipment shall be approved by Engineer.
- I. Existing fire alarm manual pull boxes, fire department communication jacks, and signaling systems shall be maintained in place and active. The foregoing items shall be clearly marked with signs containing lettering which is a minimum of 3 inch by 2 inch wide on a contrasting background. If the foregoing items are covered by plastic, each device shall be surrounded by a square of red duct type tape. In addition, a cutting device, also surrounded by red tape, shall be kept immediately adjacent to the device.
- J. Existing sprinkler systems shall remain active. Sprinkler heads may be covered with a thin, 0.003 inch or less, plastic bag during abatement only so as to avoid their contamination.
- K. Fire rated partitions, doors, and other fire cutoffs shall not be temporarily or permanently modified without the approval of Engineer.
- L. Provide a single switch or set of switches for the emergency shutdown of negative air equipment located in the containment area. This switch or set of switches shall be for emergency use by the fire department personnel. Locate the switches in a non-contaminated area near the clean exit of the decontamination station, and clearly identify using a sign with a minimum 3 inch by 2 inch lettering on a contrasting background. The sign shall read as follows: "NEGATIVE AIR MASTER SHUT OFF."

- M. The asbestos abatement process shall not cause a building to have an amount of exiting less than that required for the existing occupant load. In cases where the required exiting must be obstructed, an alternate means of exiting shall be provided as approved by Engineer. Maintain a minimum of 2 clearly marked exits from each floor during the abatement process. The second exit from a containment area may be covered with plastic upon AMC's approval. If this occurs, the covered exit shall be outlined with red duct type tape, and a cutting device shall be kept immediately adjacent to the door in an obvious and readily accessible location. The cutting device shall also be surrounded by a square of red tape as described in Paragraph 3.4 I of this Article.
- N. The following shall apply in containment areas greater than 1,000 square feet:
 - 1. Provide 5 Tyvek type protective entry suits, rated for use in an asbestos containment area, for each containment site. Suits shall be extra large and shall be kept in a separate, clearly identified, readily accessible container near the clean exit from the decontamination area. These suits shall be for the exclusive use of emergency personnel.

3.5 ASBESTOS ABATEMENT PREPARATION PROCEDURES

- A. General Work Area Preparation: Contractor shall perform the following general Work Area preparation procedures prior to commencement of abatement activities:
 - 1. Danger signs meeting the specifications of 8 CCR 5208 shall be posted at any location and approaches to locations where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from Work Area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of workplace enclosure barriers.
 - 2. Asbestos handlers shall don personnel protective equipment as required in Equipment Article of this Section.

3. Contractor, in conjunction with Engineer, shall shut down and lock out electric power to Work Areas, where necessary, to provide a safe Work environment. Contractor shall provide temporary power source and equipment, including ground faulting, in compliance with applicable electrical code requirements and Cal-OSHA requirements for temporary electrical systems. Costs for electricity shall be at Contractor's sole cost and expense.
4. Heating, ventilating, and air-conditioning (HVAC) system components that are in supply or that pass through Work Area shall be shut down and locked out. After Work Area is isolated, HVAC system shall be decontaminated, if required by AMC. Intake and exhaust vents in Work Area shall be sealed with tape and 6 mil polyethylene sheeting. HVAC system filters shall be removed and placed in labeled 6 mil polyethylene bags for staging and eventual disposal as asbestos-contaminated waste.
5. Special precautions shall be taken when enclosing live electrical panels (e.g., fan rooms). A frame shall be built around the panels and covered with 6 mil polyethylene sheeting with a minimum of 6 inches of clearance. The framed enclosure shall be kept under positive pressure using a HEPA filtered vacuum to keep the panel cool and clean. Alternative methods to keep the panel cool and clean shall be approved by Engineer.
6. Surfaces and fixed objects in Work Area shall be pre-cleaned using HEPA-filtered vacuums or wet cleaning methods as appropriate. Methods that would raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall not be used. ACM shall not be disturbed during the pre-cleaning phase.
7. Pre-clean movable objects within Work Area using a HEPA-filtered vacuum and/or wet cleaning method as appropriate. After cleaning, these objects shall be removed from Work Area and carefully stored in an uncontaminated location.
8. Windows, doorways, elevator openings, corridor entrances, drains, ducts, grilles, grates, diffusers, skylights, and any other opening between Work Area (including the outside of the building, tunnels, and crawlspaces) shall be sealed off with 6 mil plastic sheeting and tape. Fixed objects shall be enclosed in 6 mil polyethylene sheeting and sealed securely in place with tape.

9. Emergency and fire exits from Work Areas shall be maintained and adequately marked. Alternative exits shall be established that are satisfactory to Engineer and local fire regulations.
10. Contractor shall supply the necessary lighting to illuminate the entire Work Area during the working hours of Project and AMC inspections.
11. Contractor shall secure windows and access points to buildings, through which power cords are run, to prevent against break-ins and vandalism to the building.
12. Contractor shall construct and maintain at least one 3 stage decontamination unit. This decontamination unit shall be constructed in conformance with the requirements of Worker Decontamination Enclosure Systems Article of this Section.

B. Resilient Flooring and Mastic Removal Preparation:

1. Windows, doorways, elevator openings, corridor entrances, drains, ducts, grilles, grates, diffusers, skylights, and any other openings shall be sealed with 2 layers of 6 mil polyethylene sheeting and tape. Fixed objects shall be enclosed in 2 layers of 6 mil polyethylene sheeting and sealed securely in place with tape.
2. Carpeting covering resilient flooring shall be removed in a manner that shall not disturb the tile, and shall be disposed of as non-asbestos waste.
3. Carpeting covering resilient flooring that cannot be removed without disturbing the tile shall be removed under containment, and shall be disposed of as asbestos waste.
4. Wall surfaces shall be covered with 1 layer of 6 mil polyethylene sheeting sealed with tape. The polyethylene sheeting on the walls shall extend from the floor to the ceiling line or a minimum of 10 feet. The polyethylene sheeting shall be sized to minimize seams.
5. Entry and exit from Work Areas shall be through a 3 stage decontamination unit described in Worker Decontamination Enclosure Systems Article of this Section or as approved by AMC.

6. A pressure differential system shall be established that produces a minimum of 4 filtered air changes per hour in Work Area and maintains a pressure differential of 0.05-inch water gauge between the inside and outside of Work Area. The location and identification of each individual pressure differential ventilation unit shall be provided and approved by AMC for each Work Area. The pressure differential system shall not be exhausted into occupied areas of the building.
7. Contractor shall provide a manometer to monitor the pressure differential within Work Area. The manometer shall be placed at a location where it can be continuously monitored. The manometer shall be equipped with a strip chart recorder which runs continuously.

C. Drywall, Compound, and Tape Removal Preparation:

1. Windows, doorways, elevator openings, corridor entrances, drains, ducts, grilles, grates, diffusers, skylights, and any other openings shall be sealed with 2 layers of 6 mil polyethylene sheeting and tape. Fixed objects shall be enclosed in 2 layers of 6 mil polyethylene sheeting and sealed securely in place with tape.
2. Floor surfaces shall be covered with 2 layers of 6 mil polyethylene sheeting.
3. Wall surfaces not to be abated shall be covered with 2 layers of 6 mil polyethylene sheeting sealed with tape.
4. Entry and exit from Work Areas shall be through a 3 stage decontamination unit described in Worker Decontamination Enclosure Systems Article of this Section or as approved by AMC.
5. A pressure differential system shall be established that produces a minimum of 4 filtered air changes per hour in Work Area and maintains a pressure differential of 0.05 inch water gauge between the inside and outside of Work Area. The location and identification of each individual pressure differential ventilation unit shall be provided and approved by AMC for each Work Area. The pressure differential system shall not be exhausted into occupied areas of the building.

6. Contractor shall provide a manometer to monitor the pressure differential within Work Area. The manometer shall be placed at a location where it can be continuously monitored. The manometer shall be equipped with a strip chart recorder which runs continuously.

D. Roofing Material Removal Preparation:

1. Isolate the asbestos removal Work Area below with "ASBESTOS HAZARD" warning ribbon. In addition, signs meeting the specifications of Cal-OSHA General Industry Safety Order Section 1529 shall be posted at approaches to locations where airborne concentrations of asbestos may exceed ambient background levels.
2. Prior to the start of any Work on the roof, prepare the surrounding area below by clearing and cleaning debris and trash up to 15 feet from the exterior walls.
3. Seal duct Work intakes and exhaust vents within the regulated Work Area with 6 mil polyethylene sheeting and duct tape.
4. Place a layer of 6 mil, polyethylene sheeting drop cloth at the base of the wall below the roof to be removed. Extend the drop cloth out 15 feet from the exterior wall.
5. Entry and exit from Work Areas shall be through a 3 stage decontamination unit described in Worker Decontamination Enclosure Systems Article of this Section or as approved by AMC.

3.6 WORKER DECONTAMINATION ENCLOSURE SYSTEMS

- A. Worker decontamination enclosure systems shall be provided where workers shall enter or exit the asbestos removal Work Areas, and shall be located inside the building.
- B. Plans for construction, including materials and layout, shall be submitted and approved by AMC prior to Work initiation. Worker decontamination enclosure systems constructed at Project Site shall use 6 mil opaque black or white polyethylene sheeting or other acceptable materials for privacy. Detailed descriptions of portable, prefabricated units, if used, shall be submitted to AMC for approval. Plans shall include floor plans, with dimensions, materials, size, thickness, plumbing, and electrical utilities.

- C. The worker decontamination enclosure system shall consist of at least a clean room, a shower room, and an equipment room, each separated from the other by curtained doorways.
- D. Entry to and exit from decontamination enclosure system chambers shall be through curtained doorways consisting of 2 sheets of overlapping polyethylene sheeting. One sheet shall be secured at the top and left side, the other sheet at the top and right side. Both sheets shall have weights attached to the bottom to ensure that they hang straight and maintain a seal over the doorway when not in use. Doorway designs, providing equivalent protection and acceptable to AMC, may be used.
- E. Pathways into (from clean to contaminated) and out of (contaminated to clean) Work Area shall be clearly designated.
- F. The clean room shall be sized to adequately accommodate Work crew. The clean room shall also provide shelves for storing respirators and a location for posting notices.
- G. The equipment room shall be used for storage of equipment and tools. A walk-off pan shall be located in Work Area just outside the equipment room for workers to clean off foot coverings after leaving Work Area and to prevent excessive contamination enclosure system. A drum lined with a labeled 6 mil polyethylene bag for collection of disposable clothing shall be located in this room. Contaminated footwear (e.g., rubber boots, other reusable footwear) shall be stored in this area for reuse the following workday.

3.7 EMERGENCY EXITS

- A. Emergency exits shall be established and clearly marked with duct tape arrows or other effective designations to permit easy location from anywhere within Work Area. Secure emergency exits to prevent access from uncontaminated areas and still permit emergency exiting. Properly seal emergency exits with 6 mil polyethylene sheeting that can be cut to permit egress, if needed. These exits may be the worker decontamination enclosure, the waste pass-out airlock, and other alternative exits satisfactory and in compliance with local fire regulations. Where emergency exits are sealed, an instrument capable of cutting the polyethylene barrier shall be installed on both sides of the barrier, to allow for immediate exit from Work Area in the event of an emergency.

3.8 MAINTENANCE OF WORKPLACE BARRIERS

- A. Following completion of the construction of polyethylene barriers and decontamination system enclosures, adequate settling time shall be required to ensure that barriers shall remain intact and secured to walls and fixtures before beginning actual abatement activities.
- B. Visually inspect barriers at the beginning of each Work period or shift.
- C. Repair damage and defects in the enclosure system immediately upon discovery.
- D. At any time during the abatement activities after barriers have been erected, if visible material is observed outside of Work Area or if damage occurs to barriers, Work shall immediately stop, repairs made to barriers, and debris and residue cleaned up using appropriate HEPA-vacuuming and wet-mopping procedures.

3.9 WORKPLACE ENTRY AND EXIT PROCEDURES

- A. General: The following procedures shall be followed prior to entrance into any regulated asbestos Work Area:
 - 1. Personnel who enter Work Area shall sign the entry log upon entry and exit.
 - 2. Personnel, before entering Work Area, shall read and be familiar with posted regulations, personal protection requirements (including Workplace entry and exit procedures), and emergency procedures.
 - 3. Personnel shall wear appropriate respiratory protection and disposable coveralls, head covering, and foot covering. Hard hats, eye protection, and gloves shall also be used, as required. Provide clean respirator filter cartridges and protective clothing for use by each person for each separate entry into Work Area.
 - 4. Personnel wearing designated personal protective equipment shall proceed to Work Area.
 - 5. To exit Work Area personnel shall proceed to the equipment room where they shall remove protective equipment, except respirators, and deposit disposable clothing into appropriately labeled containers for disposal.
 - 6. Clothing or footwear worn into a regulated Work Area shall not be permitted out of the regulated Work Area.

7. Store reusable and contaminated footwear in the equipment room when not in use in Work Area. Upon completion of abatement, footwear shall be disposed of as asbestos-contaminated waste. (Rubber boots may be decontaminated at the completion of the abatement for reuse).

B. Resilient Flooring, Mastic Removal Work Area Entry, and Exit Procedures:

1. Asbestos handlers involved in resilient flooring and mastic removal procedures shall wear 2 disposable Tyvek suits, including hood and footwear, and appropriate respiratory protective equipment. Hard hats, eye protection, and gloves shall also be used as required. Clean respirators and protective clothing shall be provided and used by each person for each separate entry into Work Area.
2. The double layer personal protective equipment shall be used throughout the procedure if a decontamination unit with a shower room is not contiguous to Work Area. Upon exiting Work Area and entering the change room, the worker shall HEPA vacuum and wet clean the outer suit and dispose of it as asbestos-contaminated waste. Workers shall then proceed to an operational 3 stage decontamination unit to remove and dispose of the second suit, shower, and change into street clothes.

C. Drywall, Compound, and Tape Removal Work Area Entry and Exit Procedures:

1. Asbestos handlers involved in drywall, compound, and tape removal procedures shall wear disposable Tyvek suits, including hood and footwear, and appropriate respiratory protective equipment. Hard hats, eye protection, and gloves shall also be used as required. Clean respirators and protective clothing shall be provided and used by each person for each separate entry into Work Area.
2. Upon exiting Work Area and entering the change room, the worker shall remove protective equipment except respirator and place disposable protective clothing in a proper waste bag. The worker shall then proceed to the shower where the respirator may be removed. Following proper showering, the worker shall proceed to the clean room and change into street clothes.

D. Roofing Material Removal Work Area Entry and Exit Procedures:

1. Asbestos handlers involved in roofing material removal procedures shall wear 2 disposable Tyvek suits, including hood and footwear, and appropriate respiratory protective equipment. Hard hats, eye protection, and gloves shall also be used as required. Clean respirators and protective clothing shall be provided and used by each person for each separate entry into Work Area.
2. The double layer personal protective equipment shall be used throughout the procedure if a decontamination unit with a shower room is not contiguous to Work Area. Upon exiting Work Area and entering the change room, the worker shall HEPA vacuum and wet clean the outer suit and dispose of it as asbestos-contaminated waste. Workers shall then proceed to an operational 3 stage decontamination unit to remove and dispose of the second suit, shower, and change into street clothes.

3.10 ASBESTOS REMOVAL PROCEDURES

A. Contractor shall coordinate Work activities with Engineer.

B. General:

1. Work Area shall be cleaned and isolated in conformance with the procedures specified in Asbestos Abatement Preparation Procedures Article of this Section.
2. Waste containers shall be sealed when full. Bags shall not be overfilled. Bags shall be securely sealed to prevent accidental opening and leakage by tying the tops of bags in an overhand knot or by taping in gooseneck fashion. Bags shall not be sealed with wire or cord.
3. Large components removed intact may be wrapped in 2 layers of 6 mil polyethylene sheeting secured with 2 inch wide duct tape for transport to a landfill.
4. Asbestos-containing or contaminated waste with sharp-edged components shall be placed into 55 gallon steel drums for disposal.
5. Waste bags shall be evacuated of air employing HEPA-filtered vacuums prior to double-bagging and disposal.

C. Resilient Flooring and Mastic Removal Procedures:

1. Asbestos-containing flooring materials shall be sprayed with amended water or chemical remover, as appropriate, using spray equipment capable of providing a low-pressure application. If chemical removers are used, follow manufacturer's written instructions. Solvent vapors shall be exhausted in a manner that does not create a fire hazard, health hazard or nuisance, and complies with applicable SCAQMD regulations.
2. The wetted asbestos flooring material shall be removed using methods to minimize the breakup of the material. As it is removed, the material shall be packed in polyethylene bags of 6 mil minimum thickness and placed in labeled containers for transport. Material shall not be allowed to dry out prior to placement into the container.
3. Contractor shall adhere to disposal authorities' size and weight requirements for containers (bags or packages).
4. ACM or asbestos-contaminated material that has been bagged or wrapped in Work Area shall not be allowed to accumulate; bagged or wrapped material shall be removed from Project Site or placed in a Contractor supplied dumpster at the end of each Work day. The dumpster shall be marked with asbestos warning signs, and shall be secured continually when not in use.
5. Dispose of asbestos containing material in conformance with Disposal Procedures Article of this Section.
6. Cleanup shall proceed in conformance with Cleanup Procedures Article of this Section.
7. After Work Area surfaces have been rendered free of visible residues, a thin coat of an approved encapsulating agent shall be applied to seal in invisible residue.

D. Drywall, Compound, and Tape Removal Procedures:

1. Asbestos-containing drywall, compound and tape shall be sprayed with amended water using spray equipment capable of providing a low-pressure application.
2. The wetted drywall, compound, and tape shall be removed using methods to minimize the breakup of the material. As it is removed, the material shall be packed in polyethylene bags of 6 mil minimum thickness and placed in labeled containers for transport. Material shall not be allowed to dry out prior to placement into the container.

3. Contractor shall adhere to disposal authorities' size and weight requirements for containers (bags or packages).
4. ACM or asbestos-containing material that has been bagged or wrapped in Work Area shall not be allowed to accumulate; bagged or wrapped material shall be removed from Project Site or placed in a Contractor-supplied dumpster at the end of each Work day. The dumpster shall be marked with asbestos warning signs, and shall be secured continually when not in use.
5. Dispose of asbestos containing material in conformance with Disposal Procedures Article of this Section.
6. Cleanup shall proceed in conformance with Cleanup Procedures Article of this Section.
7. After Work Area surfaces have been rendered free of visible residues, a thin coat of an approved encapsulating agent shall be applied to seal in invisible residue.

E. Roofing Material Removal Procedures:

1. Roofing material shall be manually removed after spraying with amended water (unless wetting the material poses a slipping hazard). Material shall remain wet continually during removal operations. No visible emissions shall be allowed during removal.
2. The asbestos-containing material shall be removed in small sections. As it is removed, the material shall be encapsulated before packing in double polyethylene bags of 6 mil minimum thickness, and placed in labeled containers for transport. Material shall not be allowed to dry out prior to placement into the disposal container.
3. Contractor shall adhere to disposal authorities' size and weight requirements for containers (bags or packages).
4. No asbestos-containing material shall be allowed to drop or free-fall to the ground. Chutes for conveying asbestos-containing roofing material off the roof shall be sealed.
5. Dispose of asbestos containing material in conformance with Disposal Procedures Article of this Section.

6. Cleanup shall proceed in conformance with Cleanup Procedures Article of this Section.
7. After Work Area has been rendered free of visible residues and after passing visual inspection by AMC, a thin coat of an approved encapsulating agent shall be applied to seal in invisible residue.

F. Transite Pipe Materials Removal Procedures:

1. Workers removing transite pipes shall wear full Tyvek suits, half-face air purifying respirators equipped with N- or P-100 filters, hard hats, boots, eye protection, and gloves.
2. The transite pipes shall be removed intact and wrapped in 6-mil polyethylene sheeting.
3. Cleanup shall proceed in conformance with Cleanup Procedures Article of this Section.
4. Dispose of asbestos-containing/contaminated waste in conformance with Disposal Procedures Article of this Section.

3.11 WASTE CONTAINER PASS-OUT PROCEDURES

A. Waste container pass-out procedures shall use 2 teams of workers:

1. The inside team, wearing appropriate protective clothing and respirators for inside Work Area, shall clean the outside, including bottoms, of properly labeled containers (bags, drums, or wrapped components) using HEPA vacuums and wet-wiping techniques. No worker from the inside team shall exit Work Area through the waste container pass-out system.
2. Bagged asbestos waste materials shall be placed in a second 6 mil polyethylene waste disposal bag, or drum, respectively, as it is passed out of Work Area. External surfaces shall be clean and caution labels placed on the outside of the containers in conformance with 8 CCR 1529 and 29 CFR 1926.1101.
3. The outside person, wearing appropriate personal protection, shall transfer the waste containers to the disposal storage vehicle. The exit from this airlock shall be secured to prevent unauthorized entry.
4. AMC shall be notified in advance of waste container movement through the waste container pass-out system.

3.12 CLEANUP PROCEDURES

A. General:

1. Visible accumulations of ACM and asbestos-contaminated debris shall be removed and containerized using nonmetallic tools (squeegees, shovels, and the like.). Surfaces in Work Area shall then be wet cleaned.
Equipment used in Work Area shall be included in the cleanup, and shall be removed from Work Areas via the decontamination enclosure system or waste load-out, at appropriate times in the cleaning sequence.
2. None of the procedures described in this Article relieve Contractor of the responsibility to meet the final clearance criteria as established by this Section.

B. Resilient Flooring and Mastic Cleanup Procedures:

1. Windows, doors, and HVAC vents shall remain sealed, and any HEPA-filtered pressure differential systems, waste load-out, and decontamination enclosure systems shall remain in service.
2. Work Area and any other contaminated areas shall be cleaned using HEPA-filtered vacuum equipment and wet-wiping techniques. After completion of the cleaning operation, a complete visual inspection of Work shall be conducted with AMC to ensure that Work Area is free of visible asbestos debris. A final check shall be made for asbestos debris, and further cleaning shall be conducted as necessary.
3. Upon completion of the cleaning operation, Contractor shall notify AMC that Work Area is ready for review and clearance air monitoring. Work Area shall be cleaned until it passes Clearance Air Monitoring Standard.
4. Upon notification from AMC that Work Area has passed the standard for clearance air monitoring, (if applicable) Contractor shall proceed with the demolition of Work Area.

C. Drywall, Compound, and Tape Cleanup Procedures:

1. Windows, doors, and HVAC vents shall remain sealed, and any HEPA-filtered pressure differential systems, waste load-out, and decontamination enclosure systems shall remain in service.

2. Work Area and any other contaminated areas shall be cleaned using HEPA-filtered vacuum equipment and wet-wiping techniques. After completion of the cleaning operation, a complete visual inspection of Work Area shall be conducted with AMC to ensure that Work Area is free of visible asbestos debris. A final check shall be made for asbestos debris, and further cleaning shall be conducted as necessary.
3. Upon completion of the cleaning operation, Contractor shall notify AMC that Work Area is ready for review and clearance air monitoring. Work Area shall be cleaned until it passes Clearance Air Monitoring Standard.
4. Upon notification from AMC that Work Area has passed the standard for clearance air monitoring, (if applicable) Contractor shall proceed with the demolition of Work Area.

D. Roofing Material Removal Cleanup Procedures:

1. Any polyethylene drop cloths or polyethylene sheeting used to seal air vents shall be wet-wiped to remove any visible roofing material debris. Each drop cloth shall then be rolled-up and placed within a 6 mil polyethylene waste disposal bag.
2. Work Area and any other contaminated areas shall be cleaned of visible debris with HEPA-filtered vacuum equipment. Any roofing mastics adhering to non-asbestos surfaces may be "touched-up" using a solvent-based mastic remover.
3. After completion of the cleaning operation, a complete visual inspection of Work Area shall be conducted with AMC to ensure that Work Area is free of visible asbestos debris. A final check shall be made for asbestos debris and further cleaning conducted as necessary.
4. Upon completion of the cleaning operation, Contractor shall notify AMC that Work Area is ready for review and clearance air monitoring. Work Area shall be cleaned until it passes Clearance Air Monitoring Standard.
5. Upon notification from AMC that Work Area has passed the standard for clearance air monitoring, (if applicable) Contractor shall proceed with the demolition of Work Area.

3.13 CLEARANCE AIR MONITORING

- A. After completion of cleanup operations, Contractor shall notify AMC that Work Areas are ready for clearance air monitoring. Final clearance sampling shall be conducted only after the procedures specified in Cleanup Procedures Article of this Section have been completed, the area has been satisfactorily cleaned and encapsulated, and the abatement area has been thoroughly dried.
- B. AMC shall conduct the final clearance air monitoring by collecting and analyzing air samples using the methods set forth in NIOSH Method 7400.
- C. Clearance of Work Area shall be achieved when each sample taken within the contained Work Area indicates airborne fiber concentrations of less than 0.01 fibers per cubic centimeter, as determined by phase contrast microscopy.
- D. Any abatement area not achieving clearance shall be re-cleaned using procedures specified in Cleanup Procedures Article of this Section, and retested until clearance is achieved. The cost of any additional samples, consultant air monitoring fees, and labor for recleaning Work Areas that fail final air clearances shall be paid for by Contractor.

3.14 DISPOSAL PROCEDURES

- A. As Work progresses, to prevent exceeding available storage capacity on Project Site, sealed and labeled containers of asbestos-containing waste shall be removed and transported to the prearranged disposal location.
- B. Unless other arrangements are made satisfactory to Engineer, bagged or wrapped material shall be removed from Work Areas and placed in a Contractor-supplied dumpster at a minimum every day. The dumpster shall be marked with asbestos warning signs and shall be locked continually when not in use. When a dumpster is full, it shall be removed from Department property by the end of the next business day.
- C. Disposal shall occur at an authorized site, in conformance with regulatory requirements of National Emissions Standards for Hazardous Air Pollutants (NESHAP) and applicable state and local guidelines and regulations, including California State Department of Health Services, Toxic Substances Control Division.
- D. Dump receipts, trip tickets, transportation manifests, or other documentation of disposal shall be delivered to Engineer and AMC for their records.

3.15 TRANSPORTATION TO THE LANDFILL

- A. Once drums, bags, and wrapped components have been removed from Work Area, they shall be transported in an enclosed vehicle or container at sole cost and expense of Contractor.
- B. The enclosed cargo area of the truck shall be free of debris and lined with 6 mil polyethylene sheeting to prevent any waste or contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the sidewalls. Wall sheeting shall be overlapped and taped into place.
- C. Drums shall be placed on level surfaces in the cargo area and packed tightly together to prevent shifting and tipping. Large structural components shall be secured to prevent shifting, with bags placed on top. Containers shall not be thrown into the truck cargo area.
- D. Any debris or residue observed on containers or surfaces outside of Work Area resulting from cleanup or disposal activities shall be immediately cleaned up using HEPA-filtered vacuum equipment or wet methods as appropriate.

3.16 DISPOSAL AT THE LANDFILL

- A. Bags, drums, and components shall be inspected as they are off-loaded at the disposal site. Material in damaged containers shall be repacked in empty drums or bags, as necessary.
- B. Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out of trucks (weight of wet material could rupture containers).
- C. Following the removal of containerized waste, the truck cargo area shall be decontaminated using HEPA vacuums or wet methods to meet the no visible residue criteria. Polyethylene sheeting shall be removed and discarded, along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site.

3.17 ALTERNATIVE PROCEDURES

- A. The procedures described in this Section shall be used continually.
- B. If specified procedures cannot be used, a request shall be made in writing to Engineer providing details of the problem encountered and recommended alternatives.

- C. Alternative procedures shall provide equivalent or greater protection than the procedures that they replace.
- D. Any alternative procedure shall be approved in writing by Engineer prior to implementation.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Insurance, permits, notifications, incidentals, and other miscellaneous requirements necessary to perform abatement of damaged lead-based paint (LBP) and LBP contaminated materials located within Project Site limits including its removal, transportation, and disposal as required by federal, state, and local requirements and statutes.
- B. For Drawing No. 1-3502, Pacific Edge Engineering, Inc. has prepared the Environmental Assessment for the CFS Building Demolition and Lot Conversion at Berths 208-209. The report is included in the bid package.
- C. For Drawing No. 1-3571, Citadel EHS has prepared the Environmentally Regulated Materials (ERM) Survey Report Pre-Demolition Asbestos and Lead Survey for StarKist Plant 4. The report is included in the bid package.
- D. For Drawing No. 1-3573, California Asbestos Consultants has prepared the Pre-Demolition Lead/Asbestos Survey for the former Southwest Marine Administration Building. The report is included in the bid package.
- E. For Drawing No. 1-3574, Apex Companies, LLC has prepared the Asbestos, Lead Based Paint, and Polychlorinated Biphenyls Survey Report for Former Southwest Marine Facility - Compressor Building and Recommendations for PCB Dust, Window Putty Removal and Lead Based Paint Stabilization of Concrete Floor Former Southwest Marine Facility Compressor Building. The reports are included in the bid package.

1.2 RELATED SECTIONS

- A. Section 02 41 16 - Structure Demolition
- B. Section 02 82 13 - Asbestos Abatement

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Asbestos Abatement and Lead Remediation bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. 8 CCR 1532.1 - Lead.

- B. 8 CCR 3203 - Injury and Illness Prevention Program.
- C. 8 CCR 3220 - Emergency Action Plan.
- D. 8 CCR 3221 - Fire Prevention Plan.
- E. 8 CCR 5216 - Lead.
- F. 17 CCR Division 1, Chapter 8 - Accreditation, Certification and Work Practices for Lead-Based Paint and Lead Hazards.
- G. 29 CFR 1910.1020 - Access to employee exposure and medical records.
- H. 29 CFR 1910.1025 - Lead.
- I. 29 CFR 1910.1200 - Hazard communication.
- J. 29 CFR 1926.62 - Lead.
- K. 49 CFR 172 - Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans.
- L. 49 CFR 178 - Specifications for Packaging.
- M. ANSI/ASSP Z9.2 - Fundamentals Governing the Design and Operation of Local exhaust Ventilation Systems.
- N. ANSI/ISEA Z87.1 - American National Standard Occupational and Educational Personal Eye and Face Protection Devices.
- O. ANSI/ISEA Z89.1 - American National Standard for Industrial Head Protection.
- P. ASTM F2412 - Standard Test Methods for Foot Protection.
- Q. ASTM F2413 - Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear.
- R. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.
- S. UL 586 - High Efficiency, Particulate, Air Filter Units.

1.5 DEFINITIONS

Abatement: Procedures to control release from lead-containing material. Includes removal, encapsulation, enclosure, repair, demolition, and renovation activities.

Abatement Activities: Activities from the initiation of work area preparation through certification by PEM that the area is clean based on visual inspection and clearance criteria.

Abatement Area: An area where lead removal or other abatement procedures are being performed; an abatement area is considered a contaminated area between the time preparation begins to the time the area meets the clearance standards.

Air Lock: A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area.

Air Monitoring: The process of measuring the lead content of a specific volume of air collected during a stated period of time.

Air Sampling Professional: The professional contracted or employed to supervise air monitoring and analysis schemes. This individual is also responsible for recognition of technical deficiencies in worker protection equipment and procedures during both planning and on-site phases of an abatement project. Acceptable air sampling professionals include industrial hygienists, environmental engineers, and environmental scientists with equivalent experience in lead air monitoring and worker protection.

Department of Health Services must certify air-sampling professionals working in the State of California.

Ambient Air Monitoring: Measurement or determination of airborne lead concentrations outside the abatement area, but in the general vicinity of Project Site.

Amended Water: Water to which a surfactant has been added.

Authorized Visitor: A person approved by PEM, representatives of Engineer, or representatives of any regulatory or other agency having jurisdiction over Project.

Baseline Monitoring: A measurement or determination of lead concentrations for Work Area prior to the start of abatement activities.

City: Refer to GENERAL CONDITIONS Section for definition.

Clean or Decontaminate: To make a surface free of lead dust by thoroughly HEPA-vacuuming or wet cleaning with sponges or mops.

Clean Room: A non-contaminated area or room that is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment.

Construction Barrier: A fixed or movable barrier that is 8'-0" in height consisting of 3-5/8 inch metal studs 26 gage framed at 16 inches on center with 5/8 inch Type X gypsum board screwed on exterior side. Tape and spackle sharp edges. Brace as necessary.

Contained Work Area: A Work Area that has been isolated, plasticized, and equipped with a decontamination enclosure system.

Contractor: Refer to GENERAL CONDITIONS Section for definition.

Critical Barrier: Individually seal ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, convectors, speakers, and any other opening into Work Area with two layers, independently sealed, of 6 mil polyethylene sheeting and duct tape. Maintain seal until work including project decontamination is completed.

Curtained Doorway: A portal that allows ingress or egress from one room to another while permitting minimal air movement between the two rooms. It is typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway, securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite vertical side of the doorway. Other effective designs shall be permissible on approval by PEM.

Department: Refer to GENERAL CONDITIONS Section for definition.

Disturb: To alter, change, or strip LBP during activities such as, but not limited to, removal, encapsulation, enclosure, or repair.

Encapsulant (Sealant): Material that can be applied to other solid material to reduce the possible release of lead from the solid material by creating a membrane over the surface.

Encapsulation: A procedure to coat or saturate material with an encapsulant to control the possible release of lead into the ambient air.

Engineer: Refer to GENERAL CONDITIONS Section for definition.

Entry/exit logbook: Logbook that records the name, affiliation, time in and time out for each entry into Project Site.

Equipment Room: A room that is part of the worker decontamination enclosure system with provisions for storage of contaminated clothing and equipment.

Fixed Items: Walls, ceilings, floors, equipment, furniture, or other objects that cannot be removed from the abatement area.

HEPA Filter: A high-efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97 percent of particles greater than 0.3 micron in size and meeting requirements of UL 586.

HEPA-Filtered Vacuum: A vacuum cleaner designed for and equipped with a HEPA filter.

Isolation: The sealing of openings into a Work Area with critical barriers, isolation barriers, and plasticizing.

Isolation Barrier: The containing of a Work Area by installing 2 layers of 6 mil plastic sheeting, mechanically supported, totally isolating Work Area from adjacent non-Work Areas. Openings into Work Area larger than 32 square feet with any one dimension greater than four feet shall be framed sixteen inches on center with nominal 2-inch by 4-inch wood studs or 3-5/8 inch 26 gage metal studs.

Lead-Based Paint: Any paint containing more than or equal to 600 ppm or 0.07 mg/cm² of lead.

Log: An official record of activities that occurred during Project. It shall identify PEM, Contractor, and workers and shall contain other Project documentation as required by law or requested by PEM.

Movable Object: A piece of equipment or furniture in Work Area that can be removed from Work Area.

Outside Air: The air outside buildings and structures.

Plasticize: To cover floors, walls and other structural elements of a Work Area with 6 mil plastic sheeting as herein specified with seams securely taped.

Pressure Differential System: A portable exhaust system equipped with HEPA filtration. The system shall be capable of maintaining a minimum pressure differential of minus 0.05 inch of water gage in a Work Area relative to adjacent areas and make 1 complete air filtration every 15 minutes in Work Area.

Project Environmental Manager (PEM): PEM shall act as agent for Department as final authority concerning technical matters of lead abatement requirements.

Removal: The stripping of any LBP from surfaces of components of a facility.

Replacement Material: Any material that does not contain lead and that is used to replace LBP.

Shower Room: A room between the clean room and the equipment room in the worker decontamination enclosure having hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination.

Surface Barriers or Protective Coverings: The placement of sheet plastic on the walls, floors, and other fixed objects within the abatement area to prevent contamination from subsequent work.

Wet Cleaning: The process of eliminating lead contamination from building surfaces and objects by using cloths, mops, or other cleaning tools that have been dampened with water and afterwards disposing of the cleaning tools as lead contaminated waste.

Work Area: A location in which LBP has been designated for abatement under Contract.

Worker Decontamination Enclosure System: A decontamination system consisting of a clean room, a shower room, and an equipment room separated from each other and from Work Area by curtained doorways. It is used for worker exits from Work Area and for equipment and materials leaving the area.

1.6 NOTIFICATIONS AND PERMITS

A. Contractor shall make required written notifications or applications to regulatory agencies including the following:

1. California Division of Occupational Safety and Health (Cal-OSHA):

- a. Notification shall be in conformance with Section 1532.1 of Title 8 of California Code of Regulations.
2. Local or facility agencies as applicable.
- B. Contractor shall obtain and pay for permits required for work of this Section.

1.7 SUBMITTALS

- A. Prior to commencement of lead abatement work, submit to Engineer 1 copy (3 ring bound) of the following documentation:
 1. Submit copies of written notifications to regulatory agencies, including:
 - a. California Division of Occupational Safety and Health (Cal-OSHA) Temporary Job-Site Notification.
 2. Submit copies of waste hauler's Hazardous Waste Transporter Registration and Environmental Protection Agency Acknowledgement of Notification of Hazardous Waste Activity.
 3. A written LBP abatement work plan identifying removal procedures, LBP debris handling procedures, LBP debris cleanup and disposal procedures.
 4. A bar chart schedule for LBP abatement work indicating mobilization, Work Area preparation, LBP removal, clearance, and demobilization dates for each building.
 5. Shop drawings of worker decontamination enclosure system.
 6. Manufacturer's certification that HEPA vacuums, differential pressure air filtration devices and other local exhaust ventilation equipment conform to ANSI/ASSP Z9.2.
 7. South Coast Air Quality Management District certifications for HEPA vacuums, differential pressure air filtration devices, and other local exhaust ventilation equipment to be used on Project Site.
 8. Manufacturer's product data and Safety Data Sheets (SDS) for chemical products to be used on Project Site.
 9. Identification of Project's lead abatement supervisor who meets the requirements of 29 CFR 1926.62, 29 CFR 1910.1025, and 8 CCR 1532.1 and is experienced in administration and supervision of LBP abatement projects, including work practices, protective measures for building and personnel, and disposal procedures.

10. Documentation that Contractor's employees performing LBP removal, disposal, and air sampling operations have received training in conformance with 29 CFR 1926.62, 29 CFR 1910.1025, and 8 CCR 1532.1.
 - a. Provide training certification prior to the start of work involving LBP abatement, for Contractor's workers, supervisors, and Competent Persons. Training shall meet the requirements of 29 CFR 1926.62, 29 CFR 1910.1025, and 8 CCR 1532.1. Provide training prior to the time of Project assignment and, at least, annually.
 - b. Training may cover abatement methods or focus only on those methods specified in LBP Management Plan. Project specific training shall, at a minimum, include the following:
 - 1) An employee's right to access to records as required by 29 CFR 1910.1020.
 - 2) The specific nature of the operation that could result in exposure to lead.
 - 3) Purpose, proper selection, fitting, use, and limitations of respirators.
 - 4) Purpose and description of the medical surveillance program and the medical removal protection program described in 8 CCR 1532.1, including information concerning the adverse health affects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant).
 - 5) Relevant engineering controls and good work practices.
 - 6) The contents of any compliance plan in effect.
 - 7) Instructions that chelating agents shall not routinely be used to remove lead from their bodies and shall not be used except under the direction of a licensed physician.

11. Documentation from a physician that employees or agents who may be exposed to airborne lead in excess of background levels have received medical monitoring in conformance with 29 CFR 1926.62 to determine whether employees or agents are physically capable of working while wearing the respirator required without suffering adverse health affects. Contractor shall be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g. high temperatures, humidity, and chemical contaminants) that may impact on the employee's or agent's ability to perform work activities.
12. Documentation from a physician that employees or agents who may be exposed to lead contaminated dust have received a comprehensive medical examination as required by 29 CFR 1926.62 and 29 CFR 1910.1200 and shall receive continued medical surveillance, including biological monitoring, as required by 29 CFR 1926.62 and 29 CFR 1910.1200 and by the State and local regulations pertaining to such work. Records shall be retained, at Contractor's sole cost and expense, in conformance with 29 CFR 1910.1020.
13. Documentation of respirator fit testing for Contractor employees and agents who must enter Work Area. This fit testing shall be in conformance with qualitative procedures as required by OSHA regulations or be quantitative in nature.
14. Manufacturer's documentation and certification of National Institute For Occupational Safety And Health (NIOSH) approvals for respiratory protective devices utilized on site, including manufacturer's certification of NIOSH approval of respirator cartridges (organic vapor, acid gas, mist, dust, high efficiency particulate) and HEPA filtration capabilities for cartridges, filters, and HEPA vacuum systems.

15. Identification of the independent testing laboratory (name, address, and telephone number) selected to perform analysis of personal air samples and TCLP analysis. Documentation shall be provided that the laboratory selected to perform the analysis is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and is rated proficient in NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT), including accreditation for heavy metal analysis. The documentation shall list experience relevant to the analysis of lead in air and include a Quality Assurance and Quality Control Program. Currently, American Association for Laboratory Accreditation (AALA) and American Industrial Hygiene Association (AIHA) are EPA recognized laboratory accreditors. Documentation shall also be provided that the laboratory is certified by California Department of Health Services.
 16. Contractor's Project Site specific Fire Prevention Plan that complies with 8 CCR 3221.
 17. Contractor's Injury/Illness Prevention Program that complies with 8 CCR 3203.
- B. Upon completion of LBP abatement activities, submit to Engineer documentation that includes, without limitation, the following:
1. Work area entry/exit logbook. Logbook shall record name, affiliation, time in and time out for each entry into Project Site.
 2. SDS for solvents, encapsulant, wetting agents and replacement materials, as necessary.
 3. OSHA required personal exposure air monitoring results.
 4. Accident/incident reports where injury or damage has occurred on or to Port's property.
 5. Hazardous waste manifests, non-hazardous waste data forms, trip tickets, and disposal receipts for lead waste materials removed from Work Area within 24 hours of the transport. Send to Engineer.

1.8 QUALITY ASSURANCE

A. Required Licensure:

1. Contractor shall be licensed by State of California and Contractors State License Board.
 2. Transportation of LBP Materials: Contractor shall itself be, or have a subcontractor that is, a registered hazardous waste transporter with State of California, Department of Toxic Substances Control.
- B. Work specified in this Section shall be performed by persons knowledgeable, qualified, and trained in the removal, treatment, handling, and disposal of LBP, and the subsequent cleaning of the affected environment. These persons shall comply with federal, state, and local regulations and mandated work practices, and shall be capable of performing Work in Contract.
- C. Work shall be supervised by experienced persons trained, knowledgeable and qualified in the techniques of lead abatement, removal and subsequent cleaning of contaminated areas, transportation, and disposal of lead-containing waste.
- D. Work shall conform to the standards set by applicable federal, state, and local laws, regulations, ordinances, and guidelines including but not limited to the references listed in References Article of this Section and specified in this Section.

1.9 RESTRICTED HOURS OF WORK AND ACCESS

- A. Work Hours: Lead abatement and related Work activities shall be performed Monday through Friday between the hours of 8 a.m. and 4:30 p.m. unless otherwise approved by Engineer.

1.10 EMERGENCY PLANNING

- A. Develop emergency planning and procedures in conformance with 8 CCR 3220.
- B. Emergency procedures shall be in written form and prominently posted. Contractor shall ensure that persons entering Work Area read these procedures and understand Project Site layout, location of emergency exits, and emergency procedures.
- C. Emergency planning shall include considerations of fire, explosion, electrical hazards, slips, trips and falls, confined spaces, and heat related injury. Written procedures shall be developed and employee training in procedures shall be provided by Contractor.

- D. Employees shall be trained in evacuation procedures in the event of Work place emergencies.
 - 1. For non-life-threatening situations, employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting Work place to obtain proper medical treatment.
 - 2. For life-threatening injury or illness, worker decontamination shall take least priority. After measures to stabilize the injured worker, remove the injured worker from Work place and secure proper medical treatment.
 - 3. Telephone numbers of emergency response personnel shall be prominently posted in the clean and equipment rooms.

1.11 PROJECT ENVIRONMENTAL MANAGER (PEM) SERVICES

- A. Department shall contract with an independent, third party PEM to perform the services as specified in this Section. PEM shall handle technical matters relating to lead abatement requirements. PEM's responsibilities shall include but not be limited to:
 - 1. Participate in pre-Project and weekly progress meetings.
 - 2. Review and recommend to Engineer for approval, Contractor submittals, proposed methods for establishing contained Work Areas, decontamination enclosure system and differential pressure system as well as equipment to be used.
 - 3. Review, and recommend to Engineer for approval, proposed methods and procedures for abatement Work.
 - 4. Discuss, and report to Engineer, potential problems arising from the use of methods and procedures agreed upon or not at pre-project meeting.
 - 5. Visually observe the progress of Work activities, including but not necessarily limited to:
 - a. Verify warning signs and warning barriers are posted in appropriate locations.
 - b. Verify daily that Contractor's employees have met training requirements and disallow entry for workers who do not meet or cannot prove qualifications.

- c. Verify contained Work Area and decontamination enclosure system are installed in accordance with approved design.
 - d. Verify agreed upon abatement methods and procedures are being followed.
 - e. Report to Engineer and notify Contractor of unacceptable methods and procedures or unacceptable results of Contractor.
 - f. Report to Engineer if Contractor fails to correct unacceptable methods and procedures or unacceptable results.
 - g. Conduct periodic reviews of isolation and critical barriers to determine if they are complying with the general direction of Specifications.
 - h. Report to Engineer if Contractor varies from agreed upon or specified scope of Work, schedule and/or Work force.
 - i. Verify that damages caused during the performance of Work are acceptably repaired.
 - j. Verify materials delivered to Project Site are those approved or specified for use on Work.
 - k. Verify that Contractor performs OSHA required personnel air monitoring.
6. For purposes of Project, "unacceptable methods and procedures, and unacceptable results" shall mean methods and results other than:
- a. Those recommended by the manufacturer of the approved products and materials.
 - b. Those required by pertinent regulations of governmental agencies having jurisdiction.
 - c. Those required by this Section and those agreed upon at pre-Project meeting.
7. Failure of PEM to notice unacceptable methods and procedures or unacceptable results during the progress of Work shall not absolve Contractor from responsibility to complete Work in conformance with the specified requirements and agreed methods.
8. Provide laboratory testing and ensure that the laboratory shall handle and analyze air samples in conformance with applicable standards.

- a. Contractor shall furnish power, either temporary or generator, for PEM to collect sufficient air samples.
9. Perform pre-abatement environmental air monitoring prior to Work Area preparation to establish ambient air baseline fiber concentrations.
10. Perform lead surface wipe samples as described in Department of Housing and Urban Development (HUD) Title X and 17 CCR Division 1, Chapter 8. Lead surface wipe samples shall meet the following minimum clearance criteria (sample results shall be reported in micrograms of lead per square foot of surface area):
 - a. Floors: Below 50 ug/sf
 - b. Window Sills: Below 250 ug/sf
 - c. Window Troughs and Exterior Concrete: Below 800 ug/sf
11. If, at any time, Engineer or PEM decides that Work practices are violating Specifications, or State, federal, or local regulations to the extent of potential endangerment of building users, workers, Department employees, or the public, Engineer shall immediately notify Contractor that operations shall cease until corrective actions are taken by Contractor. Written confirmation shall follow within 24 hours of the verbal notice. Contractor shall take such corrective actions before proceeding with Work. Loss or damage due to Stop Work Order(s) shall be Contractor's responsibility. A Stop Work Order, issued by Engineer or PEM shall become effective immediately. Abatement Work shall not recommence until authorized by Engineer.
12. Upon completion of the abatement portion of Project, PEM shall submit a comprehensive report (Job Book) covering activities performed under this Section.

1.12 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in the original packages, containers, or bundle bearing the name of the manufacturer, brand name (where applicable), and model. Polyethylene sheet in a roll size shall be delivered to Project Site with factory label indicating 6 mil.
- B. Handle and store materials in conformance with manufacturer's written instructions.

- C. Protect materials from moisture and extremes of hot and cold.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General:

1. Plastic, spray-on strippable coatings, and structural materials used shall be UL-certified as fire retardant or non-combustible.
2. Polyethylene sheeting utilized for worker decontamination and barriers shall be black or opaque in color and shall be a minimum of 6-mil in thickness. Polyethylene shall be fire retardant.
3. Disposal bags used for lead-waste shall be doubled 6-mil polyethylene, with labels as required by 29 CFR 1926.62 and 8 CCR 5216. Tie wraps for bags shall be plastic, 5 inches long minimum, pointed, and looped to secure filled bags.
4. Stick-on labels in conformance with US EPA or Cal-OSHA requirements for disposal drums.
5. Warning signs as required by 8 CCR 1532.1, 8 CCR 5216, and 29 CFR 1926.62 shall be used during lead abatement activities.

B. Removal and Encapsulation:

1. Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in proportion of 1 fluid ounce to 5 gallons.
2. Where called for, trisodium phosphate shall mean a 5 percent solution of trisodium phosphate in water.

C. Replacement:

1. Replacement materials shall be lead-free and suitable for the intended application.

2.2 EQUIPMENT

A. General:

1. A sufficient quantity of HEPA vacuums and differential pressure air filtration devices equipped with HEPA filtration and operated in conformance with ANSI/ASSP Z9.2 (local exhaust ventilation requirements). To calculate total air flow requirement:

$$\text{Total ft}^3/\text{min} = \text{Vol. of Work Area (in ft}^3\text{)} / 15 \text{ min}$$

To calculate the number of units needed for the abatement:

$$\text{Number of units needed} = [\text{total ft}^3/\text{min}] / [\text{capacity of unit in ft}^3/\text{min}]$$

2. Use half-face air-purifying respirators equipped with HEPA filters during removal of LBP.
3. Respirators shall be furnished to the abatement workers by Contractor. Respirators shall have been tested and approved by National Institute of Occupational Safety and Health (NIOSH) for use in lead contaminated atmospheres.
4. Contractor shall provide full body disposable protective clothing, including head, body, and foot coverings to abatement workers and visitors in sizes adequate to accommodate movement without tearing.
5. Additional safety equipment (e.g. hard hats meeting the requirements of ANSI/ISEA Z89.1 eye protection meeting the requirements of ANSI/ISEA Z87.1, safety shoes meeting the requirements of ASTM F2412 and ASTM F2413, protective gloves [rubber, leather, single use latex as appropriate for work conditions]), as necessary, shall be furnished to workers and authorized visitors.
6. Non-skid footwear shall be furnished to abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
7. Furnish a sufficient supply of disposable mops, rags, and sponges for Work Area decontamination.

B. Removal:

1. A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, and the like) shall be furnished as needed.
2. Rubber dustpans and rubber squeegees shall be furnished for cleanup.
3. Brushes utilized for removing loose LBP shall have nylon or fiber bristles. Metal bristles shall not be utilized.
4. A sufficient supply of HEPA filtered vacuum systems shall be furnished during cleanup.

C. Enclosure:

1. Use hand tools equipped with HEPA filtered local exhaust ventilation during the installation of enclosures and supports if there is any need to disturb LBP during this process. As an alternative, LBP may be partially removed following controlled removal procedures approved by Engineer or PEM.

PART 3 - EXECUTION

3.1 COMMENCEMENT OF WORK

A. Work shall not commence until the following items have been completed:

1. Enclosure systems have been constructed and tested.
2. At least one 3-stage decontamination unit with shower facility is operational.
3. Pressure differential systems are functioning adequately.
4. Pre-abatement submissions, notifications, and permits have been provided.
5. Equipment for abatement, cleanup, and disposal are on hand.
6. Worker training, medical examination, and respirator fit testing (and certification) is completed.
7. Contractor receives permission from Engineer to commence abatement.

3.2 NOTICES AND POSTINGS

- A. Post in the clean room area of the worker decontamination enclosure a list containing the names, addresses, and telephone numbers of Contractor, lead abatement supervisor, Engineer, PEM, and emergency contact numbers.
- B. Post at Project Site a list of persons authorized to enter Work Area.
- C. Additional postings shall include:
 - 1. Visitor entry and exit log.
 - 2. Employee daily sign in/out log.
 - 3. Work area entry and exit procedures.
 - 4. Emergency procedures.
 - 5. One copy of Cal-OSHA Construction Safety Orders.

3.3 WORK AREA SECURITY

- A. Work area shall be restricted only to authorized, trained and protected personnel, including Contractor, Contractor's employees, Engineer, PEM, state, and local inspectors.
- B. Entry into Work Area by unauthorized individuals shall be reported immediately to Engineer.
- C. Access to Work Area shall be through a worker decontamination system located at the designated entrance to the area. Other means of access shall be locked or blocked by the erection of drywall, plywood, or particle board barriers so as to prevent entry to or exit from Work Area, except for emergency exits which shall not be locked from the inside but shall be sealed with polyethylene sheeting and tape until needed.
- D. Contractor shall be responsible for Project site security during abatement operations in order to protect work efforts and equipment.

3.4 FIRE PROTECTION

- A. Prepare a site specific written Fire Prevention Program in conformance with 8 CCR 3221.

- B. Plastic, spray-on strippable coatings and structural materials used in the lead abatement process shall be UL approved and certified as fire retardant or noncombustible when tested in conformance with NFPA 701.
- C. Combustible rubbish and debris, including properly bagged lead shall be properly disposed of at the end of each working day.
- D. A minimum of one 4A/60BC dry-chemical extinguisher shall be maintained at each of the following locations:
 - 1. At each corner of Work Area. Where no clear corners exist, four extinguishers shall be placed around the exterior wall of Work Area so that they are approximately 25 percent of the total distance apart.
 - a. Exception: Where the total abatement containment area is less than 1,000 square feet, provide two 4A/60BC extinguishers. Extinguishers shall be clearly identified with red tape.
 - 2. Contractor shall ensure that on site personnel are aware of the location and proper use of extinguishers and other fire and life safety equipment.
- E. Maintain fire and life safety information in Project log.
- F. A statement shall be prepared at the conclusion of each workday, signed by Contractor, confirming that a survey of Project Site has been made and that any unsafe fire and life safety conditions have been rectified.
- G. Any work requiring open flame shall require a fire watch standing by with a 2A/60BC extinguisher until completion of said open flame work.
- H. Existing fire detection, alarm systems, connections and standpipes shall remain in place, active and unobstructed. Any alteration to this equipment shall be approved by Engineer.

- I. Existing fire alarm manual pull boxes, fire department communication jacks, and signaling systems shall be maintained in place and active. The foregoing items shall be clearly marked with signs containing lettering that is a minimum of 3-inch by 2-inch wide on a contrasting background. If the foregoing items are covered by plastic, each device shall be surrounded by a square of red duct type tape. In addition, a cutting device, also surrounded by red tape, shall be kept immediately adjacent to the device.
- J. Existing sprinkler systems shall remain active. Sprinkler heads may be covered with a thin, 0.003 inch or less, plastic bag during abatement only so as to avoid their contamination.
- K. Fire rated partitions, doors, and other fire cutoffs shall not be temporarily or permanently modified without the approval of Engineer.
- L. Provide a single switch or set of switches for the emergency shutdown of negative air equipment located in the containment area. This switch or set of switches shall be for emergency use by the fire department personnel.
Locate the switches in a non-contaminated area near the clean exit of the decontamination station, and clearly identify using a sign with a minimum 3-inch by 2-inch lettering on a contrasting background. The sign shall read as follows: "NEGATIVE AIR MASTER SHUT OFF."
- M. The lead abatement process shall not cause a building to have an amount of exiting less than that required for the existing occupant load. In cases where the required exiting must be obstructed, an alternate means of exiting shall be provided as approved by Engineer. Maintain a minimum of 2 clearly marked exits from each floor during the abatement process. The second exit from a containment area may be covered with plastic upon PEM's approval. If this occurs, the covered exit shall be outlined with red duct tape, and a cutting device shall be kept immediately adjacent to the door in an obvious and readily accessible location. The cutting device shall also be surrounded by a square of red tape as described above.
- N. The following shall apply in containment areas greater than 1,000 square feet:
 - 1. Provide 5 Tyvek type protective entry suits, rated for use in a lead containment area, for each containment site. Suits shall be extra large and shall be kept in a separate, clearly identified, readily accessible container near the clean exit from the decontamination area. These suits shall be for the exclusive use of emergency personnel.

3.5 LEAD ABATEMENT PREPARATION PROCEDURES

A. LBP abatement workers shall be provided with the following:

1. A clean changing area.
2. Shower facilities with hot and cold running water.
3. Proper respiratory protection.
4. Proper decontamination and personal hygiene requirements.
5. Training on the health hazards of lead exposure including ingestion of lead-contaminated food.

B. Exterior Abatement Work Area Preparation:

1. Prepare a lead control area by placing lead warning tape around the removal area. Place warning tape a sufficient distance away from the removal area to allow persons who are not properly trained or who are not wearing personal protective equipment to avoid the contaminated area.
2. Install remote worker decontamination unit described in Worker Decontamination Enclosure Systems Article of this Section or as agreed upon with Engineer.
3. Lead abatement handlers shall don personnel protective equipment as required in Equipment Article of this Section.
4. HEPA vacuum surfaces below for a distance of 3 feet in every direction from the intended building component to be abated.
5. Place 6-mil polyethylene sheeting on the ground as close as possible to the foundation, or the exterior floors (i.e., deck or porch) when applicable.
6. Extend plastic sheeting out from the foundation 5 feet per story being abated, with a minimum of 5 feet and a maximum of 20 feet.
7. Weight down the polyethylene sheeting at the foundation, and along every edge and seam.
8. Do not perform exterior LBP removal on days when the constant wind speed is 15 mile per hour or over. If the removal procedure is producing dry waste in which visible movement along polyethylene sheeting is evident erect vertical shrouds around the perimeter of Work Area.

9. Perform LBP removal in conformance with Lead Removal Procedures Article of this Section.

C. Interior Work Area Preparation:

1. Prepare a lead control area by placing lead warning tape around the removal area. Place warning tape a sufficient distance away from the removal area to allow persons who are not properly trained or who are not wearing personal protective equipment to avoid the contaminated area.
2. Install remote worker decontamination unit described in Worker Decontamination Enclosure Systems Article of this Section or as agreed upon with Engineer.
3. Lead abatement handlers shall don personnel protective equipment as required in Equipment Article of this Section.
4. HEPA vacuum loose LBP chips for a distance of 3 feet in every direction from the intended component to be abated.
5. Construct walls and a floor with 1 layer of 6-mil polyethylene sheeting sealed with 2-inch wide duct tape. The containment shall be sealed so as to be made airtight. Alternately, a glovebag may be attached to the component to be abated, as long as the glovebag completely encloses the area to be abated in an airtight manner.
6. Perform LBP removal in conformance with Lead Removal Procedures Article of this Section.

3.6 WORKER DECONTAMINATION ENCLOSURE SYSTEMS

- A. The following 3-stage decontamination system shall be used when placing the decontamination unit directly adjacent to a regulated Work Area is not feasible:
1. Worker decontamination enclosure systems shall be provided at a location near or adjacent to removal areas. As a minimum, 1 system at a single location is required.
 2. Worker decontamination enclosure systems constructed at Project site shall utilize 6-mil black or opaque polyethylene sheeting, or other approved materials for privacy.
 3. Personnel decontamination unit shall not be located inside Work Area unless otherwise authorized by PEM or Engineer.

4. Worker decontamination enclosure system shall consist of at least a clean room, an equipment room, and a shower room, each separated from the other and from Work Area by flaps comprised of 3 sheets of 6-mil polyethylene sheeting.
5. Clean rooms shall be sized to adequately accommodate Work crew. Space for storing respirators shall be provided in this area. Clean work clothes, clean disposable clothing, replacement filters for respirators, towels and other necessary items shall be provided in adequate supply at the clean room. Posting of notices shall also be in this area.
6. Shower rooms shall contain at least a Hudson sprayer for washing the workers hands, face, and respirator. Shower enclosure shall be constructed to ensure against leakage of any kind. Shower water shall be drained, collected and either filtered through a system with at least 0.5 to 1.0 micron particle size collection capability or disposed of as contaminated waste.

3.7 EMERGENCY EXITS

- A. Emergency exits shall be established and clearly marked with duct tape arrows or other effective designations to permit easy location from anywhere within Work Area. Secure emergency exits to prevent access from uncontaminated areas and still permit emergency exiting. Properly seal emergency exits with 6-mil polyethylene sheeting that can be cut to permit egress, if needed. These exits may be the worker decontamination enclosure, the waste pass-out airlock, and other alternative exits satisfactory and in compliance with local fire regulations. Where emergency exits are sealed, an instrument capable of cutting the polyethylene barrier shall be installed on both sides of the barrier, to allow for immediate exit from the Work Area in the event of an emergency.

3.8 MAINTENANCE OF WORKPLACE BARRIERS

- A. Following completion of the construction of polyethylene barriers and decontamination system enclosures, adequate settling time shall be required to ensure that barriers shall remain intact and secured to walls and fixtures before beginning actual abatement activities.
- B. Visually inspect barriers at the beginning of each work period or shift.
- C. Repair damage and defects in the enclosure system immediately upon discovery.

- D. At any time during the abatement activities after barriers have been erected, if visible material is observed outside of Work Area or if damage occurs to barriers, Work shall immediately stop, repairs made to barriers, and debris and residue cleaned up using appropriate HEPA-vacuuming and wet-mopping procedures.

3.9 WORKPLACE ENTRY AND EXIT PROCEDURES

- A. General: The following procedures shall be followed prior to entrance into any regulated lead Work Area:
 - 1. Personnel who enter Work Area shall sign the entry log upon entry and exit.
 - 2. Personnel, before entering Work Area, shall read and be familiar with posted regulations, personal protection requirements (including workplace entry and exit procedures), and emergency procedures.
 - 3. Personnel shall wear appropriate respiratory protection and disposable coveralls, head covering, and foot covering. Hardhats, eye protection, and gloves shall also be used, as required. Provide clean respirator filter cartridges and protective clothing for use by each person for each separate entry into Work Area.
 - 4. Personnel wearing designated personal protective equipment shall proceed to Work Area.
 - 5. To exit Work Area, personnel shall proceed to the equipment room where they shall remove protective equipment, except respirators, and deposit disposable clothing into appropriately labeled containers for disposal.
 - 6. Clothing or footwear worn into a regulated Work Area shall not be permitted out of the regulated Work Area.
 - 7. Store reusable and contaminated footwear in the equipment room when not in use in Work Area. Upon completion of abatement, footwear shall be disposed of as lead-contaminated waste. (Rubber boots may be decontaminated at the completion of the abatement for reuse).

3.10 LEAD REMOVAL PROCEDURES

- A. Contractor shall coordinate Work activities with Engineer.

- B. Prior to the start of Work, Contractor shall submit to Engineer or PEM a Project Site specific Work plan detailing LBP removal methods to be utilized and measures to prevent the release of LBP contaminated materials to soil, water, air, and other environmental media as required in Submittals Article of this Section.
- C. Current federal, state, and local regulations do not require the removal of tightly adhered LBP materials prior to renovation or demolition of buildings; however, any loose, chipped, peeling, blistering, or otherwise damaged LBP shall be removed and disposed of conforming to this Section.
 - 1. LBP shall be removed and disposed within 12 inch of any cuts made by welding torches in conformance with this Section.
- D. Remove LBP from surfaces using methods that reduce the amount of airborne lead particulate generated and the amount of waste for disposal. Manual scraping of the paint back to an adhered edged of paint is the preferred method, however, water blasting with water/debris containment is also acceptable.
 - 1. If water blasting of the damaged LBP is performed, Contractor shall contain water and paint chip waste in a polyethylene trough. Remove large paint chips using a filter. Place water in a "Baker" tank to allow the lead waste to settle out. Water can then be pumped out into the sanitary sewer. Place debris in the bottom of the tank into bags and drums for proper disposal.
- E. For health and safety reasons, the following LBP removal methods shall not be used:
 - 1. Chemical removal methods that produce liquid waste that is regulated under present United States Environmental Protection Agency, RCRA, state and local hazardous waste regulations, unless approved by Engineer or PEM.
 - 2. Burning of LBP with an open flame torch, or equivalent method that shall generate airborne lead fumes and particles.
 - 3. Dry sanding LBP with an abrasive electric or air powered sander without HEPA vacuum filtration equipment.
 - 4. Un-contained water blasting.

- F. LBP waste shall be promptly placed in either 6-mil polyethylene bags or U.S. DOT-approved 55 gallon steel drums. Debris shall not be allowed to remain on the ground longer than 60 minutes during exterior removal.

3.11 WASTE CONTAINER PASS-OUT PROCEDURES

- A. Waste container pass-out procedures shall utilize 2 teams of workers:
 - 1. The inside team, wearing appropriate protective clothing and respirators for inside Work Area, shall clean the outside, including bottoms, of properly labeled containers (bags, drums, or wrapped components) using HEPA vacuums and wet-wiping techniques. No worker from the inside team shall exit Work Area through the waste container pass-out system.
 - 2. The outside person, wearing appropriate personal protection, shall transfer the waste containers to the disposal storage vehicle. The exit from this airlock shall be secured to prevent unauthorized entry.
 - 3. PEM shall be notified in advance of waste container movement through the waste container pass-out system.

3.12 CLEAN-UP PROCEDURES

- A. After LBP is removed from specified building components, Contractor shall clean walls, floors, ceiling, and other surfaces and remove any "settled" lead dust and debris. The following procedures shall be used:
 - 1. HEPA vacuum surfaces in Work Area including woodwork, walls, windows, window wells, and floors. Start at the ceiling and work down, cleaning the floors last.
 - 2. Wash surfaces in Work Area with a solution containing 5 percent trisodium phosphate (TSP). Prepare solution using hot water. Workers shall use towels, sponges, and mops to clean surfaces including areas that had been covered with polyethylene sheeting. Cleaning shall start at the ceiling and work down to the floors. A new solution of TSP and water shall be mixed, as the water becomes dark.
 - 3. Discard items used for cleaning (towels, sponges, rags, mop heads, and the like) in a plastic bag for later disposal into steel drums.
 - 4. After the surfaces have dried, HEPA vacuum surfaces a second time, ensuring that no dust or residue can be seen.

3.13 LEAD-RELATED CLEARANCE TESTING

- A. Lead surface wipe samples shall meet the following minimum clearance criteria (sample results shall be reported in micrograms of lead per square foot of surface area):
 - 1. Floors: Below 50 ug/sf
 - 2. Window Sills: Below 250 ug/sf
 - 3. Window Wells and Exterior Concrete: Below 800 ug/sf
 - 4. If these conditions are not met, then the decontamination is incomplete, and the cleaning procedures noted in Article 3.9 of this Section shall be repeated. The area shall be re-tested at no additional cost to Department until satisfactory levels are obtained.
 - 5. Department may, at its discretion, perform environmental air sampling utilizing a low volume sampling train and a 3-piece 0.8 um MCE cassette. Environmental air samples shall be taken adjacent to Work boundary or lead control area. Contractor shall control lead levels outside Work boundary or lead control area so that the airborne lead level does not exceed 30 micrograms per cubic meter of air at any time.

3.14 DISPOSAL PROCEDURES

- A. Maintain surfaces within the lead control area free of accumulations of paint chips and dust. Restrict the spread of dust and debris. Keep waste from being disturbed over Work Area. Do not dry sweep or use compressed air to clean up the area. When LBP removal operation has been completed, clean the area of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner or wet mopping the area.
- B. Dispose of disposable personnel protective equipment, respirator cartridges, and HEPA vacuum filters upon completion of Work shift and when LBP removal operation has been completed.
- C. Place removed LBP, lead-contaminated clothing and equipment, and lead-containing dust and debris into a US DOT approved (49 CFR 178) 55-gallon drum.
- D. Properly label each LBP drum to identify the type of waste in conformance with 49 CFR 172 and the date lead-contaminated wastes were first put into the drum.

- E. Contractor shall make provisions for the safe storage of waste on site for waste characterization and eventual disposal. For health and safety reasons, waste storage areas shall be treated as lead control areas with restricted access.
- F. LBP waste or lead-contaminated waste shall be characterized by performing a soluble threshold limit concentration (STLC) test prior to disposal. Results indicating 5 parts per million or more shall be disposed of as Resource Conservation Recovery Act (RCRA) regulated hazardous waste.

3.15 TRANSPORTATION TO THE LANDFILL

- A. Once drums, bags, and wrapped components have been removed from Work Area, they shall be transported in an enclosed vehicle or container at sole cost and expense of Contractor.
- B. The enclosed cargo area of the truck shall be free of debris and lined with 6-mil polyethylene sheeting to prevent any waste or contamination from leaking or spilled containers. Install floor sheeting first and extend up the sidewalls. Overlap and tape wall sheeting into place.
- C. Place drums on level surfaces in the cargo area and packed tightly together to prevent shifting and tipping. Secure large structural components to prevent shifting, with bags placed on top. Containers shall not be thrown into the truck cargo area.
- D. Immediately clean up debris or residue observed on containers or surfaces outside of Work Area resulting from cleanup or disposal activities using HEPA-filtered vacuum equipment or wet methods as appropriate.

3.16 DISPOSAL AT THE LANDFILL

- A. Inspect bags, drums, and components as they are off-loaded at the disposal site. Re-pack material in damaged containers in empty drums or bags, as necessary.
- B. Place waste containers on the ground at the disposal site, not pushed or thrown out of trucks (weight of wet material could rupture containers).
- C. Following the removal of containerized waste, decontaminate truck cargo area using HEPA vacuums or wet methods to meet the no visible residue criteria. Remove and discard polyethylene sheeting, along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site.

3.17 OSHA PERSONNEL AIR MONITORING

- A. Contractor shall perform air monitoring required by OSHA for lead exposure. Contractor shall provide daily OSHA compliance monitoring in conformance with 29 CFR 1926.62 and 8 CCR 1532.1.
 - 1. At a minimum, Contractor shall conduct representative (25 percent of crew) breathing zone personal air monitoring of its employees twice each shift and repeated daily.
 - 2. Monitoring shall be conducted by a qualified professional experienced and knowledgeable about the methods of air monitoring and in conformance with 29 CFR 1926.62 and 8 CCR 1532.1.
 - 3. Monitoring results and appropriate laboratory analysis work shall be submitted to Engineer or PEM within 24 hours of the monitoring Work.

3.18 ALTERNATE PROCEDURES

- A. If specified procedures cannot be utilized, a request shall be made in writing to Engineer providing details of the problem encountered and recommended alternatives.
 - 1. Alternative procedures shall provide equivalent or greater protection than procedures that are replaced.
 - 2. Any alternative procedure must be approved in writing by Engineer prior to the implementation of the procedure.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Repair materials for damaged galvanizing

1.2 RELATED SECTIONS

- A. Section 05 12 02 - Structural Steel
- B. Section 05 50 00 - Metal Fabrications
- C. Section 09 90 01 - Painting for Exterior Improvements
- D. Section 26 05 34 - Outlet, Junction, and Pull Boxes
- E. Section 26 05 41 - Rigid Galvanized Steel Conduit
- F. Section 32 31 13 - Chain Link Fences and Gates

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires treatment of damaged galvanizing.

1.4 REFERENCES

- A. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials shall be zinc-based alloys, zinc-rich paints, or sprayed zinc in conformance with ASTM A780/A780M.
- B. The following product is acceptable: Carbozinc 859 VOC manufactured by Carboline Company, (314) 644-1000 or (800) 848-4645.
- C. Products shall be in compliance with South Coast Air Quality Management District (SCAQMD) regulations.
- D. Materials shall comply with City of Los Angeles Green Building Code requirements.

1. Enter product data in VOC Content Verification Checklist form and provide product specification sheets. Make checklist and specifications available to City of Los Angeles Department of Building and Safety inspector through Engineer upon request. VOC Content Verification Checklist can be found here: https://www.ladbs.org/docs/default-source/forms/green-building-2023/grn_2_voc_content_verification_checklist-01.17.23.pdf?sfvrsn=19f4c153_10

PART 3 - EXECUTION

3.1 REPAIR

- A. Repairs shall be in conformance with ASTM A780/A780M and manufacturer's latest material safety data sheet instructions.
- B. Coating thickness shall be a minimum of 3.0 mils in dry film thickness.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Structural steel Work

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 05 12 24 - Structural Steel Tests and Inspections
- C. Section 09 90 01 - Painting for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires structural steel.

1.4 REFERENCES

- A. 8 CCR 1710 - Structural Steel Erection.
- B. ASME B18.21.1 - Washers: Helical Spring-Lock, Tooth Lock, and Plain Washers (Inch Series).
- C. ASTM A6/A6M - Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling.
- D. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
- E. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- F. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- G. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- H. ASTM A435/A435M - Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates.
- I. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

- J. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- K. ASTM D962 - Standard Specification for Aluminum Powder and Paste Pigments for Paints.
- L. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength.
- M. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification.
- N. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- O. FS TT-V-81 - Varnish: Mixing, for Aluminum Paint.
- P. SSPC-SP 3 - Power Tool Cleaning.

1.5 QUALITY ASSURANCE

A. Welders' Qualifications:

1. Before assigning welders to Work, provide Engineer with certification that each welder employed on Work has passed qualification tests using procedures covered in AWS B2.1/B2.1M, Part 11 and is certified by City of Los Angeles Department of Building and Safety.
2. Contractor shall require welder to retake the test when Work of the welder creates a reasonable doubt as to proficiency.
3. Tests, when required, shall be conducted at no additional expense to Department. Recertification of the welder shall be made to Engineer only after the welder has taken and passed the required retest.
4. Coupons cut from location in joint may be required for testing.
 - a. Sections of welds found defective shall be chipped or cut out to base metal and re-welded before proceeding with Work.
 - b. Should 2 coupons cut from Work of welder show strengths, under test, less than that of the base metal, it shall be considered evidence of negligence or incompetence and such welder shall be permanently removed from Project Site.

- c. When coupons are removed from part of a structure, the members cut shall be repaired, at no additional cost to Department, in a manner with joints of type to develop the full strength of the member and joints cut, with peening as necessary or directed to relieve residual stress.
- B. Erection and bracing plan and procedure shall be in conformance with 8 CCR 1710 and City of Los Angeles Building Code. Employ and pay a State of California registered structural engineer to prepare an erection and bracing plan and erection procedure for structural steel, including columns, beams, and girders. Contractor's structural engineer shall be solely responsible for Code compliance. Keep a copy at Project Site as required by California Division of Industrial Safety. Submit 2 copies of stamped erection and bracing plan and procedure for record purposes only, not for review or approval.
- C. Certifications:
 - 1. Mill materials shall have heat and melt numbers with mill analyses and certified test reports.
 - 2. Provide test specimens required by testing laboratory.
- D. Conform to the requirements of American Institute of Steel Construction (AISC) Manual of Steel Construction as applicable.
- E. Materials shall comply with the current rules and regulations of the local air quality management district, with the rules regarding volatile organic compounds, and with Food and Drug Administration (FDA) rules and regulations for dangerous materials.
- F. Testing and inspections of structural steel are specified in STRUCTURAL STEEL TESTS AND INSPECTIONS Section.

1.6 SUBMITTALS

- A. A complete set of approved shop and erection drawings.
- B. Cutting lists, order sheet material bills, shipping bills, and mill test reports.
- C. Information as to the shipment of material to the shop.
- D. Representative sample pieces as requested by the testing agency.
- E. Full and ample means and assistance for testing material.

- F. Facilities, including scaffolding, temporary Work platforms for inspection of Work in the shop and field.
- G. Mill Test Reports:
 - 1. Submit certified copies of mill test reports for steel and high strength bolts furnished. Include the following:
 - a. Names and locations of mills and shops.
 - b. Analysis of chemical and physical properties of steel.
 - c. City of Los Angeles Research Report (LARR) number.
 - 2. In addition to the normal information, mill orders shall include American Society for Testing and Materials (ASTM International) specifications description, marking, and invoicing requirements. The mill shall be instructed to include the following markings. Markings may be of any of the means permitted by ASTM A6/A6M:
 - a. Mill order number.
 - b. Heat number.
 - c. Size.
 - d. Type and grade of material.
 - e. Color coded as specified.
- H. Shop Drawings:
 - 1. Submit detailed drawings showing grade of steel, identification marks or members, dimensions, size, weight, orientation, and location of each member, setting elevation of base plates and bearing plates, location, types, sizes and extent of welds, welding sequences; identify and show connections.
 - 2. Submit erection drawings and index sheets at same time as shop details. The use of Contract Drawings as erection drawings shall not be allowed.

3. Show and identify temporary members and connections which may be required for erection.
 4. Submit structural calculations for connections prepared by a State of California-registered professional engineer, for those connections not designed and detailed on Drawings.
 5. Submit proposed erection procedure including loads and details of erection equipment and temporary bracing.
 6. The details shall be prepared in such a way as to avoid having steel, connections, and bracing interfere with architectural features.
 7. Submit manufacturer's literature and certification that shop paint meets South Coast Air Quality Management District (SCAQMD) VOC requirements.
- I. Detail minor connections and fastenings not shown or specified to meet required conditions. Include detailed sequence plan for shop and field welding that minimizes locked-in stresses and distortions.
 - J. Erection Survey: Provide set of reproducible transparencies of Erection Survey.
 - K. Fabricator's test results.
 - L. Manufacturer's certification of filler metal for welding.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. General: Protect materials from damage during shipping, handling and storage on Project Site. Steel showing dents, creases, deformations, weathering, or other defects is not acceptable.
 - B. Deliver welding electrodes to Project Site in unbroken packages bearing the manufacturer's name and label identifying the contents.
- 1.8 FIELD CONDITIONS
- A. Take field measurements as required. Report to Engineer discrepancy between Drawings and field dimensions.
 - B. Protect floor slab and adjacent Work from damage. Do not overload floors. Use rubber tired equipment to handle and move steel. Do not place steel members directly on floor; use pads of timber or like material for cushioning.

- C. Provide temporary scaffolding and flooring for erection of structural steel or support of erection machinery. Conform use of temporary floors or steel decking to City of Los Angeles Building Code.
- D. Temporarily weld steel decking to supports where used as a working platform. Distribute concentrated loadings from welding machines to other heavy machinery with planking or equal. Replace decking damaged by use as a working platform at no additional cost to Department.

PART 2 - PRODUCTS

2.1 STRUCTURAL STEEL MATERIALS

- A. Refer to Structural Drawings for designation of types of steel. Steel shall conform to ASTM A36/A36M, unless shown otherwise on Drawings. Plates shall be furnished to qualify for ultrasonic examination in conformance with ASTM A435/A435M.
- B. Steel pipe shall be in conformance with ASTM A53/A53M, Grade B where used for structural purpose.
- C. Structural Tubing:
 - 1. Hot-formed shall be in conformance with ASTM A501/A501M.
 - 2. Cold-formed shall be in conformance with ASTM A500/A500M, Grade B, $F_y = 46$ ksi.
- D. Bolts and nuts shall be American National coarse-thread series.
 - 1. Unfinished bolts and nuts, anchors and fastening in conformance with ASTM A307.
 - 2. High-strength bolts and nuts shall conform to Specifications for Structural Joints, using ASTM F3125/F3125M Bolts.
 - 3. Shear Stud Connectors:
 - a. Conform to AWS D1.1/D1.1M. Shear connectors shall develop a minimum design value of 9.5 kips per connector with a minimum safety factor of 2.5.
 - b. Substitution of shear connectors with design shear capacity other than given above shall be acceptable, provided total horizontal shear capacity in a span of a beam or girder is unaltered.

- c. The arrangement and spacing of shear connector shall be subject to Engineer's review.
- 4. Washers:
 - a. Plain washers, other than those in contact with high-strength bolt heads and nuts shall conform to ASME B18.21.1.
 - b. Beveled washers shall be square, smooth, and sloped so that contact surface of bolt head and nut are parallel.
 - c. The diameter of hole of square-beveled washer shall be 1/16 inch greater than the bolt size for bolts larger than 1 inch.
 - d. Washers in contact with high-strength bolt heads and nuts shall be hardened washers in conformance with Specifications for Structural Joints using ASTM F3125/F3125M bolts.
 - e. Washers shall be installed on nut side of bolt for torquing as required.
- E. Filler metal arc-welding electrodes shall conform to requirements of AWS D1.1/D1.1M. Electrodes shall be as recommended by their manufacturers to suit the position of other conditions of actual use.
 - 1. Shielded metal arc-welding use E70 XX series.
 - 2. Submerged arc-welding use F7 series.

2.2 MISCELLANEOUS ITEMS

- A. Provide miscellaneous structural steel items and their related components required to complete Work. Provide in conformance with Drawings and Specifications. Such items include, but are not limited to, built-in items, leveling plates, anchors, bearing plates, base, reinforcing angles, straps, brackets, and hangers.
- B. Primer:
 - 1. Surfaces to be painted shall be primed as required in PAINTING FOR EXTERIOR IMPROVEMENTS Section.
 - 2. Surfaces to receive sprayed-fireproofing shall be primed compatible with fireproofing; approved and tested by fireproofing manufacturer.

3. Other surfaces shall be primed as required in PAINTING FOR EXTERIOR IMPROVEMENTS Section.

2.3 GENERAL FABRICATION REQUIREMENTS

- A. According to the approved submittals, reference standards as applicable. Fabricate and form Work to meet actual installation conditions verified at Project Site.
- B. Fabricate and assemble structural material in the shop to the greatest extent possible.
- C. Wire brush material, clean off loose mill scale and rust, and straighten by methods that shall not injure the steel prior to fabrication. Remove twists or bends after punching or working component parts of a member before the parts are assembled. Produce finished members free from twists, bends, or open joints when erected.
- D. Shearing, flame cutting, and chipping shall be done accurately. Sole plates of beams and girders shall have full contact with the flanges. Stiffeners shall be fitted between the flanges or girders, and, where tight fits are required to transmit bearing, the ends of stiffeners shall be milled or ground to secure an even bearing against the flanges. Splice plates and fillers under stiffeners shall fit within 1/8 inch of the flanges.
- E. Assembled pieces shall be taken apart, if necessary, for the removal of burrs and shavings produced by the reaming operation.
- F. Parts not completely bolted in the shop shall be secured by temporary bolts, insofar as practicable, to prevent damage in shipment and handling.
- G. Drilling, Punching, and Reaming of Holes: Hole burning to make or enlarge previous holes is allowed only with prior approval of Engineer. Prepare required holes in structural steel members for attachment or passage of Work of other trades. Where allowed, steel may be punched 1/16 inch larger than the nominal diameter of the bolt when the steel thickness is equal to or less than diameter of the bolt plus 1/8 inch. Where the steel is thicker than the diameter of the bolt plus 1/8 inch, the holes shall be drilled or sub-punched and reamed. Diameter of sub-punched holes, and the drill for sub-drilled holes, shall be 1/16 inch smaller than the nominal diameter of bolt to be installed. Precisely locate finished holes to ensure passage of bolts through steel assemblies without drifting. Enlarge holes only by reaming. Poor matching of holes is cause for rejection.

- H. Punch and drill or ream holes for anchor bolts in base and bearing plates. Do not make or enlarge the holes by burning except for grouting holes in column bases.
- I. Use of gas cutting torch is allowed where the metal being cut is not stressed during the operation, and provided stresses are not transmitted through a flame-cut surface. Make gas cuts with smooth regular contour. Deduct 1/8 inch from width of gas cut edges to determine effective width of member that is gas cut. Make radius of reentrant gas cuts as large as possible, but 1 inch minimum.
- J. Press or mill steel column base plates 4 inches thick or less for straight contact bearing between plate and column.
- K. Mill column and compression truss members and bearing stiffeners to give full bearing over the cross section. Plane contact surfaces of grillages and bearing plates. It is not necessary to plane bottom surfaces of plates or grillages on grout beds.

2.4 CONNECTIONS

- A. Whether shown on Drawings or not, the fabricator shall design required connections to safely resist shear, axial load, and moment given on Drawings.
- B. Where moment connections are indicated on Drawings, but moment values are not given, the connections shall be designed for full moment capacities of members. Connections of beams with no reaction or axial loads given on Drawings shall be made to conform to Specifications for Design, Fabrication and erection of Structural Steel for Buildings. Composite beam reaction shall be modified in accordance with Drawings.
- C. Connections for beams at columns shall have capacity for bracing force (axial load) given on Drawings (or determined at 2 percent of allowable axial load on column for unbraced floor to floor height) in addition to beam reactions.
Symmetrical connections shall be required here, unless it can be shown by calculations that 1 sided or eccentric type connection is adequate.
- D. Single shear plate type connections, may be permitted as an option at beam to beam connections resisting shear only.

- E. Bolted connections shall be made with high-strength bolts unless shown otherwise. Friction type bolts shall be required at lateral load resisting moment and braced frames. Unfinished bolts shall not be used except where indicated. Surface of joints for welded or high-strength bolted connections shall comply with the requirements of joint surfaces and contact surfaces within friction-type joints.
- F. Unless otherwise shown on Drawings, grade of connection material shall be same as that of connecting member, unless it can be shown by calculations that lower grade steel can be used.
- G. Where specific details are shown on Drawings, the alternate details proposed by the fabricator shall be accepted only at the discretion of Engineer.
- H. Unless shown otherwise on Drawings, the splices in columns or beams shall be made with complete penetration welds to develop full capacity of member locations and shall be subject to Engineer's review.
- I. Unless otherwise shown on Drawings, welds in built-up members shall be continuous and shall be designed to transfer stress caused by forces on members framing into the built-up members. Stiffeners inside box columns or at W shape columns may be required in conformance with AISC specifications section 1.15.5, unless specifically omitted on Drawings or if shown by calculations that stiffener can be omitted.

2.5 HOLES

- A. Cut, drill, or punch holes at right angles to the surface of the metal. Do not make holes or enlarge existing holes by burning.
- B. Holes in base or bearing plate shall be drilled.
- C. Provide holes in members to permit connecting Work of other trades.
- D. Holes shall be clean-cut without torn or ragged edges.
- E. Remove outside burrs resulting from drilling or reaming operations with a tool making a 1/16 inch bevel.

2.6 BOLTING

- A. General (Not including high-strength):
 - 1. Drive bolts into the holes without damaging the thread. Protect bolt heads from damage during driving.

2. Bolt heads and nuts shall rest squarely against the metal.
3. Where bolts are to be used on beveled surface having slopes greater than 1 to 20 with a plane normal to the bolt axis, beveled washers shall be provided to give full bearing to the head or nut.
4. Upset bolt threads to prevent the nuts from backing off.

B. Unfinished Bolts:

1. Unfinished bolts shall be of the length that shall extend through but no more than 1/4 inch beyond the nuts.
2. Bolt heads and nuts shall be drawing tight against Work.
3. Bolt heads shall be tapped with a hammer while the nut is being tightened. After having been finally tightened, bolt threads shall be upset to prevent the nuts from backing off.

C. High Strength Bolting:

1. Assemble joints in conformance with Specifications for Assembly of Structural Joints Using High Strength Steel Bolts, as approved by Research Council on Riveted and Bolted Structural Joints of Engineering Foundation.
2. Tighten bolts with impact wrenches to a torque not less than recommended for size of bolt.
3. Contact surface of joints shall be free of paint, lacquer, or other friction reducing coatings.

2.7 MISCELLANEOUS

- A. Load indicator washers as manufactured and licensed by Cooper and Turner or Bethlehem Steel may be used for the field installation of the high-strength bolts, as approved by City of Los Angeles Department of Building and Safety. Load indicator washers may not be substituted for required washer, but may be used in conjunction with the required washers. After bolts in a joint are snugged to bring the members into close contact, tightening shall progress from the most rigid part to the free edges until the load indicators on bolts are closed to the required gap of 0.015 inch under bolt heads or 0.010 inch under the nuts. Do not completely close the gap to prevent overtightening and damage to the bolts.

- B. Tension set or load indicator bolts, nuts, and washers as manufactured by Cold Form Specialties or Bethlehem Steel may be used for field installation of the high-strength bolts. In multi-bolt joints, the nuts shall be tightened in stages without breaking the spline in them until the final stage, to minimize slackening of the installed bolts.

2.8 WELDED CONNECTIONS

- A. Do not begin structural welding until joint elements are bolted or tacked in intimate contact and adjusted to dimensions shown, with allowance for weld shrinkage that is expected. Weld heavy sections and those having a high degree of restraint with low hydrogen type electrodes. No members are to be spliced without prior review by Engineer.
- B. Weld in conformance with AWS D1.1/D1.1M.
 - 1. Welds exposed to view shall have as-welded surfaces that are continuous, smooth, and uniform. Radii shall be true, and consistent from weld to weld. Finishing or grinding may be required where clearances or fit of other items may so necessitate.
- C. Perform intermittent welding, continuous welding, and straightening of built-up sections to minimize internal stresses. Built-up sections assembled by welding shall be free of warpage. Each axis shall have true alignment.
- D. Welds not specified shall be continuous fillet welds. Use minimum fillet in conformance with AWS.
- E. Clean surfaces to be welded of paint, grease, loose scale, and foreign matter. Clean welds each time electrode is changed or a new pass started. Chip clean burned or flame cut edges before depositing welds.
- F. Same electrode may be used with various thickness of plates, but change current used and number of passes made proportionately.
- G. After being deposited, brush welds with wire brushes. Welds shall exhibit uniform section, smoothness of welded metal, feather edges without undercuts or overlays, and freedom from porosity and clinkers. Visual inspection at edges and ends of fillets and butt joint welds shall indicate good fusion with penetration into base metal.

- H. During assembling and welding, keep parts straight and in close contact. Take precautions to minimize "lock-up" stress and distortion due to heat. Do not weld during windy conditions unless wind protection is provided. Cut-out and replace welds found defective.
- I. The maximum space between pieces or members to be butt welded shall not exceed 1/4 inch. Bevel pieces or members up to 3/8 inch thickness to form single or double "Vee" before being welded. Bevel pieces over 3/8 inch thickness to form a double "Vee" whenever possible. Lay and size fillet welds as shown. Measure only effective portion of fillet welds. Maximum space between pieces or member to be fillet welded shall not exceed 1/16 inch.
- J. At groove welds between thick plates or between plates and thick members (generally greater than 3 inches plates), preheating temperatures higher than AWS minimums may be required to prevent lamellar tearing or weld cracking. Peening of weld passes, except the root pass and last pass, may be required to prevent lamellar tear or weld cracking.

2.9 FINISHING

A. General:

1. Steel, painted, and unpainted iron materials furnished shall be cleaned of rust, scale, and grease.
2. Structural steel not to receive galvanized coating or spray-on fireproofing, shall be given 1 shop coat of an approved rust inhibitive metal primer. Cleaning method for painted steel shall conform to SSPC-SP 3.
 - a. Where steel is scheduled to be painted, paint in conformance with PAINTING FOR EXTERIOR IMPROVEMENTS Section.
3. Apply primer to give a dry film thickness of 2.5 mils, except as specified for zinc-rich coating option.
4. Paint after shop Work has been completed. Paint with brushes, entire surface to be covered smoothly, with paint worked into joints.
5. No material shall be loaded for shipment until primer is fully dry.
6. Work arriving at Project Site which has been carelessly primed or painted shall be cleaned and given an additional coat of paint before being erected, except finish Work which shall be exposed to view shall be returned to shop for recleaning and repainting.

- B. Steel surfaces in contact with aluminum shall receive an additional coat of paint consisting of 2 pounds of aluminum paste pigment (ASTM D962 Type II, Class B) per gallon of varnish meeting FS TT-V-81, Type II or equivalent.
- C. Galvanizing:
 - 1. Fabricated ferrous metal Work so specified shall be galvanized by hot-dip process, conforming to ASTM A123/A123M. Required hot-dip galvanizing shall be done after fabrication, in largest sections possible.
 - 2. Items too large for available dip tanks shall be sprayed by approved methods, with molten zinc to coating thickness of 0.003 inch to 0.004 inch. Weight of the zinc coating per square foot of actual surface shall average not less than 2 ounces, no individual specimen shall show less than 1.8 ounces.
 - 3. Shop galvanized metal Work necessitating field soldering or welding which removed original galvanizing shall be restored by field cold galvanizing with "Ferralloy", "Tim Easy Fluid", or "Galvaloy".
 - 4. Bolts and screws for attachment of galvanized items shall be galvanized, or of non-corrodible material.
- D. Finish painting in conformance with PAINTING FOR EXTERIOR IMPROVEMENTS Section.

PART 3 - EXECUTION

3.1 FIELD MEASUREMENTS AND TEMPLATES

- A. Secure field measurements required for fabrication and installation of Work.
- B. Furnish templates for exact location of items to be embedded under other Work, with setting instructions required for installation of embedded item.
- C. Verify conditions and measurements affecting Work at Project Site. Make sure that detrimental conditions are corrected before proceeding with installation.

3.2 ERECTION

- A. Contractor shall be responsible for the design, strength, safety, and adequacy of temporary bracing and methods of handling, erection, and sequencing of erection of Work.

B. During construction:

1. The stability of the frame during erection shall be Contractor's responsibility.
2. Vertical and horizontal temporary bracing may be required to diaphragm lateral forces to the lateral force resisting structural elements. Deviation from this recommended procedure is subject to Engineer's review.

C. Temporary erection facilities:

1. Provide temporary braces, guys, connections, supports, flooring, planking, Work platforms, scaffolding and other facilities necessary for the safe erection of Work, and the support and bracing of erection equipment.
2. As erection progresses, Work shall be connected to safely resist dead load, wind, and erection forces.
3. Temporary bracing shall be introduced wherever necessary to safely resist loads to which the structure may be subjected, including loads of erection equipment and its operation. Such bracing shall be left in place as long as may be required until, as a minimum, after the permanent structure is capable of resisting imposed loads.

D. Set base plates and bearing plates level to correct elevations and support temporarily on steel wedges, shims, leveling devices, or as shown on Drawings, until corresponding supported member has been positioned, plumbed and anchor-bolted. Do not grout column base plates until beams, girders, and trusses are permanently anchored to column.

E. Erect and install structural steel in conformance with the approved shop drawings.

F. Align, level, and adjust members prior to final fastening. Bearing surfaces and surfaces that shall be in permanent contact shall be cleaned prior to final assembly of members.

G. Fasten compression member splices only after abutting surfaces have been brought completely into contact. Clean bearing surfaces prior to final assembly of members.

H. Oxygen cutting in the field shall be done only with prior written permission of Engineer.

I. Bolted Field Connections at Supports:

1. Standard bolts shall be of a length that shall extend not less than 1/4 inch beyond the nuts. Enter bolts into holes without damaging the threads.
2. Correct poor matching of holes by drilling to next larger size and use of larger size bolt. Obtain written approval before proceeding with corrective Work.
3. For high-strength bolts, use specified pre-calibrated bolts or bolts with direct tension indicators; install bolts in conformance with manufacturer's written instructions, engaging both the bolt and the nut and driven until the torque control groove of the bolt shears off, or until the indicator element yields. Tensioning of group of bolts shall be done first to snug tight condition and subsequently in proper sequence to obtain required tension.

J. Field Welding:

1. Welding operations and the welds shall conform to the applicable provisions of AWS Code, as modified by UBC Standard 27-6, Structural Welding.
2. Each welder working on Project shall be assigned an identification symbol or mark. Each welder shall make or stamp his or her identification symbol at each completed make.
3. Allow for weld shrinkage so that welded connected members shall be aligned and level after completion of the welding Work.

K. Weld shear connectors to supports through decking units in conformance with manufacturer's written instructions. Do not weld shear connectors through 2 layers (lapped ends) of decking units. Weld only on clean dry deck surfaces. Space and align shear connectors as shown on Drawings.

L. Erection tolerances:

1. Dimensional tolerances as stated by AISC Code of Standard Practice Paragraph 6.4 and Frame tolerances as stated by AISC Code of Standard Practice Paragraph 11, shall be considered the minimum acceptable standard for structural framing members except that at elevator shafts, the cumulative tolerances of columns and beams around the shafts shall not exceed 1 inch toward the shaft.

2. On shop drawings submitted for review for architectural metal Work, exposed structural framing members or framing members designed to receive exposed architectural metal Work, Engineer may indicate closer tolerances, which shall be acceptable and binding upon Contractor.
- M. After erection, clean exposed surfaces of field connections, unpainted areas adjacent to field connections and damaged areas in shop coat to the same standards as required for the shop coat and paint with the same primer used in the shop coat.
- N. Survey:
1. Make a survey of actual column locations immediately upon the completion of every third tier of steel and promptly submit same to Engineer.
 2. Survey shall include tier below.
 3. Should column locations carry beyond the allowable tolerances, take necessary corrective measures and modify details or procedures as required and approved.
- O. Corrective Work:
1. Members or assemblages of Work having fabrication errors, or which exceed permissible tolerances, or which have errors or deformations preventing assembly and fitting of parts, shall be reported immediately to Engineer before incorporation in the finished Work.
 2. Such members or assemblages shall be corrected if permitted by Engineer, or otherwise shall be replaced.
 3. Submit drawings showing the errors and obtain Engineer's acceptance prior to performing any corrective Work.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Testing and inspecting structural steel Work.

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 05 12 02 - Structural Steel

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires testing and inspection of structural steel Work.

1.4 REFERENCES

- A. AISC 348 - Specification for Structural Joints Using High-Strength Bolts.
- B. ASTM A435/A435M - Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates.
- C. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength.
- D. AWS D1.1/D1.1M - Structural Welding Code - Steel.

PART 2 - PRODUCTS

2.1 SOURCE QUALITY CONTROL

- A. Source Quality Control:
 - 1. Tests are waived for steel identified by heat number, accompanied by mill analyses and mill test reports, and properly tagged with an Identification Certificate so as to be readily identified for conformance with applicable American Society for Testing and Materials (ASTM International) Standards.

2. Unidentified Materials:
 - a. Yield strength up through 36,000 pounds per square inch (psi): Make 1 set of tension tests and 1 set of bend tests for each 20 tons or part thereof of each heat.
 - b. Yield strength greater than 36,000 psi: Make 1 set of tension tests and 1 set of bend tests for each piece.
 - c. Additional tests may be required when deemed necessary by Engineer or City of Los Angeles Department of Building and Safety and shall be performed at no additional cost to Department.
3. Furnish certified copy of manufacturer's test reports stating that high strength bolts and heat-treated steel structural bolts meet the requirements of ASTM F3125/F3125M.
 - a. Department Testing Laboratory (Test Lab) shall take samples and test not less than 3 samples including nuts, bolts, and washers from each lot and each size of each lot.

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 1. Tests and inspections of structural steel Work performed by the fabricator shall be verified by Test Lab in conformance with requirements of Chapter 17 Special Inspections and Tests of International Code Council (ICC) and City of Los Angeles Building Code. Provide Test Lab with the submittals under STRUCTURAL STEEL Section. Allow Test Lab free access to places whether on or off Project Site where materials are stored or services are performed, and to Project Site during times of fabrication and erection.
 2. Each person installing connections shall be assigned an identifying symbol or mark and shop and field connections shall be so identified so that Inspector can refer to the person making the connection.

3. Testing and inspection by Test Lab shall include, but is not limited to, the following:
 - a. High strength bolts shall be continuously visually inspected. At least 10 percent of high-strength bolted connection shall be tested at random for bolt tightness using procedure described in AISC 348.
 - b. Shop and field welded connections shall be continuously visually inspected except for welding done in a City of Los Angeles Department of Building and Safety licensed shop. In addition, field and shop testing using ultrasonic or magnetic particle method shall be done as noted on Drawings.
4. Ultrasonic Shop Welding Inspection:
 - a. Material in the designated location shall be checked at the shop for internal imperfections by ultrasonic testing prior to fabrication, in conformance with ASTM A435/A435M. Defects found may be repaired by welding subject to Engineer's approval.
 - b. Complete penetration and partial penetrations shop welds in designated locations shall be ultrasonically tested.
 - c. Test Lab test reports shall include types and locations of defects found during inspections, and the measure required and performed to correct such defects, and statements of final approval of welding shop connections.
5. Ultrasonic Field Test Procedures:
 - a. Ultrasonic testing shall be performed conforming to AWS D1.1/D1.1M by a specifically trained, qualified technician, who shall operate the equipment, examine the weld and maintain a record of welds examined, defects found, and disposition of each defect. Defective welds shall be repaired and costs, including retesting of defective welds, shall be at sole cost and expense of Contractor.
 - b. Ultrasonic testing shall also be done in the vicinity of groove weld in moment connections and other weldments as designated on Drawings to detect lamellar tearing.
 - c. The ultrasonic instrumentation shall be calibrated by the technician to evaluate the quality of the weld in conformance with AWS D1.1/D1.1M.

- d. When ultrasonic indications arising from the weld root can be interpreted as either a weld defect or the backing strip, the backing strip shall be removed at sole cost and expense of Contractor and the weld retested. If no root defect is indicated on this retest and no significant amount of the base and weld metal has been removed, no further repair or welding shall be required. If a defect is indicated, it shall be repaired and retested as specified.
6. Testing by Fabricator:
- a. When mill reports identifying heat or melt numbers and analysis are not available, tension and bed tests of the materials may be required by Test Lab.
 - b. Test specimens shall be taken by the fabricator under the direction of Test Lab and shall be machined by Test Lab to dimension as required by the related applicable standard ASTM specifications.
7. Field welding shall be performed in the presence of a City of Los Angeles Deputy Inspector.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Shop fabricated miscellaneous metal fabrications, steel, and aluminum items
- B. Fasteners
- C. Loose bearing and leveling plates
- D. Miscellaneous framing and supports
- E. Metal bar gratings
- F. Loose steel lintels
- G. Floor plates
- H. Metal finishes

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 05 50 01 - Guard Posts
- C. Section 09 90 01 - Painting for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires metal fabrications.

1.4 REFERENCES

- A. ASME B18.6.3 - Machine Screws, Tapping Screws, and Metallic Drive Screws (Inch Series).
- B. ASME B18.21.1 - Washers: Helical Spring-Lock, Tooth Lock, and Plain Washers (Inch Series).
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
- D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

- E. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- F. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- G. ASTM A193/A193M - Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications.
- H. ASTM A194/A194M - Standard Specification for Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both.
- I. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- J. ASTM A276/A276M - Standard Specification for Stainless Steel Bars and Shapes.
- K. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.
- L. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- M. ASTM A435/A435M - Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates.
- N. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- O. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- P. ASTM A786/A786M - Standard Specification for Hot-Rolled Carbon, Low-Alloy, High-Strength Low-Alloy, and Alloy Steel Floor Plates.
- Q. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- R. ASTM B26/B26M - Standard Specification for Aluminum-Alloy Sand Castings.
- S. ASTM B85/B85M - Standard Specification for Aluminum-Alloy Die Castings.

- T. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- U. ASTM B210/B210M - Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes.
- V. ASTM B211/B211M - Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire.
- W. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- X. ASTM D962 - Standard Specification for Aluminum Powder and Paste Pigments for Paints.
- Y. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
- Z. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
- AA. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength.
- BB. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.
- CC. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- DD. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel.
- EE. AWS D1.2/D1.2M - Structural Welding Code - Aluminum.
- FF. FS TT-V-81 - Varnish: Mixing, for Aluminum Paint.
- GG. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel AC172.
- HH. NAAMM MBG 531 - Metal Bar Grating Manual.
- II. NAAMM MBG 532 - Heavy Duty Metal Bar Grating Manual.
- JJ. SSPC-PA 1 - Shop, Field, and Maintenance Coating of Metals.
- KK. SSPC-SP 1 - Solvent Cleaning.

LL. SSPC-SP 2 - Hand Tool Cleaning.

MM. SSPC-SP 3 - Power Tool Cleaning.

NN. SSPC-SP 7 - Brush-Off Blast Cleaning.

1.5 SUBMITTALS

A. Submit mill test reports certifying that materials meet requirements of standards listed in References Article of this Section.

1. Heat and melt numbers and mill test report numbers.
2. Size
3. Type and grade of material, identified by ASTM Standard Specification number
4. Color coding for shop drawing requirements.

B. Submit the following to Engineer for review and approval:

1. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - a. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
 - b. Design fabrications to meet actual installation conditions verified at Project Site.
 - c. Detail minor connections and fastenings not shown or specified to meet required conditions. Include detailed sequence plan for shop and field welding that minimizes locked-in stresses and distortions.
 - d. No change shall be made on shop drawings after shop drawings have been approved, except by written consent or direction of Engineer.
 - e. Detail drawings shall show grade of steel, identification marks on members, dimensions, size, weight, orientation, and location of each member and setting elevation of base plates and bearing plates. Identify connections and welds, including welding sequences and types, sizes, and extent of weld.

- f. The shop drawings shall show details of permitted options proposed, details of connections, direction of rolling plates, sequence of field and shop assembly, welding sequence and procedures, location and details of welds, and the location of temporary support used for assembly.
- 2. Welders' Certificates: Submit certification for welders employed on Project, verifying AWS qualification within the previous 12 months.
- 3. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is accredited under IAS AC172.
- C. Submit manufacturer's literature and certification that paints and coatings meet South Coast Air Quality Management District (SCAQMD) Volatile Organic Compounds (VOC) requirements.
 - 1. Refer to PAINTING FOR EXTERIOR IMPROVEMENTS Section for priming and painting requirements.
- D. Submit name of independent test laboratory to perform inspection and testing.
- E. Submit results of independent test laboratory's inspections and tests.
- F. Submit fabricator's test results of materials prior to using materials for fabrication.

1.6 QUALITY ASSURANCE

- A. Inspection: Engineer reserves the right to inspect the manufacture or fabrication. Engineer's inspection of Work does not relieve Contractor of the responsibility for Work. Errors or faults that are discovered during fabrication shall be corrected by Contractor prior to installation.
- B. Welders: Welders shall be qualified in conformance with AWS D1.1/D1.1M and AWS D1.3/D1.3M shall be City of Los Angeles Department of Building and Safety certified.
- C. Mill Tests: Prepare mill tests for specified material.
- D. Field welding shall be performed in presence of a City of Los Angeles Registered Deputy Inspector.
- E. Design metal fabrications under direct supervision of a professional structural engineer experienced in design of this Work and licensed in the State of California.

- F. Fabricator Qualifications: A qualified steel fabricator that is accredited by IAS AC172.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from damage during shipping, handling, and storage on Project Site. Steel showing dents, creases, deformations, weathering, or other defects is not acceptable.
- B. Store metals above ground on platforms, skids, or other supports, and keep free from dirt, grease, and other foreign material. Protect metals from corrosion while stored.
 - 1. Store materials in a location and in a manner to avoid damage. Stacking shall be done in a way which shall prevent bending. Store metal components and materials in a clean, dry location. Cover with waterproof paper, tarpaulin, or polyethylene sheeting in a manner that shall permit circulation of air inside the cover.
- C. Deliver bolts, nuts, washers, and studs not part of an approved fabrication, to Project Site in the original labeled containers and do not transfer into unlabeled containers.
- D. Units weighing more than 5,000 pounds shall have the mass marked on the steel unit.

PART 2 - PRODUCTS

2.1 MATERIALS - STEEL

- A. Steel Plates, Shapes, and Bars: ASTM A36/A36M, unless shown otherwise on approved shop drawings or this Section. Plates shall be furnished to qualify for ultrasonic examination in conformance with ASTM A435/A435M.
- B. Steel Tubing: ASTM A500/A500M, cold-formed, Grade B, $F_y = 46$ ksi or ASTM A501/A501M hot formed structural tubing. For exterior installations, provide tubing with hot-dip galvanized coating in conformance with ASTM A153/A153M.
- C. Low to intermediate grade steel plates shall conform to ASTM A283/A283M.
- D. Steel Pipe: ASTM A53/A53M, Grade as directed by Engineer Schedule 40, unless shown otherwise on Drawings.
- E. Slotted Channel Framing: ASTM A1011, Grade 33.

F. Slotted Channel Fittings: ASTM A1011/A1011M.

G. Fasteners:

1. Bolts and nuts:

a. Bolts and nuts shall be American National coarse-thread series.

b. Unfinished bolts shall conform to ASTM A307.

2. Washers and Load Indicator Devices:

a. Plain washers shall conform to ASME B18.21.1.

b. Beveled washers shall be square, smooth, and sloped so that contact surfaces of bolt head and nut are parallel.

c. The diameter of hole of square-beveled washer shall be 1/16 inch greater than the bolt size for bolts larger than 1 inch.

d. Install washers on nut side of bolt for torquing as required.

3. Anchor Bolts: ASTM F1554, Grade 36.

4. Machine Screws: ASME B18.6.3.

5. High Strength Bolts: ASTM F3125/F3125M.

2.2 MATERIALS - ALUMINUM

A. Extruded Aluminum: ASTM B221, 6063 alloy, T6 temper.

B. Sheet Aluminum: ASTM B209/B209M, 5052 alloy, H32 or H22 temper.

C. Aluminum-Alloy Drawn Seamless Tubes: ASTM B210/B210M, 6063 alloy, T6 temper.

D. Aluminum-Alloy Bars: ASTM B211/B211M, 6061 alloy, T6 temper.

E. Aluminum-Alloy Sand Castings: ASTM B26/B26M.

F. Aluminum-Alloy Die Castings: ASTM B85/B85M.

G. Bolts, Nuts, and Washers: Stainless steel, Type 304 or 316 in conformance with ASTM F593.

H. Welding Materials: AWS D1.2/D1.2M; type required for materials being welded.

2.3 MATERIALS - STAINLESS STEEL

- A. Stainless Steel Plates: ASTM A276/A276M, Type 304 or 316 (for exterior and highly corrosive environment).
- B. Anchor Bolts and Nuts: ASTM A193/A193M and ASTM A194/A194M
- C. Pipe: ASTM A269/A269M
- D. Finish: As noted on Drawings.

2.4 FABRICATION

- A. General:
 - 1. Metal items shall be fabricated and finished in accordance with Drawings and approved shop drawings. Verify measurements before fabrication.
 - 2. Welding procedures and inspection shall be in conformance with AWS D1.1/D1.1M. Welding shall be continuous along the area of contact except where tack welding is called for on Drawings. Welds shall be ground smooth.
 - 3. Galvanize fabricated ferrous items after fabrication.
 - 4. Metal fabrications showing injurious defects, weak spots, imperfections in Work, or otherwise not conforming to Specifications or Drawings shall be rejected.
- B. Fit and shop assemble items in largest practical sections, for delivery to Project Site.
- C. Fabricate items with joints tightly fitted and secured.
- D. Wire brush material, clean off loose mill scale and rust, and straighten by methods that shall not injure the steel prior to fabrication. Remove twists or bends after punching or working component parts of a member before the parts are assembled. Produce finished members free from twists, bends, or open joints when installed.
- E. Shearing, flame cutting, and chipping shall be done accurately.
- F. Assembled pieces shall be taken apart, if necessary, for the removal of burrs and shavings produced by the reaming operation.

- G. Parts not completely bolted in the shop shall be secured by temporary bolts, insofar as practicable, to prevent damage in shipment and handling.
- H. Use of gas or plasma cutting torch is allowed where the metal being cut is not stressed during the operation, and provided stresses are not transmitted through a flame-cut surface. Make cuts with smooth regular contour. Deduct 1/8 inch from width of cut edges to determine effective width of members that are cut. Make radius of reentrant cuts as large as possible, but 1 inch minimum.
- I. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- J. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.5 LOOSE BEARING AND LEVELING PLATES

- A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction, made flat, free from warps or twists, and of required thickness and bearing area. Drill plates to receive anchor bolts and for grouting as required.

2.6 LOOSE STEEL LINTELS

- A. Fabricate loose structural steel lintels from steel angles and shapes of size indicated for opening and recesses in masonry walls and partitions at locations indicated on Drawings.
- B. Weld adjoining members together to form a single unit where indicated on Drawings.
- C. Size loose lintels for equal bearing of one inch per foot of clear span but not less than 8 inches bearing at each side of openings, unless otherwise indicated on Drawings.

2.7 MISCELLANEOUS METAL ITEMS

- A. Miscellaneous Framing and Supports: Provide steel framing and supports for applications indicated which are not a part of structural steel framework, as required to complete Work.

1. Fabricate units to sizes, shapes, and profiles indicated and required to receive adjacent other construction retained by framing and supports. Fabricate from structural steel shapes, plates, and steel bars of welded construction using mitered joints for field connection. Cut, drill, and tap units to receive hardware, hangers, and similar items.
 2. Equip units with integrally welded anchors for casting into concrete or building into masonry. If units are installed after concrete is placed, furnish inserts. Unless otherwise indicated on Drawings, space anchors 24 inches on center and provide minimum anchor units in the form of steel straps 1-1/4 inches wide by 1/4 inch by 8 inches long.
- B. Miscellaneous Steel Trim: Provide shapes and sizes indicated for profiles shown on Drawings. Unless otherwise indicated on Drawings, fabricate units from structural steel shapes, plates, and steel bars, with continuously welded joints and smooth exposed edges. Use concealed field splices wherever possible. Provide cutouts, fittings, and anchorages as required for coordination for assembly and installation with other Work.

2.8 SHELF AND LEDGER ANGLES

- A. Fabricate shelf and ledger angles from steel angles of sizes indicated on Drawings and for attachment to concrete framing. Provide slotted holes to receive 3/4 inch bolts, spaced not more than 6 inches from ends and not more than 24 inches on center, unless otherwise indicated on Drawings.
- B. For cavity walls, provide vertical channel brackets to support shelf/ledger angles from back-up masonry and concrete. Align expansion joints in angles with indicated expansion joints in cavity wall exterior wythe.
- C. Furnish wedge-type concrete inserts, complete with fasteners, for attachment of shelf angles to cast-in-place concrete.

2.9 METAL BAR GRATINGS

- A. General: Produce metal bar gratings of description indicated in conformance with National Association of Architectural Metal Manufacturers (NAAMM) marking system that complies with the following:
 1. Metal Bar Grating Standard: Metal Bar Grating Manual published in NAAMM MBG 531.
 2. Heavy Duty Metal Bar Grating Standard: Heavy Duty Metal Bar Grating Manual published in NAAMM MBG 532.

- B. If gratings are located in walking surfaces, gratings shall have spaces no greater than 1/2 inch wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.
- C. Fabricate steel gratings to comply with requirements as indicated on Drawings.
- D. Traffic Surface for Steel and Aluminum Bar Gratings: Plain, unless otherwise indicated on Drawings.
- E. Steel Finish: shop prime paint applied in conformance with manufacturer's standard practice.
- F. Aluminum Finish: Mill (as fabricated), unless otherwise indicated on Drawings.
- G. Fabricate removable gratings sections with banding bars attached by welding to entire perimeter of each section. Include anchors and fasteners of type indicated, or if not indicated, as recommended by manufacturer, for attachment to supports.
 - 1. Heavy Duty Grating: Provide not less than 4 anchors blocks, 1/4 minimum thickness, for each section of grating composed of bearing bars over 3/16 inch in thickness, with each block shop-welded to 2 bearing bars.
 - 2. Non-Heavy Duty Grating: Provide not less than 4 saddle clips for each grating section composed of rectangular bearing bars 3/16 inch or less in thickness and spaced not less than 15/16 inch on center, with each clip designed and fabricated to fit over 2 bearing bars. Furnish threaded bolts with nuts and washers for each clip required, unless otherwise indicated on Drawings.
- H. Attach toe plates to grating by welding, unless otherwise indicated on Drawings. Toe plate height: 4 inches, unless a greater height indicated on Drawings.
- I. Fabricate cutouts in grating sections for penetrations indicated. Arrange layout of cutouts to permit grating removal without disturbing items penetrating gratings.
 - 1. Edge band openings in grating that interrupt 4 or more bearing bars with bars of same size and material as bearing bars.
 - 2. Do not notch bearing bars at supports to maintain elevation.

- J. Manufacturers: Alabama Metal Industries Corp., Barnett/Bates Corp., and IKG Industries.

2.10 FLOOR PLATE

- A. Fabricate raised pattern floor plates from rolled steel floor plate in conformance with ASTM A786/A786M of thickness and pattern indicated on Drawings. If not indicated, pattern as selected from manufacturer's standard patterns.
- B. Abrasive Surface Floor Plate: Manufacturer's standard abrasive granules, rolled into surface of steel plate, where indicated on Drawings.
- C. Include steel angle stiffeners and fixed and removable sections as indicated on Drawings. Provide 2 steel bar drop handles for lifting plates, 1 at each end of each removable section.

2.11 STEEL AND IRON FINISHES

- A. General:
 - 1. Steel, painted, and unpainted iron materials furnished shall be cleaned of rust, scale, and grease.
 - 2. Remove oil, grease, and similar contaminants in conformance with SSPC-SP 1.
 - 3. Remove loose rust, scale, spatter, slag, and other deleterious materials in conformance with SSPC-SP 2, SSPC-SP 3, or SSPC-SP 7.
 - 4. Apply primer to give a dry film thickness of 2.5 mils, except as specified for zinc-rich coating option.
 - 5. Paint after shop Work has been completed. Paint with brushes, entire surface to be covered smoothly, with paint worked into joints.
 - 6. No material shall be loaded for shipment until primer is fully dry.
 - 7. Materials arriving at Project Site with damaged primer or paint shall be cleaned and given an additional coat of paint before being assembled, except finish Work which shall be exposed to view shall be returned to shop for recleaning and repainting.

- B. Painting: Immediately after surface preparation, apply structural steel primer paint in conformance with manufacturer's written instructions and at a rate to provide dry film thickness of not less than 3.0 mils. Use painting methods that result in full coverage of joints, corners, edges, and exposed surfaces. Apply 2 coats of paint to surfaces that are inaccessible after assembly or erection.
- C. Where steel is scheduled to be painted, apply paint in conformance with PAINTING FOR EXTERIOR IMPROVEMENTS Section.
- D. Steel surfaces in contact with aluminum shall receive an additional coat of paint consisting of 2 pounds of aluminum paste pigment (ASTM D962 Type II, Class B) per gallon of varnish meeting FS TT-V-81, Type II.
- E. Galvanizing: For those items indicated for galvanizing, apply zinc-coating in compliance with the following requirements:
 - 1. Ferrous metal Work, both fabricated and unfabricated iron and steel products made of uncoated rolled, pressed, and forced shapes, plates, bars, and strip 0.0299 inch thick and heavier shall be galvanized by hot-dip process, with larger items galvanized in conformance with ASTM A123/A123M and smaller hardware (that can be centrifuged) galvanized in conformance with ASTM A153/A153M. Required hot-dip galvanizing shall be done after fabrication, in largest sections possible.
 - 2. Items too large for available dip tanks shall be sprayed by approved methods, with molten zinc to coating thickness of 0.003 inch to 0.004 inch. Weight of the zinc coating per square foot of actual surface shall average not less than 2 ounces; no individual specimen shall show less than 1.8 ounces.
 - 3. Bolts and screws for attachment of galvanized items shall be galvanized, or of non-corrodible material.

2.12 ALUMINUM FINISH

- A. Mill finish (as fabricated), unless otherwise indicated on Drawings.

2.13 SOURCE QUALITY CONTROL

- A. Tests are waived for steel identified by heat number, accompanied by mill analyses and mill test reports, and properly tagged with an Identification certificate so as to be readily identified for conformance with applicable ASTM Standards.

1. Unidentified materials to be tested by independent test laboratory:
 - a. Yield strength less than or equal to 36,000 psi: 1 set of tension tests and 1 set of bend tests for each 20 tons or part thereof of each heat.
 - b. Yield strength greater than 36,000 psi: 1 set of tension tests and 1 set of bend tests for each piece.
 - c. Additional tests may be required by Engineer or City of Los Angeles Department of Building and Safety.
- B. Shop inspections may be waived for manufacturer fabricated assemblies delivered to Contractor for installation as preassembled units.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive Work.
- B. Correct detrimental conditions before proceeding with installation.

3.2 PREPARATION

- A. Clean and strip primed steel items to bare metal where Project Site welding is required.
- B. Furnish setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.3 INSTALLATION

- A. Install metal fabrication items in accordance with Drawings and approved shop drawings.
- B. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installing anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project Site.
- C. Install items plumb and level, accurately fitted, free from distortion or defects.
- D. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

- E. Field weld components as indicated on Drawings.
- F. Perform field welding in conformance with AWS D1.1/D1.1M or appropriate AWS standard for procedures of manual shielded metal-arc welding, appearance and quality of welds made, methods used in correcting welding Work, and the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surfaces matches those adjacent.
- G. Obtain approval from Engineer prior to Project Site cutting or making adjustments not scheduled.

3.4 SETTING LOOSE PLATES

- A. Clean concrete and masonry bearing surfaces of any bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of bearing plates.
- B. Set loose leveling and bearing plates on wedges, or other adjustable devices. After the bearing members have been positioned and plumbed, tighten the anchor bolts. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the bearing plate before packing with grout. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.5 HOLES

- A. Prepare required holes in steel members for attachment or passage of Work of other trades.
- B. Hole burning to make or enlarge holes is allowed only with prior approval of Engineer. Enlarge holes only by reaming.
- C. Cut, drill, or punch holes at right angles to the surface of the metal.
- D. Holes shall be clean-cut without torn or ragged edges.

- E. Remove outside burrs resulting from drilling or reaming operations with a tool making a 1/16 inch bevel.
- F. Punch, drill, or ream holes for anchor bolts in base and bearing plates. Do not make or enlarge the holes by burning except for grouting holes in column bases.
- G. Where the steel thickness is equal to or less than diameter of the bolt plus 1/8 inch, holes may be punched 1/16 inch larger than the nominal diameter of the bolt.
- H. Where the steel is thicker than the diameter of the bolt plus 1/8 inch, the holes shall be drilled or sub-punched and reamed. Diameter of sub-punched holes, and the drill for sub-punched holes, shall be 1/16 inch smaller than the nominal diameter of bolt to be installed.
- I. Precisely locate finished holes to ensure passage of bolts through steel assemblies without drifting. Poor matching of holes is cause for rejection.

3.6 BOLTING

A. General (Not Including High-Strength):

- 1. Drive bolts into the holes without damaging the thread. Protect bolt heads from damage during driving.
- 2. Bolt heads and nuts shall rest squarely against the metal.
- 3. Where bolts are to be used on beveled surface having slopes greater than 1 to 20 with a plane normal to the bolt axis, beveled washers shall be provided to give full bearing to the head or nut.
- 4. Upset bolt threads to prevent the nuts from backing off.

B. Unfinished Bolts:

- 1. Unfinished bolts shall be of the length that shall extend through but no more than 1/4 inch beyond the nuts.
- 2. Bolt heads and nuts shall be drawn tight against Work.
- 3. Bolt heads shall be tapped with a hammer while the nut is being tightened. After having been finally tightened, bolt threads shall be upset to prevent the nuts from backing off.

C. Bolted Field Connections at Supports:

1. Standard bolts shall be of a length that shall extend not less than 1/4 inch beyond the nuts. Enter bolts into holes without damaging the threads and bolt heads
2. Bolt heads and nuts shall rest squarely against the metal.
3. Where bolts are to be used on beveled surface having slopes greater than 1 to 20 with a plane normal to the bolt axis, beveled washers shall be provided to give full bearing to the head or nut.
4. Upset bolt threads to prevent the nuts from backing off.
5. Correct poor matching of holes by drilling to next larger size and use of larger size bolt. Obtain written approval from Engineer before proceeding with corrective Work.

3.7 WELDED CONNECTIONS

- A. Do not begin welding until joint elements are bolted or tacked in intimate contact and adjusted to dimensions shown on Drawings, with allowance for weld shrinkage that is expected. Weld heavy sections and those having a high degree of restraint with low hydrogen type electrodes. No members shall be spliced without prior approval by Engineer.
- B. Weld in conformance with AWS D1.1/D1.1M.
 1. Welds exposed to view shall have as-welded surfaces that are continuous, smooth, and uniform. Radii shall be true and consistent from weld to weld. Finishing or grinding may be required where clearances or fit of other items may require.
- C. Perform intermittent welding, continuous welding, and straightening of built-up sections to minimize internal stresses. Built-up sections assembled by welding shall be free of warpage. Each axis shall have true alignment.
- D. Welds not specified shall be continuous fillet welds. Use minimum fillet in conformance with AWS requirements.
- E. Clean surfaces to be welded of paint, grease, loose scale, and foreign matter. Clean welds each time electrode is changed or a new pass started. Chip clean burned or flame cut edges before depositing welds.
- F. Same electrode may be used with various thicknesses of plates, but change current used and number of passes made proportionately.

- G. After being deposited, brush welds with wire brushes. Welds shall exhibit uniform section, smoothness of welded metal, feather edges without undercuts or overlays, and freedom from porosity and clinkers. Visual inspection at edges and ends of fillets and butt joint welds shall indicate good fusion with penetration into base metal.
- H. During assembling and welding keep parts straight and in close contact. Take precautions to minimize "lock-up" stress and distortion due to heat. Do not weld during windy conditions unless wind protection is provided. Cut-out and replace welds found to be defective.
- I. The maximum space between pieces or members to be butt welded shall not exceed 1/4 inch. Bevel pieces or members up to 3/8 inch thickness to form single or double "Vee" before being welded. Bevel pieces over 3/8 inch thickness to form a double "Vee" whenever possible. Lay and size fillet welds as shown on Drawings. Measure only effective portion of fillet welds.
Maximum space between pieces or members to be fillet welded shall not exceed 1/16 inch.

3.8 CORRECTIVE WORK

- A. Members or assemblages of Work having fabrication errors, or which exceed permissible tolerances, or which have errors or deformations preventing assembly and fitting of parts, shall be reported immediately to Engineer before incorporation in the finished Work.
- B. Such members or assemblages shall be corrected if permitted by Engineer, otherwise, they shall be replaced at Contractor's sole cost and expense.
- C. Submit drawings showing the corrections and obtain acceptance prior to performing any corrective Work.

3.9 REPAIR OF DAMAGED GALVANIZING

- A. Repair damaged galvanizing in conformance with TREATING DAMAGED GALVANIZING Section.

3.10 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Tests and inspections by independent test laboratory shall include, but is not limited to, the following:

- a. Shop and field welded connections shall be continuously visually inspected except for welding done in a City of Los Angeles Department of Building and Safety licensed shop.
- b. Defects shall be corrected and a statement of final approval shall be received from Engineer before fabrications are installed.

3.11 CLEANING AND TOUCH-UP PAINTING

- A. Touch-Up Painting of Steel Items: Immediately after erection, clean field welds, bolted connections, abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 requirements for touch-up of field painted surfaces. Apply by brush or spray to provide a minimum dry film thickness of 3.0 mils.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Concrete filled steel guard posts
- B. Concrete footings

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 09 90 01 - Painting for Exterior Improvements
- C. Section 26 56 14 - Steel Light Pole

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires guard posts.

1.4 REFERENCES

- A. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. Reference Specifications (RS):
 - Section 201 - Concrete, Mortar, and Related Materials
 - Subsection 201-1 - Portland Cement Concrete

1.5 QUALITY ASSURANCE

- A. Welders constructing guard post protection system shall be City of Los Angeles Department of Building and Safety certified. Schedule deputy inspection with Engineer prior to any field welding.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel pipe shall conform to ASTM A53/A53M, welded, Grade B, plain ends, standard weight unless shown otherwise on Drawings, and galvanized in conformance with ASTM A123/A123M if galvanizing is called for on Drawings. Sizes of guard posts shall be as indicated on Drawings.
- B. Concrete shall conform to RS Subsection 201-1, Class 560 C-3250 for fill and footing.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set posts in concrete footings in conformance with Drawings. Fill posts with concrete and crown top. Slope concrete footing around post to drain, and steel trowel finish.

3.2 FINISH AND PROTECTION

- A. Paint guard posts and protection system in conformance with PAINTING FOR EXTERIOR IMPROVEMENTS Section. Color shall be safety yellow.

3.3 REPAIR OF DAMAGED GALVANIZING

- A. Repair damaged galvanizing in conformance with TREATING DAMAGED GALVANIZING Section.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Exterior paint for:
 - 1. Steel light poles
 - 2. Metal fabrications
 - 3. Guard posts
 - 4. Other elements shown on Drawings or listed in Specifications to receive painting or coating

1.2 RELATED SECTIONS

- A. Section 05 50 00 - Metal Fabrications
- B. Section 05 50 01 - Guard Posts
- C. Section 26 56 14 - Steel Light Pole

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires painting for exterior improvements.

1.4 REFERENCES

- A. 29 CFR 1910.134 - Respiratory protection.
- B. 29 CFR 1910.1000 - Air Contaminants.
- C. SSPC PA Guide 10 - Guide to Safety and Health Requirements for Industrial Painting Projects.
- D. SSPC-SP 6 - Commercial Blast Cleaning.
- E. Reference Specifications (RS):
 - Subsection 210-1 - Paint

1.5 SUBMITTALS

A. Samples of Painting:

1. Color swatches 8 1/2 inches by 11 inches shall be required for each type of paint material and color. Submit swatches to Engineer for approval not less than 10 days prior to start of painting.

B. Extra Stock Materials:

1. Provide two 1-gallon paint, in original and sealed containers bearing manufacturer's label, for each type and color used for finish coats. Identify each container by color and type.

1.6 QUALITY ASSURANCE

- ### A. Paint products and applications shall comply with South Coast Air Quality Management District (SCAQMD) regulations. The product label and/or Safety Data Sheet (SDS) shall state that the product meets requirements or manufacturer shall furnish certificate of compliance.

1.7 ENVIRONMENTAL AND HEALTH REQUIREMENTS

A. Coating Hazards:

1. Comply with the requirements of SSPC PA Guide 10.
2. Specified coatings may have potential health hazards if ingested or improperly handled. The coating manufacturer's written safety precautions shall be followed throughout mixing, applying, and curing of the coatings. During cleaning, cleanup, surface preparation, and coating application phases, ensure that employees are protected from toxic and hazardous chemical agents which exceed concentrations in 29 CFR 1910.1000. Comply with respiratory protection requirements as required in 29 CFR 1910.134 .
3. Take care to prevent fire; open containers or inflammable materials only as needed; keep rubbing cloths and oily rags in tightly closed metal container, or remove from Project Site daily. Benzene, gasoline, and distillate shall not be permitted on Project Site.
4. Do not apply coatings in unheated space during foggy or rainy weather, or under the following surface temperature conditions:

- a. Less than 5 degrees Fahrenheit (F) (4 degrees Celsius (C)) above the dew point; and
 - b. Below 40 degrees F (4 degrees C) for oil based paints, 10 degrees F (50 degrees C) for latex paints or over 95 degrees F (35 degrees C), unless approved in writing by manufacturer's representative and quality control manager.
 - c. Below 32 degrees F (0 degrees C) or over 120 degrees F (49 degrees C), unless approved in writing by manufacturer's representative and quality control manager.
5. Paints shall comply with City of Los Angeles Green Building Code requirements.
- a. Enter pertinent product data in VOC Content Verification Checklist form and provide product specification sheets. Make checklist and specifications available to City of Los Angeles Department of Building and Safety inspector through Engineer upon request. VOC Content Verification Checklist form can be found here:
https://www.ladbs.org/docs/default-source/forms/green-building-2023/grn_2_voc_content_verification_checklist-01.17.23.pdf?sfvrsn=19f4c153_10

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver in factory sealed containers with labels intact, in conformance with RS Subsection 210-1.
- B. Store in conformance with manufacturer's written instructions for paint shelf life, including, but not limited to, protection from temperature extremes.
- C. Obtain Engineer's approval of materials before containers are opened.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Paint products used in the coating systems shall be from the same manufacturer.
- B. Paints shall comply with City of Los Angeles Green Building Code requirements.

- C. The products listed are to be produced and supplied by Dunn-Edwards Paints.

1. Ungalvanized Ferrous Metals:

First Coat	BRPRO0 Bloc-Rust Primer
Second Coat	EVSH60 Evershield Gloss Enamel
Third Coat	EVSH60 Evershield Gloss Enamel

2. Galvanized Metals:

Pretreatment	Metal Clean & Etch by Krud Kutter/ Rust-Oleum
First Coat	ULGM00-WH Ultrashield Galvanized Metal Primer
Second Coat	EVSH60 Evershield Gloss Enamel
Third Coat	EVSH60 Evershield Gloss Enamel

3. Wood:

First Coat	EZPR00 EZ-Prime Premium
Second Coat	EVSH50 Evershield Semi-Gloss
Third Coat	EVSH50 Evershield Semi-Gloss

4. Concrete:

First Coat	ESSL00 EFF-STOP Select
Second Coat	ACHS10 ACRI-HUES Exterior Acrylic Flat
Third Coat	ACHS10 ACRI-HUES Exterior Acrylic Flat

PART 3 - EXECUTION

3.1 SURFACE PREPARATION-UNGALVANIZED METALS

- A. Clean surfaces to be painted by No. 6 Commercial Blast Cleaning in conformance with SSPC-SP 6.

3.2 SURFACE PREPARATION-GALVANIZED METALS

- A. Clean galvanized metals in conformance with written instructions of pretreatment wash manufacturer, then apply pretreatment wash.
- B. Blast lightly with fine abrasive or organic media (walnut shells) at 45 degree angle (profile only, do not remove zinc coating).

3.3 APPLICATION

- A. Surfaces to be painted shall be approved by Engineer prior to painting.
- B. Do not use paints with coarse particles, skins, and indications of color instability.
- C. Protect surfaces not designated to receive paint.
- D. Apply paint in uniform thickness and Work into joints in conformance with manufacturer's written instructions.
- E. Surfaces shall be dry during painting. No painting shall be done in damp weather unless surfaces to be painted are kept dry.
- F. Paint shall be dry before applying succeeding coats.
- G. Color schedule (if any) shall be in accordance with Drawings and applicable Specification Sections and shall be approved by Engineer prior to painting.
 - 1. Refer to GUARD POSTS Section for color selections for those improvements.
- H. Paint showing signs of blistering, spotting, uneven coating, or sagging shall be rejected.
- I. Steel items that are to be encased or partially encased in concrete shall be painted with complete coating system before being encased.
- J. Do not apply second and third coats until previous coat has been approved by Engineer.

- K. Electrical panels shall be touched-up in conformance with manufacturer's written instructions to match original color and type of paint.

3.4 COATING THICKNESSES

- A. First Coat: (Prime coat): 1.5 to 2.5 mils in dry film thickness.
- B. Second Coat: 1.5 to 2.0 mils in dry film thickness.
- C. Third Coat: 1.5 to 2.0 mils in dry film thickness.

3.5 CLEANING AND PROTECTION

- A. Cleaning: Remove from Project Site discarded paint materials, rubbish, cans, and rags at end of each day.
- B. Upon completion of painting Work, clean overspray off of adjacent surfaces. Remove overspray by proper methods of washing and scraping, taking care not to scratch or otherwise damage adjacent finished surfaces.
- C. Protection: Protect Work of other trades and existing adjacent surfaces, whether to be painted or not, against damage by painting and finishing Work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Engineer.
 - 1. Place "Wet Paint" signs as required to warn passersby of newly-painted finishes.
 - 2. Touch-up and restore damaged or defaced painted surfaces before final inspection.
 - 3. Remove temporary protective wrappings for protection of adjacent Work after completion of painting operations.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. High-performance coatings including coatings, coating, or coating system for the following items:
 - 1. Steel items that are exposed to the atmosphere including structural steel beams; fabricated steel items; sheet metal fabricated items; sheet metal flashings; and other steel or sheet metal surfaces that are exposed to the atmosphere or are noted on Drawings or specified to receive high-performance coatings.
 - 2. Portion of structural steel embedded in concrete.

1.2 RELATED SECTIONS

- A. Section 05 12 02 - Structural Steel
- B. Section 05 50 00 - Metal Fabrications
- C. Section 09 90 01 - Painting for Exterior Improvements
- D. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires high-performance coatings.

1.4 REFERENCES

- A. ASTM D6386 - Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting.
- B. SSPC-SP 1 - Solvent Cleaning.
- C. SSPC-SP 10 - Near-White Metal Wet Abrasive Blast Cleaning.
- D. SSPC-SP 11 - Power-Tool Cleaning to Bare Metal.

1.5 SUBMITTALS

- A. Product data for the coating system specified.
 - 1. Submit the manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use in Project.
- B. Certification by the manufacturer that products supplied comply with South Coast Air Quality Management District (SCAQMD) regulations controlling use of volatile organic compounds (VOCs).
- C. Samples: Submit samples of each color and material to be applied with texture to simulate actual conditions on representative samples of the actual substrate.
 - 1. Submit stepped samples, defining each separate coat. Use representative colors when preparing samples for review. Resubmit until the required sheen, color, and texture are achieved.
 - 2. Submit a list of material and application for each coat of each sample. Label each sample as to location and application.
 - 3. Submit samples on the following substrates for Engineer's review of color and texture only:
 - a. Ferrous Metal: Provide two 4-inch square samples of flat metal and two 8-inch long samples of solid metal for each color and finish.
- D. Submit the name of an independent testing agency for Engineer's approval prior to starting coating application Work.
- E. Submit qualification data for coating system applicator.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Services: Qualified technical representative shall be available to visit Project Site for technical support as required to resolve field problems associated with substrate preparation, use, mixing, application, and curing of high-performance coating systems.
- B. Applicator Qualifications: Engage an experienced applicator who has successfully completed coating system applications similar in material and extent to those indicated for Project.

- C. Single-Source Responsibility: Provide primers and undercoat material produced by the same manufacturer as the finish coats for each type of coating. Use only thinners recommended by coating manufacturer and only within recommended limits.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project Site in manufacturer's original, new, unopened packages, and containers bearing manufacturer's name and label, and the following information:
 - 1. Name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's name, stock number, and date of manufacture.
 - 4. Contents by volume, for major pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. Handling instructions and precautions and material safety data sheets.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 degrees Fahrenheit (F). Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and Work areas are protected from fire and health hazards resulting from handling, mixing, and supplying the coatings.

1.8 PROJECT SITE CONDITIONS

- A. Apply coatings only when the temperature of surfaces to be coated and surrounding air temperatures are between 45 degrees F and 85 degrees F or as specified in coating manufacturer's written instructions.
- B. Do not apply coatings in rain, fog or mist; when the relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.

1. Allow wet surfaces to dry thoroughly and attain the temperature and conditions specified before proceeding with or continuing the coating operation.
2. Work may continue during inclement weather only if areas and surfaces to be coated are enclosed and the temperature within the area can be maintained within limits specified by the manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General:

1. Material Compatibility: Provide primers, finish coat material, and related materials that are compatible with one another and the substrates indicated under conditions of service and application as demonstrated by manufacturer based on testing and field experience.
2. Material Quality: Provide the highest grade of the various coatings as regularly manufactured by acceptable coating manufacturers. Materials not displaying manufacturer's identification as a best grade product shall not be acceptable.
3. Colors: Provide color selections as noted on Drawings.

B. Coating system shall be from 1 manufacturer.

2.2 COATING SYSTEM

A. Zinc rich/epoxy/polyurethane coating system as manufactured by Tnemec Company, Incorporated (Tnemec):

1. First Coat (Primer): Series 90-97 Tneme-Zinc aromatic urethane, zinc at 2.5 to 3.5 mils dry film thickness (DFT) or Series 94-H2O Hydro-Zinc at 2.5 to 3.5 mils DFT.
2. Touch Up: Series 90-97 Tneme-Zinc at 2.5 to 3.5 mils DFT or Series 94-H2O Hydro-Zinc at 2.5 to 3.5 mils DFT.
3. Second Coat: Series L69 Hi-Build Epoxoline II polyamidoamine epoxy at 2.0 to 4.0 mils DFT.
4. Third Coat: Series 1095 Endura-Shield aliphatic acrylic polyurethane at 2.0 to 3.0 mils DFT.

B. Zinc / epoxy / polyurethane system as manufactured by Carboline:

1. First Coat (Primer): Carbozinc 859 organic zinc rich epoxy at 3.0 to 5.0 mils DFT or Carbozinc 11 WB water based self-curing inorganic zinc at 3.0 to 4.0 mils DFT.
2. Touch Up: Carbozinc 859 at 3.0 to 3.5 mils DFT or Carbozinc 11 WB at 3.0 to 4.0 mils DFT.
3. Second Coat: Carboguard 890 VOC cycloaliphatic amine epoxy 4.0 to 6.0 mils DFT.
4. Third Coat: Carbothane 133 MC aliphatic acrylic polyurethane satin finish 3.0 to 5.0 mils DFT.

2.3 COATING FOR EMBEDDED STEEL

- A. Structural steel embedded in concrete shall be coated with high-solids epoxy, Tnemec Series L69 Hi-Build Epoxoline II at 4.0 to 6.0 mils DFT or Carboguard 890 VOC at 6.0 to 8.0 mils DFT.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions under which coatings shall be applied for compliance with manufacturer's written application requirements. Surfaces to receive coatings shall be thoroughly dry before coatings are applied.
1. Do not proceed with coating application until unsatisfactory conditions have been corrected.
 2. Start of application shall be construed as Contractor's acceptance of surfaces within that particular area.
- B. Review sections in which coatings are provided to ensure compatibility of the total systems for various substrates. On request, furnish information on the characteristics of specified finish materials to ensure compatible primers.
1. Notify Engineer of problems anticipated using the coatings specified over substrates primed by others.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures and similar items already in place that are not to be coated, or provide surface-applied protection prior to surface preparation and coating. Remove these items, if necessary, to completely coat the items and adjacent surfaces. Following the coating operations in each space or area, have removed items reinstalled by workers skilled in the trades involved.
- B. Cleaning: Before applying coatings or other surface treatment, clean the substrates of substances that could impair bond of the various coatings. Remove oil and grease prior to cleaning. Schedule cleaning and coating application so dust and other contaminants from the cleaning process shall not fall on wet, newly coated surfaces.
- C. Surface Preparation:
 - 1. General: Clean and prepare surfaces to be coated in conformance with manufacturer's written instructions for each particular substrate condition and as specified.
 - a. Provide barrier coats over incompatible primers, or remove and reprime. Notify Engineer in writing of problems anticipated when using the specified finish-coat material with substrates primed by others.
 - 2. Ferrous Metal: Clean ungalvanized ferrous metal surfaces that have not been shop-coated; remove oil, grease, dirt, loose mill scale and other foreign substances. Use solvent or mechanical cleaning methods as recommended by manufacturer of high-performance coating system. Clean in conformance with SSPC-SP 10 with a minimum 2 mils angular anchor profile.
 - a. Touch up shop-applied prime coats that have been damaged and bare areas. Clean in conformance with SSPC-SP 11 with a minimum 1.5 mils angular anchor profile, and touch up with the same primer as the shop coat.
 - 3. Galvanized Surfaces: Clean surfaces in conformance with SSPC-SP 1 to remove soluble contaminants. Uniformly roughen entire surface by either abrasive blast or mechanical etch to achieve a uniform anchor profile (1.0 to 2.0 mils) in conformance with ASTM D6386, Section 5.4.1.

4. Nonferrous Metal Surfaces: Clean nonferrous surfaces in conformance with manufacturer's written instructions for the type of service, metal substrate, and application required.

D. Material Preparation:

1. Carefully mix and prepare materials in conformance with coating manufacturer's written instructions.
2. Maintain containers used in mixing and application of coatings in conformance with manufacturer's written instructions.
3. Stir materials before applying to produce a mixture of uniform density; stir as required during application. Do not stir surface film into the material. Remove film and if necessary, strain the coating material before using.
4. Use only the type of thinners approved by the manufacturer and only within recommended limits.

- E. Tinting: Tint each undercoat a lighter shade to facilitate identifying each coat where multiple coats of the same material are to be applied. Tint undercoats to match the color of the finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

- A. General: Apply high-performance coating system in conformance with the coating manufacturer's written instructions. Equipment shall be in conformance with coating manufacturer's written instructions.
1. Do not apply coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
 2. Coating colors, surface treatments, and finishes shall be as indicated on Drawings.
 3. Provide finish coats compatible with the primers used.
 4. The number of coats and film thickness required shall be the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by coating manufacturer. Where sanding is required, conforming to manufacturer's written instructions, sand between applications to produce a smooth, even surface.

5. When undercoats or other conditions show through the final coat, apply additional coats until the cured film has a uniform coating finish, color, and appearance. Give special attention to edges, corners, crevices, welds, exposed fasteners, and similar surfaces to ensure that surfaces receive a dry film thickness equivalent to that of flat surfaces.
 6. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, and similar components are in place. Extend coatings in these areas to maintain the system integrity and provide desired protection.
 - a. Coat surfaces behind movable equipment and furniture the same as similar exposed surfaces.
 - b. Coat the back sides of access panels, removable or hinged covers, and similar exposed surfaces.
 - c. Omit primer on metal surfaces that have been shop-primed and touched-up painted.
 7. After erection, exposed surfaces damaged during fabrication or erection including weld seams shall be spot cleaned in conformance with SSPC-SP 11. These surfaces shall then receive a touch up coat of primer or first coat.
- B. Schedule Coating: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.
1. Allow sufficient drying time between successive coats. Do not recoat until the coating has dried so it feels firm and does not deform or feel sticky under moderate thumb pressure and where applying another coat does not cause the undercoat to lift or lose adhesion.
- C. Minimum Coating Thickness: Apply each material no thinner than manufacturer's recommended spreading rate. Provide total dry film thickness of the entire system as specified in Coating System Article of this Section.
- D. Prime Coats: Before applying intermediate coats, apply a prime coat of material, compatible with the high-performance coating system and as recommended by coating manufacturer, to the material required to be coated or finished that has not been prime-coated by others. Touch up any damaged or defective areas of shop-applied inorganic zinc rich primer coats.

1. Recoat primed and sealed substrates where there is evidence of suction spots or unsealed areas in the first coat to ensure a finish coat with no burn-through or other defects caused by insufficient sealing.
- E. Brush Application: Brush-out and work brush coats into surfaces in an even film. Eliminate cloudiness, spotting, holidays, laps, brush marks, sags, ropiness, or other surface imperfections. Neatly draw glass lines and color breaks.
 1. Apply primers and first coats by brush unless manufacturer's written instructions permit using mechanical applicators.
- F. Mechanical Applications: Use mechanical methods to apply coating when permitted by manufacturer's written instructions and governing regulations.
 1. Wherever using spray application, apply each coat to provide the equivalent hiding of brush applied coats. Do not double-back with spray equipment building-up film thickness of 2 coats in one pass, unless recommended by manufacturer.
- G. Completed Work: Match approved samples for color, texture and coverage. Finish coat(s) shall be uniform in color and sheen, without streaks, laps, sags, or missed areas. Remove, refinish, or recoat Work not complying with specified requirements.

3.4 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 1. Engineer reserves the right to request the following test procedures at any time and as often as Engineer deems necessary during coating operations:
 - a. Contractor shall engage and pay for the services of an independent testing agency approved by Engineer to sample the coating system being used. Samples of material delivered to Project Site shall be taken, identified, sealed, and certified in the presence of Engineer.
 - b. The testing agency shall perform appropriate tests for the following characteristics as required by Engineer:
 - 1) Quantitative materials analysis.
 - 2) Absorption.

- 3) Accelerated weathering.
- 4) Accelerated yellowness.
- 5) Color retention.
- 6) Alkali and mildew resistance.
- 7) Abrasion resistance.
- 8) Apparent reflectivity.
- 9) Washability.
- 10) Dry Opacity.
- 11) Recoating.
- 12) Skinning.

- c. If results show materials being used do not comply with requirements, Engineer shall direct Contractor to stop Work, remove non-complying coating materials, and clean, prime, and recoat surfaces with approved materials. Contractor shall pay for the retesting until coating Work is approved by Engineer.

3.5 CLEANING

- A. Remove rubbish, empty cans, rags, and other discarded materials from Project Site at the end of each Work day.
- B. Clean glass and spattered surfaces after completing work. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent painted surfaces.

3.6 PROTECTION

- A. Protect Work of other trades, whether being coated or not, against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as acceptable to Engineer. Leave in an undamaged condition.
1. Provide "Wet Paint" signs to protect newly coated finishes. Remove temporary protective wrappings provided by others to protect their Work after completing coating operations.

2. Touch up and restore damaged or defaced coated surfaces using same materials as the coating system.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Basic electrical materials, methods, and requirements to perform electrical Work

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 26 01 27 - Field Tests
- C. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables
- D. Section 26 05 21 - 600 Volt or Less Rated Wiring System
- E. Section 26 05 26 - Grounding and Bonding for Electrical Systems
- F. Section 26 05 33 - Raceways and Boxes for Electrical Systems
- G. Section 26 05 34 - Outlet, Junction, and Pull Boxes
- H. Section 26 05 35 - Concrete Pull Boxes
- I. Section 26 05 41 - Rigid Galvanized Steel Conduit
- J. Section 26 05 42 - PVC Conduit
- K. Section 26 05 45 - Underground Electrical Work
- L. Section 26 05 53 - Identification for Electrical Systems
- M. Section 26 12 12 - Transformers
- N. Section 26 24 16 - Panelboards
- O. Section 26 27 14 - Electricity Meter
- P. Section 26 27 26 - Wiring Devices
- Q. Section 26 50 00 - Lighting
- R. Section 26 56 14 - Steel Light Pole
- S. Section 26 56 15 - Wooden Poles
- T. Section 26 56 58 - Outdoor Lighting Fixtures

U. Section 31 23 33 - Trenching and Backfilling

V. Section 33 05 97.23 - Underground Utility Warning Tape

1.3 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 SUBMITTALS

A. Complete list of materials and equipment proposed for use in Project prior to purchase and installation of materials or equipment.

1. Submittals shall include manufacturer's names and material descriptions or equipment identification such as styles, types, and catalog numbers. Submittal data shall show published ratings or capacity data, detailed equipment drawing for fabricated items, panel diagrams, wiring diagrams, installation instructions, and other pertinent data. Where literature is submitted covering a group or series of similar items, clearly indicate or identify the applicable items. Drawings shall be drawn to scale indicating exact dimensions.

B. Review of materials shall be based on the manufacturer's latest published data and such physical tests as may be performed by Department Testing Laboratory.

C. Prior to start of construction, submit to Engineer proposed equipment layout drawings for each equipment room or area containing items of equipment furnished under Division 26. Layout drawings shall consist of plan view of room, to scale, showing projected outlines of equipment, complete with dotted indication of required clearances including those needed for removal of service. Indicate location of conduit and pull boxes.

D. Operation and Maintenance Manuals: Provide 1 copy of indexed operation and maintenance manual which shall include test reports, service instructions, and renewal parts lists of equipment installed in Project. Submit in hard copy and electronic file format.

1. Submit operation and maintenance manuals at least 30 Calendar Days before final inspection. Include the following information together with any pertinent data:

- a. Renewal part numbers of replaceable items.
 - b. Manufacturer's specific product data.
 - c. Serial numbers of principal pieces of equipment.
 - d. Supplier's name, address, and phone number.
 - e. Final settings for breakers, relays, and control devices.
- E. Submit resume of full-time quality assurance person.
- F. Project Records:
- 1. In addition to the requirements of PROJECT RECORD DOCUMENTS Section, the make and model of equipment installed in Project shall be indicated on Project Record Drawings.

1.5 QUALITY ASSURANCE

- A. Provide at Project Site, a full time quality assurance person with minimum 5 years of electrical construction experience. This person shall lay out on plans the installation of electrical equipment, conduit alignments, terminations, wiring, and Work pertaining to electrical construction, which shall be used by the electricians for field installations.
- B. Jobsite Workers:
- 1. Apprentices and Journey Level Electricians:
 - a. Apprentices shall be registered in a State of California approved apprenticeship program.
 - b. The use of Journey level electricians shall comply with State of California labor laws.
 - 2. Project Workforce for Compliance with Electrical Safety Policy:
 - a. 70 percent of Journey Level electricians shall be graduates of a State of California Approved Electrical Apprenticeship Program.
 - b. 20 percent of Project Site electrical workers shall be Occupational Safety and Health Administration (OSHA) 10-hour General Industry Safety And Health certified.
 - c. At least 1 Project Site electrical worker shall be OSHA 30-hour General Industry Safety And Health Certified.

- d. The workforce ratios indicated in Quality Assurance Article, Jobsite Workers Paragraph, subparagraphs 2a through c shall be determined by verifying the workforce composition on a daily basis.
3. Contractor shall complete Electrical Safety Policy-Implementation Plan form, located in Appendix "G" of Specifications and submit at the time required in NOTICE INVITING BIDS Section.
4. Prior to start of electrical Work, Contractor or subcontractor shall provide proof of compliance to Inspector.
5. Contractor shall continue to monitor and comply with Jobsite Workers Paragraph of this Article requirements for the duration of Contract. Electrical Work may be terminated at any time Contractor is found to be out of compliance.

1.6 MAINTENANCE

- A. Spare Parts: Deliver the following spare parts to Engineer and obtain receipts. Submit at same time as operating instructions.
 1. Spare fuses: 2 sets for each size combination fused breaker.
 2. Spare fuses for low voltage fused switch: 2 sets for each size used on Project.
 3. Spare pilot light lamps of each type used on Project, in quantity of 10 percent, but not less than 2 percent.
 4. Overload heater elements: 2 sets for each size used on Project.
 5. Spare fuses for medium voltage switches: 2 sets for each size fuse used on Project.

1.7 WARRANTY

- A. Warrant the electrical equipment, systems, products, and services for 1 year commencing from the date of the services completed in manner compliant with Specifications and approved by Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials and equipment to be installed shall be standard cataloged products of companies regularly engaged in the manufacture of such products,

Underwriters Laboratories, Incorporated (UL) listed, and meet the requirements of City of Los Angeles Electrical Code. The products shall be the latest standard designs in accordance with Drawings and unless otherwise noted.

- B. Equipment and devices of the same rating shall be new, interchangeable, and of the same manufacturer. Fixtures and fittings of one classification shall be of the same manufacturer and model.
- C. Materials and equipment shall have National Electrical Manufacturers Association (NEMA) NEMA 1 rating for indoor use and NEMA 3R rating for outdoor use.

2.2 NAMEPLATES

- A. Furnish and install identifying and functional nameplates for the electrical fixtures and poles. Nameplates shall identify function and controlling circuits.
- B. Engrave nameplates on filled metal or 2 ply laminated acrylic and hold in place by mechanical means. Galvanize mechanical fasteners with 2 ounces of hot-dipped zinc per square foot of surface. Characters shall have a minimum height of 4 millimeters for branch circuit identification and minimum of 51 millimeters for warning signs, unless a larger minimum dimension is required by Cal-OSHA or City of Los Angeles Electrical Code.

2.3 ENCLOSURES

- A. Indoor: NEMA 1
- B. Outdoor: NEMA 3R
- C. Switch enclosures shall be clearly marked for maximum voltage, current, and horsepower rating.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Perform trench Work and vault excavations as shown on Drawings and in conformance with BASIC SITE MATERIALS AND METHODS and TRENCHING AND BACKFILLING Sections.

3.2 INSTALLATION

- A. Perform Work in conformance with City of Los Angeles Electrical Code, American Insurance Association (AIA) regulations, regulations of Industrial

Safety Commission of the State of California, and any other legally constituted regulating authority having jurisdiction.

- B. Install Work in conformance with NEMA 3R rating for weather resistance.
- C. Locate and route new electrical conduits without penetrating through new or existing roof decks or electrical equipment roofs.
- D. Exposed conduit, fittings, and straps shall be PVC coated steel conduit unless noted otherwise.

3.3 EMPTY CONDUITS

- A. Provide a nylon pull tape in each empty conduit for future use. Secure tape at both ends and provide a minimum 48 inches of slack.
- B. Nylon pull tape shall be a 3/8 inch width nylon pull tape. Nylon pull tape shall be permanently printed with the rated tensile strength (1,250 pounds minimum) and sequential footage markings.
- C. Nylon pull tape shall be in 1 continuous length without any cuts or ties.
- D. Identify each tape at the end of each line with source and destination markers.

3.4 CAPPING EMPTY CONDUITS

- A. Cap underground conduits, which are to remain empty, at both ends.

3.5 CONDUITS CROSSING RAILROAD TRACKS

- A. Encase electrical, telephone, communications, and signal conduit duct banks crossing new railroad tracks in 3 inch concrete with minimum 2,000 pounds per square inch (psi) strength, extending a minimum of 10 feet on both sides of railroad tracks.

3.6 REPAIR AND RESTORATION

- A. Perform trench resurfacing Work as shown on Drawings and in conformance with BASIC SITE MATERIALS AND METHODS and TRENCHING AND BACKFILLING Sections.

3.7 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Compliance Tests:

- a. Conduct tests at portions of the installation as may be necessary to ensure full compliance with Drawings and Specifications. Perform tests in presence of Engineer. Costs of tests shall be at sole cost and expense of Contractor. Provide instruments, equipment, labor, and materials to complete tests. Tests may be required on any item between installation of Work and end of 1 year warranty period. Should tests detect defective materials, poor workmanship, or variance with requirements of Specifications, Contractor shall make changes necessary and remedy defects at no additional cost to Department.
2. System Acceptance:
 - a. Notify Engineer for final inspection prior to system acceptance upon:
 - 1) Completion of installation of systems required under Contract Documents.
 - 2) Submission and acceptance of operating and maintenance data.
 - 3) Completion of identification markers, tags, nameplates, directory cards, and other identification mechanisms as specified in Specifications.
 - b. Acceptance is contingent upon the following:
 - 1) Completion of final review and correction of deficiencies.
 - 2) Satisfactory completion of acceptance tests which demonstrate compliance with performance and technical requirements of Contract Documents.
 - 3) Satisfactory completion of training program and submission of Operation and Maintenance Manuals and As-Built Drawings required by Contract Documents.

3.8 CLEANING

- A. Upon completion, and at other times during the progress of Work, remove surplus materials, trash, and debris resulting from Work.

3.9 TRAINING SERVICES

- A. After acceptance of Work, Contractor shall provide 3 separate 8-hour sessions (3 separate shifts) for a total of 24 hours site training for 12 of Department's operation personnel. The training session shall be conducted by the manufacturer's qualified representative, with Contractor present. Training shall include meals and instructions on switchgear operation, switchgear maintenance, electrical power monitoring, operation/programming, protective relay operation, neutral grounding resistor with protective relay, ethernet network communications, PLC/HMI operation, computer server, and other major components.
- B. Training shall be conducted at Project Site.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Electrical field tests

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 05 21 - 600 Volt or Less Rated Wiring System
- C. Section 26 05 26 - Grounding and Bonding for Electrical Systems

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems.

1.5 SUBMITTALS

- A. Indexed engineering report presenting the results of field tests.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Tests and Inspections:

1. Testing procedures and recording of test results shall comply with NETA ATS.

- B. Electrical Service Company:

1. Contractor shall retain an experienced and skilled electrical service company to make the field tests.
 - a. Suggested Company: Electro-Test, Incorporated

2. Contractor shall coordinate the field test Work with the electrical service company.

C. High Voltage Cables:

1. After installation of cables and prior to connection, subject cables to a high potential test in conformance with Insulated Cable Engineers Association, Incorporated (ICEA) standards for each voltage category and in conformance with this Section.
2. Applied voltage and timing cycles of voltages shall be as recommended by ICEA standards. Method of shielding cable ends during tests shall comply with National Electrical Testing Association, Incorporated (NETA) and ICEA standards.

D. Relays:

1. Field check overcurrent, ground fault relays, and undervoltage relays for proper operation and calibration.

E. Voltage Tests:

1. The electrical service company shall record service voltage for a period of 7 days.
2. Record voltages at transformer secondaries.
3. Record simultaneous load currents.

F. Grounding Networks:

1. Measure the resistance to earth ground of networks at service switchgear, yard substations, wharf, and individual grounding rods at wharf. Measurements shall be made before the grounding networks are interconnected. Refer to GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS Section for maximum resistance acceptable.

G. System Coordination and Protection Selectivity:

1. The report shall include the final coordination curves for selective tripping of overcurrent devices.
2. Curves shall be redrawn where required due to the substitution of relays or fuses other than those used in the engineering design. Install exact fusing and relay setting descriptions at each overcurrent device in a permanent manner.

3. Confirm power shut downs with Engineer to avoid disruption of operations.

H. Report:

1. Results of tests shall be presented in an indexed engineering report.
Report shall be completed in a professional manner and submit report to Engineer.
2. The engineering report shall be signed by a State of California registered electrical engineer. The registered engineer shall be a principal officer of the electrical service company.

I. 600 or Less Voltage Conductors:

1. After installation of low voltage conductors (600 volts or less) with splices, the independent electric service company shall megger test conductors with 1,000 volt megger test, and tabulate the results. Tested conductors with 500 megaohm or less shall be replaced by Contractor at no additional cost to Department. Test shall be repeated until the results are greater than 500 megaohm.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Single conductor building wire
- B. Wiring connectors
- C. Electrical tape
- D. Heat shrink tubing
- E. Oxide inhibiting compound
- F. Wire pulling lubricant
- G. Cable ties

1.2 RELATED SECTIONS

- A. Section 26 05 26 - Grounding and Bonding for Electrical Systems
- B. Section 26 05 53 - Identification for Electrical Systems
- C. Section 26 27 26 - Wiring Devices

1.3 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment for Work in this Section shall be under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire.
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes.
- D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation.
- E. ASTM D4388 - Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes.

LOW-VOLTAGE ELECTRICAL
POWER CONDUCTORS AND
CABLES

- F. FS A-A-59544 - Cable and Wire, Electrical (Power, Fixed Installation).
- G. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- H. NECA 120 - Standard for Installing Armored Cable (AC) and Type Metal-Clad (MC) Cable.
- I. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy.
- J. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems.
- K. NFPA 70 - National Electrical Code.
- L. UL 44 - Thermoset-Insulated Wires and Cables.
- M. UL 83 - Thermoplastic-Insulated Wires and Cables.
- N. UL 486A-486B - Wire Connectors.
- O. UL 486C - Splicing Wire Connectors.
- P. UL 486D - Sealed Wire Connector Systems.
- Q. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape.
- R. UL 1569 - Metal-Clad Cables.

1.5 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
 - 3. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with Work.

1.6 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.
- B. Field Quality Control Test Reports.
- C. Manufacturer's Written Instructions for Installation: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Project Record Documents: Record actual installed circuiting arrangements. Record actual routing for underground circuits.
- E. Maintenance Materials: Furnish the following for Department's use in maintenance of Project.
 - 1. Submit Operations and Maintenance documents and clearly identify its location in the close-out documentation per the requirements of PROJECT RECORD DOCUMENTS Section.

1.7 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Maintain at Project Site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum 3 years documented experience.
- D. Product Listing Organization Qualifications: An organization recognized by Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conductors and cables in conformance with manufacturer's written instructions.

1.9 FIELD CONDITIONS

- A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees Fahrenheit (F), unless otherwise permitted by manufacturer's written instructions. When installation below this temperature is unavoidable, notify Engineer and obtain direction before proceeding with Work.

PART 2 - PRODUCTS

2.1 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Nonmetallic-sheathed cable is not permitted.
- D. Underground feeder and branch-circuit cable is not permitted.
- E. Service entrance cable is not permitted.
- F. Armored cable is not permitted.
- G. Metal-clad cable is permitted only as follows:.
 - 1. Where not otherwise restricted, may be used:
 - a. Where concealed above accessible ceilings for final connections from junction boxes to luminaires.
 - 1) Maximum Length: 6 feet.
 - 2. In addition to other applicable restrictions, may not be used:
 - a. Unless approved by Department.
 - b. Where not approved for use by the authority having jurisdiction.
 - c. Where exposed to view.
 - d. Where exposed to damage.
 - e. For damp, wet, or corrosive locations, unless provided with a PVC jacket listed as suitable for those locations.

- H. Manufactured wiring systems are not permitted.

2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Provide new conductors and cables manufactured not more than 1 year prior to installation.
- D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, and the like as required for a complete operating system.
- E. Comply with NEMA WC 70.
- F. Comply with FS A-A-59544 where applicable.
- G. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- H. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- I. Conductor Material:
 - 1. Provide copper conductors only. Aluminum conductors are not acceptable for this Project. Conductor sizes indicated are based on copper.
 - 2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
 - 3. Tinned Copper Conductors: Comply with ASTM B33.
- J. Minimum Conductor Size:
 - 1. Branch Circuits: 12 AWG.
 - a. Exceptions:
 - 1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
 - 2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.

- 3) 20 A, 277 V circuits longer than 150 feet: 10 AWG, for voltage drop.
- K. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- L. Conductor Color Coding:
1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout Project.
 2. Color Coding Method: Integrally colored insulation.
 - a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
 3. Color Code:
 - a. 480Y/277 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Brown.
 - 2) Phase B: Orange.
 - 3) Phase C: Yellow.
 - 4) Neutral/Grounded: Gray.
 - b. 240/120 V, 1 Phase, 3 Wire System:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Neutral/Grounded: White.
 - c. Equipment Ground, All Systems: Green.
 - d. For modifications or additions to existing wiring systems, comply with existing color code when existing code complies with NFPA 70 NFPA 70 and is approved by the authority having jurisdiction.

2.3 SINGLE CONDUCTOR BUILDING WIRE

- A. Manufacturers:
1. Copper Building Wire:

- a. Cerro Wire LLC: www.cerrowire.com.
- b. Encore Wire Corporation: www.encorewire.com.
- B. Description: Single conductor insulated wire.
- C. Conductor Stranding:
 - 1. Feeders and Branch Circuits:
 - a. Size 10 AWG and Smaller: Solid.
 - b. Size 8 AWG and Larger: Stranded.
 - 2. Control Circuits: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Insulation:
 - 1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.
 - a. Size 4 AWG and Larger: Type XHHW-2.

2.4 METAL-CLAD CABLE

- A. Manufacturers:
 - 1. AFC Cable Systems Inc: www.afcweb.com.
 - 2. Encore Wire Corporation: www.encorewire.com.
- B. Description: NFPA 70, Type MC cable listed and labeled as complying with UL 1569, and listed for use in classified firestop systems to be used.
- C. Conductor Stranding:
 - 1. Size 10 AWG and Smaller: Solid.
 - 2. Size 8 AWG and Larger: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Insulation: Type THHN, THHN/THWN, or THHN/THWN-2.
- F. Provide oversized neutral conductors where indicated or required.

- G. Provide dedicated neutral conductor for each phase conductor where indicated or required.
- H. Grounding: Full-size integral equipment grounding conductor.
- I. Armor: Steel, interlocked tape.
- J. Provide PVC jacket applied over cable armor where indicated or required for environment of installed location.

2.5 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS Section.
- C. Wiring Connectors for Splices and Taps:
 - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
 - 2. Copper Conductors Size 6 AWG and Larger: Use compression connectors.
- D. Wiring Connectors for Terminations:
 - 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
 - 2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
 - 3. Copper Conductors Size 8 AWG and Larger: Use compression connectors where connectors are required.
 - 4. Stranded Conductors Size 10 AWG and Smaller: Use crimped terminals for connections to terminal screws.
- E. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.

- F. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.
- G. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
 - 1. Manufacturers:
 - a. 3M: www.3m.com
 - b. Ideal Industries, Inc: www.idealindustries.com
- H. Compression Connectors: Provide circumferential type or hex type crimp configuration.
 - 1. Manufacturers:
 - a. Hubbell Electrical Systems (Burndy) www.hubbell.com/burndy/en
 - b. IlSCO: www.ilSCO.com
- I. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.
 - 1. Manufacturers:
 - a. Hubbell Electrical Systems (Burndy) www.hubbell.com/burndy/en
 - b. IlSCO: www.ilSCO.com

2.6 WIRING ACCESSORIES

- A. Electrical Tape:
 - 1. Manufacturers:
 - a. 3M: www.3m.com
 - b. Plymouth Rubber Europa: www.plymouthrubber.com
 - 2. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.

3. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
 4. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
 5. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil; suitable for continuous temperature environment up to 176 degrees F.
 6. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.
- B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.
1. Manufacturers:
 - a. 3M: www.3m.com
 - b. Hubbell Electrical Systems (Burndy) www.hubbell.com/burndy/en
- C. Oxide Inhibiting Compound: Listed; suitable for use with the conductors or cables to be installed.
1. Manufacturers:
 - a. Hubbell Electrical Systems (Burndy) www.hubbell.com/burndy/en
- D. Wire Pulling Lubricant: Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.
1. Manufacturers:
 - a. 3M: www.3m.com
 - b. American Polywater Corporation: www.polywater.com
- E. Cable Ties: Material and tensile strength rating suitable for application.

1. Manufacturers:

- a. Hubbell Electrical Systems (Burndy) www.hubbell.com/burndy/en

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that Work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in conformance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting Work.

3.2 PREPARATION

- A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.3 INSTALLATION

- A. Circuiting Requirements:
 - 1. Unless dimensioned, circuit routing indicated is diagrammatic.
 - 2. When circuit destination is indicated without specific routing, determine exact routing required.
 - 3. Arrange circuiting to minimize splices.
 - 4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
 - 5. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in conformance with NFPA 70.
 - 6. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is not permitted.

- a. Provide no more than 6 current-carrying conductors in a single raceway. Dedicated neutral conductors are considered current-carrying conductors.
 - b. Increase size of conductors as required to account for ampacity derating.
 - c. Size raceways, boxes, and the like to accommodate conductors.
- 7. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.
- B. Install products in conformance with manufacturer's written instructions.
- C. Perform Work in conformance with NECA 1 (general workmanship).
- D. Install metal-clad cable (Type MC) in conformance with NECA 120.
- E. Installation in Raceway:
 - 1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
 - 2. Pull conductors and cables together into raceway at same time.
 - 3. Do not damage conductors and cables or exceed manufacturer's written instructions for maximum pulling tension and sidewall pressure.
 - 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
- F. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- G. Secure and support conductors and cables in conformance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
- H. Terminate cables using suitable fittings.
 - 1. Metal-Clad Cable (Type MC):
 - a. Use listed fittings.

LOW-VOLTAGE ELECTRICAL
POWER CONDUCTORS AND
CABLES

- b. Cut cable armor only using specialized tools to prevent damaging conductors or insulation. Do not use hacksaw or wire cutters to cut armor.
 - c. Do not use direct-bearing set-screw type fittings for cables with aluminum armor.
- I. Install conductors with a minimum of 12 inches of slack at each outlet.
- J. Where conductors are installed in enclosures for future termination by others, provide a minimum of 5 feet of slack.
- K. Neatly train and bundle conductors inside boxes, wireways, panelboards, and other equipment enclosures.
- L. Group or otherwise identify neutral and grounded conductors with associated ungrounded conductors inside enclosures in conformance with NFPA 70.
- M. Make wiring connections using specified wiring connectors.
 - 1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
 - 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
 - 3. Do not remove conductor strands to facilitate insertion into connector.
 - 4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
 - 5. Compression Connectors: Secure connections using manufacturer's written instructions for tools and dies.
- N. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
 - 1. Dry Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
 - a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.

2. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
 - a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
 - b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.
 3. Wet Locations: Use heat shrink tubing.
- O. Insulate ends of spare conductors using vinyl insulating electrical tape.
- P. Identify conductors and cables in compliance with IDENTIFICATION FOR ELECTRICAL SYSTEMS Section.
- Q. Unless specifically indicated to be excluded, provide final connections to equipment and devices, including those furnished by others, as required for a complete operating system.

3.4 FIELD QUALITY CONTROL

- A. Tests and Inspections:
1. Inspect and test in conformance with NETA ATS, except Section 4.
 2. Perform inspections and tests listed in NETA ATS, Section 7.3.2.
 3. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. 600 volt or less rated copper wire, cable, and electrical system

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 05 26 - Grounding and Bonding for Electrical Systems
- C. Section 26 05 41 - Rigid Galvanized Steel Conduit
- D. Section 26 05 42 - PVC Conduit

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

- 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wire and Cable:

- 1. Provide 600 volt or less rated low voltage wire and cable with conductors of soft-drawn annealed copper. Unless otherwise noted on Drawings, 600 volt or less rated wire No. 8 AWG and larger shall be stranded and No. 10 AWG and smaller shall be solid.
 - 2. Wire and cable insulation shall be Type THWN-2/THHN (90 degrees C wet or dry), single conductor, for general use as branch circuits and control wiring. No. 12 AWG minimum for branch circuits; No. 16 AWG minimum for control wiring, unless indicated otherwise on Drawings.

- B. Connectors and Terminals:

- 1. For Conductors used in Systems other than Communication and Control Wiring: For connectors sizes No. 10 AWG and smaller, make splices and terminal connections using 1 or 2-piece insulated crimp-type wire joints, splices and terminals manufactured by 1 of the following:
 - a. Burndy LLC (Hylugs and Hylinks)

- b. Ideal Industries, Incorporated (connectors, terminals, and the like.)
 - c. Thomas & Betts (Sta-Kons)
- 2. Use ring-tongue lugs on strap-screw device terminals. Do not use crimping tools not specifically designed for the application.
 - 3. For conductor sizes No. 8 AWG and larger, make splices, taps, and terminal connections using City of Los Angeles Department of Building and Safety listed cast or machined high-conductivity copper alloy connectors of the circular clamp type with multiple socket-head cap screws manufactured by T & B, OZ Electrical Manufacturing Company, Incorporated, Types "L", "LM", "TW", "TWC", "T", "TC". Except where insulated covers are provided, fill voids and irregularities on connections with insulation putty and cover with 2 half-lapped layers of electrical insulating tape and 1 half-lapped layer of friction tape.

C. Wire Pulling Lubricants:

- 1. Provide wire pulling lubricants in accordance with the following schedule:

<u>Jacket</u>	<u>Manufacturer and Type</u>
Polyethylene	Burndy: Albentonite
Other (except asbestos)	Ideal: Yellow 77

D. Ties:

- 1. Conductor ties shall be Ty-Raps, as manufactured by Thomas & Betts.

E. Insulation Putty: Scotchfil as manufactured by 3M.

F. Insulating Tape: Scotch Super 88 as manufactured by 3M.

2.2 IDENTIFICATION

A. Color Coding:

1. Provide color coding as follows:

	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>	<u>Neutral</u>
240 volts and below	Black	Red	Blue	White
250 to 480 volts	Brown	Orange	Yellow	White with Tracer
Insulated Equipment Ground: Green				
Control Wiring: Purple				

2. For insulations and jackets not manufactured by the selected vendor with integral colors, use Scotch No. 35 color-coding tape on each conductor entering every box, trough, cabinet, and wireway and at intervals not exceeding 5 feet in wireways, trench duct, and other locations where conductors are continuously accessible.

B. Conductor Identification:

1. Other than color-coding, identify conductor with panel and circuit number and additional numbering systems shown on Drawings. Identify circuits by means of numbered tape markers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. Do not pull wire or cable through box fitting or enclosure where change of raceway alignment or direction occurs.
2. Do not cut strands from conductors to fit lugs or terminals.
3. Do not bend conductors to less than recommended radius.

4. Use temporary guides, sleeves, rollers, and other hardware to protect cable from excess tension or abrasion during installation.
5. Splices are not allowed on control and communication wiring when pulling through junction boxes or pull boxes. Conductors shall be terminated only at their origination and final terminal blocks. Terminations shall be made with terminal blocks; splicing with wire nuts is not acceptable.

B. Wiring in Enclosures:

1. Form and tie conductors in panelboards, cabinets, control panels, wireways and wiring troughs, providing circuit and conductor identification, using T & B Ty-Raps of appropriate size and type.
2. Limit spacing between ties to 15 centimeters and provide circuit and conductor identification at least once in each enclosure.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Grounding and bonding for electrical systems to:
 - 1. Prevent transient over-voltages and the energization of conductive machine frames, enclosures, appliances, and structures due to lightning.
 - 2. Improve the capability of overcurrent devices to sense and interrupt ground fault currents by minimizing the impedance of ground current return paths to transformer neutrals.

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 05 21 - 600 Volt or Less Rated Wiring System
- C. Section 26 05 34 - Outlet, Junction, and Pull Boxes
- D. Section 26 24 16 - Panelboards

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 SUBMITTALS

- A. Two copies of certified test reports.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Grounding electrodes shall be 3/4-inch diameter by 10-feet long copper jacketed stainless steel.
- B. Ground clamp onto grounding electrode shall be as shown on Drawings.
- C. Concrete box shall be as shown on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. Grounded service equipment, motor frames, switchgear and equipment enclosures, lighting and power panel boards, transformers, raceways, fences and gates, building or structure steel frames, lighting standards, floodlight poles, power/light pull boxes/maintenance holes, in conformance with the applicable requirements of City of Los Angeles Electrical Code.
At buildings and substations, ground connection shall be made to buried ground bus consisting of a 4/0 softdrawn, annealed, bare stranded copper cable connected to 3/4-inch diameter, 10 foot long stainless steel ground rods, spaced 6 feet minimum. Resistance of the ground bus with rods connected but without supplementary connection shall be less than 25 ohm at any point. Ground rods shall be stainless steel clad.
2. Ground bus shall also be connected at 2 or more points to water main if same is within practical distance.
3. Underground connections, including ground rod connections to structural steel, shall be made by Cadweld or other exothermic process, or Burndy Compression System.
4. Coat cadweld connections with an epoxy resin compound for protection against corrosion.
5. Above ground, Code-approved copper ground clamps, connectors, and lugs shall be used whenever another method of connections is not specified. Ground connectors shall be of the multiple bolt type. Bolts, washers, and stop nuts shall be of high copper alloy, Everdur, Durium, Duronze, or silicon bronze. Ferrous hardware is not acceptable. Size of grounding conductors shall have a minimum current carrying capacity in conformance with City of Los Angeles Electrical Code or the size indicated on Drawings.
6. Length of grounding conductors or jumpers shall be kept to a minimum.
Where flexible conduit is used, provide a bonding jumper between conduit ends.

B. Connection of Equipment to the Structural Steel:

1. If the grounding conductors connected to the structural steel are No. 2 AWG or larger, make the connection to the steel using Cadweld or Burndy Compression System process using proper molds and charges. If conductors are smaller than No. 2 AWG, install a stud in the steel using a high-velocity powder actuated tool and bolt the conductor lug to the stud.
2. Provide a connection to the direct ground for transformer neutrals when the transformer rating is 9 kVA or larger. Use an insulated conductor sized in conformance with City of Los Angeles Electrical Code but not smaller than No. 2 AWG.
3. Provide a connection to the direct ground for the ground bus in switchgear assemblies, and power panel boards, except where the power panel boards are directly mounted and bolted to a steel structure. Use an insulated conductor sized in conformance with City of Los Angeles Electrical Code but not smaller than No. 6 AWG.
4. Install an insulated No. 2 AWG conductor from each set of lightning arrestors or surge capacitors to the nearest direct ground.

C. Equipment Grounding:

1. Provide an electrically continuous copper equipment grounding conductor, color-coded green, and sized in conformance with City of Los Angeles Electrical Code, pulled into electrical raceways containing conductors of systems rated higher than 30 V. Bond to grounding lugs, equipment, fixtures, enclosures, and transformer neutrals.

3.2 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. General:
 - a. Measure the ground resistance employing Fall-of-Potential method using a Biddle Megger Earth Tester with 2 electrodes after complete erection of the structural steel and installation of grounding system.
2. Test Reports:
 - a. Submit to Engineer 2 copies of the test reports certified by the testing technician and Engineer's representative authorized to witness the test.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Conduit raceways and fittings

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASME B1.20.1 - Pipe Threads, General Purpose, Inch.
- B. ASTM A90/A90M - Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
- C. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit.

1.5 SUBMITTALS

- A. Submit catalog cuts of conduit products, accessories, and fittings.

PART 2 - PRODUCTS

2.1 RIGID GALVANIZED STEEL CONDUIT

- A. Conduit shall be City of Los Angeles Department of Building and Safety approved or meet requirements of a recognized testing laboratory approved by City of Los Angeles Department of Building and Safety.
- B. Couplings, fittings, and adapters shall be of the same materials and size as the conduit.
- C. Plastic spacers for direct burial or concrete encasement shall be of size required to fit conduit and as manufactured by Carlon Products.
- D. Zinc Coating:

1. Galvanized steel conduit, bends, and couplings shall be coated by the hot dip process. Other processes, such as metal spray, high zinc coatings, and cold galvanizing, can not be substituted for hot-dipped galvanizing, either in whole or in part.
2. Galvanizing shall be applied to produce a smooth, uniform coating with no flaws or thin spots.
3. The weight of zinc coatings shall not be less than 1.0 ounce per square foot on the outside and 1.0 ounce per foot of zinc on the inside of the conduit, conduit bends, and couplings.
4. Outside and inside surfaces shall be tested separately by Department Testing Laboratory.
5. The determination of the weight of zinc coating shall be done in conformance with ASTM A90/A90M.
6. The conduit after galvanizing shall be uniformly pliable and free from brittleness. When a sample is bent to a semi-circle with an inner radius of six times normal internal diameter, the steel shall not crack, the welded joints shall not open, nor the zinc coating crack, flake, or be removable by rubbing with the bare fingers.

E. PVC Coated Conduit:

1. Where indicated on Drawings, use Plasti-Bond Red PVC coated rigid galvanized conduit as manufactured by Robroy Industries.
2. PVC coated conduit shall conform with NEMA RN 1 with a urethane interior coating.
3. Conduit threads shall be factory made and galvanized. No field threading permitted.
4. Fittings, couplings, elbows, and adapters shall be of the same materials and manufacturer as the conduit.

2.2 PVC CONDUITS

- A. Conduit, fittings, and bends shall be Schedule 80 unless noted otherwise on Drawings.
- B. Conduit color is not important, except that any system installed in the open, where it is visible, shall be of the same color materials.

- C. Couplings, fittings, and adapters shall be of the same materials as the conduit.
- D. Sealing and joining compounds shall be as recommended by the conduit manufacturer.
- E. Conduit and fittings shall be made from clean, virgin, Type II, Grade I, polyvinyl chloride.
- F. Dimensions and tolerances shall conform to City of Los Angeles Electrical Code requirements for rigid PVC.
- G. Materials shall contain labels as may be required by City of Los Angeles Electrical Code.
- H. Joints between PVC and PVC, or between PVC conduit and PVC-coated steel conduit shall be socket-type solvent weld or threaded fittings.
- I. Plastic spacers for direct burial or concrete encasement shall be of size required to fit conduit and as manufactured by Carlon Products.

2.3 ELECTRIC METALLIC TUBING (EMT)

- A. Electric metallic tubing shall be City of Los Angeles Department of Building and Safety approved and standard for electrical metallic tubing applying to conduit galvanized by the hot dip process.
- B. Couplings, fittings, and adapters shall be of the same material and size as the conduit.
- C. Flexible conduits shall be an approved type and shall be spanned by a bonding assembly meeting City of Los Angeles Electrical Code requirements.
- D. Zinc coating requirements: Refer to Zinc Coating Paragraph of Rigid Galvanized Steel Conduit Article of this Section.

2.4 FOR UNDERGROUND CONSTRUCTION

- A. Use rigid PVC Schedule 40 for power up to 600 volts and for communication conduits.
- B. Underground concrete envelope for over 600 volts shall be in conformance with BASIC SITE MATERIALS AND METHODS Section.
- C. Use rigid galvanized or PVC Schedule 80 for installation under floor slabs.

- D. The last 10 feet of buried conduit shall be galvanized steel conduit PVC coated as called for on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. Install conduit raceways in a neat and orderly manner. Raceways shall run true and be aligned plumb vertically and horizontally. Fasteners shall be factory designed and supports installed at spacing prescribed in City of Los Angeles Electrical Code.
2. Conduits shall be cut square and rigid galvanized steel joint shall be painted with a rust resisting paint. Fittings shall be factory-approved, and 1 1/4 inch ELLs and larger shall be factory ELLs. Set screw fittings on EMT shall be restricted to 1 inch conduit or smaller; compression fittings on 2 inch or larger.
3. Branch circuits and feeders are shown schematically on Drawings. Provide conduits with junction boxes, condulets, expansion fittings, ELLs, and supports as required by City of Los Angeles Electrical Code. Routing of conduit shall be field engineered unless otherwise noted on Drawings.
4. Conduit sizes indicated or specified on the wiring diagram and floor plans on Drawings are for copper conductors in steel conduit without a grounding conductor. Conduit sizes shall be increased by Contractor if ground wires are installed.
5. Where conduit home runs to panels are grouped and exposed, coordinate the exact routing of the hanger system with Engineer.
6. Minimum size of conduits shall be 3/4 inch.
7. Install conduit in compliance with City of Los Angeles Electrical Code and in the following manner:
 - a. Concealed in Finished Areas: EMT with set screw fittings or compression fittings.
 - b. Surface mounted parallel with building lines in warehouse or plant areas shall be EMT with set screw fittings or compression fittings. Diagonal runs not allowed.

- c. Rigid Plastic Conduit for Telephone Work: Schedule 40.
- d. Conduits shall be flashed and sealed at locations where the conduit pierces exterior walls or roofs.
- e. Conduits in structural concrete slab shall not exceed $\frac{1}{3}$ the thickness of the concrete: Maintain a clearance of 3 inches where installed parallel to the reinforcing bars.
- f. The cutting of structural building members of the routing of conduit shall not be permitted unless approved by Engineer.
- g. Install conduit stub-ups in tilt-up buildings with a coupling flush in the ground floor slab in order that stub-ups shall not interfere with pouring of tilt-up concrete panels.
- h. Install conduit trapeze hangers with $\frac{3}{8}$ inch rod minimum and supported by thru-bolts at roof structural members. Lag screws not allowed.
- i. In office areas and other finished areas where concrete panels are not furred, install conduit and outlets concealed in wall.
- j. Rigid plastic conduit shall be supported at 4'-0" spacing.
- k. Provide grounding conductor in non-metallic conduits. Conduits are sized on Drawings for metallic conduit and copper cables. Increase conduit capacity if required.
- l. Install circuits rated above 600 volts in rigid galvanized conduits above ground.
- m. Install grounding conductor in conformance with City of Los Angeles Electrical Code.
- n. Conduits shall be installed in fill below slab without reducing thickness of slab or vapor seal.

B. Rigid Galvanized Steel:

- 1. Exercise care in bending conduit to prevent damage to the conduit.
- 2. The radius of the curve of the inner edge of a field bend shall not be less than 6 times the internal diameter of the conduit. The internal diameter of the conduit at the bend shall not be reduced.

3. A run of conduit between box and box, between fitting and fitting, or between box and fitting shall not contain more than the equivalent of four 90 degree bends (360 degrees total), in compliance with City of Los Angeles Electrical Code requirements.
4. End of conduit shall be reamed to remove rough edges and where a conduit enters a box or other fittings. Use approved hot-dipped galvanized bushing and locknut to protect the wire from the abrasion unless the design of box and fitting accomplishes the equivalent purposes.
5. Install conduit as a complete, continuous system, mechanically and electrically connected to boxes and fittings. Connect boxes and fitting to provide electrical continuity.
6. Conduit shall be jointed with approved couplings and unions. Right angle bends, offsets and change-in-direction bends shall be made with hickey or power bends, standard elbows, conduit fittings, or pull boxes. Conduit runs shall be uniform and symmetrical. Joints in conduit installed in concrete or earth, or exposed to the weather shall be liquid and gas tight.
7. Install conduit runs which extend through areas of different temperature or atmospheric conditions, or which are partially indoors and partially outdoors, in a manner which shall prevent drainage of condensed or entrapped moisture into pull boxes, cabinets, or equipment. Drill overhead fittings at point of entry to box or cabinet.
8. Conduit runs for direct burial or concrete encasement shall have plastic spacers at not more than 5'-0" on centers. Install spacers on firm bearing surfaces before backfilling or concrete encasement.
9. Conduit runs which cross concrete structure joints shall have conduit expansion fittings, approved by Engineer, at structural joints.
10. Install PVC coated conduit with tools specifically designed to prevent damage to PVC coating.
11. Repair damage to PVC coatings to the satisfaction of Engineer or replace the component parts with undamaged components.
12. Cleaning: Conduit runs shall be cleaned and swabbed to remove foreign matter and moisture prior to pulling in wire or cable. Boxes in which conduits terminate shall be cleaned of foreign matter and threads. Boxes shall be left broom clean upon completion.

C. PVC Conduit:

1. PVC conduit shall be jointed by socket type solvent weld or threaded fittings.
2. Conduit shall be cut square and externally chamfered approximately 10 to 15 degrees. Remove burrs and fins.
3. Exercise care not to place stress on previously made joints. Allow joints to set before handling according to air temperature as follows:

<u>Air Temperature</u>	<u>Minimum Set Time</u>
60 degrees to 100 degrees Farenheit	30 minutes
below 60 degrees Farenheit	60 minutes

4. Apply solvent in such a manner that no material is deposited on the interior surface or extruded into the interior during jointing. Excess cement on the exterior of the joint shall be wiped clean immediately after assembly.
5. Threads for plastic conduit shall be as specified in ASME B1.20.1. Install a plug in the bore to prevent distortion prior to threading.
6. Threaded joints shall be made using teflon tape or other approved jointing material. Solvent shall not be used with threaded joints.
7. Protect conduit from tool damage during assembly. Vises shall have padded jaws and strap wrenches shall be used for installation of fittings and nipples.
8. Conduit which has been nicked, scarred, or otherwise damaged shall be removed and replaced at no additional cost to Department.
9. Conduit runs for direct burial or concrete encasement shall have plastic spacers spaced at nor more than 5'-0" on center. Spacers shall be installed on firm bearing (surfaces) before backfilling or placing concrete.
10. Bends and transitions from buried or encased runs to exposed runs shall be made with PVC coated steel conduit. The transition shall include as a minimum the last 5 feet of the buried or encased conduit and the first 3 feet of exposed conduit.
11. PVC conduit runs shall contain a grounding conductor.

D. Electrical Metallic Tubing (EMT):

1. Exercise care in bending conduit to prevent damage to the conduit.
2. The radius of the curve of the inner edge of a field bend shall not be less than 6 times the internal diameter of the conduit. The internal diameter of the conduit at the bend shall not be reduced.
3. A run of conduit between box and box, between fitting and fitting, or between box and fitting shall not contain more than the equivalent of four 90 degree bends (360 degrees total), in compliance with City of Los Angeles Electrical Code requirements.
4. Terminations of conduit shall be reamed where a conduit enters a box and other fittings and to remove rough edges.
5. Continuous runs shall be installed as a complete, continuous system, mechanically and electrically connected to boxes and fittings. Boxes and fittings shall be connected to provide electrical continuity.
6. Coupling and unions shall be joined with approved couplings and unions. Right angle bends, offsets and change-in-direction bends shall be made with hickey or power bends, standard elbows, conduit fittings, or pull boxes. Conduit runs shall be uniform and symmetrical. Joints in conduit installed in concrete or earth, or exposed to the weather shall be liquid and gas tight.
7. Conduit runs shall be cleaned and swabbed to remove foreign matter and moisture prior to pulling in wire to cable. Boxes in which conduits terminate shall be cleaned of foreign matter and threads. Leave boxes broom clean upon completion.
8. Conduit runs for concrete encasement shall have plastic spacers at not more than 5'-0" on centers. Install spacers on firm bearing surfaces before backfilling or concrete encasement.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Outlet boxes
- B. Junction boxes
- C. Pull boxes

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 26 00 01 - Basic Electrical Materials and Methods
- C. Section 26 05 41 - Rigid Galvanized Steel Conduit

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Boxes shall be pressed steel or cast iron unless otherwise noted on Drawings.
- B. Hot-dip galvanized steel and cast iron outlet boxes.
- C. Boxes shall be sized in conformance with City of Los Angeles Electrical Code and space requirements, but in no case less than 4 inch by 4 inch by 1 1/2 inches deep. Conduit penetration shall be located so that the cable can be installed without bending it to a radius less than the recommended as a minimum by the cable manufacturer.
- D. Boxes installed outside or in wet locations shall have taper threaded conduit hubs and gasket covers. Boxes listed for use in wet locations shall be National Electrical Manufacturers Association (NEMA) 3R weather rated.
- E. Boxes installed in hazardous locations shall conform to City of Los Angeles Electrical Code.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install boxes to be accessible after completion of the structures; securely mounted and plumb with surrounding structural members. Boxes shall be secured in place independently of conduits entering them.
- B. Install junction box for lighting fixtures as detailed on Drawings.
- C. Install outlet, junction, and pull boxes, conduit bodies, and fittings in conformance with City of Los Angeles Electrical Code.

3.2 REPAIR OF DAMAGED GALVANIZING

- A. Repair damaged galvanizing in conformance with TREATING DAMAGED GALVANIZING Section.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Concrete pull boxes
- B. Underground ducts

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary.

1.5 SUBMITTALS

- A. Shop Drawings: Submit catalog cuts, descriptive data of precast pull boxes and structural design calculation for precast pull boxes.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Jensen Precast Products

2.2 PRECAST PULL BOXES

- A. Precast concrete pull boxes shall comply with the criteria and details shown on Drawings. Refer to Drawings for size of pull box. For Drawing No. 1-3573, pull box shall be as called out on Drawings.
 - 1. The precast reinforced concrete pull box shall be capable of sustaining loads and pressures resulting from vertical and lateral earth loadings, vehicular loadings, or combinations as shown on Drawings.
- B. The following criteria shall be used for design, but shall not minimize Drawing requirements:

1. Earth density = 120 pounds per cubic foot (lb./cu. ft.)
 2. Equivalent fluid pressure for lateral pressure due to earth shall be 85 lb./sq. ft./ft. Minimum safety factor for buoyancy shall be 1.25.
 3. Vehicular loading shall be 100 kips wheel plus 25 percent impact on a 2'-0" by 2'-6" wheel imprint area, wheels 6'-0" apart on centers, unless noted otherwise for installations in terminals.
 4. Design and details shall comply with minimum ACI CODE-318 requirements. Minimum $f'c$ =3,000 pounds per square inch (psi).
- C. Pull Box Structure: Designed to withstand forces due to additional inward load of 4,000 pounds (working load) with safety factor of 2, acting perpendicular to the surface at any pulling iron.
- D. Pull Box: Design to provide a dry, water-tight installation.
- E. Calculations and Details: Prepared by a civil engineer registered in the State of California and experienced in this type of design.
- F. Precast Concrete Pull Boxes: Rectangular or octagonal type conforming to applicable provisions specified or shown on Drawings regarding cover assemblies, pulling irons, hardware, and the like.
- G. Each pull box section shall be equipped with necking frame suitable for installation of cover assembly. If necessary, provide concrete grade ring(s) to bring top of cover to required elevation.
- H. Each pull box section shall have suitable knockouts or openings in vertical walls for duct banks and conduits entering the pull box.
- I. Furnish each pull box with sump with minimum dimensions of 6 inch diameter and depth as indicated on Drawings.
- J. Metallic parts of the pull box shall have galvanized finish.

PART 3 - EXECUTION

3.1 PULL BOXES

- A. Install in accordance with details on Drawings and manufacturer's written instructions.

- B. Place pulling irons on each end opposite walls and below horizontal centerlines of ducts and knockouts. Install pulling irons with each end hooked behind reinforcing bar.
- C. Ground exposed non-current carrying metal parts of the pull box.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Rigid galvanized steel conduit and fittings

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 26 00 01 - Basic Electrical Materials and Methods
- C. Section 26 05 21 - 600 Volt or Less Rated Wiring System
- D. Section 26 24 16 - Panelboards

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

- 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC).
- B. ASTM A90/A90M - Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
- C. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit.
- D. UL 6 - Electrical Rigid Metal Conduit-Steel.

1.5 SUBMITTALS

- A. Submit the following to Engineer:

- 1. Cut sheets for rigid galvanized steel conduit, PVC coated rigid galvanized steel conduit, and fittings.

PART 2 - PRODUCTS

2.1 CONDUIT

- A. Conduit shall comply with the requirements of UL 6 for rigid galvanized steel electrical conduit and each piece shall bear Underwriters Laboratories, Incorporated (UL) label. In case of conflict between UL standards and Specifications, the more stringent requirements shall apply.
- B. Conduit shall be City of Los Angeles Department of Building and Safety approved or meet requirements of a recognized testing laboratory approved by City of Los Angeles Department of Building and Safety.
- C. Conduit shall conform to ANSI C80.1.
- D. Couplings, fittings, and adapters shall be of the same material and size as the conduit.
- E. Plastic spacers for direct burial or concrete encasement shall be of size required to fit conduit and as manufactured by Carlon Products.
- F. Coat rigid galvanized steel conduit with a 40 mil PVC bonded coating for outdoor installation.
- G. Minimum size of conduits shall be 3/4 inch.

2.2 ZINC COATING

- A. Galvanized steel conduit, bends, and couplings shall be coated by the hot-dip process. Other processes, such as metal spray, high zinc coatings, or cold galvanizing, may not be substituted for hot-dipped galvanizing either in whole or in part.
- B. Apply galvanizing to produce a smooth, uniform coating.
- C. The weight of zinc coating shall not be less than 1.0 ounce per square foot on the outside and 1.0 ounce per foot of zinc on the inside of the conduit, conduit bends, and couplings.
- D. The outside and inside surface shall be tested separately.
- E. The determination of the weight of zinc coating shall be done in conformance with ASTM A90/A90M.

- F. Conduit shall be pliable and free from brittleness after galvanizing. When a sample is bent to a semicircle with an inner radius of 6 times nominal internal diameter, the steel shall not crack, the welded joints shall not open, nor the zinc coating crack, flake, or be removable by rubbing with the bare fingers.
- G. Repair damaged galvanizing in conformance with TREATING DAMAGED GALVANIZING Section.

2.3 PVC COATED CONDUIT

- A. Where indicated on Drawings, use Ocal PVC coated rigid galvanized conduit as manufactured by Thomas and Betts Corporation.
- B. PVC coated conduit shall conform to NEMA RN 1 with a urethane interior coating.
- C. Conduit threads shall be factory made and galvanized. No field threading permitted.
- D. Fittings, couplings, elbows, and adapters shall be of the same materials and manufacturer as the conduit.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Exercise care in bending conduit to prevent damage to the conduit.
- B. The radius of the curve of the inner edge of a field bend shall not be less than 6 times the internal diameter of the conduit and the internal diameter of the conduit at the bend shall not be reduced.
- C. A run of conduit between pole and pole, between fitting and fitting, between box and box, between box and fitting, between box and pole, or between pole and fitting shall not contain more than the equivalent of four-90 degree bends (360 degrees total), including those bends located immediately at the outlet or fitting, in compliance with City of Los Angeles Electrical Code requirements.
- D. End of conduit shall be reamed to remove rough edges and where a conduit enters a box or other fittings. Use approved hot-dipped galvanized bushing and locknut to protect the wire from the abrasion unless the design of box and fitting accomplishes the equivalent purposes.

- E. Install conduit as a complete, continuous system, mechanically and electrically connected to boxes and fittings. Boxes and fittings shall be connected to provide electrical continuity.
- F. Conduit shall be jointed with UL listed couplings and unions. Right angle bends, offsets and change-in-direction bends shall be made with hickey or power bends, standard elbows, conduit fittings, or pull boxes. Conduit runs shall be uniform and symmetrical. Joints in conduit installed in concrete or earth, or exposed to the weather shall be liquid and gas tight.
- G. Install conduit runs which extend through areas of different temperature or atmospheric conditions, or which are partially indoors and partially outdoors, in a manner which shall prevent drainage of condensed or entrapped moisture into pull boxes, cabinets, or equipment. Drill overhead fittings at point of entry to box or cabinet.
- H. Conduit runs for direct burial or concrete encasement shall have plastic spacers at not more than 5'-0" on centers. Install spacers on firm bearing surfaces before backfilling or concrete encasement.
- I. Conduit runs which cross concrete structure joints shall have conduit expansion fittings.
- J. Clean and swab conduit runs to remove foreign matter and moisture prior to pulling in wire or cable. Boxes in which conduits terminate shall be cleaned of foreign matter and threads. Leave boxes broom clean upon completion.
- K. Mandrel and swab conduit runs to remove foreign matter and moisture prior to pulling in wire and cable. Boxes in which conduits terminate shall be cleaned of foreign matter and threads. Leave boxes broom clean upon completion.
- L. Install PVC coated conduit with tools specifically designed to prevent damage to PVC coating.
- M. Damage to PVC coatings shall be repaired in conformance with manufacturer's written instructions or the component parts shall be replaced with undamaged components.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. PVC conduit and fittings

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 05 21 - 600 Volt or Less Rated Wiring System
- C. Section 26 05 41 - Rigid Galvanized Steel Conduit

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

- 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASME B1.20.1 - Pipe Threads, General Purpose, Inch.
- B. ASTM D1784 - Standard Classification System and Basis for Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.
- C. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.

1.5 SUBMITTALS

- A. Submit the following to Engineer:
 - 1. Cut sheets for PVC conduit and fittings.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Conduit, fittings, and bends shall be of the schedules noted on Drawings, but in no case lighter than Schedule 40.
- B. Conduit bends shall be of same schedule as conduit straight runs as shown on Drawings.

- C. Conduit color is not important, except that conduit installed where visible shall be of the same color materials.
- D. Couplings, fittings, and adapters shall be of the same materials as the conduit manufacturer.
- E. Primer, solvent, sealing, and joining compounds shall be as recommended by the conduit manufacturer.
- F. Conduit and fittings shall be made from clean, virgin, Type II, Grade 1, PVC resin conforming to ASTM D1784.
- G. Dimensions and tolerances shall conform to requirements for rigid PVC conforming to both ASTM D1784 and ASTM D1785.
- H. Each piece shall be City of Los Angeles Department of Building and Safety approved or meet requirements of a recognized testing laboratory approved by City of Los Angeles Department of Building and Safety.
- I. Plastic spacers for direct burial or concrete encasement shall be of size required to fit conduit and shall be as manufactured by Carlon Products.
- J. Materials shall contain labels as may be required by City of Los Angeles Electrical Code.
- K. Joints between PVC and PVC or between PVC conduit and PVC-coated steel conduit shall be socket-type solvent weld or threaded fittings.
- L. Minimum size of conduits shall be 3/4 inch, unless noted otherwise on Drawings.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Rod, clear, and rope conduit sections prior to pulling cable.

3.2 INSTALLATION

- A. Join PVC conduit using socket type solvent weld or threaded fittings and in conformance with manufacturer's written instructions.
- B. Cut conduit square and externally chamfer approximately 10 to 15 degrees. Remove burrs and fins.

- C. Exercise care not to place stress on previously made joints. Allow to set before handling according to air temperature as follows:

<u>Air Temperature</u>	<u>Minimum Set Time</u>
60 degrees to 100 degrees Fahrenheit	30 minutes
below 60 degrees Fahrenheit	60 minutes

- D. Apply primer and solvent to ends in a manner such that no material is deposited on the interior surface or extruded into the interior during jointing. Excess cement on the exterior of the joint shall be wiped clean immediately after assembly.
- E. Threads for plastic conduit shall be as specified in ASME B1.20.1. Install a plug in the bore to prevent distortion prior to threading.
- F. Threaded fittings used for joints shall be made using Teflon tape or other approved jointing material. Solvent shall not be used with threaded fittings.
- G. Protect conduit from tool damage during assembly. Vises shall have padded jaws and strap wrenches shall be used for installation of fittings and nipples.
- H. Remove and replace conduit which has been nicked, scarred, or otherwise damaged at no additional cost to Department.
- I. Conduit runs for direct burial or concrete encasement shall have plastic spacers spaced at not more than 5'-0" on center. Install spacers on firm bearing surfaces before backfilling or concrete encasement.
- J. PVC conduit runs shall contain a grounding conductor.
- K. The last 10 feet of buried conduit shall be galvanized steel conduit with PVC coating as called for on Drawings.
- L. For Drawing No. 1-3573, minimum sweep for 4 inch conduit is 3 feet 90 degree radius and maximum of two 90 degree bends.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Underground electrical Work
- B. Plastic utilities duct
- C. Moisture sealing materials

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 05 26 - Grounding and Bonding for Electrical Systems
- C. Section 26 05 35 - Concrete Pull Boxes
- D. Section 26 05 41 - Rigid Galvanized Steel Conduit
- E. Section 26 05 42 - PVC Conduit
- F. Section 26 05 53 - Identification for Electrical Systems
- G. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM F512 - Standard Specification for Smooth-Wall Poly(Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation.
- B. CPUC GO 128 - Public Utilities Commission of the State of California Rules for Construction of Underground Electric Supply and Communication Systems.
- C. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit.
- D. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit.

- E. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
- F. NEMA TC 6&8 - Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installations.
- G. NEMA TC 9 - Fittings for Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installation.
- H. NFPA 70 - National Electrical Code.
- I. UL 6 - Electrical Rigid Metal Conduit-Steel.
- J. UL 514A - Metallic Outlet Boxes.
- K. UL 514B - Conduit, Tubing, and Cable Fittings.
- L. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings.

1.5 SUBMITTALS

- A. Submit the following to Engineer for approval:
 - 1. Product Data:
 - a. Conduit/Duct (all types)
 - b. Precast Maintenance Holes
 - c. Sealing Material for Precast Maintenance Holes
 - d. Maintenance Holes Frames and Covers
 - 2. Shop Drawings:
 - a. Precast Maintenance holes: Indicate dimensions, reinforcement, size, and locations of openings, and accessory locations for precast maintenance holes.
 - b. Submit structural calculations for precast concrete items as follows:
 - 1) Submit structural calculations for loads including traffic, soil pressure, and live loads.
 - 2) Submit buoyancy calculations based on water table at 5 feet below grade. Products shall have a buoyancy safety factor of 1.5 minimum.

- 3) The calculations shall include a statement by the structural engineer that products are suitable for use in Seismic Zone 4 as defined by City of Los Angeles Building Code.

3. Certificates:

- a. Material and Equipment: Provide manufacturer's statement certifying that the product supplied meets or exceeds Contract requirements.

- 1) Precast maintenance hole and accessories.

- b. For electrical medium and high voltage splicing installer provide the following:

- 1) State of California Journeyman license

- 2) IBEW-NECA cable splicing certification

4. Details, installation procedures, sequence of Work, and supporting information to intercept electrical medium and high voltage lines.

- a. References from 3 clients where high voltage intercepting was completed. Provide description of Work and estimated value of Work.

1.6 QUALITY ASSURANCE

- A. In each standard referenced to in this Section, consider the advisory provisions to be mandatory, as though the word "shall" has been substituted for "should" wherever it appears.
- B. Electrical medium and high voltage splicing shall be installed by a qualified installer with at least 10 years experience in this type of Work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products to Project Site under provisions of BASIC SITE MATERIALS AND METHODS Section. Inspect for damage.
- B. Store and protect in conformance with manufacturer's written instructions.

1.8 PROJECT CONDITIONS

- A. Drawings are diagrammatic and shall not be scaled for exact locations. Locations of existing underground utilities are based on record drawings and casual field observations. Contractor shall use care in excavating for the installation of new underground ducts and shall be responsible for damage to existing underground utilities. Field conditions and non-interference with other utilities and trades, shall determine exact locations of new underground electrical ducts.
- B. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

1.9 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of PROJECT RECORD DOCUMENTS Section.
- B. Accurately record actual locations of exact routing of ductbank indicating plan location and depths every 50 linear feet. Measure conduit locations from permanently fixed readily discernible landmarks such as building corners, columns, maintenance hole centerline.
- C. Accurately record actual locations of each maintenance hole.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment shall be new and of high quality to give long life and reliable operation. Equipment shall be modern in design and shall not have been in prior service except as required by factory tests. Materials and equipment shall conform to the respective specifications and standards of this Section. Electrical ratings shall be as indicated on Drawings.
- B. Concrete for encasement shall be in conformance with BASIC MATERIALS AND METHODS Section.

2.2 CONDUIT

- A. Rigid Metal Conduit: UL 6, hot-dip galvanized, threaded type.
- B. PVC Coated Rigid Steel Conduit: NEMA RN 1.
- C. Rigid Plastic Conduit: NEMA TC 2; Schedule 40 PVC.

2.3 PLASTIC DUCT

- A. Concrete Encased Plastic Utilities Duct: UL 651: Schedule 40 Rigid PVC Conduit.
- B. Concrete Encased Plastic Telecommunication Duct: UL 651: Schedule 40 Rigid PVC Conduit.

2.4 FITTINGS AND OUTLET BOXES

- A. Metal Fittings and Outlet Boxes: UL 514A and UL 514B. Fittings and boxes for use with steel conduit, rigid or flexible shall be cast-metal with gasketed closures.
- B. PVC Fittings and Conduit Bodies: NEMA TC 3.
- C. Plastic Utility Duct Fittings: NEMA TC 6&8, NEMA TC 9, and ASTM F512.

2.5 NYLON PULL TAPE

- A. Nylon pull tape shall be nylon having a minimum tensile strength of 1,250 pounds in each empty duct. Minimum 48 inches of slack shall be left at each end of nylon pull tape. Plug spares for future use.

2.6 CABLE SUPPORTS

- A. Provide a means of supporting cables running through electrical maintenance holes. This shall be in the form of vertical channels cinch anchored to the maintenance holes wall. A cantilevered support fastened to the channels shall be used to support the cable and splices. Cable racks, including rack arms and insulators, shall be adequate to accommodate the cable. A porcelain clamp shall be used to insulate and protect cables from supports. Cables smaller than 0.75 inch diameter shall be provided with supplementary means of support such as cable tray or conduit. Exposed metal parts and fasteners shall be fabricated of stainless steel or double hot-dip galvanized steel.

2.7 MOISTURE SEALING MATERIAL

- A. Provide a 2-part urethane foam sealant which when mixed shall expand approximately 15 times in volume to form a dense, strong, tough foam unit with density of 3 to 4 pounds per cubic foot. Sealant shall reach 60 percent full strength in 8 to 10 minutes after application.

2.8 GROUNDING

- A. Grounding shall conform to City of Los Angeles Electrical Code NFPA 70 Section 250.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Underground cable installation shall conform to NFPA 70, CPUC GO 128, and other state codes and City of Los Angeles Electrical Code.

3.2 CONCRETE

- A. Concrete for electrical requirements shall be at least 3,000 pounds per square inch (psi) concrete with 1-inch aggregate and in conformance with CONCRETE FOR EXTERIOR IMPROVEMENTS Section, unless otherwise noted on Drawings.

3.3 UNDERGROUND DUCT

- A. The duct bank shall be rectangular in cross-section and shall provide at least 3 inches of concrete cover surrounding the bank. Separate conduits by a minimum concrete thickness of 3 inches.
- B. Provide a minimum of 12 inches of separation between low voltage conduits from high voltage conduits.
- C. Provide a minimum of 6 inches of separation between utility crossings.
- D. Sweep bends may be made up of 1 or more curved or straight sections or combinations thereof. Manufactured bends shall have a minimum radius of 60 inches for ducts of 2 inches in diameter and larger.
- E. Use suitable spacers of high impact polystyrene installed not greater than 4 feet on center.
- F. During construction, protect partially completed duct lines from the entrance of debris such as mud, sand, and dirt by means of suitable conduit plugs.
- G. Conduit Termination to Maintenance Holes: Conduits shall terminate into maintenance hole and pull box terminators. Immediately after installation, plug or cap raceway ends with water-tight and dust-tight seals until the time for pulling in conductors.

- H. Concrete Envelope: Securely anchor duct to prevent movement during concrete or slurry placement.
- I. Underground Warning Tape: Identifying tapes shall be buried in utility line trenches. Place 1 tape above the centerline of each duct bank. Refer to IDENTIFICATION FOR ELECTRICAL SYSTEMS Section.
- J. Conduit Stub-up through Concrete Slab or Grade: Install raceways so that they emerge at right angles to the surface and have no curved portion of the bend exposed. Provide support during pouring of concrete to ensure that raceways remain in position. Provide PVC coated galvanized rigid steel elbows and nipples where conduit emerges from slab of concrete or grade. This requirement is for slabs and grades, regardless of whether it is permanently exposed to view or not.

3.4 PREPARATION FOR PULLING IN CONDUCTORS

- A. Do not install crushed or deformed raceways. Avoid traps in raceways where possible. Take care to prevent the lodging of concrete, dirt, or trash in raceways, boxes, fittings, and equipment during the course of construction. Make raceways entirely free of obstructions or replace them. Ream raceways, remove burrs, and clean raceway interior before introducing conductors or pull wires. Conduit shall be clear of particles of earth, sand, and gravel.
- B. Existing and new raceways shall be successfully mandrelled with a 12 inch long mandrel in the presence of Inspector. After successful mandrelling of raceways, pull a bristle brush through each raceway to remove debris.
- C. For existing raceways to be used in Contract, pull a mandrel of a diameter approximately 1/2 inch less than the raceway inside diameter through each raceway. Provide nylon pull tape to be used for conductor paths.
- D. For new concrete-encased raceways, after the concrete envelope has set, mandrel each completed section of a duct line from maintenance hole to maintenance hole. Pull a mandrel of a diameter approximately 1/4 inch less than the raceway inside diameter through each raceway.

3.5 EMPTY RACEWAYS

- A. Certain raceways shall have no conductors pulled in as part of Contract. Identify with tags at each end and at any intermediate pull point the origin and destination of each such empty raceway. Provide a removable permanent cap over each end of each empty raceway. Provide a 3/8 inch nylon pull cord in each empty raceway.

3.6 GROUNDING

- A. Grounding shall be in conformance with City of Los Angeles Electrical Code NFPA 70 Section 250.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Electrical systems identification

1.2 RELATED SECTIONS

- A. Section 33 05 97.23 - Underground Utility Warning Tape

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. 29 CFR 1910.145 - Accident Prevention Signs and Tags.
- B. ASME A13.1 - Scheme for the Identification of Piping Systems.
- C. NFPA 70 - National Electrical Code.

1.5 SUBMITTALS

- A. Shop Drawings: Dimensioned plans and sections or elevation layouts of electrical equipment.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements:

1. Comply with NFPA 70.

1.7 COORDINATION

- A. Where electrical identification devices are applied to field-finished surfaces, coordinate installation of identification devices with completion of finished surface.
- B. Where electrical identification markings and devices shall be concealed by acoustical ceilings and similar finishes, coordinate installation of these items before ceiling installation.

PART 2 – PRODUCTS

2.1 ELECTRICAL IDENTIFICATION

- A. Identification Devices: A single type of identification product for each application category. Use colors prescribed by ASME A13.1, NFPA 70, and this Section.
- B. Raceway and Cable Labels: Comply with ASME A13.1, Table 3, for minimum size of letters for legend and minimum length of color field for each raceway and cable size.
 - 1. Type: Pretensioned, wraparound plastic sleeves. Flexible, preprinted, color-coded, acrylic band sized to suit the diameter of the item identified.
 - 2. Type: Preprinted, flexible, self-adhesive, vinyl. Legend is overlaminated with a clear, weather- and chemical-resistant coating.
 - 3. Color: Black letters on orange background.
 - 4. Legend: Indicates voltage.
 - 5. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape, not less than 1 inch wide by 3 mils thick.
- C. Install underground utility warning tape in conformance with UNDERGROUND UTILITY WARNING TAPE Section.
- D. Tape Markers for Wire: Vinyl or vinyl cloth, self-adhesive, wraparound type with preprinted numbers and letters.
 - 1. Color Coding Cable Ties: Type 6/6 nylon, self locking type. Colors to suit coding scheme.
- E. Engraved Plastic Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched or drilled for mechanical fasteners 1/16-inch minimum thickness for signs up to 20 square inches and 1/8-inch minimum thickness for larger sizes. Engraved legend in black letters on white background.
- F. Interior Warning and Caution Signs: Comply with 29 CFR 1910.145. Preprinted, aluminum, baked enamel finish signs, punched or drilled for mechanical fasteners, with colors, legend, and size appropriate to the application.

- G. Exterior Warning and Caution Signs: Comply with 29 CFR 1910.145. Weather resistant, nonfading, preprinted, cellulose acetate butyrate signs with 0.0396 inch galvanized steel backing, with colors, legend, and size appropriate to the application. Use 1/4-inch grommets in corners for mounting.
- H. Fasteners for Nameplates and Signs: Self tapping, stainless steel screws, or No. 10/32 stainless steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 IDENTIFICATION INSTALLATION

- A. Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated in Contract Documents or required by codes and standards. Use consistent designations throughout Project.
- C. Self-Adhesive Identification Products: Clean surfaces before applying.
- D. Identify raceways and cables with color banding.
- E. Bands: Pretensioned, snap around, colored plastic sleeves, or colored adhesive marking tape. Make each color band 2 inches wide, completely encircling conduit, and place adjacent bands of 2 color markings in contact, side by side.
 - 1. Band Locations: At changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
 - 2. Colors:
 - a. Fire Alarm System: Red
 - b. Security System: Blue and yellow
 - c. Telecommunication System: Green and yellow
- F. Tag and label circuits designated to be extended in the future. Identify source and circuit numbers in each cabinet, pull and junction box, and outlet box. Color coding may be used for voltage and phase identification.

- G. Install continuous underground plastic markers directly above power and communication lines during trench backfilling, for exterior underground power, control, signal, and communication lines. Locate 6 to 8 inches below finished grade. If width of multiple lines installed in a common trench or concrete envelope does not exceed 16 inches overall width, use a single line marker.
 - 1. Color code 240/120V and 208/120V system secondary service, feeder, and branch circuit conductors throughout the secondary electrical system as follows:
 - a. Phase A: Black
 - b. Phase B: Red
 - c. Phase C: Blue
 - d. Neutral: White
 - 2. Color code 480/277-V system secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:
 - a. Phase A: Yellow
 - b. Phase B: Brown
 - c. Phase C: Orange
 - d. Neutral: Gray
- H. Install warning, caution, and instruction signs in conformance with City of Los Angeles Electrical Code NFPA 70 Section 490 and where needed to ensure safe operation and maintenance of electrical systems and of items to which they connect. Install engraved plastic laminated instruction signs with approved legend where instructions are needed for system or equipment operation. Install metal backed butyrate signs for outdoor items.
- I. Install engraved laminated emergency operating signs with white letters on red background with minimum 3/8-inch high lettering for emergency instructions on power transfer, load shedding, and other emergency operations.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Dry-type transformers

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 05 33 - Raceways and Boxes for Electrical Systems
- C. Section 26 05 41 - Rigid Galvanized Steel Conduit

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 SUBMITTALS

- A. Submit shop drawings, catalog cuts, outline drawings, and other working plans of the equipment and installation to Engineer for approval prior to purchase of materials.
- B. Submit certified test reports for each unit.

PART 2 - PRODUCTS

2.1 EQUIPMENT

- A. Transformers:

1. Manufacturer: Square D by Schneider Electric.
2. Transformers shall have the following:
 - a. Dry type transformer vented.
 - b. Ratings and voltage as shown on Drawings.
 - c. Copper windings.

- d. For outdoor applications, the enclosure shall be National Electrical Manufacturers Association (NEMA) Type 3R, heavy sheet steel, and finished with American National Standards Institute (ANSI) 61 gray enamel.
- e. For indoor applications, the enclosure shall be NEMA 1.
- f. Insulation shall be 30 kV basic insulation level (BIL) rated.
- g. Impedance shall be 5 1/2 percent with a plus or minus over or under 7 1/2 percent.
- h. Maximum temperature rise of 115 degrees C above 40 degrees C ambient, which provides 15 percent additional kilovolt ampere (kVA) capacity.
- i. Transformer shall be approved for use by City of Los Angeles Testing Laboratory or meet requirements of a recognized testing laboratory approved by City of Los Angeles Department of Building and Safety.
- j. Sound levels shall not exceed 64 decibels (dB) for 750 kVA to 1000 kVA, 65 dB for 1500 kVA, and 66 dB for 2000 kVA.
- k. Mechanically brace core-coil assembly to withstand testing.
- l. Coil construction and bracing shall be such as to prevent mechanical breakdown of insulation during short circuit.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install transformers in conformance with manufacturer's written instructions and Drawings.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Panelboards:
 - 1. Branch circuit
 - 2. Distribution
- B. Circuit breakers

1.2 RELATED SECTIONS

- A. Section 09 90 01 - Painting for Exterior Improvements
- B. Section 26 00 01 - Basic Electrical Materials and Methods
- C. Section 26 05 21 - 600 Volt or Less Rated Wiring System

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for work of this Section shall be paid under the Electrical System bid item of the Bid Proposal Line Items.

1.4 SUBMITTALS

- A. In addition to the requirements of BASIC ELECTRICAL MATERIALS AND METHODS Section, submit descriptive data for products and materials, breaker layouts drawing with dimensions, component list, short circuit rating, voltage, and continuous current.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Square D by Schneider Electric, (909) 612-5400

2.2 DISTRIBUTION PANELBOARDS

- A. Dead front, dead rear, equipped with automatic circuit breakers for each circuit and paneled for accessibility. Provide minimum 8 inch gutter space at top and bottom of panelboard. Provide circuit breaker with individual engraved laminated plastic nameplate stating trip value and load supplied, screwed to interior trim. Include breaker frame size and type on nameplate if not readily identifiable without removing trim. Breakers shall be of the size and arrangement as shown on Drawings. Panels shall be fully bused, drilled, and tapped; copper busing. Voltages and ratings shall be as shown on Drawings. Provide lock-offs for each breaker.

2.3 BRANCH CIRCUIT PANELBOARDS

- A. Interior: Shall consist of automatic circuit breakers (one for each branch circuit) properly secured and mounted in a dead front, dead rear code gage, galvanized steel cabinet with wiring gutter of sufficient width to provide ample space for branch circuit wires and feeders; in no case less than 4 inches wide. Provide barriered wireway for feedthrough panels. Provide minimum 8 inches gutter space at top and bottom of panelboard. Panels shall be fully bused; copper busing. Furnish each panel with 42-20 ampere 1-pole circuit breakers unless shown otherwise on Drawings or panel schedules.
- B. Exterior: Shall consist of trim with hidden mounting screws for flush mounted panelboards, and door constructed of code gage sheet steel with factory finish. Door shall be fitted with hidden hinges and spring catch latch with cylinder lock. Provide directory cardholder on inside of door. Mounting screws shall allow adjustable alignment of trim and interior panel.

2.4 CIRCUIT BREAKERS

- A. Circuit breakers shall be automatic trip-free, quick-make, quick-break, thermal-magnetic type; with handles clearly indicating tripped position. Multi-pole breakers shall have common trip and single handle. Breaker sizes, trip ratings, and arrangement in panelboards shall be in conformance with panel schedules. Breaker sizes shall be clearly stamped on handles or on laminated plastic nameplate attached to trim. Spaces for future breakers shall have bus drilled and tapped. Multi-pole breakers shall not be used for lighting or 120 volt receptacle circuits except where specifically required by the City of Los Angeles Electrical Code. Provide lock-off or lock-on devices, where required.

- B. Breakers for Distribution Panels: Square D Type I-Line; minimum interrupting rating 18,000 ampere, symmetrical at 240 volt. Provide high-interrupting rated breakers where noted or required. Breakers shall be plug-on to busing.
- C. Breakers for 120Y/240 Volt Lighting Panelboards: Square D Type NF; minimum interrupting rating 18,000 ampere symmetrical at 240 volt, bolted to busing. Provide lock-off device for each breaker.
- D. Breakers for 208Y/120 volt or 120/240 volt Receptacle Panelboards: Square D Type NQ; minimum interrupting rating 10,000 ampere, symmetrical at 240 volt, bolted to busing. Panelboards shall have amps interrupting capacity (AIC) rating as specified on Drawings. Provide sub-feed breakers where indicated on schedules.

2.5 IDENTIFICATION

- A. Nameplates: Provide identification nameplates on panelboards. Nameplates shall be engraved black lamicon with minimum 1/4 inch high white letters. Nameplate shall state panel designation, voltage and bus ampere rating, and shall be riveted or screwed to panelboard housing. Provide engraved branch circuit breaker numbering strip, screwed or riveted, on panelboard internal trim.
- B. Schedules: Provide load schedules for branch circuit panelboards identifying type, size, and location of load. Schedules shall be typewritten and protected by transparent plastic cover.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. In general, support panels on building structure. Provide auxiliary supports where required. Auxiliary supports shall be Unistrut.
- B. Mount panels so that the tops of trims are at 6'-6" above finished floor, unless noted otherwise on Drawings.
- C. Install panelboards as indicated on Drawings and in conformance with the manufacturer's written instructions.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Electricity meter

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 24 16 - Panelboards

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

- 1. Payment for work of this Section shall be paid under the Electrical System bid item of the Bid Proposal Line Items.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The meter safety socket box shall be in conformance with City of Los Angeles Department of Water and Power (LADWP) requirements and as called for on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install meter in conformance with LADWP standards and requirements.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Wiring devices

1.2 RELATED SECTIONS

- A. Section 26 05 33 - Raceways and Boxes for Electrical Systems

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. NEMA WD 1 - General Color Requirements for Wiring Devices.
- B. NEMA WD 6 - Wiring Devices - Dimensional Specifications.
- C. NFPA 70 - National Electrical Code.

1.5 SUBMITTALS

- A. Product Data: Manufacturer's catalog information showing dimensions, colors, and configurations.
- B. Manufacturer's installation instructions.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this Section shall have minimum 5 years documented experience.
- B. Conform to requirements of NFPA 70.
- C. Products shall be listed and classified by Underwriters Laboratories, Inc. (UL), or testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

1.7 EXTRA MATERIALS

- A. Furnish 2 of each style, size, and finish wall plate.

- B. Provide 2 protective rings.
- C. Provide 2 carpet rings.

PART 2 - PRODUCTS

2.1 WALL SWITCHES

- A. Manufacturers:
 - 1. Hubbell
 - 2. Pass & Seymour
- B. Description: Conforming to NEMA WD 1, heavy-duty, AC only general-use snap switch.
- C. Body and Handle: White plastic with toggle handle.
- D. Indicator Light: Lighted handle type switch; red color handle.
- E. Locator Light: Lighted handle type switch; green color handle.
- F. Ratings:
 - 1. Voltage: 120-277 volts, AC.
 - 2. Current: 20 amperes or match branch circuit and load characteristics.

2.2 WALL DIMMERS

- A. Manufacturers:
 - 1. Watt-Stopper
 - 2. Lutron
- B. Description: Conforming to NEMA WD 1, Type II semiconductor dimmer for incandescent lamps.
- C. Body and Handle: White plastic with linear slide.
- D. Voltage: 120 volts.
- E. Power Rating: Match load shown on Drawings; 1000 watts minimum.
- F. Power Rating: As indicated in schedule shown on Drawings.
- G. Accessory Wall Switch: Match dimmer appearance.

2.3 RECEPTACLES

- A. Manufacturers:
 - 1. Hubbell.
 - 2. Pass & Seymour.
- B. Description: Conforming to NEMA WD 1, Heavy duty general use receptacle.
- C. Device Body: White plastic.
- D. Configuration: Conforming to NEMA WD 6, type as specified and indicated.
- E. Convenience Receptacle: Type 5-20.
- F. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.
- G. Isolated Ground Receptacle: Type.
- H. Transient Voltage Surge Suppression (TVSS) Receptacle

2.4 WALL PLATES

- A. Decorative Cover Plate: Smooth stainless steel.
- B. Jumbo Cover Plate: Smooth stainless steel.
- C. Weatherproof Cover Plate: Gasketed cast metal with hinged gasketed device cover.

2.5 FLOOR MOUNTED SERVICE FITTINGS

- A. Pedestal Convenience Receptacle:
 - 1. Housing: Satin aluminum.
 - 2. Device Plate: Stainless steel.
 - 3. Configuration: One duplex.
- B. Flush Cover Convenience Receptacle:
 - 1. Material: Brass.
 - 2. Configuration: Duplex flap opening.
- C. Flush Cover Communication Outlet:

1. Material: Brass.
2. Configuration: 2-1/8 by 1-inch combination threaded opening.

D. Pedestal Combination Fitting:

1. Housing: Satin aluminum.
2. Device Plate: Stainless steel.
3. Configuration: One duplex convenience receptacle with one bushed opening, 1 inch inside diameter.

E. Flush Cover Combination Fitting:

1. Material: Brass.
2. Configuration: Duplex flap opening with 2-1/8 by 1-inch combination threaded opening.

F. Protective Ring: Brass finish.

G. Split Nozzle: Brass finish.

H. Carpet Ring: Brass.

2.6 POKE-THROUGH FITTINGS

A. Manufacturers:

1. Hubbell.
2. Leviton

B. Description: Assembly comprising service fitting, poke-through component, fire stops and smoke barriers, and junction box for conduit termination.

C. Fire Rating: 3 hours.

D. Service Fitting:

1. Type: Pedestal.
2. Housing: Satin aluminum.
3. Device Plate: Stainless steel, brown plastic.
4. Configuration: One duplex and one communications outlet.

2.7 ACCESS FLOOR BOX

A. Manufacturers:

1. Hubbell.
2. Leviton

B. Description: Sheet metal box suitable for mounting in access floor system.

C. Size: In conformance with CEC requirements.

D. Cover: Impact resistant plastic finish as selected by Engineer.

E. Convenience Receptacle: Two with isolated ground.

F. Communications Receptacle: Two modular jacks.

G. Data Receptacle: One.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions prior to beginning work.
- B. Verify that outlet boxes are installed at proper height.
- C. Verify that wall openings are neatly cut and will be completely covered by wall plates.
- D. Verify that floor boxes are adjusted properly.
- E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.
- F. Verify that openings in access floor are in proper locations.

3.2 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean debris from outlet boxes.

3.3 INSTALLATION

- A. Install in conformance with NECA Standard of Installation.
- B. Install devices plumb and level.

- C. Install switches with OFF position down.
- D. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.
- E. Do not share neutral conductor on load side of dimmers.
- F. Install receptacles with grounding pole on top.
- G. Connect wiring device grounding terminal to branch circuit equipment grounding conductor.
- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- I. Connect wiring devices by wrapping conductor around screw terminal.
- J. Use jumbo size plates for outlets installed in masonry walls.
- K. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.
- L. Install protective rings on active flush cover service fittings.

3.4 MOUNTING HEIGHTS

- A. Coordinate locations of outlet boxes provided to obtain mounting heights specified and indicated on Drawings.
- B. Install wall switch 48 inches above finished floor.
- C. Install convenience receptacle 18 inches above finished floor.
- D. Install convenience receptacle 6 inches above counter or backsplash of counter.
- E. Install dimmer 48 inches above finished floor.
- F. Install telephone jack 18 inches above finished floor.
- G. Install telephone jack for side-reach wall telephone to position top of telephone at 48 inches above finished floor.
- H. Install telephone jack for forward-reach wall telephone to position top of telephone at 48 inches above finished floor.
- I. Coordinate installation of access floor boxes with access floor system.

3.5 FIELD QUALITY CONTROL

- A. Quality Control and Starting of Systems: Field inspection, testing, adjusting, and balancing.
- B. Inspect each wiring device for defects.
- C. Operate each wall switch with circuit energized and verify proper operation.
- D. Verify that each receptacle device is energized.
- E. Test each receptacle device for proper polarity.
- F. Test each GFCI receptacle device for proper operation.
- G. Verify that each telephone jack is properly connected and circuit is operational.

3.6 ADJUSTING

- A. Adjust devices and wall plates to be flush and level.

3.7 CLEANING

- A. Clean exposed surfaces to remove splatters and restore finish.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Lighting fixtures
- B. Lamps
- C. Ballasts
- D. Seismic restraints

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 SUBMITTALS

- A. Submit to Engineer the following in hard copy and electronic file format:
 - 1. Manufacturer's catalog sheets of standard fixtures, indicating materials, dimensions, supports, standard finishes available, weights, and approval of fixtures from City of Los Angeles Department of Building and Safety or recognized testing laboratory approved by City of Los Angeles Building and Safety.
 - 2. Pictures or cuts of lighting fixtures, with distribution curves, and complete photometric data.
 - 3. Manufacturer's catalog sheets indicating input and load electrical characteristics, ambient temperature rating, noise level rating, mounting methods, and UL listing for use with required lamps.
 - 4. Samples: Submit 1 sample of each lighting fixture type (at the option of Engineer) for review at the time the materials list is submitted for approval.
 - 5. Outdoor lighting analysis with the fixture material submittal showing the fixture manufacturer's written instructions of fixture beam spread, manufacturer's recommended aiming diagram, and a table showing calculated levels of illumination for the area.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fixtures shall be standard products of the fixture manufacturers, approved, and bear the label of Underwriters Laboratories, Incorporated (UL). Fixture types shall be as indicated on Drawings.
- B. Complete units and electrical components of custom made fixtures shall be approved by City of Los Angeles Department of Building and Safety or meet requirements of recognized testing laboratory approved by City of Los Angeles Department of Building and Safety. Do not place labels on fixtures at locations where installation of unit labels is visible after installation.
- C. Exposed metal parts of exterior lighting fixtures shall be stainless steel, anodized aluminum or have a mil zinc coating applied after fabrication and before finish. Screws and fastening shall be stainless steel. Painted finishes shall be as specified in schedules.
- D. Ballasts shall be Class P equipped with automatic resetting thermal protectors built in adjacent to the transformer coils. Ballasts shall be Electrical Testing Laboratory (ETL) tested and Certified Ballast Manufacturers (CBM) certified. Ballasts shall meet applicable American Standards Institute (ASI) and UL specifications regarding reliable starting, radio interference, dielectric, and sound ratings. Ballasts shall be high power factor; voltages shall be as specified in the fixture schedule. Provide a 3-year written warranty for materials and labor on ballasts. Provide ballasts as required for switching as indicated on Drawings.

2.2 MANUFACTURERS

- A. As noted on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install fixtures level, plumb, and in line on outlets and connected to the wiring, ready for operation. Assemble fixtures with screw and nuts tight, and parts securely mounted. Provide additional parts, wire, screws, nuts, washers, locknuts, bushings, or required structural supports to make fixture installation complete, safe, and substantial. Parts, including paint and finish, shall be clean and undamaged.

- B. Fixtures installed in gypsum board ceilings or plaster soffits shall be provided with metal frames. Fixtures in concrete shall have steel housing with bitumastic paint finish. Fixtures shall be compatible with type of ceiling.
- C. Mount exterior fixtures requiring exposed exterior boxes on approved cast boxes equipped with suitable gaskets.
- D. Do not install louvers, diffusers, or lenses in lighting fixtures until glazing has been completed and construction Work involving plastering, grinding, sanding, painting, and final clean-up sweeping and dusting have been completed.
- E. Clean reflector surfaces and lamps in lighting fixtures prior to installation of louvers, diffusers, or lenses.
- F. Installation of recessed fixtures shall include independent support wires of 9 gage steel wires to the supporting building structure at diagonal corners of each fixtures. Wire to have 6 inch slack.
- G. Interior and exterior adjustable lighting fixtures shall be aimed, adjusted, and set to the satisfaction of and in the presence of Engineer.
- H. Fixture Supports: Surface-mounted fluorescent fixtures shall have minimum of 2 supports per 4-foot fixture, 1 near each end, fastened directly to structural members. Method of installation shall be approved by Engineer. Fixtures shall be grounded by fastening to outlet box fixtures stud or conduit connection to fixture.
- I. Stems for pendant fixtures shall have approved swivel hanger and canopy at the ceiling.
- J. Recessed fixtures in suspended ceiling shall be free of light leaks above and below ceiling and shall have adequate ventilation.
 - 1. Reflectors, cones, or baffles shall be absolutely free of spinning lines, ripples, or any marks or indentations caused by riveting or other assembly techniques. No rivets, springs, or other hardware shall be visible after installation.
 - 2. Lamp sockets shall be rigidly and securely attached to the fixture enclosure or husk to insure safe operating temperature as recommended by lamp manufacturer.

- K. At time of final observation, ballasts and lamps shall have been installed and in operating condition. Remove faulty lamps and replace with new lamps as approved by Engineer.

3.2 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Run a complete burn test for the light fixtures and lamps installed for a duration of 5 days continuously. Repeat test for early burn outs. If premature lamp failure occurs, replace the lamp at no additional cost to Department and retest the fixture. Notify Engineer 5 calendar days prior to start of burn test.
2. Engineer shall perform an intensity test. Contractor shall make any necessary adjustments within the capability of the fixture, at no expense to Department.

3.3 CLEANING

- #### A. Clean lamps after installation.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Steel light pole assembly

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
- B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- D. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Anchor bolts for setting poles: ASTM A36/A36M and ASTM A307 hot-dip galvanized unless otherwise designated on approved shop drawings.
- B. Cover plate screws: Hot-galvanized carbon steel ASTM A307 or Series 302 or 304 stainless steel (nonmagnetic).

2.2 GALVANIZING

- A. Fittings and appurtenances, including anchor bolts, washers, and nuts shall be galvanized to meet the requirements of ASTM A153/A153M and ASTM A123/A123M.

- B. Treat welds made after galvanizing and damaged surfaces in conformance with TREATING DAMAGED GALVANIZING Section.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Concrete shall be in conformance with CONCRETE FOR EXTERIOR IMPROVEMENTS Section. Erect poles only after concrete has attained 80 percent of the pole base concrete design strength.
- B. The vertical centerline of the pole shall be within 0.200 percent of plumb in an undeflected condition. Poles shall be checked by Engineer for plumbness prior to base plate dry packing operations.
- C. After anchor bolt and dry pack approval, trowel mortar grout over anchor bolts, and base plates to a smooth finish. Cure mortar in conformance with CONCRETE FOR EXTERIOR IMPROVEMENTS Section.
- D. Mount and aim fixtures and pole supported equipment as directed by Engineer. Final adjustment in aiming shall be made by Contractor, on each luminaire in the air, at night under the supervision of Engineer.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Wooden poles

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 56 58 - Outdoor Lighting Fixtures

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wooden Poles:

1. Wooden poles shall conform with dimension for Class 2, Douglas Fir 40 foot wooden utility poles embedded as shown on Drawings.

- B. Wood Preservation Treatment:

1. Pole treatment preservation shall be one of the following:

<u>Treatment</u>	<u>Retentive pounds per cubic feet</u>
Pentachlorophenol, Volatile Petroleum Solvent LPG (Koppers Cellon)	0.50
Pentachlorophenol Methylene Chloride WTG (Dowicide 7 Penta)	0.50
Ammoniacal Copper Arsenite (Chemonite, J. Baxter)	0.50

2. Protect pole in transit and during installation.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set pole as shown on Drawings.
- B. Compact sand around pole to a minimum of 95 percent relative compaction.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Site lighting fixtures for light poles 30 feet high or less

1.2 RELATED SECTIONS

- A. Section 26 00 01 - Basic Electrical Materials and Methods
- B. Section 26 56 14 - Steel Light Pole

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Electrical System bid item of Bid Proposal Line Items.

1.4 SUBMITTALS

- A. Fixture shop drawings and materials specifications.
- B. Illumination analysis in accordance with Drawings. This shall include footcandle readings at 20 foot interval on the x and y direction of the lighting pattern, to a maximum distance of 4 times fixture mounting height, in both directions, with reference to the floodlight pole location. This information shall be included in the floodlight fixture shop drawing submittal.
- C. As part of the materials submittals, submit light fixture manufacturer's complete illumination analysis showing: aiming points, footcandles of illumination and recommended luminaire American National Standards Institute (ANSI)-Illuminating Engineering Society (IES) distributions. The luminaire is defined as the light fixture plus lamp. Illumination level of 3.5 footcandles horizontal with a minimum illumination of 1/3 of the average and a maximum of 3 times the average.
- D. Submit Effective Projected Area (EPA) values and calculations prepared in conformance with the most recent version of Los Angeles Building Code, Chapter 16, Division III.
 - 1. EPA values for down lights shall be 1.3 square feet or less, and EPA values for flood lights shall be 3.6 square feet or less.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fixture types shall have the minimum average candlepower specified. Beam spread and aiming of the fixture shall conform to NEMA standards.
- B. Design and construct fixtures to provide extended service life in a highly saline, marine atmosphere.
- C. Ballast housing shall be integral with the fixture.
- D. The minimum photometric characteristics required and other test data shall be proven by certified laboratory tests furnished by Contractor and performed conforming to IES and National Electrical Manufacturer's Association (NEMA) test standards.
- E. The fixture assembly shall be ready for installation and bear UL approval. No modification after approval and installation shall be allowed.

2.2 FABRICATION

- A. The optical assembly shall be of the open ventilated design with the following features:
 - 1. Glass reflector and refractor shall be of a pressed or spun heat resistant prismatic borosilicate. Reflector and refractor shall be thermal shock impact resistant, and non-solarizing.
 - 2. Glass surface shall be of a smooth non-porous type on inner surface and resistant to deterioration from atmosphere.
 - 3. Encase the glass reflector in a spin-on scaled aluminum cover to attach to the die cast aluminum fixture housing.
 - 4. Design the reflector to direct the light away from the high pressure sodium arc tubes so as to prevent lamp voltage rise.
- B. Ballast shall be copper wound to operate a 1,000 watt lamp at 480 volts. Ballast component shall be mounted to a single removable die cast aluminum plate as a unitized luminaire from the bracket arm of the fixture.
- C. Attach the reflector to the refractor by means of a stainless steel band or other device made of 302 or 304 stainless steel.

- D. Lamp socket shall be heavy-duty, porcelain body and silverplated, double, lamp grip screw shell, spring load, center contact to match.
- E. Aluminum used in the construction of the floodlight light fixture shall be corrosion resistant aluminum with a copper content of less than 0.5 percent.
- F. Paint and finish shall be on external surfaces, including brackets, mounting hardware, primed and finished with baked alkyd or epoxy, high gloss, high temperature enamel, utilizing the manufacturer's standard system. Color shall be manufacturer's standard.

2.3 FIXTURES

- A. As listed on Drawings.

2.4 LAMPS

- A. As listed on Drawings.

2.5 BALLASTS

- A. Ballast shall be City of Los Angeles Department of Building and Safety approved or meet requirements of a recognized testing laboratory approved by City of Los Angeles Department of Building and Safety, UL listed with high power factor and Class H insulation. Operating line voltage shall be as shown on Drawings. Ballast shall permit nominal line regulation of plus or minus 10 percent minimum and lamp wattage variation of plus or minus 1.5 percent change in lamp wattage for a 1 percent change in line voltage.

2.6 ELECTRONIC PROTECTED STARTER

- A. The electronic protected starter shall be able to sense the difference between a lamp failure and a lamp drop out.
 - 1. In case of a lamp drop out due to a momentary power interruption, the protected starter shall restrike the lamp as normal.
 - 2. In case of a lamp failure, the protected starter shall pulse within 3 to maximum 10 minutes period, where timing is by means of an integrated electronic circuit timer (#555). After the maximum 10 minute pulse period, the protected starter recognizes a lamp failure mode, and then stops the cycling process. The cycling process shall not start again until either the lamp has been replaced or the main power to the fixture has been turned off and then on.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install fixtures in conformance with manufacturer's written instructions.
- B. Install fixtures as a complete assembly including mounting and aiming.
- C. Install luminaires at the aiming angles called for by Engineer and adjust to achieve uniformity in coverage.
- D. Provide necessary fittings for mounting the fixtures.

3.2 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Engineer shall conduct a night intensity test. Contractor shall make necessary fixture adjustments, within the capability of the fixtures.
 - 2. Perform burn test of the light fixtures for 5 continuous days. If premature lamp failure occurs, replace the lamp at no additional cost to Department and retest the fixture. Notify Engineer 5 calendar days prior to start of burn test.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Clearing and grubbing
- B. Excavating, scarifying, grading, filling, and compacting earth to grades and elevations shown on Drawings
- C. Testing, characterizing, furnishing, placing, and compacting import fill
- D. Removing excess earth from Project Site

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 02 41 13 - Selective Site Demolition
- C. Section 02 41 16 - Structure Demolition
- D. Section 02 61 14 - Excavating, Stockpiling, and Disposing of Chemically Impacted Soil
- E. Section 31 23 33 - Trenching and Backfilling
- F. Section 32 11 24 - Crushed Miscellaneous Base
- G. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Subgrade Stabilization:
 - a. The quantity of qualified native replacement material for soil that is determined by Engineer to be geotechnically unsuitable as a subgrade for fill or base material shall be measured by the cubic yard of native replacement material compacted in place at Project Site.
 - b. Payment shall be made under the contingency bid item Subgrade Stabilization (Contingency Item) of Bid Proposal Line Items. Final payment for soil quantities shall be verified by Engineer before and after field survey topographies. Allow 2 days in Construction Schedule for surveyors to perform before and after field topography before starting new Work.

- c. Costs for excavating, handling, stockpiling, loading, and transporting the unsuitable material and costs for filling and compacting the resultant void with native soil, in conformance with this Section, and BASIC SITE MATERIALS AND METHODS Section shall be included in the bid item's unit price per cubic yard for native replacement material compacted in place.

2. Import and Place Fill Soil:

- a. The quantity of tested and qualified import fill soil shall be measured by the cubic yard compacted in place at Project Site and shall be paid under the Import Fill bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ASTM D2419 - Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
- C. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- D. EPA SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
- E. City of Los Angeles Department of Public Works Brown Book:
Subsection 300-3 - Structure Excavation and Backfill
- F. Reference Specifications (RS):

Section 300 - Earthwork

Subsection 300-2 - Unclassified Excavation

Subsection 300-3 - Structure Excavation and Backfill

Subsection 300-4 - Unclassified Fill

Subsection 300-5 - Borrow Excavation

Section 301 - Subgrade Preparation, Treated Materials, and Placement of Base Materials

Subsection 301-1 - Subgrade Preparation

Section 306 - Open Trench Conduit Construction

Subsection 306-1 - General

1.5 SUBMITTALS

- A. Submit to Engineer for review and approval written documentation to identify the proposed fill source, previous uses of the land from which the fill originated, proposed import fill volume from each source, and sampling plan with a map showing depth and location of soil sample collection. After approval of fill source and sampling plan with a map, submit results of soil characterization performed. Contractor personnel who sample stockpiles should be competent in their understanding of environmental sampling, including sample collection and handling, sample preservation and storage, decontamination, and chain of custody procedures.
 - 1. For In-situ Characterization: Provide a proposed plan for characterization including a map of borrowed site boundaries, depths of proposed excavations, depth horizons that shall be used for fill, and proposed analyses.
- B. After approval of fill source, submit the following to Engineer for review and approval 30 Calendar Days prior to the receipt of soil to Project Site from Department property (re-use or borrowed soil from another area within Department property) or off Department property (import fill):
 - 1. Completed Los Angeles Harbor Department Import Material Checklist form included in Appendix "D" of Specifications. Data from the characterization efforts shall be submitted with the completed form.
 - 2. Sieve analysis conforming to ASTM C136/C136M.
 - 3. Proposed trucking delivery schedule and haul route.
 - 4. Analytical documentation submittals shall include "FINAL" analytical characterization information (Draft analytical data is not acceptable). Analytical documentation shall include the chain-of-custody noting the condition of soil samples upon arrival to the laboratory.
- C. Submit the following during placement of import soil fill:
 - 1. Documentation of daily volumes of fill material received and placement location within Project Site.

1.6 QUALITY ASSURANCE

- A. Engineer reserves the right to approve materials to be used in construction. Approved materials that are no longer in conformance with this Section shall not be used.
- B. Refer to BASIC SITE MATERIALS AND METHODS Section for sampling procedures for material to be compacted.
- C. Analytical Laboratory Qualification: State of California Environmental Laboratory Accreditation Program (ELAP) accredited.

1.7 PERMITS

- A. Comply with applicable South Coast Air Quality Management District (SCAQMD) permits and rules, and City of Los Angeles Department of Building and Safety permits. Obtain permits as required. Refer to REGULATORY REQUIREMENTS Section for additional requirements.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Native Fill: Excavated materials may be re-used for fill as approved by Engineer, including backfill of voids left after removals in conformance with RS Subsection 300-4 exclusive of RS Subsection 300-4.9 and RS Subsection 300-4.10. Material shall not contain vegetation or other organics, rocks, broken concrete, debris, or other solid materials larger than 4 inches, or any other deleterious materials.
- B. Import and Re-use Fill Geotechnical Requirements (from sites off and within Department property):
 - 1. Fill, where required on Drawings or in Specifications, shall conform to RS Subsection 300-5, except for RS Subsection 300-5.4, and the following:
 - a. Fill shall consist of soil classified as SW, SM, SC, or SP in conformance with ASTM D2487. Soil shall have a minimum sand equivalent value of 20 percent in conformance with ASTM D2419.
 - b. Obtain Engineer's approval of material prior to transporting to Project Site.

- C. Import Fill Environmental Requirements (from sites off and within Department property): Import fill material shall conform to properties described in this Section. Refer to Appendix "D" of Specifications for Los Angeles Harbor Department Import Material Checklist.
1. Fill source area shall not be located in:
 - a. Industrial areas including airports.
 - b. Sites undergoing environmental cleanup.
 - c. Sites under regulatory oversight (Los Angeles Regional Water Quality Control Board (LARWQCB), Department of Toxic Substances Control (DTSC), and United States Environmental Protection Agency (US EPA))
 - d. Other sites where hazardous materials were used or hazardous wastes were generated (gasoline stations, dry cleaners, oil refineries, painting facilities, metal processing shops, and other similar sites).
 2. Proposed import fill shall be tested by Contractor. Import fill material shall be sampled at the place of origin and tested by an ELAP accredited analytical laboratory and certified in conformance with this Section. Additional materials shall not be added to stockpile after samples have been collected. Department retains the right to refuse any potential fill material for use at any of its construction sites.
 3. Provide written documentation that identifies the proposed fill source, previous uses of the land from which the fill originated, proposed import fill volume from each source, and sampling plan with a map showing depth and location of soil sample collection. After approval of fill source and sampling plan with a map, submit results of soil characterization performed. Data shall be submitted to Engineer for review and approval 30 Calendar Days prior to the receipt of soil to Project Site. Upon approval by Engineer, Contractor shall deliver approved import fill to Project Site.

PART 3 – EXECUTION

3.1 SUBGRADE PREPARATION

- A. Subgrade preparation shall be in conformance with RS Subsection 301-1 with the exception of compaction and payment requirements.

3.2 EXCAVATION

- A. Excavation, including disposal of surplus material, shall be in conformance with RS Subsections 300-2 and 300-3 exclusive of RS Subsections 300-2.9 and 300-3.6. RS Subsection 300-3 shall be as modified by Brown Book Subsection 300-3.5.1.

3.3 FILL PLACEMENT, GENERAL

- A. Fill placement shall be in conformance with RS Subsections 300-4 and 300-5 except for 300-5.4.

3.4 IMPORT FILL

- A. Characterization and Testing Requirements:
1. Furnish labor, materials, laboratory analyses and reports, and equipment to characterize proposed import fill soil as defined in this Section. Data from the characterization efforts shall be submitted with the completed Los Angeles Harbor Department Import Material Checklist form included in Appendix "D" of Specifications.
 2. Notify Engineer at least 72 hours prior to start of proposed import fill soil characterization Work.
 3. Characterize proposed import fill soil using procedures contained in EPA SW-846 and the following sampling requirements:

Fill Source	Target Compounds and Analyses
Land adjacent to or within 250 feet from existing freeway or major highway	- TPH (modified EPA Method 8015)
	- Lead (EPA Method 6010B)
	- PAHs (EPA Method 8310)
Mining area or rock quarry	- Heavy Metals (EPA Methods 6020 and 7471A)
	- Asbestos (polarized light microscopy)
Agricultural	- Pesticides and Herbicides (Organochlorine Pesticides: EPA Method 8081A or 8080A; Organophosphorus Pesticides: EPA Method 8141A; Chlorinated Herbicides: EPA Method 8151A)
	- Heavy metals (EPA Methods 6020 and 7471A), including hexavalent chromium (EPA Method 7199)

Acceptable commercial land	- VOCs (EPA Method 8021 or 8260B, as appropriate and combined with collection by EPA Method 5035)
	- Semi-VOCs (EPA Method 8270SIM)
	- TPH (modified EPA Method 8015B)
	- PCBs (EPA Method 8082 or 8080A)
	-Heavy metals including lead (EPA Methods 6020 and 7471A), including hexavalent chromium (EPA Method 7199)

- a. Pre-approved quarries and import soil sources may be proposed to Department with supporting documentation including characterization and testing in conformance with this Section.
 - b. The analytical results shall be reviewed and accepted by Engineer prior to proceeding with importing of soil.
4. The required minimum sample frequency for each unique source of fill materials shall be as follows:

Volume of Borrow Area Stockpile	Required Number of Samples per Volume
Up to 1,000 CY	1 sample per 250 CY
1,000 to 5,000 CY	4 samples for first 1,000 CY +1 sample per each additional 500 CY
Greater than 5,000 CY	12 samples for first 5,000 CY +1 sample per each additional 1,000 CY

5. The required minimum sample frequency for each unique in-situ source of fill materials shall be based on approved documentation in conformance with Paragraph A.1 of Submittals Article of this Section. In-situ characterization typically requires approximately 2 to 3 times the number of samples required for stockpile characterization. The table in Paragraph 3.4 A.4 of this Section shows the required number of samples for stockpile characterization.
6. Proposed import fill material is considered to have a non-homogenous distribution of chemicals.
7. Composite sampling is not acceptable. Do not mix soil from different locations or different depths at 1 location into 1 sample. Do not add soil to a characterized stockpile.

- a. A borrow area or stockpile is defined as 1 contiguous source that is homogeneous in color and soil type.
- B. Import Soil Transportation Requirements:
- 1. Select transporter with current insurance coverage, and applicable licenses as required by Department of Transportation and State of California.
 - 2. Cover transported materials appropriately to minimize loss of material during transport.
- C. Monitoring Requirements:
- 1. Air monitoring shall comply with local, state, and federal regulations and guidelines.
 - 2. Provide field screening and monitoring equipment to monitor for:
 - a. Worker safety.
 - b. Air monitoring permit requirements.
 - 3. Monitoring activities shall include, but are not limited to:
 - a. Engineer shall evaluate the soil using a photoionization detector (PID), capable of detecting volatile organic vapors to a minimum of one part per million (ppm), to assess potential soil contamination levels. Soil with any PID readings greater than background (measured at a distance of no more than 3 inches from the surface of the soil material) shall be deemed suspect and considered potential chemical impacted soil (PCIS). Manage PCIS at Contractor's sole cost and expense in conformance with the following:
 - 1) PCIS shall be immediately removed from Project Site. No further import soil shall be brought in from contaminated import fill source location.
 - 2) Submit new fill material source location subject to characterization and testing requirements described in this Section.
 - 3) Resume importing fill material after Engineer approves Los Angeles Harbor Department Import Material Checklist from new import fill material source location and other submittals required prior to start of fill soil import Work.

- b. Engineer may at times monitor the import soil for discolorations, odors, debris, and other physical or chemical characteristics. Soil not in conformance with this Section (identified by Department) shall be considered PCIS and shall be managed in conformance with Paragraph 3.4 C.3.a of this Section.

3.5 COMPACTION

- A. Perform compaction in conformance with BASIC SITE MATERIALS AND METHODS Section.

3.6 CHEMICAL ANALYSIS REQUIREMENTS FOR IMPORT FILL

- A. Import fill material shall be considered unacceptable for use if laboratory analytical results indicate an exceedance of 1 or more of the following specified concentration limits:

Chemicals of Concern (COC) Industrial Land Use	Soil/Fill Material Concentration (mg/kg)*	Source
Total Petroleum Hydrocarbons (TPH) (EPA Method 8015M/8015B)		
TPH (Total Petroleum Hydrocarbons)	1,000	Cal-EPA SWRCB**
- Gasoline (if present)	180	Cal-EPA SWRCB/DTSC**
- Diesel (if present)	180	Cal-EPA SWRCB/DTSC**
Heavy Metals (EPA Method 6020/7471A)		
Antimony	150	10 X STLC***
Arsenic	8.7	Cal-EPA SWRCB/DTSC**
Barium	1,000	10 X STLC***
Beryllium	7.5	10 X STLC***
Cadmium	1.4	Cal-EPA SWRCB/DTSC**
Chromium VI (EPA Method 7199/3060A)	2.8	Cal-EPA SWRCB/DTSC**
Total Chromium	100	20 X TCLP/STLC***
Cobalt	350	Cal-EPA SWRCB/DTSC**
Copper	69	Cal-EPA SWRCB/DTSC**
Lead	50	10 X STLC***
Mercury	0.69	Cal-EPA SWRCB/DTSC**
Molybdenum	4.4	Cal-EPA SWRCB/DTSC**
Nickel	200	10 X STLC***

Chemicals of Concern (COC) Industrial Land Use	Soil/Fill Material Concentration (mg/kg)*	Source
Selenium	0.23	Cal-EPA SWRCB**
Silver	3.75	Cal-EPA SWRCB/DTSC**
Thallium	0.95	Cal-EPA SWRCB**
Vanadium	240	10 X STLC***
Zinc	680	Cal-EPA SWRCB/DTSC**
BTEX (EPA Method 8260)		
Benzene	0.055	Cal-EPA SWRCB/DTSC**
Toluene	56	Cal-EPA SWRCB**
Ethylbenzene	3.9	Cal-EPA SWRCB**
Xylene	7.2	Cal-EPA SWRCB**
Naphthalene	0.17	Cal-EPA SWRCB**
Asbestos (OSHA Method ID-191)	ND	Laboratory Reporting Limit****
Polychlorinated Biphenyls (PCBs) (EPA 8082)	ND	Laboratory Reporting Limit****/US EPA
Chemicals of Concern*****		
Volatile Organic Compounds (VOCs) (EPA Method 8260)	ND	Laboratory Reporting Limit****
Polynuclear Aromatic Hydrocarbons (PAHs) (EPA Method 8310)	ND	Laboratory Reporting Limit****
Semi Volatile Organic Compounds (SVOCs) (EPA Method 8270)	ND	Laboratory Reporting Limit****
Organochlorine Pesticides (EPA Method 8081A)	ND	Laboratory Reporting Limit****
Organophosphorus Pesticides (EPA Method 8141A)	ND	Laboratory Reporting Limit****
Chlorinated Herbicides (EPA Method 8151A)	ND	Laboratory Reporting Limit****

NOTES:

* Acceptable Soil/Fill Material concentrations may vary between regulated sites. Consult Engineer prior to analysis of samples to ensure the correct Laboratory Reporting Limits are achieved.

** Cal-EPA State Water Resources Control Board & Department of Toxic Substances Control (DTSC) Action Goals for Industrial Land Use sites only. The listed concentrations/levels may not be applicable for former or active cleanup sites, public land use, or worker health & safety.

*** Soluble Threshold Limit Concentration (STLC) and Toxicity Characteristic Leaching Procedure (TCLP), California Code of Regulations (CCR), Title 22, Section 66261.24. Characteristic of Toxicity.

**** Laboratory Reporting Limit is based on reporting limits commonly used by Southern California laboratories (DAF = 1). Note that for some regulated sites (to be determined by Department) target Laboratory Reporting Limits may need to be provided to the laboratory prior to sampling.

***** Any other suspected constituents or contaminants not shown on this table should be discussed with Engineer

- B. Chemical analyses having a dilution factor greater than 1 or rendering the reporting limits greater than the concentration limits shown may be rejected by Department due to possible indication of elevated concentrations of one or more constituents.

3.7 GEOTECHNICALLY UNSUITABLE SOIL

- A. Notify Engineer upon encountering what appears to be geotechnically unsuitable soil. Upon excavating to design subgrade elevations, obtain Engineer's decision on soil's suitability and authorization to excavate geotechnically unsuitable materials to limits determined by Engineer and in conformance with Excavation Article of this Section. Unsuitable soil shall become the property of Contractor. Dispose of unsuitable soil off Department property following proper waste characterization and profiling protocols.
1. Native Soil Backfill: Maintain stockpile of native excavation soil approved by Engineer for use as fill or backfill in conformance with RS Subsection 300-2.6 until subgrade excavation is complete and the extent of geotechnically unsuitable soil is known. Backfill geotechnically unsuitable soil removal excavations with approved fill material. Compact in conformance with BASIC SITE MATERIALS AND METHODS Section.

3.8 FIELD QUALITY CONTROL

- A. Refer to BASIC SITE MATERIALS AND METHODS Section, Field Quality Control Article, for Engineer's determination of maximum dry density and optimum moisture content, and for field-testing of compacted soil.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Filter fabric

1.2 RELATED SECTIONS

- A. Section 32 11 24 - Crushed Miscellaneous Base
- B. Section 34 11 26.13 - Track Rail Ballast

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Low Impact Development (LID) Trenches bid item of Bid Proposal Line Items.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Filter fabric for Low Impact Development (LID) trenches shall be Mirafi 140N as manufactured by TenCate.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Protect the filter fabric against deterioration.
- B. Install filter fabric in 2 layers in areas unless noted otherwise on Drawings. Overlap fabric 3 feet when joining pieces and extend 3 feet beyond ends of the new Work area. Overlap existing filter fabric by 3 feet. Replace or repair existing filter fabric that is damaged at Contractor's sole cost and expense.
- C. Place filter fabric loosely over excavated trench. Fabric shall not be stretched tight, but shall be allowed to deform to the shape of the excavated trench.
- D. Anchor filter fabric across the top every 3 feet by a shot in anchor. Anchors shall be used only to hold fabric in place until rail ballast material is poured or material placed on filter fabric.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Scope of Work:

1. Dewatering excavations
2. Department shall not obtain a NPDES (National Pollutant Discharge Elimination System) Permit for dewatering. If Contractor chooses to dewater, Contractor shall be responsible for obtaining NPDES Permit, paying for fees, complying with the requirements, and ensures no impact to the schedule.
3. Dewatering activities not subject to a separate NPDES permit shall comply with NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order WQ 2022-0057-DWQ NPDES No. CAS000002 (CGP). Activities such as mechanical pumping or syphoning of non-potable water from sources including but not limited to: excavations, trenches, foundations, vaults, groundwater removal specifically related to the construction activities, or water collected in impoundments (ponds, puddles, low points on the active site, or other similar accumulation points).

1.2 RELATED SECTIONS

- #### A. Section 33 40 01 - Storm Drainage

1.3 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment for dewatering shall be considered incidental to construction of applicable items on Bid Proposal Line Items. No separate payment shall be made for Work of this Section.

1.4 SUBMITTALS

- #### A. Submit to Engineer for approval, a schedule for dewatering operations and a list of proposed methods and equipment.

1.5 PROJECT SITE CONDITIONS

- #### A. Contractor shall expect to dewater 600 gallons per minute (GPM) and assume water is hazardous for bidding purposes.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Provide an adequate dewatering system for the control of surface, ground, and sea water in the trench excavations and elsewhere in Project as may be necessary during the construction period. Keep excavation dry during construction operations. Keep water table 1 foot below the bottom of the excavation until backfill has been completed.
- B. Water extracted by the dewatering shall be disposed of by Contractor off Department property in such a manner as shall not damage public or private property or create a nuisance or health menace.
- C. De-silt the water before discharging water.
- D. California State Water Resources Control Board (CSWRCB) classifies water used in construction as construction wastewater, the disposal of which is subject to Attachment J of CGP. Comply with requirements in Attachment J for discharge and monitoring of wastewater as issued by CSWRCB.
- E. Except for shut downs for maintenance of dewatering equipment, no interruptions in the dewatering system procedures shall be permitted during excavation and construction operations. Provide full-time surveillance and maintenance, 24 hours per day, to avoid breakdowns.
- F. Where possible, Contractor shall avoid removing groundwater from excavations.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Trench excavation and backfill operations
- B. Trench excavation and backfill Work includes excavation, backfill, and compaction of utility trenches.
- C. Trench excavation and backfill Work includes:
 - 1. Sawcutting
 - 2. Asphalt concrete and concrete pavement removals
 - 3. Excavation
 - 4. Slurry backfill
 - 5. Trench resurfacing with concrete and asphalt concrete

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 02 61 14 - Excavating, Stockpiling, and Disposing of Chemically Impacted Soil
- C. Section 31 50 01 - Excavation Safety Requirements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Costs for trench excavating, backfilling, and surfacing including but not limited to sewer, storm drain, water, electrical, communications, gas, and oil pipeline trenches, shall include pavement sawcutting; asphalt concrete and concrete removals; excavation; soil backfill; slurry where used as backfill; removal and disposal of excavation spoils off of Department property; compaction; repeated compaction tests after failures; and asphalt concrete and concrete trench resurfacing, and shall be paid under each corresponding bid item of Bid Proposal Line Items that requires trenching and backfilling.

2. The quantity of subgrade stabilization material in excess of trench depths required for Work where subgrade is saturated, and is unsuitable as substrate for bedding, as determined by Engineer, shall be measured as the volume of over-excavated native material. This quantity shall be paid for under the Subgrade Stabilization (Contingency Item) bid item of Bid Proposal Line Items at the unit price per cubic yard of subgrade stabilization material. Costs for excavating, handling, stockpiling, loading, transporting, and disposing of the unsuitable material, purchasing, delivering, placing, and compacting the stabilization material shall be included in the bid item's unit price per cubic yard for subgrade stabilization material.

1.4 REFERENCES

- A. ASTM C535 - Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- B. Reference Specifications (RS):
 - Section 200 - Rock Materials
 - Section 201 - Concrete, Mortar, and Related Materials
 - Section 217 - Bedding and Backfill Materials
 - Section 301 - Subgrade Preparation, Treated Materials, and Placement of Base Materials
 - Section 306 - Open Trench Conduit Construction
- C. Standard Plan – City of Los Angeles Department of Public Works:
 - S-251-1 - Pipe Laying in Trenches

1.5 QUALITY ASSURANCE

- A. Engineer reserves the right to approve each material to be used in construction. Do not use material which, after approval, in any way becomes unfit for use.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Slurry backfill shall be as specified in BASIC SITE MATERIALS AND METHODS Section.

- B. Backfill shall consist of native material in conformance with RS Subsections 306-12.1 and 306-12.3, unless noted otherwise on Drawings.
1. Imported trench backfill, where required on Drawings or in Specifications, shall conform to RS Subsection 217-2.2 and the requirements of BASIC SITE MATERIALS AND METHODS Section.
 2. Sand shall conform to RS Subsection 200-1.5.1.
- C. Additional trench subgrade stabilization material shall conform to RS Subsection 200-1.2 and 1 of the 2 following gradations as indicated on Drawings or as directed by Engineer:
1. RS Table 200-1.2.1 (A), 1 inch nominal gradation
 2. The following 2 inch nominal gradation:

<u>Sieve Size (inches)</u>	<u>Percent Passing</u>
2 1/2	100
2	90-100
1 1/2	30-60
1	0-20
1/2	0-5

- a. Gradation sample shall not exceed 30 percent loss by weight at 1,000 revolutions as performed under ASTM C535. Sample shall be assumed to correspond most nearly to ASTM C535, Gradings of Test Samples Table, Grading 2.

- D. Contractor may elect, at its option, to use slurry as stabilization material.

PART 3 - EXECUTION

3.1 EXCAVATION

- A. Pavement removals shall conform to BASIC SITE MATERIALS AND METHODS Section.
1. Except as noted otherwise on Drawings, existing asphalt concrete thickness varies throughout Project Site. Assume for bid purposes 12 inches for existing pavement thickness.
- B. Excavation shall conform to RS Subsection 306-3 unless otherwise specified or shown on Drawings.

- C. Perform excavations for pipe laying or conduit in accordance with Standard Plan S-251-1 unless otherwise detailed on Drawings.
- D. Perform trench excavations in conformance with EXCAVATION SAFETY REQUIREMENTS Section.
- E. Excavate to the depths shown on Drawings or as necessary for the installation. After the excavation is completed, notify Engineer for approval of excavation subgrade.
- F. Remove interfering portions of abandoned substructures and abandon remaining substructures in place in conformance with BASIC SITE MATERIALS AND METHODS Section.
- G. Positively determine the location and elevation of substructures containing hazardous or unstable substance installations prior to excavation in conformance with EXCAVATION SAFETY REQUIREMENTS Section.
- H. Maintain excavation trench wall stability during construction in conformance with EXCAVATION SAFETY REQUIREMENTS Section. Remove material that slides into the excavation.
- I. Trench excavation spoils not used as backfill shall become property of Contractor and shall be disposed of off Department property regardless of type of backfill material specified.

3.2 CHEMICALLY IMPACTED SOIL

- A. Handle unexpectedly discovered chemically impacted soil in conformance with EXCAVATING, STOCKPILING, AND DISPOSING OF CHEMICALLY IMPACTED SOIL Section.

3.3 BACKFILL AND COMPACTION

- A. Place slurry backfill in conformance with RS Subsection 306-12.2, except that trench width, bedding, and backfill depths shall be as shown on Drawings.

3.4 HIGH VOLTAGE CONCRETE ENCASEMENT

- A. Refer to BASIC SITE MATERIALS AND METHODS Section.

3.5 TRENCH SUBGRADE STABILIZATION MATERIAL

- A. Once the bottom of trench excavation has been reached, obtain Engineer's analysis of soil that appear saturated or that may be unsuitable as a support for trench bedding.

1. Upon Engineer's authorization, perform trench subgrade stabilization in conformance with RS Section 306, to the depth directed by Engineer except that replacement bedding material shall conform to 1 of the 2 gradations specified in Paragraph 2.1C of this Section.
 2. Dispose of unsuitable soil off Department property.
- B. Measurement and payment shall be made in conformance with Price and Payment Procedures Article of this Section.
- C. Refer to appropriate Section listed in Related Sections Article of this Section for trench bedding requirements.

3.6 REPAIR AND RESTORATION

- A. Refer to BASIC SITE MATERIALS AND METHODS Section for surface improvements not designated to be permanently removed but which were removed or damaged as a result of Contractor's operations.

3.7 FIELD QUALITY CONTROL

- A. Refer to BASIC SITE MATERIALS AND METHODS Section Field Quality Control Article, for Engineer's determination of maximum dry density and optimum moisture content, and for field-testing of compacted backfill.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Excavating and trenching requirements in conformance with State of California Construction Safety Orders issued by Division of Occupational Safety and Health during the course of excavating and trenching Work.

1.2 RELATED SECTIONS

- A. Section 02 61 14 - Excavating, Stockpiling, and Disposing of Chemically Impacted Soil
- B. Section 31 00 00 - Earthwork
- C. Section 31 23 33 - Trenching and Backfilling

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires excavating and trenching requirements.

1.4 SUBMITTALS

- A. Prior to excavating 5 feet or more in depth, submit to Engineer for review detailed drawings showing the design of shoring, bracing, sloping, or other provisions for worker and property protection.
 - 1. Indicate design criteria, limits of shored areas, sequence of placement and removal, and shoring system details.

PART 2 - PRODUCTS

2.1 DESIGN AND CONSTRUCTION REQUIREMENTS

- A. If such Drawings vary from the shoring system standards established by Construction Safety Orders for State Division of Occupational Safety and Health, Drawings shall be prepared and signed by a State of California registered civil or structural engineer.
- B. The use of a protective system less effective than that provided by Construction Safety Orders shall not be permitted.

- C. Contractor shall provide more extensive shoring or bracing systems than those required by Construction Safety Orders when required by conditions shown on Drawings, or in Specifications, or encountered in the field.
- D. Refer to SITE CONDITIONS Section for geotechnical information required in the preparation of shoring design.
- E. Where excavation alignments are within 10 feet of existing buildings, streets, tanks, or other structures requiring shoring, shoring design shall accommodate surcharge loads imposed on the structure or a minimum equivalent of 2 feet in height of earth added to the active earth pressure in the upper 10 feet of shoring, whichever is greater.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Do not begin excavation Work until shoring drawings are reviewed and approved by Engineer.

3.2 PROTECTION

- A. Exercise caution when excavating near flammable, high pressure, or high voltage substructures and conduits.
- B. Prior to excavating adjacent to and within 6 feet of an existing subsurface installation carrying a hazardous or unstable substance, excavate potholes in conformance with Section 62.03.1 (Notification and Location Requirements) of Los Angeles Municipal Code and positively determine the location and elevation of the subsurface installation.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Contractor-furnished base material
- B. Stabilized crushed miscellaneous base (CMB)

1.2 RELATED SECTIONS

- A. Section 02 00 01 - Basic Site Materials and Methods
- B. Section 32 12 17 - Asphalt Concrete Paving
- C. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. The quantity of base material shall be measured per cubic yard compacted in place.
 - 2. For crushed miscellaneous base, payment for Work of this Section shall be paid under the Crushed Miscellaneous Base bid item of Bid Proposal Line Items.
 - 3. For stabilized crushed miscellaneous base, payment for Work of this Section shall be paid under the Stabilized Crushed Miscellaneous Base bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. Reference Specifications (RS):

Section 200 - Rock Materials

Subsection 200-2.4 - Crushed Miscellaneous Base

Section 301 - Subgrade Preparation, Treated Materials, and Placement of Base Materials

Subsection 301-2 - Untreated Base

Subsection 301-2.2 - Spreading

Subsection 301-2.3 - Compacting

1.5 SUBMITTALS

- A. Submit to Engineer list of equipment to be used for hauling, dust control during hauling, and placing crushed miscellaneous base (CMB) prior to usage on Project.
- B. Submit proposed trucking delivery schedule and haul route.
- C. Submit the following to Engineer 30 Calendar Days prior to delivery of Contractor-furnished CMB to Project Site:
 - 1. Written documentation to identify the proposed CMB source and previous uses of the site from which CMB originated.
 - 2. Sieve analysis conforming to ASTM C136/C136M.
- D. For stabilized CMB, submit the following to Engineer:
 - 1. Curing time for each application method.
 - 2. Application and dilution rates.
 - 3. Equipment to be used.
 - 4. Safety Data Sheet (SDS) for stabilizer product.

1.6 QUALITY ASSURANCE

- A. Notify Engineer when base course or portion thereof has been placed and compacted in conformance with the requirements shown on Drawings and in this Section. Do not place pavement surface or ballast until so directed by Engineer.
- B. If compaction tests indicate that the crushed miscellaneous base course does not meet specified requirements, remove defective Work and replace. Retest costs shall be responsibility of Contractor.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Load, transport, and deliver base materials to Project Site from the source through approved haul routes.
- B. Control dust from loading and hauling operations by sprinkling with a water truck or utilize other methods acceptable to Engineer.

PART 2 - PRODUCTS

2.1 EQUIPMENT

- A. Provide and maintain in operating condition equipment, tools, and machines used in performance of Work of this Section.
- B. Contractor shall have major equipment items available for inspection by Engineer. Correct deficiencies in quality, quantity, or types of equipment prior to commencing Work. This inspection and approval shall in no way relieve Contractor from the obligation to provide the equipment required to perform Work of this Section.
- C. Soil-Sement Engineered Formula stabilizer product shall be applied by a pressure-type distribution vehicle equipped with a power unit for the pump and full circulation spray bars. Stabilizer shall be applied in a uniform, unbroken spread on surface. For surfaces not accessible by distributor vehicle, hand spray.

2.2 MATERIALS

- A. Contractor-furnished CMB shall conform to RS Subsection 200-2.4, fine gradation.
 - 1. Stabilized CMB shall be NaturalPave Road Stabilization, a mix of CMB and Soil-Sement Engineered Formula, as manufactured by Midwest Industrial Supply Inc., <https://www.midwestind.com/>.
 - a. Minimum 52 percent solids prior to dilution.
- B. Import CMB, Environmental Requirements (from sites off of Department property):
 - 1. CMB source area shall not be located in:
 - a. Sites undergoing environmental cleanup.
 - b. Other sites where hazardous materials were used or hazardous wastes were generated (gasoline stations, dry cleaners, oil refineries, painting facilities, metal processing shops, and other similar sites).
 - 2. Department retains the right to refuse any potential CMB material for use at any of its construction sites.

3. Provide written documentation that identifies proposed CMB source and previous uses of the land from where CMB shall originate. Information shall be submitted to Engineer for review and approval prior to delivery of CMB material.

PART 3 - EXECUTION

3.1 PREPARATION OF SUBGRADE

- A. Subgrade shall conform to lines, grades, cross sections, and density shown on Drawings prior to the placing of the base course. Do not place base course until the subgrade has been inspected and approved by Engineer.
- B. Do not place base course when the subgrade is sufficiently wet that its surface can be marred by construction equipment.
- C. Protect finished subgrade course from disturbance by traffic or other operations and maintain until base course is placed.
- D. For stabilized CMB:
 1. Do not apply stabilized CMB to excessively wet or saturated subgrade.
 2. Subgrade shall be graded and scarified to minimum depths as shown on Drawings and be clear of debris, weeds, organic materials, and stones larger than 2 inches.

3.2 CONSTRUCTION

- A. Place, spread, and compact base course in conformance with RS Subsections 301-2.2 and 301-2.3 except that relative compaction shall be 97 percent.
 1. NaturalPave shall be installed in conformance with manufacturer's written instructions.
 - a. Do not apply stabilized product during high wind or when rain is expected.
 - b. Soil-Sement Engineered Formula shall be applied, incorporated, and thoroughly blended into soil until a homogenous mixture is obtained to full depth of treatment.
 - c. Complete penetration of stabilization product is required prior to compaction.

3.3 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Refer to BASIC SITE MATERIALS AND METHODS Section, Field Quality Control Article, for Engineer's determination of maximum dry density and optimum moisture content, and for field-testing of compacted crushed miscellaneous base.

3.4 CLEANING

- #### A.
- Prevent stabilizer product from overspray onto adjacent landscaping, property, or improvements. Any damage resulting from overspray shall be corrected at Contractor's sole cost and expense.

3.5 PROTECTION

- #### A.
- For stabilized CMB, no equipment or traffic is permitted on treated surface for a minimum of 48 hours after installation unless approved by Engineer.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Asphalt concrete
- B. Tack coat

1.2 RELATED SECTIONS

- A. Section 31 23 33 - Trenching and Backfilling
- B. Section 32 11 24 - Crushed Miscellaneous Base
- C. Section 32 17 23 - Pavement Markings

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for asphalt concrete pavement shown on Drawings shall be paid under the Asphalt Concrete Pavement bid item of Bid Proposal Line Items as measured by the tonnage on the weigh tickets from the plant.
 - 2. Refer to TRENCHING AND BACKFILLING Section concerning costs for asphalt concrete trench resurfacing.

1.4 REFERENCES

- A. AASHTO T 312 - Standard Method of Test for Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor.
- B. ASTM C131/C131M - Standard Method of Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- C. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- D. ASTM D2726/D2726M - Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Asphalt Mixtures.
- E. ASTM D2950/D2950M - Standard Test Method for Density of Asphalt Mixtures in Place by Nuclear Methods.

F. ASTM D6307 - Standard Test Method for Asphalt Content of Asphalt Mixture by Ignition Method.

G. Reference Specifications (RS):

Section 200 - Rock Materials

Subsection 200-1 - Rock Products

Section 203 - Bituminous Materials

Subsection 203-1 - Paving Asphalt

Subsection 203-6 - Asphalt Concrete

Section 302 - Roadway Surfacing

Subsection 302-5 - Asphalt Concrete Pavement

1.5 DEFINITIONS

- A. Project Mix Design: Contractor's Project specific asphalt concrete formula, including individual gradation values and other data conforming to RS Subsection 203-6.3.
- B. Project Aggregate Gradation Control Band: Percentage passing sieve ranges derived by adding and deducting tolerance range values to Contractor's approved Project Mix Design percentage passing sieve values. Tolerance range values are shown in the Production RS Mix Tolerances Table.

1.6 SUBMITTALS

- A. Copies of the supplying vendor's asphalt test report required by RS Subsection 203-1.
- B. List of equipment to be used for placing asphalt concrete prior to usage on Project.
- C. Copies of the asphalt concrete Project Mix Design, including gradation and binder content required by RS Subsection 203-6.
 - 1. Include coarse aggregate percentage wear test results from RS Subsection 200-1.2 and ASTM C131/C131M.
- D. Gradation sample from mixing plant.

1.7 QUALITY ASSURANCE

- A. Have major equipment items available for inspection by Engineer. Correct deficiencies in quality, quantity, or types of equipment prior to commencing Work. This inspection and approval shall in no way relieve Contractor from the obligation to provide the equipment required to perform Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Tack coat shall conform to RS Subsection 203-1, PG 70-10.
- B. Paving asphalt shall conform to RS Subsection 203-1 except reclaimed asphalt paving pavement (RAP) shall not be used.
- C. Aggregates:
 - 1. Crushed slag shall not be used for coarse or fine aggregates.
 - 2. Coarse aggregates shall conform to the requirements for maximum percentage wear in RS Subsection 200-1, Table 200-1.2.1 (B) as tested under ASTM C131/C131M.
 - 3. The minimum specific gravity of coarse aggregate shall be 2.58.
 - 4. Material passing each aggregate sieve size shall be 100 percent by weight crushed rock with 2 or more fractured faces.
 - 5. Fine aggregates shall be 100 percent by weight rock dust.
- D. Asphalt concrete shall conform to RS Subsection 203-6 except that reclaimed asphalt pavement (RAP) shall not be used.
 - 1. Asphalt concrete class and grade shall be as designated on Drawings.
- E. Asphalt concrete for class and grade shown on Drawings shall conform to RS Subsection 203-6 and as follows:
 - 1. Production Asphalt Concrete Mix Tolerances: Production RS Mix Tolerances Table establishes a Project Mix Design control band which applies to Contractor's approved Project Mix Design submittal.

- a. Production asphalt concrete mix tolerance percentage values for each sieve may be added to or deducted from the approved Project Mix Design percentage passing values for each sieve. The resulting values still apply if they result in Project Aggregate Gradation Control Band outside of Percentage Passing Sieves columns for the class of asphalt concrete shown on Drawings and shown in RS Subsection 203-6, Table 203-6.4.4.
- b. Production asphalt concrete aggregate gradations, asphalt binder, and air voids shall not deviate from the approved Project Mix Design more than the tolerances shown in Production RS Mix Tolerances Table included in this Section.

Production RS Mix Tolerances Table	
<u>Sieve Size</u>	<u>Tolerance Range</u>
1-1/2 inches	±0
1 inch	±2
3/4 inch	±4
1/2 inch	±5
3/8 inch	±6
No. 4	±6
No. 8	±5
No. 30	±4
No. 50	±3
No. 200	±1
Air Binder Percent	±0.45
Air voids - lab samples	-1.5 to +0.5%*
Air voids - field samples	-2.0 to +1.0%**

* The average air void volume of lab-compacted samples from a day's production shall fall between 2.5 and 4.5 percent with a standard deviation less than 0.65.

** The air void volume of each in place sample shall fall between 2.0 and 5.0 percent.

2.2 SOURCE QUALITY CONTROL

- A. Allow Engineer access to the mixing plant 30 Calendar Days prior to start of paving operations and at any time thereafter for verification of weights or proportions, character of materials used and determination of temperatures used in the preparation of asphalt concrete mix.
- B. Engineer shall verify acceptability of asphalt concrete aggregate gradations from plant extractions tested in conformance with ASTM D6307. Aggregate gradations shall be determined in conformance with ASTM C136/C136M Sieve Analysis.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Place base material in conformance with CRUSHED MISCELLANEOUS BASE Section.
- B. Clean base course prior to paving operations. Clean surfaces to receive overlay prior to tack coating. Remove dirt, trash, oil, loose asphalt concrete debris, vegetation, and standing water.
- C. Wherever asphalt concrete paving does not terminate against a curb, gutter, or another pavement, furnish and install header at the line of termination prior to placing asphalt concrete in conformance with RS Subsection 302-5.5.
- D. Carefully lay joints between existing hard-surface pavements and new pavements; between hard-surface structures permanently embedded in the grade and new pavements; or between successive days' Work in such a manner as to ensure a continuous bond between existing and new sections.
 - 1. Expose, clean, and cut edges of existing pavement or new asphalt concrete placed in the previous days asphalt concrete in place to straight, vertical surfaces.
 - 2. Lay joints between same-day successive runs adjacent to new asphalt in conformance with RS Subsection 302-5.7.
- E. At joint locations described in Paragraph D of this Article, or areas to be overlaid, apply tack coat to the existing surfaces to be joined in conformance with RS Subsection 302-5.4 prior to placing asphalt concrete.
- F. Do not place asphalt concrete until Engineer approves batch plant gradation samples.

- G. Do not place asphalt concrete until crushed miscellaneous base material has been approved by Engineer.

3.2 CONSTRUCTION

- A. Perform paving during daylight hours.
- B. Paving shall be continued uninterrupted and as expeditiously as possible once commenced.
- C. Construct asphalt concrete paving in conformance with RS Subsection 302-5. Exceptions:
 - 1. Mixes shown in RS Table 203-6.4.4 shall be compacted to 98 percent relative density unless indicated otherwise on Drawings.
- D. Provide and maintain in good operating condition equipment, tools, and machines used for constructing asphalt concrete pavement.

3.3 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Testing and inspection of asphalt concrete paving mix and testing of placed asphalt concrete paving shall be performed by Engineer.
 - 2. Engineer shall determine in-place densities and other specified material properties by nuclear methods in conformance with ASTM D2950/D2950M and by cores in conformance with ASTM D2726/D2726M and AASHTO T 312. Remove and replace materials not complying with specified material property requirements.
 - 3. If compaction tests indicate that the asphalt concrete paving does not meet specified requirements, re-test costs shall be at sole cost and expense of Contractor.
 - 4. Asphalt concrete pavement that Engineer determines to be out of conformance with the gradation and compaction requirements of this Section shall be subject to removal. If, after initial rejection, non-conformance continues, stop asphalt concrete material deliveries entirely until Engineer is satisfied that future deliveries shall conform to the requirements of this Section. Contractor shall be solely responsible for any delays to Project schedule resulting from rejected asphalt concrete material.

5. Flood Test:
 - a. Flood asphalt pavement with water to check for positive drainage.
 - b. Provide materials and equipment for flood testing.
 - c. Perform test in Engineer's presence.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Site Work Concrete:

1. Concrete pavement
2. Reinforcement bars
3. Catch basins
4. Fence footings
5. Steel light pole foundations
6. Guard post footings
7. Concrete pads for electrical and mechanical equipment
8. Maintenance holes

B. Slurry: Duct bank encasement.

C. Other non-wharf and non-building concrete structures as shown on Drawings.

1.2 RELATED SECTIONS

A. Section 02 00 01 - Basic Site Materials and Methods

B. Section 05 50 01 - Guard Posts

C. Section 26 00 01 - Basic Electrical Materials and Methods

D. Section 26 56 14 - Steel Light Pole

E. Section 31 00 00 - Earthwork

F. Section 32 31 13 - Chain Link Fences and Gates

G. Section 33 40 01 - Storm Drainage

1.3 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items.

2. For Drawing No. 1-3502, payment for concrete paving repairs shall be paid under the Concrete Paving Repairs bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary.
- B. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide.
- C. ACI PRC-347 - Guide to Formwork for Concrete.
- D. ACI SPEC-301 - Specifications for Concrete Construction.
- E. ASTM A706/A706M - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.
- F. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- G. ASTM C33/C33M - Standard Specification for Concrete Aggregates.
- H. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- I. ASTM C42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
- J. ASTM C88/C88M - Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
- K. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
- L. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- M. ASTM C150/C150M - Standard Specification for Portland Cement.
- N. ASTM C470/C470M - Standard Specification for Molds for Forming Concrete Test Cylinders Vertically.
- O. ASTM C618 - Standard Specification for Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.

- P. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
- Q. Reference Specifications (RS):
 - Section 200 - Rock Materials
 - Section 201 - Concrete, Mortar, and Related Materials
 - Section 302 - Roadway Surfacing
 - Section 303 - Concrete and Masonry Construction

1.5 SUBMITTALS

- A. Submit concrete mix design to Engineer for review.
- B. Submit manufacturer's data sheet, including the following items
 - 1. Manufacturer's printed batching and mixing instructions.
- C. Submit shop drawings for reinforcing steel in conformance with ACI CODE-318. Provide bending diagrams and assembly diagrams. Indicate splicing, laps of bars, shapes, dimensions, and details of bar reinforcing, accessories, and concrete cover. Do not scale dimensions from structural Drawings to determine lengths of reinforcing steel. Reproductions of Drawings are unacceptable.
- D. Submit construction joint layout showing alternating pour areas and sequential pour schedule, including 7 day cure time, prior to fabricating reinforcement.
- E. Submit delivery tickets from plant for each load of concrete placed. Each ticket shall state quantities by weight of each component of the load (cement, sand, water, and the like).
- F. Submit certificate of compliance signed by the supplier of fly ash identifying the type of fly ash and certifying that fly ash complies with ASTM C618.
- G. Submit certification that aggregates meet the requirements of ASTM C33/C33M Appendix XI for reactivity.
- H. Submit certification that the aggregates meet the soundness requirements of ASTM C33/C33M when tested in conformance with the requirements of ASTM C88/C88M using a sodium sulfate solution.

- I. Submit two 12 inch long samples of waterstops and construction joint devices.

1.6 QUALITY ASSURANCE

- A. Department Testing Laboratory (Test Lab) shall perform tests in conformance with RS Subsection 201-1..
 1. Test Lab shall perform sieve analysis of aggregates in conformance with ASTM C136/C136M.
 2. Test Lab shall provide certificate of compliance for bottoms of footings and pads prior to placing reinforcing bar and concrete.
 3. Advise Test Lab 72 hours in advance of the beginning of operations to allow time for completion of quality tests and for assignment of laboratory personnel.
 4. Provide and deliver to Test Lab, representative samples of materials which require testing and are proposed to be used on Project (coarse and fine aggregate, cement, and the like).
 5. When requested, furnish copies of test reports of shipments of concrete to Engineer and Test Lab.
- B. Schedule Engineer's registered deputy building inspection prior to placing concrete and at other times as Drawings require.
- C. In addition to test cylinders required by Contractor's own testing and quality control, Contractor shall make for Department four 6 inch diameter by 12 inch long test cylinders for each light pole foundation, for every 5,000 square feet of slab area, and every 150 cubic yards of other types of concrete placement. A minimum of 4 cylinders shall be made for each day's pour regardless of cubic yardage, or for each change in mix design. Upon notification, dispose of any cylinders not tested by Department.
 1. Furnish certified technicians and equipment necessary to obtain and handle the samples at Project Site or at other locations where materials are located.
 2. Make and cure cylinders in conformance with ASTM C31/C31M, standard cured method. Cylinder molds shall conform to ASTM C470/C470M.

3. Label cylinders with the date of sampling, the class and mix proportions of the concrete, and Work location of the pour from which the sets of samples were taken. Identify parent concrete structure from which samples were taken, and Drawing page number. Identify cylinders with the same identification system used on Drawings for the parent concrete structure. Use same identification system for samples Contractor requires for its own use.
4. Coordinate with Engineer for pick up of cylinders from field curing location between 24 to 72 hours after being cast. Avoid damage to cylinders and loss of lids and identifying labels during handling. Failure to comply with the provisions of this Section regarding cylinder handling may be cause for rejection of the concrete structure. Engineer may further require performance of any and necessary alternative strength tests at sole cost and expense of Contractor.
5. Engineer may increase the required number of cylinders if the specified concrete strength is not being attained consistently or reduce the number if Engineer determines that high concrete strengths are consistently produced and the concrete and curing processes are uniform.
6. Contractor shall provide evidence that the concrete structures have met strength and other requirements as specified in Materials Article of this Section. Light pole foundations shall further meet strength requirements of Materials Article of STEEL LIGHT POLE Section. Strength shall be determined by cylinder breaks after 28 days as specified by ASTM C39/C39M.
7. If the cylinders show compressive strengths below the minimum acceptable limit, Engineer may require coring of the parent concrete structure at Contractor's sole cost and expense. Cores shall conform to ASTM C42 and RS Subsection 201-1.7.
 - a. Coordinate with Test Lab through Engineer to perform additional, earlier cylinder breaks for purposes of scheduling.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store fly ash separately from other components of concrete until concrete is ready to be batched.

PART 2 – PRODUCTS

2.1 CONCRETE MIX DESIGN

- A. Mix shall be designed to produce a concrete that has maximum density, minimum shrinkage, and maximum smoothness of surface.
- B. Concrete mix designs shall conform to RS Subsection 201-1.3.3 where concrete class is shown on Drawings. Concrete mix design shall conform to RS Subsection 201-1.3.4 where compressive strength is shown on Drawings. Exception:
 - 1. Refer to STEEL LIGHT POLE Section for additional light pole foundation concrete mix design requirements.
- C. Proportion concrete in conformance with ACI SPEC-301, Section 4 - Concrete Mixtures, ACI PRC-211.1, and ACI CODE-318, Chapter 5, Concrete Quality, Mixing and Placing.

2.2 MATERIALS

- A. Portland cement concrete shall conform to RS Subsection 201-1 unless shown otherwise on Drawings. Portland cement shall be Type II, low alkali (0.6 percent, maximum), in conformance with ASTM C150/C150M.
 - 1. Only 1 brand of cement shall be used.
- B. Ready-mix concrete shall conform to ASTM C94/C94M.
- C. Mortar shall conform to RS Subsection 201-5.
- D. Reinforcing bars shall be Grade 60 in conformance with ASTM A706/A706M, RS Subsection 201-2, and ACI CODE-318.
 - 1. Exceptions: Reinforcing bars shall be Grade 60 in conformance with ASTM A706/A706M:
 - a. Where bars are to be welded.
 - b. As called out on Drawings.
 - 2. Reinforcement Accessories:
 - a. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch.
 - b. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

- E. Headed steel anchors shall be by Nelson Stud Welders.
- F. Aggregate shall be normal weight in conformance with RS Subsection 200-1.4, and shall conform to ASTM C33/C33M, and ACI CODE-318, except where concrete is specified by class on Drawings in conformance with RS Subsection 201-1.3.3, or elsewhere in Specifications.
- G. Fine aggregate shall conform to RS Subsection 200-1.5.
- H. Non-shrink grout shall conform to ASTM C1107/C1107M and shall be Masterflow 713 as manufactured by Master Builders Solutions, (800) 433-9517. Other non-masonry grouts shall conform to RS Subsection 201-7 and as indicated on Drawings.
 - 1. Grout for vault grade adjustment shall be high strength, non-shrink grout.
 - 2. Grout for fence post cores into existing concrete or asphalt concrete shall be non-shrink grout.
- I. Chemical admixtures shall conform to RS Subsection 201-1.2.6
 - 1. Calcium chloride shall not be used.
 - 2. Strength of concrete with admixture shall be, at 48 hours and more, not less than similar concrete without the admixture.
- J. Fly ash shall conform to RS Subsection, 201-1.2.7.3, Class F and ASTM C618.
- K. Forms shall conform to RS Subsection 303-1.3 and ACI PRC-347.
 - 1. Anti-bonding agent shall be Duogard II, as manufactured by W.R. Meadows, (909) 469-2606.
- L. Concrete curing shall be by water or membrane curing, Type 1-D, in conformance with RS Subsection 201-4.
- M. Sealants for expansion and control joints shall be as specified on Drawings. Joint fillers shall conform to RS Subsection 201-3.2.
- N. Epoxy adhesives shall be 2-component, 100 percent solids, 100 percent reactive suitable for use on dry or damp surfaces.
- O. Materials shall comply with City of Los Angeles Green Building Code requirements.

1. Enter pertinent product data in VOC Content Verification Checklist form and provide product specification sheets. Make checklist and specifications available to City of Los Angeles Department of Building and Safety inspector through Engineer upon request. VOC Content Verification Checklist form can be found here: https://www.ladbs.org/docs/default-source/forms/green-building-2023/grn_2_voc_content_verification_checklist-01.17.23.pdf?sfvrsn=19f4c153_10

- P. Slurry material shall be as specified in BASIC SITE MATERIALS AND METHODS Section.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Where concrete is to be cast against existing concrete older than 60 days, clean and roughen existing concrete by sandblasting, exposing the aggregate, and apply bonding agent.

3.2 CONSTRUCTION

A. General:

1. Construct exterior concrete equipment pads and high mast light pole foundation in conformance with City of Los Angeles Building Code and in conformance RS Subsection 303-1 except for RS Subsections 303-1.11 and 303-1.12.
2. Construct concrete curbs, walks, gutters, cross gutters, access ramps, and driveways in conformance with RS Subsection 303-5 except for RS Subsection 303-5.9.
3. Construct concrete paving in conformance with RS Subsection 302-6 except for RS Subsection 302-6.8. Vehicular traffic closure time period shall conform to RS Subsection 302-6.7 except where Drawings state specific closure time period.
4. Sequence formwork, reinforcement, concrete placement, and other concrete Work in conformance with joint layout and pour sequence approved by Engineer.

B. Formwork:

1. Construct formwork in conformance with RS Subsection 303-1.3.

2. Construct forms that can be removed without hammering or prying against the concrete.
3. Provide plywood sheathing for exposed concrete, whether to be painted or not.
4. Form exposed angles in concrete with neat 3/4 inch 45 degree chamfers and fillets.
5. Remove forms in conformance with RS Subsection 303-1.4.
6. Tolerances for deviation in lines, grades, and dimensions shown on Drawings shall conform to ACI PRC-347.

C. Reinforcement Placing:

1. Place reinforcing bars in conformance with RS Subsection 303-1.7, ACI SPEC-301, ACI CODE-318, and approved shop drawings.

D. Embedded Materials:

1. Maintain 4/3 times maximum aggregate size clearance from pipes, conduits, and other embeds to reinforcing bars.
2. Place anchor bolts in templates to maintain position during concrete placement.

E. Placing Concrete:

1. Clear water from areas where concrete is to be placed prior to placing concrete.
2. Clean dirt, grease, rust, and the like from metalwork, including steel reinforcement, that shall be in contact with concrete immediately prior to placing concrete.
3. Place concrete in conformance with RS Subsection 303-1.8 and City of Los Angeles Building Code.
 - a. Discharge of ready-mix concrete shall be completed within 90 minutes after addition of the cement to the aggregates, or before 300 revolutions of the drum, whichever occurs first.
 - b. Use of non-agitating transport equipment for ready-mixed concrete is not permitted.

- c. Maximum length of chutes shall be 50 feet.

4. Consolidation of Concrete:

- a. Consolidate concrete in conformance with RS Subsection 303-1.8.4. Fill corners and angles, thoroughly embed reinforcement, eliminate rock pockets and bring only a slight excess of water to exposed surface of concrete during placement.
- b. Screed to bring the concrete surfaces to required grades with straight edge screed and scrapers as necessary.
- c. Float to compact the surfaces evenly. Remove excess surface water before floating. Do not use mortar to level surfaces.

3.3 SLURRY PLACEMENT

- A. Cement slurry backfill shall be placed in a uniform manner that shall prevent voids in, or segregation of, the backfill.

3.4 CONCRETE FINISH

- A. Exterior concrete slabs, ramps, and aprons shall be finished in conformance with RS Subsection 303-5.5.5 and shall have a non-slip light broom finish unless otherwise called for on Drawings.
- B. Curbs, gutters, cross gutters, driveways, and walks shall be finished in conformance with RS Subsection 303-5.5 except for Subsection 303-5.9.
- C. Finish concrete pavement in conformance with RS Subsection 302-6.4.
- D. Finish other exterior concrete structures above and below grade, including high mast light pole foundations, in conformance with RS Subsection 303-1.9.

3.5 TREATMENT OF SURFACE DEFECTS

- A. Immediately after forms are removed, rub or grind out irregularities.
- B. Fill minor voids, holes, honeycombing, tie-rod cone impressions, and other depressions with non-shrink grout. Presence of extensive defects is cause for rejection of concrete.
 - 1. Cut back defective areas a minimum of 1/2 inch depth
 - 2. Wet surfaces prior to applying repair material.

3.6 CURING

- A. Cure concrete in conformance with RS Subsection 303-1.10 using water cure where possible, otherwise membrane cure.

3.7 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Department shall provide City of Los Angeles registered deputy building inspector.

3.8 PROTECTION

- A. Protect finished concrete surfaces from stains, abrasions, and other damage.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Pavement markings and striping, including words, numbers, and other additional information.
- B. Pavement markers.
- C. Removing existing markings on pavements and curbs prior to installing new markings.

1.2 RELATED SECTIONS

- A. Section 32 12 17 - Asphalt Concrete Paving
- B. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Lump Sum Construction bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. 40 CFR 262 - Standards Applicable to Generators of Hazardous Waste.
- B. Reference Specifications (RS):
 - Section 214 - Traffic Striping, Curb and Pavement Markings, and Pavement Markers
 - Subsection 214-2 - Test Reports and Certificates of Compliance
 - Subsection 214-4 - Paint for Striping and Markings
 - Subsection 214-6 - Pavement Markers
 - Subsection 214-7 - Adhesives for Pavement Markers
 - Section 314 - Traffic Striping, Curb and Pavement Markings, and Pavement Markers
 - Subsection 314-4 - Application of Traffic Striping and Curb and Pavement Markings

Subsection 314-5 - Pavement Markers

1.5 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Test Reports and Certificates: Submit for each batch of paint stating compliance with specified requirements in conformance with RS Subsection 214-2.
- C. For pavement marker quantity less than 10,000, Contractor may submit manufacturer's certification that markers and adhesive conform to RS Subsections 214-6 and 214-7.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver paint in containers of at least 5 gallons accompanied by batch certificate.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in conformance with 40 CFR 262 and South Coast Air Quality Management District (SCAQMD) regulations.

1.7 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Line and Zone Marking Paint: Master Painters Institute (MPI) No. 97 Latex Traffic Marking Paint; color(s) as indicated.

B. Paint:

1. Conform to RS Subsection 214-4.2, Rapid Dry White, Yellow, or Black for traffic paint.
2. Blue and red pavement striping and markings shall conform to the requirement for white paint.

C. Temporary Marking Tape: Preformed, reflective, pressure sensitive adhesive tape in color(s) required; Contractor is responsible for selection of material of sufficient durability as to perform satisfactorily during period for which its use is required.

D. Pavement Markers:

1. Conform to RS Subsection 214-6. Type of marker as shown on Drawings. Adhesive shall conform to RS Subsection 214-7.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas that shall receive markings and verify that substrates have been properly prepared.
- B. Correct unsatisfactory conditions prior to proceeding Work.

3.2 PREPARATION

- A. Allow new pavement surfaces to cure for a period of not less than 48 hours before application of marking materials. Allow 5 days after slurry seal or sealcoat application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under Project conditions.
- C. Clean surfaces thoroughly prior to installation.
 1. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods.
 2. Recover and dispose of grindings, paint residue, blast media, and waste water from areas undergoing marking removals.

3. For striping on new concrete pavement, water blast curing compound off of areas to receive markings.
- D. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.
- E. Establish survey control points to determine locations and dimensions of markings; provide templates to control paint application by type and color at necessary intervals.
- F. Temporary Pavement Markings: Apply temporary markings of the color(s), width(s) and length(s) as indicated on Drawings or as directed by Engineer.
 1. After temporary marking has served its purpose, remove temporary marking by carefully controlled sandblasting, approved grinding equipment, or other approved method so that surface to which the marking was applied shall not be damaged.
 2. At Contractor's option, temporary marking tape may be used in lieu of temporary painted marking; remove unsatisfactory tape and replace with painted markings at no additional cost to Department.
- G. Engineer shall inspect surfaces to be painted after Contractor has laid out pavement markings, and prior to application of paint materials. Correct deficiencies in layout and surface preparation prior to application of paint.
- H. Protect existing and adjacent facilities from overspray and spillage.

3.3 EQUIPMENT

- A. Equipment shall conform to RS Subsection 314-4.3.4.

3.4 INSTALLATION

- A. Begin pavement marking as soon as practicable after surface has been cleaned and dried.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees Fahrenheit (F) or more than 95 degrees F.
- C. Apply in conformance with manufacturer's written instructions using an experienced technician that is thoroughly familiar with equipment, materials, and marking layouts.

- D. Comply with California Manual on Uniform Traffic Control Devices (California MUTCD) for details not shown on Drawings.
- E. Apply markings in locations determined by measurement from survey control points; preserve control points until after markings have been accepted.
- F. Apply uniformly painted and reflective pavement markings of color(s), lengths, and widths as indicated on Drawings with true, sharp edges, and ends.
 - 1. Apply paint in 1 coat only markings show. Markings showing light spots shall receive additional coats as directed by Engineer.
 - 2. Wet Film Thickness: 0.015 inch, minimum.
 - 3. Width Tolerance: Plus or minus 1/8 inch.
 - 4. Straightness Tolerance: Plus or minus 1/2 inch in 50 feet.
- G. Symbols: Use a suitable template that shall provide a pavement marking with true, sharp edges and ends, of the design and size indicated on Drawings.
- H. Install pavement markers in conformance with RS Subsection 314-5 except for RS Subsections 314-5.6 and 314-5.7.

3.5 DRYING, PROTECTION, AND REPLACEMENT

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sandblasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to Department.

3.6 CLEANING

- A. Remove paint overspray, drips, and spills from adjacent surfaces by means which shall not damage the surfaces.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Chain link fences, gates, and accessories
- B. Post footings
- C. K-rails

1.2 RELATED SECTIONS

- A. Section 05 05 14 - Treating Damaged Galvanizing
- B. Section 09 90 01 - Painting for Exterior Improvements
- C. Section 32 12 17 - Asphalt Concrete Paving
- D. Section 32 13 14 - Concrete for Exterior Improvements

1.3 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. For 8-feet high chain link fence, payment for Work of this Section shall be paid under the Chain Link Fence (8-Feet High) bid item of Bid Proposal Line Items.
2. For chain link fence double swing gate, payment for Work of this Section shall be paid under the Chain Link Fence (8-Feet High) bid item of Bid Proposal Line Items.
3. For rolling chain link gate, payment for Work of this Section shall be paid under the Rolling Chain Link Gate bid item of Bid Proposal Line Items.
4. For 6-feet high chain link fence, payment for Work of this Section shall be paid under the Chain Link Fence (6-Feet High) bid item of Bid Proposal Line Items.
5. For chain link fence on K-rail, payment for Work of this Section shall be paid under the Chain Link Fence on K-Rail bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM A47/A47M - Standard Specification for Ferritic Malleable Iron Castings.

- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASTM A90/A90M - Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
- D. ASTM A121 - Standard Specification for Metallic-Coated Carbon Steel Barbed Wire.
- E. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- F. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- G. ASTM A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
- H. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
- I. ASTM A824 - Standard Specification for Metallic-Coated Steel Marcellled Tension Wire for Use With Chain Link Fence.
- J. ASTM F626 - Standard Specification for Fence Fittings.
- K. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
- L. State of California Department of Transportation (Caltrans) Standard Plans:
T3 - Temporary Railing (Type K)

1.5 SUBMITTALS

- A. Submit shop drawings of typical fence elevations showing line post, corner post, gate post, and gates for review prior to fabrication. Shop drawings shall include pipe sizes, gate sizes, bracing, locking devices, hinges or rollers, tensioning hardware, pipe embedment depths, and galvanizing.
- B. Submit fence materials for galvanizing thickness testing. Materials to be tested shall comply with ASTM A90/A90M. Obtain Engineer's review prior to installation.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General:

1. Construct chain link fencing and gates of hot-dipped galvanized materials as specified.
2. Steel materials shall have a minimum galvanized coating of 2 ounces per square foot of surface area, except barbed wire, tension wire, clips, ties and hog rings which shall have a Class 3 coating in conformance with ASTM A121, unless otherwise specified.
3. Fencing shall be 8 feet high plus 1 foot high (vertically), 45 degree barbed wire extension unless called out otherwise on Drawings.

B. Fabric:

1. Fabric shall conform to ASTM A392, be helically wound and interwoven; 2-inch mesh; 6 gage for fabric 108 inches or more in height; 9 gage for fabric less than 108 inches high; fabric less than 60 inches high shall be knuckled on top. Galvanize material in conformance with ASTM A392, Class 2, zinc coating after weaving (2 ounces per square foot).
2. Furnish fence fabric in 50 foot lengths.

C. Barbed Wire:

1. Barbed wire shall conform to ASTM A121. Wire shall consist of 3 strand pairs of 13 1/2 gage steel line wire with 0.08 inch, 4-point barbs spaced approximately 5 inches apart. Galvanize material in conformance with ASTM A121, Class 3 coating (0.70 ounces per square foot).

D. Tension Wire:

1. Tension wire shall conform to ASTM A824 and shall be 0.177 inch diameter hot-dipped galvanized marcelled steel, Type II, Class 2 zinc coating in conformance with ASTM A824 (2.0 ounces per square foot).

E. Hog Rings:

1. Hog rings shall conform to ASTM F626 and shall be 0.11 inch diameter, hot-dipped galvanized steel, Class 3 or A zinc coating in conformance with ASTM A641/A641M (0.8 ounces per square foot).

F. Wire Fabric Ties:

1. Ties shall conform to ASTM F626 and shall be 0.148 diameter, hot-dipped galvanized steel, zinc coating in conformance with ASTM A641/A641M, Class 3 or A (0.9 ounces per square foot).

G. Flat Band Fabric Ties:

1. Ties shall be 1/2 inch by 0.06 inch, hot-dipped galvanized steel, Class B3 coating in conformance with ASTM A153/A153M (1.3 ounces per square foot).

H. Tension Bars:

1. Tension bars shall conform to ASTM F626 and shall be 3/16 inch by 3/4 inch, high carbon steel, galvanized with 1.2 ounces per square foot coating.

I. Truss Rods:

1. Truss rods shall conform to ASTM F626 and be 3/8 inch, diameter, adjustable, threaded at one end hot-dipped galvanized steel, (1.2 ounces per square foot). Provide galvanized bracket for adjusting tension at threaded end.

J. Turnbuckles:

1. Turnbuckles shall be wrought iron in conformance with ASTM A47/A47M, galvanized drop forged steel, Class A in conformance with ASTM A153/A153M (2 ounces per square foot).

K. Posts and Gate Frames:

1. Posts and gate frames shall be cylindrical, welded at corners (no circumferential welds) or assembled with corner fittings. Gates with corner fitting connections shall have adjustable truss rods for gate panels 5 feet or wider. Pipe shall be hot-dipped galvanized steel conforming to ASTM A53/A53M, Schedule 40, zinc coated (1.8 ounces per square foot) or ASTM F1083, Schedule 40, zinc coated (1.8 ounces per square foot). Gate frames shall be covered with fabric to match fence.

L. Gate Hinges and Accessories:

1. Gate hinges and accessories shall be malleable iron in conformance with ASTM A47/A47M and galvanized in conformance with ASTM A153/A153M, Class A zinc coating (2 ounces per square foot). Hinges shall be structurally capable of supporting the gate leaf and allow the gate to open and close without binding. Hinges shall be designed to permit the gate to swing a full 180 degrees.

M. Latch Hardware:

1. Latches are required for double gates. Latch hardware shall be galvanized malleable iron in conformance with ASTM A47/A47M. Plunger bars may be tubular or bar steel and shall be capable of retaining the gate in a closed position. Latches shall have provisions for a padlock. Galvanize in conformance with ASTM A153/A153M, Class A (2 ounces per square foot).

N. Tension Bands:

1. Tension bands shall be steel and shall conform to ASTM F626, 1/8 inch by 1 inch with beveled edges, and hot-dipped galvanized (1.2 ounces per square foot).

O. Bolts:

1. Bolts shall be steel ASTM A307 with hot-dipped galvanized zinc coating in conformance with ASTM A153/A153M, Class C (1.25 ounces per square foot).

P. Nuts:

1. Nuts shall be steel ASTM A307 with hot-dipped galvanized zinc coating in conformance with ASTM A153/A153M, Class C (1.25 ounces per square foot).

Q. Sleeves:

1. Sleeves shall be 1.695-inch I.D. by 0.078-inch wall, drawn tube, 6 inches long. Sleeve shall be self centering type in conformance with ASTM A53/A53M; galvanized (1.8 ounces per square foot).

R. Top Rails and Brace Rails:

1. Rails shall be 1 1/4-inch American Standard Schedule 40 galvanized steel pipe in conformance with ASTM A53/A53M; hot-dipped galvanized (1.8 ounces per square foot).

S. Rail, Brace Ends, and Post Caps for Attaching Barbed Wire Extension Arm:

1. Rail, brace ends, and posts caps shall be permanent mold casting, sand casting, galvanized malleable iron in conformance with ASTM A47/A47M and galvanized in conformance with ASTM A153/A153M, Class A (2 ounces per square foot).

T. Post Tops:

1. Post tops shall be permanent mold, sand mold, die castings, malleable iron in conformance with ASTM A47/A47M and galvanized in conformance with ASTM A153/A153M, Class A (2 ounces per square foot). Tops shall be weather tight closure caps, 1 for each post.

U. Barbed Wire Supporting Arm:

1. Barbed wire supporting arms shall be 16 gage steel in conformance with ASTM F626 and with the arm at 45 degrees. The top wire of the 3 wires shall be 12 inches horizontally from the fence line and the other wires spaced uniformly between top of fence fabric and the outside strand. The vertical distance between the top wire and the height of the top of fence fabric shall be 12 inches.

V. K-rails:

1. K-rails shall be in accordance with State of California Department of Transportation (Caltrans) Standard Plans Plan No. T3A modified with scuppers.

2.2 CONCRETE FOR SETTING POSTS

- A. Concrete for setting posts shall be in conformance with CONCRETE FOR EXTERIOR IMPROVEMENTS Section.

2.3 SIZES FOR POSTS, RAILS, BRACES, AND GATE FRAMES

	<u>Use</u>	Nominal Pipe Size* <u>O.D. (Inches)</u>	Actual O.D. <u>(Inches)</u>	Weight per Lbs/ft <u>(Galv. Steel)</u>
A.	End, corner, slope, and rolling gate posts for fences 6 feet or higher	3	2.875	5.79
B.	End, corner, slope, and rolling gate posts, fences less than 6 feet	2-1/2	2.375	3.65
C.	Line posts for fences 6 feet or higher	2-1/2	2.375	3.65
D.	Line posts for fences less than 6 feet high	2	1.90	2.72
E.	Top rail and braces	1-5/8	1.66	2.27
F.	Swinging and sliding gate post for 3 feet, and 6 feet single or 12 feet double gates, 6 feet or higher; Under 72 inches	3 2-1/2	2.875 2.375	5.79 3.65
G.	Swinging and sliding gate posts for single gates from 6 feet to 13 feet and double gates over 12 feet but not over 26 feet	4	4.00	9.12
H.	Swinging gate posts for single gates 13 to 18 feet and double	6-5/8	6.625	18.99

	<u>Use</u>	Nominal Pipe Size* <u>O.D. (Inches)</u>	Actual O.D. <u>(Inches)</u>	Weight per Lbs/ft <u>(Galv. Steel)</u>
	gates 26 to 36 feet			
I.	Swinging gate posts over 18 feet single and 36 feet double	8-5/8	8.625	28.58
J.	Gate leaf 6 feet in width, frames and bracing	1-5/8	1.66	2.27
K.	Gates leaf greater than 6 feet in width Frame---	2	1.90	2.72
	Vertical Divisions---	2	1.90	2.72
	Bracing---	1-5/8	1.66	2.27
*Fence Industry Standard O.D.				

PART 3 - EXECUTION

3.1 FENCE CONSTRUCTION AND INSTALLATION

A. Post Spacing:

1. Space line posts equidistant on a maximum of 10 feet on center. Posts shall be plumb and the tops of the posts aligned.

B. Post Footings:

1. Post holes shall be cylindrically shaped, sized, and set to the depths shown in the following tabulation except for line posts in asphalt pavement or if shown otherwise on Drawings:

<u>Post Type</u>	<u>Post Hole Depth</u>	<u>Post Hole Diameter</u>	<u>Post Embedment</u>
Line	36 inches	8 inches	30 inches

Terminal and Corner	42 inches	12 inches	36 inches
Gate	42 inches	18 inches*	36 inches
*or 3-1/2 times pipe diameter (O.D.) whichever is larger			

2. Fill post holes with concrete with top of concrete shaped to drain away from post. Concrete shall extend at least 3 inches below end of post.

C. Line Posts in Asphalt Concrete Pavement:

1. Line post holes in asphalt pavement shall be cored to a diameter no greater than 1/2 inch larger than outside diameter of post. Posts shall then be driven into ground to a 30 inch depth and plumbed true with wood wedges. Backfill remaining void with fine dry sand.

D. Barbed Wire Extension Arms:

1. Bolt extension arms to the post caps which are to be firmly seated on top of the posts perpendicular to the fence line.

E. Top Rail:

1. Top rails shall pass through the base of the extension arms and shall form a continuous brace from end to end of each stretch of fence. Top rail lengths shall be jointed with sleeves. Fasten top rail to terminal posts by means of rail ends and brace bands.

F. Horizontal Braces:

1. Provide horizontal braces at terminal posts midway between top rail and tension wire. Fasten braces to the line post by brace ends and brace bands, and to the terminal posts by rail ends and brace bands.

G. Diagonal Braces:

1. Install diagonal brace rods from the brace end on the line post back to the terminal post and fastened to it by a brace band. Securely fasten diagonal braces to the terminal post with brace ends and brace bands at the 2/3 point above adjacent grade (where top rails omitted) and attach other end to the adjacent line post at grade. There shall be no more than a 50 degree angle between the brace and the ground.

H. Fence Fabric:

1. Furnish fence fabric in 50-foot continuous lengths. The fabric may be either right-hand or left-hand weave, but not both. Install fabric 2 inches above ground level and fasten line post ties at a maximum of 24 inch intervals. Tighten fabric to provide a smooth uniform appearance. Install tension bars at end posts and gate posts. Install tension bands at a maximum of 15 inch intervals.

I. Tension Wire:

1. Stretch marcelled tension wire from post to post of each stretch of fence, at bottom. Attach tension wire to bottom of the chain link fabric by hog ring-type fasteners at 24 inch on center, maximum. Fasten wire within the bottom 6 inches of the fence fabric. Tension wire shall be taut and free of sag. Attach to terminal posts by means of brace bands.

J. Barbed Wire:

1. Tightly stretch barbed wire to remove sag. Install firmly in the slots of the extension arms and anchor to the terminal extension arms.

3.2 GATE CONSTRUCTION AND INSTALLATION

- A. Provide each gate leaf over 8 feet in width with vertical stay members.
- B. Brace each panel of the gates wider than 5 feet and containing corner fittings by means of 2 diagonal truss rods. Provide tension adjustment nut for tightening threaded rod end against bracket.
- C. Do not fabricate gate leaves prior to Engineer's review of detailed shop drawings. Gate corners and tee junctions, where intermediate vertical or barbed wire extensions are required, shall be connected with electrically welded butt joints; welds shall be sound and watertight. Fit gate with the same type of fabric as the fence.
- D. Perform galvanizing after welding.
- E. Furnish fittings, including hinges and latches for each gate. One keeper or other device for holding gate open shall be furnished with each leaf 6 feet or wider. One drop bar locking assembly shall be furnished on double gates. Single gates shall have fork latch with provisions for padlock. Locking and catch fittings shall be furnished on double gates.

- F. Install gates plumb to operate with freedom through an arc of a minimum 180 degrees.
- G. Gates to be used with fencing having barbed wire extension arms shall have vertical members extended to carry the barbed wire across the gates. Barbed wires shall be in a vertical plane, above the gates, on approximately 4 inch centers. The top wire shall be approximately 12 inches above the top of the gate.
- H. Rolling gates shall be equipped as follows:
 - 1. Upper gate guides and track of Schedule 40 steel pipe.
 - 2. Trolley wheels for track of malleable cast iron with hardened steel axles and permanently lubricated steel ball bearings.
 - 3. A steel assembly mounted to the trolley wheel axle that prevents the wheel from lifting off the track.
 - 4. A 2-wheel front carriage with at least 8 inches diameter solid rubber tired wheels.
 - 5. Flared guide brackets.
 - 6. Eye bolt and chain or other locking device.
 - 7. Line posts shall be 5 feet on center in the length that supports the rolling gate.
- I. Install safety posts for rolling gates at the terminal post and at approximately 1/3 the gate width measurement back along the fence line. Center safety posts 8 inches inside the fence line and the same dimensions as line posts. The safety posts shall prevent gates from falling if they come off track.
- J. Equip swinging gates 8 feet or greater in width with double carriage wheels at the free swinging end. Carriage wheels shall be at least 8-inches in diameter with solid rubber tires and mounted in a tubular frame at the bottom of the gate.

3.3 BOLTED CONNECTIONS

- A. Bolted connections shall be peened, double bolted, or secured by cotter pins to prevent nuts from working loose.

3.4 DAMAGED GALVANIZING

- A. Repair damaged galvanizing on the materials in conformance with TREATING DAMAGED GALVANIZING Section.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Warning tape to mark the location of electrical conduits, water lines, sewer lines, storm drains, gas lines, telephone lines, and other conduits and lines

1.2 RELATED SECTIONS

- A. Section 31 23 33 - Trenching and Backfilling
- B. Section 33 40 01 - Storm Drainage

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under each corresponding bid item of Bid Proposal Line Items that requires underground utility warning tape.

1.4 SUBMITTALS

- A. Submit product data to Engineer for approval.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Warning tape shall be acid, alkaline, and corrosion resistant detectable marking tape Terra Tape Sentry Line as manufactured by Reef Industries, Incorporated, (800) 231-6074 or equivalent product as manufactured by T. Christy Enterprises, (800) 258-4583.
- B. Warning tape shall be 6 inches wide by 5 to 6 mils thick. The tape shall be made of 1 layer of metalized foil laminated between 2 layers of inert plastic film.
- C. Tape shall bear a continuous printed message to conform to the utility within the trench the tape is being installed in. The message shall be as indicated on Drawings or as may be the standard from the manufacturer for that utility.
- D. Tape color and legend combination shall be in conformance with American Public Works Association (APWA) color coding or local requirements. Color codes are as follows:

1. Red: Electric power, distribution, and transmission installations or municipal electric installations.
2. Yellow: Gas distribution, oil distribution, petroleum, or installations containing dangerous materials, products or steam.
3. Orange: Telephone, telegraph installations, police and fire communications installations, and cable television.
4. Blue: Water installations and slurry pipelines.
5. Green: Sewer and storm drain installations.
6. Purple: Reclaimed water.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Where crushed miscellaneous base is used in the pavement structural section, install tape a minimum of 12 inches below bottom of the base material parallel and directly above the buried line unless indicated to be deeper on Drawings.
- B. Where cement-sand slurry is used as backfill directly under asphalt concrete, place tape on top of slurry material parallel to and directly above the buried line unless indicated to be deeper on Drawings.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Storm drainage materials and accessories
- B. Bedding for pipes

1.2 RELATED SECTIONS

- A. Section 31 23 19 - Dewatering
- B. Section 31 23 33 - Trenching and Backfilling
- C. Section 31 50 01 - Excavation Safety Requirements
- D. Section 32 13 14 - Concrete for Exterior Improvements
- E. Section 33 05 97.23 - Underground Utility Warning Tape

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment for Work of this Section shall be paid under the Storm Drainage System bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
- B. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- C. ASTM C497 - Standard Test Methods for Concrete Pipe, Concrete Box Sections, Manhole Sections, or Tile.
- D. Reference Specifications (RS):
 - Section 207 - Gravity Pipe
 - Subsection 207-2 - Reinforced Concrete Pipe (RCP)
 - Section 208 - Pipe Joint Types and Materials
 - Subsection 208-3 - Gaskets For Concrete Pipe

Section 217 - Bedding and Backfill Materials

Subsection 217-1 - Bedding Material

Section 306 - Open Trench Conduit Construction

Subsection 306-6 - Bedding

- E. Standard Plan – City of Los Angeles Department of Public Works, Bureau of Engineering:

- S-251-1 - Pipe Laying in Trenches

- S-281-3 - Maintenance Hole Frame and Cover 24-Inch

- F. Standard Plan – City of Los Angeles Harbor Department:

- H-101-01 - Catch Basin – Grate – Frame

1.5 SUBMITTALS

- A. Means and methods working drawings for installing storm drain systems in the wet signed and stamped by a civil engineer registered in State of California.
- B. One-cubic foot samples of proposed bedding materials for approval prior to use.
- C. Pipeline layout diagram in conformance with RS Subsection 207-2.1.
- D. Shop drawings and calculations for the following signed and stamped by a civil engineer registered in State of California:
 - 1. Storm drain castings and fabrications
 - 2. Catch basins including insert filter
 - 3. Storm drain maintenance hole shaft, rings, and steps
- E. Detail for concrete pipe joint in conformance with RS Subsection 207-2.5.
- F. For catch basin stencil, submit cut sheet to Engineer for review.
- G. Material manufacturer's certificate of compliance with Specifications.
- H. Original digital recordings of closed circuit television inspections, log sheets, and reports for review and acceptance of Work, which shall become property of Department.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cast-in-place concrete materials shall conform to the applicable requirements of CONCRETE FOR EXTERIOR IMPROVEMENTS Section and as specified in this Section. Cement shall be Type II.
- B. Bedding shall conform to RS Subsection 217-1, Standard Plan S-251-1, and as called for on Drawings.
- C. Reinforced concrete pipe shall conform to RS Subsection 207-2, ASTM C76, have a minimum water cement ratio of 0.40 per ASTM C497 Test Method A, have a maximum absorption of 6 percent, and have a minimum inside and outside concrete cover to reinforcement of 1 1/2 inches.
- D. Reinforced concrete pipe joints shall be rubber-gasketed type conforming to RS Subsection 208-3. Maximum joint gap shall be in conformance with manufacturer's written instructions.
- E. Upon encountering groundwater in trench excavation zone, refer to Drawings and TRENCHING AND BACKFILLING Section for additional trench subgrade stabilization requirements.
- F. Catch basin screens and filters shall be Flogard +Plus as manufactured by Oldcastle. Model and size as shown on Drawings.
- G. Catch basin stencils shall be size, design, and material as shown on Drawings.
- H. Materials shall be from a City of Los Angeles Department of Public Works Bureau of Engineering pre-approved manufacturer or supplier.
- I. Geotextile shall conform to the applicable requirements of FILTER FABRIC Section.
- J. Ballast shall conform to applicable requirements of TRACK RAIL BALLAST Section.

2.2 FABRICATIONS AND CASTINGS

- A. Grates shall conform with Department Standard Plan H-101-01, included in Appendix "I" of Specifications, incorporating any changes that may be shown on Drawings. Design grates for 125,000 pounds wheel loading.

- B. Maintenance hole covers shall conform with Standard Plan S-281-3, with "L.A.H.D." and "SD" lettering, except that covers shall be adequate for 125,000 pounds wheel loading.

PART 3 - EXECUTION

3.1 EXCAVATION AND BACKFILL

- A. Excavation and backfill for drainage structures shall be in conformance with TRENCHING AND BACKFILLING Section.
- B. Perform trench excavation to the depths shown on Drawings or as necessary for installation. Install pipes and other precast materials without dewatering (in the wet). Groundwater can be anticipated at plus 5 feet elevation in backland areas and at or near tidal elevation adjacent to the rock dikes. If Contractor chooses to dewater, it shall be at no additional cost to Department. Refer to DEWATERING Section for requirements.

3.2 INSTALLATION

- A. Construct and install underground structures in conformance with RS Section 306.
- B. Bedding Material and Drainage Structure Bases:
 - 1. Bedding shall conform to RS Subsection 306-6 and Standard Plan S-251-1. Case shall be as shown on Drawings.
 - 2. Compact bedding material to 95 percent relative density.
- C. Structures:
 - 1. Place and cure cast-in-place concrete structures in conformance with CONCRETE FOR EXTERIOR IMPROVEMENTS Section.
- D. Metal Castings and Grates:
 - 1. Set frames, grates, and covers to the finish elevations shown on Drawings.
- E. Install underground utility warning tape as specified in UNDERGROUND UTILITY WARNING TAPE Section.

3.3 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Department Testing Laboratory (Test Lab) shall perform bedding compaction tests 1 time at no expense to Contractor. Retests because of failed tests shall be performed by Department and at sole cost and expense of Contractor. Allow time for tests to be run and results returned.
2. Prior to start of Work, Contractor shall conduct a closed circuit television (CCTV) inspection of the existing storm drain or structure where connections are to be made to document the existing condition.
3. Contractor shall also perform a post-installation CCTV inspection of the storm drain after backfill of the trench and before completion of trench resurfacing, to determine if Work was completed in conformance with Contract Documents.
4. CCTV equipment shall include television cameras, a television monitor, cables, power sources, and other equipment. Focal distance shall be adjustable through a range from 6 inches to infinity. The remote-reading footage counter shall be accurate to less than 1 percent error over the length of the particular section pipeline being inspected. This distance shall be measured from the centerline of the upstream maintenance hole to the centerline of the downstream maintenance hole. The camera and television monitor shall produce a minimum 350 lines per inch resolution. The inspection shall be performed using a remote-focus stationary lens camera, a rotating-lens camera or a pan-and-tilt camera, which shall be mounted on a skid, floatable raft system, or transporter based on the conditions of the pipeline to be televised.
5. The pipeline shall be CCTV inspected during optimum low-flow level conditions. CCTV inspection camera shall be moved through the pipeline in a downstream direction at a uniform rate no greater than 30 feet per minute, stopping when necessary to ensure proper documentation of the storm drain's condition.
6. Documentation shall consist of a colored digital recording, log sheets, and written report detailing the post installation condition of the pipeline and lateral connections or openings. The report and digital recording shall note the time and date of CCTV inspection, street name or storm drain line identification, upstream and downstream maintenance hole stations,

direction of view, direction of flow, pipe size, pipe material, and footage station or counter.

7. Record video inspections on a digital storage device. Submit original digital recordings, log sheets, and reports to Engineer for review and upon acceptance of Work, shall become property of Department.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Crushed rock ballast for Low Impact Development (LID) trenches

1.2 RELATED SECTIONS

- A. Section 31 00 00 - Earthwork
- B. Section 31 05 20 - Filter Fabric

1.3 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Track rail ballast shall be measured by the cubic yard of ballast compacted in place and shall be paid under the Low Impact Development (LID) Trenches bid item of Bid Proposal Line Items.

1.4 REFERENCES

- A. ASTM C25 - Standard Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime.
- B. ASTM C29/C29M - Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate.
- C. ASTM C88/C88M - Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
- D. ASTM C117 - Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing.
- E. ASTM C127 - Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate.
- F. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- G. ASTM C142/C142M - Standard Test Method for Clay Lumps and Friable Particles in Aggregates.
- H. ASTM C535 - Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

- I. ASTM C702/C702M - Standard Practice for Reducing Samples of Aggregate to Testing Size.
- J. ASTM D75 - Standard Practice for Sampling Aggregates.
- K. ASTM D4791 - Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate.

1.5 SUBMITTALS

- A. Prior to initial shipment, submit the following:
 - 1. Production tests and ballast certifications for source verification.

PART 2 - PRODUCTS

2.1 BALLAST

- A. Ballast shall conform to American Railway Engineering and Maintenance of Way Association (AREMA) Volume 1, Chapter 1, Section 2.4.4, Gradations, Standard No. 4A ballast, unless otherwise noted. Specifications for Steel Rails. Conduct gradation tests in conformance with ASTM C136/C136M.

Percent Passing by Weight	
Size of Sieve Opening (inches)	Track Ballast (Percent)
2.5	100
2.0	90 to 100
1 1/2	60 to 90
1	10 to 35
3/4	0 to 10
1/2	-----
3/8	0 to 3
No. 4	-----

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. Samples shall be secured in conformance with ASTM D75. Test samples shall be reduced from field samples by the means of ASTM C702/C702M.

2. Durability Requirements:

- a. Deleterious substances present in prepared ballast are not to exceed the following amounts as determined by the specified current method of test. Determination of weight per cubic yard shall be in conformance with ASTM C29/C29M.

<u>Material</u>	<u>Percent by Weight</u>	<u>Method of Test</u>
Soft Pieces	5.0	AASHTO T189
Fines less than No. 200 sieve	1.0	ASTM C117
Clay lumps and Friable Particles	0.5	ASTM C142/C142M

- b. Percentage of wear, after testing in a Los Angeles abrasion testing machine - in conformance with ASTM C535, not to exceed 35 percent for granite, 25 percent for traprock or 30 percent for quartzite.
- c. The percentage of flat and elongated particles - not to exceed a weighted average of 5 percent by weight, as determined by United States Army Corps of Engineers Specification CRD-C 119 and by ASTM D4791.
- d. The weighted average loss - not to exceed 5 percent as determined in the sodium sulfate soundness test in conformance with ASTM C88/C88M.
- e. Samples shall be secured in conformance with ASTM D75. Test samples shall be reduced from field samples by means of ASTM C702/C702M .
- f. Sieve analysis shall be made in conformance with ASTM C136/C136M.
- g. The bulk specific gravity and percentage of absorption shall be determined in conformance with ASTM C127. The bulk specific gravity shall be greater than 2.60 and the absorption shall be less than 1 percent.
- h. The magnesium carbonate content shall be tested and defined in conformance with ASTM C25. No carbonates shall be allowed.

3. Source Production, Quality Inspection, and Acceptance Testing:
 - a. From each 4,000 tons of ballast or as noted below, a test sample of not less than 150 pounds is to be subjected to the following tests performed by an independent laboratory approved by Engineer:
 - 1) Deleterious substances
 - 2) Los Angeles abrasion: Every 20,000 tons
 - 3) The percentage of flat and elongated particles
 - 4) Sodium sulfate soundness: Every 20,000 tons
 - 5) Weight per cubic yard
 - 6) Sieve analysis
 - 7) Bulk specific gravity and percentage of absorption: Every 20,000 tons
 - 8) Magnesium Carbonate content: Every 20,000 tons
 - b. Provide certification that ballast delivered to Project Site is typical of ballast which passed acceptance and production tests.
 - c. Prior to initial shipment, ballast source shall be approved by Engineer.

3.2 INSPECTION AND ACCEPTANCE

- A. Provide certification that ballast delivered to Project Site is typical of ballast which passed acceptance and production tests.
- B. If material loaded or being loaded does not conform to this Section, Contractor shall stop further loading until the fault has been corrected. Defective material shall be promptly removed and replaced. Engineer shall reject ballast arriving at Project Site for unloading that does not conform to this Section at no additional cost to Department.
- C. Random samples of material being used for Project may be taken by Engineer at any time during Work. If material loaded or being loaded does not conform to this Section, Contractor shall stop further loading until the fault has been corrected. Engineer shall reject ballast arriving at Project Site for unloading that does not conform to this Section. Defective material shall be promptly removed and replaced at no additional cost to Department.

3.3 PLACEMENT

- A. Place ballast in lifts no more than 3 inches in thickness before compacting to 90 percent relative compaction. Each lift of ballast within the initial layer shall be uniformly spread and compacted with not less than 4 passes of either a handheld or machine mounted self-propelled, pneumatic-tired roller or vibratory compactor.

END OF SECTION

APPENDIX "A"

PROJECT LABOR AGREEMENT (PLA) AND POLA CONSTRUCTION CAREERS POLICY

CITY OF LOS ANGELES

Harbor Department



2017-2027



Project Labor Agreement (PLA)

WITH

LOS ANGELES/ORANGE COUNTIES
BUILDING AND CONSTRUCTION TRADES COUNCIL
Affiliated with the Building & Construction Trades Department (AFL/CIO)
Craft International Unions and any other craft labor Unions signatory to this
Agreement

PROJECT LABOR AGREEMENT
CITY OF LOS ANGELES HARBOR DEPARTMENT

TABLE OF CONTENTS

Introduction and Findings	2
I. Definitions	5
II. Scope of Agreement	10
III. Effect of Agreement.....	14
IV. Work Stoppages, Strikes, Sympathy Strikes and Lockouts.....	15
V. No Discrimination.....	22
VI. Union Security.....	22
VII. Referral.....	23
VIII. Wages and Benefits	32
IX. Employee Grievance Procedure	34
X. Department Policies And Procedures.....	34
XI. Compliance	35
XII. Joint Administrative Committee	36
XIII. Grievance Arbitration Procedure	37
XIV. Jurisdictional Disputes	40
XV. Management Rights	41
XVI. Safety, Protection of Person and Property.....	43
XVII. Savings Clause.....	44
XVIII. Steward	45
XIX. Term.....	46

Attachment "A" - Letter of Assent

Attachment "B" – Los Angeles/Orange Counties Building and Construction Trades Council Approved
Drug and Alcohol Testing Policy

Attachment "C" - Craft Request Form

Attachment "D" - Trade Union Contact Numbers

Attachment "E" – Five-Year Capital Improvement Program ("CIP") Project List

**PROJECT LABOR AGREEMENT
CITY OF LOS ANGELES**

HARBOR DEPARTMENT

INTRODUCTION AND FINDINGS

The purpose of this Project Labor Agreement ("Agreement") is to promote efficiency of construction operations during the construction of various projects within the Harbor Department's Capital Improvement Program (CIP) and provide for the orderly settlement of labor disputes and grievances without strikes or lockouts, thereby promoting the public interest in assuring timely and economical completion of these Projects.

WHEREAS, the Port of Los Angeles is among the world's premier ports and is a critical hub for global trade; and

WHEREAS, the Port of Los Angeles is the nation's busiest container port, and the Port's 7,500 acres, 43 miles of waterfront, 270 berths and 26 cargo terminals represent a critical segment of the U.S. trade infrastructure and the global supply chain; and

WHEREAS, in addition to containerized cargo, the Port's diverse maritime operations handle bulk products, scrap metal, steel, and cruise passengers, with regularly scheduled vessel calls increasing the need for more terminal acreage and more efficient operations, as well as transforming the Port into a model environmental-friendly gateway through the implementation of the San Pedro Bay Ports Clean Air Action Plan; and

WHEREAS, the Harbor Department is responsible for construction, renovation, maintenance and operation of the facilities and infrastructure of the Port of Los Angeles, including capital improvement projects throughout the Port; and

WHEREAS, the safe, timely and successful completion of these projects with a trained workforce is of utmost importance to the Harbor Department and the general public in the City; and

WHEREAS, the work to be done will require maximum cooperation from the many Parties who will be involved; and

WHEREAS, it is recognized that projects of a certain magnitude with multiple contractors and bargaining units on the job site at the same time over an extended period of time create the potential for work disruption without there being an overriding commitment to maintain continuity of work; and

WHEREAS, the interests of the Harbor Department, the general public, the City, the Unions, contractors, subcontractors, employers and workers would be best served if the construction work proceeded in an orderly manner free of disruption because of strikes, sympathy strikes, work stoppages, picketing, lockout, slowdowns or other interferences with work; and

WHEREAS, large numbers of workers of various skills will be required in the performance of the construction work, including those to be represented by the Unions affiliated with the Los Angeles/Orange Counties Building and Construction Trades Council and any other craft labor organization which are signatory to this Agreement, employed by contractors and subcontractors who are signatory to agreements with said labor organizations; and

WHEREAS, the Contractor/Subcontractor/Employer(s) (C/S/E) and the Unions desire to mutually establish and stabilize wages, hours and working conditions for the workers employed on these Projects by the C/S/Es, and further, to encourage close cooperation among the C/S/Es, and the Unions to the end that a satisfactory, continuous and harmonious relationship will exist among the Parties to this Agreement; and

WHEREAS, this Agreement is not intended to replace, interfere with, abrogate, diminish, or modify existing local or national collective bargaining agreements in effect during the duration of this Agreement, insofar as a legally binding agreement exists between the C/S/Es and the affected Unions, except to the extent that the provisions of this Agreement are inconsistent with said collective bargaining agreements, in which event, the provisions of this Agreement shall prevail; and further, it is understood that C/S/Es are bound and shall remain bound, for the duration of this Agreement by the terms of this Agreement and applicable local and national collective bargaining agreements for the craft work performed, established between the signatory Unions and C/S/Es, in effect and covering the area of these Projects; and

WHEREAS, this Agreement is not intended to have an adverse impact on the policy of the City to maximize business opportunities for minority, women and other business enterprises in City contracts; and

WHEREAS, increasing access to employment opportunities with prevailing wages is one way for the Harbor Department to directly combat poverty and stimulate economic reinvestment; and

WHEREAS, the Harbor Department has adopted a departmental Agreement which will provide construction employment and training opportunities in ways calculated to mitigate the harms caused by poverty, unemployment and underemployment; and

WHEREAS, this Agreement reflects a commitment by all parties to the diversity in the workforce hiring that reflect levels of minority, women and other worker utilization at levels which are representative of the relevant workforce of these groups in the Greater Los Angeles Area as determined by the U.S. Census Bureau; and

WHEREAS, the contracts for the construction of Projects will be awarded in accordance with the applicable provisions of the Harbor Department's Administrative Policies and Procedures; and

WHEREAS, the Parties signatory to this Agreement pledge to work towards a mutually satisfactory completion of Projects;

NOW, THEREFORE, IT IS AGREED BETWEEN AND AMONG THE PARTIES HERETO, AS FOLLOWS:

ARTICLE I

DEFINITIONS

1.1 "Agreement" means this Project Labor Agreement and its applicability to all Projects.

1.2 "Apprentice" means any worker who is indentured in a bona fide Labor/Management construction apprenticeship program, registered and approved by the State of California Department of Industrial Relations (DIR) Division of Apprenticeship Standards (DAS) or in the case of Projects with federal funding,

indentured in a bona fide Labor/Management construction apprenticeship program, approved by the US Department of Labor (DOL) and California DAS.

1.3 "Apprenticeship Program" means any Labor/Management construction apprenticeship program certified and approved by the California Division of Apprenticeship Standards (DAS) or in the case of Projects with federal funding, approved by the US DOL and California DAS.

1.4 "Awarding Authority" means the City of Los Angeles, acting by and through the Board of Harbor Commissioners, or any employee or officer of the Board that is authorized to award or enter into any contract on behalf of the Board.

1.5 "Board" means the Los Angeles Board of Harbor Commissioners.

1.6 "Bureau of Contract Administration" (BCA) means the designated bureau within the City's Department of Public Works which may provide support services to the Harbor Department in administering this Agreement.

1.7 "City" means the City of Los Angeles, a municipal corporation, and all City awarding authorities.

1.8 "Committee" means the Joint Administrative Committee as described in Article XII of this Agreement.

1.9 "Construction contract" means a City contract which has been awarded by the Board, and is necessary to complete the Harbor Department Project.

1.10 "Contractor/Subcontractor/Employer(s)" (C/S/E) means any individual firm, partnership, owner operator, or corporation, or combination thereof, including joint ventures, which is an independent business enterprise and has entered into a contract with the Harbor Department or any of its contractors or subcontractors/owner operators

of any tier, with respect to the construction of any part of the Project(s) under contract terms and conditions approved by the Board and which incorporate this Agreement.

1.11 “Core Worker” means a verifiable member of a C/S/E’s core workforce for the purpose of this Agreement if the worker’s name appears on the C/S/E’s active payroll for 60 of 100 working days immediately prior to the award of the construction contract and meets all standards required by applicable local, state or federal law or regulation.

1.12 “Covered Project(s)” or “Project” means a project or projects which have been included within the Ten-Year Capital Improvement Program (“CIP”) Project List and covered by this Agreement or so designated by the Board. The Board may identify additional projects that are appropriate for coverage by the Agreement for inclusion under the CIP and include such projects by Board Resolution. The Board shall request an annual review of the Harbor Department Capital Improvement Program to identify any new projects appropriate for inclusion with in the CIP.

1.13 “Department” means the Harbor Department of the City of Los Angeles.

1.14 “Employment Hiring Plan” (EHP) means a C/S/E’s detailed hiring plan as described in BCA’s Targeted Hiring Guidelines for Contractors and the Policy or other applicable Department policy.

1.15 “Engineer” means the Chief Harbor Engineer of the City of Los Angeles Harbor Department, Construction Division, or its authorized representative.

1.16 “FHWA Project” means a Harbor Department Project that is funded in whole or in part by the Federal Highway Administration (FHWA).

1.17 “Ten year (10) Capital Improvement Program (“CIP”) Project List” means the list of Harbor Department projects included as Attachment E hereto that will operate under

the Harbor Department PLA, as well as other projects that may be added in the sole discretion of the Department.

1.18 "Jobs Coordinator" means the Prime Contractor's designated person, agent or agency that will facilitate the local hire referral process with the C/S/E, Unions and other referral organization, as described in the Construction Careers Policy. The Jobs Coordinator must be able to demonstrate or document to the Department or its designee that it has the requisite qualification and/or experience to fulfill the duties and responsibilities as outlined in the Policy.

1.19 "LA/OCBTC" (Trades Council) means the Los Angeles/Orange Counties Building and Construction Trades Council.

1.20 "Letter of Assent" means the document that each C/S/E (of any tier) must sign and submit to the Engineer or designated administrator, which formally binds them to adherence to all the forms, requirements and conditions of this Agreement and Policy.

1.21 "Local Resident" means an individual whose primary residence is within the Tier 1 or 2 zip code areas.

1.22 "Long-Term Unemployment" as defined by the Bureau of Labor Statistics means being jobless for 21 weeks or more, or as defined.

1.23 "Plan" means the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry as referenced in Article XIV of this Agreement.

1.24 "Policy" means the Harbor Department Construction Careers Policy.

1.25 "Subscription Agreement" means the contract between a C/S/E and a Union's Labor/Management Trust Fund(s) that allows the C/S/E to make the appropriate fringe benefit contributions in accordance with the terms of the contract.

1.26 “Targeted Hiring Guidelines for Contractors” means the document provided by the Department to assist C/S/E’s in implementing the targeted hiring procedures.

1.27 “Tier 1” means the zip codes identified in Article 7.4 of the PLA, which fall within an approximate ten mile radius of the Port and in which the rate of unemployment is in excess of 105% of the County of Los Angeles’ unemployment rate at the time of application and/or are within the area of Port-related operations and activity and/or are within the area of Port-related operations and activity.

1.28 “Tier 2” means the zip codes within the City, identified in Article 7.5 of this Agreement, that includes at least 2 census tracts (or a portion thereof) in which the median annual household income is less than \$62,627 per and/or where the rate of unemployment is in excess of 100% of the County of Los Angeles’ unemployment rate at the time of application.

1.29 “Transitional Worker” means any individual whose primary place of residence is within a Tier 1 or Tier 2 zip code of the City of Los Angeles, and who prior to commencing work on a Project has been certified as satisfying at least one of the following criteria:

(1) having Veteran status; having a documented history of involvement with the criminal justice system; being homeless; or,

(2) is an individual facing two or more of the following barriers to employment: having a household income less than 50% of the Los Angeles County median annual household income, receiving public assistance, lacking a GED or high school diploma, being a custodial single parent, suffering from long term unemployment, being emancipated from the foster care system, or being an apprentice, in a program

described in Section 1.3 above, with less than 15% of the apprenticeship hours required to graduate to journey level.

(3) If the Jobs Coordinator or Employer is not able to identify anyone using criteria (1), criteria (2) may be used.

1.30 "Union(s)" or "Signatory Unions" means the Los Angeles/Orange Counties Building and Construction Trades Council affiliated with the Building & Construction Trades Department (AFL/CIO) Craft International Unions or any other craft labor organization signatory to this Agreement, acting in their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed this Agreement.

ARTICLE II

SCOPE OF AGREEMENT

2.1 Parties: The Agreement shall apply and is limited to all C/S/Es performing construction on a Harbor Department Project, the Board, and the Unions (signatory Unions or otherwise).

2.2 Project Description: The Agreement shall apply to all CIP construction contracts awarded by the Board. The Board has the absolute right to combine, consolidate or cancel contracts or portions of contracts identified as part of the Project. Should the Board remove any contract from the Project and thereafter authorize that construction work be commenced on the contract, the contract may, at the discretion of the Board, be performed under the terms of the Agreement.

2.3 Project Labor Disputes: The provisions of this Agreement, including the Schedule A Agreements, (which are the local collective bargaining agreements of the signatory

Unions having jurisdiction over the work on the Project, as such may be changed from time-to-time and which are incorporated herein by reference) shall apply to the work covered by this Agreement. It is understood that this is a self-contained, stand alone Agreement and that by virtue of having become bound to this Agreement, neither the Prime Contractor, Employer, nor the Subcontractor (of any tier) or owner-operator will be obligated to sign any other local, area, or national agreement, except as may be provided under Section 8.2, below. It is further agreed that, where there is conflict, the terms and conditions of this Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements (Schedule A Agreements) except for all work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and control systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article IV (Work Stoppages, Strikes, Sympathy Strikes and Lockouts), Article XIII (Grievance and Arbitration Procedure) and Article XIV (Jurisdictional Disputes) of this Agreement, which shall apply to such work. All disputes relating to the interpretation or application of this Agreement shall be subject to resolution by the grievance arbitration procedure set forth in Article XIII of this Agreement except for those disputes exempted from the grievance procedure pursuant to Article 13.1. Where a subject is covered by a provision in a Schedule A Agreement and not covered by this Agreement, the provision of the Schedule A Agreement shall prevail. Any dispute as to the applicable source between this Agreement and any

Schedule A Agreement for determining the wages, hours of working conditions of employees on a Project shall be resolved under the grievance procedures established in this Agreement.

2.4 Exclusions:

(1) This Agreement shall be limited to construction work on a Project which is approved by the Board, and is not intended to, and shall not apply to any construction work performed at any time prior to the effective date, or after the expiration or termination of the Agreement, or on other City projects.

(2) This Agreement is not intended to, and shall not, affect or govern the award of contracts by the Board, which are outside the approved scope of the Project.

(3) This Agreement is not intended to, and shall not, affect the operation or maintenance of any facilities whether related or not to Projects.

(4) This Agreement shall not apply to a C/S/E's executives, managerial employees, engineering employees, supervisors (except those covered by Schedule A collective bargaining agreements), office and clerical employees, or any other employee not performing construction craftwork.

(5) Notwithstanding the foregoing, it is understood and agreed that Building/Construction Inspector and Field Soils and Material Testers (inspectors) are a covered craft under this Agreement. This inclusion applies to the scope of work defined in the State of California Wage Determination for that Craft. This shall not cover quality assurance work or material testing performed by or on behalf of the Department. Every Inspector performing under the wage classification of Building/Construction Inspector and Field Soils and Material Tester under a professional services agreement or a

construction contract shall be bound to all applicable requirements of this Agreement. Notwithstanding the provisions of this sub-section, the Department may engage consultants for limited periods of time in the event of an urgent need for specialized inspection services. The Department must provide prior notice to the Trades Council that despite good faith efforts, it is unable to obtain qualified inspector(s) under the provisions of this Agreement. Such engagement shall be only to meet immediate and limited needs until such qualified inspectors working under this Agreement are available.

(6) This Agreement shall not apply to material suppliers or delivery by any means of material, supplies, or equipment required to any point of delivery.

(7) This Agreement shall not apply to City employees.

(8) This Agreement shall not apply to the work of persons, firms and other entities that perform consulting, planning, scheduling, management or other supervisory services on the Project, provided such entities do not perform craft employee construction work on the Project with their own employees or to customer service work performed post completion by an entity other than the C/S/E that performed the original construction work.

(9) This Agreement shall not apply to Harbor Department construction contracts or Projects, if the federal funding source has established provisions or rules that forbid the inclusion of a Project Labor Agreement.

(10) FHWA Projects: All provisions of this Agreement shall apply to the project, in accord with the policies and conditions under which the FHWA funds are received from the U.S. Department of Transportation.

(11) Out-of-State Workers: Hours worked by residents of states other than California shall not be included in calculation of total hours of Project work for purposes of the percentage requirements set forth by the Agreement.

(12) Notwithstanding the foregoing, demolition and asbestos abatement shall constitute work covered by the Project Labor Agreement when such work is part of a Covered Project.

2.5 The Harbor Department and/or the C/S/Es, as appropriate, have the absolute right to award contracts on this project to any C/S/E, notwithstanding the existence or non-existence of any agreements between such C/S/E and any Union parties, provided only that such C/S/E is ready, willing and able to execute and comply with this Agreement should such C/S/E be awarded work covered by this Agreement.

ARTICLE III

EFFECT OF AGREEMENT

3.1 By executing the Agreement, the Unions and the Board agree to be bound by each and all of the provisions of the Agreement.

3.2 By accepting the award of a construction contract for a Project, whether as a C/S/E, the C/S/E agrees to be bound by each and every provision of the Agreement.

3.3 At the time that any C/S/E enters into a subcontract with any subcontractor of any tier providing for the performance on the construction contract, the C/S/E shall provide a copy of this Agreement to said subcontractor and shall require the subcontractor as a part of accepting the award of a construction subcontract to agree in writing in the form of a Letter of Assent to be bound by each and every provision of this Agreement prior to the commencement of work. See Attachment "A" for a sample

Letter of Assent.

(1) Approval of any C/S/E to perform work on the Project will be contingent upon the submittal of its Letter of Assent and its Employment Hiring Plan to the Chief Harbor Engineer and the Council.

3.4 This Agreement shall only be binding on the signatory C/S/Es hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any construction contract prior to the execution of this Agreement.

ARTICLE IV

WORK STOPPAGES, STRIKES, SYMPATHY STRIKES AND LOCKOUTS

4.1 The Unions, Board and C/S/Es agree:

(1) During the existence of this Agreement, there shall be no strike, sympathy strike, picketing, hand billing, slowdown, withholding of work, refusal to work, lockout, sick-out, walk-off, sit-down, stand-in, wobble, boycott, or other work stoppage, disruption, advising the public that a labor dispute exists, or other impairment of any kind for any reason by the Unions or employees employed on the Project, at the job site of the Project, or at any other facility of the City because of a dispute on this Project.

(2) As to employees employed on the Project, there shall be no lockout of any kind by any C/S/E(s) covered by the Agreement. The C/S/E(s) may lay off employees for lack of work or delay of work on the Project.

(3) The Unions agree that they shall not sanction in any way any picket line or other impairment of the work on the Project and will affirmatively take all measures necessary to effectively induce their respective members to cross any and all picket lines and report for work as scheduled and that responsible representatives of the

Unions who are employed on the Project will also do so themselves.

(4) The Unions agree that they shall not sanction, aid or abet, encourage or continue any work stoppage, strike, picketing or other disruptive activity at the Project site or C/S/E's business site that will economically and/or materially affect the completion of the Project. Any such costs that economically and/or materially harm the City shall be borne by the affected Union and made payable to the City.

(5) Notwithstanding any provision of this Agreement to the contrary, it shall not be a violation of this Agreement for any Union to withhold the services of its members (but not the right to picket) from a particular C/S/E who:

(i) fails to timely pay its weekly payroll; or

(ii) fails to make timely payments to the Union's Labor/Management Trust Funds in accordance with the provisions of the applicable Schedule A Agreements. Prior to withholding its members services for the C/S/E's failure to make timely payments to the Union's Labor/Management Trust Funds, the Union shall give at least ten (10) days (unless a lesser period of time is provided in the Union's Schedule A Agreement, but in no event less than forty-eight (48) hours) written notice of such failure to pay by registered or certified mail, return receipt requested, and by facsimile transmission to the involved contractor, the prime contractor, and the BCA. Union will meet within the ten (10) day period to attempt to resolve the dispute.

(iii) Upon the payment of the delinquent C/S/E of all monies due and then owing for wages and/or fringe benefit contributions, the Union shall direct its members to return to work and the C/S/E shall return all such members back to work.

4.2 Expiration of Local Agreements: If the Schedule A Agreement, or any local,

regional, and other applicable collective bargaining agreements expire during the term of the Project, the Union(s) agree that there shall be no work disruption of any kind as described in Section 4.1 above as a result of the expiration of any such agreement(s) having application on this Project and/or failure of the involved Parties to that agreement to reach a new contract. Terms and conditions of employment established and set for purposes of prevailing wage requirements under this Agreement at the time of bid shall remain established and set. Otherwise to the extent that such agreement does expire and the Parties to that agreement have failed to reach concurrence on a new contract, work will continue on the Project on one of the following two (2) options, both of which will be offered by the Unions involved to the Contractors affected:

(1) Each of the Unions with a contract expiring must offer to continue working on the Project under interim agreements that retain all the terms of the expiring contract, except that the Unions involved in such expiring contract may each propose wage rates and employer contribution rates to employee benefit funds under the prior contract different from what those wage rates and employer contributions rates were under the expiring contracts. The terms of the Union's interim agreement offered to Contractors will be no less favorable than the terms offered by the Union to any other employer or group of employers covering the same type of construction work in Los Angeles County.

(2) Each of the Unions with a contract expiring must offer to continue working on the Project under all the terms of the expiring contract, including the wage rates and employer contribution rates to the employee benefit funds, if the C/S/E affected by that expiring contract agrees to the following retroactive provisions: if a new Schedule A Agreement, local, regional or other applicable labor agreement for the industry having

application at the Project is ratified and signed during the term of this Agreement and if such new labor agreement provides for retroactive wage increases, then each affected C/S/E shall pay to its employees who performed work covered by this Agreement at the Project during the hiatus between the effective dates of such expired and new labor agreements, an amount equal to any such retroactive wage increase established by such new labor agreement, retroactive to whatever date is provided by the new labor agreement for such increase to go into effect, for each employee's hours worked on the Project during the retroactive period. All Parties agree that such affected C/S/Es shall be solely responsible for any retroactive payment to its employees and that neither the Project, nor the Board, nor the Board's designee, nor any other C/S/E has any obligation, responsibility or liability whatsoever for any such retroactive payments or collection of any such retroactive payments, from any such C/S/E.

(3) Some C/S/Es may elect to continue to work on the Project under the terms of the interim agreement option offered under paragraph (1) above and other C/S/Es may elect to continue to work on the Project under the retroactivity option offered under paragraph (2) above. To decide between the two options, C/S/Es will be given one week after the particular labor agreement has expired or one week after the Union has personally delivered to the Contractors in writing its specific offer of terms of the interim agreement pursuant to paragraph (1) above, whichever is the later date. If the C/S/E fails to timely select one of the above options, the C/S/E will be deemed to have selected paragraphs 4.2(2), above.

4.3 Expedited Arbitration will be utilized for all work stoppages and lockouts. In lieu of

or in addition to any other action at law or equity, any party may institute the following procedure when a breach or violation of this Article IV is alleged to have occurred:

(1) The party invoking this procedure shall notify the permanent arbitrator next in sequence from the following list:

1. Joseph Gentile
2. Michael Rappaport
3. Walter Daugherty
4. Paul Greenberg
5. Lou Zigman

The Parties agree these shall be the five permanent Arbitrators under this procedure. In the event that none of the five permanent Arbitrators are available for a hearing within 24 hours, the party invoking the procedure shall have the option of delaying until one of the five permanent Arbitrators is available or of asking the permanent Arbitrator that would normally hear the matter to designate an arbitrator to sit as a substitute Arbitrator for this dispute. If any of the permanent Arbitrators ask to be relieved from their status as a permanent Arbitrator, the Parties shall mutually select a new permanent Arbitrator from the following list of arbitrators:

1. John Kagel
2. Fred Horowitz
3. Wayne Estes

Selection shall be made by each party alternately striking from the foregoing list until one name remains who shall be the replacement permanent Arbitrator. Expenses incurred in arbitration shall be borne equally by the Union and the Contractor involved

and the decision of the Arbitrator shall be final and binding on both Parties, provided, however, that the Arbitrator shall not have the authority to alter or amend or add to or delete from the provisions of this Agreement in any way. Notice to the Arbitrator shall be by the most expeditious means available, including by telephone and by facsimile or e-mail to the party alleged to be in violation and to the Trades Council and involved local Union if a Union is alleged to be in violation.

(2) Upon receipt of said notice, the Arbitrator shall convene a hearing within twenty-four (24) hours if it is contended that the violation still exists.

(3) The Arbitrator shall notify the Parties by telephone and by facsimile or telegram of the place and time for the hearing. Notice shall be given to the individual Unions alleged to be involved; however, notice to the Trades Council shall be sufficient to constitute notice to the Unions for purposes of the arbitration being heard by the Arbitrator. Said hearing shall be completed in one session, which, with appropriate recesses at the Arbitrator's discretion, shall not exceed twenty-four (24) hours unless otherwise agreed upon by all Parties. A failure of any party to attend said hearings shall not delay the hearing of evidence or the issuance of any decision by the Arbitrator.

(4) The sole issue at the hearing shall be whether or not a violation of Section 4.1 or 4.2 of this Article IV has in fact occurred. The Arbitrator shall have no authority to consider any matter of justification, explanation or mitigation of such violation or to award damages, which issue is reserved for court proceedings, if any. The decision shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with or

enforcement of the decision. The Arbitrator may order cessation of the violation of this Article and other appropriate relief and such decision shall be served on all Parties by hand or registered mail upon issuance.

(5) Such decision may be enforced by any Court of competent jurisdiction upon the filing of this Agreement and all other relevant documents referred to above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain a temporary order enforcing the Arbitrator's decision as issued under Section 4.3 (4) of this Article, all Parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Arbitrator's decision shall be served on all Parties by hand or delivered by registered mail.

(6) Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by the Parties to whom they accrue.

(7) The fees and expenses incurred in arbitration shall be divided equally by the Parties to the arbitration, including Union(s) and the C/S/E(s) involved.

4.4 The procedures contained in Section 4.3 shall be applicable to alleged violations of Article IV to the extent any conduct described in Section 4.1 or 4.2 occurs on the Project. Disputes alleging violation of any other provision of this Agreement, including any underlying disputes alleged to be in justification, explanation, or mitigation of any violation of Section 4.1 or Article IV shall be resolved under the applicable grievance adjudication procedures for these other Articles.

ARTICLE V

NO DISCRIMINATION

5.1 The C/S/Es and Unions agree not to engage in any form of discrimination, including in the hiring and dispatching of workers, on the grounds of, or because of, race, religion, national origin, ancestry, sex, sexual orientation, age, physical handicap, domestic partner status, medical condition, political affiliation, membership in a labor organization, being a party to a collective bargaining agreement, color, or disability.

ARTICLE VI

UNION SECURITY

6.1 The C/S/Es recognize the Unions as comprising the respective sole bargaining representatives for all craft employees working within the scope of this Agreement.

6.2 No employee covered by this Agreement shall be required to join any Union as a condition of being employed, or remaining employed, for the completion of Project work; provided, however, that any employee who is a member of the referring Union at the time of referral shall maintain that membership in good standing while employed under this Agreement. All employees shall, however, be required to comply with the Union security provisions for the period during which they are performing on-site Project work to the extent, as permitted by law, of rendering payment of the applicable monthly and working dues.

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ARTICLE VII

REFERRAL

7.1 The Union(s) shall be the primary source of all craft labor employed on the Project(s) and will exert their best efforts to recruit and identify individuals, particularly residents residing in the Tier 1 or 2 zip code areas, as well as those referred by the Jobs Coordinator, for entrance into joining labor/management apprenticeship programs, and to assist individuals in qualifying and becoming eligible for such programs.

In the event that the C/S/E has his or her own Core Worker(s), and wishes to employ such workers to perform covered work, the C/S/E shall employ such workers in accord with the provisions of this Article VII. The following process shall govern the employment of workers at the Project:

(1) A worker shall be considered a member of a C/S/E's core workforce for the purposes of this Article if the worker meets the required definition of 1.11 above. The C/S/E shall identify Core Workers in their Employment Hiring Plan and shall provide payroll records evidencing the worker's qualification as a Core Worker upon request by the City. Prior to each C/S/E, which utilizes any core employees, performing any work on the Project, each such C/S/E shall provide a list of its core employees to the Department and the Trades Council. Failure to do so will prohibit the C/S/E from using any core employees. The number of Core Workers on this Project shall be governed by the following procedure: one Core Worker shall be selected and one worker from the hiring hall of the affected trade or craft and this process shall repeat until such C/S/E's requirements are met or until such C/S/E has hired five (5) such Core Workers for that craft, whichever occurs first. Thereafter, all additional employees in the affected trade

or craft shall first be requisitioned from the hiring hall in accordance with other provisions in Article VII.

(2) In the event of a reduction-in-force or layoff, such will take place in a manner to assure that the number of Core Workers in the affected craft does not exceed, at any time, the number of others working in that craft who were employed pursuant to other procedures available to the C/S/E under this Agreement. This provision applies only to employees who were not working under the terms of a Schedule A Agreement at the time of their transfer to the work covered under this Agreement and is not intended to limit transfer provisions of the Schedule A Agreements of any Union.

7.2 C/S/Es shall be bound by and utilize the registration facilities and referral systems established or authorized by the signatory Unions for all job site craft employee(s) before such employee(s) begin work, when such procedures are not in violation of Federal or State law or in conflict with provisions set forth in this Agreement.

7.3 In the event that referral facilities maintained by the Unions are unable to fill the requisition of a C/S/E for Local Residents and/or Transitional Workers within a forty-eight (48) hour period after such requisition is made by the C/S/E (Saturdays, Sundays, and holidays excepted), the C/S/E shall be free to obtain Local Residents and/or Transitional Workers from any source. However, for all other requisitions by a C/S/E for non-Local Residents or non-Transitional Workers, only after a forty-eight (48) hour period (Saturdays, Sundays and holidays excepted) after such requisition is made by the C/S/E shall the C/S/E be free to obtain work persons from any source if the Unions are unable to fill the requisition. However, the C/S/E is still responsible for complying

with conditions and requirements of the Targeted Hiring Guidelines for Contractors and the Policy.

(1) The C/S/E's must document, from the applicable Tiers, all efforts made to comply with the targeted hiring process to locate and hire Local Residents and/or Transitional Workers. The C/S/E may employ Local Residents and/or Transitional Workers referred by the Jobs Coordinator. However, in the event the Jobs Coordinator is unable to fill the requisition of a C/S/E for Local Residents and/or Transitional Workers, the C/S/E may utilize any organization, such as those listed in the Targeted Hiring Guidelines for Contractors, to assist them in satisfying the requirements of the Targeted Hiring Guidelines for Contractors and the Policy.

(2) The C/S/E shall inform the Unions, Job Coordinator and the BCA of the name, address, worker craft classification and social security number of any worker hired from other sources upon their employment on the Project(s).

(3) No Local Resident and/or Transitional Worker, having been pre-screened and/or pre-qualified by the Jobs Coordinator, and employed by the C/S/E to work on the Project, shall be required to participate in any Joint Labor/Management "boot camp" or pre-apprentice program that will unnecessarily delay the Local Resident and/or Transitional Worker's start of work or cause said worker's termination due to having to participate in such "boot camps" or pre-apprentice programs.

(4) Any work person hired under this Section 7.3, as well as all other workers hired under this Article VII, shall be obligated to register with the appropriate Union hiring hall within five (5) working days prior to their first day of employment on the project and comply with the Union Security provisions of this Agreement.

7.4 The Unions will exert their best efforts to refer/recruit sufficient numbers of skilled craft Local Residents and Transitional Workers to fulfill the requirements of the C/S/E(s). In recognition of the fact that the communities within the boundaries of the City and the Port's impact zone will be impacted by the construction of the Project, the Parties agree to support the development and graduation of transitional construction apprentices and workers from residents within Tiers 1 or 2 zip code areas. Towards that end, the Unions agree to encourage and provide referrals and utilization of qualified workers residing preferably within the Tier 1 zip code areas identified in the following:

Tier 1 Zip Codes

90001	90222	90501	90732	90804
90002	90242	90502	90744	90805
90003	90247	90503	90745	90806
90044	90249	90505	90746	90807
90059	90255	90710	90748	90808
90061	90262	90717	90755	90810
90220	90280	90723	90802	90813
90221	90303	90731	90803	90815

7.5 When the Unions cannot provide the C/S/Es, having documented their efforts in the attainment of Local Residents and/or Transitional Workers within the Tier 1 zip code areas as listed in Article 7.4 above, the Unions will exert their best efforts to recruit and identify Local Residents and/or Transitional Workers within Tier 2 zip code areas identified in the following and Transitional Workers in the remaining zip code areas of the City:

Tier 2 Zip Codes

90004	90023	90045	91042	91364
90005	90024	90046	91302	91367
90006	90026	90007	91303	91401
90007	90027	90048	91304	91402

90008	90028	90049	91306	91403
90010	90029	90057	91324	91405
	90031	90058	91325	91406
90012	90033	90062		91411
90013	90034	90063	91331	91423
90014	90035	90065	91335	91505
90015	90036	90066	91340	91601
90016	90037	90068	91342	91602
90017	90038	90071	91343	91604
		90073	91344	91605
90019		90089	91345	91606
90020	90042		91352	91607
90021	90043	91040	91356	

The Unions will exert their best efforts to recruit and identify Local Residents and/or Transitional Workers of the City and assist individuals in qualifying and becoming eligible for such apprenticeship programs.

7.6 The Prime Contractor is responsible for ensuring compliance with the targeted hiring process for the Project(s) to achieve the following anticipated levels of participation:

(1) The following percentages shall be the targeted hiring for the Project:

(a) At least 30% of total work hours shall be performed by Local Residents residing within Tier 1 described in Article 7.4. If the 30% local hire is not attained utilizing the Tier 1, the outreach shall expand to the Tier 2 as described in Article 7.5 of this Agreement.

(b) At least 10% of total work hours shall be performed by Transitional Workers residing within Tier 1 or Tier 2 zip code areas described in Articles 7.4 and 7.5 respectively and the remaining zip code areas within the City of Los Angeles. These hours shall be applied towards the 30% Local Resident targeted hiring.

(c) At least 20% of total work hours on each project will be performed by apprentices, but the hours performed by apprentices in each individual craft shall not exceed the ratio to journeymen established by the applicable craft union's DAS approved apprenticeship standards. The Parties agree that residents in the Tier 1 or 2 zip code areas will perform 50% of all apprenticeship hours worked on the Project.

An apprentice who begins his/her period of apprenticeship as a resident in the Tier 1 or 2 zip code areas will retain that status for the entire apprenticeship, regardless of any changes in the apprentice's residence provided the Unions submit to BCA the necessary identifying information to enable the tracking of such apprentices, if requested by BCA.

(d) The C/S/Es shall document their compliance efforts through the utilization of the Craft Request Form, hiring hall procedures, the resources of organizations listed in BCA's Targeted Hiring Guidelines for Contractors, Jobs Coordinator or any other organization/agency that can assist the C/S/E in meeting this requirement. The provisions to address the non-attainment of the targeted hiring participation and/or apprenticeship hiring participation levels on a Project are addressed in the Policy.

(2) The employer retains authority in making individual hiring decisions.

(3) Hours worked by residents of states other than California shall not be included in calculation of total hours of Project work for purposes of the percentage requirements set forth above.

(4) The above referenced targeted hiring shall apply to FHWA projects in accord with the policies and conditions under which the FHWA funds are received from the U.S. Department of Transportation.

7.7 The Transitional Workers, as also defined also in Section 1.29, above, may be referred to the Unions from the Jobs Coordinator qualified to perform construction jobs coordination and related services. The Jobs Coordinator shall pre-screen and/or pre-qualify any applicant prior to referral to the Unions. Drug screening will be a prerequisite to employment. The following criteria will be used to identify the Transitional Worker:

- a. Being a Veteran;
- b. Having a documented history of involvement with the justice system;
- c. Being homeless; or

(2) Faces at least two of the following barriers to employment:

- a. Having household income below 50% of the Los Angeles County's median annual household income;
- b. Emancipated from the foster care system ;
Receiving public assistance;
Lacking a GED or high school diploma;
Being an apprentice with less than 15% of the apprenticeship hours
- c. required to graduate to journey level in a program described in Section 1.3;
- d. Being a custodial single parent
- e. Suffering from long-term unemployment

To qualify under this section, the Jobs Coordinator shall verify and certify that the

individual's primary place of residence is within the City and that such individual satisfies the criteria set forth above.

7.8 The C/S/Es and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The C/S/Es and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the Parties.

7.9 The Unions and C/S/Es agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on a Project and of apprenticeship and employment opportunities for a Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

7.10 C/S/Es agree to only use the Craft Request Form (See Attachment C) and the procedures written therein to request any and all workers from Unions with a concurrent transmittal of such request to the Jobs Coordinator, including workers qualified as Local Residents, Transitional Workers, and/or general dispatch.

(1) When Local Residents and/or Transitional Workers are requested by the C/S/Es, the Unions will refer such workers regardless of their place in the Unions' hiring halls' list and normal referral procedures.

(2) In the event that a C/S/E, having not achieved its targeted hiring participation levels, requests a Local Resident and/or Transitional Worker from the

Union hiring facility, and is referred a worker who is not a Local Resident and/or Transitional Worker, the C/S/E is under no obligation to hire the referred worker for the Project work and shall notify the Union hiring facility and the Jobs Coordinator.

(3) The C/S/Es, Unions and Jobs Coordinator agree to maintain copies of all Craft Request Forms used on the Project submitted or received including transmission verification reports that are date/time imprinted. All Craft Request Forms and transmission verification reports shall be available for inspection and copies provided, upon request by the Harbor Department representative as described in Article XI of this Agreement.

7.11 Apprentices

(a) The Parties recognize the need to maintain continuing support of the programs designed to develop adequate numbers of competent workers in the construction industry, the obligation to capitalize on the availability of the Harbor Department's and the City's local work force, and the opportunities to provide continuing work for Projects covered by this Agreement. To these ends, the Parties shall facilitate, encourage, and assist Local Residents and/or Transitional Workers within Tier 1 or 2 zip code areas to commence and progress in Labor/Management apprenticeship and/or training programs in the construction industry leading to participation in such apprenticeship programs. The Harbor Department, Jobs Coordinator, Work Source Centers, other non-profit entities, organizations and the Unions, will work cooperatively to identify, or establish and maintain effective programs and procedures for persons interested in entering the construction industry and which will help prepare them for the

formal joint Labor/Management apprenticeship programs maintained by the signatory unions.

(b) Unions shall track retention of Apprentices hired through this program for so long as those Apprentices participate in a joint labor/management apprenticeship program. The signatory unions shall collect and compile information on the retention of these Apprentices and submit this information to the Department and the BCA on a quarterly basis. The City will use the information provided to generate a quarterly report on the retention of Apprentices on the Department's PLA projects.

(c) All apprentices shall work under the direct supervision of a journeyman from the trade in which the apprentice is indentured. A journeyman shall be defined as set forth in the California Code of Regulations, Title 8 [apprenticeship] section 205, which defines a journeyman as a person who has either completed an accredited apprenticeship in his or her craft, or has completed the equivalent of an apprenticeship in length and content of work experience and all other requirements in the craft which has workers classified as journeyman in the apprenticeable occupation. Should a question arise as to a journeyman's qualification under this subsection, the C/S/E shall provide adequate proof evidencing the worker's qualification as a journeyman.

ARTICLE VIII

WAGES AND BENEFITS

8.1 Wages. All employees covered by this Agreement shall be classified in accordance with work performed and paid the hourly wage rates for those classifications in compliance with the applicable prevailing wage rate determination established pursuant to the California Labor Code by the Department of Industrial

Relations or as established by the US DOL if applicable. If a prevailing rate increases during the term of this Agreement under State law or Federal law, the Contractor shall pay the rate as of its effective date under the applicable law. C/S/Es directly signatory to one or more of the Schedule A Agreements are required to pay all wages set forth in those Schedule A Agreements without reference to the foregoing. If the prevailing wage laws are repealed during the term of this Agreement, the contractor shall pay the wage rates established under the Schedule A Agreements, except as otherwise provided in this Agreement.

8.2 Benefits.

(a) C/S/Es not signatory to the established Labor/Management Trust Fund agreements, as specified in the Schedule A Agreements for the craft workers in their employ, shall sign a "Subscription Agreement" with the appropriate Labor/Management Trust Fund covering the work performed under this agreement.

(b) C/S/Es shall pay contributions to the established employee benefit funds on behalf of all employees performing Project work under this Agreement in the amounts designated in the appropriate Schedule A Agreement and make all employee-authorized deductions in the amounts designated in the appropriate Schedule A Agreement; provided, however, that such contributions shall not exceed the contribution amounts set forth in the applicable prevailing wage determination. C/S/Es directly Signatory to one or more of the Schedule A Agreements are required to make all contributions set forth in those Schedule A Agreements without reference to the foregoing. Bona fide jointly-trusted benefit plans or authorized employee deductions programs established or negotiated under the applicable Schedule A Agreement or by

the Parties to this Agreement during the life of this Agreement may be added, provided that the contributions do not exceed the amounts set forth in the applicable prevailing wage determination.

(c) The C/S/E adopts and agrees to be bound by the written terms of the applicable, legally established, trust agreement(s) specifying the detailed basis on which payments are to be made into, and benefits paid out of, such trust funds for its employees. The C/S/E authorizes the Parties to such trust funds to appoint trustees and successors' trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the C/S/E.

ARTICLE IX

EMPLOYEE GRIEVANCE PROCEDURE

9.1 Should a grievance arise regarding the imposition of discipline of an employee, or the dismissal of an employee, working on Project work, all such grievance(s) shall be processed, exclusively, under the grievance procedure contained in the applicable Schedule A Agreement for the craft Union representing such employee(s) and not under the provisions of the Grievance Arbitration provisions of Article XIII. C/S/Es shall not discipline or dismiss its employees except for good cause.

ARTICLE X

DEPARTMENT POLICIES AND PROCEDURES

10.1 All construction contracts identified by the Harbor Department as part of the Project shall include the following provisions. Such provisions include, but are not limited to:

(1) All persons who perform labor in the execution of a construction contract shall be paid the prevailing rate of wages applicable to the classification as provided in Article III, Section 377 of the Los Angeles City Charter.

(2) All C/S/Es shall provide information concerning their experience, financial qualifications, including proof of a current State Contractor's License, Business Tax Registration Certificate, and ability to perform said contract or subcontract.

10.2 In addition to the above requirements, the C/S/Es and Unions understand and agree that all construction contracts shall be awarded in accordance with other applicable provisions of the Los Angeles City Charter ("Charter") (effective July 1, 2000), and the Los Angeles Administrative Code ("Administrative Code") (and any future amendments applicable thereto), including but not limited to:

(1) Los Angeles City Charter Article III, Section 371 (award of construction contracts to the lowest responsible bidder);

(2) Harbor Department policies providing Small Business Enterprises ("SBE"), Very Small Businesses ("VSBE"), and Minority-Owned, Women-Owned and all Other Business Enterprises ("MBE"/"WBE"/"OBE") an equal opportunity to participate in the performance of all City contracts in all areas where such contracts afford such participation opportunities.

ARTICLE XI

COMPLIANCE

11.1 It shall be the responsibility of the C/S/Es and Unions to investigate and monitor compliance with the provisions of the Agreement contained in Article VIII (Wages and Benefits). The Board shall appoint the BCA or its designee to investigate and monitor

compliance with Article VIII, the applicable provisions of the Charter and the Administrative Code, including, but not limited to, the prevailing wage requirements of the Charter, Local Residents, and Disadvantaged Worker hiring compliance and the Policy, and the affirmative action provisions of the Administrative Code, and to recommend to the Board or designee enforcement measures to ensure the C/S/E's compliance with the general conditions of a construction contract and the Policy. At the conclusion of any six-month period, the Parties to the Agreement shall report to the Board with a status update on the Agreement with regard to that Project, including a description of any obstacles or barriers faced. The provisions of this Article shall not substitute for or preclude any employee or Union from filing a grievance for any violation of Article VIII under the provisions of the Grievance Arbitration Procedure provisions of Article XIII.

11.2 Each C/S/E shall cooperate fully and promptly with any inquiry or investigation the City or its designated representatives deems necessary in order to monitor compliance with the provisions in this Agreement and the Policy.

ARTICLE XII

JOINT ADMINISTRATIVE COMMITTEE

12.1 The Parties to this Agreement may establish an eight (8) person Joint Administrative Committee (JAC). This JAC shall be comprised of three (3) representatives selected by the Department and one (1) representative of the prime contractor, and four (4) representatives of the signatory Unions to be appointed by the Trades Council to be chaired jointly by a representative of the Department and the Council.

Each representative shall designate an alternate who shall serve in his or her absence.

12.2 The JAC shall meet at the call of either of the joint chairs to discuss the implementation and administration of this Agreement, the progress of the Project, general labor management problems that may arise, and any other matters consistent with this Agreement. A unanimous decision of the JAC shall be final and binding upon all Parties. However, the JAC shall have no authority to make determinations upon or to decide grievances arising under this Agreement.

12.3 A quorum will consist of at least two (2) City and two (2) signatory union representatives. For voting purposes, only an equal number of City and signatory union representatives present may constitute a voting quorum.

ARTICLE XIII

GRIEVANCE ARBITRATION PROCEDURE

13.1 The Parties hereby agree that all grievances and disputes that may arise concerning the meaning, application or the interpretation of the terms of this Agreement, other than disputes arising from conduct described in Article IV (Work Stoppages, Strikes, Sympathy Strikes and Lockouts), Article IX (Employee Grievance Procedure) and Article XIV (Jurisdictional Disputes), shall be settled in accordance with the following procedures set out herein. Grieving parties are encouraged to meet as soon as possible and try to resolve the dispute. However, if a resolution cannot be reached, the following procedure shall be used.

13.2 Grievances and disputes shall be settled according to the following procedures:

Step 1: The business representative of the local Union involved shall first attempt to settle the matter by oral discussion with the particular C/S/E's representative no later than five (5) working days after the Union submitting the grievance first became aware of, or by the use of reasonable diligence should have been aware of, the occurrence first giving rise to the dispute or grievance. If the matter is not resolved with the C/S/E's representative within five (5) working days after the oral discussion with said C/S/E's representative, the dispute or grievance shall be reduced to writing by the grieving Union.

Step 2: In the event that the representatives (C/S/E and Union) are unable to resolve the grievance after its referral to Step 1, either involved party may submit the grievance, within five (5) business days of the Step 1 meeting of the parties to the grievance, to the Joint Administrative Committee (JAC), which shall meet within five (5) business days after such referral (or such longer time as is mutually agreed upon by all representatives of the JAC), to confer in an attempt to resolve the grievance. If the grievance is not resolved by the parties to the grievance within five (5) business days after its referral (or such longer time as is mutually agreed on by all representatives of the JAC) to the JAC, it may be referred within five (5) business days by either party to Step 3 by written notice of the submittal of the grievance to arbitration in accordance with the provisions set forth below.

Step 3: After notice by any party of intent to submit a grievance to arbitration, the Parties shall have five (5) working days to attempt, by mutual agreement, to

select as the Arbitrator to hear the dispute, one of the Arbitrators listed under the Expedited Arbitration provisions of Article 4.3 of this Agreement. If the Parties are unable to reach such agreement, the first arbitrator from the list, on a rotational basis, shall be the arbitrator to hear the dispute. The decision of the Arbitrator shall not have the authority to alter, amend, add to or delete from the provisions of this Agreement in any way. A failure of any party to attend said hearing shall not delay the hearing of evidence or the issuance of any decision by the Arbitrator. Should any party seek confirmation of the award made by the Arbitrator, the prevailing party shall be entitled to receive its reasonable attorney fees and costs.

13.3 The time limits specified in any step of the Grievance Arbitration Procedure set forth in Section 13.2 may be extended by mutual agreement of the Parties. However, failure to process a grievance, or failure to respond in writing within the time limits provided above, without a request for an extension of time, shall be deemed a waiver of such grievance without prejudice, or without precedent to the processing and/or resolution of like or similar grievances.

13.4 Grievances which are settled directly by the Parties to such grievance shall not be precedent setting.

13.5 The Harbor Department or its designated representative shall be given advance notification of all proceedings of all actions at Steps 2 and 3 and may observe such proceedings upon request.

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ARTICLE XIV

JURISDICTIONAL DISPUTES

14.1 The assignment of work will be solely the responsibility of the C/S/E performing the work involved; and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor plan.

14.2 All jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the C/S/Es and Unions. A decision shall not award back pay or any other damages for a misassignment of work, nor may any party bring an independent action for back pay or any other damages based upon a decision.

(1) If a dispute arising under this Article involves the Southwest Regional Council of Carpenters or any of its subordinate bodies, an Arbitrator shall be chosen by the procedures specified in Article V, Section 5 of the Plan from a list composed of John Kagel, Thomas Angelo, Robert Hirsch and Thomas Pagan. The Arbitrator's hearing on the dispute shall be held at the offices of the Council within fourteen (14) days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan.

14.3 No Work Disruption Over Jurisdiction. All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, disruption, or slow down of any nature and the C/S/E's assignments shall be adhered to until the dispute is resolved.

Individuals violating this section shall be subject to immediate discharge.

14.4 Pre-Job Conference. A pre-job conference shall be held with all parties prior to the start of work by the prime contractor for the Project covered by this Agreement. The purpose of the conference will be to, among other things, determine craft manpower needs, schedule of work for the contract and Project work rules/owner rules. The subcontractors/owner operators of any tier will be advised in advance of all such conferences and shall participate. The Trades Council and the BCA's Office of Contract Compliance shall be advised in advance of all such conferences and may participate if they wish. All work assignments shall be disclosed by the C/S/E at a pre-job conference. Any formal jurisdictional dispute raised under Article XIV must be raised at the pre-job conference upon disclosure of the work assignments. If the C/S/E intends to change the work assignment after the pre-job conference or to make an assignment of work not previously known, the C/S/E must notify the appropriate affected craft union(s) prior to the commencement of work. The C/S/E performing all project work that was not previously assigned at the pre-job conference will conduct a separate pre-job conference for such newly assigned work prior to commencing such work.

ARTICLE XV

MANAGEMENT RIGHTS

15.1 The C/S/Es shall retain full and exclusive authority for the management of their operations including, but is not limited to, the right to direct their working force and to establish coordinated working hours and starting times, which shall not be in conflict with the Schedule A Agreements of the Unions.

15.2 There shall be no limit on production by workers or restrictions on the full use of tools or equipment. Craftsmen using tools shall perform any of the work of the trades and shall work under the direction of the craft foremen. There shall be no restrictions on efficient use of manpower other than as may be required by safety regulations. The C/S/Es may utilize the most efficient methods or techniques of construction, tools or other labor-saving devices to accomplish the work. Restrictive practices not a part of the terms and conditions of this Agreement will not be recognized.

15.3 The C/S/Es shall be the sole judge of the number and classifications of employees required to perform work subject to this Agreement and shall have the absolute right to hire, promote, suspend, discharge or lay off employees at their discretion and to reject any applicant for employment, subject to the provisions of the respective craft collective bargaining agreement between the particular C/S/E and Union and pursuant to this Agreement.

15.4 Nothing in this Agreement shall be construed to limit the right of any of the C/S/Es' to select the lowest bidder they deem qualified for the award of contracts or subcontracts or material, supplies, or equipment purchase orders on the Project. The right of ultimate selection remains solely with the C/S/E in accordance with the construction contract.

15.5 It is recognized that certain materials, equipment and systems of a highly technical and specialized nature will have to be installed at the Project. The nature of the materials or the nature of the equipment and systems, together with requirements of manufacturer's warranty, dictate that it will be pre-fabricated, pre-piped, pre-wired and/or installed under the supervision and direction of the Harbor Department, City

and/or manufacturer's personnel. The Unions agree that such materials, equipment and systems shall be installed without the occurrence of any conduct described in Section 4.1 or 4.2.

ARTICLE XVI

SAFETY, PROTECTION OF PERSON AND PROPERTY

16.1 It shall be the responsibility of each C/S/E to ensure safe working conditions and employee compliance with any safety rules contained herein or established by the Harbor Department, City, the state and the C/S/E. It is understood that the employees have an individual obligation to use diligent care to perform their work in safe manner and to protect themselves and the property of the C/S/E and the Harbor Department.

16.2 Employees shall be bound by the safety, security and visitor rules established by the C/S/E and the Harbor Department. These rules will be published and posted in conspicuous places throughout the work site. An employee's failure to satisfy his/her obligations under this Section will subject him/her to discipline, including discharge.

16.3 The Parties acknowledge that the Harbor Department and the C/S/E have a policy, which prohibits the use, sale, transfer, purchase and/or possession of a controlled substance, alcohol and/or firearms while on the Harbor Department's premises. Additionally, the C/S/E has a "drug free" work place policy, which prohibits those working on the Harbor Department's premises from having a level of alcohol in their system, which could indicate impairment, and/or any level of controlled substances (i.e., illegal drugs) in their system.

16.4 To that end, the Parties agree to adopt the Los Angeles/Orange Counties Building and Construction Trades Council Approved Drug and Alcohol Testing Policy, a

copy of which is attached hereto as Attachment "B" which shall be the policy and procedure utilized under this Agreement.

ARTICLE XVII

SAVINGS CLAUSE

17.1 The Parties agree that in the event any article, provision, clause, sentence or work of the Agreement is determined to be illegal or void as being in contravention of any applicable law, by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect. The Parties further agree that if any article, provision, clause, sentence or word of the Agreement is determined to be illegal or void, by a court of competent jurisdiction, the Parties shall substitute, by mutual agreement, in its place and stead, an article, provision, sentence or word which will meet the objections to its validity and which will be in accordance with the intent and purpose of the article, provision, clause, sentence or word in question.

17.2 The Parties also agree that in the event that a decision of a court of competent jurisdiction materially alters the terms of the Agreement such that the intent of the Parties is defeated, then the entire Agreement shall be null and void.

17.3 If a court of competent jurisdiction determines that all or part of the Agreement is invalid and/or enjoins the City or the Harbor Department from complying with all or part of its provisions and the Board accordingly determines that the Agreement will not be required as part of an award to a C/S/E, the Unions will no longer be bound by the provisions of Article IV to the extent that such C/S/E is no longer bound. The Unions and their members shall remain bound to Article IV with respect to all other C/S/Es who remain bound to this Agreement, and no action taken by the Unions or their members

shall disrupt the work of such C/S/Es.

17.4 The provisions of this Agreement shall not be applicable where prohibited by Presidential Executive Order, Federal or State law, or where the application would be inconsistent with terms and conditions of a grant or a contract with the agency of the United States, State of California, or the instruction of an authorized representative of any of these agencies with respect to any grant or contract.

ARTICLE XVIII

STEWARD

18.1 Each Union shall have the right to designate a working craft employee as steward for each C/S/E employing such craft on the Project. Such designated steward shall be a qualified workman assigned to a crew and shall perform the work of the craft. The steward shall not perform supervisory duties. Under no circumstances shall there be nonworking stewards. Stewards shall be permitted a reasonable amount of time during working hours to perform applicable Union duties related to the work being performed by the craft employees of his/her C/S/E and not to the work being performed by other C/S/Es or their employees.

18.2 Authorized representatives of the Union(s) shall have access to the Covered Project, provided that such representatives fully comply with posted visitor, security, and safety rules and the environmental compliance requirements of the Covered Project, provided that they do not unnecessarily interfere with the employees or cause them to neglect their work. The Contractor recognizes the right of access set forth in this Section and such access will not be unreasonably withheld from an authorized representative of the Union.

ARTICLE XIX

TERM

19.1 This Agreement shall commence upon execution by all Parties (the City of Los Angeles Harbor Department and the Los Angeles/Orange Counties Building and Construction Trades Council and the Craft Unions signatory to this Agreement) and shall continue in full force and effect from the date of execution by all Parties for a period of ten (10) years. During the term of this Agreement, upon request by either Party or by mutual consent, the Parties will meet to discuss the application of and their experience with this Agreement. As a result of any such meeting, the Parties may, but shall not be obligated to, mutually agree to amendments or modification of this Agreement.

19.2 The Agreement shall continue in full force and effect for each covered Project until project acceptance by the Board. Either party desiring to renew, extend or to negotiate changes to this Agreement upon expiration, shall make such intention known to the other party by written notice thereof not less than six (6) months prior to the expiration of this Agreement.

19.3 Any covered Project awarded during the term of this Agreement shall continue to be covered hereunder, until completion of the Project, notwithstanding the expiration date of this Agreement.

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IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day and year written below.

THE UNION OFFICIALS signing this Agreement warrant and represent that they are authorized to collectively bargain on behalf of the organizations whom they represent and the members of such organizations.

THE CITY OF LOS ANGELES HARBOR DEPARTMENT

By: Mark Blewett
Eugene D. Seroka
Executive Director

Date: 12-11-17

By: Amber Klesges
Amber Klesges
Commission Secretary

Date: 12-11-17

LOS ANGELES/ORANGE COUNTY BUILDING AND CONSTRUCTION TRADES COUNCIL

By: Ron Miller
Ron Miller
Executive Secretary
Los Angeles/Orange County Building
And Construction Trades Council

Date: 5-17-17

APPROVED AS TO FORM:

Michael N. Feuer, City Attorney

By: Hugo S. Rossitter
Hugo S. Rossitter
Deputy City Attorney

Date: 5/17/2017

Union Signatory Page

Asbestos Heat & Frost Insulators (Local 5)
Boilermakers (Local 92)
Bricklayers & Allied Craftworkers (Local 4)
Cement Masons (Local 500)
District Council of Laborers
Electricians (Local 11)
Elevator Constructors (Local 18)
Gunitite Workers (Local 345)
Iron Workers (Reinforced – Local 416)
Iron Workers (Structural – Local 433)
Laborers (Local 1309)
Laborers (Local 300) (Remediation)
Operating Engineers (Local 12)
Operating Engineers (Local 12)
Operating Engineers (Local 12)
Painters & Allied Trades DC 36
Pipe Trades (Local 250)
Pipe Trades (Local 345)
Pipe Trades (Plumbers Local 78)
Pipe Trades (Sprinkler Fitters Local 709)
Plasterers (Local 200)
Plaster Tenders (Local 1414)
Roofers & Waterproofers (Local 36)
Sheet Metal Workers (Local 105)
Teamsters (Local 986)
Southwest Regional Council of Carpenters

Keith Acker
 Mark Thoe (B)
 Jeff Fox
 David Gray
 Aaron
 Mark D
 Ed Lear
 Mitchell Acker
 Roger Spang
 Ronald G. Fouchi
 Hans Hauer
 Carl L. Menendez
 Mark Badlett
 Glenn Santa Cruz GT
 Daryl H. Ma
 Rick
 Dan Rosta
 Gary
 John Vane
 Gary Green

ATTACHMENT "A"
COMPANY LETTERHEAD

Date: _____

Mr. Shaun Shahrestani
Chief Harbor Engineer
Construction Division
Port of Los Angeles
425 S. Palos Verdes Street
San Pedro, CA. 90731

SUBJECT: LETTER OF ASSENT

Dear Mr. Shahrestani:

This is to certify that the undersigned Contractor/Employer has examined a copy of the subject Project Labor Agreement entered into by and between the City of Los Angeles Harbor Department and Los Angeles/Orange Counties Building and Construction Trades Council and the signatory Unions dated _____. The undersigned Contractor/Employer hereby agrees to comply with all of the terms and conditions of the aforementioned Project Labor Agreement as such labor Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms.

It is understood that the signing of the letter of Assent shall be as binding on the undersigned Contractor/Employer as though the Contractor/Employer had signed the above referred Agreement and shall require all its subcontractors, of whatever tier, to become similarly bound for all work within the scope of this Agreement.

This Letter of Assent shall become effective and binding upon the undersigned Contractor/Employer the _____ day of _____, _____, and shall remain in full force and effect until the completion of the above stated project.

Sincerely,

(Name of Construction Company)

By: _____

(Name and Title of Authorized Executive)

Contractor's State License No.: _____

cc:

ATTACHMENT B

LOS ANGELES/ORANGE COUNTIES BUILDING AND CONSTRUCTION TRADES COUNCIL APPROVED DRUG AND ALCOHOL TESTING POLICY

The Parties recognize the problems which drug and alcohol abuse have created in the construction industry and the need to develop drug and alcohol abuse prevention programs. Accordingly, the Parties agree that in order to enhance the safety of the work place and to maintain a drug and alcohol free work environment, individual Employers may require applicants or employees to undergo drug and alcohol testing.

1. It is understood that the use, possession, transfer or sale of illegal drugs, narcotics, or other unlawful substances, as well as being under the influence of alcohol and the possession or consuming alcohol is absolutely prohibited while employees are on the Employer's job premises or while working on any jobsite in connection with work performed under the Project Labor Agreement ("PLA").

2. No Employer may implement a drug testing program which does not conform in all respects to the provisions of this Policy.

3. No Employer may implement drug testing at any jobsite unless written notice is given to the Union setting forth the location of the jobsite, a description of the project under construction, and the name and telephone number of the Project Supervisor. Said notice shall be addressed to the office of each Union signing the PLA. Said notice shall be delivered in person or by registered mail before the implementation of drug testing. Failure to give such notice shall make any drug testing engaged in by

the Employer a violation of the PLA, and the Employer may not implement any form of drug testing at such jobsite for the following six months.

4. An employer who elects to implement drug testing pursuant to this Agreement shall require all employees on the Project to be tested. With respect to individuals who become employed on the Project subsequent to the proper implementation of this drug testing program, such test shall be administered upon the commencement of employment on the project, whether by referral from a Union Dispatch Office, transfer from another project, or another method. Individuals who were employed on the project prior to the proper implementation of this drug testing program may only be subjected to testing for the reasons set forth in Paragraph 5(f) (1) through 5(f) (3) of this Policy. Refusal to undergo such testing shall be considered sufficient grounds to deny employment on the project.

5. The following procedure shall apply to all drug testing:

a. The Employer may request urine samples only. The applicant or employee shall not be observed when the urine specimen is given. An applicant or employee, at his or her sole option, shall, upon request, receive a blood test in lieu of a urine test. No employee of the Employer shall draw blood from a bargaining unit employee, touch or handle urine specimens, or in any way become involved in the chain of custody of urine or blood specimens. A Union Business Representative, subject to the approval of the individual applicant or employee, shall be permitted to accompany the applicant or employee to the collection facility to observe the collection, bottling, and sealing of the specimen.

b. The testing shall be done by a laboratory approved by the Substance Abuse & Mental Health Services Administration (SAMHSA), which is chosen by the Employer and the Union.

c. An initial test shall be performed using the Enzyme Multiplied Immunoassay Technique (EMZT). In the event a question or positive result arises from the initial test, a confirmation test must be utilized before action can be taken against the applicant or employee. The confirmation test will be by Gas Chromatography Mass Spectrometry (GC/MS). Cutoff levels for both the initial test and confirmation test will be those established by the SAMHSA. Should these SAMHSA levels be changed during the course of this agreement or new testing procedures are approved, then these new regulations will be deemed as part of this existing agreement. Confirmed positive samples will be retained by the testing laboratory in secured long-term frozen storage for a minimum of one year. Handling and transportation of each sample must be documented through strict chain of custody procedures.

d. In the event of a confirmed positive test result the applicant or employee may request, within forty-eight (48) hours, a sample of his/her specimen from the testing laboratory for purposes of a second test to be performed at a second laboratory, designated by the Union and approved by SAMHSA. The retest must be performed within ten (10) days of the request. Chain of custody for this sample shall be maintained by the Employer between the original testing laboratory and the Union's designated laboratory. Retesting shall be performed at the applicant's or employee's expense. In the event of conflicting test results the Employer may require a third test.

e. If, as a result of the above testing procedure, it is determined that an applicant or employee has tested positive, this shall be considered sufficient grounds to deny the applicant or employee his/her employment on the Project.

f. No individual who tests negative for drugs or alcohol pursuant to the above procedure and becomes employed on the Project shall again be subjected to drug testing with the following exceptions:

1. Employees who are involved in industrial accidents resulting in damage to plant, property or equipment or injury to him/herself or others may be tested pursuant to the procedures stated hereinabove.

2. The Employer may test employees following thirty (30) days advance written notice to the employee(s) to be tested and to the applicable Union. Notice to the applicable Union shall be as set forth in Paragraph 3 above and such testing shall be pursuant to the procedures stated hereinabove.

3. The Employer may test an employee where the Employer has reasonable cause to believe that the employee is impaired from performing his/her job. Reasonable cause shall be defined as exhibiting aberrant or unusual behavior, the type of which is a recognized and accepted symptom of impairment (i.e., slurred speech, unusual lack of muscular coordination, etc.). Such behavior must be actually observed by at least two persons, one of whom shall be a Supervisor who has been trained to recognize the symptoms of drug abuse or impairment and the other of whom shall be the job steward. If the job steward is unavailable or there is no job steward on the project the other person shall be a member of the applicable Union's bargaining unit. Testing shall be pursuant to the procedures stated hereinabove. Employees who

are tested pursuant to the exceptions set forth in this paragraph and who test positive will be removed from the Employer's payroll.

g. Applicants or employees who do not test positive shall be paid for all time lost while undergoing drug testing. Payment shall be at the applicable wage and benefit rates set forth in the applicable Union's Master Labor Agreement. Applicants who have been dispatched from the Union and who are not put to work pending the results of a test will be paid waiting time until such time as they are put to work. It is understood that an applicant must pass the test as a condition of employment. Applicants who are put to work pending the results of a test will be considered probationary employees.

6. The employers will be allowed to conduct periodic job site drug testing on the Project under the following conditions:

a. The entire jobsite must be tested, including any employee or subcontractor's employee who worked on that project three (3) working days before or after the date of the test;

b. Jobsite testing cannot commence sooner than thirty (30) days after start of the work on the Project;

c. Prior to start of periodic testing, a business representative will be allowed to conduct an educational period on company time to explain periodic jobsite testing program to affected employees;

d. Testing shall be conducted by a SAMHSA certified laboratory, pursuant to the provisions set forth in Paragraph 5 hereinabove.

e. Only two periodic tests may be performed in a twelve month period.

7. It is understood that the unsafe use of prescribed medication, or where the use of prescribed medication impairs the employee's ability to perform work, is a basis for the Employer to remove the employee from the jobsite.

8. Any grievance or dispute which may arise out of the application of this Agreement shall be subject to the grievance and arbitration procedures set forth in the PLA.

9. The establishment or operation of this Policy shall not curtail any right of any employee found in any law, rule or regulation. Should any part of this Agreement be found unlawful by a court of competent jurisdiction or a public agency having jurisdiction over the parties, the remaining portions of the Agreement shall be unaffected and the parties shall enter negotiations to replace the affected provision.

10. Present employees, if tested positive, shall have the prerogative for rehabilitation program at the employee's expense. When such program has been successfully completed the Employer shall not discriminate in any way against the employee. If work for which the employee is qualified exists he/she shall be reinstated.

11. The Employer agrees that results of urine and blood tests performed hereunder will be considered medical records held confidential to the extent permitted or required by law. Such records shall not be released to any persons or entities other than designated Employer representatives and the applicable Union. Such release to the applicable Union shall only be allowed upon the signing of a written release and the information contained therein shall not be used to discourage the employment of the individual applicant or employee on any subsequent occasion.

12. The Employer shall indemnify and hold the Union harmless against any and all claims, demands, suits, or liabilities that may arise out of the application of this Agreement and/or any program permitted hereunder.

13. Employees who seek voluntary assistance for substance abuse may not be disciplined for seeking such assistance. Requests from employees for such assistance shall remain confidential and shall not be revealed to other employees or management personnel without the employee's consent. Employees enrolled in substance abuse programs shall be subject to all Employer rules, regulations and job performance standards with the understanding that an employee enrolled in such a program is receiving treatment for an illness.

14. This Memorandum, of Understanding shall constitute the only Agreement in effect between the parties concerning drug and alcohol abuse, prevention and testing. Any modifications thereto must be accomplished pursuant to collective bargaining negotiations between the parties.

DRUG ABUSE PREVENTION AND DETECTION

APPENDIX A

CUTOFF LEVELS

DRUG	SCREENING METHOD	SCREENING LEVEL **	CONFIRMATION METHOD	CONFIRMATION LEVEL
Alcohol	EMIT	0.02%	CG/MS	0.02%
Amphetamines	EMIT	1000 ng/m*	CG/MS	500 ng/ml*
Barbiturates	EMIT	300 ng/ml	CG/MS	200 ng/ml
Benzodiazepines	EMIT	300 ng/ml	CG/MS	300 ng/ml
Cocaine	EMIT	300 ng/ml*	CG/MS	150 ng/ml*
Methadone	EMIT	300 ng/ml	CG/MS	100 ng/ml
Methaqualone	EMIT	300 ng/ml	CG/MS	300 ng/ml
Opiates	EMIT	2000 ng/ml*	CG/MS	2000 ng/ml*
PCP (Phencyclidine)	EMIT	25 ng/ml*	CG/MS	25 ng/ml*
THC (Marijuana)	EMIT	50 ng/ml*	CG/MS	15 ng/ml*
Propoxyphene	EMIT	300 ng/ml	CG/MS	100 ng/ml

* SAMHSA specified threshold

** A sample reported positive contains the Indicated drug at or above the cutoff level for that drug. A negative sample either contains no drug or contains a drug below the cutoff level.

EMIT - Enzyme Immunoassay

CC/MS - Gas Chromatography/Mass Spectrometry

SIDE LETTER OF AGREEMENT
TESTING POLICY FOR DRUG ABUSE

It is hereby agreed between the parties hereto that an Employer who has otherwise properly implemented drug testing, as set forth in the Testing Policy for Drug Abuse, shall have the right to offer an applicant or employee a "quick" drug screening test. This "quick" screen test shall consist either of the "ICUP" urine screen or similar test or an oral screen test. The applicant or employee shall have the absolute right to select either of the two "quick" screen tests, or to reject both and request a full drug test.

An applicant or employee who selects one of the quick screen tests, and who passes the test, shall be put to work immediately. An applicant or employee who fails the "quick" screen test, or who rejects the quick screen tests, shall be tested pursuant to the procedures set forth in the Testing Policy for Drug Abuse. The sample used for the "quick" screen test shall be discarded immediately upon conclusion of the test. An applicant or employee shall not be deprived of any rights granted to them by the Testing Policy for Drug Abuse as a result of any occurrence related to the "quick" screen test.

Attachment C

**CITY OF LOS ANGELES HARBOR DEPARTMENT
REQUEST/VERIFICATION FOR CRAFT EMPLOYEES
(INSERT NAME OF PROJECT)**

INSTRUCTIONS**To the Contractor:**

Please complete and fax this form to the applicable union to request craft workers that fulfill all hiring requirements for the City of Los Angeles project. After faxing your request, call the Local to verify receipt and substantiate their capacity to furnish local, at-risk or general dispatch as requested. Contact information for Locals is listed on back of form. Please print your Fax Transmission Verification Report and keep a copy of this request for your records.

To the Union:

Please complete the "Union Use Only" section and fax form back to the requesting contractor. Retain form for your records.

To:	Local	Fax# ()	Date:
From – Company Name			
Person Sending:		Contact Phone: ()	

Please provide me with union craft workers per the City of Los Angeles PLA that fulfills the requirements for this project as defined below:

30% Local Requirement (Union craft employees, including apprentices, who reside in the local metropolitan area zip codes listed below. If unavailable, can be dispatched from any one of the Citywide zip codes listed in Attachment).

SEE ATTACHED TIER 1 AND TIER 2 ZIP CODES

10% "Transitional Worker" Requirement (Union craft employees, including apprentices, who live in one of the Citywide zip codes listed in Attachment, and are certified to fulfill the "Transitional worker" hiring requirement).

General Dispatch (Union craft employees dispatched per normal dispatch procedures, not including the 30% Local or 10% Transitional Worker requirements)

Employee Name	Address	Zip Code

Craft Employees Requested						
Job/Craft Description	Journeyman / Apprenticeship Level	Number(s) Requested			Report Date	Report Time
		30% Local	10% Transitional	General Dispatch		

Total Workers Requested _____

Please have worker(s) report to the following address indicated below:

Site Address: _____

Report to (On-Site Contact): _____

On-Site Tel.#: () _____

Fax: () _____

Comments or special requirements: _____

Union Use Only

(Fax the Completed Form Back to Contractor)

Reception Date: _____

Dispatch Date: _____

Received By: _____

Requested DispatchAvailable for DispatchUnavailable for Dispatch

30% Local

☐
☐

10% Transitional

☐
☐

General Dispatch

☐
☐

Comments: _____

ATTACHMENT D

Harbor Department PLA Construction Trade Unions Contact Numbers

Asbestos Heat & Frost Insulators (Local 5)

670 E. Foothill Blvd.
Azusa, CA 91702
Tel: (626) 815-9794
Fax: (626) 815-0165

Boilermakers (Local 92)

2260 S. Riverside Avenue
Bloomington, CA 92316
Tel: (909) 877-9382
Fax: (909) 877-8318

Bricklayers & Allied Craftworkers (Loc. 4)

11818 Clark St., Suite A
Arcadia, CA 91706
Tel: (626) 739-5600
Fax: (626) 739-5610

Drywall Finishers Local 1136

Corporate Center Drive
Monterey Park, CA 91754
Tel: (626) 296-8003
Fax: (626) 296-8076

Electricians (Local 11)

297 N. Marengo Avenue
Pasadena, CA 91101
Tel: (626) 243-9700
Fax: (626) 793-9743

Elevator Constructors (Local 18)

100 S. Mentor Avenue
Pasadena, CA 91106
Tel: (626) 449-1869
Fax: (626) 577-1055

Operating Engineers (Local 12)

150 E. Corson
Pasadena, CA 91103
Tel: (626) 792-8900
Fax: (626) 792-9039

Glaziers (Local 636)

1155 Corporate Center Dr.
Monterey Park, CA 91754
Tel: (626) 448-1565
Fax: (626) 797-8395

Gunit Workers (Local 345)

P.O. Box 3345
Burbank, CA 91508
Tel: (818) 846-1303
Fax: (818) 846-1226

Iron Workers (Reinforced – Local 416)

13830 San Antonio Dr.
Norwalk, CA 90650
Tel: (562) 868-1251
Fax: (562) 868-1429

Iron Workers (Structural – Local 433)

17495 Hurley St. East
City of Industry, CA 91744
Tel: (626) 964-2500
Fax: (626) 964-1754

Laborers Local 1309

3971 Pixie Ave.
Lakewood, CA 90712
Tel: (562) 421-9346
Fax: (562) 421-5964

Laborers Local 300

2005 W. Pico Blvd.
Los Angeles, CA 90006
Tel: (213) 385-3550
Fax: (213) 385-6985

Painters & Allied Trades DC 36

1155 Corporate Center Drive
Monterey Park, CA 91754
Tel: (626) 584-9925
Fax: (626) 584-1949

Plaster Tenders

1055 W. Second Street
Pomona, CA
Tel.: (909) 622-8500
Fax: (909) 623-5244

Plumbers (Local 78)

1111 West James Wood Boulevard
Los Angeles, CA 90015
(213) 688-9000
(213) 627-4624

Pipe Trades (Local 250)

*Steamfitters/Air Conditioning/
Refrigeration / Industrial Pipefitters*
18355 S. Figueroa St.
Gardena, CA 90248
Steamfitters: Tel: (310) 660-0035
Fax: (310) 329-2465
AC/Refrig. Tel: (310) 660-0045
FAX: (310) 329-2465

Pipe Trades (Local 345)

*Landscape, Irrigation, Underground &
Specialty Piping*
1430 Huntington Dr.
Duarte, CA 91010
Tel: (626) 357-9345
Fax: (626) 359-0359

Pipe Trades (Sprinkler Fitters – Local 709)

12140 Rivera Road
Whittier, CA 90606
Tel: (562) 698-9909
Fax: (562) 698-7255

Plasterers (Local 200)

1610 W. Holt Ave.
Pomona, CA 91768
Tel: (909) 865-2240
Fax: (909) 865-9392

Cement Masons #500

1605 N. Susan St.
Santa Ana, CA 92703
Tel.: (714) 554-0730
Fax: (714) 265-0780

Resilient Floor & Dec. Cov. (Local 1247)

8051 Pioneer Blvd.
Whittier, CA 90606
Tel: (562) 695-7402
Fax: (562) 695-6337

Roofers & Waterproofers (Local 36)

5380 Poplar Blvd.
Los Angeles, CA 90032
Tel: (323) 222-0251
Fax: (323) 222-3585

Sheet Metal Workers (Local 105)

2120 Auto Centre Dr., Suite 105
Glendora, CA 91740
Tel: (909) 305-2800
Fax: (909) 305-2822

Teamsters (Local 986)

1198 Durfee Avenue
So. El Monte, CA 91733
Tel: (626) 350-9860
Fax: (626) 448-0986

Tradeshaw and Sign Crafts

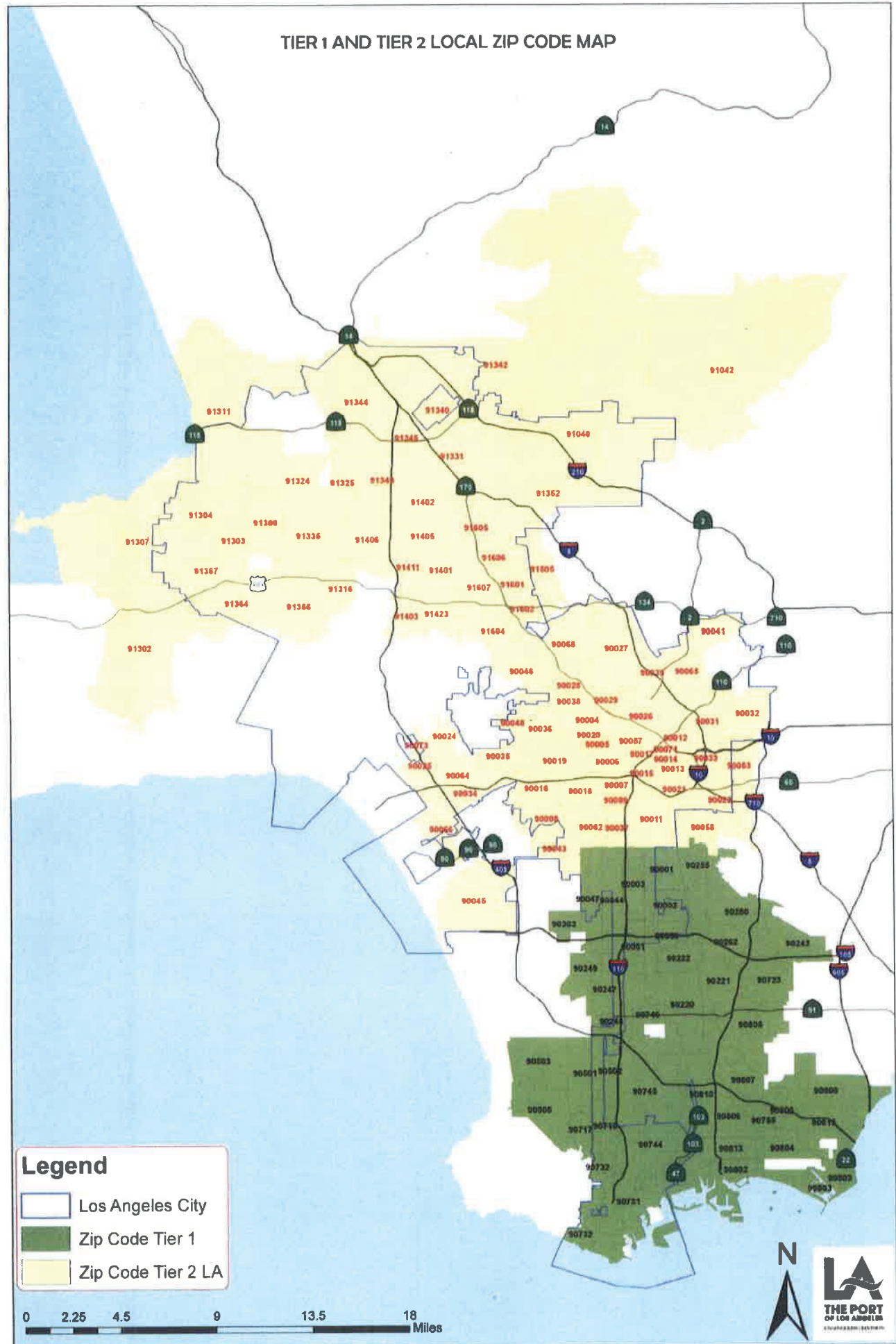
1155 Corporate Center Drive
Monterey Park, CA 91754
Tel: (626) 296-8086
Fax: (626) 584-1949

ATTACHMENT E
Harbor Department Calendar Years 2017 Thru 2027
Capital Improvement Program (CIP) Project List

Project Title	Anticipated Start
2017 - 2019 Site Improvements	2017/2018
B. 196-199 & 200A - Wharf Rehabilitation (2516600)	2017/2018
B. 212-224 - Intermodal Container Transfer Facility (ICTF) Expansion (2533300)	2017/2018
B. 93 - Cruise Terminal - Customs and Border Protection Improvements (2525300)	2017/2018
B.187-190 - MOTEMS Repairs (2524600)	2017/2018
Front Street Beautification (2504700)	2017/2018
North Gaffey Street Beautification -Phase II (7934500)	2017/2018
B. 240 A, B, & C - Seawall Improvements - ExxonMobil (2537600)	2017/2018
San Pedro Waterfront - Ports O' Call Promenade and Town Square (2532100)	2017/2018
B. 200 - Rail Yard and Track Connections Enhancements (2540800)	2017/2018
B. 214 - 220 - Concrete Wharf Improvements (2537800)	2018/2019
B. 167-169 - MOTEMS- Shell (2493600)	2018/2019
B. 226-236 Terminal Improvements - Wharf and Backlands (2531200)	2018/2019
B. 228-230 - Alternative Maritime Power (AMP) Upgrade and Retrofit (2529400)	2018/2019
Wilmington Waterfront Pedestrian Bridge (2537700)	2018/2019
Wilmington Waterfront Promenade (2533000)	2018/2019
San Pedro Waterfront - Sampson Way (7th St. to 22nd St.) Roadway Improvements (2488200)	2018/2019
2018 - 2020 Marine Improvements	2018/2019
B. 148-151 - MOTEMS- Phillips 66 (2493800)	2018/2019
B. 238 - MOTEMS- ExxonMobil (2489900)	2018/2019
West Basin Lead Track Gap Closure (2536600)	2018/2019
B. 226-236- Terminal Infrastructure Reconstruction (2539400)	2018/2019
San Pedro Waterfront - Harbor Boulevard From Miner Street to SP Slip (2543000)	2018/2019
San Pedro Waterfront - B. 57 - Wharf Retrofit and Signal Street Improvements (2500600)	2019/2020
San Pedro Waterfront - B. 80-83 - Waterside Improvements (2539000)	2019/2020
2019 - 2021 Site Improvements	2019/2020
B. 164 - MOTEMS - Valero (2493900)	2019/2020
B. 100-102 Marine Operations Building (2454300)	TBD
B. 100-102 Crane Maintenance Building (2502600)	TBD
B. 121-131 Wharf Upgrades (2449000)	TBD
B. 121-131 West Basin Intermodal Container Transfer Facility (WBICTF)(24810000)	TBD
RB 301-305 Buildings, Gates and Backland Development(2489000)	TBD
B. 306 Wharf and Backland Development (2489100)	TBD
B. 306 Alternative Maritime Power (AMP) (2506800)	TBD
B. 163 MOTEMS-NuStar (2493700)	TBD
B. 187-191 MOTEMS-Vopak (2494000)	TBD
B. 161 Marine Ways Modifications (2486100)	TBD
Harbor Administration Building-HVAC Replacement (2509600)	TBD

All Projects on this list are subject to change. The anticipated starts are the best estimate at the time this document was prepared.

TIER 1 AND TIER 2 LOCAL ZIP CODE MAP



Transmittal 2



**CONSTRUCTION
CAREERS POLICY**

(Revision 1)

TABLE OF CONTENTS

	Page
Port of Los Angeles Construction Careers Policy	
Section	
I. Definitions	1-4
II. Coverage of Projects	4
III. Implementation	5
IV. Exclusions and/or Modifications	5
V. Targeted Hiring	5-6
VI. Responsibilities of Harbor Department, C/S/Es, Unions and Jobs Coordinator	6-10
VII. Compliance	10-11
VIII. Enforcement	12-13
IX. Applicable Laws and Severability	13

SECTION I. DEFINITIONS

1. "Apprentice" means any worker who is indentured in a bona fide Labor/Management construction apprenticeship program, registered and approved by the State of California Department of Industrial Relations, Division of Apprenticeship Standards (DAS) or in the case of Projects with federal funding, indentured in a bona fide Labor/Management apprenticeship program approved by the US Department of Labor (DOL) and California DAS.
2. "Apprenticeship Program" means any Labor/Management construction apprenticeship program certified and approved by the California DAS or in the case of Projects with federal funding, approved by the US DOL and California DAS.
3. "Awarding Authority" means the City of Los Angeles, acting by and through the Board of Harbor Commissioners, or any employee or officer of the Board that is authorized to award or enter into any contract on behalf of the Board.
4. "Board" means the Los Angeles Board of Harbor Commissioners.
5. "Bureau of Contract Administration" (BCA) means the designated bureau within the City's Department of Public Works which may provide support services to the Harbor Department in administering the Policy and the PLA.
6. "City" means the City of Los Angeles, a municipal corporation, and all City awarding authorities.
7. "Construction Contract" means a City contract which has been awarded by the Board, and is necessary to complete the Project.
8. "Contractor/Subcontractor/Employer (C/S/E)" means any individual firm, partnership, owner operator, or corporation, or combination thereof, including joint ventures, which is an independent business enterprise and has entered into a contract with the Harbor Department or any of its contractors or subcontractors/owner operators of any tier, with respect to the construction of any part of the Project(s) under contract terms and conditions approved by the Board.
9. "Core Worker" means a verifiable member of a C/S/E's core workforce for the purpose of the PLA and this Policy if the worker's name appears on the C/S/E's active payroll for 60 of 100 working days immediately prior to award of the construction contract and meets all standards required by applicable local, state or federal law or regulation.
10. "Covered Project(s)" or "Project" means a project or projects that have been included in the Ten-Year "Capital Improvement Program (CIP) Project List" included as Attachment "E" to the PLA, or so designated by the Board. The Board may identify additional projects that are appropriate for coverage by the Agreement for

inclusion under the CIP and include such projects by Board Resolution. The Board shall request an annual review of the Harbor Department Capital Improvement Program to identify any new projects appropriate for coverage by the Agreement.

11. "Craft Request Form" means the document through which a C/S/E shall request workers from the Union and/or Jobs Coordinator, in the form set forth in the PLA and/or Policy.
12. "Employment Hiring Plan" (EHP) means a C/S/E's detailed hiring plan as described in BCA's Targeted Hiring Guidelines for Contractors and the Policy or other applicable Department policy.
13. "Engineer" means the Chief Harbor Engineer of the City of Los Angeles Harbor Department, Construction Division, or its authorized representative.
14. "Executive Director" shall mean the Executive Director of the City of Los Angeles Harbor Department, or his or her designee.
15. "FHWA Project" means a Harbor Department Project that is funded in whole or in part by the Federal Highway Administration (FHWA).
16. "Harbor Department" means the city of Los Angeles Harbor Department.
17. "Jobs Coordinator" means the Prime Contractor's designated person, agent or agency that will facilitate the local hire referral process with the C/S/E, Unions and other referral organizations, such as those listed in the BCA's Targeted Hiring Guidelines for Contractors. The Jobs Coordinator must be able to demonstrate or document to the BCA that it has the requisite qualification and/or experience to fulfill the duties and responsibilities as outlined in the Policy.
18. "LA/OCBTC" (Trades Council) means the Los Angeles /Orange Counties Building and Construction Trades Council.
19. "Letter of Assent" means the document that each C/S/E (of any tier) must sign and submit to the Engineer or designated administrator, which formally binds them to adherence to all the forms, requirements and conditions of the PLA and this Policy.
20. "Liquidated Damages" means disputed funds withheld from the Prime Contractor until they are found to be in compliance, the contract is terminated, or the Covered Project is completed.
21. "Local Resident" means an individual whose primary residence is within the Tier 1 or Tier 2 zip code areas.
22. "Long-Term Unemployment" as defined by the Bureau of Labor Statistics means being jobless for 21 weeks or more, as defined.

24. "PLA" means the Project Labor Agreement entered into between the Harbor Department of the City of Los Angeles and Unions, applicable to Covered Projects.
25. "Policy" means this Harbor Department Construction Careers Policy.
26. "Port" means the Port of Los Angeles.
27. "Project Work" means construction work performed as part of a Covered Project.
28. "Prime Contractor" means any individual firm, partnership, owner-operator, or corporation, or combination thereof, including joint-ventures, that is an independent business enterprise and that has entered into a Construction Contract with the Harbor Department.
29. "Reporting Period" means the Harbor Department's indicated reporting period for measuring the targeted hiring efforts of the C/S/Es. These reporting periods shall be at the Harbor Department's determination of 10%, 30%, 50%, 70% and 90% construction completion phases.
30. "Targeted Hiring Guidelines for Contractors" means the document provided by the Department to assist C/S/E's in implementing the targeted hiring procedures.
31. "Tier 1" means the zip codes identified in Article 7.4 of the PLA, which fall within an approximate ten mile radius of the Port and in which the rate of unemployment is in excess of 105% of the County of Los Angeles' unemployment rate at the time of application and/or are within the area of Port-related operations and activity.
32. "Tier 2" means the zip codes within the City, identified in Article 7.5 of the PLA, that includes at least 2 census tracts (or a portion thereof) in which the median annual household income is less than \$62,627 per and/or where the rate of unemployment is in excess of 100% of the County of Los Angeles' unemployment rate at the time of application.
33. "Transitional Worker" means any individual whose primary place of residence is within a Tier 1 or Tier 2 zip code of the City of Los Angeles, and who prior to commencing work on a project has been certified as satisfying at least one of the following criteria:
 - (1) having a Veteran status; having a documented history of involvement with the criminal justice system; being homeless; or
 - (2) is an individual facing two or more of the following barriers to employment: having a household income less than 50% of the Los Angeles County median annual household income, receiving public assistance, lacking a GED or high school diploma, being a custodial single parent, suffering from long term unemployment, being emancipated from the foster care system, or being an

apprentice, in a program described in Section I Number 1 above , with less than 15% of the apprenticeship hours required to graduate to journey level.

34. "Underemployment" means a situation in which a worker (i) is employed only part-time when one needs and desires full-time employment, and/or (ii) is inadequately employed at a low-paying job that requires less skill or training than one possesses.
35. "Unemployment" means, in accordance with the Bureau of Labor Statistics definition, a situation in which a person does not have a job, has actively looked for work in the prior 4 weeks, and is currently available for work and chronic Unemployment means unemployment lasting 27 weeks or longer.
36. "Union(s)" or "Signatory Unions" means the Los Angeles/Orange Counties Building and Construction Trades Council affiliated with the Building & Construction Trades Department (AFL/CIO) Craft International Unions or any other craft labor organization signatory to the PLA, acting in their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed the PLA.

SECTION II. COVERAGE OF PROJECTS

1. Covered Projects:
 - (a) Except as provided otherwise herein, this Policy applies to all Covered Projects contained in the 10-Year CIP list, and awarded by the Board.
 - (b) The Board may identify additional projects that are appropriate for coverage by the Policy and the PLA and include such projects by Board Resolution based on specific findings that such coverage will advance the Harbor Department's legitimate proprietary and policy interests and promote the public interest in assuring completion of the project in question in a safe and cost-effective manner while minimizing or negating any adverse impact to the public welfare.
2. FHWA Projects: In the event that the Harbor Department determines that a project to which this Policy applies is an FHWA Project or other grant-funded project, the Department shall modify or not enforce any aspect of the Policy or PLA in accordance with a valid and binding instruction from the U.S. Department of Transportation or applicable funding authority.

SECTION III. IMPLEMENTATION

Prior to bid, Harbor Department staff shall review each Covered Project's bid specifications to ensure the following provisions are incorporated:

1. That the Request for Bid Package Authorization from the Executive Director specifies that the Covered Project contains the PLA and this Policy;
2. That the Bid specifications require all contractors submitting bids or proposals agree to the terms of the PLA and this Policy;
3. That a provision exists in the prime contract obligating the Prime Contractor and all its C/S/Es (of any tier) to comply with the terms of the PLA and this Policy and require compliance with PLA and Policy terms through a Letter of Assent or any other form or legally enforceable obligation to the City.
4. That the Construction Contract shall include provisions establishing liquidated damages amounts as described in Section VIII of this Policy.

SECTION IV. EXCLUSIONS AND/OR MODIFICATIONS

1. Funding Source: this Policy shall not apply to construction contracts or projects where the funding source has established provisions or rules that forbid the inclusion of a PLA and/or Local Hire provision. If the project is listed as part of the CIP, Harbor Department staff must present the reason(s) to the Board prior to final determination to exclude the Covered Project.
2. This Policy shall not apply to work performed by a C/S/E's executives, managerial employees, engineering employees, supervisors (except those covered by Schedule A collective bargaining agreements), office and clerical employees, or any other employee not performing construction craftwork.
3. Out-of-State Workers: hours worked by residents of states other than California shall not be included in calculation of total hours of project work for purposes of determining compliance with the Section 5 below.

SECTION V. TARGETED HIRING

1. Requirements for Covered Projects:

The Prime Contractor shall ensure that the following targeted hiring requirements are met for each Covered Project:

- (a) At least 30% of total work hours on each project shall be performed by Local Residents residing within Tier 1 as described in Article 7.4 of the PLA. If the 30% local hire is not attained utilizing Tier 1, the outreach shall expand to the Tier 2 as described in Article 7.5 of the PLA.
- (b) At least 20% of total work hours on each project will be performed by apprentices, but the hours performed by apprentices in each individual craft shall not exceed the ratio to journeymen established by the applicable craft union's DAS approved apprenticeship standards. The parties agree that residents in the Tier 1 or 2 zip code areas will perform 50% of all apprenticeship hours worked on the Project.
- (c) At least 10% of total hours worked on each project shall be performed by Transitional Workers residing within Tier 1 or Tier 2 zip code areas described in Articles 7.4 and 7.5 of the PLA respectively and the remaining zip code areas within the City of Los Angeles. These hours shall be applied towards the 30% Local Resident targeted hiring.

SECTION VI. RESPONSIBILITIES OF HARBOR DEPARTMENT, C/S/Es, UNIONS, and JOBS COORDINATOR

1. Harbor Department Responsibilities:

- (a) Work with BCA or the Harbor Department's designated PLA administrator to monitor and enforce the targeted hiring measures of the PLA and Policy and issue Notices of Non-Compliance where appropriate.
- (b) Review, approve or disapprove submitted Employment Hiring Plans prior to a C/S/E's estimated start of work. Approval of a C/S/E to work on a Covered Project is contingent on the C/S/E's submittal of an approved EHP.
- (c) Ensure, prior to a C/S/E's approval to work on a Covered Project, its submittal of a duly signed Letter of Assent.
- (d) Work with BCA or the Harbor Department's designated PLA administrator to post local hire status reports on the BCA website (<http://bca.lacity.org>) for Covered Projects.
- (e) Inform the Board on a quarterly basis regarding the status of all Covered Projects.
- (f) Determine any withholding from payments as disputed funds and make recommendations for assessment of Liquidated Damages.

2. Prime Contractor and C/S/Es:

- (a) Employment Hiring Plan (EHP): Prime Contractor shall ensure that its C/S/Es (of any tier), at least 20 business days prior to starting their work on the Covered Project, shall submit their plan(s) to the Harbor Department for approval by the Executive Director or his/her designee. Each C/S/E shall include in its EHP a description of how it will meet the targeted hiring requirements set forth in the PLA and Policy. No C/S/E (of any tier) shall be approved to work on a Covered Project without an approved EHP.
- (b) PLA and Policy: Prime Contractor shall ensure that its C/S/Es (of any tier), prior to start of work, (i) read and understand the requirements of the PLA and Policy; (ii) submit their Employment Hiring Plans at least 20 business days prior to their subcontractors' start of work and (iii) sign and submit their Letters of Assent prior to start of work. No C/S/E (of any tier) shall be approved to work on a Covered Project without having submitted a signed Letter of Assent.
- (c) Prior to start of work on the project, the Prime Contractor shall:
 - (i) Recommend a Jobs Coordinator for approval by the Harbor Department.
 - (ii) Upon Department's approval of its Jobs Coordinator, notify its subcontractor (of any tier) who the Jobs Coordinator is.
 - (iii) Provide within 10-calendar days upon request by the Department or its designated representative, documentation of their Jobs Coordinator's qualifications.
- (d) The Prime Contractor and its C/S/Es (of any tier) shall coordinate with the Jobs Coordinator for services to support their efforts in meeting the targeted hiring percentages as described in Article 7 of the PLA and Section 5 of the Policy.
- (e) Pre-Job Conference: The Prime Contractor and its C/S/Es (of any tier), prior to start of work, shall hold a pre-job conference. The purpose of the pre-job conference is to determine craft personnel needs, schedule of work for the contract and all other matters as described in the PLA and the Policy. All work assignments shall be disclosed by the Prime Contractor and/or C/S/Es (of any tier) at the pre-job conference. Any formal jurisdictional dispute(s) raised under Article 14 of the PLA must be raised at the pre-job conference upon disclosure of the work assignments. If the Prime Contractor and/or C/S/Es intend to change the work assignment after the pre-job conference or to make an assignment of work not previously known, the Prime Contractor and/or C/S/Es must notify the appropriate affected craft union(s) prior to the commencement of work.

- (f) Craft Request Form: The Prime Contractor and its C/S/Es (of any tier) shall only use the Craft Request Form (Attachment “C” of the PLA) and the procedures written therein to request workers from the affected Union(s). All C/S/Es must transmit a concurrent Craft Request transmittal of such request to the Jobs Coordinator.
- (g) The Prime Contractor and its C/S/Es (of any tier) must satisfactorily document their contact with the Jobs Coordinator when the Unions have not been able to refer a Local Resident and/or Transitional Worker within the 48-hour window of referral.
- (h) The Prime Contractor and its C/S/Es (of any tier) shall maintain proof of transmittal of the Craft Request forms to the Union hiring halls and Jobs Coordinator. Upon request by the Harbor Department or its designated representative, copies shall be provided within 10-calendar days of request.
- (i) The Prime Contractor and its C/S/Es (of any tier) shall make available to the Harbor Department, BCA, or designated representatives, records and information that are deemed relevant to monitoring and enforcement of the provisions of the PLA and the Policy.
- (j) The Prime Contractor and its C/S/Es (of any tier) shall cooperate fully and promptly with any inquiry or investigation the Harbor Department, BCA or designated representatives deem necessary in order to monitor compliance with the provisions of the PLA and the Policy.
- (k) The Prime Contractor and its C/S/Es (of any tier), within 60 calendar days after concluding work on the Covered Project, shall submit to the Harbor Department a verified statement of the number of journeypersons and apprentices who worked on the project, their classifications and the hours worked (per California Labor Code 1777.5(e)).

Upon request of the BCA, or the Harbor Department, the Prime Contractor and its C/S/Es (of any tier) must provide documentation of their Local Resident, Apprentice and Transitional Workers targeted hiring participation level efforts within 10-calendar days of the request for documentation.

3. Union Responsibilities:

- (a) Ensure that its dispatchers properly adhere to the use of the Craft Request Form and the procedures written therein.
- (b) Refer Local Residents and/or Transitional Workers requested through the Craft Request Form regardless of their place on the hiring hall list and normal referral procedures.

- (c) Exert their best efforts to recruit and identify Local Residents residing in Tier 1, and then Tier 2 zip code areas, as well as those referred by the Jobs Coordinator for entrance, indentureship into a union apprenticeship program, and assisting such individuals in graduating into eligible journeypersons.
- (d) Upon receiving a request from a C/S/E for a Local Resident, exhaust the available list of individuals residing the Tier 1 zip codes before referring an individual residing in the Tier 2 zip codes.
- (e) Track retention of Local Residents and/or Transitional Worker apprentices participating in joint Labor/Management apprenticeship programs and provide the Harbor Department with the necessary information as requested.

4. Jobs Coordinator:

- (a) Criteria for Selecting a Jobs Coordinator: The Jobs Coordinator plays an integral part in the success of its partners in obtaining the targeted hiring percentages. It is the responsibility of the Prime Contractor to designate a Jobs Coordinator possessing, but not limited to, the following demonstrable experience and qualifications:
 - (i) Developing, creating, designing and marketing specific programs targeting Local Residents and/or Transitional Workers for construction opportunities at the Covered Project (e.g. handouts and fliers for “walk-ins” demonstrating program entrance procedures).
 - (ii) Coordinating services for contractors to assist in their local worker, transitional worker and apprentice utilization.
 - (iii) Educating and assisting contractors on incentives provided by State or federal programs for On-the-Job Training and employer tax credits.
 - (iv) Conducting orientations, job fairs and community outreach meetings to the local community.
 - (v) Providing supportive services such as skills training, child care, transportation, education remediation, assistance with union fees and tools.
 - (vi) Screening and certifying the Transitional Worker status of workers.
 - (vii) Establishing a referral and retention tracking mechanism for placed local and/or transitional workers and apprentices.
 - (viii) Networking with the various Work Source Centers, community and faith based organizations and other non-profit entities that provide qualified local workers and/or transitional workers.

(ix) Liaising with the various building trades crafts for referral and placement of local hire and/or transitional workers.

(b) Jobs Coordinator Responsibilities. The Jobs Coordinator shall:

- (i) Coordinate the local hire referral process with the C/S/Es, Unions, City Work Source Centers, Faith and Community Based Organizations, and other organizations that can provide qualified local hire referrals.
- (ii) Certify the Transitional Worker status.
- (iii) Maintain a database of pre-qualified Local Residents for referral to work on a Covered Project and/or indentureship into a bona fide Labor/Management apprenticeship program.
- (iv) Facilitate relationships among approved apprenticeship programs and the C/S/Es to enable prompt referral.
- (v) Be the point of contact to provide information about available job opportunities on Covered Projects.
- (vi) Educate and provide financial incentives information to the C/S/Es whom hire eligible workers under Work Opportunity Tax Credit (WOTC) and On-the-Job Training (OJT) and other benefits for which a C/S/E may be eligible based on their implementation of the Local Hire requirements.
- (vii) Assist the C/S/Es with their local hire effort documentations and other reports as it relates to their Local Resident and/or Transitional Worker targeted hiring requirements.
- (viii) Work closely with Harbor Department staff, the building trades and C/S/Es in achieving the targeted hiring.

Parties with responsibilities under the PLA and/or Policy, shall maintain those responsibilities regardless of the performance of the Jobs Coordinator at the tasks described in the PLA and the Policy.

SECTION VII. COMPLIANCE

The Harbor Department or its authorized representatives shall determine whether a Prime Contractor and its C/S/Es have complied with the requirements of the PLA and the Policy. The Prime Contractor is ultimately responsible for its and its C/S/Es (of any tier) compliance with the PLA and Policy requirements.

In determining compliance with the Apprentice Targeted Hiring, project hours performed by trades who do not have approved training under Chief of the Division of apprenticeship standards, and/or do not have written apprentice agreements under Chapter 4(commencing with Section 3070) will be excluded in calculations determining compliance with the Targeted Hiring requirements as applicable.

1. If, after the Harbor Department or its authorized representatives takes into account all applicable hours of Project Work performed up to that point in time of the Reporting Period, the targeted hiring requirements of the PLA and Policy have been satisfied for a Project, then the Prime Contractor and its subcontractors (of any tier) working on that Project shall be deemed to be in compliance.
2. If the targeted hiring requirements of the PLA and the Policy have not been satisfied for a Project, the Prime Contractor nonetheless may be deemed to be in compliance if it demonstrates both (a) that it and each of its C/S/Es (of any tier) have complied with all other requirements of the PLA and the Policy, and (b) that it and each C/S/E (of any tier) have either (i) satisfied the targeted hiring requirements of the PLA and this Policy with regard to the Project Work that it has performed or (ii) satisfactorily demonstrated the following:
 - (a) Adherence to procedures contained in its Employment Hiring Plan as approved by the Harbor Department.
 - (b) Requests to Unions, through Craft Request Forms, of sufficient numbers of Local Residents and Transitional Workers to meet the targeted hiring percentages set forth in Section 5 of the Policy for that C/S/E's Project Work.
 - (c) Documented contact with the Jobs Coordinator in each instance when the relevant Union did not refer qualified Local Residents or Transitional Workers within the 48 hours following the C/S/E's request and the C/S/E's fair consideration of any Local Resident or Transitional Worker subsequently referred by the Jobs Coordinator.
 - (d) Accurate records documenting the C/S/E's compliance efforts that include (but are not limited to):
 - (i) A listing by name and address of all local recruitment sources contacted by the C/S/E;
 - (ii) The date of the local recruitment contact and the identity of the person contacted, the trade and classification and number of hire referrals requested;
 - (iii) The number of Local Residents and/or Transitional Workers hires made as a result of the contact;

- (iv) The identity and address of the worker(s) hired pursuant to the contact;
- (v) (v) Documentation when a referral was not hired (reason for non-hire) and/or premature termination.

SECTION VIII. ENFORCEMENT

The Prime Contractor for every Project agrees:

1. To be liable to the Harbor Department for Liquidated Damages as provided in this section;
2. That the Prime Contractor and its C/S/Es (of any tier) commitment to comply with the targeted hiring requirements of PLA and Policy is a material element of the Covered Project;
3. That the failure of the Prime Contractor and its C/S/Es (of any tier) to comply with the targeted hiring requirements in accordance with Section VII of this Policy will cause harm to the Harbor Department and the public which is significant and substantial but extremely difficult to quantify. The harm to the City includes the difficult-to-quantify harm that the community and its families suffer as a result of high unemployment and concentrated poverty;
4. Liquidated Damages: Due to the difficulty of estimation of damages for violation(s) of requirements of this Policy, Construction Contracts shall have provisions establishing liquidated damage to be assessed as follows:
 - (a) The Prime Contractor shall pay liquidated damages equal to the average journey person project wage for each applicable work hour the Project fell short of the targeted hiring, or \$200 per day, whichever is greater. When more than one targeted hiring requirement is not in compliance, the liquidated damages will not be assessed cumulatively; however, the highest violation will govern.
 - (b) If the Covered Project's targeted hiring requirements are out of compliance during any Reporting Period, the Prime Contractor shall meet with the Harbor Department or their designated representative to develop a recovery plan for compliance. The Prime Contractor has until the next Reporting Period to effectuate the recovery compliance plan or Liquidated Damages shall be withheld.
 - (c) Before Liquidated Damages are sought, the Prime Contractor shall be notified of the proposed Liquidated Damages and served with a summary of the information upon which the Liquidated Damages are based.
 - (d) Liquidated Damages shall be withheld from all subsequent monthly progress payment request(s) as disputed funds until such time as Prime Contractor is

found to be in compliance, the Covered Project contract is terminated, or the Covered Project is completed.

- (e) Should the Covered Project be terminated or completed before the Prime Contractor is found to be in compliance, the Engineer will evaluate the data and determine if Liquidated Damages are recommended. If the Engineer recommends assessment of Liquidated Damages, then the amount of the Liquidated Damages shall be returned to the fund from whence they came.

5. Liquidated Damages Appeal:

- (a) A Prime Contractor that has received a Liquidated Damages assessment letter, which includes the targeted hiring data and Liquidated Damages calculations, may send a written appeal to the Engineer, within fourteen(14) calendar days. The Prime Contractor shall provide documentation supporting the appeal of the assessment.
- (b) A meeting with the Engineer, Harbor Department staff, and the Prime Contractor will be held to present any relevant information. The Prime Contractor will be allowed to provide evidence that it has made all of the showings required under Section 7 of the Policy during the meeting. The decision of the Engineer on the Liquidated Damages assessment shall be final when rendered. The Contractor shall be notified of the final decision in writing by the Engineer.
- (c) Failure to submit a written request for an appeal within the time frame stipulated in this Section will be deemed a waiver of the right to appeal and the recommendation for assessment of Liquidated Damages will be implemented.

6. Termination of Contract(s): Consistent, substantial violations of the PLA and/or this Policy by any Prime Contractor and/or C/S/E may result in a recommendation to the Board that the contract of the offending Prime Contractor and/or C/S/E be terminated per Section 00405 of the Master General Conditions.

SECTION IX. APPLICABLE LAW AND SEVERABILITY

The provisions of this Policy shall not be applicable where prohibited by federal or state law, or where the application would violate or be inconsistent with the terms and conditions of a grant or a contract with an agency of the United States or the State of California, or the valid instructions of an authorized representative of any of these agencies with respect to any grant or contract. If enforcement of any provision of this Policy is enjoined by an court of competent jurisdiction, the remaining provisions shall remain in full force and effect.

APPENDIX "B"

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation/Lease Measure Monitoring and Reporting Forms for the Compressor Building

Spec No. 2838

- **MM-BIO-1**
- **MM-CULT-1**
- **LM-AQ-4: Off-Road Construction Equipment (except vessels, harbor craft, on-road trucks, and dredging equipment)**

MM-BIO-1

Project: Compressor Building Demolition Project

Contractor: _____

Application for Port Project (APP) Number: 220321-062

State Clearinghouse Number: 2017121023

SECTION I: MITIGATION MEASURE:

Prior to ground-disturbing activities and/or vegetation removal, a qualified biologist shall conduct surveys for the presence of nesting birds protected under the Migratory Bird Treaty Act (MBTA) and/or California Department of Fish and Wildlife Code within areas of the proposed project sites that contain potential nesting bird habitat. Surveys shall be conducted 24 hours prior to the clearing, removal, or grubbing of any vegetation or ground disturbance. If active nests are located, then a barrier installed at a 50-foot radius from the nest(s) will be established and the tree/location containing the nest will be marked and will remain in place and undisturbed until a qualified biologist performs a survey to determine that the young have fledged or the nest is no longer active.

Mitigation Monitoring Frequency: Throughout construction, prior to vegetation removal.

Mitigation/Reporting Requirement: The contractor shall comply with this mitigation measure, and submit verification documents to the Engineer.

Standard Environmental Controls will be implemented in the daily operations based on existing local, state and federal laws.

SECTION II: COMPLIANCE COMMITMENT (PRIOR TO COMMENCING CONSTRUCTION):

By signing below, the contractor certifies that it will comply with the mitigation measure identified in Section I: Mitigation Measure and all mitigation monitoring and reporting requirements. In compliance with the mitigation measure, all applicable verification documents will be provided to the Engineer.

Name and Title of Responsible Person

Signature

Date

SECTION III: COMPLIANCE VERIFICATION (AT CONSTRUCTION COMPLETION):

By signing below, the contractor certifies that it has complied with the mitigation measure identified in Section I: Mitigation Measure and all mitigation monitoring reporting requirements, including submitting all applicable verification documents to the Engineer.

Name and Title of Responsible Person

Signature

Date

MM-CULT-1

Project: Compressor Building Demolition Project

Contractor: _____

Application for Port Project (APP) Number: 220321-062

State Clearinghouse Number: 2017121023

SECTION I: MITIGATION MEASURE:

In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending on the significance of the find under CEQA (14 CCR 15064.5 (f); California Public Resources Code, PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

Mitigation Monitoring Frequency: Ground disturbing activities during project demolition and construction.

Mitigation/Reporting Requirement: The contractor shall comply with this mitigation measure, and submit verification documents to the Engineer.

Standard Environmental Controls will be implemented in the daily operations based on existing local, state and federal laws.

SECTION II: COMPLIANCE COMMITMENT (PRIOR TO COMMENCING CONSTRUCTION):

By signing below, the contractor certifies that it will comply with the mitigation measure identified in Section I: Mitigation Measure and all mitigation monitoring and reporting requirements. In compliance with the mitigation measure, all applicable verification documents will be provided to the Engineer.

Name and Title of Responsible Person

Signature

Date

SECTION III: COMPLIANCE VERIFICATION (AT CONSTRUCTION COMPLETION):

By signing below, the contractor certifies that it has complied with the mitigation measure identified in Section I: Mitigation Measure and all mitigation monitoring reporting requirements, including submitting all applicable verification documents to the Engineer.

Name and Title of Responsible Person

Signature

Date

LM-AQ-4: Off-Road Construction Equipment (except vessels, harbor craft, on-road trucks, and dredging equipment)

Project: Compressor Building Demolition Project

Contractor: _____

Application for Port Project (APP) Number: 220321-062

State Clearinghouse Number: 2017121023

SECTION I: LEASE MEASURE:

All off-road construction equipment greater than 50 hp must meet EPA Tier IV emission standards, unless the contractor provides a written finding consistent with project contract or lease management requirements and obtains written approval from the Lead Agency that such equipment is unavailable.

In the event that EPA Tier IV emission standards cannot be met for a piece of construction equipment, the construction contractor shall provide a written finding to demonstrate that one of the following circumstances exists:

- The equipment is unavailable within the required Tier level, within the state of California, including through a leasing agreement.
- The contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the Project, but the application process is not yet approved, or the application has been approved but funds are not yet available.
- The contractor has ordered a control device for a piece of equipment planned for use on the proposed Project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must have attempted to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the proposed Project has the controlled equipment available for lease.

Monitoring Frequency: At start of construction and updated every six months throughout construction to reflect receipt of any new equipment.

Reporting Requirement: The contractor shall comply with this measure, and submit verification documents to the Engineer.

Standard Environmental Controls will be implemented in the daily operations based on existing local, state and federal laws.

SECTION II: COMPLIANCE COMMITMENT (PRIOR TO COMMENCING CONSTRUCTION):

By signing below, the contractor certifies that it will comply with the measure identified in Section I: Lease Measure and all monitoring and reporting requirements. In compliance with the measure, all applicable verification documents will be provided to the Engineer.

Name and Title of Responsible Person

Signature

Date

SECTION III: COMPLIANCE VERIFICATION (AT CONSTRUCTION COMPLETION):

By signing below, the contractor certifies that it has complied with the measure identified in Section I: Lease Measure and all monitoring reporting requirements, including submitting all applicable verification documents to the Engineer.

Name and Title of Responsible Person

Signature

Date

APPENDIX "C"

ENVIRONMENTAL COMPLIANCE TRACKING (ECT) FORM

Environmental Compliance Tracking (ECT) Form

PORT OF LOS ANGELES CONSTRUCTION DIVISION

Terminal Island Facilities Demolition and Improvements

SPECIFICATION No. 2838

CONTRACT No. ####

Contractor				ECT No.:			
Section I: Equipment Information							
Equipment Description			Equipment Make and Model No.			Est. Hours on Project	
On-Road Equipment		☐	Engine Model Year		License Plate No.		
Non-Road Construction Equipment		☐	Tier Level	CARB EIN	Engine Family Name	Executive Order No. (Attach Form)	
Harbor Craft Equipment		☐	Tier Level	CARB UVI	Engine Family Name	Fleet Operator	

Section II: Compliance Status

Does the above piece of equipment comply with the environmental measures, including but not limited to regulatory compliance certifications, mitigation measures and project conditions, set forth in the contract? ***If no, please state circumstance in Section III.***

Yes ☐

No ☐

Section III: Non-Compliance Circumstance

- ☐ A piece of specialized equipment is unavailable, in a controlled form, or within the required Tier level, within the state of California, including through a leasing agreement.
- ☐ Contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the project, but the application process is not yet approved, or the application has been approved, but funds are not yet available.
- ☐ Contractor has ordered a control device for a piece of equipment planned for use on the Project, or Contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the Contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the Project has the controlled equipment available for lease.

Section IV: Steps Taken (Explain Below)

I certify to the best of my knowledge that the above information is true and in accordance with the contract requirements.

Signature

Date

APPENDIX "D"

LOS ANGELES HARBOR DEPARTMENT IMPORT MATERIAL CHECKLIST



LOS ANGELES HARBOR DEPARTMENT IMPORT MATERIAL CHECKLIST

GENERAL INFORMATION

POLA Project Name: _____ **Contract Spec No.:** _____

POLA Project Address: _____

Source of Import Material*

Name/Address of Source: _____ Unique Identifier (if any): _____

*For stockpiled materials, enter information for the source and staging of the stockpiles.

Origin of Import Material: Quarry: _____ Industrial/Commercial: _____ Other: _____

Current/Historical Operations of the Source: _____

SAMPLING INFORMATION

Sampling Firm Name: _____

Firm Address: _____

Sampler's Name(s): _____

Sample Type: Grab from within stockpile(s): _____ In-Situ (Contractor should have a Port-Approved sampling plan): _____

Analytical Laboratory Name/Address: _____

Laboratory Report Number (s): _____

CERTIFICATION

I certify that all information, sampling, and analytical laboratory data and results provided regarding the subject material are representative, accurate, correct, and complete to the best of my knowledge and belief.

Contractor Signature – Licensed Professional

Date: _____

Print Contractor Name – Licensed Professional

Title: _____

Note: Contractor must attach copies of all pertinent information, including approved sampling plan (if applicable), sample location map, laboratory reports, and photographs for checklist verification.

POLA ACCEPTANCE

_____ Approved _____ Reject (Explain): _____

POLA Authorization Signature

Print Name

Date

APPENDIX "E"

ARMY CORPS OF ENGINEERS PERMIT

DEPARTMENT OF THE ARMY PERMIT

Permittee: Los Angeles Harbor Department, Port of Los Angeles, Chief Harbor Engineer; Dina Aryan-Zahlan, P.E.

Project Name: Los Angeles Harbor Department Maintenance Permit

Permit Number: SPL-2022-00686-TS

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Section 10: To construct structures and/or conduct work in or affecting "navigable waters of the United States", as needed for repairs and maintenance, pursuant to Section 10 of the Rivers and Harbors Act of 1899,

Section 404: To discharge fill into waters of the U.S., as needed for repairs and maintenance, pursuant to Section 404 of the Clean Water Act of 1972,

Section 103: To transport dredged or fill material by vessel or other vehicle for the purpose of dumping suitable material into ocean waters pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972,

in association with the Los Angeles Harbor Department Maintenance Permit Project as shown on the attached drawings.

Specifically, you are authorized to:

Conduct routine maintenance on approximately 80,000 linear feet of existing wharves, structures, existing revetment fills, seawalls, bulkheads and other existing structures, and to conduct maintenance dredging at berths to address navigation safety and vessel access associated with routine Port operations and maritime shipping activity. The

applicant has requested this maintenance permit for a 10-year period. Maintenance activities may be conducted by anchored barges or support vessels, as well as crews staged on top of existing structures.

Wharf and Dike Maintenance: This includes scheduled maintenance and emergency repair, and would address maintenance of existing timber and concrete wharves. Repair and maintenance includes in-kind replacement of bearing piles, fender piles, decking, joists, pile caps, marginal beams, bull rails, and other wharf structural members. In addition, part of the wharf maintenance program consists of repairing damaged seawalls to their original condition and/or placing additional rock riprap on an existing eroded dike in order to stabilize or protect the dike. The slope of any additional fill will match the original design slope and footprint. The cubic yards of rock needed to repair dikes will vary, and in some cases rock that has sloughed off an existing slope will be recovered and replaced onto the slope.

Maintenance Dredging: This includes maintenance dredging, as needed, at berths throughout the Los Angeles Harbor to restore approved design depths which have been reduced by sediment shoaling, plus an additional 2-foot overdredge allowance. The applicant proposes an annual estimated amount of dredging and disposal of 150,000 cubic yards. On occasion, some of the work may involve maintenance of existing rock riprap slopes along channels and under wharves, as described above. Dredging would be accomplished by means of side casting, barge mounted clamshell dredge, a dredged bucket operated from the shore or adjacent wharf, or knockdown dredging. Knockdown dredging involves the leveling or spreading of shoaled or mounded material to maintain waterway depths, rather than the direct removal of material from the waterway. The disposal location would be dictated by the quality of the dredged sediment following a sediment characterization study and/or bioassay testing, and suitability determination by the interagency Southern California Dredged Material Management Team. If after sediment characterization, the sediment is found suitable for unconfined ocean disposal per the U.S. Environmental Protection Agency's (EPA) ocean disposal requirements, the designated EPA ocean dump site (LA-2) may be used for ocean disposal. Following sediment sampling and characterization, if dredged sediment is found to be unsuitable for ocean disposal, an upland/terrestrial disposal site, landfill, or the Corps-approved Berths 243-245 Confined Disposal Facility (CDF) would be used for disposal. The applicant proposes an annual estimated amount of dredging and disposal of 150,000 cubic yards.

Project Location: Maintenance activities would occur in the Los Angeles Harbor, Port of Los Angeles (Port,) within the city and county of Los Angeles, CA (approximate center point of the Port of Los Angeles near Berth 94 at latitude: 33.74861 / longitude: -118.27444).

Permit Conditions:

General Conditions:

1. **The time limit for completing the authorized activity ends September 30, 2033.** If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.
7. You must notify this office as to the dates of commencement (within 10 days prior to the start of construction) and completion of the activity (within 10 days following the end of construction) using the enclosed forms.

Special Conditions:

1. The Permittee shall comply with the terms and conditions of the Clean Water Act Section 401 Water Quality Certification (WQC) (WDID No. 4WQC40123078, WQC No.

23-078, dated September 19, 2023), incorporated by reference.

2. SEDIMENT TESTING FOR PHASED PROJECTS

The Permittee is prohibited from conducting dredging operations and disposing material in navigable waters of the United States that has not been tested and determined by the Corps Regulatory Division, in consultation with the U.S. Environmental Protection Agency (EPA), to be suitable for disposal in ocean waters. Sampling and testing of previously tested sediment or previously dredged areas is required after three years from the date of initial sediment sampling and testing unless the Corps deems that conditions warrant another testing duration be formulated with EPA consultation. This time limit is subject to change at the discretion of the Corps Regulatory Division if any event causes previously determined suitable material to become potentially unsuitable. The applicant must demonstrate the proposed dredged materials are chemically and physically suitable for disposal in ocean waters according to the provisions of the Inland Testing Manual (ITM) or Ocean Disposal Manual (ODM) and the Corps Regional Guidance Letter (RGL) 06-02, as appropriate. If the material does not meet the physical and chemical criteria for unconfined disposal in ocean waters, the dredged material shall be disposed at a Corps approved upland disposal location. The applicant shall submit to the Corps Regulatory Division and EPA a draft Sampling and Analysis Plan (SAP); the SAP must be completed in accordance with the joint EPA/Corps SAPR Guidelines (July 2021). Sampling may not commence until the final SAP is approved, in writing, by the Corps Regulatory Division, in consultation with EPA. Further the SAP Results (SAPR) must also be reviewed and approved and the Permittee must receive a written authorization to proceed.

3. OPERATIONS PLAN

At least 15 calendar days before initiation of any dredging operations authorized by this permit, the Permittee shall submit a dredging and disposal Operations Plan to the Corps Regulatory Division and EPA, with the following information:

A) A list of the names, addresses and telephone numbers of the Permittee's project manager, the contractor's project manager, the dredging operations inspector, the disposal operations inspector and the captain of each tug boat, hopper dredge or other form of vehicle used to transport dredged material to the designated disposal site.

B) A list of all vessels, dredging equipment and electronic positioning systems or navigation equipment to be used for dredging and disposal operations, including: the capacity, load level and acceptable operating sea conditions for each hopper dredge or disposal barge or scow.

C) A schedule describing when the dredging project is planned to begin and end.

D) A pre-construction dredging bathymetric survey (presented as a large format plan view drawing), taken within thirty (30) days before the dredging begins, accurate to 0.5-

foot with the exact location of all soundings clearly defined on the survey chart. The pre-dredge survey chart shall be prepared showing the following information:

- i) The entire dredging area, including the toe and top of all side-slopes, and typical cross sections of the dredging areas. To ensure that the entire area is surveyed, the pre-dredge condition survey should cover an area at least 50 feet outside the top of the side-slope or the boundary of the dredging area.
- ii) Areas shallower than the dredging design depth shall be shaded green, areas between the dredging design depth and overdredge depth shall be shaded yellow, and areas below overdredge depth that will not be dredged shall be shaded blue.
- iii) The pre-dredging survey chart shall be signed by the Permittee to certify that the data are accurate and that the survey was completed within thirty (30) days before the proposed dredging start date.

E) A debris management plan to prevent unauthorized disposal of large debris or other unsuitable materials. The debris management plan shall include: sources and expected types of debris if known, debris separation and retrieval methods and equipment to be used, debris disposal location(s), and debris disposal methods (e.g., recycling, landfill, hazardous/toxic/radioactive materials/munitions disposal sites, etc.).

F) Dredging and dredged material disposal and monitoring of dredging projects using the National Dredging Quality Management (DQM) system shall be implemented for this permit. The permittee's DQM system must have been certified by the DQM Support Center within one calendar year prior to the initiation of the dredging/disposal. Questions regarding certification should be addressed to the DQM Support Center at 1-877-840-8024. Additional information about the DQM System can be found at <https://dqm.usace.army.mil>. The permittee is responsible for insuring that the DQM system is operational throughout the dredging and disposal project and that project data are submitted to the DQM Support Center in accordance with the specifications provided at the aforementioned website. The data collected by the DQM system shall, upon request, be made available to the Regulatory Division project manager of the U.S. Army Corps of Engineers, Los Angeles District.

4. NOTICE TO PROCEED

The Permittee shall not commence dredging or disposal operations unless and until the Permittee receives a Notice to Proceed (NTP), in writing (letter or email), from the Corps Regulatory Division.

5. MAINTAIN PRINTED COPY OF PERMIT ON-BOARD

The Permittee and its contractors and subcontractors shall maintain a copy of this permit at the work site, and on all vessels used to dredge, transport and dispose of dredged material authorized under this permit.

6. CAPTAIN LICENSING

The Permittee shall ensure that the captain of any hopper dredge, tug or other vessel

used in the dredging and disposal operations, is a licensed operator under U.S. Coast Guard regulations and follows the Inland and Ocean Rules of Navigation or the U.S. Coast Guard Vessel Traffic Control Service. All such vessels, hopper dredges or disposal barges or scows, shall have the proper day shapes (mast head signals which indicate vessel operational status), operating marine band radio, and other appropriate navigational aids.

7. RADIO CHANNEL MONITORING

The Permittee's contractor(s) and the captain of any vessel covered by this permit shall monitor VHF-FM channels 13 and 16 while conducting dredging operations.

8. INSPECTIONS

Upon request, the Permittee and its contractor(s) shall allow inspectors from the Corps Regulatory Division (may include other Corps Divisions), EPA, and(or) the U.S. Coast Guard to inspect all phases of the dredging and disposal operations. Upon request, the Permittee and its contractor(s) retained to perform work authorized by the permit or to monitor compliance with this permit shall make available to inspectors from the Corps EPA, and(or) the U.S. Coast Guard the following: dredging and disposal operations inspectors' logs, the vessel track plots and all disposal vessel logs or records, any analyses of the characteristics of dredged material, or any other documents related to dredging and disposal operations.

9. INTERFERENCE WITH NAVIGATION

During disposal and dredging operations the permitted activity shall not interfere with the public's right to free navigation on all navigable waters of the United States.

10. NON-COMPLIANCE NOTIFICATION

If non-compliance of the permit occurs, the Permittee shall report the details of the permit non-compliance to the Corps Regulatory Division within twenty-four (24) hours. If the Permittee retains any contractors to perform any activity authorized by this permit, the Permittee shall instruct all such contractors that any permit non-compliance of any permit condition must be reported to the Permittee immediately who must then report to the Corps Regulatory Division.

11. HOPPER DREDGE OPERATION

When using a hopper dredge, water/slurry flowing through the weirs shall not exceed 10 minutes during dredging operations (to prevent overflow/overload). When using a hopper dredge, the fill level of the hopper dredge shall not exceed the load line to prevent any dredged material or water from spilling over the sides at the dredging site or during transit from the dredging site to the disposal site. No hopper dredge shall be filled above this predetermined level. Before each hopper dredge is transported to the disposal site, the dredging site inspector shall certify that it is filled correctly. If a dredging or disposal operation does not require a hopper dredge than disregard this special condition.

12. BARGE OR SCOW OPERATIONS

When using a disposal barge or scow, no water shall be allowed to flow over the sides throughout the dredging and disposal operations. The fill level of the disposal barge or scow shall not exceed the load line to prevent any dredged material or water from spilling over the sides during all operations. No disposal barge or scow shall be filled above this predetermined level or load line (vessel frame/plating). Before each disposal barge or scow is transported to the disposal site, the Permittees dredging site inspector shall certify that it is filled correctly.

13. ELECTRONIC POSITIONING SYSTEM NAVIGATION

The Permittee shall use an electronic positioning system to navigate throughout all dredging, hauling, disposal, and discharge operations. The electronic positioning system shall have a minimum accuracy and precision of +/- 10 feet (or 3 meters). If the electronic positioning system fails or navigation problems are detected, all dredging operations shall cease until the failure or navigation problems are corrected.

14. POST-CONSTRUCTION REPORTING

The Permittee shall submit a post-construction/project completion report to the Corps Regulatory Division within 30 calendar days after completion of each dredging event to document compliance with all general and special conditions in this permit. The report shall include all information collected by the Permittee, the dredging operations inspector and the disposal operations inspector or the disposal vessel captain. One post-construction report (instead of separate reports) should be submitted for all activities conducted under the permit. The report must describe whether or not all general and special conditions were met. The report shall include:

- A) Project Name and Corps file number (Corps File No. is SPL-2022-00686).
- B) Start date (month/day/year) and completion date of dredging and disposal operations.
- C) The disposition and total cubic yards of all material disposed or discharged at each site or location.
- D) Dredging method (e.g., hopper dredge, suction dredge, clamshell, dragline, etc.).
- E) Mode of transportation.
- F) Frequency of disposal and plots of all trips to the disposal or discharge site(s).
- G) Tug boat or other disposal vessel logs documenting contact with the U.S. Coast Guard before each trip to the disposal or discharge site(s).
- H) A detailed post-dredging bathymetry survey drawing of the dredging area. The survey drawing shall show areas above the dredging design depth shaded green, areas between the dredging design depth and overdredge depth shaded yellow, areas below overdredged depth that were not dredged or areas that were deeper than the overdredge depth before the project began as indicated on the pre-dredging survey shaded blue, and areas dredged below the overdredge depth or outside the project boundaries shaded red. The methods used to record the post-construction dredging survey drawing shall be the same methods used in the pre-construction dredging survey

drawing. The survey drawing shall be signed by the Permittee certifying that the data are accurate.

I) A description of any navigation problems and corrective measures implemented.

J) Copies of all completed Scow Certification Checklists for ocean disposal.

Section 103 Special Conditions (Ocean Disposal at EPA approved site):

15. This permit does not authorize ocean disposal. Based on the results of the Sampling and Analysis Plan Report (see Special Condition No. 2 above), if the EPA concurs that sediment is suitable for ocean disposal, EPA site use conditions and the Corps NTP (see Special Condition No. 3 above) shall be obtained prior to initiating dredging and disposal at an EPA-approved ocean disposal site.

Endangered Species Special Conditions:

1. This Corps permit does not authorize you to take any threatened or endangered species, in particular the California least tern (*Sterna antillarum browni*) or green sea turtle (*Chelonia mydas*) or adversely modify designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply).
2. No maintenance activity shall be performed within 500 feet of the California least tern nest site on Pier 400 during the nesting season. The Permittee shall provide one week advance notice of proposed pile-driving, including measures to minimize impacts on least terns to both the Corps and U.S. Fish and Wildlife Service that would occur during the nesting season, including a description of any concurrent work occurring in the same time frame within a one mile radius of the Pier 400 nest site. Structure maintenance and replacement or repair of fenders and bollards within the aforementioned distances from the nest site is not required.
3. In the unlikely event that any individuals of fish, whale, abalone, sea turtle, coral, or marine plant species listed by NOAA Fisheries under the Endangered Species Act appear to be entangled, injured, or killed as a result of the structures or work in [navigable] waters of the United States authorized by this permit, the permittee or designated representative shall immediately report the event to the Regulatory Office of the Los Angeles District of the U.S. Army Corps of Engineers at 805-585-2146 AND NOAAs Entanglement hotline 1-877-767-9425 or NOAAs West Coast Region Stranding hotline 1-866-767-6114. If you have any trouble contacting these hotlines, please immediately NOAAs Regional Stranding Coordinator, Justin Viezbicke, at 562-506-4315 or NOAAs Assistant Stranding Network Coordinator,

Justin Greenman, at 707-496-7230. The finder should leave the plant or animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously injured or killed by discharge exposure, or some unnatural cause. The finder may be asked to carry out instructions provided by NOAA Fisheries to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

Historic Properties Special Conditions:

1. In each case involving a repair or replacement activity subject to this permit proposes to 1) repair or replace more than 20% of viewable wharf, and 2) at a wharf that is at least 50 years old, unless the proposed activity would be limited to wharf components that have been replaced in the previous 50 years, the Permittee shall notify the Corps Regulatory Division in writing at least one month prior to commencing the proposed activity to determine whether consultation with the State Historic Preservation Officer (SHPO) is necessary pursuant to section 106 of the National Historic Preservation Act. The Permittee shall not commence with the proposed activity until the Corps Regulatory Division issues a Notice to Proceed.
2. Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction within waters within the Corps Permit Area (the permit area is defined as waters of the U.S. below the plane of the high tide elevation of approximately +7.3 feet mean lower low water) and 100 feet landward of the pierhead line; the vertical permit area includes the previously approved design depth of berthing areas to be dredged and the depth of existing piles) of either human remains, archaeological deposits, or any other type of historic property, the Permittee shall notify the Corps Regulatory Project Manager (Theresa Stevens at 805-585-2146) and the Corps' Regulatory Archaeology Staff (Danielle Storey 213-452-3855) within 24 hours. The Permittee shall immediately suspend all work in any area(s) where potential cultural resources are discovered. The Permittee shall not resume construction in the area surrounding the potential cultural resources until the Corps Regulatory Division re-authorizes project construction, per 36 C.F.R. Section 800.13.

Section 10 Special Conditions (Work and Structures in Navigable Waters of the United States):

1. ANNUAL REPORT OF STRUCTURAL AND ROCK DIKE MAINTENANCE: The Permittee shall submit an annual report of maintenance activities on structures and rock dikes; this report shall include the berth number(s), the number of piles repaired

or replaced, an estimate of the area and cubic yards of rock dike affected by the maintenance activity. The annual report shall be submitted in January of each year.

2. INTERFERENCE WITH NAVIGATION: The permitted activity shall not interfere with the right of the public to free navigation on all navigable waters of the United States as defined by 33 C.F.R. Part 329.

3. PILES: Creosote treated pilings shall not be placed in navigable waters unless conditions A-E are met. Condition F is required to reduce adverse effects of noise and vibration. Condition G is required to reduce adverse effects on water quality.

A) The project involves the repair of existing structures that were originally constructed using wood products;

B) The creosote treated pilings are wrapped in plastic;

C) Measures are taken to prevent damage to plastic wrapping from boat use. Such measures may include installation of rub strips or bumpers;

D) The plastic wrapping is sealed at all joints to prevent leakage; and

E) The plastic material is expected to maintain its integrity for at least ten years, and plastic wrappings that develop holes or leaks must be repaired or replaced in a timely manner by the Permittee.

F) A soft-start or ramp-up method shall be used during pile driving. Alternative noise-reduction measures (bubble curtain, pipe-in-pipe, or equivalent) may also be used during pile driving to further reduce noise.

G) Turbidity reduction measures shall be implemented when installing or removing piles with a jet device.

4. LIMITATIONS: No other modifications or work shall occur to the structure permitted herein.

5. CLEAN CONSTRUCTION PRACTICES: The Permittee shall discharge only clean construction materials suitable for use in the oceanic environment. The Permittee shall ensure no debris, soil, silt, sand, sawdust, rubbish, cement or concrete washings thereof, oil or petroleum products, hazardous/toxic/radioactive/munitions from construction or dredging or disposal shall be allowed to enter into or placed where it may be washed by rainfall or runoff into waters of the United States. Upon completion of the project authorized herein, any and all excess material or debris shall be completely removed from the work area and disposed of in an appropriate upland site.

6. OBSTRUCTIONS: The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the Corps of Engineers Regulatory Division, to remove, relocate, or alter the

structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

7. U.S. COAST GUARD NOTIFICATION: To ensure navigational safety, the Permittee shall provide appropriate notifications to the U.S. Coast Guard as described below:

Local Notice to Mariners, 11th Coast Guard District

TEL: (510) 437-2980

Email: d11LNM@uscg.mil

Website: <https://www.pacificarea.uscg.mil/Our-Organization/District-11/Prevention-Division/LnmRequest/>

U.S. Coast Guard, District 11, LA-LB Sector

Captain of the Port (COTP)

Email: d11-SMB-SectorLALB-WWM@uscg.mil

A) The Permittee shall notify the U.S. Coast Guard, Commander, 11th Coast Guard District (dpw) and the U.S. Coast Guard, Sector LA-LB (COTP) (contact information shown above), not less than 14 calendar days prior to commencing work and as project information changes. The notification shall be provided by email with at least the following information, transmitted as an attached Word or PDF file:

- 1) Project description including the type of operation (i.e. dredging, diving, construction, etc).
- 2) Location of operation, including Latitude / Longitude (NAD 83).
- 3) Work start and completion dates and the expected duration of operations. The U.S. Coast Guard needs to be notified if these dates change.
- 4) Vessels involved in the operation (name, size and type).
- 5) VHF-FM radio frequencies monitored by vessels on scene.
- 6) Point of contact and 24 -hour phone number.
- 7) Potential hazards to navigation.
- 8) Chart number for the area of operation.
- 9) Recommend the following language be used in the Local Notice to Mariners: "Mariners are urged to transit at their slowest safe speed to minimize wake, and proceed with caution after passing arrangements have been made."

B) The Permittee and its contractor(s) shall not remove, relocate, obstruct, willfully damage, make fast to, or interfere with any aids to navigation defined at 33 C.F.R. chapter I, subchapter C, part 66. Not less than 30 calendar days in advance of operating any equipment adjacent to any aids to navigation that require relocation or removal, the Permittee shall notify, in writing, the Eleventh U.S. Coast Guard District and the Corps Regulatory Division. The Permittee and its contractor(s) are prohibited from relocating or removing any aids to navigation until authorized to do so by the Corps

Regulatory Division and the U.S. Coast Guard.

C) The Permittee is prohibited from establishing private aids to navigation in navigable waters of the United States until authorized to do so by the Corps Regulatory Division and the U.S. Coast Guard. Should the Permittee determine the work requires the temporary placement and use of private aids to navigation in navigable waters of the United States, the Permittee shall submit a request in writing to the Corps Regulatory Division and the U.S. Coast Guard.

D) The COTP may modify the deployment of marine construction equipment or mooring systems to safeguard navigation during project construction. The Permittee shall direct questions concerning lighting, equipment placement, and mooring to the appropriate COTP.

8. COMMENCEMENT AND COMPLETION NOTIFICATION: The Permittee shall notify the Corps Regulatory Division of the date of commencement of work in navigable waters of the United States (within 10 calendar days prior to the start of construction) and completion of the activity (within 10 calendar days following the end of construction); electronic mail notification is preferred.

9. CAULERPA PRE-CONSTRUCTION SURVEY: For maintenance dredging activities, a pre-construction survey of the project area for *Caulerpa* sp. (*Caulerpa*) shall be conducted by a certified *Caulerpa* surveyor in accordance with the *Caulerpa* Control Protocol (see <https://media.fisheries.noaa.gov/2021-12/caulerpa-control-protocol-v5.pdf>) not earlier than 90 calendar days prior to planned construction and not later than 30 calendar days prior to construction. The results of this survey shall be furnished to the Corps Regulatory Division, NOAA Fisheries, and the California Department of Fish and Wildlife (CDFW) at least 15 calendar days prior to initiation of dredging in navigable waters. In the event that *Caulerpa* is detected within the project area, the Permittee shall not commence work until such time as the infestation has been isolated, treated, and the risk of spread is eliminated as confirmed in writing by the Corps Regulatory Division, in consultation with NOAA Fisheries and CDFW.

10. EELGRASS SURVEYS: Prior to each qualifying maintenance event, a pre-construction eelgrass survey should be conducted in accordance with the California Eelgrass Mitigation Policy (CEMP, 2014) (<https://www.fisheries.noaa.gov/resource/document/california-eelgrass-mitigation-policy-and-implementing-guidelines>). Qualifying maintenance events are those involving maintenance dredging or repair or replacement of more than 10 piles, where the activity is in water shallower than -20 feet Mean Lower Low Water, and occurring on the water-side half of a wharf where light conditions would allow for eelgrass growth. Pre-construction survey results must be submitted to the Corps and NOAA Fisheries at least 15 calendar days prior to the scheduled start date for work in waters of the United States. If the pre-construction survey

demonstrates eelgrass presence within 25 feet of the construction footprint, a post-construction survey should be conducted within 30 days of project completion. Should this survey determine impacts, up to two additional annual post-construction surveys may be conducted in accordance with the mapping guidelines in the CEMP. All required post-construction surveys shall be submitted by the Permittee to the Corps and NOAA Fisheries within 30 calendar days of each survey completion date. Based upon the post-construction survey results and in accordance with current regulations and policy, the Corps will determine the need and/or amount of Essential Fish Habitat (EFH) mitigation required to offset adverse impacts to such habitat. The Corps will transmit its determination to the Permittee in writing. Within 60 calendar days of receiving the Corps' determination specifying the need and amount of mitigation, the Permittee shall submit a draft EFH mitigation plan to the Corps for review and approval. The EFH mitigation plan shall be prepared in accordance with current Corps regulations and policy. The Permittee shall fully implement the final EFH mitigation plan as approved by the Corps.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

(x) Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

(x) Section 404 of the Clean Water Act (33 U.S.C. 1344).

(x) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest

decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

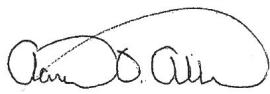


PERMITTEE
Dina Aryan-Zahlan, P.E.
Chief Harbor Engineer

9/29/23

DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



AARON O. ALLEN, PHD
CHIEF NORTH COAST BRANCH
REGULATORY DIVISION

2023.10.10 12:43:33
-07'00'

DATE

ON BEHALF OF:

ANDREW J. BAKER
District Engineer
Colonel, U.S. Army

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFeree

DATE



*LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS*

**NOTIFICATION OF COMMENCEMENT OF WORK
DEPARTMENT OF THE ARMY PERMIT**

Permit Number: *SPL-2022-00686-TS*

Name of Permittee: *Los Angeles Harbor Department, Port of Los Angeles, Chief Harbor Engineer, Dina Aryan-Zahlan, P.E.*

Date of Issuance: *September 29, 2023*

Date work in waters of the U.S. will commence: _____

Estimated construction period (in weeks): _____

Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that I, and the contractor (if applicable), have read and agree to comply with the terms and conditions of the above referenced permit.

Signature of Permittee

Date

At least ten (10) days prior to the commencement of the activity authorized by this permit, sign this certification and email it to theresa.stevens@usace.army.mil or.



LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

**NOTIFICATION OF COMPLETION OF WORK AND
CERTIFICATION OF COMPLIANCE WITH
DEPARTMENT OF THE ARMY PERMIT**

Permit Number: *SPL-2022-00686-TS*

Name of Permittee: *Los Angeles Harbor Department, Port of Los Angeles, Chief Harbor Engineer, Dina Aryan-Zahlan, P.E.*

Date of Issuance: *September 29, 2023*

Date work in waters of the U.S. completed: _____

Construction period (in weeks): _____

Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit.

Signature of Permittee

Date

Upon completion of the activity authorized by this permit, sign this certification and email it to theresa.stevens@usace.army.mil or.

SCOPE OF WORK:

WHARF AND DIKE MAINTENANCE

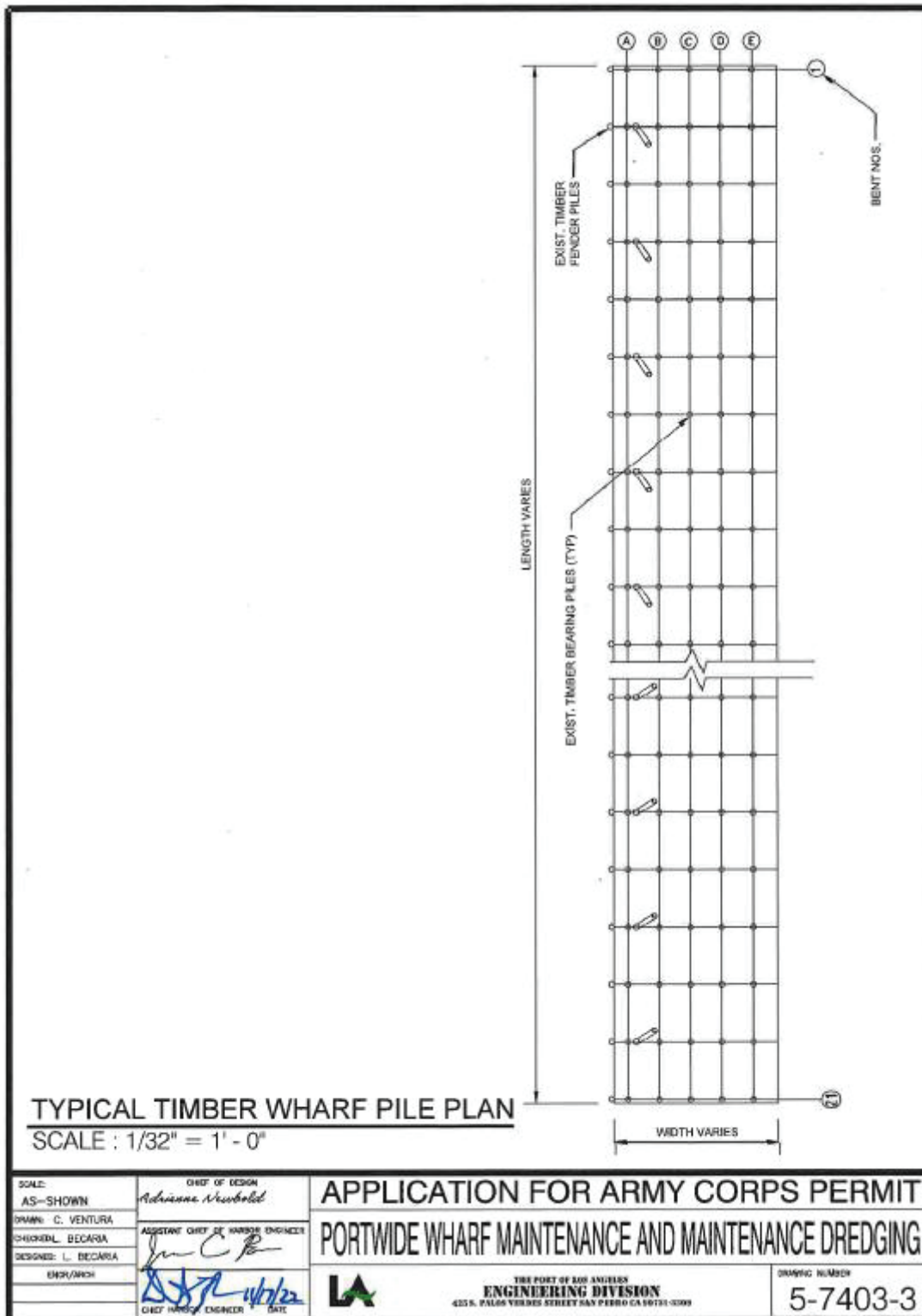
1. PERFORM REPAIRS AND MAINTENANCE OF EXISTING TIMBER AND CONCRETE WHARVES AS SHOWN ON DRAWING 5-7403-2 THROUGH 5-7403-7.
2. REPAIR AND MAINTENANCE TO INCLUDE DECKING, JOISTS, PILE CAPS, MARGINAL BEAMS, FENDER & BEARING PILES, BULLRAILS, AND OTHER WHARF STRUCTURAL MEMBERS.
3. REPAIR CRACKED AND SPALLED SEAWALLS TO ITS ORIGINAL CONDITION.
4. PLACE NEW RIPRAP OVER EXISTING ERODED DIKE TO STABILIZE OR PROTECT EXISTING DIKE. NEW FILLED SLOPE SHALL MATCH ORIGINAL DESIGN SLOPE.
5. NO CONSTRUCTION MATERIAL SHALL BE ALLOWED TO BE DEPOSITED INTO THE WATER OR ONTO THE EXISTING ROCK SLOPE.
6. ALL WORK TO BE COORDINATED WITH TERMINAL OPERATOR AND ADJACENT TENANTS.

MAINTENANCE DREDGING

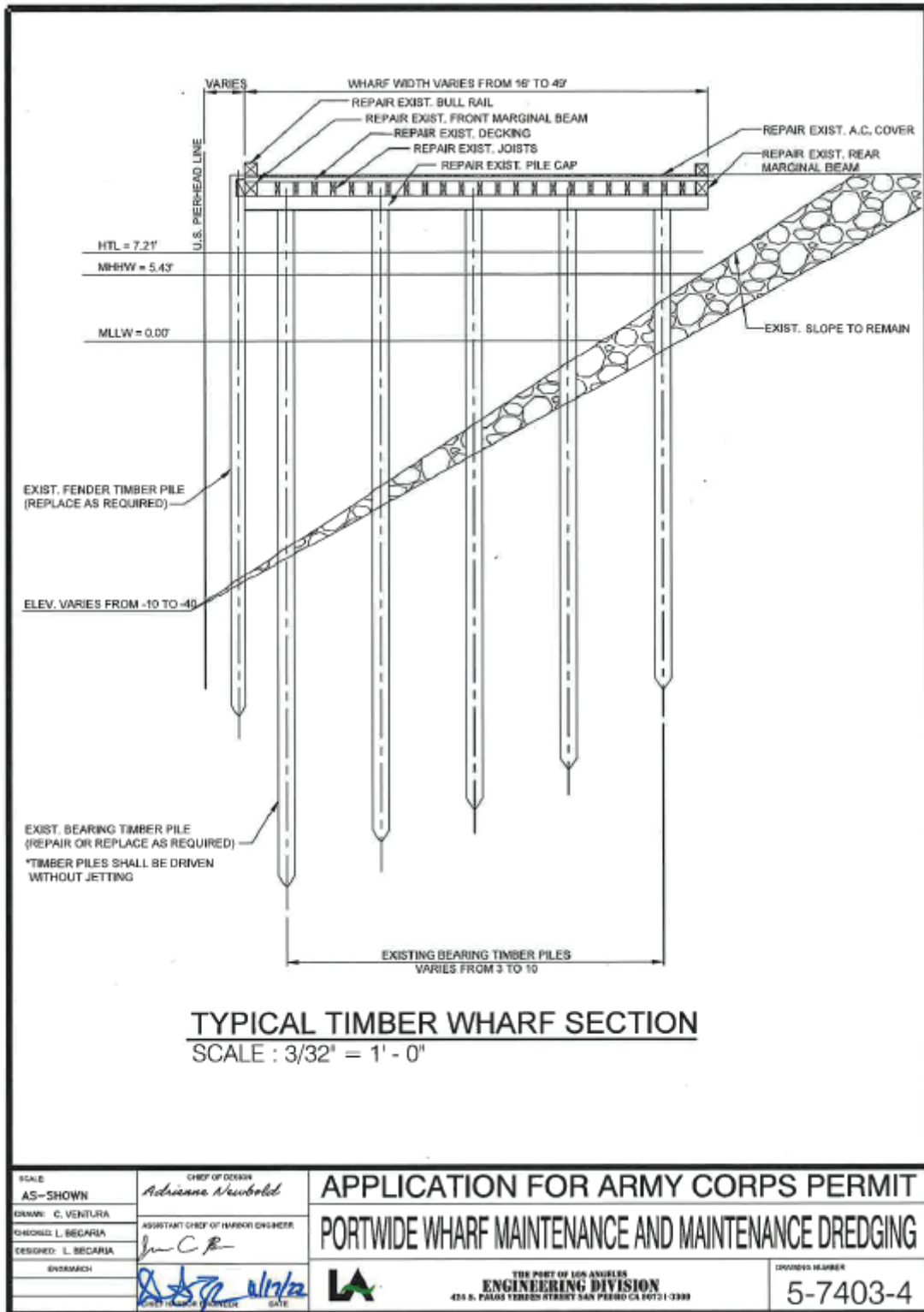
1. MAINTENANCE DREDGING WILL TAKE PLACE AS NEEDED.
2. PERFORM MAINTENANCE DREDGING AT SITES THROUGHOUT THE LOS ANGELES HARBOR TO RESTORE APPROVED DESIGN DEPTHS REDUCED BY SHOALING WITH SEDIMENT.
3. DREDGING WILL BE ACCOMPLISHED BY MEANS OF SIDECASTING, BARGE MOUNTED CLAMSHELL DREDGE, AND/OR BY BUCKET FROM SHORE/WHARF AND KNOCKDOWN DREDGING. THE DISPOSAL LOCATION WILL BE DICTATED BY THE QUALITY OF THE MATERIAL AS INDICATED IN A SEDIMENT CHARACTERIZATION STUDY AND/OR BIOASSAY TESTING. IF THE SEDIMENT IS FOUND TO MEET ENVIRONMENTAL PROTECTION AGENCY'S (EPA) OCEAN DISPOSAL REQUIREMENTS, THE DESIGNATED EPA DUMP SITE "LA-2" OR THE OTHER APPROVED SITE, WILL BE USED FOR OCEAN DISPOSAL. IF EXCAVATED DREDGE SEDIMENTS ARE UNACCEPTABLE FOR OCEAN DISPOSAL, A SUITABLE LAND DISPOSAL SITE WILL BE USED, SUCH AS BERTH 243-245, CONFINED DISPOSAL FACILITY (CDF).
KNOCKDOWN DREDGING INVOLVES THE LEVELING OR SPREADING OF SHOAL OR MOUNDED MATERIAL TO MAINTAIN WATERWAY DEPTHS, RATHER THAN THE DIRECT REMOVAL OF MATERIAL FROM THE WATERWAY.

SCALE: AS-SHOWN	CHIEF OF DESIGN <i>Adrienne Neubold</i>	APPLICATION FOR ARMY CORPS PERMIT	
DRAWN: C. VENTURA	ASSISTANT CHIEF OF HARBOR ENGINEER <i>[Signature]</i>	PORTWIDE WHARF MAINTENANCE AND MAINTENANCE DREDGING	
CHECKED: L. BECARIA			DRAWING NUMBER 5-7403-10
DESIGNED: L. BECARIA			
ENGR/ARCH	<i>[Signature]</i> 1/17/12	THE PORT OF LOS ANGELES ENGINEERING DIVISION 405 S. PALMS YERBEN STREET SAN PEDRO CA 90731-0300	
	CHIEF HARBOR ENGINEER DATE		

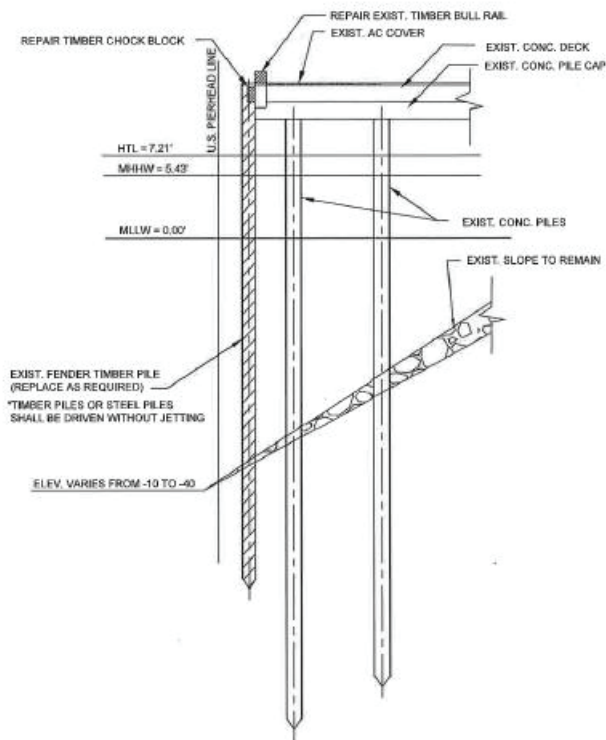
¹ Port of Los Angeles Wharf Maintenance and Maintenance Dredging Scope of Work for Army Corps Permit Application



¹ Port of Los Angeles Typical Timber Wharf Pile Plan View



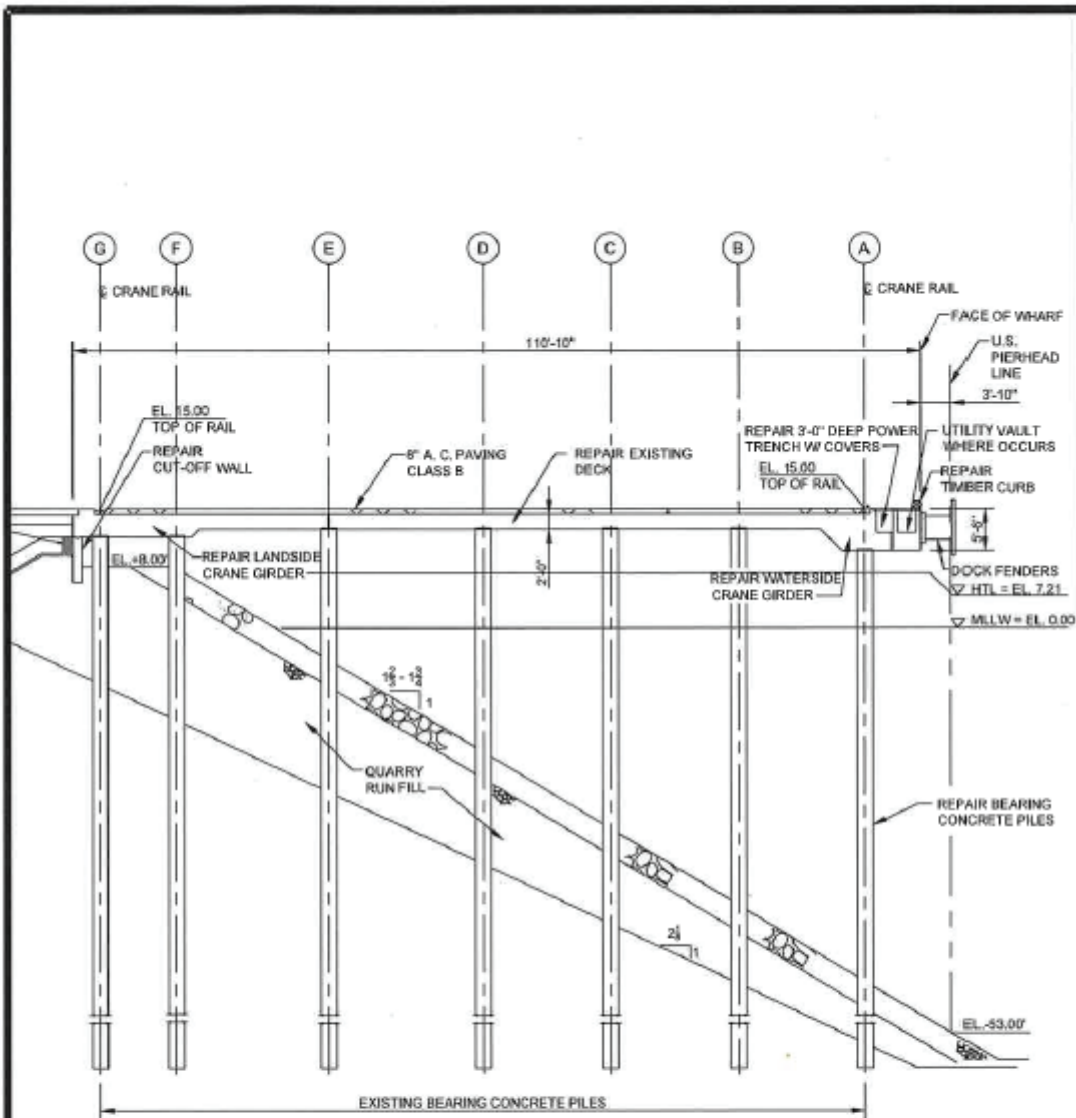
¹ Port of Los Angeles Typical Timber Wharf Cross Section



TYPICAL FENDER PILE AT CONC. WHARF
 SCALE : 3/32" = 1' - 0"

SOLE: AS-SHOWN DRAWN: C. VENTURA CHECKED: BECARIA DESIGNED: L. BECARIA INCH/POUNDS		CHIEF OF DESIGN: <i>Adrianna Newbold</i> ASSISTANT CHIEF OF MAJOR ENGINEER: <i>[Signature]</i> APPLICATION FOR ARMY CORPS PERMIT PORTWIDE WHARF MAINTENANCE AND MAINTENANCE DREDGING
DATE: <i>11/17/12</i> BY: <i>[Signature]</i>	THE PORT OF LOS ANGELES ENGINEERING DIVISION 425 S. VALERIE STREET, LOS ANGELES, CA 90013	DRAWING NUMBER: 5-7403-5

¹ Port of Los Angeles Typical Fender Pile at Concrete Wharf Cross Section

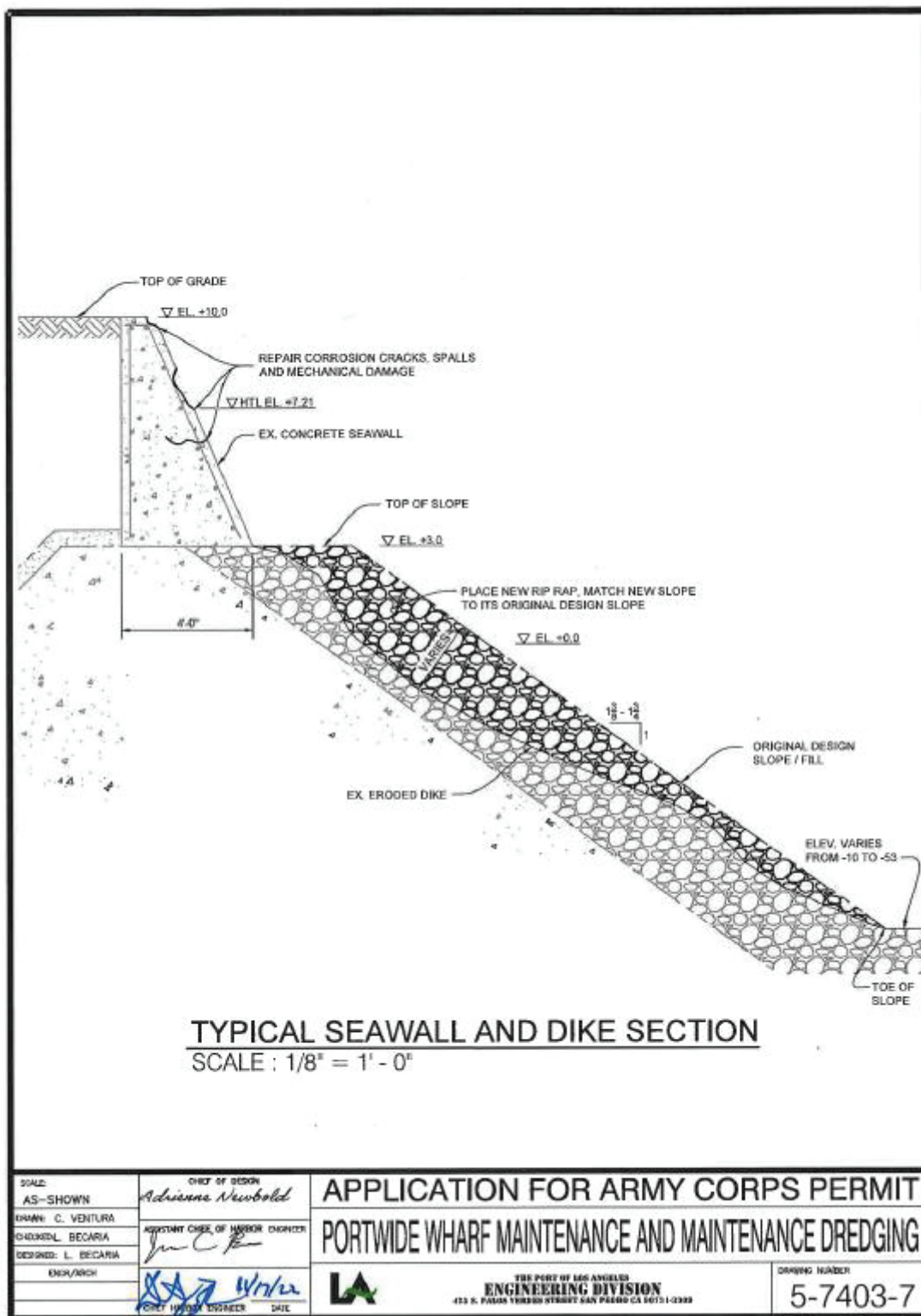


TYPICAL CONCRETE WHARF SECTION

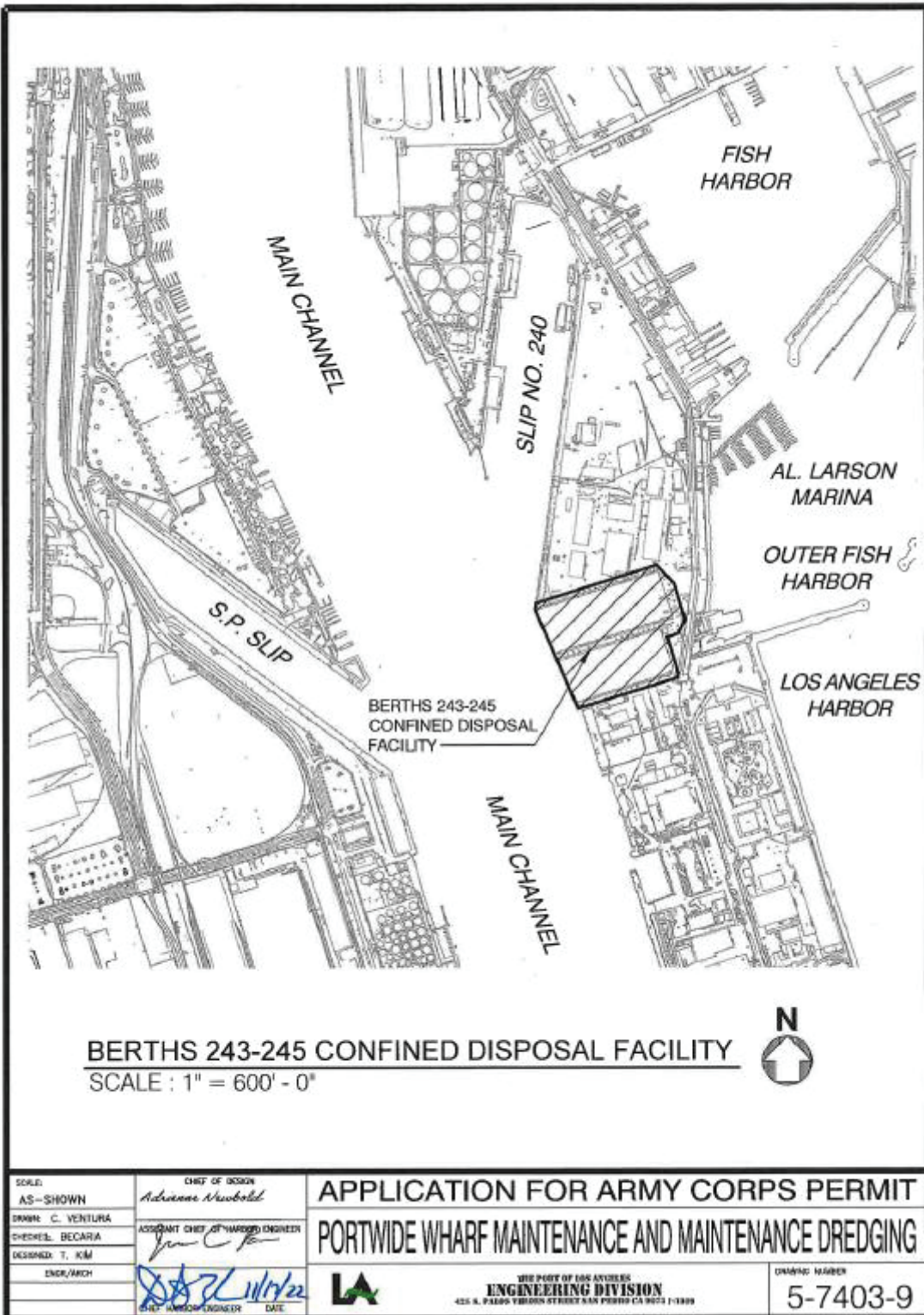
SCALE : 1" = 20'

SCALE: AS-SHOWN	CHIEF OF DESIGN <i>Adrienne Newbold</i>	APPLICATION FOR ARMY CORPS PERMIT	
DRAWN: C. VENTURA	ASSISTANT CHIEF OF DESIGN ENGINEER <i>Jim C. [Signature]</i>	PORTWIDE WHARF MAINTENANCE AND MAINTENANCE DREDGING	
CHECKED: BECARIA			
DESIGNED: L. BECARIA			
ENGR/ARCH	<i>[Signature]</i> 11/17/22		
	ENGINEER DATE	 THE PORT OF LOS ANGELES ENGINEERING DIVISION 406 A. PALMS YARDS STREET SAN PEDRO CA 90731-3399	
		DRAWING NUMBER 5-7403-6	

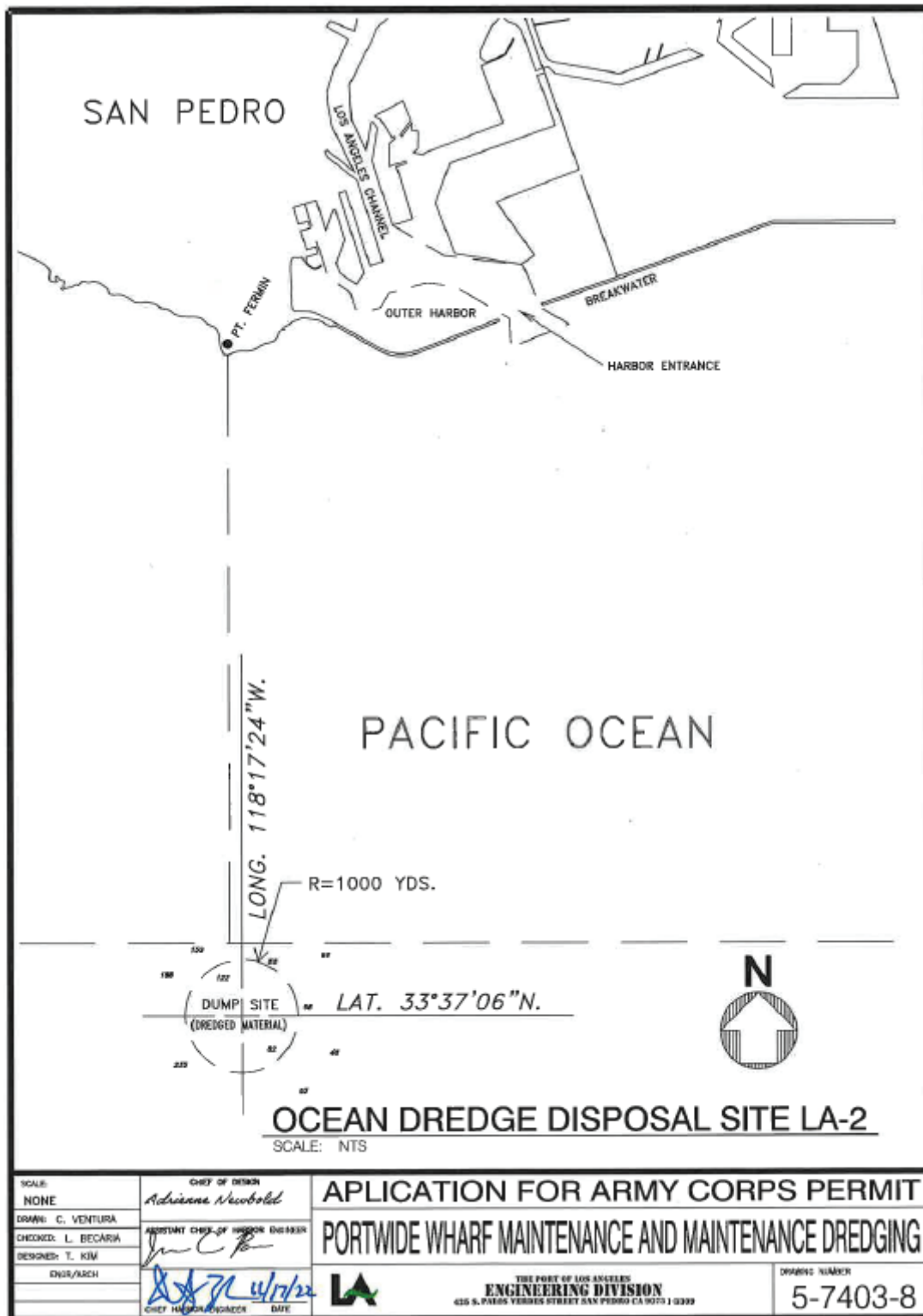
¹ Port of Los Angeles Typical Concrete Wharf Cross Section



¹ Port of Los Angeles Typical Seawall and Dike Cross Section



¹ Port of Los Angeles Berths 243-245 Confined Disposal Facility



POLARIS_VERT_12/98

¹ U.S. EPA Ocean Dredge Material Disposal Site LA-2 Location Map (latitude: 33 degrees 37 minutes 06 seconds North / longitude: -118 degrees 17 minutes 24 seconds West)

APPENDIX "F"

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD (LARWQCB) CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER



Los Angeles Regional Water Quality Control Board

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER

Effective Date: September 19, 2023

Program Type: Dredging and Fill/Excavation

Regulatory Measure ID:	452165
Place ID:	887519
WDID:	4WQC40123078
USACOE#:	SPL-2022-00686
R4 File No:	23-078

Project Type: Boating and Navigation

Project: Port of Los Angeles Wharf Maintenance and Maintenance Dredging (Project)

Applicant: Port of Los Angeles

Applicant Contact: Dina Aryan-Zahlan
Chief Harbor Engineer
Port of Los Angeles
425 S. Palos Verdes Street
San Pedro CA 90731
Phone: (310) 732-3804
Email: Daryan-zahlan@portla.org

Applicant's Agent: Lily Becaria
Civil Engineer
425 S. Palos Verdes Street
San Pedro CA 90731
Phone: (310) 732-3669
Email: lbecaria@portla.org

Water Board Staff: Emily Duncan
Senior Environmental Scientist
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
Phone: 213-576-6679
Email: Emily.Duncan@waterboards.ca.gov

Water Board Contact Person:

If you have any questions, please call the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) Staff listed above or (213) 576-6600 and ask to speak with the Water Quality Certification and Wetlands Unit Program Manager. When corresponding via email, please include our general email: RB4-401Certification@waterboards.ca.gov.

NORMA CAMACHO, CHAIR | SUSANA ARREDONDO, EXECUTIVE OFFICER

320 West 4th Street, Suite 200, Los Angeles, CA 90013 | www.waterboards.ca.gov/losangeles

Table of Contents

I.	Order	3
II.	Public Notice	3
III.	Project Purpose	3
IV.	Project Description	3
V.	Project Location	5
VI.	Project Impact and Receiving Waters Information	6
VII.	Description of Direct Impacts to Waters of the State	6
VIII.	Avoidance and Minimization	7
IX.	Compensatory Mitigation	7
X.	California Environmental Quality Act (CEQA)	7
XI.	Petitions for Reconsideration	7
XII.	Fees Received	7
XIII.	Findings	8
XIV.	Conditions	9
XV.	Water Quality Certification	16
Attachment A	Maps	
Attachment B	Signatory Requirements	
Attachment C	Report and Notification Requirements	
Attachment D	40 CFR Part 121.7 Compliance	
Attachment E	Locations where maintenance repair activities may be conducted	

I. Order

This Clean Water Act (CWA) section 401 Water Quality Certification action and Order (Order) is issued at the request of Dina Aryan-Zahlan and the Port of Los Angeles (hereinafter Permittee) for the Project. This Order is for the purpose described in the application and supplemental information submitted by the Permittee. The application was received on April 5, 2023. The application was deemed complete on June 21, 2023.

The Applicant submitted a certification request as defined by 40 CFR section 121.5 concurrently to the Los Angeles Water Board and the U.S. Army Corps of Engineers (Corps) on April 5, 2023. In response to the certification request, the Corps provided a reasonable period of time as defined by 40 CFR 121.6 for the Water Board to act on the request by September 19, 2023.

II. Public Notice

The Los Angeles Water Board provided public notice of the application pursuant to California Code of Regulations, title 23, section 3858 from April 7, 2023 to the effective date of the Order. The Los Angeles Water Board did not receive any comments during the comment period.

III. Project Purpose

The purpose of the Project is threefold 1) to maintain the navigable capacity of waterways within the Port; 2) to facilitate routine, in-kind maintenance of marine structures (e.g. wharves, dikes, and bulkheads); and 3) to beneficially reuse dredged sediment when appropriate.

IV. Project Description

The Port of Los Angeles has previously been authorized maintenance dredging under Order No. R4-2018-0139 (File No. 16-135) and maintenance wharf repairs under CWA section 401 Water Quality Certification, 4WQC40117135 (File No. 17-135). The maintenance dredging permit allowed for up to 150,000 cubic yards (cy) of sediment annually, not to exceed 750,000 cy over the 5-year period. The wharf repairs permit allowed for structural maintenance and repair activities within the harbor for all berths and areas listed in the certification. This certification will authorize POLA to conduct both activities (dredging and wharf repairs) in one 10-year certification.

Maintenance Dredging

The Port of Los Angeles will dredge up to a maximum of 150,000 cubic yards per calendar year for a total maximum volume of 1,500,000 cubic yards over a 10-year period from all the berth areas in the Los Angeles Harbor that may require maintenance. Dredging will be accomplished through use of a clamshell dredge (barge mounted, or by bucket from the shore or wharf) and knockdown dredging.

The disposal options for each dredging project will be dictated by the quality of the dredged material as indicated by a sediment characterization study and will be determined by the Southern California Dredged Material Management Team (SCDMMT), which includes, but is not limited to, the Los Angeles Water Board, the California Coastal Commission, the USEPA and the Corps. A sediment characterization study typically consists of sediment sample collection, grain size analysis, chemical analysis (including sediment chemistry, tissue chemistry and elutriate testing), and biological testing (including solid and suspended particulate phase toxicity testing, and bioaccumulation potential analysis) as outlined in regulatory guidance documents, such as *Evaluation of Dredged Material Proposed for Ocean disposal*, also known as the "Green Book" (USEPA and USACE, 1991) and the *Inland Testing Manual* (USEPA and USACE, 1998). However, the requirements for specific analysis or testing are usually driven by the proposed disposal option. For example, biological testing is

normally required when the dredged material is proposed to be disposed of at an ocean disposal site, a temporary aquatic storage site, or a confined aquatic disposal (CAD) site. If the dredged material is deemed suitable for ocean disposal, the material will be disposed of at the offshore LA-2 ocean disposal site. The LA-2 ocean disposal site is a USEPA designated site that is currently managed at an annual disposal capacity of 1 million cubic yards for the ocean disposal of dredged material from the Los Angeles County and Orange County regions. The site is located approximately 6.8 miles offshore from the entrance to the Port of Los Angeles in federal waters. If the dredged material is deemed unsuitable for ocean disposal, the material will be disposed of within the Berths 243-245 Confirmed Disposal Facility (CDF) located within Los Angeles Harbor, or at another suitable land disposal site deemed appropriate by the SCDMMT. Maintenance dredge materials in the Los Angeles Harbor are typically composed of fine silts and clays, with generally no more than 25% sand. However, should testing indicate that the dredged material is composed of at least 80% sand and deemed suitable to beach nourishment, the material will be disposed of at Outer Cabrillo Beach as another disposal option.

The Port of Los Angeles will conduct a sediment characterization study prior to proposed maintenance dredging operations for evaluation of the suitability of the material for beneficial re-use and selection of a suitable disposal alternative. A sampling and Analysis Plan (SAP) for each sediment characterization study will be submitted to the SCDMMT for approval. A Sampling and Analysis Report (SAR) for each sediment characterization study will be presented to and discussed at the SCDMMT meetings, where the disposal options of the dredged material will be determined. The Port of Los Angeles shall submit all documents to the Los Angeles Water Board for staff review prior to each dredging event.

The Port of Los Angeles may use 'knockdown' dredging to supplement routine maintenance dredging. Within the port, there are times when the prop wash from the large propellers of commercial vessels creates isolated high spots near the berths. These localized high spots usually consist of less than one to two feet of accumulated sediment, often very close to the edge of the wharf and spread over a wide area. To address these localized high spots, "knockdown" dredging is a commonly used. It involves the leveling or spreading of shoaled or mounded material to maintain waterway depths, rather than the direct removal of material from the waterway. This activity typically involves employing an I-beam or other similar equipment which is towed by a boat across a shoal or mound in order to redistribute the sediment into adjacent deeper areas within the project area. This equipment can be mobilized more quickly and much more inexpensively than normal dredging equipment. The option to use "knockdown" dredging or grading of underwater shoals to supplement routine maintenance dredging activities would provide the Port of Los Angeles with a more efficient, cost-effective means to deal with localized shoaling events while maintaining the safe navigation and berthing of vessels.

In addition to using a drag beam- an I-beam, rake, cutting edge, or similar fixed object, the Port of Los Angeles may use another "knockdown" dredging technique using a clamshell bucket or excavator to sweep the bottom surface to knock down high spots. This method would be used to remove high spots near piles or other wharf structures where the use of a drag beam is not feasible. A clamshell bucket, excavator or similar equipment also may be used to collect and move shoaled material near the bottom (without lifting out of the water column) for placement in a lower nearby area within the approved project boundary.

Small knockdowns can reduce the need for and frequency of maintenance dredging and may have fewer environmental effects than traditional dredging (less turbidity is produced by knockdowns,

since sediments remain localized near the bottom, rather than being raised through the water column and removed at the surface as is the case with dredging, which can generate large turbidity plumes). In addition, since the knockdown process simply redistributes shoaled or mounded material within the normal dredging footprint of a berth, the material would be removed in the future when full dredging is required.

The Port of Los Angeles will also conduct a pre-knockdown study prior to each knockdown dredging operation to assess the quality of the sediments. A SAP for each pre-knockdown study will be submitted to the SCDMMT for approval. For each pre-knockdown study, the Port of Los Angeles proposes to collect one sample per 500 linear feet of knockdown area along a wharf face and per 250 feet offshore. Elutriate testing will be performed for each sample. A SAR for each pre-knockdown study will also be presented to and discussed at the SCDMMT monthly meetings, where the scope of the knockdown operation will be approved. No receiving water monitoring will be required during knockdown dredging since the limited magnitude (less than 2000 cubic yards) and short duration of the activity is not expected to produce adverse water quality impacts. The Port of Los Angeles has proposed several criteria and guidelines that must be met to use "knockdown" dredging: 1) limited to a maximum of 15,000 cubic yards of material per year; 2) total volume for each event limited to a maximum of 2,000 cubic yards; and 3) cannot be performed in the same area more than once per year. POLA shall submit documents to the Los Angeles Water Board for staff review and written approval for each knockdown dredging project.

Wharf Maintenance

Wharf maintenance includes scheduled repair, emergency repair, and routine maintenance of existing timber and concrete wharves. Specifically, it includes in-kind replacement of decking, joists, pile caps, marginal beams, bull rails, pile wraps, deteriorated bearing piles made of concrete, timber or steel, fender piles, and other wharf structural members that are damaged and require repair or replacement. Creosote piles will typically be replaced with Ammoniacal Copper Zinc Arsenate (ACZA) treated timber piles. Creosote-treated pilings shall not be placed within the Port of Los Angeles unless all of the following conditions are met: 1) the project involves the repair of existing structures that were originally constructed using wood products; 2) the creosote-treated pilings are wrapped in plastic; 3) measures are taken to prevent damage to plastic wrapping from boat use. Such measures may include installation of rub strips or bumpers; 4) the plastic wrapping is sealed at all joints to prevent leakage; and 5) the plastic material is expected to maintain its integrity for at least ten years, and plastic wrappings that develop holes or leaks must be repaired or replaced in a timely manner by the permittee.

Also, the wharf maintenance program includes the repair of damaged seawalls to the original condition and restoration of eroded revetment or rock dike by placing new, clean riprap over existing eroded dike in order to stabilize or protect existing dike. The slope of the new fill will match the original design slope and elevations.

Repairs will be conducted as the need arises. Based on previous wharf maintenance, it is estimated that the maximum cumulative project area will be approximately 14.96 acres. This area was calculated by calculating the average in-water work area next to the wharf (0.17 acres) and multiplying that by the number of projects in 10 years (88 projects). The area also includes the project area of possible dike and seawall repairs that may be performed over the water.

V. Project Location

The project is located in the Port of Los Angeles. Maps and Figures showing the Project location are found in Attachment A of this Order. Specific locations within the Port of Los Angeles where maintenance may be conducted are listed in Attachment E of this Order.

VI. Project Impact and Receiving Waters Information

The Project is located within the jurisdiction of the Los Angeles Water Board. Receiving waters and groundwater potentially impacted by this Project are protected in accordance with the applicable water quality control plan (Basin Plan) for the region and other plans and policies which may be accessed online at: http://www.waterboards.ca.gov/plans_policies/. The Basin Plan includes water quality standards, which consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies.

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet contaminant levels designed to protect human health and ensure that water is safe for domestic use.

Receiving Water: Los Angeles – Long Beach Harbors: Outer Harbor and All Other Inner Areas
(Hydrologic Unit Code: 180701060703)

Designated Beneficial Uses: IND, NAV, POW, REC-1, REC-2, COMM, MAR, RARE, SHELL

VII. Description of Direct Impacts to Waters of the State

Total Project dredge and fill/excavation quantities for all impacts are summarized in Tables 1 and 2. Permanent impacts are categorized as those resulting in a physical loss in area and also those degrading ecological condition only.

Table 1: Total Project Dredge Quantity									
Aquatic Resource Type	Temporary Impact ¹			Permanent Impact					
				Physical Loss of Area			Degradation of Ecological Condition Only		
	Acres	CY ²	LF	Acres	CY	LF	Acres	CY	LF
Ocean/bay/estuary		150,000 per year							

Table 2: Total Project Fill/Excavation Quantity		
Aquatic	Temporary Impact ³	Permanent Impact

¹ Includes only temporary direct impacts to waters of the state and does not include upland areas of temporary disturbance which could result in a discharge to waters of the state. Temporary impacts, by definition, are restored to pre-project conditions and therefore do not include a physical loss of area or degradation of ecological condition.

² Cubic Yards (CY); Linear Feet (LF)

Table 2: Total Project Fill/Excavation Quantity									
Resource Type				Physical Loss of Area			Degradation of Ecological Condition Only		
	Acres	CY ⁴	LF	Acres	CY	LF	Acres	CY	LF
Ocean/bay/estuary	14.96								

VIII. Avoidance and Minimization

No alternatives analysis is required because the Project has no permanent impacts to aquatic resources and no impacts to rare, threatened or endangered species habitat in waters of the state, wetlands, eelgrass beds, Outstanding National Resources Waters or Areas of Special Biological Significance.

IX. Compensatory Mitigation

No compensatory mitigation was required for impacts because all impacts are temporary in nature and are for routine maintenance activities.

If eelgrass is detected in a survey conducted prior to dredging and/or maintenance activities impacts to eelgrass shall be mitigated in accordance with the California Eelgrass Mitigation Policy (CEMP).

X. California Environmental Quality Act (CEQA)

The Los Angeles Water Board has determined that the Project is exempt from review under CEQA pursuant to California Water Code of Regulations, title 14, section 15061. Specifically, the issuance of this Order and the activities described herein meet the exemption criteria under California Code of Regulations title 14, section(s) 15301 existing facilities, 15302 replacement or reconstruction, or 15304, minor alterations to land. Additionally, the Los Angeles Water Board concludes that no exceptions to the CEQA exemption apply to the activities approved by this Order.

XI. Petitions for Reconsideration

Any person aggrieved by this action may petition the State Water Board to reconsider this Order in accordance with California Code of Regulations, title 23, section 3867. A petition for reconsideration must be submitted in writing and received within 30 calendar days of the issuance of this Order.

XII. Fees Received

The fee amount for the proposed project has been determined as required by California Code of Regulations, title 23, sections 3833(b)(3) and 2200(a)(3), and was calculated as Fill and Excavation Discharges and Dredging Discharges, with the dredge and fill fee calculator.

(footnote continued from previous page)

³ Includes only temporary direct impacts to waters of the state and does not include upland areas of temporary disturbance which could result in a discharge to waters of the state.

⁴ Cubic Yards (CY); Linear Feet (LF)

Table 3: Record of Fees Received		
Date Received	Check No.	Amount
June 2, 2023	0301283094	\$2,734.00
		\$234,456 (not received at time of Order issuance)
	Total	

XIII. Findings

1. This Order is adopted pursuant to section 401 of the Clean Water Act and the California Porter-Cologne Water Quality Control Act (Cal. Water Code § § 13000, et seq.). Discharges to waters of the state are prohibited except when in accordance with Water Code section 13264. Notwithstanding any determinations made by the U.S. Army Corps or other federal agency pursuant to 40 C.F.R. section 121.9, dischargers must comply with the entirety of this Order because the Order also serves as waste discharge requirements in accordance with State Water Board Water Quality General Order No. 2003-0017-DWQ.
2. Failure to comply with any condition of this Order shall constitute a violation of the Porter-Cologne Water Quality Control and the Clean Water Act. The Permittee and/or discharger may then be subject to administrative and/or civil liability pursuant to Water Code section 13385.
3. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law.
4. In response to a suspected violation of any condition of this Order, the Water Board may require the holder of this Order to furnish, under penalty of perjury, any technical or monitoring reports the Water Boards deem appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The additional monitoring requirements ensure that permitted discharges and activities comport with any applicable effluent limitations, water quality standards, and/or other appropriate requirement of state law.
5. This Order and all of its conditions contained herein continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project.
6. This Order does not provide coverage under the Construction General Permit. As applicable, dischargers shall maintain compliance with conditions described in, and required by, the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-009-DWQ; NPDES No. CAS000002 as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto) (General Construction Permit). Enrollment in the Construction General Permit may be required for construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development or sale. For projects with ground disturbing activities that require enrollment in the Construction General Permit, dischargers shall maintain compliance with conditions described in, and required by the Permit. For ground disturbing activities that do

not require enrollment in Order No. 2009-0009-DWQ, project plans included with the application shall include appropriate erosion and sediment control measures as described in the *Best Management Practices* Section (Stormwater subsection) below.

7. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Wildlife Code, sections 2050-2097) or the federal Endangered Species Act (16 U.S.C. sections 1531-1544). If a “take” will result from any act authorized under this Order held by the discharger, the discharger must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The discharger is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.
8. This Order includes monitoring and reporting requirements pursuant to Water Code section 13267. The burden of preparing these reports, including costs, are reasonable to the need and benefits of obtaining the reports. The reports confirm that the best management practices required under this Order are sufficient to protect beneficial uses and water quality objectives. The reports related to accidental discharges also ensure that corrective actions, if any, that are necessary to minimize the impact or clean up such discharges can be taken as soon as possible. The anticipated costs are minimal as the reporting obligations require only visual monitoring, in-field measurements, and notification reporting.

XIV. Conditions

The Los Angeles Water Board has independently reviewed the record of the Project to analyze impacts to water quality and designated beneficial uses within the watershed of the Project. In accordance with this Order, the Permittee may proceed with the Project under the following terms and conditions. This Order provides reasonable assurance that the Project authorized under this Order will comply with state and federally approved water quality requirements, provided that the following conditions are adhered to.

A. Authorization

Impacts to waters of the state shall not exceed quantities shown in Tables 1 and 2.

B. Reporting and Notification Requirements

Requirements for the content of these reporting and notification types are detailed in Attachment C, including specifications for photo and map documentation during the Project. Written reports and notifications must be submitted using the Reporting and Notification Cover Sheet located in Attachment C, which must be signed by the Permittee or an authorized representative.

1. Project Reporting

- a. **Annual Reporting:** The Permittee shall submit an Annual Report each year by December 31st. Annual Reporting requirements are detailed in Attachment C. Annual reporting shall continue until a Notice of Project Complete Letter is issued to the Permittee.

2. Project Status Notifications

- a. **Commencement of Construction:** The Permittee shall submit a Commencement of Construction Report at least seven (7) days prior to start of initial ground disturbance activities.
 - b. **Notice of Completion of an Eelgrass Survey:** The Permittee shall submit an eelgrass survey per the California Eelgrass Mitigation Policy (CEMP) that will be conducted at a maximum of sixty (60) days prior to the commencement of in water construction activities. The survey will be reviewed by Los Angeles Water Board staff within two weeks following submission. The Permittee shall not begin construction before approval of the eelgrass survey by the Los Angeles Regional Water Board.
 - c. **Request for Notice of Completion of Discharges Letter:** The Permittee shall submit a Request for Notice of Completion of Discharges Letter following completion of active Project construction activities, including any required restoration and permittee-responsible mitigation. This request shall be submitted to Los Angeles Water Board staff within thirty (30) days following completion of all Project construction activities. Upon acceptance of the request, Los Angeles Water Board staff shall issue a Notice of Completion of Discharges Letter to the Permittee, which will end the active discharge period and associated annual fees.
 - d. **Request for Notice of Project Complete Letter:** The Permittee shall submit a Request for Notice of Project Complete Letter when construction and/or any post-construction monitoring is complete,⁵ and no further Project activities will occur. This request shall be submitted to Los Angeles Water Board staff within thirty (30) days following completion of all Project activities. Upon approval of the request, Los Angeles Water Board staff shall issue a Notice of Project Complete Letter to the Permittee which will end the post discharge monitoring period and associated annual fees.
3. **Conditional Notifications and Reports:** The following notifications and reports are required as appropriate.
- a. **Accidental Discharges of Hazardous Materials⁶**

Following an accidental discharge of a reportable quantity of a hazardous material, sewage, or an unknown material, the following applies (Wat. Code, § 13271):

- i. As soon as (A) the Permittee has knowledge of the discharge or noncompliance, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures then:
 - first call – 911 (to notify local response agency)
 - then call – Office of Emergency Services (OES) State Warning Center at:

⁵ Completion of post-construction monitoring shall be determined by Los Angeles Water Board staff and shall be contingent on successful attainment of restoration and mitigation performance criteria.

⁶ "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. (Health & Saf. Code, § 25501.)

(800) 852-7550 or (916) 845-8911

Lastly, follow the required OES procedures as set forth in the [Office of Emergency Services' Accidental Discharge Notification Web Page](https://www.caloes.ca.gov/office-of-the-director/operations/response-operations/fire-rescue/hazardous-materials/spill-release-reporting/)

(<https://www.caloes.ca.gov/office-of-the-director/operations/response-operations/fire-rescue/hazardous-materials/spill-release-reporting/>)

- ii. Following notification to OES, the Permittee shall notify the Los Angeles Water Board, as soon as practicable (ideally within 24 hours). Notification may be via telephone, e-mail, or delivered written notice.
- iii. Within five (5) working days of notification to the Los Angeles Water Board, the Permittee must submit an Accidental Discharge of Hazardous Material Report.

b. Violation of Compliance with Water Quality Standards: The Permittee shall notify the Los Angeles Water Board of any event causing a violation of compliance with water quality standards. Notification may be via telephone, e-mail, or delivered written notice.

- i. Examples of noncompliance events include: lack of any reporting in a timely manner, lack of storm water treatment following a rain event, discharges causing a visible plume in a water of the state, water contact with uncured concrete, and exceedances of limits for the analytes for *In-Water Work or Diversions* listed below.
- ii. This notification must be followed within three (3) working days by submission of a Violation of Compliance with Water Quality Standards Report.

c. In-Water Work or Diversion

- i. During in-water work, water quality monitoring shall be conducted. Requirements for water quality monitoring are below.

d. Modifications to Project: Project modifications may require an amendment of this Order. The Permittee shall give advance notice to Los Angeles Water Board staff if Project implementation as described in the application materials is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority by submitting a Modifications to Project Report. The Permittee shall inform Los Angeles Water Board staff of any Project modifications that will interfere with the Permittee's compliance with this Order.

e. Transfer of Property Ownership: This Order is not transferable in its entirety or in part to any person or organization except after receiving certification for the Project from the Los Angeles Water Board. In addition:

- i. The Permittee must notify the Los Angeles Water Board of any change in ownership or interest in ownership of the Project area by submitting a Transfer of Property Ownership Report. The Permittee and purchaser must sign and date the notification and provide such notification to the Los Angeles Water Board at least 30 days prior to the transfer of ownership.
- ii. Until such time as a new Order has been issued, the Permittee shall continue to be responsible for all requirements set forth in this Order.

- f. Transfer of Long-Term BMP Maintenance:** If maintenance responsibility for post-construction BMPs such as debris basins is legally transferred, the Permittee must submit to the Los Angeles Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer or designer specifications. The Permittee must provide such notification to the Los Angeles Water Board with a Transfer of Long-Term BMP Maintenance Report at least 10 days prior to the transfer of BMP maintenance responsibility.

C. Water Quality Monitoring

- 1. General:** If surface water is present, continuous visual surface water monitoring shall be conducted to detect accidental discharge of construction related pollutants (e.g., oil and grease, turbidity plume, or uncured concrete).
- 2. Accidental Discharges/Noncompliance:** Upon occurrence of an accidental discharge of hazardous materials or a violation of compliance with a water quality standard, Los Angeles Water Board staff may require water quality monitoring based on the discharge constituents and/or related water quality objectives and beneficial uses.

3. In-Water Work or Diversions:

During planned work in water, any discharge(s) to waters of the state shall conform to the following water quality standards:

- a. Oil and Grease.** Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
- b. Dissolved Oxygen.** At a minimum, the mean annual dissolved oxygen concentration of all waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.

For that area known as the Outer Harbor area of Los Angeles-Long Beach Harbors, the mean annual dissolved oxygen concentrations shall be 6.0 mg/L or greater, provided that no single determination shall be less than 5.0 mg/L

- c. pH.** The pH of bays or estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge.
- d. Turbidity.** Downstream TSS shall be maintained at ambient levels. Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

Water quality monitoring is required for all maintenance dredging projects and wharf maintenance projects involving the removal or replacement of 10 or more piles. Sampling shall be conducted in accordance with Table 4 sampling parameters.⁷

Table 4: Sample Type and Frequency Requirements			
Parameter	Unit of Measurement	Type of Sample	Minimum Frequency
Oil and Grease	N/A	Visual	Continuous
Dissolved Oxygen	mg/L	Grab or CTD	Daily for the first week, weekly, thereafter
pH	Standard Units	Grab or CTD	Daily for the first week, weekly, thereafter
Turbidity	% light transmittance	Grab or CTD	Daily for the first week, weekly, thereafter
Temperature	°F (or as °C)	Grab or CTD	Daily for the first week, weekly, thereafter

A reference station shall be established outside of the project influence, at least 300 feet from the Project Boundary. The Reference station is to be monitored concurrently with project station monitoring. Project station sampling shall take place at a minimum of two locations. Project station data will be compared to reference station data to determine compliance for water quality parameters (4 locations total). Results of the analyses shall be submitted to this Regional Board by the 15th day of each subsequent sampling month. A map or drawing indicating the locations of sampling points shall be included with each submittal. A summary of results shall discuss the analysis and compliance. Every measurement not meeting the compliance limits shall be accompanied by an explanation, the actions taken to correct the degradation to waters, and addressed in *Violation of Compliance with Water Quality Standards* report described above.

D. Standard Conditions

1. This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330, and California Code of Regulations, title 23, chapter 28, Article 6 commencing with sections 3867-3869, inclusive. Additionally, the Los Angeles Water Board reserves the right to suspend, cancel, or modify and reissue this Order, after providing notice to the Permittee, if the Los Angeles Water Board determines that: the Project fails to comply with any of the conditions of this Order; or, when necessary to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, §

⁷ Pollutants shall be analyzed using the analytical methods described in 40 Code of Federal Regulations Part 136; where no methods are specified for a given pollutant, the method shall be approved by Los Angeles Water Board staff. Grab samples shall be taken between the surface and mid-depth and not be collected at the same time each day to get a complete representation of variations in the receiving water. Measurements with a Conductivity, Temperature and Depth (CTD) tool shall be taken throughout the water column, at a minimum of 2-meter increments. An average of surface to mid-depth readings shall be reported. A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring shall be maintained onsite.

13000 et seq.) or federal Clean Water Act section 303 (33 U.S.C. § 1313). For purposes of Clean Water Act section 401(d), the condition constitutes a limitation necessary to assure compliance with water quality standards and appropriate requirements of state law.

2. This Order is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to subsection 3855(b) of chapter 28, title 23 of the California Code of Regulations, and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. This Order is conditioned upon total payment of any fee required under title 23 of the California Code of Regulations and owed by the Permittee.

E. General Compliance

1. Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses for receiving waters as adopted in the Basin Plans by any applicable Los Angeles Water Board or any applicable State Water Board (collectively Water Boards) water quality control plan or policy. The source of any such discharge must be eliminated as soon as practicable.
2. Authorization under this Order is granted based on the application information submitted, including engineering plans, specifications, and technical reports. Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order.

F. Administrative

1. Signatory requirements for all document submittals required by this Order are presented in Attachment B of this Order.
2. The Permittee shall grant Los Angeles Water Board staff, or an authorized representative (including an authorized contractor acting as a Water Board representative), upon presentation of credentials and other documents as may be required by law, permission to:
 1. Enter upon the Project or compensatory mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records are kept.
 2. Have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order.
 3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
 4. Sample or monitor for the purposes of assuring Order compliance.
3. A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall remain at the Project site for the duration of this Order. The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors.

4. A copy of this Order must be available at the Project site(s) during construction for review by site personnel and agencies. All personnel performing work on the Project shall be familiar with the content of this Order and its posted location at the Project site.
5. This Order shall expire ten (10) years from date of this Order. The Applicant shall submit a complete application at least 90 days prior to termination of this Order if renewal is requested.

G. Best Management Practices

1. Dredging

- a. BMPs shall be implemented to minimize the suspension of sediments and disturbance of the substrate when performing maintenance dredging and structure maintenance. Appropriate BMPs shall be implemented for individual maintenance projects and could include measures such as use of silt curtains and floating booms, adjustment of dredge bucket cycle time, preventing overflow of sediment from barges, avoiding overdredging, and containing and removing construction debris from the project area promptly.
- b. Sediments shall be sampled and analyzed prior to dredging activities and presented to the Southern California Dredged Material Management Team to determine the suitability of the proposed placement site.

2. Site Management

- a. Earth, construction materials, sediments, trash, construction-related wastes, other potential pollutants, or stockpiles of these materials shall not be transported by wind or blower.
- b. Concrete waste shall be retained on-site until they can be appropriately disposed or recycled.
- c. On-site washout shall be allowed only in designated areas away from drains, ditches, and streets.
- d. Trash and construction-related solid waste shall be deposited in covered receptacles.
- e. Tracking of sediment and other materials from the site by vehicle traffic shall be prevented.
- f. Construction entrance roadways shall be stabilized to inhibit sediments from being deposited into the public ways.
- g. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the Project site.
- h. Containment booms shall be installed within the construction area during removal of existing decking, piles and other structural members.

3. Hazardous Materials

- a. BMPs shall be implemented for the placement of creosote treated piles, including wrapping them in plastic.

4. In-Water Work

- a. In water sound level monitoring shall be conducted during pile driving of steel piles.

- b. A vibratory hammer shall be used to the maximum extent feasible with impact hammers used only if required for final pile driving.
- c. Hydrojet installation of piles shall only be used in specific situations, these situations may include repairs of damaged concrete piles over water.
- d. To reduce underwater noise during timber pile extractions, direct pull and vibratory methods shall be used.
- e. Underwater noise dampening measures for pile driving, such as noise dampening wooden blocks, air bubble curtains, or coffer dams shall be used as applicable.

5. Wildlife and Special Status Species

- a. For all projects in water shallower than -15 feet Mean Lower Low Water, and wharf maintenance projects involving the repair, removal, or replacement of 10 or more piles in the front waterside half of the wharf where light conditions allow for eelgrass growth, a pre-project eelgrass survey shall be conducted in accordance with the CEMP. If eelgrass is found within the project vicinity, a post-project survey shall be conducted and impacts to eelgrass shall be mitigated per the CEMP.
- b. If work is performed within 500 feet of a California least tern nesting site, the Port shall provide notification to the appropriate agencies.

6. Stormwater

- a. The project shall comply with the local regulations associated with the Los Angeles Water Board's Municipal Stormwater Permit issued to Los Angeles and Ventura County and co-permittees under NPDES No. CAS004004 and Waste Discharge Requirements Order No. R4-2021-0105 or subsequent order or subsequent order.
- b. If not enrolled in the General Construction Permit, the Permittee shall develop and implement a site-specific Storm Water Pollution Prevention Plan (SWPPP) and a Rain Event Action Plan (REAP) as described in the General Construction Permit.

H. On-site Mitigation for Temporary Impacts

- 1. The Permittee shall restore all areas of temporary impacts to waters of the state.

XV. Water Quality Certification

I hereby issue the Order for the Port of Los Angeles Wharf Maintenance and Maintenance Dredging Project, 4WQC40123078 certifying that as long as all of the conditions listed in this Order are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards).

This discharge is also regulated pursuant to State Water Board Water Quality Order No. 2003-0017-DWQ which authorizes this Order to serve as Waste Discharge Requirements pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.).

Except insofar as may be modified by any preceding conditions, all Order actions are contingent on:
(a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions of this Order and the attachments to this Order; and, (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies, the Regional Water Boards' Water Quality Control Plans and Policies.

Jenny Newman



Digitally signed by Jenny
Newman
Date: 2023.09.18 15:47:17 -07'00'

for Susana Arredondo
Executive Officer
Los Angeles Water Quality Control Board

Date

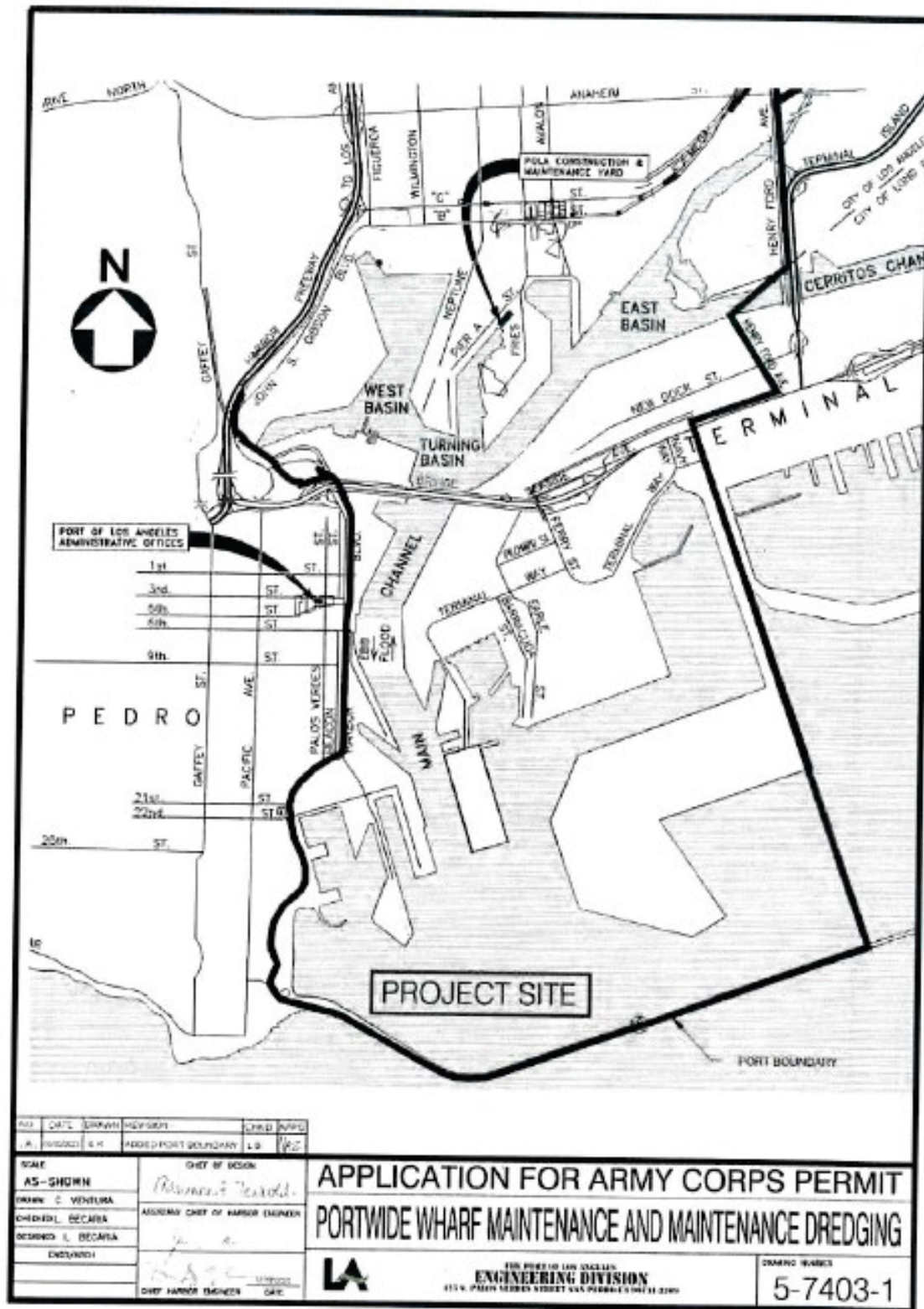


Figure 1: Project site location, Port of Los Angeles, dredging locations.

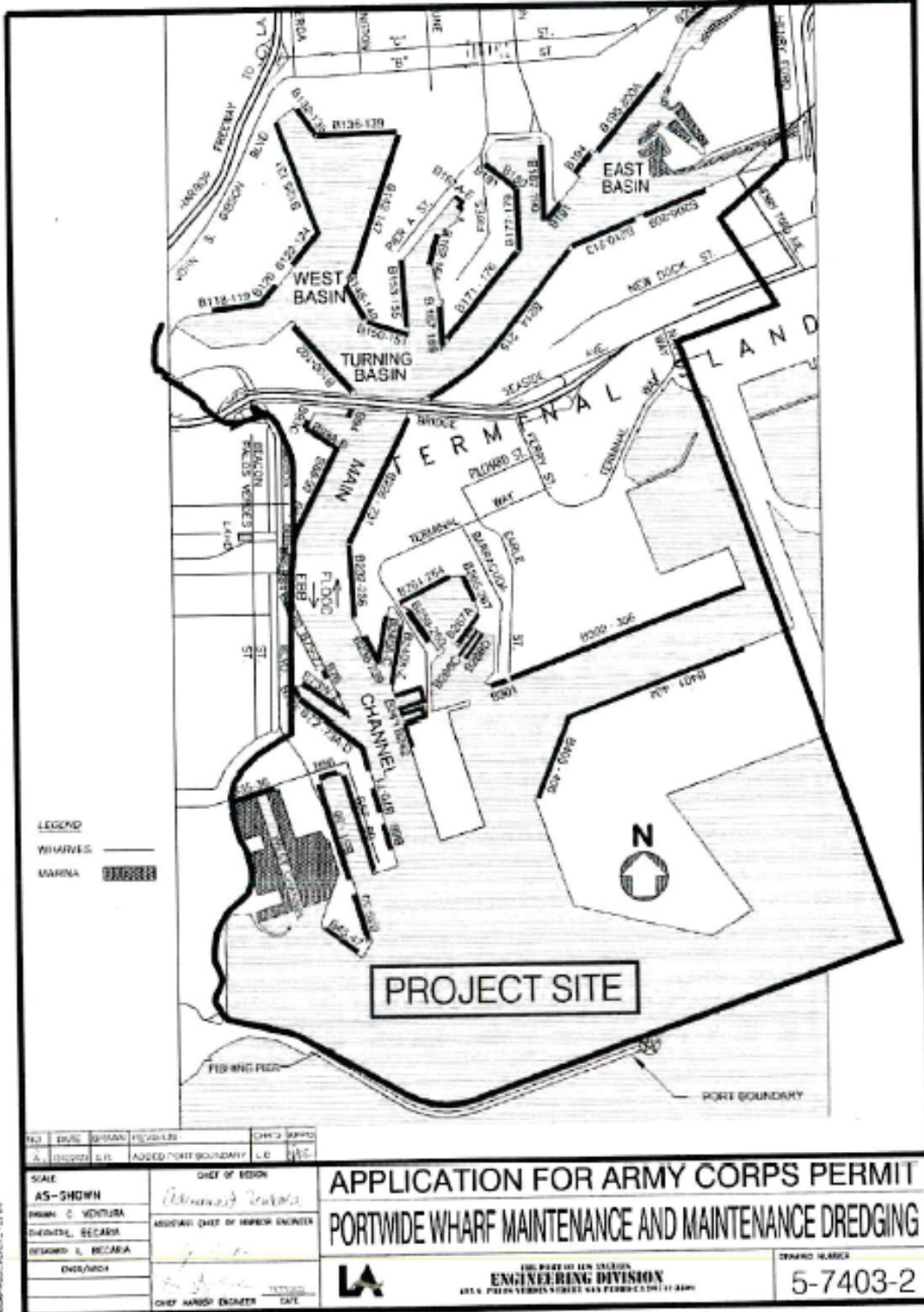


Figure 2. Port Of Los Angeles maintenance project Berth locations.

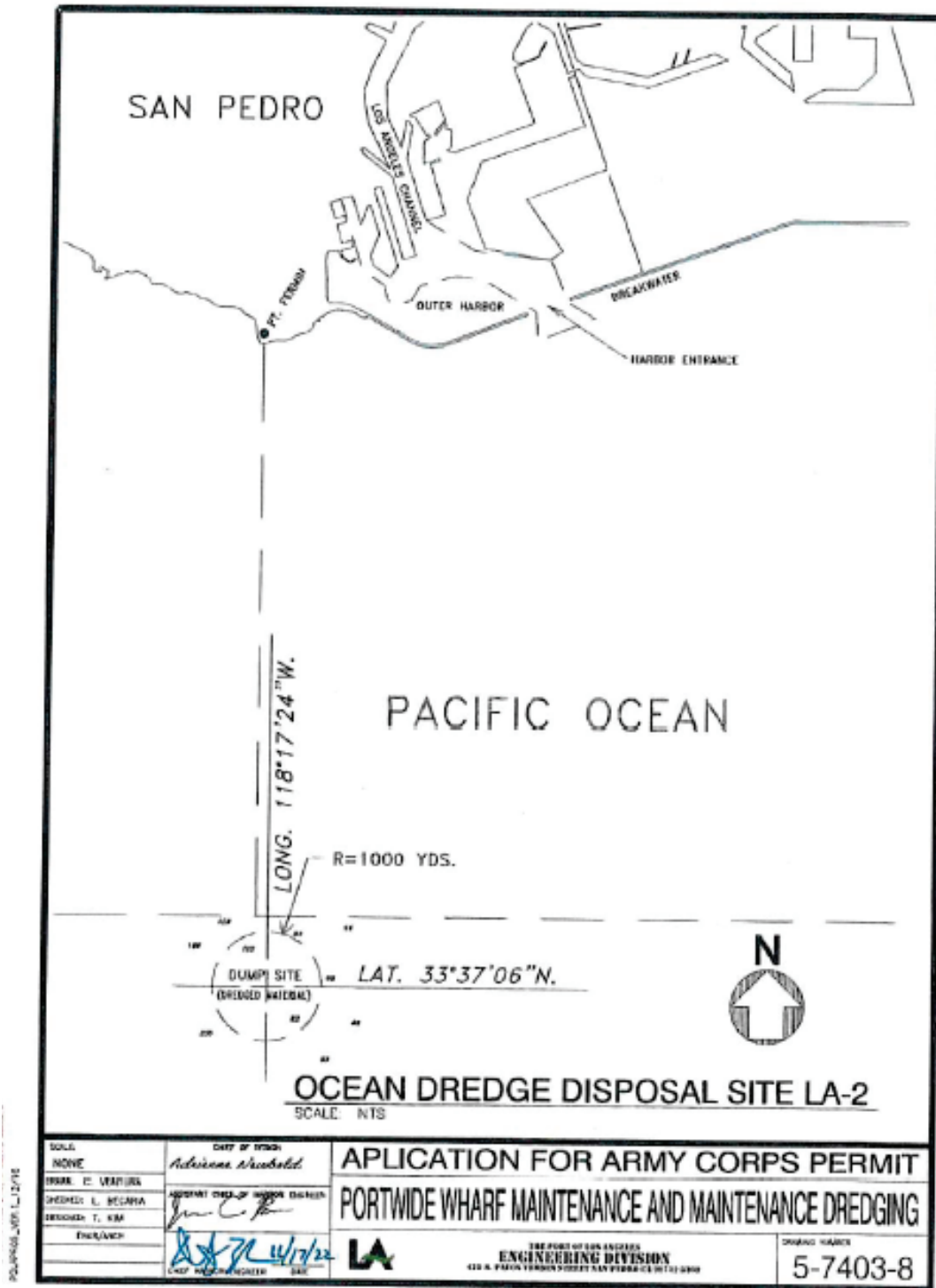


Figure 3. LA-2, ocean dredge disposal site for qualified dredging projects.

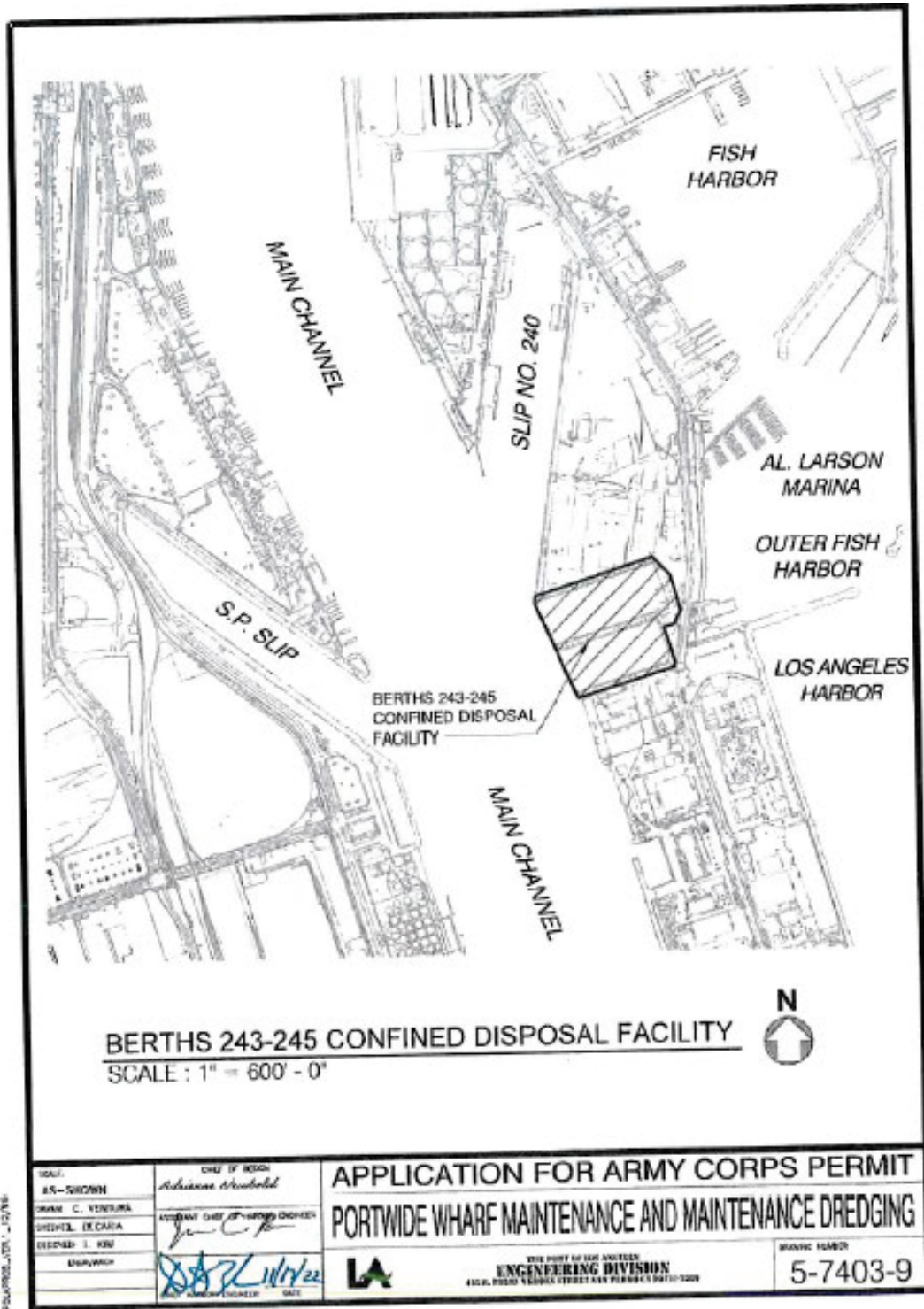


Figure 4. Berths 243-245 Confined Disposal Facility (CDF) dredged material disposal facility.

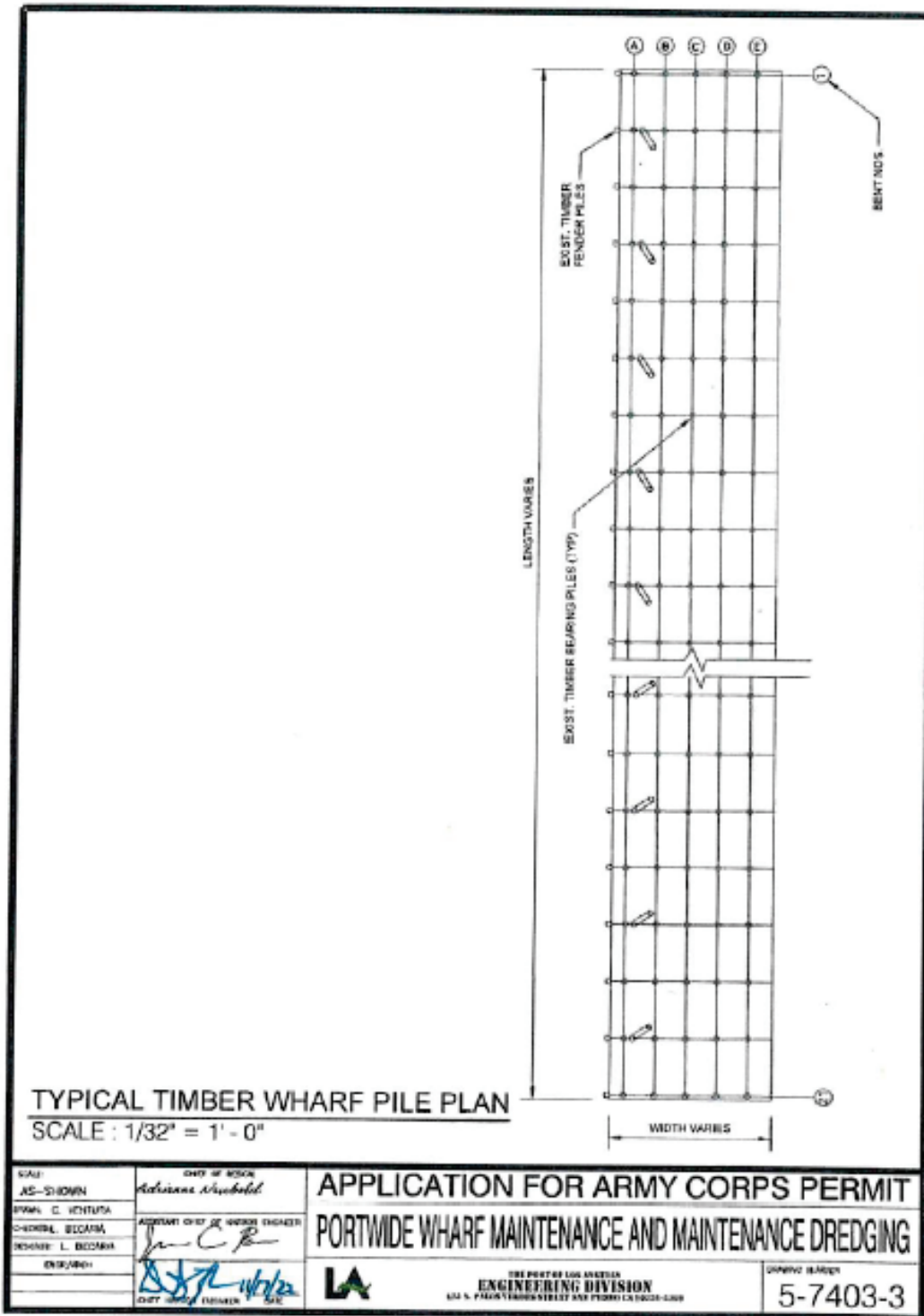


Figure 5. An example of a timber wharf pile that could be replaced under maintenance activities.

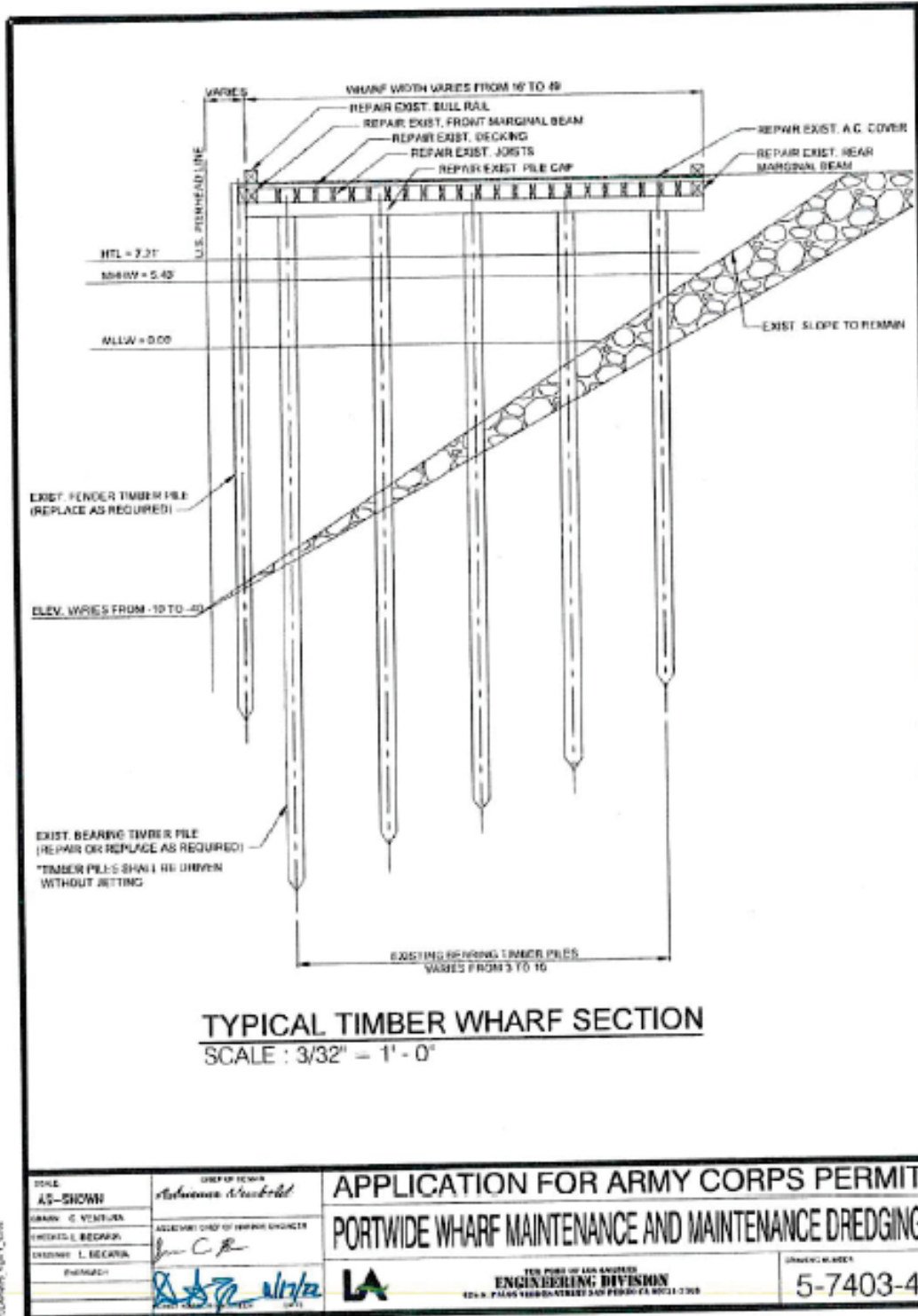


Figure 6. An example of a timber wharf cross section that could be replaced or repaired under maintenance activities.

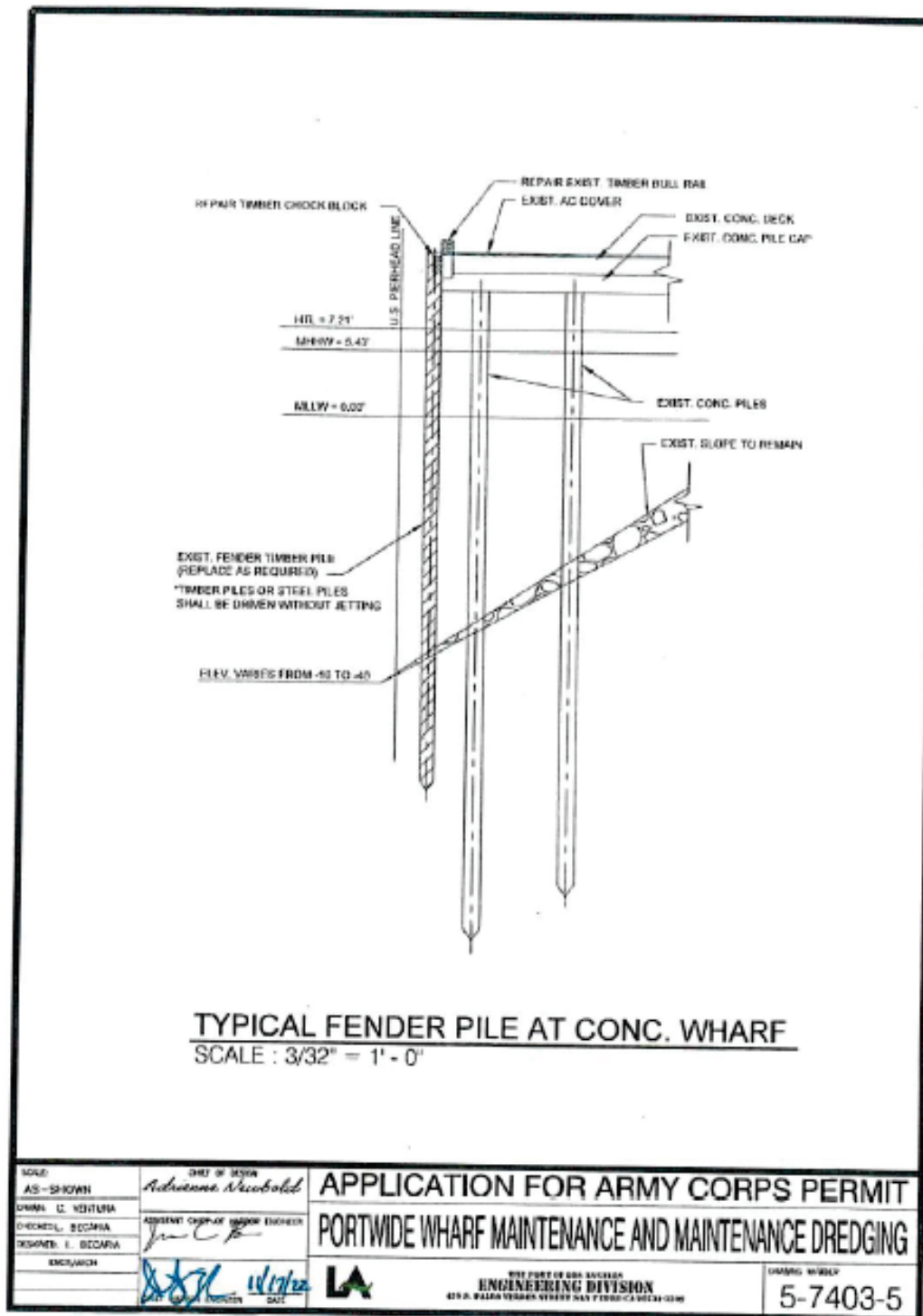


Figure 7. An example of a typical fender pile at a concrete wharf, which could be repaired under maintenance activities.

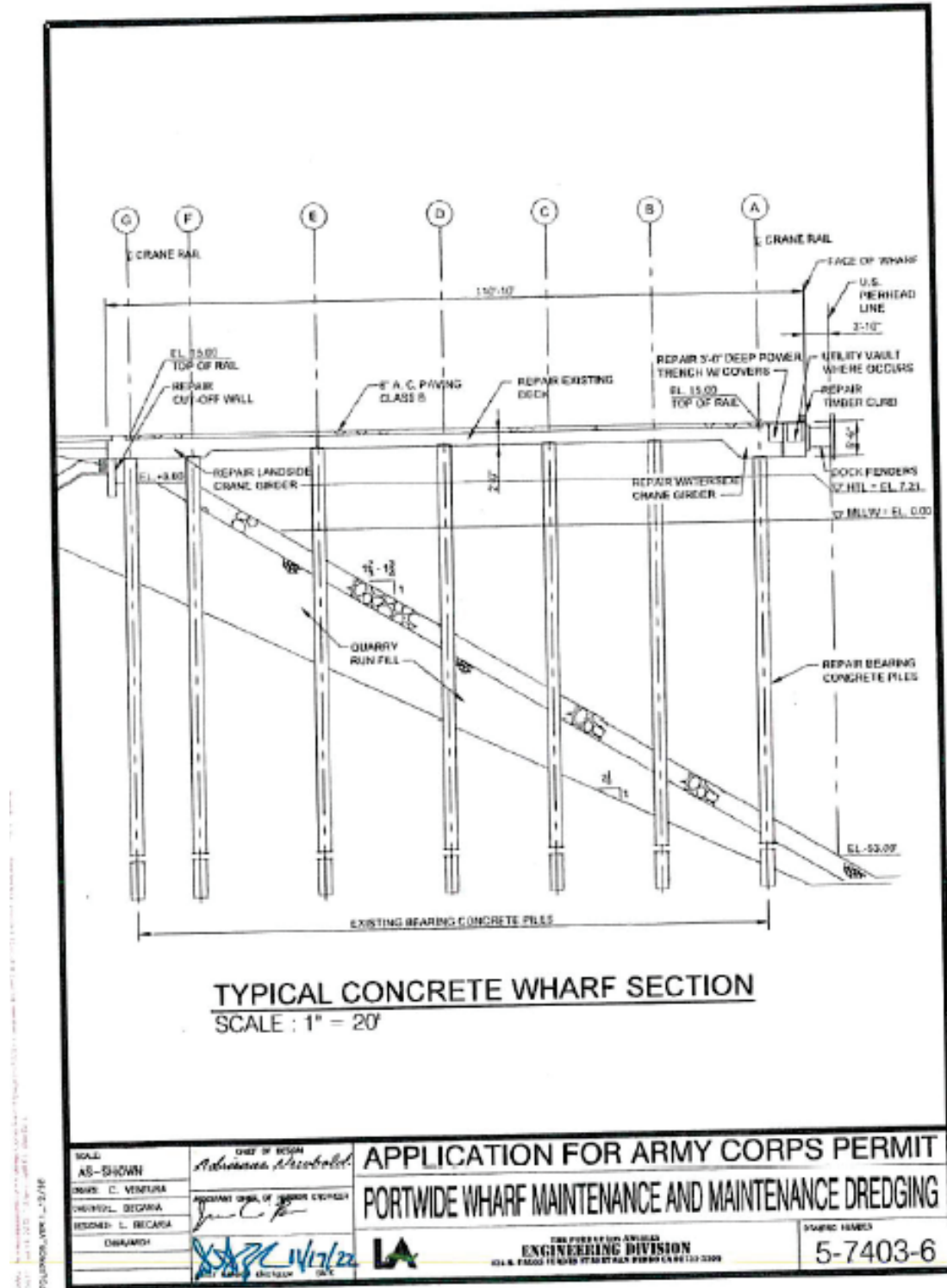


Figure 8. An example of a concrete wharf section, which could be repaired under maintenance activities.

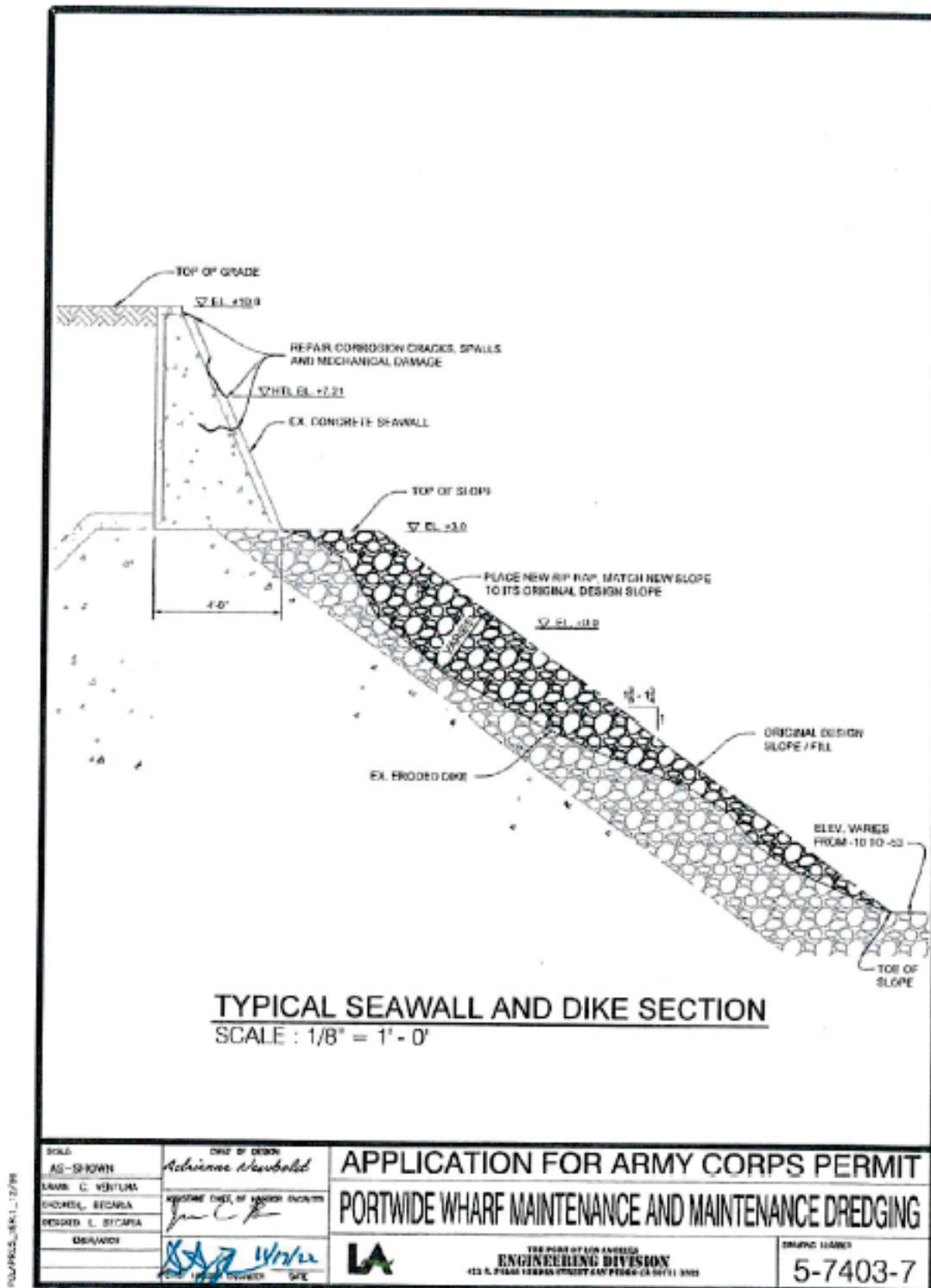


Figure 9. An example of a seawall and dike section, which could be repaired under maintenance activities.

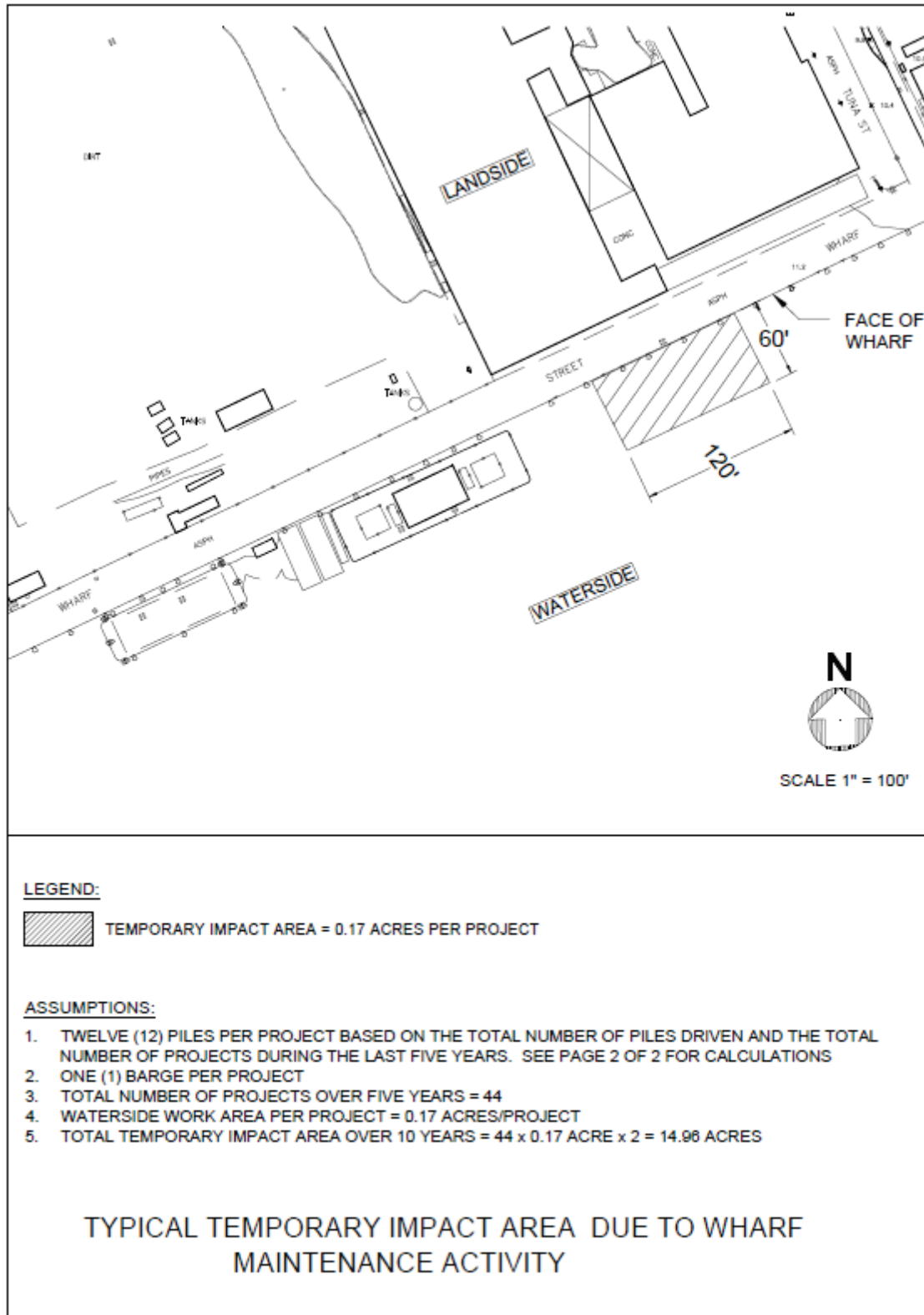


Figure 10. An example of the typical temporary impact area due to wharf maintenance activities.

Attachment B
Signatory Requirements

SIGNATORY REQUIREMENTS

*All Documents Submitted In Compliance With This Order
Shall Meet The Following Signatory Requirements:*

1. All applications, reports, or information submitted to the Los Angeles Water Quality Control Board (Los Angeles Water Board) must be signed and certified as follows:
 - a) For a corporation, by a responsible corporate officer of at least the level of vice-president.
 - b) For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
 - c) For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
2. A duly authorized representative of a person designated in items 1.a through 1.c above may sign documents if:
 - a) The authorization is made in writing by a person described in items 1.a through 1.c above.
 - b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c) The written authorization is submitted to the Los Angeles Water Board Staff Contact prior to submitting any documents listed in item 1 above.
3. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Copies of this Form

Include a copy of the Project specific Cover Sheet below with your report: please retain a copy for your records.

Report Submittal Instructions

1. Check the box on the Report and Notification Cover Sheet next to the report or notification you are submitting.
 - **Part A (Annual Report):** This report will be submitted annually from the anniversary of Project effective date until a Notice of Project Complete Letter is issued.
 - **Part B (Project Status Notifications):** Used to notify the Los Angeles Water Board of the status of the Project schedule that may affect Project billing.
 - **Part C (Conditional Notifications and Reports):** Required on a case by case basis for accidental discharges of hazardous materials, violation of compliance with water quality standards, notification of in-water work, or other reports.
2. Sign the Report and Notification Cover Sheet and attach all information requested for the Report Type.
3. **Electronic Report Submittal Instructions:**
 - Submit signed Report and Notification Cover Sheet and required information via email to: RB4-401Certification@Waterboards.ca.gov
 - Include in the subject line of the email: Subject: ATTN: Emily Duncan; File No: 23-078, Reg. Measure ID: 452165 Report

Definition of Reporting Terms

1. **Active Discharge Period:** The active discharge period begins with the effective date of this Order and ends on the date that the Permittee receives a Notice of Completion of Discharges Letter or, if no post-construction monitoring is required, a Notice of Project Complete Letter. The Active Discharge Period includes all elements of the Project including site construction and restoration, and any Permittee responsible compensatory mitigation construction.
2. **Request for Notice of Completion of Discharges Letter:** This request by the Permittee to the Los Angeles Water Board staff pertains to projects that have post construction monitoring requirements, e.g. if site restoration was required to be monitored for 5 years following construction. Los Angeles Water Board staff will review the request and send a Completion of Discharges Letter to the Permittee upon approval. This letter will initiate the post-discharge monitoring period and a change in fees from the annual active discharge fee to the annual post-discharge monitoring fee.

3. **Request for Notice of Project Complete Letter:** This request by the Permittee to the Los Angeles Water Board staff pertains to projects that either have completed post-construction monitoring and achieved performance standards or have no post-construction monitoring requirements, and no further Project activities are planned. Los Angeles Water Board staff will review the request and send a Project Complete Letter to the Permittee upon approval. Termination of annual invoicing of fees will correspond with the date of this letter.
4. **Post-Discharge Monitoring Period:** The post-discharge monitoring period begins on the date of the Notice of Completion of Discharges Letter and ends on the date of the Notice of Project Complete Letter issued by the Los Angeles Water Board staff. The Post-Discharge Monitoring Period includes continued water quality monitoring or compensatory mitigation monitoring.
5. **Effective Date:** Date of Order issuance.

Map/Photo Documentation Information

When submitting maps or photos, please use the following formats.

1. **Map Format Information:**

Preferred map formats of at least 1:24000 (1" = 2000') detail (listed in order of preference):

- **GIS shapefiles:** The shapefiles must depict the boundaries of all project areas and extent of aquatic resources impacted. Each shape should be attributed with the extent/type of aquatic resources impacted. Features and boundaries should be accurate to within 33 feet (10 meters). Identify datum/projection used and if possible, provide map with a North American Datum of 1983 (NAD38) in the California Teale Albers projection in feet.
- **Google KML files** saved from Google Maps: My Maps or Google Earth Pro. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. Include URL(s) of maps. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
- **Other electronic format** (CAD or illustration format) that provides a context for location (inclusion of landmarks, known structures, geographic coordinates, or USGS DRG or DOQQ). Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
- Aquatic resource maps marked on paper **USGS 7.5 minute topographic maps** or **Digital Orthophoto Quarter Quads (DOQQ)** printouts. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.

2. **Photo-Documentation:** Include a unique identifier, date stamp, written description of photo details, and latitude/longitude (in decimal degrees) or map indicating location of photo. Successive photos should be taken from the same vantage point to compare pre/post construction conditions.

REPORT AND NOTIFICATION COVER SHEET

Project: Port of Los Angeles Wharf Maintenance and Maintenance Dredging Project

Permittee: Port of Los Angeles

Reg. Meas. ID: 452165

Place ID: 887519

File No: 23-078

Report Type Submitted

Part A – Project Reporting

Report Type ☐ Annual Report

Part B - Project Status Notifications

Report Type ☐ Request for Completion of Eelgrass survey

Report Type ☐ Commencement of Construction

Report Type ☐ Request for Notice of Project Complete Letter

Part C - Conditional Notifications and Reports

Report Type ☐ Accidental Discharge of Hazardous Material Report

Report Type ☐ Violation of Compliance with Water Quality Standards Report

Report Type ☐ In-Water Work/Diversions Water Quality Monitoring Report

Report Type ☐ Modifications to Project Report

Report Type ☐ Transfer of Property Ownership Report

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name ¹

Affiliation and Job Title

Signature

Date

¹STATEMENT OF AUTHORIZATION (include if authorization has changed since application was submitted)

I hereby authorize _____ to act in my behalf as my representative in the submittal of this report, and to furnish upon request, supplemental information in support of this submittal.

Permittee's Signature

Date

***This Report and Notification Cover Sheet must be signed by the Permittee or a duly authorized representative and included with all written submittals.**

Part A – Project Reporting

Report Type	Annual Report
Report Purpose	Notify the Los Angeles Water Board staff of Project status during both the active discharge and post-discharge monitoring periods.
When to Submit	Annual reports shall be submitted each year on the anniversary of Project effective date. Annual reports shall continue until a Notice of Project Complete Letter is issued to the Permittee.
Report Contents	The contents of the annual report shall include the topics indicated below for each project period. Report contents are outlined in Annual Report Topics below. <u>During the Active Discharge Period</u> • Topic 1: Construction Summary • Topic 2: Mitigation for Temporary Impacts Status • Topic 3: Compensatory Mitigation for Permanent Impacts Status <u>During the Post-Discharge Monitoring Period</u> • Topic 2: Mitigation for Temporary Impacts Status • Topic 3: Compensatory Mitigation for Permanent Impacts Status
Annual Report Topics (1-3)	
Annual Report Topic 1	Construction Summary
When to Submit	With the annual report during the Active Discharge Period.
Report Contents	1. Project progress and schedule including initial ground disturbance, site clearing and grubbing, road construction, site construction, and the implementation status of construction storm water best management practices (BMPs). If construction has not started, provide estimated start date and reasons for delay. 2. Color photos, pre-project and current. 3. Map showing general Project progress. 4. If applicable: a. Summary of any conditional reports sent during the year such as “Accidental Discharge of Hazardous Material Report” or “Accidental Discharge of Hazardous Material Report” b. Copies of revised permits from other agencies c. Compilation of all water quality monitoring results for the year in a spreadsheet format.
Annual Report Topic 2	Mitigation for Temporary Impacts Status
When to Submit	With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.

Report Contents	*If not applicable report N/A. 1. Planned date of initiation and map showing locations of mitigation for temporary impacts to waters of the state and all upland areas of temporary disturbance which could result in a discharge to waters of the state. 2. If mitigation for temporary impacts has already commenced, provide a map and information concerning attainment of mitigation success.
Annual Report Topic 3	Compensatory Mitigation for Permanent Impacts Status
When to Submit	With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.
Report Contents	*If not applicable report N/A. Part A. Permittee Responsible 1. Planned date of initiation of compensatory mitigation site installation. 2. If installation is in progress, a map of what has been completed to date. 3. If the compensatory mitigation site has been installed, provide a final map and information concerning attainment of performance standards contained in the compensatory mitigation plan. Part B. Mitigation Bank or In-Lieu Fee 1. Status or proof of purchase of credit types and quantities. 2. Include the name of bank/ILF Program and contact information. 3. If ILF, location of project and type if known.

Part B – Project Status Notifications

Report Type	Notice of Completion of an Eelgrass survey
Report Purpose	Notify Los Angeles Water Board staff of the completion of an Eelgrass survey.
When to Submit	Construction shall not begin before approval of the survey by the Los Angeles Regional Water Board.
Report Contents	1. An eelgrass survey conducted following the California Eelgrass Mitigation Policy (CEMP) instructions. 2. As stated in CEMP, a survey must be conducted during the active growth period for eelgrass (typically March through October for southern California) no more than 60 days prior to construction activities.

Report Type	Commencement of Construction
Report Purpose	Notify Los Angeles Water Board staff prior to the start of construction.
When to Submit	Must be received at least seven (7) days prior to start of initial ground disturbance activities.
Report Contents	3. Date of commencement of construction. 4. Anticipated date when discharges to waters of the state will occur. 5. Project schedule milestones including a schedule for onsite compensatory mitigation, if applicable.

Report Type	Request for Notice of Completion of Discharges Letter
Report Purpose	Notify Los Angeles Water Board staff that post-construction monitoring is required and that active Project construction, including any mitigation and permittee responsible compensatory mitigation, is complete.
When to Submit	Must be received by Los Angeles Water Board staff within thirty (30) days following completion of all Project construction activities.
Report Contents	1. Pre- and post-photo documentation of all Project activity sites where the discharge of dredge and/or fill/excavation was authorized. 2. An updated monitoring schedule for mitigation for temporary impacts to waters of the state and permittee responsible compensatory mitigation during the post-discharge monitoring period, if applicable.

Report Type	Request for Notice of Project Complete Letter
Report Purpose	Notify Los Angeles Water Board staff that construction and/or any post-construction monitoring is complete, or is not required, and no further Project activity is planned.
When to Submit	Must be received by Los Angeles Water Board staff within thirty (30) days following completion of all Project activities.
Report Contents	Part A: Mitigation for Temporary Impacts 1. A report establishing that areas of temporary impacts to waters of the state, and upland areas of temporary disturbance which could result in a discharge to waters of the state, have been successfully restored and all identified success criteria have been met. Pre- and post-photo documentation of all restoration sites. Part B: Permittee Responsible Compensatory Mitigation 2. A report establishing that the performance standards outlined in the compensatory mitigation plan have been met. 3. Status on the implementation of the long-term maintenance and management plan and funding of endowment. 4. Pre- and post-photo documentation of all compensatory mitigation sites. 5. Final maps of all compensatory mitigation areas (including buffers). Part C: Post-Construction Storm Water BMPs 6. Date of storm water permit Notice of Termination(s), if applicable. 7. Report status and functionality of all post-construction BMPs.

Part C – Conditional Notifications and Reports

Report Type	Accidental Discharge of Hazardous Material Report
Report Purpose	Notifies Los Angeles Water Board staff that an accidental discharge of hazardous material has occurred.

When to Submit	Within five (5) working days following the date of an accidental discharge. Continue reporting as required by Los Angeles Water Board staff.
Report Contents	1. The report shall include the OES Incident/Assessment Form, a full description and map of the accidental discharge incident (i.e. location, time and date, source, discharge constituent and quantity, aerial extent, and photo documentation). If applicable, the OES Written Follow-Up Report may be substituted. 2. If applicable, any required sampling data, a full description of the sampling methods including frequency/dates and times of sampling, equipment, locations of sampling sites. 3. Locations and construction specifications of any barriers, including silt curtains or diverting structures, and any associated trenching or anchoring.

Report Type	Violation of Compliance with Water Quality Standards Report
Report Purpose	Notifies Los Angeles Water Board staff that a violation of compliance with water quality standards has occurred.
When to Submit	The Permittee shall report any event that causes a violation of water quality standards within three (3) working days of the noncompliance event notification to Los Angeles Water Board staff.
Report Contents	The report shall include: the cause; the location shown on a map; and the period of the noncompliance including exact dates and times. If the noncompliance has not been corrected, include: the anticipated time it is expected to continue; the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and any monitoring results if required by Los Angeles Water Board staff.

Report Type	In-Water Work and Diversions Water Quality Monitoring Report
Report Purpose	Notifies Los Angeles Water Board staff of the completion of in-water work.
When to Submit	Within three (3) working days following the completion of in-water work. Continue reporting in accordance with the approved water quality monitoring plan.
Report Contents	As required by the approved water quality monitoring plan.

Report Type	Modifications to Project Report
Report Purpose	Notifies Los Angeles Water Board staff if the Project, as described in the application materials, is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority.
When to Submit	Prior to any alteration or modification of Project activities.
Report Contents	A description and location of any alterations of Project activities. Identify any Project modifications that will interfere with the Permittee's compliance with the Order. Any alteration may require an Amendment, to be determined by Los Angeles Water Board staff.

Report Type	Transfer of Property Ownership Report
Report Purpose	Notifies Los Angeles Water Board staff of change in ownership of the Project or Permittee-responsible mitigation area.
When to Submit	At least 10 working days prior to the transfer of ownership.
Report Contents	1. A statement that the Permittee has provided the purchaser with a copy of this Order and that the purchaser understands and accepts: a. the Order's requirements and the obligation to implement them or be subject to administrative and/or civil liability for failure to do so; and b. responsibility for compliance with any long-term BMP¹ maintenance plan requirements in this Order. 2. A statement that the Permittee has informed the purchaser to submit a written request to the Los Angeles Water Board to be named as the permittee in a revised order.

¹ Best Management Practices (BMPs) is a term used to describe a type of water pollution or environmental control.

Compliance with Code of Federal Regulations, title 40, section 121.7, subdivision (d).

The purpose of this attachment is to comply with Title 40, Code of Federal Regulations (CFR) Part 121.7(d)(1), which requires an explanation of why a condition is necessary to assure that the authorized discharge will comply with water quality requirements, and a citation to federal, state, or tribal law that authorizes the condition.

This Attachment uses the same organizational structure as the *Conditions* Section, and the statements below correspond with the conditions set forth in the *Conditions* Section. The Sections preceding the *Conditions* Section are not “conditions” as used in 40 CFR section 121.7.(A).

The following three sources of authority are applicable to almost all conditions. Because these authorities are relevant to so many conditions, they are described in greater detail here and then cross-referenced below.

The state’s Statement of Policy with respect to Maintaining High Quality of Waters in California (“Antidegradation Policy”, State Board Resolution No. 68-16), requires that any “activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the state will be maintained.” All Regional Board Water Quality Control Plans incorporate the state’s Antidegradation Policy by reference. The state Antidegradation Policy incorporates the federal Antidegradation Policy (40 CFR Part 131.12), which requires “[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” According to U.S. EPA, for dischargers of dredged or fill material comply with the federal Antidegradation Policy by complying with U.S. EPA’s section 404(b)(1) Guidelines. The State Water Board adopted a modified version of U.S. EPA’s section 404(b)(1) Guidelines in the Dredge or Fill Procedures (also referred as State Supplemental Guidelines).

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Dredge or Fill Procedures) were adopted on April 2, 2019 and went into effect on May 28, 2020. The Dredge or Fill Procedures were adopted pursuant to the State Water Board’s authority under Water Code section 13140 (state policy for water quality control) and 13170 (water quality control plan), and accordingly have regulatory effect. Consistent with Government Code, section 11353, a clear and concise summary of the Dredge or Fill Procedures is available in California Code of Regulations, section 3013. Per the Dredge or Fill Procedures, the permitting authority may only approve a project if the demonstrations set forth in Section IV.B.1 have been made. The information required by Section IV.A is necessary to ensure compliance with Section IV.B.1.

In addition, the conditions within the Order are generally required pursuant to the Los Angeles Water Board’s Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan). The Basin Plan includes water quality standards, which consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies. For instance, the Basin Plan

includes water quality objectives for chemical constituents, oil and grease, pH, dissolved oxygen, temperature, , toxicity, pesticides, solid, suspended or settleable materials, floating material, turbidity, exotic vegetation, color, and taste and odor which ensure protection of beneficial uses.

Furthermore, the conditions within the Order are also required, where applicable, pursuant to statewide water quality control plans and policies which were adopted and are periodically revised pursuant to Water Code section 13240, including, but not limited to, the following:

- California Ocean Plan (Ocean Plan),
- California Thermal Plan (Thermal Plan),
- Enclosed Bays and Estuaries Plan,
- Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan,
- Plan for California's Nonpoint Source (NPS) Pollution Control Program,
- Water Quality Control Policy for the Enclosed Bays and Estuaries of California,
- Policy for the Implementation and Enforcement of the Nonpoint Source (NPS) Pollution Control Program,
- State of California Executive Order W-59-93 (Wetlands "No Net Loss" Policy), and

Furthermore, California Code of Regulations, title 23, Chapter 28 also sets forth regulations pertaining to water quality certifications. Section 3856 sets forth information that must be included in water quality certification requests, includes a description of steps that have or will be taken to avoid, minimize, and compensate for impacts to waters of the state.

Conditions

Authorization

Authorization under this Order is granted based on the application information submitted. Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order.

Reporting and Notification Requirements

The reports confirm that the best management practices required under this Order are sufficient to protect beneficial uses and water quality objectives. The reports related to accidental discharges also ensure that corrective actions, if any, that are necessary to minimize the impact or clean up such discharges are taken as soon as possible. These monitoring and reporting conditions are authorized because the Water Boards have the authority to investigate the quality of any waters of the state within its region under Water Code sections 13383 and 13267. The burden of preparing these reports, including costs, bears a reasonably relationship to the benefits to be obtained from the reports. Specifically, the reports are necessary to demonstrate protection of beneficial uses and compliance with the requirements of the Order and relevant laws (including the Clean Water Act and other authorities). The anticipated costs are minimal as the reporting obligations require only visual monitoring, in-field measurements, and notification reporting.

Authorization under this Order is granted based on the application information submitted, including identification of the legally responsible party. Conditions regarding transfers are necessary to confirm whether the new owner wishes to assume legal responsibility for compliance with this Order. If not, the original discharger remains responsible for compliance with this Order. Confirmation is also necessary to confirm whether liability for long-term best management practices maintenance is accepted by another entity. If not, the original discharger remains responsible for compliance with this Order. Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order.

Water Quality Monitoring

General

This monitoring condition is authorized because the Water Boards have the authority to investigate the quality of any waters of the state within its region under Water Code sections 13383 and 13267. The burden of monitoring, including costs, bears a reasonable relationship to the need for the monitoring, and the benefits to be obtained from the monitoring. The anticipated costs are minimal as only visual monitoring and in-field measurements are required. Specifically, the reports are necessary to demonstrate protection of beneficial uses and compliance with the requirements of the Order and relevant laws (including the Clean Water Act and other authorities

Accidental Discharges/Noncompliance

See explanation for the *Reporting and Notification Requirements* Section

In-Water Work or Diversions

Consistent with the Dredge or Fill Procedures, section IV.A.2.c, water quality monitoring plans are required for any in-water work, including temporary dewatering or diversions. These conditions are required to assure that 1) the discharge shall not adversely affect the beneficial uses of the receiving water or cause a condition of nuisance; 2) the discharge shall comply with all applicable water quality objectives; and 3) treatment and control of the discharge shall be implemented to assure that pollution and nuisance will not occur and the highest water quality is maintained. A water quality monitoring plan is necessary to conform to water quality standards for oil and grease, dissolved oxygen, pH, turbidity, and temperature. The Regional Water Board's Basin Plan and/or applicable statewide plans and policies contains provisions related to all these constituents.

These monitoring and reporting conditions are authorized because the Water Boards have the authority to investigate the quality of any waters of the state within its region under Water Code sections 13383 and 13267. The burden of preparing these reports, including costs, bears a reasonable relationship to the need for, and benefits of, the reports. The anticipated costs are minimal as the sampling requirements are either visual or only require a grab sample on a daily and/or weekly basis. Specifically, the reports are necessary to demonstrate protection of beneficial uses and compliance with the requirements of the Order and relevant laws (including the Clean Water Act and other authorities

Post-Construction

The reports confirm that the best management practices required under this order are sufficient to protect beneficial uses and water quality objectives. The reports related to accidental

discharges ensure that corrective actions, if any, that are necessary to minimize the impact or clean up such discharges are taken as soon as possible. These monitoring and reporting conditions are authorized because the Water Boards have the authority to investigate the quality of any waters of the state within its region under Water Code sections 13383 and 13267. The burden of preparing these reports, including costs, bears a reasonable relationship to the need for, and benefits of, the reports. The anticipated costs are minimal as the reporting obligations require only visual monitoring, in-field measurements, and notification reporting.

Standard Conditions

“This Order is subject to modification or revocation ...”

“This Order is not intended and shall not be construed to apply to any activity involving a hydroelectric facility ...”

“This Order is conditioned upon total payment of any fee ...”

These Conditions are standard conditions that “shall be included as conditions of all water quality certification actions.” (Cal. Code of Regs., section 3860.)

General Compliance

“Permitted actions must not cause a violation of any applicable water quality standards ...”

By the plain language of section 401 of the Clean Water Act, permitted actions may not cause a violation of applicable water quality standards. This condition related to compliance with water quality objectives and designated beneficial uses is required pursuant to the Los Angeles Water Board's Basin Plan and/or other applicable statewide plans and policies. The Basin Plan's water quality standards consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies. The Antidegradation Policy requires that the quality of existing high-quality water be maintained unless any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present or anticipated future beneficial uses of such water, and will not result in water quality less than that prescribed in water quality control plans or policies. The Antidegradation Policy further requires best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained. Applicable beneficial uses and water quality objectives to protect those uses include the designated beneficial uses (Basin Plan, Chapter 2, Tables 2-1, 2-1a, 2-3, 2-3a, 2-4, and 2-4a; Ocean Plan, Page 4), and water quality objectives for chemical constituents (Basin Plan, page 3-29), color (Basin Plan, page 3-32), exotic vegetation (Basin Plan, page 3-32), floating material (Basin Plan, page 3-33), oil and grease (Basin Plan, page 3-34), dissolved oxygen (Basin Plan, page 3-39), pesticides (Basin Plan, page 3-40), pH (Basin Plan, page 3-40), solid, suspended and settleable material (Basin Plan, page 3-44), taste and odor (Basin Plan, page 3-44), temperature (Basin Plan, page 3-44), toxicity (Basin Plan, page 3-45), and turbidity (Basin Plan, page 3-46), and in ocean waters for physical (Ocean Plan, page 7), chemical (Ocean Plan, page 7), and biological characteristics (Ocean Plan, page 8).

“The Permittee must, at all times, fully comply with engineering plans, specifications, and technical reports...”

Authorization under this Order is granted based on the application information submitted, including engineering plans, specifications, and technical reports. Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order.

Administrative

“Signatory requirements for all document submittals...”

Conditions related to signatory requirements are also authorized by Water Code sections 13383 and 13267, which requires any person discharging waste that could affects the quality of waters to provide to the Water Boards, under penalty of perjury, any technical or monitoring program reports as required by the Water Boards. The signatory requirements are consistent with 40 C.F.R. section 122.22.

“The Permittee shall grant Los Angeles Water Board staff ...”

Conditions related to site access requirements are authorized pursuant to the Water Boards' authority to investigate the quality of any waters of the state within its region under Water Code sections 13383 and 13267. Water Code section 13267(c) provides that “the regional board may inspect the facilities of any person to ascertain whether the purposes of this division are being met and waste discharge requirements are being complied with.”

“A copy of this Order shall be provided to any consultants, contractors, and subcontractors ...”

“A copy of this Order must be available at the Project site(s) during construction...”

These conditions require site personnel (agents of the applicant) and agencies to be familiar with the content of the Order and mandate availability of the document at the project site. These conditions are required to assure that any authorized discharge will comply with the terms and conditions of the Order and is inherently tied to the signature requirements required by Water Code section 13267.

Best Management Practices

All the conditions related to best management practices are consistent with the Water Board's authority to establish, “[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area” pursuant to Water Code section 13241(c). Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order. The activities authorized under this Order have the potential to result in a discharge that exceeds water quality objectives, which is prohibited by the Clean Water Act, Antidegradation Policy and Water Code section 13263. As required by Water Code section 13369, all Water Quality Control Plans incentivize the use of best management practices to prevent prohibited discharges into waters of the state.

Dredging

Dischargers of dredged or fill material comply with the federal Antidegradation Policy by complying with U.S. EPA's section 404(b)(1) Guidelines. The State Water Boards adopted a modified version of U.S. EPA's section 404(b)(1) Guidelines in the Dredge or Fill Procedures

(State Supplemental Guidelines). In addition, this condition is required to assure that dredging operations will comply with water quality objectives established for surface waters, including solid, suspended and settleable material, toxicity and turbidity (Basin Plan, page 3-44, 3-45, 3-46), and in ocean waters physical (Ocean Plan, page 7), chemical (Ocean Plan, page 7), and biological characteristics (Ocean Plan, page 8), Ocean Plan, Thermal Plan, Enclosed Bays and Estuaries Plan, ISWEBE Plan, NPS Pollution Control Program, Water Quality Control Policy for the Enclosed Bays and Estuaries of California, Policy for the Implementation and Enforcement of the NPS Pollution Control Program, Wetlands "No Net Loss" Policy.

Site Management

This condition is necessary to prevent violation of state discharge prohibitions that protect water quality objectives. For instance, fuels and lubricants associated with the use of mechanized equipment have the potential to result in toxic discharges to waters of the state in violation of water quality standards, including the floating material and toxicity and floating material water quality objectives (Basin Plan, pages 3-33 & 3-45), and in ocean waters the physical (Ocean Plan, page 7), chemical (Ocean Plan, page 7), and biological characteristics objectives (Ocean Plan, page 8). Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order. Failure to appropriately manage site conditions has the potential to result in a discharge that exceeds water quality objectives, which is prohibited by the Clean Water Act, Antidegradation Policy and Water Code section 13263, Ocean Plan, Thermal Plan, Enclosed Bays and Estuaries Plan, ISWEBE Plan, NPS Pollution Control Program, Water Quality Control Policy for the Enclosed Bays and Estuaries of California, Policy for the Implementation and Enforcement of the NPS Pollution Control Program, Wetlands "No Net Loss" Policy.

Hazardous Materials

These conditions are required pursuant to the Los Angeles Basin Plan (toxicity objective, page 3-40), and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP), which prohibit the discharge of substances in concentrations toxic to human, plant, animal, or aquatic life. Toxic compounds can impair the beneficial uses of cold freshwater habitat, estuarine habitat, marine habitat, preservation of rare and endangered species, fish migration, fish spawning, warm freshwater habitat, and wildlife habitat. Conditions related to toxic and hazardous materials are necessary to assure that discharges comply with any water quality objectives adopted or approved under sections 13170 or 13245 of the Water Code.

Conditions related to concrete/cement are required pursuant to the Los Angeles Basin Plan, which require discharges to waters do not adversely raise or lower pH levels (Basin Plan, page 3-40). Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order. The release of hazardous materials has the potential to result in a discharge that exceeds water quality objectives, which is prohibited by the Clean Water Act, the Antidegradation Policy, the Los Angeles Basin Plan, the Dredge or Fill Procedures and Water Code section 13263, Ocean Plan, Thermal Plan, Enclosed Bays and Estuaries Plan, ISWEBE Plan, NPS Pollution Control Program, Water Quality Control Policy for the Enclosed Bays and Estuaries of California, Policy for the Implementation and Enforcement of the NPS Pollution Control Program, Wetlands "No Net Loss" Policy.

In-Water Work

These conditions are required to assure that 1) the discharge shall not adversely affect the beneficial uses of the receiving water or cause a condition of nuisance; 2) the discharge shall comply with all applicable water quality objectives; and 3) treatment and control of the discharge shall be implemented to assure that pollution and nuisance will not occur and the highest water quality is maintained. Accordingly, these conditions require implementation of best practicable treatments and controls to prevent pollution and nuisance, and to maintain water quality. Water Code section 13264 prohibits any discharge that is not specifically authorized in this Order. In-water work has the potential to result in a discharge that exceeds water quality objectives, which is prohibited by the Clean Water Act, the Antidegradation Policy, the Los Angeles Basin Plan, the Dredge or Fill Procedures and Water Code section 13263, Ocean Plan, Thermal Plan, Enclosed Bays and Estuaries Plan, ISWEBE Plan, NPS Pollution Control Program, Water Quality Control Policy for the Enclosed Bays and Estuaries of California, Policy for the Implementation and Enforcement of the NPS Pollution Control Program, Wetlands "No Net Loss" Policy.

Wildlife and Special Status Species

Prior to each qualifying maintenance event, a pre-project eelgrass survey shall be conducted in accordance with the CEMP. If eelgrass is found within the project vicinity, a post-project survey shall be conducted and impacts to eelgrass shall be mitigated.

If work is performed within 500 feet of a California least tern nesting site, the Port shall provide notification to the appropriate agencies.

Pursuant to the California Endangered Species Act (Fish & Wildlife Code, sections 2050 et seq.) and federal Endangered Species Act (16 U.S.C. sections 1531 et seq.), the Order does not authorize any act which results in the taking of a threatened, endangered, or candidate species. In the event a Permittee requires authorization from the state or federal authorities, California Code of Regulations, title 23, section 3856(e), requires that copies be provided to the Los Angeles Water Board of "any final and signed federal, state, and local licenses, permits, and agreements (or copies of the draft documents, if not finalized) that will be required for any construction, operation, maintenance, or other actions associated with the activity. If no final or draft document is available, a list of all remaining agency regulatory approvals being sought shall be included."

Stormwater

Conditions related to stormwater management are required to comply with the Los Angeles Region's Basin Plan and the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 20090009-DWQ; NPDES No. CAS000002 as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto) (General Construction Permit). Post-rain erosion and sedimentation problems can contribute to significant degradation of the waters of the state; therefore, it is necessary to take corrective action to eliminate such discharges to avoid or minimize such degradation. Implementation of control measures and best management practices (BMPs) described in the condition will assure compliance with water quality objectives including floating material, temperature, suspended and settleable material, and turbidity. (Basin Plan, pages 3-33, 3-44, 3-44, 3-46) Water Code section 13264 prohibits any discharge that is not specifically

authorized in this Order. Rain events have the potential to result in a discharge that exceeds water quality objectives, which is prohibited by the Clean Water Act, the Antidegradation Policy, the Los Angeles Basin Plan, the Dredge or Fill Procedures and Water Code section 13263, Ocean Plan, Thermal Plan, Enclosed Bays and Estuaries Plan, ISWEBE Plan, NPS Pollution Control Program, Water Quality Control Policy for the Enclosed Bays and Estuaries of California, Policy for the Implementation and Enforcement of the NPS Pollution Control Program, Wetlands "No Net Loss" Policy.

On-site Mitigation for Temporary Impacts

Conditions in this section related to restoration and/or mitigation of temporary impacts are required by the Dredge or Fill Procedures, which requires "in all cases where temporary impacts are proposed, a draft restoration plan that outlines design, implementation, assessment, and maintenance for restoring areas of temporary impacts to pre-project conditions." (Dredge or Fill Procedures section IV. A.2(d) & B.4.)

Additional authorities applying to this condition include:

- Clean Water Act Section 401 (a discharge shall comply with water quality standards, which are established in Water Quality Control Plans)
- California Water Code section 13263 (discharges must implement water quality control plans and water quality objectives)
- California Code of Regulations, Title 23, section 3859 (conditions shall be added to ensure compliance with water quality standards and other appropriate requirements)
- 40 CFR 230.10 (a) (no discharge permitted if there is a practicable alternative with less impacts)
- 40 CFR 230.10 (b) (discharges may not cause or contribute to violations of water quality standards)
- 40 CFR 230.10 (c) (discharges may not cause degradation)
- 40 CFR 230.12 (conditions shall be included to minimize adverse effects to aquatic ecosystems)
- 40 CFR 230.70 (minimize effects of discharge through various actions)
- 40 CFR 230.71 (minimize effects of discharge through treatment of or limitations on the material)
- 40 CFR 230.72 (effects of discharge may be controlled by containment areas and other best management practices)
- 40 CFR 230.73 (minimize effects of discharged by controlling dispersion)
- 40 CFR 230.74 (minimize effects through use of appropriate equipment and techniques)
- 40 CFR 230.75 (minimize adverse effects on plant and animal populations)
- 40 CFR 230.76 (minimize adverse effects on human use, including timing of discharge)
- 40 CFR 230.77 (control runoff, maintain desired water quality, consider ecological changes)
- 40 CFR 230.91 (take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States)
- 40 CFR Part 230, Subpart J (sections 230.92 *et seq.*) (compensatory mitigation for losses of aquatic resources)
- The National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) (require identifying alternatives to avoid and minimize effects (40 CFR 1500.2 and California Code of Regulations, Title 144, section 15021))

- Dredge or Fill Procedures section IV. A.2(c) (water quality monitoring plan to monitor compliance with water quality objectives)
- Dredge or Fill Procedures, Subpart H (actions to minimize adverse effects)

Locations where maintenance repair activities may be conducted.

Table 1. Locations where maintenance repair activities may be conducted:

Berths	Latitude	Longitude	Berths	Latitude	Longitude
36	33.72500	-118.28083	162	33.76167	-118.26611
41	33.72278	-118.2775	163-164	33.76028	-118.26722
44	33.71639	-118.27694	165-166	33.75778	-118.26778
44	33.71611	-118.27694	167-169	33.75472	-118.26778
45-47	33.71472	-118.27556	171-173	33.75472	-118.26528
49-50	33.71722	-118.27333	174-176	33.75806	-118.2625
51-53	33.72028	-118.27417	177-179	33.76111	-118.26139
54-55	33.72444	-118.27611	180-181	33.76417	-118.26278
56	33.72611	-118.27694	183	33.76583	-118.26333
57	33.72528	-118.27528	184	33.76611	-118.2625
58-60	33.72222	-118.27389	185	33.76611	-118.26167
60	33.72000	-118.27278	186	33.76611	-118.26083
67	33.72028	-118.27111	186-187	33.76528	-118.26035
68	33.72139	-118.27111	188-189	33.76257	-118.259617
70-71	33.72500	-118.2725	190	33.76194	-118.25972
72	33.72722	-118.27389	191	33.76500	-118.25889
73A-E	33.72917	-118.27694	194	33.76500	-118.25611
73W-X	33.73028	-118.27722	194	33.76556	-118.25556
74	33.73000	-118.27528	195-199	33.76806	-118.25306
75-77	33.73167	-118.27611	200A	33.77149	-118.25009
78	33.73361	-118.27722	200G-H	33.77611	-118.24444
79-82	33.73611	-118.27833	206-209	33.76306	-118.24861
84	33.73806	-118.27861	210-211	33.76167	-118.25306
84	33.73889	-118.27861	212-221	33.75694	-118.26056
86	33.74083	-118.27838	222-225	33.75028	-118.26806
86	33.74028	-118.27861	227-226	33.74083	-118.27472
87-89	33.74167	-118.27806	238-239	33.73417	-118.27361
90-92	33.74528	-118.27694	240A-B	33.73361	-118.27222
93A-C	33.74778	-118.27694	240X-Z	33.73222	-118.27111
94	33.74861	-118.27444	241	33.729578	-118.27095
95	33.76056	-118.27417	256	33.73056	-118.26833
96	33.75000	-118.27361	258	33.73444	-118.26861
100-102	33.75303	-118.27522	259-260	33.73611	-118.26972
117	33.75683	-118.28333	261-263	33.73778	-118.26861
118-119	22.75611	-118.28056	264	33.73833	-118.26667
120	33.76667	-118.27917	265-267	33.73722	-118.25111
120-121	33.76056	-118.27556	267A	33.73500	-118.25056
127-128	33.76444	-118.27833	268A	33.73492	-118.26592
134-135	33.76778	-118.27778	268B	33.73447	-118.26568
136-139	33.76667	-118.27389	269	33.73500	-118.26389
142-143	33.76333	-118.27194	270-271	33.73194	-118.26361
144-146	33.76056	-118.27306	302-305	33.73278	-118.25583
147	33.75778	-118.27417	401-404	33.73096	-118.25062
148-149	33.75611	-118.27361	405-406	33.72642	-118.25922
150-151	33.75417	-118.27139	Cabrillo Marina	33.71883	-118.27880

153-155	33.75694	-118.27028	Inner Cabrillo Beach	33.71052	-118.28139
161	33.76249	-118.26563			

APPENDIX "G"

ELECTRICAL SAFETY POLICY – IMPLEMENTATION PLAN

LOS ANGELES HARBOR DEPARTMENT

CONSTRUCTION DIVISION

ELECTRICAL SAFETY POLICY – IMPLEMENTATION PLAN

PROJECT: TERMINAL ISLAND FACILITIES DEMOLITION AND IMPROVEMENTS

SPECIFICATION NO: 2838

INSPECTOR: _____ DATE: _____

THE CONTRACTOR SHALL:

IMPLEMENT THE ELECTRICAL SAFETY POLICY IN ACCORDANCE WITH THE BOARD OF HARBOR COMMISSIONERS' RESOLUTION NO. 6315, ADOPTED OCTOBER 27, 2004.

APPRENTICES AND JOURNEYMEN:

	All apprentices will be registered in a State of California Approved Apprenticeship Program.
	The use of "Journeymen" will comply with all State of California labor laws.

THE WORKFORCE OF PROJECTS DESIGNATED AS REQUIRING "ELECTRICAL SAFETY CRITERIA" SHALL COMPLY WITH THE FOLLOWING:

	70% of all "Journeymen Wiremen" will be graduates of a State of California Approved Electrical Apprenticeship Program.
	20% of the jobsite electrical workers will be OSHA 10-hour General Industry Safety and Health Certified.
	At least one jobsite electrical worker will be OSHA 30-hour General Industry Safety and Health Certified.
	The required workforce ratios will be determined by verifying the workforce composition on a daily basis.

FAILURE TO FULLY IMPLEMENT AND MONITOR THE ELECTRICAL SAFETY POLICY MAY RESULT IN AN ASSESSMENT OF PENALTIES AND/OR POSSIBLE SANCTIONS AGAINST THE CONTRACTOR.

Distribution:

Contractor
Job File
Inspector

As the contractor's representative, I understand and agree to comply with the above Electrical Safety Policy.

Signature

Date

APPENDIX "H"

WASTE MANAGEMENT PLAN (WMP) AND SOLID WASTE DIVERSION AND DISPOSAL (SWDD) REPORT FORMS

ATTACHMENT A - INSTRUCTION SHEET FOR WASTE MANAGEMENT PLAN

1. For assistance, contact the Solid Resources Citywide Recycling Division of LA Sanitation & Environment at (213) 485-3460 or sansrcrd_cdrecycling@lacity.org.
 2. Please print very clearly or type.
 3. Waste Management Plan (WMP) is to be completed and approved prior to start of construction. Along with the WMP, the Contractor is to include a copy of the waste hauler's waste hauler permit.
 4. Attachment A includes: **Part 1**-Inert Debris and **Part 2**-Metal, Wood, C&D waste, and all other materials.
 5. Must meet ≥80% recycling rate in **Part 1** – Inert Debris such as concrete, asphalt, dirt, rock, and brick.
 6. Must meet ≥65% recycling rate in **Part 2** – Metal, wood, green waste, C&D waste, and all other materials.
 7. The information required includes but is not limited to, the following:
 - a. Contractor and project work order number.
 - b. Permitted solid waste hauler(s) and permit number(s).
 - c. Facility names and addresses that are to process the C&D materials.
 - d. Estimated quantities of **all** C&D materials listed in **tons**.
 - e. Verify whether the Waste Management Plan meets the minimum recycling requirement of 80% for inert debris in Part 1. Verify whether the Waste Management Plan meets the minimum recycling requirement of and 65% for other C&D waste.
 8. ****Calculating recycling and disposal for mixed C&D waste taken to a certified processing facility:** the total tons taken to certified processing facility times the recycling rate = amount to be recycled. Total tons taken to facility minus amount to be recycled = amount for disposal. E.g. 100 tons x 0.80 (80% recycling rate) = 80 tons diverted and 20 tons disposed.
-

ATTACHMENT A
WASTE MANAGEMENT PLAN (PART 1-INERT DEBRIS)

Project Title:	W. O. Number:	Date Submitted:	
Name & Title of Responsible Person:	Signature:		
Permitted Waste Hauler Name(s) and Permit No(s):			
Material	Facility Name and Address	Tons Diverted	Tons Disposed
RECYCLING/REUSE			
Asphalt			X
Concrete			X
Brick			X
Dirt			X
Mixed Inerts			X
Other (Describe)			X
Other (Describe)			X
DISPOSAL			
Other (Describe)		X	
Other (Describe)		X	
Other (Describe)		X	
DIVERSION AND DISPOSAL TOTALS		=	
Percent Recycling = $\frac{\text{Total diversion}}{\text{Total diversion} + \text{Total disposed}} \times 100 =$			
Percent Recycling = $\frac{\quad}{\quad + \quad} \times 100 = \quad \%$			
Does Part 1 (Inert Debris) of this Waste Management Plan meet the minimum recycling requirement of 80% for Inert Debris? YES ☐ NO ☐			

ATTACHMENT A
WASTE MANAGEMENT PLAN (PART 2-ALL OTHER C&D WASTE)

W. O. No.:		Date Submitted:	
Contractors Name:			
Street address:			
City, State, Zip:			
Phone:		Fax:	
		Email:	
Permitted Waste Hauler Name(s) and Permit No(s):			
Material	Facility Name and Address	Tons Diverted	Tons Disposed
RECYCLING/REUSE			
Glass			X
Wood/Greenwaste			X
Metal			X
Cardboard			X
Other (Describe)			X
DISPOSAL			
Other (Describe)		X	
Other (Describe)		X	
CERTIFIED PROCESSING**			
Mixed C&D Waste			
Mixed C&D Waste			
DIVERSION AND DISPOSAL TOTALS		=	
Percent Recycling = $\frac{\text{Total Diversion}}{\text{Total Diversion} + \text{Total Disposed}} \times 100 =$			
Percent Recycling = _____ X 100 = % +			
Does Part 2 (All Other C&D Waste) of this Waste Management Plan meet the minimum recycling requirement of 65% for all other C&D Waste? YES ☐ NO ☐			

****Recycling tonnages for mixed C&D waste taken to a certified processing facility = total tonnage x recycling rate. Remaining tonnage counts as disposal. Example: 200 tons x 0.80 = 160 tons diverted and 40 tons disposed.**

EXAMPLE WASTE MANAGEMENT PLAN
ATTACHMENT A
WASTE MANAGEMENT PLAN (PART 1-INERT DEBRIS)

Project Title: <i>Big Street Overcrossing</i>	W. O. Number: <i>XYZ12345</i>	Date Submitted: <i>01/01/2020</i>	
Name & Title of Responsible Person: <i>Bobby Lee, Project Manager</i>	Signature: <i>Bobby Lee</i>		
Permitted Waste Hauler Name(s) and Permit No(s): <i>Grava Gravel Haulers, PER-22-333</i>			
Material	Facility Name and Address	Tons Diverted	Tons Disposed
RECYCLING/REUSE			
Asphalt	<i>Inert Recycling Facility A, 888 Valle Valley, CA 12345</i>	<i>600</i>	X
Concrete	<i>Inert Recycling Facility A, 888 Valle Valley, CA 12345</i>	<i>55</i>	X
Brick	<i>Inert Recycling Facility B, 777 Valle Valley, CA 12345</i>	<i>6</i>	X
Dirt	<i>The Landscaping Co., 222 Valle Valley, CA 12345</i>	<i>200</i>	X
Mixed Inerts			X
Other (Describe)			X
Other (Describe)			X
DISPOSAL			
Other (Describe)		X	
Other (Describe)		X	
Other (Describe)		X	
DIVERSION AND DISPOSAL TOTALS		=	<i>861</i>
Percent Recycling = $\frac{\text{Total diversion}}{\text{Total diversion} + \text{Total disposed}} \times 100 =$			
Percent Recycling = $\frac{861}{861 + 0} \times 100 = 100.00 \%$			
Does Part 1 (Inert Debris) of this Waste Management Plan meet the minimum recycling requirement of 80% for Inert Debris? YES ☒ NO ☐			

ATTACHMENT A
WASTE MANAGEMENT PLAN (PART 2-ALL OTHER C&D WASTE)

W. O. No.: XYZ12345		Date Submitted: 01/01/2020	
Contractors Name: Awesome Engineering Contractors			
Street address: Circular Drive			
City, State, Zip: Ciudad City, CA 12345			
Phone: (123) 456-7891		Fax: (321) 123-4567	
Email: AEC@zmail.com			
Permitted Waste Hauler Name(s) and Permit No(s):			
Material	Facility Name and Address	Tons Diverted	Tons Disposed
RECYCLING/REUSE			
Glass			
Wood/Greenwaste	<i>The Landscaping Co., 222 Valle Valley, CA 12345</i>	50	
Metal	<i>Kim Loai Metal Recycling, 333 Camino St, CA 12345</i>	6	
Cardboard			
Other (Describe)			
DISPOSAL			
Other (Describe)	<i>Municipal Landfill, 456 Montana Mountains, CA 12345</i>		15
Other (Describe)			
CERTIFIED PROCESSING**			
Mixed C&D Waste	<i>Certified Processor A (Recycling Rate = 75% = 0.75)</i>	18.75	6.25
Mixed C&D Waste	<i>25 tons x 0.75 = 18.75 tons recycled and 6.25 tons disposed</i>		
DIVERSION AND DISPOSAL TOTALS		= 74.75	21.25
Percent Recycling = $\frac{\text{Total Diversion}}{\text{Total Diversion} + \text{Total Disposed}} \times 100 =$			
Percent Recycling = $\frac{74.75}{74.75 + 21.25} \times 100 = 77.86 \%$			
Does Part 2 (All Other C&D Waste) of this Waste Management Plan meet the minimum recycling requirement of 65% for all other C&D Waste? YES ☒ NO ☐			

****Recycling tonnages for mixed C&D waste taken to a certified processing facility = total tonnage x recycling rate. Remaining tonnage counts as disposal. Example: 200 tons x 0.80 = 160 tons diverted and 40 tons disposed.**

ATTACHMENT B - INSTRUCTION SHEET FOR SOLID WASTE DIVERSION & DISPOSAL REPORT

1. For assistance, contact the Solid Resources Citywide Recycling Division of LA Sanitation & Environment at (213) 485-3460 or sansrcrd_cdrecycling@lacity.org.
 2. Please print very clearly or type.
 3. All **three (3) pages** of Attachment B and **all** manifests, weight tickets, receipts, reports, invoices, and other supporting documents specifically identifying the projects, the recyclables and solid waste generated by the project, and where the material was sent must be submitted to the inspector with each application for progress payment.
 4. Attachment B includes: **Part 1** - Inert Debris, **Part 2** - All Other C&D Waste, **Part 3** - Project Cumulative Total.
 5. Must meet $\geq 80\%$ recycling rate for Inert Debris by end of construction.
 6. Must meet $\geq 65\%$ recycling rate in Metal, wood, green waste, C&D waste, and all other materials by end of construction.
 7. In **Part 1 and Part 2**, record:
 - a. Material type generated.
 - b. Permitted solid waste hauler(s) and permit number(s).
 - c. Facility names and addresses where materials were delivered.
 - d. Tons diverted/disposed for a particular pay period.
 - e. Verify whether Part 1 meets the minimum recycling requirement of 80% for Inert Debris. Verify whether Part 2 meets the minimum recycling requirement of 65% for other C&D Waste. Contractor is to meet the minimum recycling requirements by the end of construction.
 8. In **Part 3**, record:
 - a. Pay period beginning and period ending
 - b. Diversion and disposal for the pay period and cumulative diversion and disposal for the project
 - c. Cumulative waste generated (diversion + disposal) for the project
 - d. Cumulative recycling rate for the project (diverted/generated)*100
 9. The information required includes but is not limited to, the following:
 - a. Contractor and project identification information
 - b. Actual quantities of **all** materials listed in tons
 10. Source-separated material taken to a recycling facility or certified processing facility is 100% recycled.
 11. **Calculating recycling and disposal for mixed material taken to a certified processing facility: the total tons taken to certified processing facility times the recycling rate = amount to be recycled. Total taken to facility minus amount to be recycled = amount for disposal. E.g. 100 tons $\times$ 0.80 (80% recycling rate) = 80 tons diverted and 20 tons disposed.
-

ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 1 OF 3 - INERT DEBRIS

Project Title:	W. O. Number:	Date Submitted:	Progress Payment #
Company Name: _____ Daytime Phone Number: _____			
Period Covered In This Report:			
From: _____		To: _____	
Permitted Waste Hauler Name(s) and Permit No(s): _____			
Material	Facility Name and Address	Tons diverted	Tons Disposed
RECYCLING/REUSE			
Asphalt			X
Concrete			X
Brick			X
Dirt			X
Mixed Inerts			X
Other (Describe)			X
Other (Describe)			X
DISPOSAL			
Other (Describe)		X	
Other (Describe)		X	
Other (Describe)		X	
DIVERSION AND DISPOSAL TOTALS * =			

***Copy the Tons Diverted and Tons Disposed totals to Part 3 Project Cumulative Total. Each Report needs to have the totals from every previous Diversion and Disposal Report documented on it, as well as the totals from this Report.**

ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 2 OF 3 - ALL OTHER C&D WASTE

W. O. Number:		Date Submitted:	
Permitted Waste Hauler Name(s) and Permit No(s):			
Material	Facility Name and Address	Tons Recycled	Tons Disposed
RECYCLING/REUSE			
Metal			X
Wood / Lumber			X
Greenwaste / Landscaping			X
Glass			X
Cardboard			X
Other (Describe)			X
Other (Describe)			X
DISPOSAL			
Mixed Solid Waste		X	
Other (Describe)		X	
Other (Describe)		X	
CERTIFIED PROCESSING**			
Mixed C&D Waste			
Mixed C&D Waste			
Mixed C&D Waste			
DIVERSION AND DISPOSAL TOTALS* =			

***Copy the Tons Diverted and Tons Disposed totals to Part 3 Project Cumulative Total. Each Report needs to have the totals from every previous Diversion and Disposal Report documented on it, as well as the totals from this Report.**

****Recycling tonnages for mixed C&D waste taken to a certified facility = total tonnage x recycling rate. Remaining tonnage counts as disposal. Example: 200 tons x 0.80 = 160 tons diverted and 40 tons disposed.**

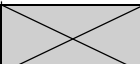
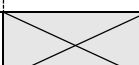
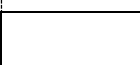
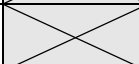
ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 3 OF 3 - PROJECT CUMULATIVE TOTAL

W. O. Number:				Date Submitted:			
Period Beginning	Period Ending	*Period Diversion	Cumulative Project Diversion, <u>R</u>	*Period Disposal	Cumulative Project Disposal, <u>D</u>	Cumulative Waste Generated <u>R + D</u>	Cumulative Recycling % (<u>R/G</u>)100
<u>INERT DEBRIS CUMULATIVE PROJECT HISTORY, REFER TO ATTACHMENT B PART 1 OF 3</u>							
<u>ALL OTHER C&D WASTE CUMULATIVE PROJECT HISTORY, REFER TO ATTACHMENT B PART 2 OF 3</u>							
Does this Report meet the minimum recycling requirement of 80% for Inert Debris and 65% for All Other C&D Waste? Contractor is to meet the minimum recycling requirements of 80% for Inert Debris and 65% for All Other C&D Waste by the end of construction. YES ☐ NO ☐							
Name & title of person responsible for the information in this form:					Signature:		

***From appropriate Part 1 or 2 during each period.**
Each Attachment B Part III Report needs to have the Tons Diverted and Tons Disposed from every previous Diversion and Disposal Report documented in it, as well as the totals from this Report.
Attach another Part III form and continue information if more rows are needed.

**EXAMPLE SOLID WASTE DIVERSION AND DISPOSAL REPORT FOR
PROGRESS PAYMENT #1**

**ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 1 OF 3 - INERT DEBRIS**

Project Title: <i>Big Street Overcrossing</i>		W. O. Number: <i>XYZ12345</i>	Date Submitted: <i>03/15/2020</i>	Progress Payment # <i>1</i>
Company Name: <i>Awesome Engineering Contractors</i>		Daytime Phone Number: <i>(123)456-7891</i>		
Period Covered In This Report: From: <i>2/1/2020</i> To: <i>2/28/2020</i>				
Permitted Waste Hauler Name(s) and Permit No(s): <i>Grava Gravel Haulers, PER-22-333</i>				
Material	Facility Name and Address	Tons diverted	Tons Disposed	
RECYCLING/REUSE				
Asphalt	<i>Inert Recycling Facility A, 888 Valle Valley, CA 12345</i>	<i>45</i>		
Concrete	<i>Inert Recycling Facility A, 888 Valle Valley, CA 12345</i>	<i>10</i>		
Brick	<i>Inert Recycling Facility B, 777 Valle Valley, CA 12345</i>	<i>6</i>		
Dirt	<i>The Landscaping Co., 222 Valle Valley, CA 12345</i>	<i>150</i>		
Mixed Inerts				
Other (Describe)				
Other (Describe)				
DISPOSAL				
Other (Describe)				
Other (Describe)				
Other (Describe)				
DIVERSION AND DISPOSAL TOTALS * =			<i>211</i>	

***Copy the Tons Diverted and Tons Disposed totals to Part 3 Project Cumulative Total. Each Report needs to have the totals from every previous Diversion and Disposal Report documented on it, as well as the totals from this Report.**

ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 2 OF 3 - ALL OTHER C&D WASTE

W. O. Number: <i>XYZ12345</i>		Date Submitted: <i>03/15/2020</i>	
Permitted Waste Hauler Name(s) and Permit No(s): <i>Grava Gravel Haulers, PER-22-333</i>			
Material	Facility Name and Address	Tons Recycled	Tons Disposed
RECYCLING/REUSE			
Metal	<i>Kim Loai Metal Recycling, 333 Camino St, CA 12345</i>	<i>2</i>	<i>X</i>
Wood / Lumber	<i>The Landscaping Co., 222 Valle Valley, CA 12345</i>	<i>15</i>	<i>X</i>
Greenwaste / Landscaping			<i>X</i>
Glass			<i>X</i>
Cardboard			<i>X</i>
Other (Describe)			<i>X</i>
Other (Describe)			<i>X</i>
DISPOSAL			
Mixed Solid Waste	<i>Municipal Landfill, 456 Montana Mountains, CA 12345</i>	<i>X</i>	<i>1</i>
Other (Describe)		<i>X</i>	
Other (Describe)		<i>X</i>	
CERTIFIED PROCESSING**			
Mixed C&D Waste	<i>Certified Facility A (Recycling Rate = 75% = 0.75)</i>	<i>9</i>	<i>3</i>
Mixed C&D Waste	<i>12 tons x 0.75 = 9.00 tons recycled and 3.00 tons disposed</i>		
Mixed C&D Waste			
Mixed C&D Waste			
DIVERSION AND DISPOSAL TOTALS* =		26	4

*Copy the Tons Diverted and Tons Disposed totals to Part 3 Project Cumulative Total. Each Report needs to have the totals from every previous Diversion and Disposal Report documented on it, as well as the totals from this Report.

**Recycling tonnages for mixed C&D waste taken to a certified facility = total tonnage x recycling rate. Remaining tonnage counts as disposal. Example: 200 tons x 0.80 = 160 tons diverted and 40 tons disposed.

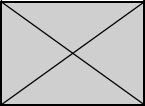
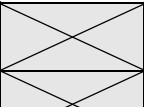
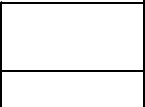
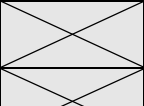
ATTACHMENT B
INERT SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 3 OF 3 - PROJECT CUMULATIVE TOTAL

W. O. Number: <i>XYZ12345</i>				Date Submitted: <i>03/15/2020</i>			
Period Beginning	Period Ending	*Period Diversion	Cumulative Project Diversion, <u>R</u>	*Period Disposal	Cumulative Project Disposal, <u>D</u>	Cumulative Waste Generated <u>R + D</u>	Cumulative Recycling % (<u>R/G</u>)100
INERT DEBRIS CUMULATIVE PROJECT HISTORY, REFER TO ATTACHMENT B PART 1 OF 3							
<i>2/1/2020</i>	<i>2/28/2020</i>	<i>211</i>	<i>211</i>	<i>0</i>	<i>0</i>	<i>211</i>	<i>100(211/211)= 100.00</i>
ALL C&D OTHER WASTE CUMULATIVE PROJECT HISTORY, REFER TO ATTACHMENT B PART 2 OF 3							
<i>2/1/2020</i>	<i>2/28/2020</i>	<i>26</i>	<i>26</i>	<i>4</i>	<i>4</i>	<i>26+4=30</i>	<i>100(26/30)= 86.67</i>
Does this Report meet the minimum recycling requirement of 80% for Inert Debris and 65% for All Other C&D Waste? Contractor is to meet the minimum recycling requirements of 80% for Inert Debris and 65% for All Other C&D Waste by the end of construction. YES ☒ NO ☐							
Name & title of person responsible for the information in this form: <i>Bobby Lee, Project Manager</i>						Signature: <i>Bobby Lee</i>	

*From appropriate Part 1 or 2 during each period.
 Each Attachment B Part III Report needs to have the Tons Diverted and Tons Disposed from every previous Diversion and Disposal Report documented in it, as well as the totals from this Report.
 Attach another Part III form and continue information if more rows are needed.

**EXAMPLE SOLID WASTE DIVERSION AND DISPOSAL REPORT FOR
PROGRESS PAYMENT #2**

**ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 1 OF 3 - INERT DEBRIS**

Project Title: <i>Big Street Overcrossing</i>		W. O. Number: <i>XYZ12345</i>	Date Submitted: <i>04/15/2020</i>	Progress Payment # <i>2</i>
Company Name: <i>Awesome Engineering Contractors</i> Daytime Phone Number: <i>(123)456-7891</i>				
Period Covered In This Report: From: <i>3/1/2020</i> To: <i>3/31/2020</i>				
Permitted Waste Hauler Name(s) and Permit No(s): <i>Grava Gravel Haulers, PER-22-333</i>				
Material	Facility and Location	Tons diverted	Tons Disposed	
RECYCLING/REUSE				
Asphalt	<i>Inert Recycling Facility A, 888 Valle Valley, CA 12345</i>			
Concrete	<i>Inert Recycling Facility A, 888 Valle Valley, CA 12345</i>	<i>300</i>		
Brick	<i>Inert Recycling Facility B, 777 Valle Valley, CA 12345</i>			
Dirt	<i>The Landscaping Co., 222 Valle Valley, CA 12345</i>	<i>100</i>		
Other (Describe)				
Other (Describe)				
DISPOSAL				
Other (Describe)				
Other (Describe)				
Other (Describe)				
DIVERSION AND DISPOSAL TOTALS * =		<i>400</i>		

***Copy the Tons Diverted and Tons Disposed totals to Part 3 Project Cumulative Total. Each Report needs to have the totals from every previous Diversion and Disposal Report documented on it, as well as the totals from this Report.**

ATTACHMENT B
SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 2 OF 3 - ALL OTHER C&D WASTE

W. O. Number: <i>XYZ12345</i>		Date Submitted: <i>04/15/2020</i>	
Permitted Waste Hauler Name(s) and Permit No(s): <i>Grava Gravel Haulers, PER-22-333</i>			
Material	Facility and Location	Tons Recycled	Tons Disposed
RECYCLING/REUSE			
Metal	<i>Kim Loai Metal Recycling, 333 Camino St, CA 12345</i>	<i>1</i>	<i>X</i>
Wood / Lumber	<i>The Landscaping Co., 222 Valle Valley, CA 12345</i>	<i>16</i>	<i>X</i>
Greenwaste / Landscaping			<i>X</i>
Glass			<i>X</i>
Cardboard			<i>X</i>
Other (Describe)			<i>X</i>
Other (Describe)			<i>X</i>
DISPOSAL			
Mixed Solid Waste	<i>Municipal Landfill, 456 Montana Mountains, CA 12345</i>	<i>X</i>	<i>1</i>
Other (Describe)		<i>X</i>	
Other (Describe)		<i>X</i>	
Other (Describe)		<i>X</i>	
CERTIFIED PROCESSING**			
Mixed C&D Waste	<i>Certified Processor A (Recycling Rate = 75% = 0.75)</i>	<i>7.5</i>	<i>3.5</i>
Mixed C&D Waste	<i>10 tons x 0.75 = 7.5 tons recycled and 2.5 tons disposed</i>		
Mixed C&D Waste			
Mixed C&D Waste			
DIVERSION AND DISPOSAL TOTALS* =		24.5	4.5

*Copy the Tons Diverted and Tons Disposed totals to Part 3 Project Cumulative Total. Each Report needs to have the totals from every previous Diversion and Disposal Report documented on it, as well as the totals from this Report.

**Recycling tonnages for mixed C&D waste taken to a certified facility = total tonnage x recycling rate. Remaining tonnage counts as disposal. Example: 200 tons x 0.80 = 160 tons diverted and 40 tons disposed.

ATTACHMENT B
INERT SOLID WASTE DIVERSION AND DISPOSAL REPORT
PART 3 OF 3 - PROJECT CUMULATIVE TOTAL

W. O. Number: <i>XYZ12345</i>				Date Submitted: <i>04/15/2020</i>			
Period Beginning	Period Ending	*Period Diversion	Cumulative Project Diversion, <u>R</u>	*Period Disposal	Cumulative Project Disposal, <u>D</u>	Cumulative Waste Generated <u>R + D</u>	Cumulative Recycling % (<u>R/G</u>)100
<u>INERT DEBRIS CUMULATIVE PROJECT HISTORY, REFER TO ATTACHMENT B PART 1 OF 3</u>							
<i>2/1/2020</i>	<i>2/28/2020</i>	<i>211</i>	<i>211</i>	<i>0</i>	<i>0</i>	<i>211</i>	<i>100(211/211)= 100.00</i>
<i>3/1/2020</i>	<i>3/31/2020</i>	<i>400</i>	<i>211+400=611</i>	<i>0</i>	<i>0</i>	<i>211+400=611</i>	<i>100(611/611)= 100.00</i>
<u>ALL OTHER C&D WASTE CUMULATIVE PROJECT HISTORY, REFER TO ATTACHMENT B PART 2 OF 3</u>							
<i>2/1/2020</i>	<i>2/28/2020</i>	<i>26</i>	<i>26</i>	<i>4</i>	<i>4</i>	<i>26+4=30</i>	<i>100(26/30)= 86.67</i>
<i>3/1/2020</i>	<i>3/31/2020</i>	<i>24.5</i>	<i>26+24.5=50.5</i>	<i>4.5</i>	<i>4+4.5=8.5</i>	<i>50.5+8.5=59</i>	<i>100(50.5/59)= 85.59</i>
Does this Report meet the minimum recycling requirement of 80% for Inert Debris and 65% for All Other C&D Waste? Contractor is to meet the minimum recycling requirements of 80% for Inert Debris and 65% for All Other C&D Waste by the end of construction. YES ☒ NO ☐							
Name & title of person responsible for the information in this form: <i>Bobby Lee, Project Manager</i>						Signature: <i>Bobby Lee</i>	

*From appropriate Part I or II during each period.

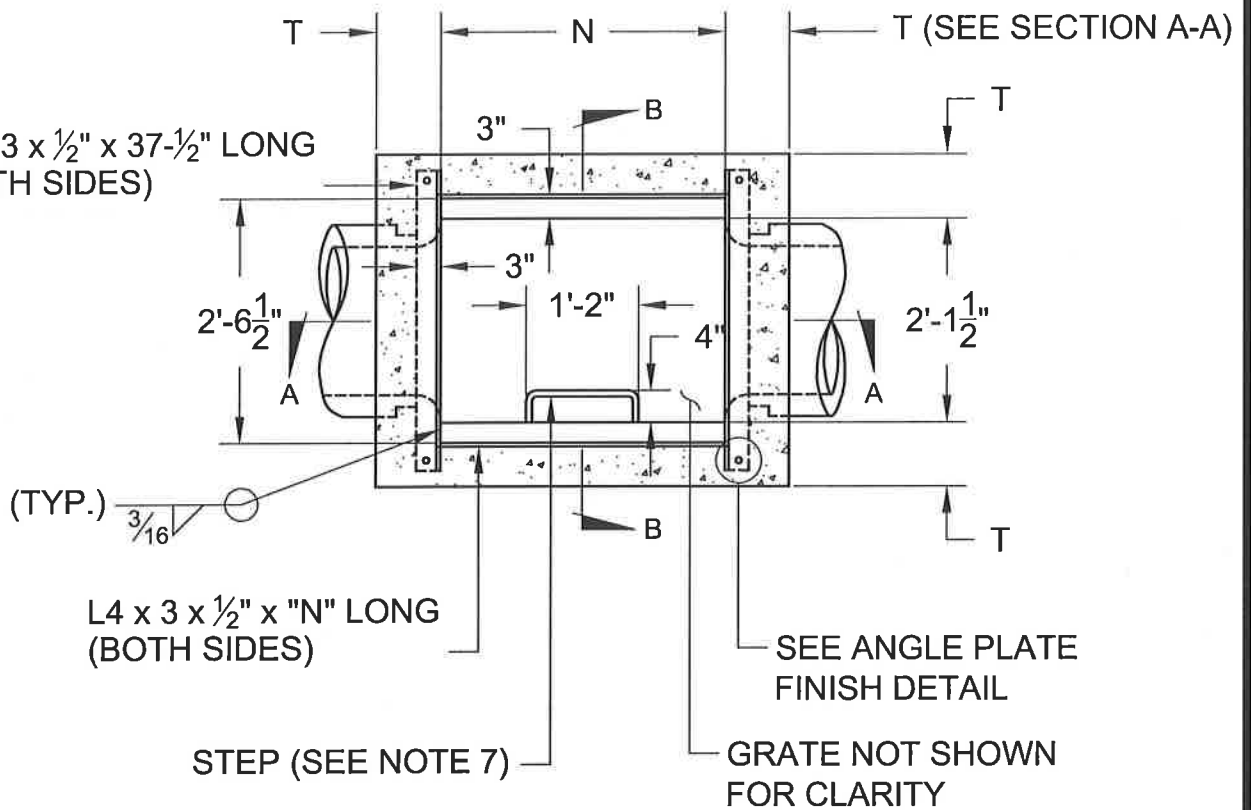
Each Attachment B Part III Report needs to have the Tons Diverted and Tons Disposed from every previous Diversion and Disposal Report documented in it, as well as the totals from this Report.

Attach another Part III form and continue information if more rows are needed.

APPENDIX "I"

LOS ANGELES HARBOR DEPARTMENT (LAHD) STANDARD PLANS

L4 x 3 x 1/2" x 37-1/2" LONG
(BOTH SIDES)



L4 x 3 x 1/2" x "N" LONG
(BOTH SIDES)

STEP (SEE NOTE 7)

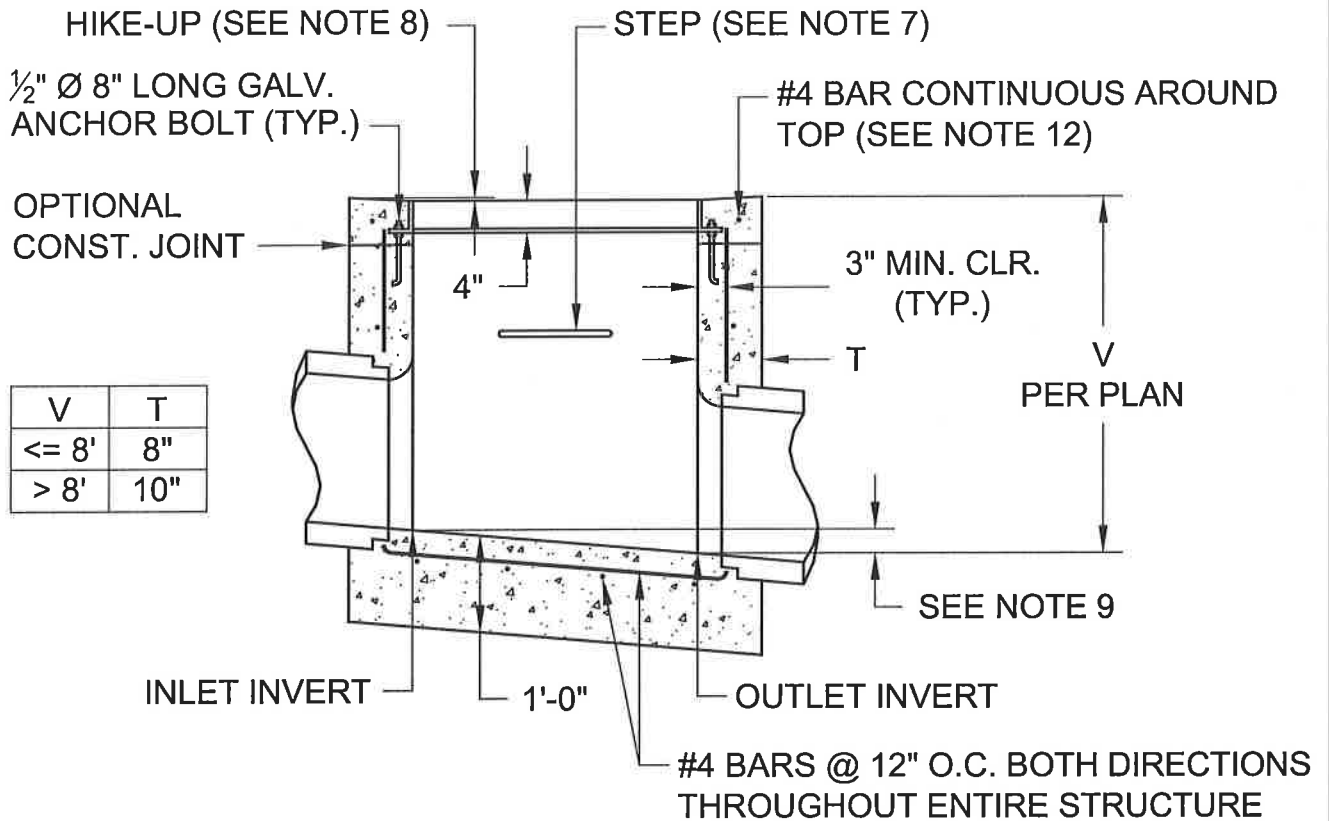
SEE ANGLE PLATE
FINISH DETAIL
GRATE NOT SHOWN
FOR CLARITY

	N
SINGLE GRATE	35 - 3/8"
DOUBLE GRATE	70 - 5/8"

CATCH BASIN AND GRATE FRAME PLAN

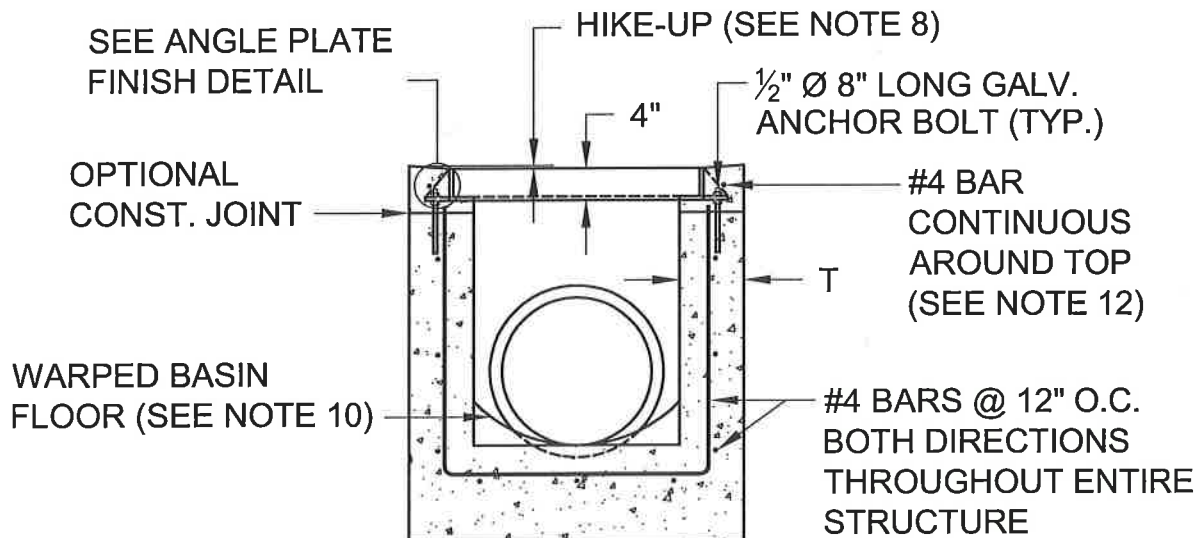
SCALE: 1/2" = 1'-0"

SCALE: AS-SHOWN		CHIEF OF DESIGN <i>[Signature]</i>		LAHD STANDARD PLAN H-101 -01	
DRAWN: F. ZINKEWICH		ASSISTANT CHIEF HARBOR ENGINEER <i>[Signature]</i>		CATCH BASIN GRATE AND FRAME	
DESIGNED: F. ZINKEWICH		CHECKED: C. BROWN			
ENGR/ARCH <i>[Signature]</i>		APPROVED <i>[Signature]</i> 12-13-12		SHEET NUMBER 1 OF 5	
DATE: Nov 28 2012 9:16am XREFS: IMAGES: POLARQ-STD-PLAN_VER 1.0912		CHIEF HARBOR ENGINEER		THE PORT OF LOS ANGELES ENGINEERING DIVISION 425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309	



SECTION A-A

SCALE: 1/2" = 1'-0"



SECTION B-B

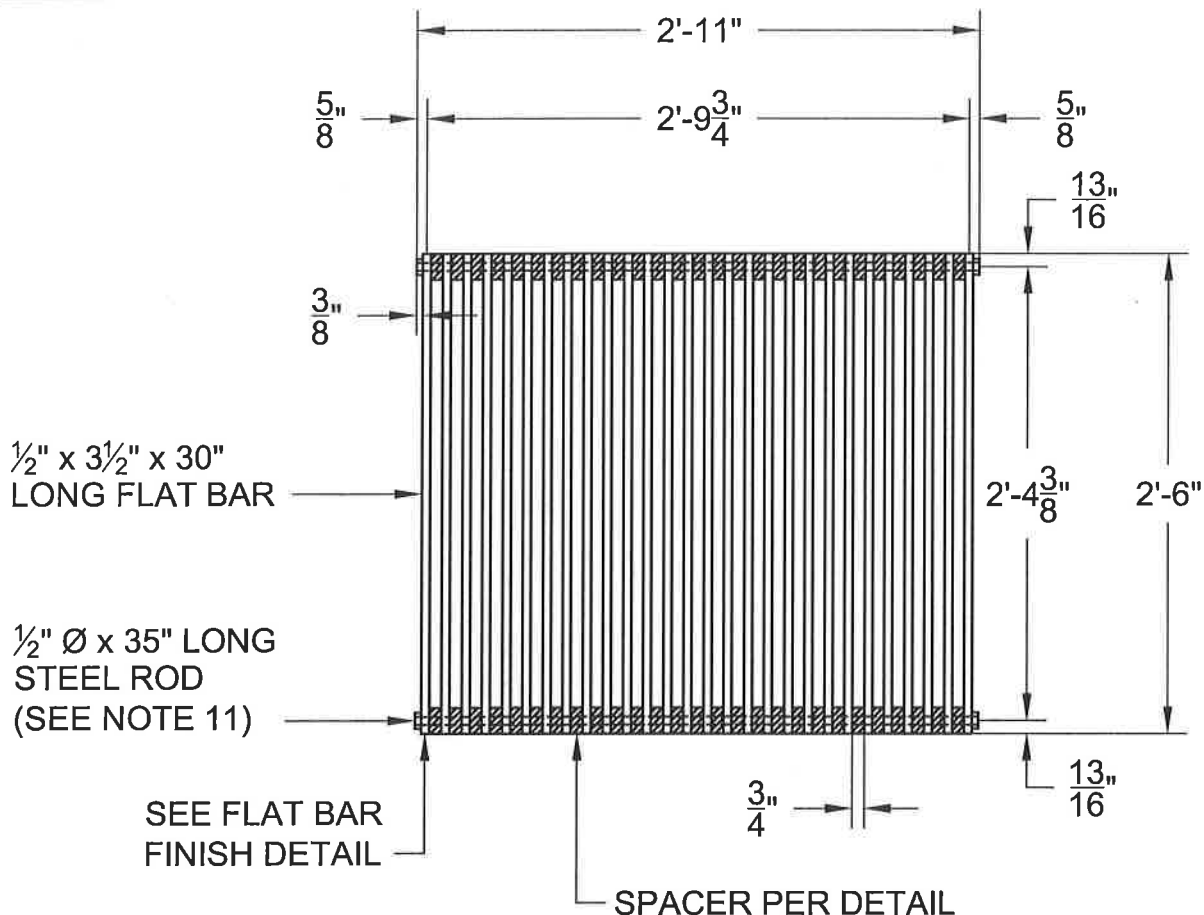
SCALE: 1/2" = 1'-0"

SCALE: AS-SHOWN		CHIEF OF DESIGN <i>[Signature]</i>		LAHD STANDARD PLAN H-101 -01	
DRAWN: F. ZINKEWICH		ASSISTANT CHIEF HARBOR ENGINEER <i>[Signature]</i>		CATCH BASIN GRATE AND FRAME	
DESIGNED: F. ZINKEWICH					
CHECKED: C. BROWN		APPROVED <i>[Signature]</i> 12-13-12		SHEET NUMBER	
ENGR/ARCH <i>[Signature]</i>		CHIEF HARBOR ENGINEER		2 OF 5	

DATE: 01/30/2012 4:34pm XREFS: IMAGES: POLAPROSTD-PLAN1 VER.1 0812

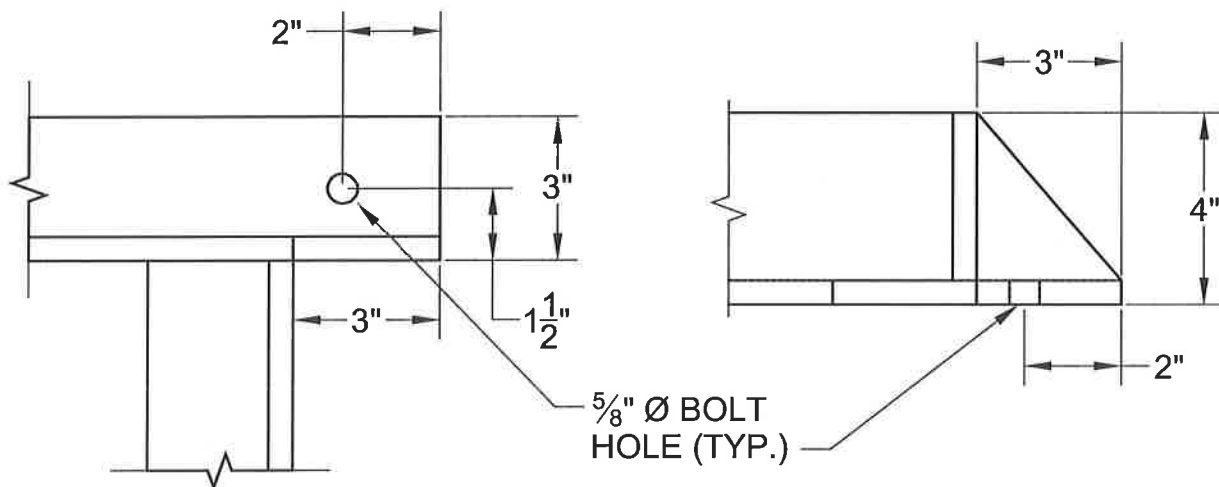
THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

DIVISION: MARINE ENGINEERING DIVISION STANDARD PLANS (Standard Plans)B, CIVIL/H-101 - Catch Basin Grate Frame (Catch Basin Grate Frame) dwg USER: brown
 DATE: Oct 30, 2012 4:54pm XREFS: IMAGES:
 POLARIS-STD-PLAN VER 1.0812



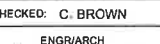
CATCH BASIN GRATE

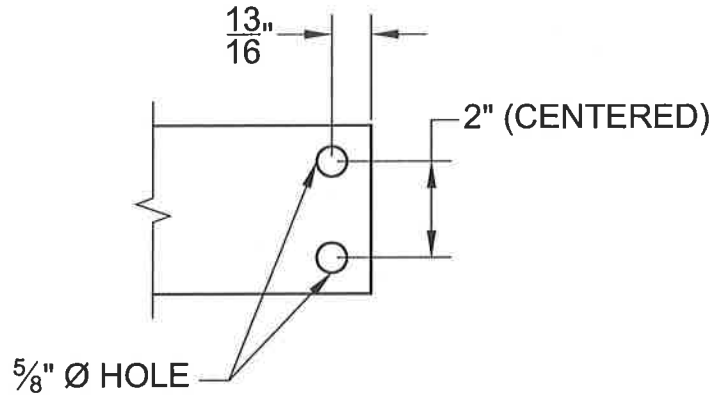
SCALE: 1" = 1'-0"



ANGLE PLATE FINISH DETAIL

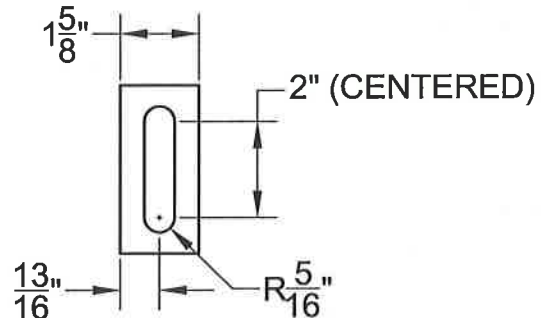
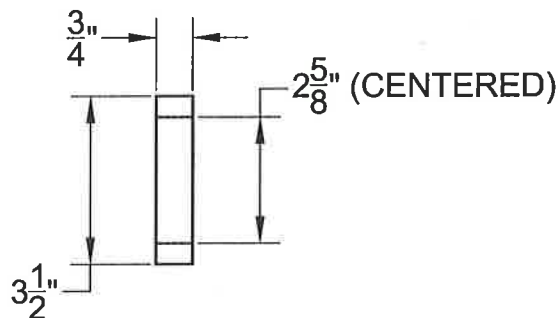
SCALE: 3" = 1'-0"

SCALE: AS-SHOWN		CHIEF OF DESIGN 	LAHD STANDARD PLAN H-101 -01	
DRAWN: F. ZINKEWICH			CATCH BASIN GRATE AND FRAME	
DESIGNED: F. ZINKEWICH				
CHECKED: C. BROWN		ASSISTANT CHIEF HARBOR ENGINEER 		
ENGR/ARCH 		APPROVED  12-13-12 CHIEF HARBOR ENGINEER DAKJ	THE PORT OF LOS ANGELES ENGINEERING DIVISION 425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309	
			SHEET NUMBER 3 OF 5	



FLAT BAR FINISH DETAIL

SCALE: 3" = 1'-0"



GRATE SPACER DETAIL

SCALE: 3" = 1'-0"

DWG: M:\user\ENGINEERING DIVISION\STANDARD PLANS\Standard Plans\B CIVIL\H-101 - Catch Basin Grate Frame.dwg USER: brown
 DATE: Oct 30, 2012 4:52pm XREFS: IMAGES: POLARPRO-STD-PLAN_VERT_1.dwg

SCALE: AS-SHOWN	CHIEF OF DESIGN <i>[Signature]</i>
DRAWN: F. ZINKEWICH	ASSISTANT CHIEF HARBOR ENGINEER <i>[Signature]</i>
DESIGNED: F. ZINKEWICH	
CHECKED: C. BROWN	
ENGR/ARCH <i>[Signature]</i>	APPROVED <i>[Signature]</i> 12-13-12 CHIEF HARBOR ENGINEER

LAHD STANDARD PLAN H-101 -01

CATCH BASIN GRATE AND FRAME



THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

SHEET NUMBER

4 OF 5

NOTES

1. ALL METAL PARTS AND REINFORCING STEEL SHALL BE OF STRUCTURAL GRADE STEEL EXCEPT SPACERS, WHICH MAY EITHER BE CAST IRON OR STEEL (STRUCTURAL STEEL A.S.T.M. DESIGNATION A-36) AND SHALL HAVE A MINIMUM 3" CLR. TO NEAREST CONCRETE EDGE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF $f'_c = 3,000$ PSI.
3. ALL REQUIRED WELDS SHALL BE E70XX
4. ALL REQUIRED SPLICES SHALL BE 27 BAR Ø.
5. ALL EXPOSED METAL PARTS SHALL BE ZINC-COATED (HOT DIPPED) PER A.S.T.M. A-123 PRIOR TO ASSEMBLY. WELDING, MACHINING, AND DRILLING SHALL BE DONE BEFORE GALVANIZING
6. ALL DIMENSIONS ARE FINISHED DIMENSIONS AND INCLUDE GALVANIZING
7. $\frac{3}{4}$ " Ø GALVANIZED STEPS PLACED 17" APART SHALL BE USED WHEN "V" IS GREATER THAN 4'-0".
8. $\frac{3}{8}$ " HIKE-UP. WHEN CONSTRUCTED WITH LONGITUDINAL CONC. GUTTER, SEE LAHD STANDARD PLAN H-201
9. THE DIFFERENCE BETWEEN THE INLET AND OUTLET INVERTS SHALL BE 3" UNLESS OTHERWISE NOTED.
10. FLOOR OF BASIN SHALL BE WARPED AT OUTLET TO PREVENT PONDING. THE WARPED FLOOR SHALL HAVE A TRANSITION LENGTH OF 9".
11. STEEL RODS SHALL BE THREADED AT EACH END AND SECURED WITH A NUT DURING ASSEMBLY OF THE GRATE. AFTER ASSEMBLY, THE NUTS SHALL BE TACK WELDED ONTO THE STEEL RODS. FOUR (4) RODS AND EIGHT (8) NUTS ARE REQUIRED PER GRATE.
12. #4 BAR CONTINUOUS ALL AROUND THE TOP OF THE BASIN SHALL HAVE A MINIMUM CLEARANCE OF 2" FROM THE CONCRETE EDGES.
13. A MONOLITHIC CONNECTION PER LOS ANGELES DEPARTMENT OF PUBLIC WORKS STANDARD PLAN S-331-1 SHALL BE CONSIDERED A PART OF THIS PLAN AND SHALL BE CONSTRUCTED WHEN SPECIFIED ON THE PROJECT PLANS.

SCALE: AS-SHOWN		DUE OF DESIGN <i>[Signature]</i>		LAHD STANDARD PLAN H-101 -01	
DRAWN: F. ZINKEWICH		ASSISTANT CHIEF HARBOR ENGINEER <i>[Signature]</i>		CATCH BASIN GRATE AND FRAME	
DESIGNED: F. ZINKEWICH		CHIEF HARBOR ENGINEER <i>[Signature]</i>			
CHECKED: C. BROWN		APPROVED <i>[Signature]</i> 12/13/12		SHEET NUMBER	
ENGR/ARCH <i>[Signature]</i>		CHIEF HARBOR ENGINEER		5 OF 5	

APPENDIX "J"

SAMPLE - BEST MANAGEMENT PRACTICES PLAN

BEST MANAGEMENT PRACTICES PLAN

[Project Name]

[CONTRACTOR's NAME]

[SPECIFICATION No.]

1. **Provide BMP Implementation Schedule for Construction Activities:** Examples of activities include but not limited to :Dewatering Operations, Paving Operations, Structure Construction, Painting, Utility Trenches, Concrete, Curb and Gutter work, Demolition, Removals, Storm Drain, Sewer, Materials Delivery and Storage, Material Use, Solid Waste, Hazardous Waste, Concrete Waste, Sanitary/Septic Waste, Vehicle/Equipment Fueling, Vehicle/Equipment Maintenance.

BMP Implementation Schedule

	BMP	Implementation	Duration
Erosion Control	EC-1, Scheduling	Prior to Construction	Entirety of Project
Sediment Controls	TC-1, Stabilized Construction Entrance		
Waste Management	WM-1 , Material Delivery and Storage		
	WM-8 , Concrete Waste Management		
Non-Storm Water Management Non-Storm Water	NS-10, Vehicle and Equipment Maintenance		

Please fill out the BMP Implementation form completely and add to the list as needed.

Required BMP Map Information

Included on Map/Plan Sheet No.	Required Element
	The project's surrounding area(Vicinty)
	Site Layout
	Construction site boundaries
	Active Areas
	Locations of erosion control BMPs
	Locations of sediment control BMPs
	Locations of runoff and storm drain inlet BMPs
	Location of all post construction BMPs
	Waste storage areas
	Vehicle storage areas
	Material storage areas
	Entrance and Exits
	Fueling Locations

[illegible]