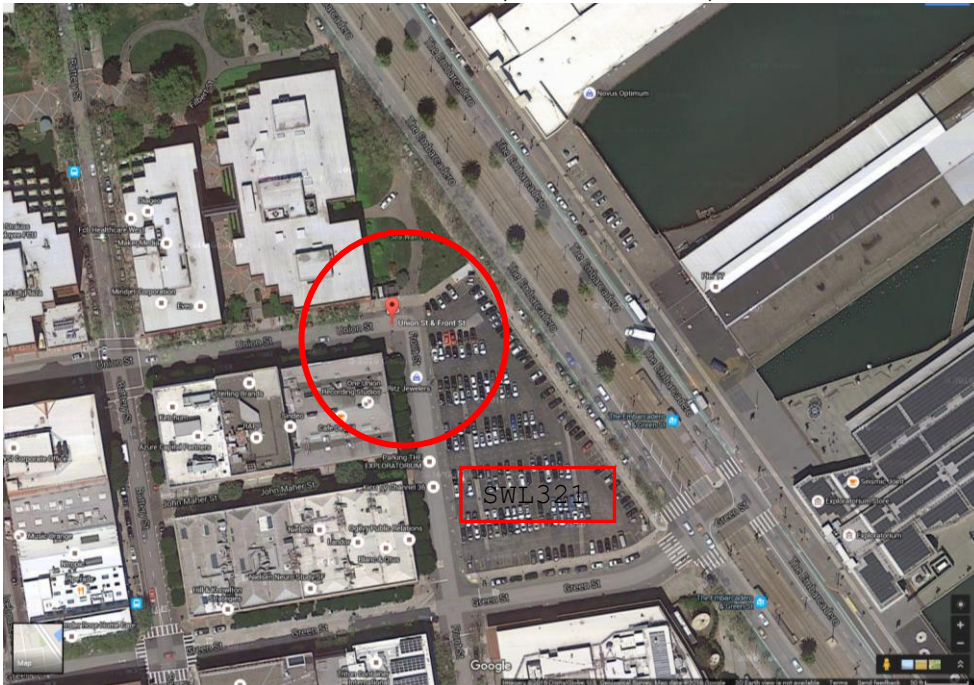


**SECTION 01010****SUMMARY OF WORK****PART 1 GENERAL****1.01 WORK COVERED BY CONTRACT DOCUMENTS****A. Project Locations:****1. Union and Front Streets, San Francisco, California 94111****B. Owner: Port of San Francisco.****C. The Construction Work includes, but is not limited to:**

This project is to bring new electric service into Seawall Lot 321 (82 The Embarcadero, Block/Lot = 0110/002). The project will include excavation across Front Street to the northwest corner of the parking lot, installation of underground 3" conduit & wiring, constructing new curb ramps, and installation of new 10" x 20" electric service pedestal.

**1.02 CONTRACTOR'S QUALIFICATIONS**

- A.** To qualify to bid, the Contractor must meet the eligibility requirements stated under Section 00 11 13., Advertisement for Bids.
- B.** For additional required qualifications of the Contractor or subcontractor's installing various elements of the Work, see:

1. Division 16 Specifications attached.

#### 1.03 CONTRACTOR USE OF SITE

- A. Limit of Work: The limit of work of this Contract is as indicated on the Drawings and as specified herein.
- B. Use of Site: Limit use of the site for construction operations necessary to perform the Work indicated on the Drawings. Protect and repair or restore to the existing condition surrounding areas damaged by Contractor's operations.
- C. Contractor's Work Area:
  1. Refer to Section 01500 "Construction Facilities and Temporary Controls" for work area maintenance requirements.
- D. Additional Staging and Storage:
  1. Do not utilize City streets or Port property for storage of demolished materials, unless approved in writing. Contact Port of San Francisco Property Manager Sandra Oberle at (415) 274-0519.

#### 1.04 HAZARDOUS MATERIALS

- A. Refer to section 01 35 45 HEALTH AND SAFETY CRITERIA.

#### 1.05 COORDINATION WITH TENANTS

- A. Contractor shall plan the Work so that tenants will not be adversely affected by the Work. The Contractor shall cooperate with the Port to minimize conflict.
- B. Coordination with tenants is considered incidental, and no compensation shall be paid for this coordination.

#### **PART 2 PRODUCTS**

Not Used.

#### **PART 3 EXECUTION**

Not Used.

**END OF SECTION 01010**

**SECTION 01040****PROJECT COORDINATION****PART 1 GENERAL**

## 1.1 SUMMARY

- A. Section Includes: Provisions of coordination of the Work of the Contract and requesting clarifications and interpretations of the Contract Documents.
- B. Related Sections:
  - 1. Section 01200 – Project Meetings.

## 1.2 GENERAL COORDINATION

- A. Contractor shall be responsible for all project coordination.
- B. Coordinate scheduling, submittals, and Work of various Sections to assure efficient and orderly sequence of installation of interdependent construction elements.
- C. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water and materials.
  - 1. The Contractor shall coordinate the work to generate least amount of waste possible and employ processes that ensure generation of least waste possible due to error, poor planning, breakage, mishandling, contamination, and other factors.
  - 2. The Contractor shall also coordinate the work to achieve the Port's goals for the diversion of solid waste and oil and grease recycling.

## 1.3 SUBCONTRACT COORDINATION

- A. Coordinate the Work and do not delegate responsibility for coordination to any other Subcontractor, and a foreman shall be available.
- B. Anticipate the interrelationship of all Subcontractors and their relationship with the Work and Safety Requirements.
- C. Resolve differences or disputes between Subcontractors concerning scheduling, interference, or extent of work between sections of the specifications including assigned Contract work. Contractor's decisions, if consistent with the Contract Document requirements, shall be final.
- D. Coordinate the work of Subcontractors so that their portions of the work are performed in a manner that minimizes interference with the progress of the Work.

## 1.4 REQUEST FOR INFORMATION (RFI)

- A. Requirement: It is Contractor's responsibility to review Contract Documents a minimum of 30 days in advance of the work to be executed, and to request for information so that the Port will have sufficient time to respond to Requests for Information prior to the start of actual construction of that part of the Work to which the RFI relates.
- B. Form:
1. When an interpretation or clarification of the Contract Documents is required from the Port or Engineer, make a written request or electronic email, with a copy to all affected parties.
  2. Fill in all applicable information on the form, reason for clarification request, and timing or schedule needed for a response.
  3. Use one form for each request; limit the subject to one question to expedite reply. Attach supplementary information where necessary.
  4. The Port will reply or give summary of reply on the same form and include supplementary information where necessary.
  5. The completed form shall be the written record of each RFI.
  6. Do not use any other RFI form on this Project.
- C. Uses:
1. The RFI form shall be used for interpretation or clarification of the Contract Documents only.
  2. Do not use the RFI form for the following; they will be rejected:
    - a. Product or material substitution.
    - b. Questions relating to construction means, methods, techniques, sequences, procedures or safety precautions. (These are Contractor's responsibilities exclusively.)
    - c. Questions relating to construction schedule, coordination between trades, or division of work among subcontractors. (These are also Contractor's responsibilities exclusively.)
    - d. Questions on contract administration procedural matters, unless they require interpretation or clarification of the Contract Documents.
    - e. Dimensions or quantities which are shown on the Contract Documents, or which can be measured from the building, or calculated from the information contained in the Contract Documents.
    - f. Confirmation of interpretations or clarifications previously provided in writing by the Port or the Engineer.
    - g. The Port will reject requests for interpretations or clarifications of the Contract Documents which can reasonably be derived from a review of the Contract Documents.
- D. Reply:
1. The Port will endeavor to reply to all RFI's promptly as work schedule of the consultants allows; generally no later than seven calendar days from the day received.
  2. When an RFI involves a complex subject, extensive research or development, or substantial input from another governmental agency, the Port will inform Contractor and request additional time to prepare the reply. Contractor shall cooperate and agree to a reasonable time extension.
  3. The reply shall be a clarification or an interpretation of the Contract Documents; the reply is not an authorization of change in the Contract Sum or Time.

4. Such written interpretation or clarification will be binding on Contractor and Port. If Contractor believes that a written interpretation or clarification justifies an adjustment in the Contract Sum or Time, then the Contractor shall make a written request for change order as provided in Section 103.03 of the General Conditions.


**PART 2 PRODUCTS**

Not Used

**PART 3 EXECUTION**

Not Used

**END OF SECTION 01040**



**PORT OF SAN FRANCISCO**  
 Pier 1, The Embarcadero, San Francisco Ca 94111  
 Phone: (415) 274-0588 Fax: (415) 274-0551

## REQUEST FOR INFORMATION

**CONTRACT:** \_\_\_\_\_  
**CONTRACTOR:** \_\_\_\_\_

**SUBJECT OF REQUEST**

Correspondence: \_\_\_\_\_  
 Gen/Special Provisions: \_\_\_\_\_  
 Technical Specs: \_\_\_\_\_  
 Drawing: \_\_\_\_\_

**TRIGON TELEPHONE ENTRY SYSTEM**

<u>INFORMATION REQUESTED:</u>	<input type="radio"/> REQUESTED BY PHONE
DATE: _____	SIGNED: _____ COMPANY: _____

<u>REPLY</u>	<input type="radio"/> RESPONDED BY PHONE
REVIEWER _____ DATE _____	Registered Design Professional In Responsible Charge (RDP): _____ DATE: _____
	Plan Review Engineer (PRE): _____ DATE: _____

**RE Distribution:**

<input type="radio"/> Contractor	<input type="radio"/> PE	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> RE/CM File	<input type="radio"/> PM	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Inspectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## SECTION 01 41 00

## REGULATORY REQUIREMENTS

## PART 1—GENERAL

## 1.01 DESCRIPTION

- i. All materials, installation, and construction shall comply with the applicable provisions of current laws, codes, safety rules, and regulations of the City and County of San Francisco, the State of California, the Federal Government, and any other applicable authorities ("Codes").
- ii. Contractor shall obtain and comply with all permits required for the Work and for temporary facilities, including indemnification and insurance requirements of such permits, and shall pay all fees and furnish deposits and bonds
- iii. Contractor shall keep a copy of each applicable permit and Codes in its Site field office, and shall ensure that it and its Subcontractors' superintendents and foremen are thoroughly familiar with all applicable permits, and Codes.
- iv. Contractor shall provide sufficient time in its Baseline Schedule to obtain permits. Contractor's failure to provide reasonable estimate of time for permitting agencies to review and approve permit application shall preclude Contractor's claim for demand for additional time or compensation for delay arising from its failure to provide adequate time for permit processing.
- v. Codes referenced in the Contract Documents shall have full force and effect as though set out in full in these Specifications. Nothing in the Contract shall be construed to permit Work not conforming to applicable Code requirements.
- vi. The Codes and other authorities referenced in the Contract Documents are not a comprehensive list of all Codes applicable to the Work; the Codes listed in the Contract Documents are referenced for the information and convenience of the Contractor only. The City does not represent that the all Codes applicable to the Work have been cited or adequately described in the Contract Documents. Contractor is solely responsible for compliance with all Codes applicable to the Work and relevant to the Contractor's means and methods of performing said Work.

## 1.02 CITED CODES AND AUTHORITIES

- A Laws, Codes, safety rules, regulations and authorities referenced in the General Provisions include but are not limited to the following:
  1. California Code of Regulations (CCR) or California Administrative Code, Title 8 - Industrial Relations, Part 1 - Department of Industrial Relations, Chapter 4 - Division of Industrial Safety:
    - a. Subchapter 4 - Construction Safety Orders (CSO),
    - b. Subchapter 5 - Electric Safety Orders (ESO),
    - c. Subchapter 7 - General Industry Safety Orders (GISO).

- d. The Contractor's attention is directed to sections of above Safety Orders, which cover some of the most frequently encountered safety concerns, as follows:
  - e. CSO #1540 - Excavations
  - f. CSO #1541 - Shoring, Sloping and Benching Systems
  - g. CSO #1598 - Traffic Control for Public Streets and Highways
  - h. CSO #1599 - Flaggers
  - i. GISO #3380 - Personal Protective Devices
  - j. GISO #3381 - Head Protection
  - k. GISO #3395 –Heat Illness Prevention Standards
  - l. GISO #3646 - Operating Instructions (Elevated Work Platforms)
  - m. GISO #3648 - Operating Instructions (Aerial Devices)
  - n. GISO #5003, #5006, #5021, #5022, #5024, #5025 - Cranes
  - o. ESO #2940.2 - Clearances
  - p. ESO #2940.7 - Mechanical Equipment
2. San Francisco Department of Public Health (SFDPH) Dust Control Ordinance - Article 22B, the San Francisco Building Code Section 106.3.2.6 (Ordinance #176-08), the DPW Dust Control Order 171,378, and the California Code of Regulations, Title 17, Section 93105 - Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. (<http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm>) and Lead-Safe Work Practices mandated by the United States Department of Housing and Urban Development (HUD) standard 24 CFR Part 1330 (a) (4).
3. CCR Title 19, Fire Marshal.
4. CCR Title 22, Social Security, Division 4, Environmental Health, and Division 4.5, Environmental Health Standards for the Management of Hazardous Waste.
5. CCR Title 24, California Building Standards Code – 2007 including Part 9, California Fire Code.
6. CCR Title 24, Americans with Disabilities Act – Accessibility Guidelines for Buildings and Facilities.
7. CCR Title 26, Toxics.
8. CCR Article 4.8 Section 2449 General Requirements for In-Use off Road Diesel fueled fleets, ARB AB 1085. (<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>)
9. Code of Federal Regulations (CFR):
  - a. CFR Title 29, Labor - Labor Environmental Health and Safety Plan (EHASP).
  - b. CFR Title 40, Protection of Environment.
  - c. CFR Title 49, Transportation.



10. San Francisco Municipal Codes, including San Francisco Administrative Code, San Francisco Building Code, San Francisco Electrical Code, San Francisco Environment Code, San Francisco Mechanical Code, San Francisco Plumbing Code, San Francisco Police Code, San Francisco Public Works Code, San Francisco Transportation Code, San Francisco Fire Code, and all department orders adopted pursuant thereto.
  - a. Regulations for working in San Francisco Streets.
  - b. DPW Order 171,333, Dust Generation and Control Regulations
  - c. DPW Order 135,595, Street Opening and Pavement Restoration Regulations for Non Moratorium City Streets.
  - d. DPW Order 135,596, Street Opening and Pavement Restoration Regulations for Newly Renovated City Streets.
  - e. DPW Order 167,840, Placement of Barricades at Construction Site.
  - f. DPW Order 178,940, Regulations for Excavating and Restoring Streets in San Francisco.
  - g. DPW Order 171,378, Dust Control Order
  - h. DPW Order 172,596, Guidelines for Processing and Issuance of Special Sidewalk Permits within the Downtown Streetscape Areas.
  - i. DPW Order 174,878, Regulations and Slip Resistant Standards for Any Manhole, Vault, or Sub-Sidewalk Basement Cover, Grille, Grate on the Public Sidewalk.
  - j. Article 2.4, San Francisco Public Works Code, Excavation in the Public Right-of-Way
  - k. Article 29, San Francisco Police Code, Regulation of Noise.
  - l. Article 4.1 and 4.2 San Francisco Public Works Code; Industrial Waste Ordinance,
  - m. The San Francisco Building Code Section 106.3.2.6.
11. San Francisco Health Code
  - a. Article 21 – Hazardous Materials
  - b. Article 21A – Risk Management Program
  - c. Article 22 – Hazardous Waste Management
  - d. Article 22A – Analyzing Soils for Hazardous Waste
  - e. Article 22B – Construction Dust Control Ordinance #176-08
12. San Francisco Department of Building Inspection (SFDBI) Central Permit Bureau – Major Plan Check Division.
13. San Francisco Department of Public Health (SFDPH).
1. Clean Construction Ordinance under the SF Administrative Code, Chapter 6, Section 6.25 and Section 6.67, SF Environment Code, Chapter 4: Section 426 Clean

- Construction Assistance and Reporting, City Ordinance # 70-07, and City Ordinance # 28-15.
14. California Division of Industrial Safety.
  15. California Health and Safety Code.
  16. California Department of Transportation – Right-Of-Way Cooperative Agreement Procedures and California Manual on Uniform Traffic Control Devices (MUTCD).
  17. California Labor Code.
  18. California State Vehicle Code.
  19. California Public Utilities Code Section 29037.
  20. State of California Public Utilities Commission.
    - a. General Order No. 26D, Regulations Governing Clearances on Railroads and Street Railroads with Reference to Side and Overhead Structures, Parallel Tracks, Crossings of Public Roads, Highways and Streets.
    - b. General Order No. 95, Rules for Overhead Line Construction.
    - c. General Order No. 128, Rules for Construction of Underground Electric Supply and Communication Systems.
    - d. General Order No. 143B, Safety Rules and Regulations governing Light Rail Transit.
  21. California Health and Safety Code.
  22. California Occupational Safety and Health Administration (CAL/OSHA).
  23. California Storm Water Municipal and Construction Activity BMP Handbooks. California Regional Water Quality Control Board (RWQCB)
  24. State Water Resources Control Board
  25. Bay Area Air Quality Management District (BAAQMD)
    - a. Regulations 1-13.
  26. State of California General Permit for Construction Stormwater (CGP)
    - a. Order 2009-0009 DWQ of the Clean Water Act
    - b. Order 2010-0014 DWQ Adopted Order that amends Order 2009-0009 DQQ of the Clean Water Act..
  27. Federal Transit Administration (FTA) Regulations and Best Practices Manual.
  28. Federal Clean Air Act.
  29. Federal Clean Water Act.
  30. Federal Railroad Administration (FRA)
    - a. Roadway Protection Rule (49 CFR Part 214C).

31. Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.
  32. National Fire Protection Association (NFPA) code:
    - a. NFPA 70, National Electrical Code.
    - b. NFPA 92B, Standard for Smoke Management Systems in Malls, Atria, and Large Spaces.
    - c. NFPA 130 - 2007, Standard for Fixed Guideway Transit and Passenger Rail Systems.
  33. National Electric Code (NEC)
  34. Uniform Fire Code.
  35. The Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.)
- B. Other Applicable Laws and Regulations: All applicable federal, state, and local laws, and the latest rules and regulations of governing utility districts and the various other authorities having jurisdiction over construction and completion of the Work, including but not limited to, the State Fire Marshall, Cal-OSHA and the State Construction Safety Orders, and the California Labor Code.

#### 1.03 PERMITS OBTAINED BY CONTRACTOR

- A. Contractor shall obtain the following permits as needed:
36. Special traffic permits from the Department of Parking and Traffic, Engineering Division, 1 South Van Ness Avenue, 7<sup>th</sup> floor, San Francisco, telephone (415) 701 4500
  37. State, County, and City Transportation vehicle permits for construction related vehicles that are over width, over length, overweight, overload.
  38. State Industrial Safety Orders/Construction Safety Orders: Training and Certification of Workers – Confined Spaces, Welding, High Voltage Electrical.
  39. CAL/OSHA permits:
    - a. Construction permits:
      - i. Trenches/Excavations five feet and deeper.
      - ii. Building, structure, scaffolding or falsework 36 feet and higher.
      - iii. Demolition of building, structure 36 feet and higher.
      - iv. Erection, dismantling of vertical shoring 36 feet and higher.
      - v. Tower cranes: fixed and mobile.
    - b. Tunneling permits that include usage of diesel engines in the station caverns.
    - c. Elevator permits for temporary hoisting and lifting equipment.
  40. SFDPH – Hazardous Materials Unified Program Agency permits:

- a. Removal of Hazardous Materials Permit.
  - b. Hazardous Materials Certificate of Registration: As deemed necessary, the Contractor shall obtain and keep current a hazardous materials certificate of registration and implement the hazardous materials plan submitted with the registration application, in accordance with Articles 21, 21A, and 22 of the San Francisco Public Health Code. Contact the SFDPH/HUMP at (415) 252-3900.
  - c. Dust Control Plan in accordance with Article 22B Construction Dust Control Ordinance #176-08.
  - d. Well Construction or Soil Borings Permit: As deemed necessary, a permit is required to construct or operate an environmental or geotechnical well or soil boring. These wells include, but are not limited to, cone penetrometers, inclinometers, piezometers, cathodic wells, exploratory wells, extraction wells, recovery wells, monitoring wells, temporary wells, irrigation wells, industrial wells, dewatering wells, wick drains, hydropunch soil borings, and soil borings drilled for geotechnical or environmental purposes (whether or not groundwater is encountered). This information is not intended as a substitute for familiarity with applicable laws and regulations. Contact the SFDPH, Monitoring Well Section at least 15 Working Days in advance of drilling at (415) 252-3947.
  - e. Underground Storage Tank (UST) Permit: As deemed necessary, all modifications, repairs, removals and installation of USTs shall require approval of the SFDPH, compliance with Articles 21, 21A and 22 of the San Francisco Public Health Code, and its implementing regulations, compliance with applicable provisions of Chapters 6.7 and 6.75 of the California Health and Safety Code, Section 25280 et al. Contact the SFDPH/HMUPA at (415) 252-3900.
41. SFPW or SF Port permits:
- a. Encroachment (minor and major) permits for sidewalks.
  - b. Street Excavation Permit.
  - c. Street Improvement Permit.
  - d. Utility Excavation Permit.
  - e. Street Space Permit.
  - f. Temporary Occupancy Permit.
  - g. Night Noise Permit.
  - h. Sidewalk Legislation Permit – Temporary by Contractor.
  - i. Sidewalk Permit – Temporary by Contractor.
  - j. Surface Mounted Facility Permit – Temporary by Contractor.
  - k. Parking Legislation Permit – Temporary by Contractor.
  - l. Debris Box Permit.
  - m. Removal of City Survey Benchmarks Permit needed for removal of existing survey benchmarks.

- n. Pipe Barrier Permit.
  - o. Personal Wireless Permit.
  - p. Side sewer connection Permit.
  - q. Boring/Monitoring Wells Permit.
  - r. Removal of Underground Storage Tanks (USTs) Permit
42. San Francisco Bay Regional Water Quality Control Board permits:
- a. National Pollutant Discharge Elimination System (NPDES) Permit – for sewer connections direct to Bay during construction.
43. San Francisco Public Utilities Commission (SFPUC) Permits. Waste Water Enterprise, Collection System Division (WWE-CSD 3<sup>rd</sup> Street, Suite 600, San Francisco, or the San Francisco Permit Center 1660 Mission Street, San Francisco.
- i. Batch wastewater discharge permit. Telephone (415)695-7321
  - ii. Construction Site Runoff Control Permit. , Telephone (415) 695 7339
44. San Francisco PUC/BWPC use of reclaimed water permit. Contact BWPC at (415) 648-6882 x1378.
45. State, County and City Transportation Permits.
46. Excavation, street space, side sewer, night noise and street improvements permits from the San Francisco Department of Public Works, Bureau of Street Use and Mapping, 1155 Market Street, 3<sup>rd</sup> Floor, San Francisco.
- a. Contractor shall contact DPW/BSM at (415) 554-6201 for all requirements for applying for the permit and the cost of the fees. Engineer will not allow any Work on the street without an Excavation Permit.
  - b. Contractor shall be the applicant of the permit, comply with all permit requirements, pay all costs, and be responsible for fines resulting from non-compliance to the permit requirements.
  - c. Contractor shall pay all permit fees requested by DPW/BSM. Contractor shall be reimbursed the Street Damage Restoration fee associated with water work. Other fees are incidental to the Work resulting in the fee.
  - d. It is the responsibility of the Contractor to determine the number of calendar days to complete the Work in the permit application.
  - e. It is the responsibility of the Contractor to keep permits valid for the entire period of construction including periods of extension or delay. All work and costs incurred to apply for and obtain the excavation permit, and keeping a valid permit shall be Incidental Work, and no separate payment shall be made to the Contractor, except as provided below.
  - f. The City will reimburse the Contractor for all charges by DPW/BSM plus \$100 per application for an extension of a permit required as a result of an unavoidable delay.
47. Rockwheel Permit.
48. Electrical permits.

49. San Francisco PUC/Water Department/City Distribution Division permits and service requests for water and meters.
50. San Francisco PUC/Bureau of Light, Heat, and Power (BLHP) permit and notification for removal of temporary lighting.
51. San Francisco PUC/ Hetch Hetchy Water & Power (HHWP) application and notification for electrical service connection to PG&E. Contact HHWP at (415) 554- 1596.
52. Port of San Francisco Building or Encroachment Permit, as applicable, including permits, notifications, inspections, and approvals. Contractor shall obtain (except the San Francisco Department of Building Inspection (DBI) Building Permits as described below) and pay all necessary permits to start and complete the Work, including, but not limited to, the following:
  - a. Building Permits:
    - i. Contractor shall obtain all required building permits from Port. Where the Port has made a pre-application for any building permits, the Contractor shall complete, obtain/pull, and pay in full for the applicable permits for this Contract.
    - ii. Contractor shall not start Work Site without the appropriate and valid Port Job Cards (to record sign-offs by building inspectors upon satisfactory in-progress inspections and final inspection) on site.
    - iii. Contractor shall be responsible for obtaining the appropriate and valid Port Job Cards and Port approved sets of Contract Drawings and Specifications, prior to the planned or actual start of permitted work.
    - iv. Contractor shall be responsible for arranging and coordinating periodic and final inspections by Port, and satisfying all other requirements of Port, including securing Temporary Certificates of Occupancy, if requested by Port, and the Certificates of Final Completion and Occupancy as required.
  - b. Other permits (Electrical, Mechanical, Plumbing and others):
    - i. Contractor shall obtain all other required permits from Port, and shall pay for any additional costs related to the permits that were not covered by the Building Permits, prior to the start of permitted work.
53. San Francisco Fire Department permits, including but not limited to:
  - a. The flammable or combustible material storage permit. Contact the SFFD, Bureau of Fire Prevention at (415) 558-3300.
  - b. Permit and notification for AWSS relocation.
  - c. Permit and notification for removal and installation of fuel or chemical storage tanks.
54. San Francisco Police Department permits.
55. San Francisco Department of Parking and Traffic (SFMTA, Division of Sustainable Streets) permits and traffic plans, and approvals.

56. City and County of San Francisco Department of Building Inspection permits as applicable.
57. San Francisco City Planning permits and approvals.
58. Bay Area Air Quality Management District (BAAQMD) permits and notifications, and the California Air Resources Board (CARB) permits, and notifications. The Contractor shall obtain all the permits required by the BAAQMD and CARB. For information on the permit requirements and application forms check the web page at [www.baaqmd.gov](http://www.baaqmd.gov), or [http://www.baaqmd.gov/enf/compliance\\_assistance/index](http://www.baaqmd.gov/enf/compliance_assistance/index), or call the compliance assistance hotline at (415) 749-4999. For asbestos <http://www.baaqmd.gov/enf/asbestos/index.htm> or call the district's Asbestos Program at (415) 749-4762.
  - a. The following BAAQMD permits forms shall be completed for work involving screening, crushing or grinding, and use of abatement devices:
    - i. Form P-201: General information
    - ii. Form P-101B: General information
    - iii. Form G: Emission Source (crusher or grinder)
    - iv. Form A: Abatement Devices: Wet Spray System
  - b. Contractor is hereby notified that screening or crushing operations of excavated materials cannot proceed without the appropriate BAAQMD, and Cal-EPA/DTSC permits.
  - c. Contractor is hereby notified that diesel exhaust pollutants requirements under ARB 1085 for In-use off- road diesel fueled fleet are in effect to minimize diesel exhaust emissions. Contractor shall register and obtain an Equipment Identification Number (EIN) per vehicle/equipment over 25 horsepower with the Air Resources Board (<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>).
59. The Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, and the California State Water Resource Control Board (SWRCB) permits and notifications.
60. Cal/EPA, Department of Toxic Substances Control (DTSC) permits and notifications, including but not limited to permit-by-rule, hazardous waste facilities permit, transportable treatment unit (TTU), and treatment storage and disposal facility (TSDF) permits.
61. Utility Service Alert (USA) permits and clearance at 1- (800) 642-2444.
62. Any other permit required to perform the Work not listed in Paragraph 1.03, above.

#### 1.04 SUBMITTALS

- A. A copy of each permit that the Contractor obtains shall be provided to the Engineer for information prior to commencing Work covered by such permit.

## 1.05 RESOLUTION OF CONFLICTS

- A. If the Contractor is aware that the Specifications or Drawings are at variance with permits, laws, or regulations, the Contractor shall give the Engineer prompt written notice thereof and the Engineer will resolve the conflict in accordance with the General Provisions. If the Contractor performs Work knowing or having reasons to know that it is contrary to such permits, Codes and safety rules, and without such notice to the Engineer, the Contractor shall bear all responsibility and costs arising there from including all costs of demolition correction and completing the nonconforming Work.

## 1.06 SEISMIC LOADING DESIGN PROVISIONS

- C. Contractor shall be responsible for the design of all supports and anchorages for all nonstructural components including mechanical and electrical equipment, pumps, and piping to be constructed or installed by Contractor.
- D. The Contractor shall provide the services of a civil or structural engineer registered in the State of California for preparing such designs, which shall be in accordance with the seismic loading provisions of the current edition of the San Francisco Building Code, using an importance factor of 1.0 or greater.
- E. Shop drawings and supporting calculations of all supports and anchorages shall bear the seal, signature and license expiration date of the engineer hired by the Contractor.

## 1.07 TRENCH SUPPORT DESIGN PROVISIONS

- A. Shoring of excavations during construction shall be in accordance with the requirements of Paragraph 12.02, Persons and Property, of the General Conditions; shall include adequate sheeting, shoring, and bracing, or equivalent method for the protection of life and limb; and shall conform to the applicable Safety Orders of OSHA and Cal/OSHA.
- B. As required by Section 6705 of the California Labor Code, whenever the work involves trench excavation 5 feet or more in depth, plans and calculations for the shoring system shall be submitted for review and approval prior to trench excavation. If such plans vary from the shoring standards established by the State Construction Safety Orders, the plans shall be prepared by a civil or structural engineer registered in the State of California. Approval shall not relieve Contractor of its responsibility to provide a satisfactory and safe shoring system.

PART 2—PRODUCTS (NOT USED)

PART 3—EXECUTION (NOT USED)

END OF SECTION



**SECTION 01 57 13****TEMPORARY EROSION AND SEDIMENT CONTROL (BMP)****PART 1 – GENERAL****1.01 SUMMARY**

- A. This Section specifies the general requirements for furnishing all labor, materials, equipment, and operations necessary for work related to storm water, Best Management Practices (BMP's), and erosion and sediment controls.
- B. Payment: All work in this Section is incidental to the work it pertains.

**1.02 DESCRIPTION**

- A. The Contractor shall comply with all applicable Federal, State, and local regulations in regards to Storm water Pollution Prevention Controls. In accordance with Federal, State, and local regulations, it is unlawful to discharge pollutants from construction sites into the sewer and drainage system.
- B. The Contractor shall comply with all applicable requirements of the San Francisco Public Works Code, Article 4.1 Sewer Use Ordinance and Article 4.2 Sewer System Management Ordinance and the Port of San Francisco storm water requirements.
- C. The Contractor is not required to submit the Notice of Intent (NOI) as required by the State Water Resources Control Board (SWRCB) as the storm water runoff eventually drains into the City's Combined Sewer System.
- D. The Contractor shall implement Best Management Practices (BMPs) at the construction site to minimize the discharge of pollutants into the sewer system. In addition, the Contractor must implement Erosion and Sediment Control Mitigation Measures (ESCMM) for wind and rain and if at all feasible use biodegradable, non-pollutant nontoxic materials.

**1.03 RELATED SECTIONS**

- A. Section 01 41 00 - Regulatory Requirements
- B. Section 01 50 00 - Temporary Facilities and Controls
- C. Section 01 57 19- Environmental Mitigation

**1.04 GENERAL REQUIREMENTS**

- A. Construction or demolition activities disturbing 5,000 square feet or more of the ground surface, measured cumulatively, are prohibited without a Construction Site Runoff Control Permit obtained from SFPUC. Land disturbance is any movement of earth or a change in the existing soil cover or existing topography that may result in soil erosion from wind, or water, and the moving of sediments into or upon waters, lands or public rights-of-way

within the City of County of San Francisco, including, but not limited to building demolition, clearing, grading, grubbing, filling, stockpiling, excavating and transporting over land.

- B. Water Control
1. The Contractor is responsible for the continuous control of surface and ground water at all times during the course of the construction, including Saturdays, Sundays, holidays, work stoppages, during periods of labor strikes, and during periods of work stoppages.
  2. The Contractor is wholly responsible for obtaining the sewer discharge permit in a timely manner if required. The City will not honor any claims from the contractor arising from delays in obtaining the sewer discharge permit.
- C. Work Within Existing Sewers
1. Comply with California Code of Regulations, General Industry Safety Orders, Article 108, Title 8, Sections 5156 through 5159 when entering and working in existing sewers.
  2. It is the responsibility of the Contractor to provide all equipment or assistance to make the confined space safe for entry by the City Representative or its representative per the California Code of Regulations, Title 8; General Industry Safety Orders entitled "Confined Spaces".
- D. Construction of Flow Diversion
1. The Contractor may construct open or close conduits, wholly within the excavation for flow diversions at places where sewers cross the excavation. Existing sewer flows shall be maintained at all times.
- E. Discharges to the sewer system shall meet the requirements
1. The City's Industrial Waste Ordinance No. 116-97 (Chapter X (Public Works Code), Part II, San Francisco Municipal Code, Article 4.1 and Article 4.2).
  2. DPW Order No. 158170 for wastewater discharges in to the City's sewerage system.
  3. Requirements for Batch Wastewater Discharges from the San Francisco Public Utilities Commission, Waste Water Enterprise (SFPUC-WWE).
  4. The construction dewatering site discharge limits of the local Water Pollution Control Plant (WPCP).
  5. No discharges shall be allowed in to a municipal separate storm sewer system (MS4).
- F. The Contractor is permitted to discharge runoff and dewater in to the City's combined sewer system after it submits and obtains approval of a sewer discharge permit and meets the above regulatory requirements.
- 3.01 F. The Contractor is advised that the WPCP and the SFPUC/WWE has the authority to impose fines or order immediate ceasing of discharge(s) to the sewer system. The Contractor is solely responsible for all costs associated with ceasing discharges, and any and all costs for delay in operations.
- 3.02 G. Should the existing wastewater be uncontaminated, and subsequently become contaminated due to the Contractor's operations, all costs related to satisfactory cleanup and disposal shall be the responsibility of the Contractor. Such costs shall include re-design, re-construction, pretreatment and, sewer service permit and usage fees costs necessary to satisfy the above requirements.

## 1.05 MINIMUM BEST MANAGEMENT PRACTICE (BMP) REQUIREMENTS

- A. Regardless of the acreage of the project the Contractor shall implement BMPs at the project site recommended from the following
1. SFPUC's Construction Best Management Practices Handbook, available for download at:  
<http://sfwater.org/modules/showdocument.aspx?documentid=4282>.
  2. California Storm water Quality Association's Construction Best Management Practice Handbook, available for download at:  
<http://www.cabmphandbooks.com/Documents/Construction/Construction.pdf>.
- B. BMPs for Management of Construction Materials.
1. Cover and berm loose stockpiled construction materials that are not actively being used.
  2. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
  3. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.)
  4. Implement BMPs such as rumble plates installation or wheel wash stations to prevent the off-site tracking of loose construction and landscape materials.
- C. BMPs for Waste Management.
1. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the combined sewer system.
  2. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the combined sewer system.
  3. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
  4. Cover waste disposal containers at the end of every business day and during a precipitation event.
  5. Prevent discharges from waste disposal containers to the combined sewer system.
  6. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
  7. Implement procedures that effectively address hazardous and non-hazardous spills.
  8. Utilize spill response procedures that include: providing equipment and materials for cleanup of spills on site, so that spills and leaks may be cleaned up immediately and properly disposed, and assigning and training appropriate spill response personnel.
  9. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

- D. BMPs for Vehicle Storage and Maintenance
1. Prevent oil, grease, or fuel from leaking in to the ground, storm drains, and catch basins.
  2. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
  3. Clean leaks immediately and dispose of leaked materials properly.
- E. BMPs for Management of Landscaping Materials
1. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
  2. Contain fertilizers and other landscape materials when they are not actively being used.
  3. Discontinue the application of any erodible landscape material within two days before a forecasted precipitation event or during periods of precipitation.
  4. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
  5. Stack erodible landscape material on pallets, and cover or store such materials when not being used or applied.
- F. The Contractor BMPs shall at a minimum also include:
1. Temporary sediment barriers such as silt fences, berms, dikes, fiber rolls, sandbags, gravel bags or straw bale barriers. These barriers shall be installed at the locations with potential erosion and as otherwise directed by the City Representative. They shall be relocated as necessary for construction operations, with prior approval from the City Representative. Remove the temporary barriers at the end of the project.
  2. Dust Control: Employ construction methods and means that will keep airborne dust to the minimum.
  3. Stockpile Management: Protection of Stockpiles is a year round requirement throughout the project duration. Locate stockpiles at minimum 50 yards away from concentrated flows of storm water, drainage courses and inlets. All stockpiles should be completely covered and secured. They should be protected with a temporary linear sediment barrier prior to the onset of precipitation. During the rainy season, all stockpiles shall be protected from storm water runoff by completely covering them and keeping the perimeter barriers around at all times.
  4. Provide for the continuous misting of water using hoses on the project, and on roads and other areas immediately adjacent to the project limits, wherever traffic or buildings that are occupied or in use, are affected by such dust caused by his hauling or other operations. The materials and methods used for water laying shall be subject to the approval of the City Representative. Provide for prompt and proper removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked, or otherwise deposited thereon by Contractor's hauling and other operations.

- G. The Contractor's Best Management Practices (BMP's) shall additionally include the following:
1. On-site vehicles, and operating equipment must be monitored for leaks; inactive equipment must be stored with drip pans to contain any fluid leaks. Drip pans containing oil must be drained into waste oil drums on a regular basis.
  2. Licensed waste material handlers must service portable sanitary facilities and trash dumpsters regularly.
  3. All hazardous material stored on-site shall be stored in secondary containment to prevent spills and leaks. The containment must be covered with temporary tarps to prevent storm water contact.
  4. A chain-link fence to prevent access by the public must enclose the site.
  5. Silt dams or hay bale barriers shall be installed and maintained to prevent sediments from flowing into storm drain inlets and public streets. Storm drain inlets shall be protected surrounding the inlets with BMPs such as fiber rolls or filters media appropriate to type of traffic and as approved by the City Representative.
  6. Minimize dust during demolition, grading, and construction by lightly spraying exposed soil on a regular basis.
  7. Minimize wind and water erosion on temporary stockpiles by spraying with water during dry season and covering during the wet season. Cover inactive piles.
  8. Minimize the area and length of time for clearing and grading.
  9. Prevent release of construction pollutants, cement, mortar, paints, solvents, fuel, etc.
  10. Install and maintain sediment traps in local storm water inlets.
  11. Implement a hazardous material spill prevention, control, and cleanup program for the construction period.
  12. Minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water
  13. Properly specify designed centralized storage areas that would keep construction materials and maintenance supplies out of the rain. Keep spill cleanup materials (e.g., rags, absorbent materials, appropriate container) at the work site when handling chemicals.
  14. Educate on-site personnel and maintain awareness of the importance of protecting storm water quality. Site supervisors or the site safety representative shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meeting and the required personnel attendance list would be specified in the SWPPP. The Contractor shall furnish the City Representative with the attendance list and the subject notes of the meeting.
  15. Additional Erosion and Sediment Control Measures for the exposed soils and stockpiled soil are:
    - a. Erosion Control Blankets shall be used to control to stabilize disturbed and exposed soil, if weather warrants such blankets.
    - b. Silt fencing shall be installed at the foot of the slope around the entire perimeter of the hill where work is in progress.
    - c. V-ditches and silt traps/sediment traps shall be installed at the perimeter of the stockpile to collect runoff where necessary to allow flow to continue to storm drain inlets.

- d. Soil stabilization measures, placement of hay bales, and sediment basins shall be constructed to reduce erosion of exposed soils.
- e. If grading must be conducted during the rainy season, prepare the primary BMPs on erosion control, by controlling the sources, that is by keeping sediments in place.
- f. End-of pipe sediment control measures (e.g., basins and traps shall be used only as secondary measures.
- g. Vehicle and equipment wash down facilities shall be designed to be accessible and functional during both dry and wet conditions.

## **1.06 EROSION AND SEDIMENT CONTROL MITIGATION MEASURES (ESCMM) REQUIREMENTS**

### **A. Minimum Requirements**

1. Erosion and Sediment Control Mitigation Measures (ESCMM) at a minimum shall include:
2. Stabilization Practices – Seeding, mulching, installation of geotextile fabric, hay bales on areas where construction activities have temporarily or permanently ceased.
3. Structural Practices – Construction of silt fences, berms, dikes, sediment basins, sediment barriers, covered material, and waste storage areas, and other such devices to limit runoff and minimize the discharge of pollutants. Appropriate practices shall be incorporated for surface drainage.
4. Operational Practices – Dust Control, housekeeping, non-hazardous regular waste collection and disposal, control of equipment fluids and lubricants, and similar practices to minimize pollutant generation.
5. Vehicle Washing – All vehicle washing shall occur at a designated equipment decontamination wash pad.
6. Wheel washing - Wheel washing will occur at areas designated wheel-washing area.
  - a. Concrete Washout – Concrete washout will neither be allowed on site nor into the sewerage.
  - b. Saw cutting operations: Provide a means to vacuum slurry, generated from saw cutting operations, thereby preventing it from going in to the storm drain.
  - c. Inspection: The Contractor shall conduct routine inspections of all structural and non-structural pollution control measures. At the minimum, it should be conducted once every two weeks for the dry season, once a week during the rainy season and 24 hours prior to forecast of precipitation events of 13 mm (0.5 in) or greater, and immediately after precipitation events of 13 mm (0.5 in) or greater with daily inspections on prolonged rainfalls.

### **B. ESCMM Implementation:**

1. Exercise every reasonable precaution, including temporary and permanent measures, throughout the duration of the project to control erosion, and the discharge of sediment and other pollutants associated with construction activity into the sewer and drainage system.

2. Temporary measures shall be coordinated with contract work to the extent practical to ensure economical, effective, and continuous erosion and siltation control and pollution prevention. Permanent pollution control measures and facilities as identified in the contract documents shall be installed as the work progresses.
  3. Inspect erosion and siltation control devices and provide corrective measures for deficiencies 24 hours prior to a forecasted rain and immediately after each rainfall, and at least daily during prolonged rainfall. Deficiencies shall be corrected immediately. If the Contractor fails to correct or take appropriate actions to remedy the specified deficiencies, the City Representative will require Contractor to discontinue work in other areas and concentrate efforts toward rectifying the specified deficiencies. The City reserves the right to remedy the specified deficiencies and deduct the entire cost of such work from monies due Contractor.
  4. The ESCMM may utilize plans, details, notes, and other information provided in the construction documents; however, such information shall not, in itself, be construed to meet the requirements of this section. Observe firsthand the conditions of the site and then provide additional detail to ensure that the ESCMM accurately reflects the Contractor's means and methods for construction, to include: construction sequencing, site layout, construction access, temporary facilities, specific sedimentation, erosion and runoff discharge controls, and project organization.
- C. Prohibited Discharge: Discharge of other materials other than storm water and approved non-storm water discharges to the sewer system is prohibited. Approved non-storm water discharges include incidental discharges of potable water from irrigation of vegetative erosion control measures, and water from dust control applications. Non-storm water discharges requiring a batch discharge permit include groundwater from excavations, water from truck washing activities, and water from the cleaning or testing of pipes or tanks.
- D. Spill Prevention and Response: The Contractor is responsible for minimizing the potential for spills of pollutants stored onsite. Leaks and spills shall be minimized and if observed, the Contractor shall clean it up immediately and institute preventive measures.
- a. Be aware of potential spill areas and drainage routes in their work areas.
  - b. Containers must remain closed at all times except when transferring contents.
  - c. Do not attempt to carry or move heavy containers of oil or hazardous material without assistance or the use of a drum dolly.
  - d. Use funnels; pumps with closed hose systems, or other means to prevent spills while transferring material from large containers to small ones. Pumps in operation shall not be left on, unattended.

- e. Hazardous materials will be stored in a designated area that is away from vehicle/traffic areas.
- f. Immediately notify the supervisor of any spill occurring in the work area. It is the responsibilities of the Contractor's designated Safety Officer to direct the cleanup activities and contact necessary regulatory agencies. All necessary emergency telephone numbers shall be posted at the construction site at a location accessible to all personnel.
- g. The Contractor shall know the proper methods to clean up small spills in their work areas, and how spent cleanup material shall be managed.
- h. The Contractor is responsible for recording all steps taken to control spills in the field notes/daily log.
- i. Spill cleanup equipment must be readily available on site. Emergency response equipment includes absorbent socks, over pack drums, personal protective equipment, shovel, labels, valves, valve charts, valve wrenches to shut off water supply, etc.

**PART 2 - PRODUCTS**

(Not Used)

**PART 3 - EXECUTION**

(Not Used)

**END OF SECTION**



**SECTION 01 57 19****ENVIRONMENTAL MITIGATION MEASURES****PART 1 - GENERAL****1.01 SUMMARY**

- A. This Section includes special project conditions and environmental mitigation measures the Contractor shall follow during construction, including but not limited to dust controls, asbestos airborne dust from the serpentine, soil vapor and gases, debris control, air pollution, water usage, noise, and vibration controls. The environmental mitigation measures are aimed to minimize disruptions to surrounding neighborhoods, resources and land uses, particularly air quality and noise during construction.
- B. The Contractor shall comply with all Federal, State and local environmental codes and regulations, specifically the City's Administrative Code, Environment Code, Fire Code, Health Code, Planning Code, Public Works Code, and the Police Code.  
<http://www.amlegal.com/library/ca/sfrancisco.shtml>
- C. This Section (along with the Sections 01-41-00 - Regulatory Requirements, 01-35-45 – Health and Safety Criteria, 01 57 13 - Temporary Erosion and Sediment Controls (ESCP), and 02 81 00 – Environmental Management of Excavated Materials) shall be considered to be the Environmental Site Mitigation Plan (SMP) in fulfillment of Article 22A of the San Francisco Health Code.
- D. For Construction Dust Control, the Contractor shall comply with the San Francisco Health Code, Construction Dust Control Requirements – Article 22B; the San Francisco Building Code Section 106.3.2.6 (Ordinance #176-08), the DPW Dust Control Order 171,378 and the California Code of Regulations, Title 17, Section 93105 - Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.
- E. For Noise Control, the Contractor shall comply with Article 29 of the Police Code, Regulation of Noise Ordinance:
- F. Failure to implement mitigation measures to control environmental impacts is subject to Federal, State, and local fines.
- G. The requirements in this Section are incidental work to mobilization, unless noted otherwise.

**1.02 REFERENCES**

- A. California Environmental Quality Act (CEQA)
- B. California Air Resources Board Final Regulation Order of 07/22/2002, in Section 93105, on Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations : <http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm>

- C. City and County of San Francisco, Department of Public Health (SFDPH), Construction Dust Control Requirements (Article 22B):  
[http://www.amlegal.com/nxt/gateway.dll/California/health/healthcode?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:sanfrancisco\\_ca](http://www.amlegal.com/nxt/gateway.dll/California/health/healthcode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca)
- D. DPW Dust Control Order 171,378.
- E. San Francisco Building Code Section 106.3.2.6 (Ordinance #176-08)  
<http://1601mariposa.com/wp-content/uploads/Ordinance-176-08.pdf>
- F. CCR Article 4.8 Section 2449 General Requirements for In-Use off Road Diesel fueled fleets, ARB AB 1085. (<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>)
- G. San Francisco Police Code, Article 29, (Ordinance # 274-72) Regulation of Noise:  
[http://www.amlegal.com/nxt/gateway.dll/California/police/policecode?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:sanfrancisco\\_ca\\$sync=1](http://www.amlegal.com/nxt/gateway.dll/California/police/policecode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1)

### 1.03 PROJECT CONDITIONS

- A. The Contractor shall be responsible for all costs incurred or necessary to ensure compliance of its operations and its performance of the Work with all applicable Codes and contract requirements.
- B. The Contractor shall make provisions to ensure that mitigation controls are consistently implemented for the project duration. The Contractor is responsible and shall pay for cleanup of spillage (including clean soils) on City streets, to the extent caused by actions of employees of the Contractor or its Subcontractors.
- C. If the Contractor fails to provide adequate dust and other pollutant control as required or promptly take all required remedial actions to the City's satisfaction herein, the Engineer reserves the right to issue environmental non-compliance notices, have the necessary work performed by others, assess fines as per DPW Ordinances of one thousand dollars (\$1000.00) per non-compliance occurrence or event or to deduct or withhold all monies required therefore as permitted under the Contract Documents.
  - 1. The City at its own discretion will monitor Contractor's compliance with Code and Contract requirements, including required mitigation actions for construction impacts and will report on Contractor's compliance with required mitigation controls. Said monitoring and reporting activities may include, but are not limited to, qualitative, quantitative and video observations and data collection on the impacts of noise, vibration air quality, traffic, street pavement damage, water quality, cultural resources, biological resources and hazardous materials.
  - 2. The Contractor shall cooperate with such monitoring activities, provide access to the Work Site to establish and secure monitoring stations, and make its facilities and records available to the City for performing such monitoring

3. The City will issue a Non-Compliance Notice to the Contractor for any detected non-compliance with the provisions herein or of any environmentally objectionable acts and the corrective action to be taken

#### **1.04 SUBMITTALS**

- A. The Contractor shall submit the Plans listed below, and have the Plans approved by the City Representative at least 15 working days before any excavation.
  1. Site-Specific Dust Control Plan (DCP) and monthly PM10 monitoring records in accordance with Article 1.08 of this Section.
  2. Vibration Monitoring Plan and monitoring records in accordance with Article 1.10 as warranted.
- B. On approval of the above Plans, the Contractor shall provide 4 printed copies and four digital copies of each Plan, in the Microsoft Word format.

#### **1.05 MAINTENANCE OF THE WORK AREA AND DEBRIS CONTROL**

- A. The Contractor shall maintain the Site and Work areas under its control and adjacent public right-of-ways in a safe condition, and remove all accumulations of debris and surplus materials at the end of each workday. At completion of the Contract the Contractor shall leave the Site in clean and orderly condition.
- B. Cleaning during Construction: The Contractor shall control the accumulation of waste materials and debris. The contractor shall collect waste from construction areas and the site daily. The Contractor shall also:
  1. Comply with requirements of NFPA 241 for removal of combustible waste material and debris.
  2. Maintain the Site and construction areas free of dust and accumulation of dirt during earthwork and other contaminants during construction as needed daily.
  3. Maintain hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly and dispose those types of materials in a lawful manner.
  4. Maintain the Site and the Construction daily in a clean and orderly condition. Maintain the site, equipment, fences and signs free of graffiti. As warranted, remove all graffiti daily, using methods, which cause no damage to the work and existing facilities.

5. Damp-sweep all pedestrian walkways and dispose of debris around the site perimeter on a daily basis and as often as determined by the Engineer.
  6. Keep all debris, hazardous/contaminated material, surplus concrete and excavated materials off the roadway, sidewalks and sewers at all times.
  7. Remove trash (waste oil and oil rags) and debris from the Site and Construction areas daily or at frequent intervals or as directed by the Engineer, so that its presence will not delay the progress of the work or cause a nuisance.
  8. Storage areas: Ensure that Materials to be used for construction are stored in designated structures or areas by the appropriate trades. Maintain such areas or structures in a clean condition for the term of the Contract.
  9. Provide and maintain proper storage with secondary containment for lubrication oil, hydraulic fluids, waste oils, fuels, solvents and other hazardous or toxic materials and wastes.
  10. Supervision: Oversee all cleaning of areas by trades using them and ensure that resulting accumulations are deposited in appropriate containers.
  11. Burying or burning of trash and debris on the Site is not permitted.
  12. Materials, trash, and debris are the property of the Contractor and shall be removed from the Site and Construction areas and disposed of in a legal manner.
- C. Initiate and maintain a specific daily program to prevent the accumulation of debris at the Site storage, parking areas, and along streets, roads, and haul routes in the Construction areas. The Contractor shall:
1. Provide and maintain containers for the deposit of debris And keep them covered.
  2. Prohibit overloading of trucks to prevent spillage.
  3. Inspect traffic areas and haul routes to enforce debris and clean up requirements.
- D. On a daily basis, remove all debris from the Site and Construction areas, including haul routes, caused directly or indirectly by the Contractor's operations.

#### **1.06 SEWER POLLUTION CONTROL**

- A. Do not dispose of construction material, concrete, debris, sediments, wastes, effluent, chemicals, or other such substances into catch basins, manholes, storm drains, and sanitary sewers. Section 123 of Article 4.1 of the Public Works Code prohibits the discharge of solids into the City's sewerage system.

- B. The washing out of concrete trucks into the sewerage system or into the excavation is not permitted.
- C. Control sewage and contain it within covered conduits. Dispose of it, properly.
- D. Refer to Section 01 57 13 for specific requirements.

#### 1.07 CLEAN CONSTRUCTION ORDINANCE (AIR POLLUTION CONTROLS)

- A. The Contractor shall comply with the Clean Construction Ordinance under the SF Administrative Code, Chapter 6, Section 6.25 and Section 6.67, SF Environment Code, Chapter 4: Section 426 Clean Construction Assistance and Reporting, City Ordinance # 70-07, and City Ordinance # 28-15.

<http://www.amlegal.com/library/ca/sfrancisco.shtml>

<http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances07/o0070-07.pdf>

<http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances15/o0028-15.pdf>

- B. Comply with all air pollution control rules, regulations, ordinances and statutes which apply to the Work and Contractor's activities performed pursuant to the Contract, including air pollution control rules, regulations, ordinances and statutes specified in Section 11017 of the California Government Code.

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=10001-11000&file=11000-11019.11>

- C. Comply with the California Air Resources Board (CARB) Off-Road Diesel Vehicle Regulation to reduce diesel particulate matter (PM) and oxides of nitrogen (NOx) emissions. The link for the Knowledge Center for the Off-Road Diesel Vehicle Regulation is:

<http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm> .

The link for the idling fact sheet is

<http://www.arb.ca.gov/msprog/ordiesel/faq/idlepolicyfaq.pdf>.

The link for the Knowledge Center for the Off-Road Diesel Vehicle Regulation is

<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

- D. The contractor shall provide a list of vehicle registered with CARB with their corresponding EIN upon request.
- E. Implement the specific air pollution controls to reduce exhaust emissions of particulate matter and other pollutants from construction and related equipment, to a less significant level, by:
  - 1. Preventing the accumulation of toxic concentrations of chemicals.

2. Preventing harmful or obnoxious dispersal of pollutants into the atmosphere.
  3. Limiting vehicle speed limit on unpaved roads to 15 miles per hour (mph).
- F. Idling Limit: Prohibiting idling motors when equipment is not in use or when truck are waiting in queues. The idling time of all construction equipment (self-propelled diesel fueled or alternative diesel fuel vehicles 25 horsepower and up that are not designed to be driven on-road) used at the site shall not exceed 5 consecutive minutes. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes. The idling limit does not apply to:
1. Idling to verify that the vehicle is in safe operating condition
  2. Idling for testing, servicing, repairing or diagnostic purposes
  3. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane).
  4. Idling required to bring the machine system to a desired operating temperature
- G. Limit the hours of operation of heavy-duty equipment and/or amount of equipment in use to what is needed.
- H. All equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications. Copies of service records will be made available to the Engineer upon request.
- I. When feasible, alternative fuel or electrical construction equipment shall be used at the project site.
- J. Use the minimum practical engine size for construction equipment.
- K. Gasoline-powered equipment shall be equipped with catalytic converters, where feasible.
- L. Implementing specific maintenance programs to reduce emissions from equipment that would be in frequent use for much of the demolition and construction periods.
- M. **Construction Emissions Minimization Plan:** If the project is located in the air pollutant exposure zone and use off-road equipment that is estimated to require 20 or more cumulative days of work, including nonconsecutive days to complete and is within a 1000 feet of hospitals, medical facilities, schools or residences (sensitive receptors) the Contractor shall submit and implement a construction emissions minimization plan demonstrating that the self-propelled off-road equipment (more than 25 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM

reduction compared to the most recent ARB fleet average (as specified in California Code of Regulations Article 4.8, Section 2449 General Requirements for In-Use Off-Road Diesel-Fueled Fleets). Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. The plan components shall include:

1. Equipment inventory
  2. Signage
  3. Certification statement
  4. Copy of quarterly report spreadsheet documenting compliance.
- N. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM;
- O. Use of Interim Tier 4 or equivalent equipment for all uses where such equipment is available;
- P. Use of Tier 3 equipment with Best Available Control Technology (BACT) or alternative fuel vehicles for applications where Tier 4 Interim engines are not available; and
- Q. Liquidated damages shall be assessed in the amount of \$100.00 per day per each piece of off-road equipment and each off-road engine utilized to complete work on the project in violation of the Clean Construction requirements.
- R. If the project is not located in the Air Pollutant Exposure Zone, it must utilize only off-road equipment and off-road engines fueled by biodiesel fuel grade B20 and utilize only off-road equipment that either meets the tier 2 standards for off-road engines or operates with the most effective VDECS as certified by ARB.
- S. All solvents, including but not limited to the solvent portion of paints, thinners, curing compounds, and liquid asphalt used on the project shall comply with the applicable material requirements of the Bay Area Air Quality Management District (BAAQMD). All containers of paint, thinner, curing compound or liquid asphalt shall be labeled to indicate that the contents fully comply with said requirements.

#### **1.08 CONSTRUCTION DUST CONTROL**

- A. The Contractor shall comply with the requirements of the San Francisco Department of Public Health (SFDPH) Dust Control Ordinance - Article 22B, the San Francisco Building Code Section 106.3.2.6 (Ordinance #176-08), the DPW Dust Control Order 171,378, and the California Code of Regulations, Title 17, Section 93105 - Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations [www.arb.ca.gov/toxics/atcm/asb2atcm.htm](http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm).

- B. The Contractor shall be responsible for paying the fees charged by the above listed agencies to defray the costs of document processing and review, consultation with applicants, and administration if its regulation.
- C. Under the DPW Dust Control Order 171,378, liquidated damages shall be assessed in the amount of \$1000.00 per day for each day any violation is not corrected.
- D. The San Francisco Building Code Section 106.3.2.6 requires that all site preparation work, demolition, or other construction activities within the City and County of San Francisco that have the potential to create dust or will expose or disturb more than 10 cubic yards or 500 square feet of soil must comply with specified dust control measures whether or not the activity requires a permit from the Department of Building Inspection, with provision for waiver by the Director of Public Health for activities on sites less than one half acre that are unlikely to result in any visible windblown dust.
- E. This project is less than one half acre; a Site-Specific Dust Control Plan is not required. However, the Contractor shall follow the all environmental mitigation requirements for dust control in this Section.
- F. The Contractor shall take all reasonable measures to furnish all labor, equipment, and means required to carry out effective measures whenever and as often as necessary to prevent its operation from producing dust in amounts damaging to surrounding properties, or causing a nuisance to businesses and local residents.
- I. The Contractor is responsible and shall pay for cleanup of spillage (including clean soils) on City streets, to the extent caused by actions of employees of the Contractor or its Subcontractors. Visible track-out on the paved public road shall be cleaned using wet sweeping or a HEPA filter equipped vacuum device within twenty-four (24) hours.
- J. Mitigation Requirements for Dust Control. Irrespective of the size of the project, the Contractor shall comply with the following environmental mitigation requirements for dust control:
1. Plan and execute the work in such manner as to minimize the area of excavations open at any time. Minimize the amount of excavated materials or waste materials stored at the site.
  2. Maintain a regenerative air or high efficiency sweeper on the Site at all times and wet sweep/vacuum sidewalks, intersections, site access and street pavement within the Site and Construction areas especially along haul routes, at the minimum three times (3) per shift including at the end of the shift or more and at the end of the workday as required to minimize track out and dust emissions. The City Representative will evaluate the effectiveness of the Contractor's vacuum sweeper vehicle and, if necessary, will require the Contractor to provide a more powerful and effective sweeper. Soil, gravel, and cutback residuals shall be wet swept immediately.
  3. Maintain a water truck and/or water buffalos at the jobsite at all times when dust-generating conditions exist. Water truck shall be equipped with hand-held hoses. Hoses shall be equipped with micro-misters and micro-foggers. All water for dust control shall be treated with biodegradable, non-polluting, non-toxic dust control agent. Water or water-miscible binders shall be continuously used to control dust during dust generating activities, including demolition, excavation, and



earthmoving, among others

4. Provide localized dust controls such as water hoses connected to a water source or water canisters to immediately control visible dust emissions at each active work area. Wet areas shall be barricaded to prevent slipping hazards.
- K. The Contractor shall not engage in any construction or grading operation on property less unless all of the following dust mitigation measures are initiated at the start and maintained throughout the duration of the construction or grading activity. The Contractor shall comply and implement all the mitigation measures consistently stated in the above regulation and as stated below.
1. Treat water for dust control with a City and/or EPA approved biodegradable, non-polluting, non-toxic dust control chemical. The water so treated becomes "amended" water.
  2. Provide continuous water misting using as fine a spray or mist as possible (without creating run-off) in any area of land clearing, earth movement, excavation, drillings, demolition, concrete crushing and grinding and other dust generating activity. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour.
  3. Prior to any ground disturbance, sufficient water shall be applied. Keep the entire site of the work and adjacent areas, including walkways and roadways, continuously free of dirt and dust by wet sweeping at least three times a day and at the end of each shift, and by consistently misting the active work areas at each step of soil handling activities. Tires or tracks and spoils trucks shall be washed off before they re-enter City streets to minimize deposition of dust-causing materials.
  4. Wet down areas around soil improvement operations, visibly dry disturbed soil surface areas, and visibly dry disturbed unpaved driveways, at least three times per shift. All unpaved access roads, parking areas, and staging areas at the Site shall be paved. Water or non-toxic soil stabilizers shall be applied as requested by the Engineer.
  5. Use reclaimed water for dust control as described in City Ordinance # 175-91, Article 21, and Section 1100 to 1107 of the San Francisco Municipal Code (Public Works Code).
  6. Use dust enclosures, curtains, and dust collectors as necessary to control dust at the Site
  7. Dust curtains, plastic tarps, barriers, enclosures or windbreaks shall be installed on windward and downwind sides of the Site.
  8. Chemical binders, soil amendments, stabilizers, or emulsions to inactive construction areas shall be applied, including previously graded areas that are inactive for no more than 10 days.
  9. Surface excavation and grading activities shall be terminated when wind speeds exceed 25 miles per hour.

10. Limit the area subject to excavation, grading, and other construction activities at any one time.
- L. Control for off-site transport. The Contractor shall ensure that no trucks hauling soils, sand and any excavated material leave the loading area off-site unless:
1. Trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments; and
  2. Loads are adequately wetted and :
    - a. Covered with tarps; and
    - b. Loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
- M. Stockpile Maintenance: No staging areas or stockpiling will be allowed at the Site. The Contractor may use a temporary soil staging area as approved by the City Representative. The Contractor shall maintain the stockpile and staging areas with consistent dust and erosion and sedimentation mitigation controls as follows:
1. Keep active stockpiles are adequately wetted as work is in progress;
  2. Any stockpile greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base and soil shall be placed on, and covered with a 10-mil polyethylene plastic or equivalent tarp and braced it down. All stockpiles shall be covered and protected at the end of the day. The Contractor shall maintain this cover and brace throughout its use, including during periods of work stoppages, overnight, weekends and holidays.
  3. Control for disturbed surface areas, and storage piles that will remain inactive for more than seven (7) days, shall include one or more of the following:
    - a. Keep the surface adequately wetted.
    - b. Establishment and maintenance of surface crusting.
    - c. Application of chemical dust suppressants or chemical stabilizers according to the manufacturers' recommendations as needed.
    - d. Covering with tarp(s) or vegetative cover.
    - e. Installation of wind barriers of fifty (50) percent porosity around three (3) sides of a storage pile.
    - f. Installation of wind barriers across open areas,
    - g. Any other measure as effective as the measures listed above.
- N. The Contractor is hereby notified that it cannot perform screening or crushing operations without the appropriate BAAQMD, and Cal-EPA/DTSC permits.
- O. Track-out prevention and control measures shall include:

1. The Contractor shall remove any visible track-out from a paved public road at any location where vehicles exit the Site; using wet sweeping or a HEPA filter equipped vacuum device within twenty-four (24) hours.
  2. Equipment shall be washed down before moving from the active areas onto a paved public road.
  3. Installation of one or more of the following track-out prevention measures. These track out controls are to be cleaned, maintain and replaced to keep their use effective for the project duration. :
    - a. A gravel pad designed using good engineering practices to clean the tires of exiting vehicles;
    - b. A tire shaker;
    - c. A wheel wash system;
    - d. Pavement extending for not less than fifty (50) consecutive feet from the intersection with the paved public road; or
    - e. Any other measure as effective as the measures listed above.
- P. Control for disturbed surface areas, and storage piles that will remain inactive for more than seven (7) days, shall include one or more of the following:
1. Keep the surface adequately wetted.
  2. Establishment and maintenance of surface crusting.
  3. Application of chemical dust suppressants or chemical stabilizers according to the manufacturers' recommendations as needed.
  4. Covering with tarp(s) or vegetative cover.
  5. Installation of wind barriers of fifty (50) percent porosity around three (3) sides of a storage pile.
  6. Installation of wind barriers across open areas, or
  7. Any other measure as effective as the measures listed above.

- Q. Control for traffic on on-site unpaved roads, parking lots, and staging areas, which shall include:
1. A maximum vehicle speed limit of fifteen (15) miles per hour or less, and
  2. One or more of the following:
    - a. Watering every two hours of active operations or sufficiently often to keep the area adequately wetted.
    - b. Applying chemical dust suppressants consistent with manufacturer's directions.
    - c. Maintaining a gravel cover with a silt content that is less than five (5) percent and asbestos content that is less than 0.25 percent, as determined using an approved asbestos bulk test method, to a depth of three (3) inches on the surface being used for travel, or
    - d. Any other measure as effective as the measures listed above.
- R. Control for NOA earthmoving activities, shall include one or more of the following:
1. Pre-wetting the ground to the depth of anticipated cuts;
  2. Set up a containment with a continuous misting system to prevent the release of asbestos fibers when screening of serpentine, or ultramafic rock
  3. Suspending grading operations when wind speeds are high enough to result in dust emissions crossing the property line, despite the application of dust mitigation measures;
  4. Application of water prior to any land clearing; or
  5. Any other measure as effective as the measures listed above.
- S. Post construction stabilization of disturbed areas. Upon completion of the project, disturbed surfaces shall be stabilized using one or more of the following methods:
1. Establishment of a vegetative cover.
  2. Placement of at least three (3.0) inches of non-asbestos containing material.
  3. Paving.
  4. Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions.

- T. Criminal and/or civil penalties may be imposed on any person who violates any rule, regulation, permit or Order of the State Air Resources Board or a district that is adopted to control and contain air emissions.

### 1.09 CONSTRUCTION NOISE CONTROLS

A. San Francisco Noise Control Ordinance Compliance:

1. The Work of this Contract is subject to requirements of City and County of San Francisco, Article 29 of the Police Code, Ordinance #274-72, and Regulation of Noise (herein after referred to as the "San Francisco Noise Ordinance").
  2. The San Francisco Noise Ordinance includes (but is not limited to) regulations on Ambient Noise, Non Stationary Sources, Fixed Source, Zoning Districts, Noise Level Measurements, Construction Equipment, and Construction Work at Night, Enforcement and Violations.
  3. The Noise Ordinance limits noise from powered construction equipment to be no greater than 80 dB(A) at 100 feet. This is equivalent to 74 dB(A) at 200 feet or 86 dB(A) at 50 feet from the source of emission. Exceptions to this requirement include impact tools and equipment, pavement breakers and jackhammers. However, these shall be equipped with acoustically attenuating shields, or shrouds to best accomplish maximum noise attenuation.
  4. Pay all fines for Contractor's violations of the San Francisco Noise Ordinance, at no additional cost to the City.
  5. Contractor may request a variance from the requirements of the San Francisco Noise Ordinance, if construction noise between 8:00 p.m. and 7:00 a.m. exceeds ambient plus 5 dB (A). Apply for a City noise permit at least 3 Working Days in advance of night (between 8:00 p.m. and 7:00 a.m.), weekend and holiday Work. The requirements of the Contract Documents, including safety requirements, shall apply for all night, weekend and holiday Work.
  6. If the Contractor is directed by special written notice from the City to perform any part of the Work between the hours of 8 p.m. and 7 a.m., or on weekends or holidays, the Contractor must obtain and comply with a City noise permit prior to starting that Work.
- B. The Contractor shall ensure that construction activities are in conformance with construction requirements of the City and County of San Francisco Police Code, Article 29, specifically sections 2901, 2907, and 2908 and any successor provisions. The Contractor shall conduct the following activities to mitigate potential construction noise and vibration impacts.
- C. The City as part of the Mitigation monitoring and Reporting Program will monitor noise construction activities. The Contractor shall cooperate with the City's designated

Compliance Coordinator to respond to noise complaints and to ensure that noise levels specified in this Contract are not exceeded during construction activities.

D. Noise Mitigation Measures:

1. The Contractor shall implement mitigation controls to ensure compliance with the construction noise levels allowed. The maximum noise level from any powered construction equipment shall not be greater than 80 dB(A) at 100 feet. This translates to 86 dB(A) at 50 feet (dual units not applicable, as these are specific field and instrument measurements);
2. The Contractor shall monitor noise levels at the Site boundary or at the nearest sensitive receptor. If noise thresholds are exceeded, the Contractor shall stop the Work that violates noise restrictions and identify alternate methods and equipment or place restrictions on construction operations to comply with noise thresholds;
3. The Contractor shall not resume the Work before correcting the conditions that cause excessive noise as deemed acceptable by the Engineer;
4. The Contractor shall use appropriate construction methods and equipment and install acoustical barriers so that noise emanating from the construction will not exceed noise levels pursuant to the City's Noise Control Ordinance;
5. The Contractor shall implement the following noise control measures, as necessary, if activities are expected to exceed the above noise restrictions;
  - a. The Contractor shall use best available controls techniques including mufflers, intake silencers, ducts, engine enclosures and acoustic attenuating shields or shrouds for all construction-noise equipment and trucks; and use electric-powered rather than diesel-powered construction equipment, as feasible
  - b. The Contractor shall muffle and shield intakes and exhausts, shroud or shield impact tools.
  - c. The Contractor shall enclose equipment such as large compressors, generators, and large dewatering pumps at a minimum in 1-inch-thick plywood sheds.
6. The Contractor shall provide and use acoustically attenuating shields to limit the noise level created by work performed between 8 p.m. and 7 a.m. to no more than the allowable ambient noise level plus 5 dB(A) at the nearest the Site or affected part of the Construction Area;
7. Impact tools must be equipped with intake and exhaust mufflers. Pavement breakers and jackhammers shall be equipped with acoustically attenuating

shields or shrouds. Use of impact tools shall be restricted to the daytime construction hours of 8:00 a.m. to 3:30 p.m. unless approved otherwise.

8. Perform construction in a manner that maintains noise levels at noise sensitive land uses below specific limits. Select construction processes and techniques that create the lowest noise levels. Quieter procedures shall be used such as drilling rather than impact equipment whenever feasible.
9. The Contractor shall use quieter procedures, such as sonic or vibratory pile drivers drilling rather than impact equipment whenever feasible. If impact equipment is required, whenever practicable, the Contractor shall use hydraulic- or electric-powered impact equipment (e.g., jackhammers, pavement breakers and rock drills) instead of pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dB(A). External jackets on the tools themselves shall be used, where feasible to achieve a reduction of 5dBA;
10. Drill holes will be pre-drilled wherever feasible to reduce potential noise and vibration impacts.
11. The Contractor shall locate stationary noise sources as far from sensitive receptors as feasible. If they must be located near receptors, adequate muffling, (such enclosures) shall be installed to ensure noise thresholds specified herein are not exceeded. Enclosure openings shall be faced away from sensitive receptors. If any stationary equipment (e.g., ventilation fans, generators, dewatering pumps) is required, such equipment shall comply with daytime and nighttime noise limits specified in pertinent noise ordinances to the extent feasible;
12. The Contractor shall locate materials and other stockpiles as well as staging and parking areas as far as feasible from sensitive receptors, residential, and school receptors;
13. Proposed jack-and-bore pits shall be located as far from sensitive receptors as technically feasible. If ventilation fans, dewatering pumps, or generators are required as part of this type of pipeline crossing, such equipment shall comply with daytime and nighttime noise limits specified in pertinent noise ordinances to the extent feasible;
14. Unless approved by the Engineer Construction activities shall be prohibited during the nighttime hours (8 p.m. to 7 a. m);
15. The Contractor shall provide advance notice to residents and affected businesses in the area of the site, of times, dates and location of construction activities;
16. The Contractor shall follow designated truck routes to the extent feasible.
17. Contractor shall direct all truck traffic to designated truck routes that avoid areas that are predominantly residential areas;

18. In the event that noise complaints are reported, the Contractor with the City, shall take all reasonable steps to resolve the complaint and the noise impact, including additional monitoring as required, and modify or implement better attenuation controls for any construction equipment or activities that generated the excessive noise levels.

#### **1.10 VIBRATION CONTROL**

- A. Depending on the construction vibration concerns on adjoining buildings and properties, the Contractor shall monitor vibration at the Site using equipment and methods as deemed appropriate by the City to measure potential building damage and effect on occupants, property, and sensitive equipment.
- B. The Contractor shall prepare and submit a Vibration Control Plan (NCP) to the City for review and approval at least 30 days prior to commencing construction. The Vibration Control Plan shall be prepared and implemented by a qualified acoustical consultant to include identification of vibration control measures, monitoring protocol, notification procedures, and other information. A qualified acoustical consultant is defined as a Board Certified Institute of Noise Control Engineering (INCE) member or other qualified consultant or engineer approved by the City Representative; The VCP shall include but not be limited to:
1. The method(s) of construction that will minimize vibration
  2. Alternate methods to be used to minimize vibration impacts.
  3. Administrative and engineering controls in the event that vibration exceed the vibration criteria
  4. Construction vibration monitoring protocol to be implemented that will include but not limited to
    - a. Type of instrument employed to record data;
    - b. Sample copy of the vibration report showing instrument set up for histograms and velocity data.
    - c. Monitoring methodology, (with weather considerations) Monitoring on three vibration directions,
    - d. Monitoring locations,
    - e. Exposure times duration, monitoring frequency at least weekly or more often if needed, in response to complaints;
    - f. Criteria for compliance,



- g. Reporting procedures for vibration concerns when complaints are received and documentation of corrective actions.
      - h. Recordkeeping and instrument maintenance
- C. Vibration Project Action Levels (VPAL): Unless otherwise directed by the Engineer, vibration during construction shall not exceed the following thresholds:
  - 0.2 inches per second, peak particle velocity (in/sec PPV) for continuous vibration (e.g., vibratory equipment and impact pile drivers) at the closest receptors to ensure that cosmetic or structural damage does not occur; and
  - 0.12 in/sec PPV (vibration perception threshold) at adjacent properties (or in accordance to local ordinances) to the extent possible for nighttime construction activities. If vibration complaints are received during facility construction, operational adjustments shall be made (e.g., restricting use of equipment causing vibration disturbance during nighttime hours or slowing the pace of its operation), as necessary, to reduce vibration annoyance effects.
- D. The Contractor would be responsible for the protection of vibration sensitive historic buildings structures that are within 200 feet of any construction activity. The maximum peak particle velocity level in any direction at any of these historic structures should not exceed 0.12 inches/second PPV for any length of time.
- E. The Contractor shall suspend operations that cause excessive vibrations or exceed the above Vibration Project Action Levels (VPAL). The Contractor shall implement better engineering or mitigation controls when:
  - 1. Vibration complaints are received;
  - 2. Vibration exceeds the above-specified VPAL limits;
  - 3. The Contractor fails to comply with vibration mitigation controls specified herein or fails to follow its own Vibration Control Plan; or
  - 4. Damage or disturbance to adjoining property or occupants has been reported.
- F. If at any time during construction vibration activities exceed the Vibration project levels, the activity will be immediately halted until such time where alternative methods that would result on lower vibration levels.. are implemented. The Contractor shall not resume operations before correcting conditions that cause excessive and not be entitled to additional compensation or extension of Contract Time for delays arising from suspension of Work due to Contractor's failure to perform vibration controls as specified.
- G. Vibration Mitigation Measures: The Contractor shall implement the following mitigation measures to reduce vibration from construction-related equipment:

1. Limiting the use of construction techniques that create high vibration levels. Pile driving will be prohibited at distances less than 250 feet from buildings and residences. If piles must be set near residential areas, the Contractor shall use pre-drilled piles or other measures that minimize the impact of pile driving.
  2. Using alternative procedures in vibration sensitive areas by using techniques with lower vibration levels.
  3. If feasible, restricting the hours of vibration intensive activities, such as pile driving, to weekdays during daytime hours.
  4. Pile holes shall be pre-drilled wherever feasible to reduce potential noise and vibration impacts. If feasible, use sonic or vibratory pile drivers instead of impact pile drivers.
  5. Restricting the use of equipment causing vibration disturbance during nighttime hours or rescheduling slowing the pace of operation to reduce vibration annoyance effects at nighttime.
- H. The Contractor shall perform pre- and post-construction video or photographic documentation/surveys of structures and evaluation of the facades of buildings on all sides of the project alignment to ensure structural damage does not result from construction activities that could cause ground vibration. The post-construction survey and monitoring results will be evaluated to determine whether the new structural and/or architectural damage was caused by vibration due to the Contractor's performance of this Work.
- I. Vibration levels equal to or exceeding 0.2 inch/second, peak particle velocity (in/sec PPV) for continuous vibration could result in architectural damage. If, following completion of construction, changes in the architectural or structural conditions of residential and/or commercial building has occurred, the Contractor shall restore the buildings to pre-construction conditions, and to the satisfaction of the City Representative.

#### 1.12 NON-PVC PLASTICS.

- A. The Contractor shall comply with the SF Ordinance 171-03 and the SF Environment Code, Chapter 5 Resource Conservation Ordinance, Section 509 – Non PVC Plastics. <http://www.amlegal.com/library/ca/sfrancisco.shtml>
- B. The Contractor shall obtain non-PVC plastics where appropriate alternative products composed of non-chlorinated materials are available. The Contractor shall procure non-chlorinated products in any of the following circumstances: (i) the product is not available in a reasonable period of time; (ii) the product would fail to meet reasonable performance standards; or (iii) the product is only available at an unreasonable price.
- C. The Contractor shall use alternative plastics such as high-density polyethylene (HDPE), and ABS (acrylonitrile-butadiene styrene).

**1.13 INTEGRATED PEST MANAGEMENT PROGRAM**

- A. The Contractor shall comply with the SF Environment Code, Chapter 3: Integrated Pest Management Program, and City Ordinance # 7-11.  
[http://www.amlegal.com/nxt/gateway.dll/California/environment/chapter3integratedpestmanagementprogram?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:sanfrancisco\\_ca](http://www.amlegal.com/nxt/gateway.dll/California/environment/chapter3integratedpestmanagementprogram?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca)  
<http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances11/o0007-11.pdf>
- B. This Chapter 3 and Ordinance concerns the application of pesticides to property owned by the City and County of San Francisco only.

**1.14 DAMAGES FOR FAILURE TO MEET ENVIRONMENTAL REQUIREMENTS**

- A. The Contractor shall be liable for all fines, penalties, liquidated damages and costs arising from any violation of the environmental mitigation measures, and City Ordinances, and Sections 01 57 13, 01 57 19, and 02 81 00, as related to or concerning the control of dust and air borne particles; the control, removal, transport, and disposal of excavated materials; control of waste water and sediment; and noise. Contractor shall pay particular attention to:
1. The prevention of accumulation and prompt clean-up of spills of excavated materials onto streets, sidewalks, and roadways;
  2. Sediment control, the protection of catch basins, and prevention of soil and sediment from falling or washing into storm drains and sewers;
  3. The prevention and control of dust created by the Work;
  4. Proper treatment and disposal of storm water and ground water prior to discharge;
  5. Adherence to noise restrictions; and
  6. Adherence to equipment emissions requirements and restrictions
  7. Daily housekeeping and site maintenance to keep each Project work location in clean and orderly condition.
- B. Under the DPW Dust Control Order 171,378, liquidated damages shall be assessed in the amount of \$1000.00 per day for each day any violation is not corrected.

**PART 2****PRODUCTS (Not Used)****PART 3****EXECUTION (Not Used)****END OF SECTION**

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**SECTION 01060****REGULATORY REQUIREMENTS****PART 1 – GENERAL****1.1 GENERAL REQUIREMENTS**

- A. All materials, installation and construction shall comply with the applicable provisions of current laws, codes, safety rules and regulations of the City and County of San Francisco, Port of San Francisco, the State of California, and the Federal Government, and any other applicable authority or agency.
- B. The Contractor shall obtain and comply with all permits required for the work or for temporary facilities, including indemnification and insurance requirements, and shall pay all fees and furnish any deposits and bonds required therefore.
- C. The Contractor shall keep a copy of each applicable permit, law, code and regulation in his/her job site field office, and shall ensure that his/her and his/her subcontractors' superintendents and foremen are thoroughly familiar with applicable permits, codes, laws, safety rules and regulations.
- D. Any delays caused by permitting agencies in issuance of permits shall not be cause for unavoidable delay. However, the Port may at their discretion recommend an extension of time provided that the Contractor waives any additional compensation caused by that delay and the Contractor can show that he/she has aggressively pursued obtaining such permits.
- E. The Codes referred to shall have full force and effect as though printed in these Specifications. Nothing in the Contract Documents shall be construed to permit work not conforming to the governing code requirements.

**1.2 CODES AND REGULATIONS**

- A. Laws, Codes, Safety Rules and Regulations referenced in the General Provisions, Article 61, include, but are not limited to the following:
  - 1. California Division of Industrial Safety.
  - 2. California Occupational Safety and Health Administration (CAL/OSHA).
  - 3. California Labor Code.
  - 4. California State Vehicle Code.
  - 5. San Francisco Municipal Code, including San Francisco Building Code, San Francisco Electrical Code, San Francisco Mechanical Code, San Francisco Plumbing Code, San Francisco Police Code, San Francisco Public Works Code, San Francisco Health Code, San Francisco Fire Code, and San Francisco Traffic Code and any department orders adopted pursuant thereto.
    - a. Regulations for Working in San Francisco Streets.
    - b. DPW Order 135,595 Street Opening and Pavement Restoration Regulations for Non Moratorium City Streets.

- c. DPW Order 135,596 Street Opening and Pavement Restoration Regulations for Newly Renovated City Streets.
- d. DPW Order 167,840 for the Placement of Barricades at Construction Site.
- e. DPW Order 171,333 Dust Generation and Control Regulations.
- f. DPW Order 171,363 Regulations for Excavating and Restoring Streets in San Francisco.
- g. Article 29, San Francisco Police Code, Regulation of Noise.
- h. Article 2.4, San Francisco Public Works Code, Excavation in the Public right-of-way.
- 6. Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.
- 7. State of California Public Utilities Commission
  - a. General Order No. 95, Rules for Overhead Line Construction.
  - b. General Order No. 128, Rules for Construction of Underground Electric Supply and Communication Systems.
  - c. General Order No. 143-B, Safety Rules and Regulations Governing Light-Rail Transit.
- 8. California Code of Regulations (California Administrative Code), Title 8 - Industrial Relations, Part 1 - Department of Industrial Relations, Chapter 4 - Division of Industrial Safety:
  - a. Subchapter 4 - Construction Safety Orders (CSO),
  - b. Subchapter 5 - Electric Safety Orders (ESO),
  - c. Subchapter 7 - General Industry Safety Orders (GISO).

The Contractor's attention is directed to sections of above Safety Orders, which cover some of the most frequently encountered safety concerns, as follows:

- d. CSO #1540 - Excavations
- e. CSO #1541 - Shoring, Sloping and Benching Systems
- f. CSO #1598 - Traffic Control for Public Streets and Highways
- g. CSO #1599 - Flaggers
- h. GISO #3380 - Personal Protective Devices
- i. GISO #3381 - Head Protection
- j. ESO #2940.2 - Clearances
- k. ESO #2941 - Work On or In Proximity of Overhead High Voltage Lines
- l. ESO #2946 - Provisions for Preventing Accidents due to Proximity of Overhead Lines

The Contractor's attention is also directed to all other applicable Safety Orders, including:

- m. GISO #5003, #5006, #5021, #5022, #5024, #5025 - Cranes
- n. GISO #3646 - Operating Instructions (Elevated Work Platforms)
- o. GISO #3648 - Operating Instructions (Aerial Devices), and,
- p. ESO #2940.7 - Mechanical Equipment
- 9. California Health and Safety Code.
- 10. National Electric Code, National Fire Protection Codes, including NFPA 70.
- 11. California Code of Regulations (CCR) Title 17, Public Health.
- 12. California Code of Regulations (CCR) Title 22, Division 4, Environmental Health and Division 4.5, Environmental Health Standards for the Management of Hazardous Waste and Title 26 - Toxics.

13. California Code of Regulations (CCR) 19, Fire Marshal.
14. Code of Federal Regulations (CFR) Titles 29 and 40.

### 1.3 SUBMITTALS

- A. A copy of each permit that the Contractor obtains shall be provided to the Port for information prior to beginning of any work covered by such permit.

### 1.4 RESOLUTION OF CONFLICTS

- A. If the Contractor observes that the Specifications or Drawings are at variance with any permits, laws or regulations, the Contractor shall give the Port and Engineer prompt written notice.
- B. If the Contractor performs any work knowing or having reasons to know that it is contrary to such permits, laws, codes, safety rules or regulations, and without such notice to the Engineer or Port, the Contractor shall bear all responsibility and costs arising there from.

## **PART 2 – PRODUCTS**

(Not Used)

## **PART 3 – EXECUTION**

(Not Used)

**END OF SECTION 01060**

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**SECTION 01090****REFERENCES****PART 1 GENERAL**

## 1.1 SUMMARY

- A. Section Includes:
  - 1. Applicable Publications
  - 2. Standard Specifications
  - 3. Reference Specifications, Codes, and Standards
  - 4. Abbreviations
  - 5. Definitions
- B. Related Documents: Section 00 72 00, General Conditions, Paragraph 100 - Definitions and Terms.
- C. Related Sections: Refer to individual Technical Specification Sections for definitions of terms which may be used uniquely in the Work covered by each Section.

## 1.2 APPLICABLE PUBLICATIONS

- A. Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that whenever no date is specified only the latest specifications, standards, or requirements of the respective issuing agencies in effect on the date of the Contract Documents, except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes.

## 1.3 STANDARD SPECIFICATIONS

- A. Unless otherwise specified, reference in these Specifications to the "DPW Standard Specifications" or "Standard Specifications" shall mean the Standard Specifications of the City and County of San Francisco, Department of Public Works, Bureau of Engineering, November 2000, except that the provisions for measurement and payment shall not apply. References in Parts 2 through 10 of the Standard Specifications to Sections of Part 1 shall be construed to mean references to the respective provisions of the General Conditions. (Refer to Section 00 72 00.)
- B. Notice: Printed copies of the Standard Specifications and plans are no longer available. They may be downloaded from the Internet at the following link: <http://38.106.4.205/index.aspx?page=294>.

## 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Upon written request, the Port's or City's Representative will furnish information as to how to obtain copies of the referenced standards.

- B. In case of conflict between codes, reference standards, Drawings, and the other Contract Documents, the most stringent requirements shall apply.
- C. The standard referred to, except as modified in the Contract Documents, shall have full force and effect as though printed in these Specifications.
- D. Maintain copies of the codes and reference standards with the Contract Documents at the job site at all times.

## 1.5 ABBREVIATIONS

- A. Abbreviations: Whenever in these Contract Documents the following abbreviations are used, the intent and meaning shall be interpreted as follows:

AA	Aluminum Association, Inc.
AAMA	Architectural Aluminum Manufacturers' Association
AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACWS	Asphalt Concrete Wearing Surface
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGMA	American Gear Manufacturers' Association
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute for Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ARI	American Refrigeration Institute
ASA	American Standards Association
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AT&T	American Telephone and Telegraph
AWG	American Wire Gage
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWSS	Auxiliary Water Supply System
AWWA	American Water Works Association

BERM	Bureau of Environmental Regulation and Management, Department of Public Works
BHMA	Builders Hardware Manufacturers Association
BOA	Department of Public Works, Bureau of Architecture
BOE	Department of Public Works, Bureau of Engineering
BWPC	Bureau of Water Pollution Control, Department of Public Works
Caltrans	California Department of Transportation
Cal/OSHA	California Occupational Safety and Health Administration
CBMA	Certified Ballast Manufacturers Association
CCR	California Code of Regulations
CDA	The Copper Development Association, Inc.
CFR	Code of Federal Regulations
CISPI	Cast Iron Soil Pipe Institute
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute, Inc.
CS	Commercial Standards - U.S. Department of Commerce
CSI	Construction Specifications Institute
CTSS	Caltrans Standard Specifications
CWP	Clean Water Project
DOT	United States Department of Transportation
DPW	City and County of San Francisco, Department of Public Works
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
FGNA	Flat Glass Marketing Association
FHWA	Federal Highway Administration
FM	Factory Mutual
FS	Federal Specification
HI	Hydraulic Institute
HMI	Hoist Manufacturer's Institute
IAMPO	International Association of Mechanical and Plumbing Officials
IBC	International Building Code
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
ITE	Institute of Traffic Engineers
JIC	Joint Industry Conferences of Hydraulic Manufacturers
MCAA	Mechanical Contractors Association of America, Inc.
MLMA	Metal Lath Manufacturers Association
MMA	Monorail Manufacturers Association
MTD	Metro Transit District
NAAM	National Association of Architectural Metal Manufacturers
NBFU	National Board of Fire Underwriters
NBHA	National Builders' Hardware Association
NECA	National Electrical Contractors Association
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NFC	National Fire Code

NFPA	National Fire Protection Association
NLMA	National Lumber Manufacturers Association
NTMA	National Terrazzo and Mosaic Association, Inc.
NWMA	National Woodwork Manufacturers Association
OECI	Overhead Electrical Crane Institute
OSHA	Occupational Safety and Health Administration - U.S. Department of Labor
PacBell	Pacific Bell
PEI	Porcelain Enamel Institute
PG&E	Pacific Gas and Electric Company
PS	Product Standards Section - U.S. Department of Commerce
RCM	Registered Construction Management
RCP	Reinforced Concrete Pipe
RLM	RLM Standards Institute, Inc.
RMA	Rubber Manufacturers Association, Inc.
SAE	Society of Automotive Engineers
SCPI	Structural Clay Products Institute
SDI	Steel Door Institute
SEWPCP	Southeast Water Pollution Control Plant
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
SJI	Steel Joist Institute
SFDPWSS	City and County of San Francisco, Department Of Public Works, Standard Specifications
SSPC	Steel Structures Painting Council
STLC	Soluble Threshold Limit Concentration
TCA	Tile Council of America
TEMA	Tubular Exchanger Manufacturers' Association
TMA	Tile Manufacturers Association
TTLC	Total Threshold Limit Concentration
UBC	Uniform Building Code
UL	Underwriters Laboratories Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
VCP	Vitrified Clay Pipe
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

## 1.6 DEFINITIONS

- A. As directed, As required, As permitted: Interpretation of Phrases - Wherever the words "as directed," "as required," "as permitted," or words of like effect are used, it shall be understood that the direction, requirement, or permission of the Port's Representative or governmental regulatory agency having jurisdiction is intended. The words "sufficient," "necessary," "proper," and the like shall mean sufficient, necessary, or proper in the judgment of the Port's Representative. Wherever the words "inspect," "approved," "acceptable," "satisfactory," or words of like import are used to describe a requirement, direction, review, or judgment of the Port's Representative as to the work, it is intended that such requirement, direction, review, or judgment will be solely to observe and evaluate, in general, the completed work

for compliance with the requirements of the Contract Documents, unless otherwise specifically stated.

- B. Approved Equal: Approved in writing by the Port as being of equivalent quality, utility, and appearance in the opinion of the Port. The burden of proof of equality is the responsibility of Contractor.
- C. Port (Owner) Provided, Contractor Installed (Relocated): Items to be provided by the Port to be relocated or removed from storage and installed by Contractor at no additional cost to the Port under the Contract.
- D. Engineer: Refer to Section 00 72 00, General Conditions, Paragraph 1.01. References in these Specifications to “Engineer” shall be deemed to include the Port’s Representative as the Port’s authorized on-site representative.
- E. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Port’s Representative, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.
- F. Installer: The person engaged by Contractor, its subcontractor or sub-subcontractor for performance of a particular element of construction at the Work site, including installation, erection, application and similar required operations. Installers are required to be experienced in the operations they are engaged to perform.
- G. Provide: Furnish and install or supply and install in place at the Work site.
- H. Remove and Dispose: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Port’s property.
- I. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.
- J. Remove and Salvage: Items indicated to be removed and salvaged remain the Port's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to the Port’s designated storage area.
- K. Port’s Representative - Refer to Section 00 72 00, General Conditions, Paragraph 1.01.
- L. Technical Specifications - Division 1 through Division 16 Specification Sections.
- M. Work Site: The space available to Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Work. The extent of the Work site is shown on the Drawings and may or may not be identical with the geographical description of the site upon which the Work is to be constructed.

## **PART 2 PRODUCTS**

Not Used

**PART 3 EXECUTION**

Not Used

**END OF SECTION 01090**

**SECTION 01200****PROJECT MEETINGS****PART 1 GENERAL**

## 1.1 SUMMARY

- A. Section Includes:
  - 1. Pre-Construction Conference
  - 2. Partnering Meetings
  - 3. Progress Meetings
  - 4. Pre-Installation Conferences

## 1.2 GENERAL

- A. The Port's Representative will arrange project meetings after consultation with Contractor and will inform the Contractor of the meeting time and location.
- B. The Contractor's attendance is required at all meetings, including pre-construction, bi-weekly, and startups.
- C. The Port's Representative shall be responsible for taking the meeting minutes and providing the Contractor with a copy. The Contractor shall duplicate them and distribute the meeting minutes to the other participants of the meeting.

## 1.3 PRE-CONSTRUCTION CONFERENCE

- A. Prior to commencement of Work, the Port's Representative will schedule and conduct a pre-construction conference.
- B. The Contractor shall be prepared to review and discuss the construction schedule and sequence of operations. The conference will be held by the Port's Representative at a time and location selected and arranged with Contractor after award of the Contract.

## 1.4 SITE MOBILIZATION CONFERENCE

- A. The Port's Representative will schedule a conference at the Project site prior to Contractor mobilization.
- B. Attendance Required: Port's Representative, Special Consultants, Contractor's Superintendent, and major subcontractors.
- C. Agenda:
  - 1. Use of premises by the Port and the Contractor.
  - 2. The Port's requirements and partial occupancy.
  - 3. Construction facilities and controls provided by the Port and the Contractor.
  - 4. Temporary utilities provided by the Contractor.
  - 5. Survey and building layout.
  - 6. Security and housekeeping procedures.
  - 7. Schedules.
  - 8. Procedures for testing of pipelines.
  - 9. Procedures for maintaining Record Documents.
  - 10. Requirements for start-up of equipment, w/ power and checklist.
  - 11. Inspection and acceptance of equipment put into service during construction.

## 1.5 PROGRESS MEETINGS

- A. The Port's Representative will schedule, prepare agenda, and administer meetings throughout progress of the Work at weekly intervals or more frequently, if required by the Port's Representative. Progress Meetings will be held at the project field office and the Contractor's attendance is mandatory.
- B. Attendance Required: Job superintendent, major Subcontractors and suppliers, as appropriate to agenda topics for each meeting.
- C. Typical agenda:
  - 1. Review and approval of minutes of previous meeting.
  - 2. Review of work progress since previous meeting.
  - 3. Field observations, problems, and conflicts.
  - 4. Problems which impede Contractor's construction schedule.
  - 5. Corrective measures and procedures to regain projected schedule(if necessary)
  - 6. Revision to Contractor's construction schedule and contractor provide "Look Ahead" work schedule in writing.
  - 7. Coordination of schedules.
  - 8. Review submittal, RFI logs.
  - 9. Maintenance of quality standards and field corrections – Housekeeping and cleaning of site.
  - 10. Review proposed changes for the following:
    - a. Effect on Contractor's construction schedule and completion date.
    - b. Effect on other aspects of the project.
    - c. General status of proposed change.
  - 11. Other business.

## 1.6 PRE-INSTALLATION CONFERENCES

- A. When required in individual specification Sections, the Contractor will convene a Pre-Installation Conference at work site prior to commencing work of the Section.
- B. The Contractor will require attendance of parties directly affecting, or affected by, work of the specific Specification Section.
- C. The Contractor will notify the Port's Representative at least four days in advance of the meeting date.
- D. The Port's Representative will prepare an agenda, preside at conference, record minutes, and distribute copies within two days after the conference to the participants.
- E. The Contractor will review conditions of installation, preparation and installation procedures, and coordination with related work.

## **PART 2 PRODUCTS**

(Not Used)

## **PART 3 EXECUTION**

(Not Used)

**END OF SECTION 01200**



**SECTION 01300****SUBMITTALS****PART 1 GENERAL****1.02 SUMMARY**

- A. Section Includes: Procedures and requirements to submit shop drawings, product data, samples and similar submittals by Contractor to the Port for review and approval. Specific requirements for submittals are included in the Contract Documents and individual Specifications.
- B. Related Documents:
  - 1. Section 00 72 00: General Conditions
- C. Related Sections:
  - 1. Section 01310: Progress Schedules
  - 2. Section 01 35 45: Health and Safety

**1.03 SUBMITTAL SCHEDULE**

- A. Contractor's submittal schedule shall be integrated into the progress schedule for the Work. Refer to Section 00 72 00: General Conditions, Article 3.09 Progress and Submittal Schedules, and Section 01310: Progress Schedules.
- B. Contractor shall provide a submittal schedule detailing each submittal activity and contain only submittal activities.
- C. Submittals will not be received from the Contractor for review by the Port before the submittal schedule has been reviewed and accepted by the Port.
- D. Allow 21 calendar days for submittal review.

**1.04 Submittal PROCEDURES**

- A. Refer to Section 00 72 00: General Conditions, Article 3.11 Shop Drawings, Product Data and Samples for General Conditions and Contractor's responsibilities.
- B. Contractor shall review, approve and stamp submittals prior to forwarding them for Port's review.
  - 1. By approving and submitting shop drawings, product data and samples or similar submittals, Contractor represents that it has determined and verified dimensions, materials, field measurements, and related field construction criteria, and that it has checked and coordinated the information contained within such submittals with the requirements of the work and of the Construction Documents.

2. When professional certification of performance criteria of materials, systems or equipment is submitted, submittal shall be stamped and signed by the responsible design professional with license number and expiration date representing that the Port could rely upon the accuracy and completeness of such calculations and certifications.
  3. Submittals not reviewed, approved and stamped by the Contractor prior to forwarding for Port review will be discarded and not reviewed.
- C. Format of submittals:
1. Identify submittals with the following information:
    - a. Submittal number (e.g., Submittal No. 1).
    - b. "Contract No. <Contract No.>"
    - c. Contractor's name, address, telephone number, fax number and e-mail address.
  2. Consecutively number the pages of the submittal (e.g., 1 of 5, 2 of 5, etc.), exclusive of any transmittal form.
  3. Shop drawings shall have a title and reference to where to product will be incorporated into the Work.
  4. Where product data contain more than one product, model, selection, etc., clearly mark and identify the information intended to be reviewed by Port.
  5. Reference to Contract Drawing or Specification Section as applicable.
  6. Where multiple Specification Sections govern any portion of the Work or where multiple trades are involved in any portion of the Work (e.g., steel, mechanical and electrical items embedded in concrete), indicate all pertinent Specification Sections in its submittal identification.
  7. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information are in accordance with the requirements of the Work and Construction Documents.
  8. Provide space for Port's review stamp. Space shall be minimum 4" x 6".
  9. Resubmitted shop drawings, product data, samples and other submittals shall:
    - a. Be identified by the original submittal number with a numbered suffix that indicates the number of times it has been resubmitted.
    - b. Be revised as required.
    - c. Identify all changes made since previous submittal with the use of "clouds".
- D. Packaging of Submittals:
1. Make submittals in groups containing all associated items as complete packages of information for review. The Port will reject partial submittals.
  2. Submittals shall be wrapped or packaged to prevent damage during delivery.
  3. Reproducible drawings shall be rolled and not folded.
  4. Transmit six (6) copies of each submittal.

E. Transmit each submittal to the Port's Representative at the following address:

Port of San Francisco  
Engineering Department, Contract <Contract No.>  
Pier 1  
San Francisco, CA 94111

F. The Port will review Contractor's submittals for conformance and compliance with the requirements of the Contract Documents, plans and specifications.

G. The Port will return the submittals stamped:

1. "NO EXCEPTIONS TAKEN" – Contractor is advised that fabrication, manufacturer, or construction may proceed, providing it complies with the Construction Documents.
2. "MAKE CORRECTIONS NOTED" – Contractor is advised that fabrication, manufacture, or construction may proceed, providing it complies with the Port's notations and the Construction Documents.
3. "REVISE AND RESUBMIT" – Contractor is advised that no work shall be fabricated, manufactured, or constructed. Contractor shall revise the submittal and resubmit it with the requested changes.
4. "REJECTED" – Submittal is rejected.

H. No change shall be made by Contractor to any submittal after it has been accepted by the Port.

## **PART 2 PRODUCTS**

Not Used

## **PART 3 EXECUTION**

Not Used

END OF SECTION

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**SECTION 01310****PROGRESS SCHEDULE****PART 1 - GENERAL****1.1 SUMMARY**

- A. Scheduling of Work under the Contract shall be performed by Contractor in accordance with requirements of this Section.
  - 1. Development of the Construction Schedule, resource loading of the Schedule, and Project status reporting requirements of the Contract shall employ computerized Critical Path Method (CPM) scheduling.

**1.2 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

**1.3 GENERAL REQUIREMENTS**

- A. Within 15 calendar days after the Notice To Proceed (NTP), Contractor shall furnish three (3) copies of a construction schedule showing in detail the proposed sequence of activities. The City will not process any progress payments until the required schedule is submitted.
- B. The CPM schedule shall represent Contractor's plan of operation performed within the specified contract completion time and within the contract bid price. It shall represent a practical plan to complete the work. A schedule extending beyond the contract completion date will not be accepted.
- C. Contractor is required to involve all subcontractors in the development, implementation, and updating process of its schedule.
- D. The CPM Schedule shall be submitted to the City's Representative for approval. After review and prior to acceptance, the Contractor shall revise the CPM schedules to incorporate the City's comments and shall submit final documents to the City's Representative for approval within five (5) working days.
- E. Acceptance or approval of the schedule is of general nature only. Failure by Contractor to include any element of work required for the performance of this contract shall not excuse him from completing all work required within any applicable completion date, notwithstanding the City approval of the CPM diagrams. Items missing from the schedule are assumed to be incidental work and not missing from the schedule after City approval, Contractor may submit a revised schedule to include these items. The revised

schedule is subject to review and approval by the City as described in “Revised Schedule” clause. No extension of time will be granted because of errors or omissions on the schedule. It is Contractor’s responsibility to incorporate all necessary activities to cover the work required by the Contract Documents.

- F. The CPM schedule and analysis when approved by the City shall constitute the official project work schedule throughout the construction period. No alteration of the logic, duration of activities, etc. will be allowed without the approval of the City.

#### 1.4 CPM SCHEDULE CONTENT

- A. The progress schedule shall be calendar-based, using a precedence method network diagram in the CPM format indicating the critical path for the execution of the work utilizing the entire contract time.
- B. The network diagram(s) shall show the following activities:
1. Required approvals, permits, notices, etc. necessary for Contractor’s execution of the proposed work.
  2. Preparation of shop drawing and working drawing submittals.
  3. Administrative activities, procedures, and subsidiary actions that will affect the critical path:
    - a. Submittal to and review by the City of shop drawings within the time limits noted in Contract Documents.
    - b. Submittal to and review by the City of substitutions as noted in Contract Documents.
    - c. Submittal to and review by the City of alternative construction methods or alternative designs, including all supporting data relating thereto, and
    - d. Submittal to and review by the City and all utility companies involved, a schedule for coordination of all utility relocation work necessitated by Contractor’s operations.
  4. Procurement of materials and equipment including ordering, fabrication, and delivery.
  5. Construction activities and sub activities tasks, including all activities shown on the Schedule of Values.
  6. Scheduled completion date shall be as specified within the time allowed.
  7. Project interim milestones shall be a maximum of two (2) events to be determined during submittal process.
- C. All CPM activity time duration shall be specified in five (5) day work weeks excluding holidays to be identified by Contractor.
- D. A maximum of fifteen (15) days duration shall be given to each CPM construction activity. Any activity in excess of the fifteen days shall be broken down in detail so that each detail activity will not exceed the fifteen days maximum.
- E. All constraints, dates and lags will require the City’s approval. All activities shall have succeeding activities except project completion. Contractor shall demonstrate the necessity of having any dummy activities.

- F. Negative float will not be allowed on the CPM schedule on the initial submittal. Initial CPM schedule with negative floats shall be rejected immediately. Contractor shall provide sufficient manpower (multiple crews) and maximize working hours (extended hours and /or weekend work) to perform the required work within the specified completion time and contract bid price.
- G. The CPM schedule's critical activities shall not exceed fifteen percent (15%) of the total number of activities. Critical activities are those which have the least float.

#### 1.5 CPM SCHEDULE FORMAT

- A. The CPM schedule shall be prepared by Contractor using the precedence method of network diagramming.
  - 1. Time Scaled Graphic network diagram showing the critical path. The graphic network diagram shall not be larger than 24" x 48".
  - 2. Tabulated Schedule shall include the following information for each activity:
    - a. Activity beginning and ending event numbers
    - b. Estimated duration in working days
    - c. Concise description of activity
    - d. Trade code (responsibility code including Contractor, all Subcontractors, Supplier, and Owner)
    - e. Early start date (ES) and early finish date (EF) (calendar dated).
    - f. Late start date (LS) and late finish date (LF) (calendar dated)
    - g. Actual start date and actual finish date (calendar dated)
    - h. Total float
    - i. Percent completed
  - 3. Copy - Contractor shall furnish information of the schedule via electronic copy, in a format acceptable to the Port, using the Microsoft Project Schedule software with the following requirements.
    - a. Sorting the activities as required.
    - b. Calculate the schedule as required in the updated schedule.
    - c. Include resource requirement as required.
    - d. Inputting actual start and completion dates of completed activities.
    - e. Inputting actual start dates and percent completion of activities in progress.
    - f. Print the total and free float for each activity.
  - 4. Additional Information - The following computer- generated reports supplied with the project identification, schedule and run date, and type of sort on the first page.
    - a. List of all activities sorted, by total float including ES, LS, EF, LF, and Total Float duration.
    - b. List of all activities sorted numerically including ES, LS, EF, LF, and Total Float duration.
    - c. List of all activities sorted numerically including ES, LS, EF, LF, Total Float duration and Predecessor/Successor information of precedence network.
    - d. List of all activities sorted by responsibility including ES, LS, EF, LF and Total Float duration.
    - e. List of activities on the critical path sorted numerically including ES, LS, EF and LF.

- f. List of near critical activities. (activities with total float less than ten (10) working days) sorted numerically including ES, LS, EF, and LF.

#### 1.6 UPDATED SCHEDULE

- A. The CPM schedule shall be updated monthly by Contractor and submitted to the City for review.
- B. Computer calculations of the updated schedule will be made starting from the current data date to the end of the project. Work completed shall be shown with actual start and finish dates for each activity. Work in progress shall be shown with the actual start date and the percentage completed for each activity.
- C. The CPM network diagram shall, at all times, represent the actual history of accomplishment of all activities as well as Contractor's current projected plan for orderly Completion of the work. Contractor shall, at monthly intervals, evaluate work progress with the City by reviewing the actual accomplishments since the previous update.
- D. Contractor's monthly written evaluation of the critical path analysis shall show the following:
  1. Computer printout of the work completed with actual start and finish dates for each activity;
  2. Critical path;
  3. Percentage of each activity completed;
  4. Anticipated completion time of entire work;
  5. Description of problem area;
  6. Current and anticipated delaying factors and their impacts
  7. Explanation of corrective action taken or proposed;
- E. This updated schedule shall not have any change in the logic of the network or in the duration of activities. The updated schedule shall be submitted with the monthly progress payment request showing all work completed as that date.
- F. If Contractor during the course of the construction desires to make changes in its method of operating and scheduling, it shall notify the City in writing stating the reasons for the change. Any change to the schedule in the logic, order or sequence of work, duration activities, etc. shall constitute a revised schedule. A revised schedule will not be in effect until it is approved by the City.
- G. The updated schedule shall have the same format and content as the initial CPM schedule and analysis for review and approval.

#### 1.7 ACTIVITY SCHEDULE

- A. Contractor shall prepare and submit at the weekly progress meeting, in sufficient quantities, on a bar chart format showing a three-week window of the following:
  1. Completed activities for last week.
  2. Scheduled activities for the next two weeks.
  3. Correlation to appropriate CPM schedule node or activity identification.



4. Detailed information including all minor elements, subjectivity, or work phases for the major activity.

#### 1.8 REVISED SCHEDULE

- A. Contractor shall submit to the City a revised critical path schedule with its evaluation whenever a schedule revision is requested or any of the following occurs:
  1. A change order affects the completion date or the sequence of the activities;
  2. Progress of any critical activity falls significantly behind schedule;
  3. Delay on a non-critical activity changes the course of the critical path; or
  4. Contractor elects to change any sequence of activities affecting the critical path.
- B. All revisions to the Schedule shall be submitted in writing to the City Representative for review and approval. The submission of a revised schedule shall not relieve the Contractor of the responsibility for the notification required by Section 6.22H.2.d of the San Francisco Administrative Code and as required by subparagraph 7.02.D – Notice of Delay of the General Conditions.

#### 1.9 SUBMITTALS

- A. The CPM schedule prepared by Contractor shall be used for planning, organizing, directing, controlling, and reporting all work required by the Contract Documents.
- B. Therefore, the timely submission of the following is required:
  1. Three (3) copies of the CPM schedule 10 working days after the official date for Notice to Proceed;
  2. Updated schedule on a monthly basis within 3 working days after update date as established by the City.
  3. Activity schedule on a weekly basis at the progress meeting.
  4. Revised schedule within 10 working days when requested by the City.
  5. Resubmittal of any rejected CPM schedule, updated schedule, or revised schedule within 5 working days after receipt of the returned schedule marked “RESUBMIT”, if necessary.
- C. Failure to comply with timely submission of any one of the above schedules will be just cause to withhold the progress payment of any portions thereof by the City and will trigger liquidated damages listed in Section 00 73 02 and paragraph 1.10 herein this Section.

#### 1.10 LIQUIDATED DAMAGES

- A. Failure to submit any one of the above schedules will result in an assessment of two hundred dollars (\$200) per calendar day as liquidated damages per schedule to be deducted from the contract until the required submittals are provided by Contractor.
- B. Liquidated damages are in addition to any remedies taken by the City under the Supplementary Conditions of this Contract.

#### 1.11 APPROVED STANDARD

- A. CPM, as required by this section, shall be interpreted to be generally as outlined and defined in “CPM in Construction Management” by James O’Brien, McGraw-Hill Company, latest issue, Chapters 1 through 7.
- B. Free float is defined as the amount of time that any activity can be delayed without adversely affecting any succeeding activity for the project completion.
- C. Total float is defined as the amount of time that an activity can be delayed without adversely affecting the overall time for the project completion.

#### 1.12 ADJUSTMENT OF THE CONTRACT TIME AND CHANGE ORDER

- A. Adjustments of the contract time due to delays, additional work, or any other cause will only be issued through a contract change order and only for causes specified in the Contract Documents.
  - 1. In the event Contractor requests an adjustment of the contract time, it shall furnish such justification, progress schedule data, and supporting evidence as the City may deem necessary, for a determination as to whether or not the Contractor is entitled to an adjustment of time under the provisions of the Contract.
    - a. Contractor shall submit proof based on revised activity logic, durations, and costs with each request.
  - 2. The progress schedule shall clearly indicate that Contractor has used, in full, all the float time available for work involved in the request.
  - 3. Total and free float are not for the exclusive use of benefit of either the City or Contractor, but is a resource available to both parties on a first needed basis. Contractor shall not be entitled to additional compensation due to schedule impacts for change order work that extends the contract beyond the scheduled completion date, but not beyond the contract completion date.
  - 4. The City determination as to the adjustment of the contract time will be based upon the latest version of the progress schedule accepted at the time of the alleged delay, and all other relevant information.
  - 5. Actual delays in activities which, according to the progress schedule, do not affect the critical path work will not be the basis for an adjustment to the Contract time.
  - 6. No contract time extensions will be allowed for contract change orders for which there are concurrent contract work delays, unless' the excusable delays affect the critical path in the schedule and after all available float has been used.
- B. Contractor shall include, as part of each change order request for which it is requesting an adjustment in the contract duration, a sub network showing logic revisions, duration changes, and cost changes for the work in question and its relationship to other activities on the Progress Schedule. Contractor shall incorporate each Change Order into the updated schedule.
- C. The City will, within 15 working days after receipt of such request and supporting evidence, review the facts and advise Contractor in writing therefor.
- D. The new progress schedule, if accepted by the City shall be in compliance with the requirements under “Revised Schedule” as defined within this section.

- E. Where the City has not yet made a final determination as to the adjustment of the contract time, and the parties are unable to agree to the amount of the adjustment to be reflected in the Progress Schedule, the current schedule will be in effect and be updated regularly every month until a revised schedule is agreed and approved by the City.

#### 1.13 EARLY COMPLETION SCHEDULE

- A. Contractor may provide a progress schedule which contains a schedule completion date earlier than the time allowed for completion of work as specified in these Specifications.
- B. If Contractor submits an early completion schedule, it agrees to the following:
1. The time difference between Contractor's early scheduled completion date and the Contract completion date will be considered as absolute float.
  2. The absolute float is not for the exclusive use of benefit of either the City or Contractor, but is a resource available to both parties on a first needed basis.
  3. Contractor's original bid has included all cost for the full duration of the Project from the start date through the official Contract completion date. Specifically, Contractor has provided through its bid, the overhead cost including field office, home office, other off-site yard, and extended overhead cost for the duration of the absolute float between its early scheduled completion date and the Contract completion date in its bid items on the Schedule of Bid Prices or Bid Proposal as specified.
  4. If the City requires additional work through change order which will be done after the early schedule completion date and prior to the official Contract agrees that no additional monies will be paid beyond the direct cost related to those change orders.

**PART 2 – PRODUCTS** (Not Used)

**PART 3 - EXECUTION** (Not Used)

**END OF SECTION 01310**

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**SECTION 01 35 45****HEALTH AND SAFETY CRITERIA****PART 1 -- GENERAL**

## 1.01 SUMMARY

- A. The Contractor shall be solely and fully responsible for compliance with regulatory requirements applicable to the health and safety of persons during the performance of the Work, and shall fully assume the defense of, indemnify and hold harmless those entities and persons stipulated in the Section 00 72 00, General Conditions.
1. Within 30 calendar days after award of the Contract, submit to the Port two copies of the Cal/OSHA approved Safety Program, including Fire Prevention Plan and Material Safety Data Sheets (MSDS's) Program. Refer to Paragraph 1.06 of this Section for specific requirements.
  2. At the same time, submit to the Port two copies of the following items:
    - a. List of hazardous materials to be used by the Contractor or Subcontractors on the Project.
    - b. MSDS documents for each one of the listed hazardous materials, and
    - c. Records of training of all the Contractor's, including Subcontractor's, personnel handling or contacting such materials.
  3. Within 30 calendar days after award of the Contract, submit to the Port two copies of the Cal/OSHA approved Written Compliance Plan which shall be subsequently updated every six (6) months thereafter throughout the duration of the Project.
  4. The Contractor shall be responsible for all costs associated with the compliance with applicable hazardous materials regulations or requirements incurred by Contractor or its subcontractors' in the demolition or construction Work.

## 1.02 REGULATORY REQUIREMENTS

- A. OSHA's Lead Exposure in Construction, Interim Final (29 CFR Part 1926.62) requires certain actions on the part of an employer when there is any possibility that an employee could be exposed to lead as a result of his/her activities. The level of engineering control and medical monitoring which may be required will be based on the governing regulations of Cal/OSHA (Title 8 CCR Section 1532.1), which are effective throughout the project duration for the level, and extent of lead exposure at the site. The Contractor shall designate a competent person to identify potential lead hazards at the site and oversee implementation of appropriate protective measures to comply with all Cal/OSHA requirements applicable for lead-based paints.

## 1.03 HAZARDOUS MATERIALS

- A. Many of the materials and items of equipment used to construct the Project contain materials known to the State of California to be either carcinogenic or reproductive toxins. These materials may include:
1. Known or suspected building materials that contain lead. These materials include, but are not limited to painted or coated surfaces (including walls, ceilings, moldings, windows, door components stairwell components, and floors), and plumbing components (including piping, fittings, and solders).
- B. Contractor shall ensure that all site personnel, including Subcontractors' personnel, receive appropriate and required awareness training and orientation that will prevent

inadvertent or unauthorized disturbance of hazardous materials that maybe present in the buildings. The Port reserves the right to request proof of the training.

- C. Regardless of the potential exposure to lead, all the Contractor's and its Subcontractors' employees performing work in the Project shall be medically monitored and trained in accordance with the requirements of California Code of Regulations, Title 8, Section 1532.1, Lead in Construction.
1. Additionally, all the Contractor's and its Subcontractors' employees shall be tested for blood lead levels prior to commencement of, and on a quarterly basis for, the duration of their work on the project. The Port reserves the right to request the results of the blood tests.
  2. The Contractor shall pay all costs for material sampling, exposure characterization, air sampling, blood lead monitoring, preparation of written compliance programs, provision of supplemental training, implementation of feasible engineering controls, provision of hygiene facilities and personal protection equipment, and other costs associated with compliance with applicable lead regulations.
  3. The Contractor shall be fully responsible for compliance with the Cal/OSHA lead standard as contained on Title 8 CCR Section 1532.1. This regulation establishes requirements including initial personal air monitoring whenever any information, observation or calculation indicates potential employee exposure to lead. If 8-Hour TWA exposures exceed the action level of 30 micrograms of lead per cubic centimeter of air ( $\mu\text{g}/\text{cm}^3$ ), Contractor shall continue to conduct periodic air monitoring at specified intervals, and institute biological monitoring and training programs. If the Cal/OSHA PEL of  $50 \mu\text{g}/\text{cm}^3$  for lead is exceeded, more stringent and additional requirements shall become effective, such as engineering controls, respiratory protection, regulated work areas, and warning signs in lead work areas.
  4. The Contractor and its sub-contractors, as applicable, shall take necessary precautions to prevent the release of lead in the form of dust, fumes or mists from lead-containing building materials into the air or onto surrounding environments. Contractor shall inform all workers, supervisory personnel and authorized visitors on the job site of the potential hazards of lead and of necessary precautions and housekeeping procedures to reduce the potential for exposure in areas where lead is known to be present.

#### 1.04 REMEDIAL ACTION

- A. Should the Contractor or its Subcontractors be notified by the Port of any unsafe or unhealthy condition associated with the performance of the Work and be required to take remedial action to correct same, such action shall be taken immediately, if so directed, or within 48 hours after receipt of a notice of violation.

#### 1.05 HEALTH AND SAFETY PLAN

- A. Contractor's site-specific Health and Safety Plan, shall include, but not be limited to, the following:
1. General Health and Safety per Title 8 Subchapter 4 of the Cal-OSHA Construction Safety Orders.
  2. Completion of site-specific individual worker training related to health and safety issues prior to start of worker employment on site.
  3. Personnel protective measures including proper respiratory protective equipment; proper protective clothing; head, eye, hand, and foot protection; and fall protection.

4. Procedures for working around wall space, and other ceiling openings.
  5. Methods for demarcating and guarding wall space, and other ceiling openings.
  6. Procedures for lock out/tag out of electrical and mechanical systems.
  7. Electrical safety issues.
  8. Air monitoring strategy to evaluate Contractor employees' personal exposures to lead, and, as applicable, any other chemical materials that are used.
  9. Procedures for dealing with heat stress.
  10. Fire prevention and protection plan.
  11. Emergency procedures including, but not limited to, medical, fire, toxic atmospheres, electrical hazards, evacuation, cleanup of unintended releases, and power outages.
  12. Schedule of regular tool box meetings to discuss safety health issues for each subcontractor and tradesperson.
  13. Lead hazard health and safety issues.
  14. Other hazardous materials health and safety issues.
- B. The Health and Safety Plan shall incorporate Contractor's schedule of work and discuss the applicability of health and safety planning to each work phase.
- C. The Port reserves the right to reject or require modification of Contractor's Health and Safety Plan. However, the Port's action or lack thereof on Contractor's Health and Safety Plan shall not be construed to mean approval or acceptance of Contractor's responsibility for compliance with the applicable laws and regulations.
- D. No site work shall begin until the Health and Safety Plan is submitted.
- E. All site work shall be conducted in compliance with the Health and Safety Plan as well as all applicable laws and regulations.

#### 1.06 HAZARDOUS MATERIALS IN THE WORK

- A. General: Materials which contain hazardous substances or mixtures may be required on the Work. Material usage shall be in strict adherence to Cal-OSHA safety requirements and all manufacturer's warnings and application instructions listed on the MSDS provided by the product manufacturer and on the product container label.
1. Be responsible for coordinating the exchange of MSDS or other hazard communication information required to be made available to or exchanged between subcontractors at the site.
  2. Notify the Port if the Contractor considers a specified product or equipment, or their intended usage to be unsafe prior to ordering the product or equipment or prior to the product or equipment being incorporated in the Work.
- B. Prohibited Materials: The following materials and chemicals are specifically prohibited from use on this Project unless otherwise accepted in writing by the Port.
1. All material with a stated ACGIH threshold limit value of less than 25 parts per million.
  2. Ethylene glycol monomethyl ether.
  3. Dipropylene glycol methyl ether.
  4. Ethylene glycol.
  5. Formaldehyde.
  6. Methylene chloride.
  7. Isocyanates.
  8. All chemicals with a flash point of less than 140 degrees Fahrenheit.

- C. Prohibited Equipment: The following tools and equipment are specifically prohibited for use on this Project unless otherwise accepted in writing by the Port:
1. High- or low-pressure water-blasting equipment for hosing of ductwork or Work areas inside the building. If approval is granted by the Port, keep adjoining Work areas dry and protect existing surfaces and finishes from damage or deterioration and from contamination by hazardous materials removed by the water-blasting.
  2. Vacuum-powered removal or collection such as Vacu-loads.
  3. Gasoline-, propane-, diesel- or other fuel-powered equipment inside a building.
  4. Equipment which creates noise or vibration that would affect the safety of the building.
  5. Powder-activated fasteners except at locations specifically required by the Contract Documents or approved in writing by the Port. If approval is granted by the Port, the powder-activated gun shall be the low-velocity piston-operated type with a charge such that the velocity of the fastener is 300 feet per second or less measured 78 inches from the nozzle.
- D. Prohibited Methods: The following methods are specifically prohibited for surfaces known to contain lead-based paint on this Project unless otherwise accepted in writing by the Port:
1. Open-flame burning or torching.
  2. Machine sanding or grinding without a high-efficiency particulate air (HEPA) vacuum exhaust tool.
  3. Uncontained hydro blasting or high-pressure washing.
  4. Abrasive blasting or sandblasting without HEPA vacuum exhaust tools.
  5. Heat guns that operate above 1,100° F.
  6. On-site use of methylene chloride chemical strippers.

**PART 2 -- PRODUCTS**

Not Used

**PART 3 -- EXECUTION**

Not Used

**END OF SECTION 01 35 45**



**SECTION 01410  
REGULATORY REQUIREMENTS**

**PART 1 - GENERAL**

1.01 SUMMARY

- A. All materials, installation and construction shall comply with the applicable provisions of current laws, codes, safety rules and regulations of the City and County of San Francisco, the State of California, and the Federal Government, and any other applicable authority.
- B. The Contractor shall obtain and comply with all permits required for the work or for temporary facilities, including indemnification and insurance requirements, and shall pay all fees and furnish any deposits and bonds required therefore.
- C. The Contractor shall keep a copy of each applicable permit, law, code and regulation in the job site field office, and shall ensure that his/her subcontractors' superintendents and foremen are thoroughly familiar with applicable permits, codes, laws, safety rules and regulations.
- F. Any delays caused by permitting agencies in issuance of permits shall not be cause for unavoidable delay. However, the City Representative may at its' discretion recommend an extension of time if the Contractor waives any additional compensation caused by that delay and the Contractor can show that it has aggressively pursued obtaining such permits.
- G. The Codes referred to shall have full force and effect as though printed in these Specifications. Nothing in the Contract Documents shall be construed to permit work not conforming to the governing code requirements.
- F. All work and fees in this Section are part of this Contract.

1.02 CODES AND REGULATIONS

- A. Laws, Codes, Safety Rules and Regulations referenced in the General Provisions, Article 61, include, but are not limited to the following:
  - 1. California Division of Industrial Safety.
  - 2. California Occupational Safety and Health Administration (Cal/OSHA).
  - 3. California Labor Code.
  - 4. California State Vehicle Code.
  - 5. San Francisco Municipal Code, including San Francisco Building Code, San Francisco Electrical Code, San Francisco Mechanical Code, San Francisco Plumbing Code, San Francisco Police Code, San Francisco Public Works Code, San Francisco Health Code, San Francisco Fire

Code, and San Francisco Traffic Code and any department orders adopted pursuant thereto.

- a. Regulations for Working in San Francisco Streets.
  - b. DPW Order 135,595 Street Opening and Pavement Restoration Regulations for Non Moratorium City Streets.
  - c. DPW Order 135,596 Street Opening and Pavement Restoration Regulations for Newly Renovated City Streets.
  - d. DPW Order 167,840 for the Placement of Barricades at Construction Site.
  - e. DPW Order 171,333 Dust Generation and Control Regulations.
  - f. DPW Order 171,363 Regulations for Excavating and Restoring Streets in San Francisco.
  - g. Article 29, San Francisco Police Code, Regulation of Noise.
  - h. Article 2.4, San Francisco Public Works Code, Excavation in the Public right-of-way.
  - i. The San Francisco Building Code Section 106.3.2.6 and San Francisco Health Code 22B-Construction Dust control Ordinance #176-08.
6. Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.
  7. State of California Public Utilities Commission
    - a. General Order No. 128, Rules for Construction of Underground Electric Supply and Communication Systems.
  8. California Code of Regulations (California Administrative Code), Title 8 - Industrial Relations, Part 1 - Department of Industrial Relations, Chapter 4 - Division of Industrial Safety:

Subchapter 4 - Construction Safety Orders (CSO),  
Subchapter 5 - Electric Safety Orders (ESO),  
Subchapter 7 - General Industry Safety Orders (GISO).

The Contractor's attention is directed to sections of above Safety Orders, which cover some of the most frequently encountered safety concerns, as follows:

CSO #1540 - Excavations

CSO #1541 - Shoring, Sloping and Benching Systems  
CSO #1598 - Traffic Control for Public Streets and Highways  
CSO #1599 - Flaggers  
GISO #3380 - Personal Protective Devices  
GISO #3381 - Head Protection  
ESO #2940.2 - Clearances

The Contractor's attention is also directed to all other applicable Safety Orders, including:

GISO #5003, #5006, #5021, #5022, #5024, #5025 - Cranes  
GISO #3646 - Operating Instructions (Elevated Work Platforms)  
GISO #3648 - Operating Instructions (Aerial Devices), and,  
ESO #2940.7 - Mechanical Equipment

9. California Health and Safety Code.
10. National Electric Code.
15. California Code of Regulations (CCR) Title 17, Public Health.
16. California Code of Regulations (CCR) Title 22, Division 4, Environmental Health and Division 4.5, Environmental Health Standards for the Management of Hazardous Waste and Title 26 - Toxics.
17. California Code of Regulations (CCR) 19, Fire Marshal.
18. Code of Federal Regulations (CFR) Titles 29, 40 and 49.
19. The Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.)
20. The Uniform Fire Code, the California Fire Code, the California Code of Regulations (CCR), Title 24, Part 9, and the San Francisco Fire Code.
21. California Code of Regulations (CCR) Title 17, Public Health, including the Final Regulation Order of 07/22/2002, in Section 93105, on Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations  
(<http://www.arb.ca.gov/toxics/atcm/asp2atcm.htm>).

### 1.03 HAZARDOUS MATERIALS

- A. The Contractor shall alert themselves to, shall familiarize themselves with, and shall include in their bid all associated compliance costs for, the following laws and regulations regarding the hazards, control measures, management of hazardous materials and characterization and disposal of hazardous waste as applicable:
1. Environmental Protection Agency (EPA).
  2. Occupational Safety and Health Administration (OSHA).
  3. California Department of Occupational Safety and Health (Cal/OSHA).

4. California Environmental Protection agency (Cal/EPA).
  5. Bay Area Air Quality Management District (BAAQMD).
- B. Hazardous and contaminated materials and hazardous waste shall be handled according to applicable laws and regulations in effect at the time of disturbance, transport or disposal of said hazardous materials or waste and requirements of the Contract Documents. In the event of conflict, the more stringent requirement shall apply.
- C. The Contractor is alerted to and shall familiarize itself to the following laws and regulations regarding the generation, management, characterization and disposal of hazardous waste:
1. Resources Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq. and regulations 40 CFR Part 260 et seq.
  2. California Health and Safety Code, Division 20 and regulations, and 22 CCR Section 66000 et seq.
  3. For asbestos hazards: Comply with the applicable requirements of:
    - a. Cal/OSHA Construction Asbestos Standard, 8 CCR Section 1529.
    - b. BAAQMD Regulation 11, Rule 2.
    - c. Environmental Protection Agency NESHAP and AHERA regulations (40 CFR Part 763, as applicable).
    - d. Occupational Safety and Health Administration (inclusive of OSHA 29 CFR 1926.1101)
    - e. California Environmental Protection Agency (Cal/EPA). Title 22
    - f. Other applicable federal, state, and local governmental regulations pertaining to asbestos-containing materials (ACM) and asbestos waste.
  4. For lead hazards, comply with the applicable requirements of the following federal, state and local regulations:
    - a. Cal/OSHA Lead in Construction Standard, 88 CCR Section 1532.1, and Cal/EPA Regulation 22 CCR Section 66000
      - 1) Federal Lead Standard for the Construction Industry, 29 Code of Federal Regulations (CFR) part 1926.62
    - b. California Department of Health Services (17 CCR Sections 35001 - 35099).
    - c. Title 17, California Code of Regulations, Division 1, Chapter 8 Accreditation, Certification and Work Practices in Lead Related Construction.
    - d. San Francisco Building Code (SFBC), Chapter 34, Section as required where there is disturbance to painted surfaces on the exterior of buildings or structures within the City and County of San Francisco.
    - e. Lead in paint: Federal Housing and Community Development Act of 1992, 24 CFR part 38.
    - f. Lead in housing and other structures: Toxic Substances Control Act (TSCA)'s Title IV, proposed 40 CFR part 745.
    - g. Lead in paint: Federal Housing and Community Development Act of 1992, 24 CFR part 38.
    - h. Lead as a water pollutant:
      - 1) Federal Clean Water Act (CWA), 40 CFR part 427.

- 2) California's Porter Cologne Water Quality Control Act.
  - i. Federal Safe Drinking Water Act (SDWA), 40 CFR parts 141-143.
  - j. Lead as a hazard to children: California's Childhood Poisoning Prevention Act, 17 CCR section 33001 et seq.
  - k. Lead as a hazardous waste:
    - 1) Federal Resource Conservation and Recovery Act (RCRA) of 1976, 40 CFR part 240 et seq.
    - 2) California's Hazardous Waste Control Law (HWCL), 22 CCR section 66260.1 et seq.
- D. Respiratory Protection: Assess potential exposures to hazardous materials and conditions and comply with 29 CFR 1926.62 (f) (formerly 29 CFR 1910.134) and 8 CCR 5144. Provide a hazard analysis. Identify the appropriate respiratory protection to be used for the various tasks. Comply with all requirements associated with proper use of respirators.
- E. For PCB ballast work: Comply with Cal/EPA Regulation 22 CCR Sections 66268.110 and 66508.
- F. For fluorescent light tubes: Comply with Cal/EPA Regulation 22 CCR Section 66699(b).
- G. For Wood Treated with Chemical Preservatives such as CCA treated wood: Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) and by the California Department of Pesticide Regulation (DPR) and Department of Toxic Substances Controls (DTSC) Regulations or the for treated wood waste as per the Health and Safety Code (HSC) 25150.7 and 25150.8.

#### 1.04 PERMITS, INSPECTIONS, AND SERVICE REQUESTS

The Contractor shall obtain and pay for (unless otherwise noted) all necessary permits, inspections and service requests to start and complete work. Permit costs shall include all associated costs for notifications, walk-through, in-progress inspections, final inspections, oversight, and approvals. These permits include, but are not limited to, the following:

- A. Cal/OSHA permits.
- B. Permits and service requests from Pacific Gas and Electricity (PG&E) and other utility owners, and underground and over-head facilities. This includes notification to PG&E, and following PG&E's procedures whenever there is work near PG&E's high voltage line (115kv). Notification is mandated by PG&E whenever the line is "day lighted", and once again before the "protective work" is covered up.
- C. State, County, and City transportation permits (over width, over length, overweight, overload).
- D. Rockwheel permit.

- E. San Francisco Department of Telecommunications and Information Services permit and notification for fire alarm relocation.
- F. San Francisco PUC/BERM sewer discharge permit and notifications. Contact BERM at (415) 695-7321.
- G. San Francisco PUC/BWPC use of reclaimed water permit. Contact BWPC at (415) 648-6882 x1378.
- H. San Francisco PUC/Water Department/City Distribution Division permits and service requests for water and meters.
- I. San Francisco PUC/Bureau of Light, Heat, and Power (BLHP) permit and notification for removal of temporary lighting.
- J. San Francisco PUC/ Hetch Hetchy Water & Power (HHWP) application and notification for electrical service connection to PG&E. Contact HHWP at (415) 554- 1596.
- K. San Francisco Department of Building Inspection (DBI) permits, notifications, inspections, and approvals.
- L. San Francisco Department of Public Health (SFDPH) permits, notifications, oversight, and approvals, including but not limited to:
  - 1. Hazardous Materials Certificate of Registration: The Contractor shall obtain and keep current a hazardous materials certificate of registration and implement the hazardous materials plan submitted with the registration application, as per Articles 21, 21A, and 22 of the San Francisco Public Health Code. Contact the SFDPH/HMUPA at (415) 252-3900.
  - 2. Dust Control Plan as per the Construction Dust control Ordinance #176-08.
  - 3. Well Construction or Soil Borings Permits: A permit is required to construct or operate an environmental or geotechnical well or soil boring. These wells include, but are not limited to, cone penetrometers, inclinometers, piezometers, cathodic wells, exploratory wells, extraction wells, recovery wells, monitoring wells, temporary wells, irrigation wells, industrial wells, dewatering wells, wick drains, hydropunch soil borings and soil borings drilled for geotechnical or environmental purposes (whether or not groundwater is encountered). This information is not intended as a substitute for familiarity with applicable laws and regulations. Contact the SFDPH, Monitoring Well Section at least 15 working days in advance of drilling at (415) 252-3947.
  - 4. Underground Storage Tank (UST) Permits: All modifications, repairs, and installation of USTs shall require approval of the SFDPH, compliance

with Articles 21, 21A and 22 of the San Francisco Public Health Code, and its implementing regulations, compliance with applicable provisions of Chapters 6.7 and 6.75 of the California Health and Safety Code, Section 25280 et.al. Contact the SFDPH/HMUPA at (415) 252-3900.

- M. San Francisco Fire Department permits, including but not limited to:
1. The flammable or combustible material storage permit. Contact the SFFD, Bureau of Fire Prevention at (415) 558-3300.
  2. Hot work and torch application of roofing materials.
  3. Permit and notification for AWSS relocation.
  4. Permit and notification for removal and installation of fuel or chemical storage tanks.
- N. San Francisco Department of Public Works, Bureau of Street-Use and Mapping permits, including but not limited to:
1. Encroachment (minor and major) permits - for sidewalks (as required by Section 723.3 of the San Francisco Public Works Code).
  2. Street excavation, and utility excavation permits (as required by Article 2.4 of the San Francisco Public Works Code).
  3. Street space, debris box, and temporary occupancy permits (as required by Section 724 thru 724.3 of the San Francisco Public Works Code).
  4. Street improvement permits.
  5. Side sewer connection, borings/monitoring wells, tanks, and noise-night work permits.
- O. San Francisco Police Department permits.
- P. San Francisco Department of Parking and Traffic permits and traffic plans, and approvals.
- Q. San Francisco Municipal Railway permits and notifications.
- R. Port of San Francisco permits.
- S. San Francisco City Planning permits and approvals.
- T. Bay Area Air Quality Management District (BAAQMD) permits and notifications, and the California Air Resources Board (CARB) permits, and notifications. The Contractor shall obtain all the permits required by the BAAQMD and CARB. For information on the permit requirements and application forms check the web page at [www.baaqmd.gov](http://www.baaqmd.gov), or

[http://www.baaqmd.gov/enf/compliance\\_assistance/index](http://www.baaqmd.gov/enf/compliance_assistance/index). or call the compliance assistance hotline at (415) 749-4999. For asbestos <http://www.baaqmd.gov/enf/asbestos/index.htm> or call the district's Asbestos Program at (415) 749-4762

The following BAAQMD permits forms shall be completed for work involving screening, crushing or grinding, and use of abatement devices.

Form P-201: General information

Form P-101B: General information

Form G: Emission Source (crusher or grinder)

Form A: Abatement Devices: Wet Spray System

The Contractor is hereby notified that any screening or crushing operations of excavated materials cannot proceed without the appropriate BAAQMD, and Cal-EPA/DTSC permits.

- U. The Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, and the California State Water Resource Control Board (SWRCB) permits and notifications.
- V. Cal/EPA, Department of Toxic Substances Control (DTSC) permits and notifications, including but not limited to permit –by-rule, hazardous waste facilities permit, transportable treatment unit (TTU), and treatment storage and/or disposal facility (TSDF) permits.
- W. Utility Service Alert (USA) permits and clearance at 1- (800) 642-2444.
- X. OSHPD approvals as per Title 24, CCR.

#### 1.05 SUBMITTALS

- A. The Contractor shall provide a copy of each applicable permit that it obtains to the City Representative, prior to beginning of any work covered by such a permit.

#### 1.06 RESOLUTION OF CONFLICTS

- A. If the Contractor observes that the Specifications or Drawings are at variance with any permits, laws, or regulations, the Contractor shall give the City Representative prompt written notice thereof and the City Representative shall resolve the conflict in accordance with Section 21 of the General Provisions. If the Contractor performs any work knowing or having reasons to know that it is contrary to such permits, laws, codes, safety rules, or regulations, and without such notice to the City Representative, the Contractor shall bear all responsibility and costs arising therefrom.



**PART 2 – PRODUCTS**

(Not Used)

**PART 3 - EXECUTION**

(Not Used)

**END OF SECTION 01410**

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**SECTION 01500****CONSTRUCTION FACILITY CONTROLS****PART 1 -- GENERAL**

## 1.01 SUMMARY

- A. This Section includes special project conditions and requirements for construction including, water and air quality, providing for accessibility and controls, and controlling construction noise.
- B. Remove the temporary facilities at the completion of the work.
- C. The work of this Section shall be considered incidental and no separate payment will be made.

## 1.02 RELATED SECTIONS

- A. Section 01060 – Regulatory Requirements

## 1.03 CONTRACTOR'S FACILITIES

- A. The location of sanitary facilities, storage and staging areas, parking and other Contractor facilities shall be subject to the prior approval of the Port's Representative.

## 1.04 TEMPORARY UTILITIES

- A. Provide temporary electrical power for construction purposes.
- B. Potable Water
  - 1. Arrange with the San Francisco Water Department to provide potable water obtained by connecting to Port water systems. Contact the Water Department at (415) 923-2520 for arranging such water service.
  - 2. Water may be available from fire hydrants located in the streets. Obtain permission from and fill out an application to use water from a hydrant with the San Francisco Water Department at (415) 923-2488.
  - 3. Pay the costs of permit fees, connection fees, meters, and all water usage furnished by the San Francisco Water Department under the water service account established above.
- C. The Contractor is advised that Ordinance # 175-91, Article 21, Sections 1100 to 1107 of the San Francisco Municipal Code (Public Works Code), restricts the use of potable water for soil compaction or dust control activities, to the extent not directly in conflict with any applicable federal, state and local law.
  - 1. In consideration for potential health concerns, an exemption may be allowed for the use of potable water for soil compaction or dust control activities when human contact and exposure exists. Such exemption will be considered and may be granted on a case-by-case basis.
  - 2. Should the Contractor seek to use potable water for soil compaction or dust control activities, the Contractor, shall apply for, and obtain an exemption pursuant to Ordinance #175-91, Article 21, prior to its use. The application for such use of potable water is to be sent to Ken Sato (415) 252-3942 of the Department of Public Health, Bureau of Environmental Health Services, 1390 Market St, Suite 210 San Francisco, CA 94102. Pursuant to Ordinance #175-91, Article 21, the General Manager of the Water Department may grant permission for such use.

- D. Reclaimed Water: The Contractor shall fill out an application with the Southeast Water Pollution Control Plant (SEWPCP) to obtain reclaimed water for dust control. Reclaimed water is available at no cost to Contractor at the SEWPCP from 8:00 a.m. to 5:00 p.m. on weekdays and Saturdays.
1. Arrangements can be made for access to reclaimed water at other times.
  2. A permit is required to obtain reclaimed water from the Port. Contact the Watch 6 Chief at (415- 648-6882 x1378) at least three (3) days prior to the date that reclaimed water is required. Processing the application for reclaimed water may take longer than three days if its use is for other than dust control.
  3. Is responsible for the handling and transportation of reclaimed water as well as any permit and discharge fees.
- E. The Contractor is responsible for all connections, hoses, materials and equipment required to access the water and any damage to the systems as a result of making temporary connections.
- F. The Contractor is required to provide and maintain his/her own distribution piping, water tankers, hoses, and all appurtenances necessary to supply water at the job site.
- G. Hoses crossing traveled roadways shall be ramped over.

#### 1.05 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required toilet facilities and enclosures for all Contractors' personnel. The location of facilities is to be approved by the Port's Representative.

#### 1.06 PLACEMENT OF BARRICADES

- A. Take all necessary precautions to isolate and protect the public from hazardous conditions by using protective barricades during construction and with warning lights during darkness.
- B. Provide barriers as needed to prevent unsafe entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- C. Comply with the requirements of the San Francisco Department of Public Works "Guidelines for the Placement of Barricades" (DPW Order No. 167,840).

#### 1.07 MAINTENANCE OF THE WORK AREA AND DEBRIS CONTROL

- A. The Contractor shall maintain work areas under his/her control and adjacent public right-of-ways in a safe condition, and remove all accumulations of debris and surplus materials at the end of each working day. The Contractor shall restore it to a condition equal to that, which existed prior to the start of work. At completion of the Contract, the Contractor shall leave it in a clean and orderly fashion.
- B. Cleaning during Construction: Control the accumulation of waste materials and debris; collect waste from construction areas and the project site, daily. The Contractor shall also:
1. Comply with requirements of NFPA 241 for removal of combustible waste material and debris.
  2. Maintain work areas and adjacent areas free of dust and other contaminants during construction.
  3. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose these types of materials in a

- lawful manner.
4. Maintain the site and all adjacent public areas in a clean and orderly condition. Maintain the site, equipment, fences and signs free of graffiti. Remove all graffiti daily, using methods, which cause no damage to the work and existing facilities.
  5. Sweep all pedestrian walkways and dispose of debris around the site perimeter on a daily basis, and as often as determined by the Port's Representative.
  6. Keep all debris, hazardous/contaminated material, surplus concrete and excavated materials, etc., off the roadway, sidewalks and sewers at all times in all areas under the Contractor's control and adjacent public right-of-ways.
  7. Remove trash (waste oil, oil rags, etc.) and debris from the site at frequent intervals or as directed by the Port's Representative, so that its presence will not delay the progress of the work or cause a nuisance.
  8. Storage areas: Ensure that materials to be used for construction are stored in designated structures or areas by the appropriate trades. Maintain such areas or structures in a clean condition for the life of the Contract.
  9. Provide and maintain proper storage with secondary containment for lubrication oil, hydraulic fluids, waste oils, fuels, solvents and other hazardous or toxic materials and wastes.
  10. Supervision: Oversee all cleaning of areas by trades using them and ensure that resulting accumulations are deposited in appropriate containers.
  11. Burying or burning of trash and debris on the site is not permitted.
  12. Removed materials, trash, debris shall become the property of the Contractor and shall be removed from the site and disposed of in a legal manner.
- A. Initiate and maintain a specific daily program to prevent the accumulation of debris at the construction site, storage, and parking areas, and along streets, roads and haul routes. The Contractor shall:
1. Provide containers for the deposit of debris.
  2. Prohibit overloading of trucks to prevent spillage.
  3. Inspect traffic areas and haul routes to enforce requirements.
- B. Immediately remove materials deposited outside of approved storage areas.
- C. On a daily basis, remove all debris from all areas, including haul routes, caused directly or indirectly by the Contractor's operations.

#### 1.08 REMOVAL OF TEMPORARY UTILITIES, FACILITIES, AND CONTROLS

- A. Remove construction equipment, temporary structures and facilities, unused materials, rubbish and debris prior to Final Inspection. Restore facilities to conditions prior to construction, to the satisfaction of the Port. Leave facilities to become the property of the Port as indicated on the Drawings in proper working order.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

#### 1.09 STORAGE AND STOCKPILING

- A. Disposal of topsoil and organic matter shall be performed in a legal manner by the Contractor at his/her own expense and as his/her own property.
- B. Storage, stockpiling, or placement of any equipment, materials or supplies in any public street including the sidewalks or lawn areas thereof, will be allowed only if such storage, stockpiling or placement work is executed in accordance with the provisions of Paragraph

3.15 of Section 00 72 00, General Conditions and does not in any way obstruct any lane or passageway for vehicular or pedestrian traffic. The Contractor shall obtain prior approval of the Port's Representative for the use of public streets or sidewalks for storage or stockpiling.

**PART 2 PRODUCTS**

**NOT USED.**

**PART 3 EXECUTION**

**NOT USED.**

**END OF SECTION 01500**

**SECTION 01505****MOBILIZATION****PART 1 GENERAL**

## 1.01 SECTION INCLUDES:

- A. The work under this Bid Item consists of preparatory work including, but not limited to, work necessary for the mobilizing and furnishing at the site, equipment, materials, supplies and incidentals; for the establishment of all offices, buildings and other temporary facilities necessary for work on the project; cost for pre-paid bonds and insurances; for all other work and operations which must be performed or costs incurred to begin work on the various Bid Items at the project site; and for demobilization from the site once construction is complete. Compensation for mobilization includes, but is not limited to, the following principal items:
1. Permits: Refer to Section 00 73 00 - Supplementary Conditions and Section 01010 - Summary of Work. **Permits shall be coordinated with Arnel Prestosa, (415) 274-0627.**
  2. Moving onto the site of all Contractors' equipment required for operations and arranging for and erection of Contractor's work and storage area(s). This includes the differing scopes and task assignments, including staging and storage areas, as well as needed coordination with the Port for shed utilization. **Contact Sandra Oberle at (415) 274-0519 regarding space availability.**
  3. Providing on-site sanitary facilities and potable water facilities.
  4. Arranging for and erection of the Contractor's work and storage yards.
  5. Obtaining and paying for all required bonds and insurances including (as applicable).
  6. Posting all OSHA-required notices and establishing safety programs, including confined spaces and deep trenches or excavations.
  7. Having the Contractor's superintendent at the job site full-time, whenever construction is in progress.
  8. Submitting preconstruction details, including:
    - a. Site-Specific Health and Safety Plan required by Section 01 35 45.
    - b. Construction Schedule as specified in Section 01310 – Progress Schedules.
  9. Seven (7) calendar days after Notice to Proceed, submit for approval any proposed changes in the Port provided Drawings.
  10. Seven (7) calendar days after Notice to Proceed, submit a project specific Health and Safety Plan covering the entire demolition and disposal work including potential waste operations. The general Contractor and all subcontractors are to submit Health and Safety Plans at least seven (7) calendar days in advance of mobilizing to the site.

- 11. Submitting a Schedule of Values in accordance with Section 00700, Article 9.02 within thirty (30) calendar days following Notice to Proceed.

1.02 RELATED SECTIONS

- A. Section 00 72 00 – General Conditions
- B. Section 000 73 00 – Supplementary Conditions
- C. Section 01010 – Summary of Work
- D. Section 01040– Project Coordination
- E. Section 01060 – Regulatory Requirements
- F. Section 01 35 45 – Health and Safety

1.03 PAYMENT PROCEDURES

- A. The Bid Item “Mobilization” will be paid as a Lump Sum payment over the course of the Project based on percent completion of the work.

<u>% Bid Item Mobilization Payment</u>	<u>% Project Completion</u>
25%	2%
50%	5%
75%	10%
100%	20%

- B. Any extension of the contract time that may be granted will not of itself constitute grounds for a claim for additional payment under the Bid Item “Mobilization.”

**PART 2 PRODUCTS**

Not Used

**PART 3 EXECUTION**

Not Used

**END OF SECTION 01505**



**SECTION 01540****PROTECTION OF PROPERTY****PART 1 GENERAL****1.01 SECTION INCLUDES, BUT IS NOT LIMITED TO:**

- A. Safeguarding of Existing Facilities.
- B. Protection of adjacent building and property.
- C. Restoration of pavement and roadways.
- D. Emergency work.
- E. Joint Survey to Document Possible Damage Claim Conditions.

**1.02 RELATED SECTIONS**

- A. Section 01500 - Construction Facilities Controls

**1.03 SAFEGUARDING OF EXISTING FACILITIES**

- A. The Contractor shall perform all work, in such a manner as to avoid damage to existing building, utilities and structures. The Contractor will be held responsible for any damage due to its failure to exercise due care. Any damage to existing building, structures and sidewalks shall be repaired to original condition at no cost to the Port.

**1.04 JOINT SURVEY TO ESTABLISH AUTHENTICITY OF POSSIBLE CLAIMS**

- A. The Contractor shall use such methods and shall take adequate precautions to prevent damage to adjacent buildings, sidewalks, utilities and other improvements during the prosecution of the work.
- B. After the Contract is awarded and before the commencement of work, the Port's Representative will arrange for a joint examination of existing buildings, structures and other improvements in the vicinity of the work, as applicable, which might be damaged by the Contractor's operations.
- C. Records in triplicate of all observations will be prepared by the photographer, including photographs when deemed necessary or prudent. One copy shall be delivered to the Contractor, one copy will be kept on file at the office of the Port's Representative, and the third copy will be retained by the Port. The photographer may be required to attest to the fact that he/she took the pictures; however, in no case, will he/she determine the cause cracks, settlement, leakage, or like condition nor is he/she being retained for the purpose of engineering evaluation.
- D. The above records and photographs are intended for use as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of the adjacent property owners, the Contractor, and the Port, and will be a means of determining whether and to what extent damage, resulting from the Contractor operations, occurred during the Contract Work.

**PART 2 PRODUCTS**

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01540

**SECTION 01700****CONTRACT CLOSEOUT****PART 1 GENERAL**

## 1.01 SUMMARY

- A. Section Includes But Is Not Limited To:
  - 1. Procedures.
  - 2. Substantial Completion.
  - 3. Final Acceptance.
  - 4. Final Cleaning.
  - 5. Project Record Documents.
  - 6. Operating Manuals and Maintenance Data.
  - 7. Equipment Testing.
  - 8. Operator Instructions.
  - 9. Release of Liens or Claims.
  
- B. Related Documents:
  - 1. Section 00 73 02, Contract Time and Liquidated Damages: Liquidated damages for completion delay.
  
- C. Related Sections:
  - 1. Section 01500, Construction Facilities Controls.
  - 2. Section 01720, Project Records and Drawings.
  - 3. Section 01740, Warranties.

## 1.02 PROCEDURES

- A. Close-out Meeting:
  - 1. The Contractor shall submit all change orders, claims, and time extension requests by the final date as required by the Port's Representative before the Work is 95% complete.
  - 2. Prior to Substantial Completion, the Port's Representative will schedule a closeout meeting with the Contractor, Port representatives, and consultants to determine the status of completion.
  - 3. The Contractor shall attend the Close-out meeting scheduled by the Port's Representative to discuss the close-out procedure and responsibilities of the Contractor and Port's Representative.
  - 4. The Port's Representative will prepare a list of actions which are still open or pending that need to be resolved during the close-out period. Such actions may include, but are not necessarily limited to, equipment testing, operator training, record documents, final inspection, administrative activities, and documentation of final quantities and force account work.

## 1.03 SUBSTANTIAL COMPLETION

- A. Prerequisites to Substantial Completion:
1. Submit to the Port's Representative with the application for payment just before Substantial Completion, a statement of all Change Orders, Modifications, claims, and time extension requests.
  2. Verify that the following administrative closeout submittals have been received by the Port:
    - a. Project Record Drawings and approved shop drawings, product data, and samples as specified in Section 01720.
    - b. Warranties as specified in Section 01740.
    - c. Keys and keying schedule.
    - d. Operation and maintenance data, including manuals and instruction of Port personnel.
    - e. Spare parts and materials extra stock.
    - f. Certificates of Final Inspection and Occupancy as evidence of compliance with the requirements of governmental agencies having jurisdiction.
  3. Advise the Port's Representative of pending insurance change-over requirements.
  4. Submit to the Port's Representative written certification that the Contract Documents have been reviewed, the Work has been inspected, the Work is complete, including start-up, testing, adjusting, and balancing of equipment and systems, and conforms to the requirements of the Contract Documents.
  5. At no additional cost to the Port, restore and replace, as specified and as determined by the Port, material and finishes damaged due to the performance of the Work.
  6. Restoration or replacement shall be equal quality and match the appearance of the existing Work.
- B. Substantial Completion Inspection:
1. Notify the Port's Representative in writing that the Work is substantially complete and ready for inspection.
  2. Upon receipt of Contractor's written notice, the Port's Representative will make an inspection to determine the status of completion.
  3. Should the Port's Representative determine that the Work is not substantially complete; the Port's Representative will so notify Contractor with a deficiency list of all items that shall be completed before the Port considers the Work substantially complete.
    - a. Remedy all deficiencies as identified and notify the Port's Representative, in writing, when the Work is ready for reinspection.
    - b. Failure to complete this requirement within the time allowed to substantially complete the Work will result in liquidated damages being assessed.
  4. The Contractor shall verify that the work is complete, including but not necessarily limited to, the items required for Substantial Completion.
  5. If the Port's Representative concurs that the Work is substantially complete, the Port's Representative will prepare a Notice of Substantial

Completion, accompanied by a punch list of remedial work items to be completed or corrected, as verified by the Port's Representative.

- a. If the Work is not substantially complete, the Port's Representative will follow the same procedure as for the first inspection, and Contractor shall reimburse the Port for all reinspection costs.

- C. Partial Use or Occupancy of Work: When partial utilization of the Work is required and substantial completion is a condition of such partial utilization, the applicable requirements specified in this Section shall apply to the part of Work to be utilized.

#### 1.04 FINAL ACCEPTANCE

##### A. Prerequisites for Final Acceptance:

1. At no additional cost to the Port, perform all remedial work noted on the punch list before requesting a final inspection and acceptance.
2. Coordinate the performance of remedial work with the Port to cause minimal inconvenience and interruption of the Port's and the tenant's operations.
3. Perform final cleaning as specified in this Section. Remove protective coverings and similar items.
4. Remove all temporary controls, utilities, facilities, field offices and sheds.
5. Submit "redlines" of Record Drawings, including level controls and equipment settings.
6. Submit the final payment request with releases and an updated final statement with supporting documentation, accounting for final additional charges for extras and liquidated damages for delays.
7. **Submit consent of surety to final payment.**
8. Submit a certified copy of the Port's Representative's punch list of remedial items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance by the Port.
9. Failure to complete all remedial work and prerequisites for final inspection within the time allowed after the date of Substantial Completion as specified in Section 00 73 00, Supplementary Conditions, will result in liquidated damages being assessed.

##### B. Final Inspection:

1. Notify the Port in writing that all punch list items of remedial work have been completed and the Work is ready for final inspection.
2. The Port's Representative will make an inspection to verify the status of completion.
3. Should the Port's Representative determine that the Work is not complete or is defective, the Port's Representative will so notify the Contractor, in writing, listing remaining incomplete or defective work.
  - a. Promptly complete the remaining deficiencies and notify the Port's Representative, in writing, when ready for reinspection.
  - b. If the Port's Representative finds the Work is still not complete, the Contractor shall be responsible for all subsequent reinspection and meeting costs incurred by the Port to resolve the remaining

- issues. Such costs will be deducted from progress payments owed to the Contractor.
4. When the Port's Representative determines that the Work is acceptable under the Contract Documents and the Contractor has made all required closeout submittals, the Port's Representative will initiate the final payment recommendation and prepare the Certificate of Completion.
- C. Prior to the final payment recommendation, the Port's Representative shall be furnished with the following administrative close-out submittals:
1. Project Record Documents and Drawings.
  2. Warranties.
  3. Parking Permits, NOI (Notice of Intent) termination.
  4. Operations manuals and maintenance data as required by the Specifications or for other items as directed by the Port's Representative.
  5. Spare parts and materials extra stock, including four (4) extra hangers.
  6. Certificates of Final Inspection and Occupancy as evidence of compliance with the requirements of governmental agencies having jurisdiction.
  6. Evidence of payment and release of liens.
  7. Post construction Video, As-Built Drawings, and Digital Photos.
- D. Submittals for final adjustment of accounts shall include, but not necessarily be limited to:
1. Request for Final Payment.
  2. Final statement of accounting, payroll records, and final change orders showing adjustments to the Contract Price for all force account work and extra payments.
- E. All prior estimates and payments shall be subject to correction in the final estimate and payment.

#### 1.05 FINAL CLEANING

- A. Final acceptance of the work by the Port will be withheld until the Contractor has satisfactorily complied with the requirements herein for final cleanup of the Project site.
- B. Should the Port elect to partially occupy or use portions of the Work prior to Completion, perform final cleaning for those portions of the Work prior to their being so occupied or used.
- C. Comply with applicable regulatory requirements during cleaning and disposal operations. Use cleaning materials which will not create hazards to health or property or cause damage to products or work.
- D. Use only cleaning materials and methods which are compatible with the surface being cleaned, as recommended by the manufacturer of the products to be cleaned.

- E. Completely clean the work site including the adjacent sidewalks and street to curb.
- F. Schedule final cleaning operations to prevent resulting dust and other contaminants from adhering to wet or newly finished surfaces and to enable the Port's Representative to accept a completely clean work.
- G. See additional cleaning requirements specified in Section 01545, Health and Safety and Section 01500, Construction Facilities Controls.

#### 1.06 PROJECT RECORD DOCUMENTS

- A. The following record documents shall be maintained on site and shall be signed and dated by the Contractor and submitted to the Port's Representative prior to final payment:
  - 1. Record Drawings in accordance to Section 01720, Project Records and Drawings.
  - 2. Specifications.
  - 3. Addenda and official Port Actions.
  - 4. Change Orders and other Modifications to the Contract.
  - 5. Approved Shop Drawings, product data and samples.
- B. Store Record Documents separate from other documents used for construction.
- C. Record information concurrent with construction progress.
- D. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including but not limited to:
  - 1. Measured depths of foundations in relation to finish main floor datum.
  - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to visible and accessible features of the Work.
  - 3. Measured locations of internal utilities and appurtenances, referenced to visible and accessible locations features of the Work.
  - 4. Field changes of dimensions and details.
  - 5. Details not on original Contract Drawings.

#### 1.07 OPERATING MANUALS AND MAINTENANCE DATA

- A. Submit operation manuals and maintenance data in accordance with the contract requirements.

#### 1.08 EQUIPMENT TESTING

- A. See Division 16 for electrical system verifications.

#### 1.09 OPERATOR INSTRUCTION

- A. Refer to individual Specification Sections for specific requirements for equipment and systems demonstration and safety, operations, and maintenance training.

- B. Where specified in the individual Specification Sections, furnish qualified personnel and coordinate scheduling for on-site instruction of the Port's operating and maintenance personnel.

#### 1.10 RELEASE OF LIENS OR CLAIMS

- A. Before the Port issues final payment to Contractor for the Work, Contractor shall sign and deliver to the Port a release of liens or claims sworn to under oath and duly notarized. The release shall state that the Contractor has satisfied all claims and indebtedness of every nature in any way connected with the Work, including, but not limited to, the foregoing, all payrolls, amounts due to the subcontractors, accounts for labor performed and materials furnished, incidental services, liens, and judgments.
- B. If any liens or claims remain unsatisfied after all payments to the Contractor have been made, the Contractor shall refund to the Port all moneys that the latter may be compelled to pay in discharging such a lien or claim, including all costs and a reasonable attorney's fee.

#### **PART 2 PRODUCTS**

Not Used

#### **PART 3 EXECUTION**

Not Used

**END OF SECTION 01700**



**SECTION 01720****PROJECT RECORDS AND DRAWINGS****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes:
  - 1. Requirements.
  - 2. Quality Assurance.
  - 3. Record Documents.
  - 4. Maintenance of Record Drawings.
  - 5. Final Record Drawings.
  - 6. Review and Submittal.
  - 7. Production of Electronic Files by Contractor.
  
- B. Related Sections:
  - 1. Section 01300 - Submittals.
  - 2. Section 01700 - Contract Closeout.

**1.2 REQUIREMENTS**

- A. Keep an accurately marked, up-to-date set of Drawings for the work actually performed. Accurately indicate on Record Drawings all site conditions, locations of utilities, work scope changes, changes in dimensions, locations, and elevations of the work, and changes in details as specified herein and as approved by the Port's Representative. The Contractor shall keep the Record Drawings current as the work is performed.
  - 1. Record Drawings shall be subject to inspection and approval by the Port's Representative at any time within the duration of the Contract.
  - 2. Such review by the Port's Representative shall not relieve the Contractor of his/her responsibility for keeping the Record Drawings current and complete.
  
- B. If the Record Drawings are not kept current, or are not furnished when specified herein, then progress payments, and if necessary, final payment will be withheld. Furnishing of Record Drawings shall be done as incidental work.
  
- C. Prior to acceptance of the work, furnish to the Port's Representative the final Record Drawings showing all changes in the Contract Drawings neatly in red ink and certified by the Port inspector.
  
- D. Record, as the work progresses, changes to the original Contract Drawings including, but not limited to, the following information relative to the Work:
  - 1. Field changes or adjustments in the final location or in the final dimensions or details of the Contract work relative to actual existing site conditions.
  - 2. Changes resulting from requests for information.
  - 3. Changes made by Change Order work.

4. Locations of underground and internal utilities and appurtenances referenced to permanent, accessible features of the Work.
5. Details not included on the original Contract Drawings but incorporated into the work by reference to approved shop drawings, product data, samples, calculations or other submittal.
6. Record Drawings shall include the location of items embedded in concrete such as conduit, cable, junction boxes, piping, re-bar, etc.
7. Measured depths of foundations in relation to finish main floor datum.

### 1.3 QUALITY ASSURANCE

- A. The Port's Representative will provide Contractor with a set of conformed prints with "Record Drawing" stamp for the Port inspector's certification of corrections.
- B. Delegate responsibility for maintenance, coordination, and accuracy of the Record Drawings to one person on Contractor's staff.
- C. Record all changes on the stamped Record Drawings which will be inspected monthly by the Port's Representative.
- D. Accuracy of Record Drawings shall be such that future searches for items shown on the Contract Documents may rely on information obtained from the approved Record Drawings.
- E. The Port's inspector will check, initial, and date the Record Drawings at various times during the progress of the Work to verify the accuracy and completeness of the recorded changes.
- F. The Port's Representative will sign the corrected Record Drawings to indicate that he/she has reviewed the corrections for completeness.

## PART 2 PRODUCTS

### 2.1 RECORD DOCUMENTS

- A. Job set: Promptly following receipt of the Notice to Proceed, secure from the Port's Representative one complete (or conformed, if available) set of all Contract Documents.
- B. When the Contract is complete, Contractor shall submit two (2) copies of the Record Documents, **AND PROVIDE ELECTRONIC FILES IN PDF FORMAT ON A FLASH DRIVE.**

## PART 3 EXECUTION

### 3.1 MAINTENANCE OF RECORD DRAWINGS

- A. Store Record Drawings apart from documents used for performing the work; keep in a dry, legible condition, and in good order. Label each document

"RECORD DRAWINGS - JOB SET" in large, neatly printed letters. Do not use Record Drawings for construction at the job site.

- B. Record neatly on the Record Drawings all changes made by clarifications, Change Orders, and other Modifications to the Contract Documents.
  - 1. Clearly describe changes on Record Drawings by note as required.
  - 2. Date all entries, calling attention to the entry by a "cloud" drawn around the area or areas affected.
  - 3. Record in each Specification Section the manufacturer, trade name, catalog number, and supplier of each product and equipment item incorporated into the Work.
- C. Furnish reproducible photocopy on vellum made from final shop drawings which have been updated to show actual conditions. Furnish additional vellum drawings as necessary to record deviations from the sizes, locations, and other features of the work and to locate piping, conduit, ductwork, and similar elements of utility installations by dimensions referenced to permanent accessible features of the work.
- D. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of conduits, circuits, piping, ducts, and similar items which are shown schematically on the Contract Drawings but where the final physical arrangement is determined by the Contractor, subject to the Port's Representative's approval.
  - 1. The Port's Representative will issue a written waiver of the requirements for conversion of schematic layouts where, in the Port's Representative's judgment, such conversion serves no useful purpose.
- E. Keep Record Drawings up to date during the entire progress of the work, and make available to the Port at any time. Updates not more than five (5) working days after changes in the work are made.

### 3.2 CHANGE ORDER DRAWINGS

- A. The Port will issue to the Contractor electronic drawings associated with change orders issued. The Contractor shall be responsible for reproducing sufficient copies of the drawings for its subcontractors.
- B. The Contractor shall also update and include the revised or newly issued drawings as part of the Record Drawings. The work of reproducing and issuing change order drawings and updating of Record Drawings shall be done as incidental work.

### 3.3 FINAL RECORD DRAWINGS

- A. Following receipt of the vellum drawings described in Part 2 - Products, and prior to start of transfer of recorded data thereto, secure the Port's Representative's approval of all recorded data.

- B. Carefully transfer change data shown on the job set of Record Drawings to the corresponding vellums, coordinating the changes as required.
- C. Make changes neatly, consistently, and with the proper media to assure longevity and clear reproduction.

#### 3.4 REVIEW AND SUBMITTAL

- A. Sign and date the completed Project Record Drawings and submit them to the Port's Representative for review prior to final payment as specified in Section 01700, Contract Closeout.
- B. Contractor shall participate in review meetings as required. Make required changes and promptly deliver the final Record Drawings to the Port's Representative.
- C. If a Record Drawing is not approved by the Port's Representative, secure a new copy of that drawing from the Port's Representative at the Port's usual charge for reproduction and handling, and carefully transfer the change data to the new copy to the satisfaction of the Port's Representative.
- D. Contractor shall provide final Record Drawings scanned and in a flash drive. Refer to paragraph 2.1, B.

**END OF SECTION 01720**

**SECTION 01740****WARRANTIES****PART 1 GENERAL**

## 1.01 SUMMARY

- A. Section includes:
  - 1. Requirements.
  - 2. Form of Submittals.
  - 3. Preparation.
  - 4. Time of Submittals.
  - 5. Warranty Conditions.
  - 6. Certificate of Guarantee.
- B. Related Documents:
  - 1. Section 00 72 00 - General Conditions:
    - a. Article 3, Paragraph 3.17 A.1 – For additional Contractor warranty of manufacturer's products.
    - b. Paragraphs 8.02 and 8.03 - Correction of Defects after Acceptance.
- C. Related Sections:
  - 1. Section 01700 - Contract Closeout.
  - 2. Individual Specifications Sections: Warranties required for specific products or Work such as pumps, hatch covers, and electrical systems.

## 1.02 REQUIREMENTS

- A. Except as otherwise specified in the individual Specification Sections, Contractor shall guarantee/warranty the Work against defects in materials and workmanship for 24 months from the date of the Substantial Completion Certificate issued by the Port.
  - 1. Upon receipt of written notification by the Port's Representative, guarantee/warranty the Work, or portions thereof, which are used or occupied by the Port before final acceptance from the date of beneficial use or occupancy.
- B. Comply with the guarantee/warranty requirements as specified in the individual Specification Sections.
- C. Submit executed guarantees/warranties to the Port for review. Deliver them to the Port upon Substantial Completion.
- D. These warranties shall be in addition to and not a limitation of other rights the Port may have under the Contract and which may be prescribed by law, regardless of the wording of manufacturer's standard warranty.

## 1.03 SUBMITTAL REQUIREMENTS

- A. For equipment or components of equipment put into service for the Port's benefit during the progress of the Work, submit within 10 days after completion of the applicable item or work.
- B. Otherwise, submit within 10 days after the date of the Notice Substantial Completion and prior to requesting final payment.
- C. Submit three copies of each guarantee/warranty on Contractor's letterhead in the sample form included at the end of this Section, or in another form approved by the Port.
- D. Bind in commercial quality, 8-1/2 x 11 inch three-ring side binders with hardback, cleanable, plastic covers.
- E. Label cover of each binder with typed or printed title WARRANTIES, with title of Project; name, address and telephone number of the Contractor and equipment supplier; and the name of responsible principal.
- F. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Specifications, with each item identified with the number and title of the Specification Section in which specified, and the name of the product or work item.
- G. Separate each warranty with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

#### 1.04 QUALITY ASSURANCE

- A. Obtain guarantees/warranties, in duplicate, executed by the Contractor and subcontractor or installer responsible for that portion of the Work and countersigned by the manufacturer.
- B. Verify that documents are in proper form, contain complete information, and are notarized if warranties are extended beyond the Manufacturers normal warranty period of TWO years.
- C. Co-execute submittals when required. Acceptance of manufacturer's guarantees/ warranties by the Port shall not be construed to limit the Port's recourse to Contractor for correction of defects under the law and in accordance with the General Conditions.

#### 1.05 WARRANTY CONDITIONS

- A. The Contractor shall warrant that work performed under this Contract conforms to the Contract Documents and is free of any defect of equipment, material, installation, design furnished, or workmanship furnished by the Contractor, or any of its subcontractors or suppliers. SUCH WARRANTY SHALL BE IN EFFECT FOR 24 MONTHS FROM THE DATE OF SUBSTANTIAL

COMPLETION except where detailed specifications for certain materials, equipment or systems require longer warranty periods.

- B. Promptly after receipt of written notice from the Port, remove, replace, or correct Work, or portion thereof, which is damaged or found to be defective and not in accordance with the Contract.
1. The Port may proceed with the correction work at Contractor's expense if the Contractor does not proceed with the corrective work within a reasonable time fixed by written notice from the Port.
  2. The Port reserves the right to remove and store or dispose of defective equipment or material at the Contractor's expense.
  3. If the Contractor does not pay the costs of such removal and storage within ten days thereafter, the Port may, upon ten additional days written notice, sell such defective items and shall account for the net proceeds after deducting all the costs that should have been borne by the Port, including compensation for Port's Representative's additional services.
  4. If the proceeds from the sale are insufficient to cover all amounts chargeable to the Contractor, the Contractor shall pay the difference to the Port.

#### 1.06 FORM OF GUARANTEE/WARRANTY

- A. For equipment or components of equipment put into service for the Port's benefit during the progress of the Work:

(Letterhead of the Company)

We (Name of the Contractor), agree to maintain and repair as recommended by equipment and system manufacturers, any such equipment and systems which have been beneficially used by Port of San Francisco personnel prior to the approval of Contractor's Application For Final Completion.

Owner: Port Authority of San Francisco.

Location: <ADDRESS>, Port, City and County of San Francisco, California.

This guarantee is effective this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ until the date of Port Approval of Contractor's Application for Final Payment.

Signed \_\_\_\_\_(Name of the Contractor)

By \_\_\_\_\_

Contractor's Telephone No. \_\_\_\_\_

B. For guarantee/warranty of the entire Work against defects in materials and workmanship for the period of warranty after the Notice of Substantial Completion:

<p>GUARANTEE/WARRANTY FORM for <u>&lt;PROJECT NAME&gt;</u> <u>&lt;CONTRACT NO. &gt;</u></p> <p>GUARANTEE/WARRANTY for _____ We hereby guarantee/warrant that the _____ which we have provided in the _____ has been completed in accordance with the requirements of Specification Section _____ and the other Contract Documents.</p> <p>We agree to repair or replace any or all of our Work, together with any other adjacent Work which may be displaced by so doing, that may prove to be defective in its workmanship or material within a period of 24 MONTHS from the date of Substantial Completion certificate as issued by the Port; and we also agree to repair any and all damages resulting from such defects, all without any expense to the Port, ordinary wear and tear and unusual abuse or neglect excepted.</p> <p>In the event of our failure to comply with the above mentioned conditions within ten (10) days after being notified in writing by the Port, we collectively or separately do hereby authorize the Port to proceed to have such defective Work repaired or replaced and made good at our expense, and we will honor and pay the costs and charges therefor upon demand.</p> <p>Signed _____ Date _____</p> <p>(Include Contractor's name, address, and license number)</p> <p>Countersigned _____ Date _____ (Port Representative)</p> <p>Substantial Completion of this Contract was granted by the Port on _____ (Date)</p>
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**PART 2 PRODUCTS**

Not Used

**PART 3 EXECUTION**

Not Used

**END OF SECTION 01740**

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**SECTION 01 74 50****CONSTRUCTION & DEMOLITION DEBRIS RECOVERY PLAN  
(Rev. 7/9/2014)**

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. In October 16, 2006, the San Francisco Mayor issued Executive Directive 06-05 requiring all Construction Contracts to divert 75% of construction and demolition debris from landfill disposal sites. This directive is supported by existing policies that require reuse, recycling, and management of construction and demolition debris. Some of these policies are described below.
- B. The City and County of San Francisco adopted an ordinance (No. 27-06) that creates a mandatory program to maximize the recovery of all construction and demolition debris material.
  - 1. The Ordinance requires that mixed construction and demolition debris material be transported off-site by a Registered Transporter and taken to a Registered Facility that can process and divert from landfill a minimum of 65% of the material generated from construction, demolition or remodeling projects.
  - 2. Material source separated at the job site should be taken to a facility that reuses or recycles such material.
  - 3. This ordinance applies to all construction projects within the City and County of San Francisco, such as new construction, remodels, tenant improvements, additions, repairs, and full and partial demolitions.
  - 4. This ordinance prohibits any construction and demolition debris from being placed in trash or sent to a landfill.
- C. Chapter 7 of the San Francisco Environment Code requires the Contractor to prepare and submit a Construction and Demolition Debris Management Plan, Construction and Demolition Debris Recovery Monthly Summary of Diversion Reports, and Construction and Demolition Debris Recovery Final Diversion Report in accordance with the submittal requirements specified below (Paragraphs 1.5, 1.6 and 1.7). This requirement applies to all Construction and/or Demolition Projects at City-owned Facilities and City leaseholds, located within the nine counties surrounding the San Francisco Bay, regardless of the size of the project.
- D. Chapter 5 of the San Francisco Environment Code requires the Contractor to reduce wastes by maximizing the use of recycled content materials, recycling, and reuse. Failure of the Contractor to comply with any of its requirements shall be deemed a material breach of contract.
- E. The Mandatory Recycling and Composting Ordinance, Chapter 19 of the San Francisco Environment Code, requires that all persons in San Francisco must source separate their refuse into recyclables, compostables and trash, and place each type of refuse in a separate container designated for disposal of that type of refuse. No person may mix recyclables, compostables or trash, or deposit refuse of one type in a collection container designated for another type of refuse.
- F. California Integrated Waste Management Act of 1989 (AB 939) established the procedures for the Highest and Best Use practices to reduce, recycle, and reuse materials.
- G. State regulations require that Universal Wastes and Treated Wood Wastes be handled and disposed of in accordance with the requirements of the California Department of Toxic Substances Control and all applicable laws.

- H. Contractor shall perform all work and meet all requirements in this Section at no additional cost to the City.

## 1.2 REFERENCES

- A. Mayor's Executive Directive 06-05, Recycling and Resource Conservation, October 16, 2006.
- B. San Francisco Ordinance No. 27-06 (Construction and Demolition Debris Recovery Ordinance) with effective date on July 1, 2006.
- C. San Francisco Environment Code, Chapter 5, Resource Conservation Ordinance.
- D. San Francisco Environment Code, Chapter 7, Green Building Requirements for City Buildings.
- E. San Francisco Environment Code, Chapter 19, Mandatory Recycling and Composting.
- F. California Integrated Waste Management Act of 1989 (California Public Resources Code 40000 et. seq.) - Assembly Bill 939.
- G. Leadership in Energy and Environmental Design (LEED) for New Construction, Version 2009, or more recent version of LEED, US Green Building Council.
- H. Universal Waste information from the following website:  
<http://www.ciwmb.ca.gov/HHW/Uwaste/>
- I. Treated Wood Waste Fact Sheet from the following website:  
[http://www.dtsc.ca.gov/HazardousWaste/Treated\\_Wood\\_Waste.cfm](http://www.dtsc.ca.gov/HazardousWaste/Treated_Wood_Waste.cfm)
- J. San Francisco Board Of Supervisors Resolution Nos. 530-04 and 679-02 establishing a zero waste goal.
- K. Food Service Waste Reduction Ordinance as set forth in San Francisco Environment Code Chapter 16.
- L. Refuse Collection and Disposal Ordinance, adopted November 8, 1932.

## 1.3 DEFINITIONS

- A. Alternative Daily Cover (ADC): Materials, other than soil, that have been approved by the California Department of Resources Recycling and Recovery ("CalRecycle") or a successor agency for use as a temporary overlay on an exposed landfill face.
- B. Beneficial Reuse: The reuse of material at a landfill that does not include ADC but shall include, but not be limited to, use of the material for or as the following: alternative intermediate cover; final cover foundation layer; liner operations layer; leachate and landfill gas collection system; construction fill; road base; wet weather operations pads and access roads; and, soil amendments for erosion control and landscaping. "Beneficial reuse" does not include disposal of material at a landfill.
- C. BioMass Energy Generation: the controlled combustion, when separated from other solid waste and used for producing electricity or heat, of wood, wood chips, wood waste, and tree and brush prunings. "Bio-mass Energy Generation" does not include the controlled combustion of recyclable pulp or recyclable paper materials, or medical or hazardous waste.
- D. City-owned Facility: any building owned by the City and County of San Francisco. "City-owned Facility" includes City-owned facilities or portions thereof that the City leases to non-City entities.

- E. City Leasehold: A building or portion thereof owned by others where the City and County of San Francisco is a tenant.
- F. City Representative: The employee of San Francisco who oversees the construction and/or demolition process for a City construction and/or demolition project and is responsible for ensuring that the contractor complies with all aspects of the contract documents.
- G. Compostable: Any material that can be broken down into, or otherwise become part of, usable compost (e.g., soil-conditioning material) in a safe and timely manner as accepted in San Francisco's compostables collection program, such as food scraps, soiled paper and plant trimmings.
- H. Construction and Demolition Debris or C&D Debris: Building materials and solid waste generated from construction and demolition activities, including, but not limited to, fully cured asphalt, concrete, brick, rock, soil, lumber, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, fixtures, plastic pipe, metals, tree stumps, and other vegetative matter resulting from land clearing and landscaping for construction, deconstruction, demolition or land developments. This term does not include refuse regulated under the 1932 Refuse Collection and Disposal Initiative Ordinance or sections of the Municipal Code that implement the provisions of that ordinance or materials from the public right-of-way. Hazardous waste, as defined in California Health and Safety Code section 25100, et seq., as amended, is not Construction and Demolition Debris.
- I. Construction Project: Any building, planning or construction activity, including demolition, new construction, major alteration, or building additions by a City department at a City-owned Facility or a City Leasehold.
- J. Contractor: The company or person to whom the City awards a contract for a construction and/or demolition project. The Contractor is responsible for complying with all aspects of this Specifications Section and for ensuring that all subcontractors, lower-tier subcontractors and suppliers also comply.
- K. Disposal: The final deposition of material at a legally operating permitted landfill that does not include beneficial reuse or at a permitted transformation facility. A legally operating, permitted landfill includes Class III landfills and inert fills. Disposal of inert materials at inert fills or inert backfill sites does not constitute recycling.
- L. Diversion: Use of material for any purpose other than disposal in a landfill or transformation facility, such as source reduction, reuse, recycling, and composting activities that do not result in material being disposed at permitted landfills and transformation facilities.
- M. Hazardous Waste: Hazardous waste is a waste with properties that make it potentially dangerous or harmful to human health or the environment. The universe of hazardous wastes is large and diverse. Hazardous wastes can be liquids, solids, or contained gases. They can be the by-products of manufacturing processes, discarded used materials, or discarded unused commercial products, such as cleaning fluids (solvents) or pesticides. In regulatory terms, a hazardous waste is a waste that appears on one of the four RCRA hazardous wastes lists (the F-list, K-list, P-list, or U-list) or that exhibits one of the four characteristics of a hazardous waste - ignitability, corrosivity, reactivity, or toxicity. However, materials can be hazardous wastes even if they are not specifically listed or don't exhibit any characteristic of a hazardous waste. For example, "used oil," products which contain materials on California's M-list, materials regulated pursuant to the mixture or derived-from rules, and contaminated soil generated from a "clean up" can also be hazardous wastes. The State Department of Toxic Substances Control offers assistance on this complex topic through its Regulatory Assistance Office. Call 1-800-728-6942 (from within California) or (916) 255-3618 (from out-of-state) or email RAO@dtsc.ca.gov

- N. Inert Fill Facility: A facility that can legally accept inert waste such as asphalt and concrete exclusively for the purpose of disposal.
- O. Landfill: A facility that (i) accepts for disposal in or on land non-hazardous waste such as household, commercial, and industrial waste, and waste generated during construction, remodeling, repair and demolition operations, and (ii) has a valid current solid waste facilities permit from the California Department of Resources Recycling and Recovery (CalRecycle).
- P. Mixed Construction and Demolition Debris Material, or Mixed C&D Debris Material, or Mixed C&D Debris: means Construction and Demolition Debris or C&D Debris, but excluding materials source-separated for reuse or recycling.
- Q. Person: A natural person, a firm, joint stock company, business concern, association, partnership or corporation or, to the extent permitted by law, governmental entity, including the City and County of San Francisco and its departments, boards and commissions for projects within the nine counties surrounding the San Francisco Bay, and its or their successors or assigns.
- R. Recover or Recovery: Any activity, including source reduction, deconstruction and salvaging, reuse, recycling and composting, which causes materials to be recovered for use as a resource and diverted from disposal.
- S. Recyclable Material: Any material or product separated or capable of being separated at its point of discard or from the solid waste stream for utilization as a raw material in the manufacture of a new product.
- T. 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 which meet the quality standards necessary to be used in the marketplace. Recycling does not include burning, incinerating, or thermally destroying solid waste.
- U. Recycling Facility: An operation or person that collects and processes materials for recycling.
- V. Registered Transporter: Anyone who is hired to remove Mixed Construction and Demolition Debris Material from a construction and/or demolition site in San Francisco, using a vehicle with more than two axles or two tires per axle (such as a large pickup truck with four tires on the rear axle or three-axle dump trucks) and is hauling at least one (1) cubic yard of Mixed Construction and Demolition Debris Material and holds a valid registration from the City and County of San Francisco pursuant to Chapter 14 of the Environment Code. A Registered Transporter is obligated to take all mixed material only to a Registered Facility.
- W. Registered Facility: Any facility that accepts Mixed Construction and Demolition Debris Material for processing and recycling and holds a valid registration issued by the City and County of San Francisco pursuant to Chapter 14 of the Environment Code.
- X. Reuse: Making new use of a material without altering its form.
- Y. Source Reduction: Any action which causes 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, reducing the amount of yard wastes generated, establishing garbage rate structures with incentives to reduce waste tonnage generated, and increasing the efficiency of the use of paper, cardboard, glass, metal, plastic, and other materials.

- Z. Source-Separated Materials: Materials that have been separated or kept separate from the solid waste stream, at the point of generation, for the purpose of reuse, recycling or composting in order to return them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace.
- AA. Solid Waste: Materials designated as non-recyclable and discarded for the purposes of disposal.
- BB. Universal Waste (CCR Title 22, Division 4.5, Chapter 23): Certain specified hazardous wastes that are more common and pose a lower risk to people and the environment than other hazardous wastes. Universal wastes are handled with reduced management requirements. Examples of universal waste: batteries, fluorescent tubes (lamps), electronic devices (cell phones, computers, televisions), cathode ray tubes (CRTs), mercury wastes (thermometers and toys), and non-empty aerosol cans.
- CC. Treated Wood Waste (CCR Title 22, Division 4.5, Chapter 34): Dimensional lumber and other wood products which have been removed from service and were treated with preserving chemicals that protect the wood from insect attack and fungal decay during its use. Examples include fence posts, sill plates, landscape timbers, pilings, railroad ties, guardrails, and decking. Treated Wood Waste is a hazardous waste in California and must be managed according to specific regulations.

#### 1.4 GENERAL REQUIREMENTS

- A. Diversion Goal: In order to meet the City's zero waste goal, the goal for this contract is to divert 75% of the Construction and Demolition Debris material from landfill disposal through waste prevention, reuse, and recycling. If a construction site contains hazardous wastes and/or universal wastes, the 75% diversion requirement should pertain to all non-hazardous waste material. No Construction and Demolition Debris material shall be disposed in garbage or taken to landfill.
- B. In order for construction and/or demolition debris to be considered hazardous, such as containing asbestos or lead, it shall be evaluated and determined to be hazardous by an independent professional such as a Cal/OSHA Certified Asbestos Consultant. The waste determination and other verification shall be included with the C&D Debris Management Plan (refer to Paragraph 1.5 below), together with a list of hazardous materials found at the project site and plans for proper disposal.
- C. If material at the jobsite is deemed hazardous after the project commences, complete Form A (Request to Send Construction & Demolition Debris Material Directly to Landfill), together with official documentation as noted above in subparagraph B and send signed form to City Representative and to San Francisco's Department of the Environment (SFE) for possible approval.
- D. All Hazardous Wastes, including Universal Wastes and Treated Wood Waste, shall be documented separately, and a summary of all manifests or other disposal documentation, including material description and weights, shall be provided to the City Representative.
- E. Highest and Best Use: The Contractor shall employ the following hierarchy of highest and best use for handling Construction and Demolition Debris as follows:
  - 1. Implement reduced material usage or reuse of materials before any recycling;
  - 2. Implement recycling or reuse of source-separated material before any recycling of Mixed Construction and Demolition Debris Material;
  - 3. Implement recycling of Mixed Construction and Demolition Debris Material before all other forms of disposal.
- F. Recycling Requirements:

1. Source Separated Materials: The Contractor shall develop and implement procedures for source-separation, to the greatest extent feasible, of the following types of recyclable or reusable materials:
    - a. Asphalt.
    - b. Acoustical ceiling tiles.
    - c. Bricks, stone(s), granite, and other finished stone-type materials.
    - d. Carpet and padding.
    - e. Concrete, concrete block, slump stone (decorative concrete block).
    - f. Corrugated cardboard.
    - g. Dimensional lumber and beams.
    - h. Fixtures, hardware, doors, and windows.
    - i. Metal, ferrous and non-ferrous.
    - j. Mixed Inerts.
    - k. Rigid plastic.
    - l. Soil/dirt/rock.
    - m. Trees, Landscape Debris, cleared vegetation and cut-off or other wood scraps.
    - n. Wall board, gypsum sheetrock.
    - o. Other: describe.
  2. Mixed Construction & Demolition Debris Material:
    - a. For projects within the legal and geographical boundaries of the City and County of San Francisco, Mixed C&D Debris Material must be taken to a Registered Facility by a Registered Transporter, per Environment Code 14. The diversion rate for Mixed C&D Debris Material taken to one of San Francisco's Registered Facilities is 65%.
    - b. For projects outside San Francisco, the diversion rate for Mixed C&D Debris Material is 65% if taken to one of San Francisco's Registered Facilities; if taken to a non-registered facility the diversion rate approved by the local jurisdiction will be used, and official documentation of the diversion rate approved by the local jurisdiction must be provided by the Contractor. If a facility does not have a locally approved recycling rate, the diversion rate is calculated as zero.
  3. Handling Of Recyclable Materials:
    - a. The Contractor shall assure that recyclable or reusable materials be free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process. The Contractor shall clean materials that are contaminated before placing it in collection containers.
    - b. The Contractor shall arrange for collection of reusable and recyclable materials by or delivery to the appropriate reuse and/or recycling centers for purposes of reuse and/or recycling.
    - c. All Mixed C&D Debris material from projects in San Francisco must be taken to a Registered Facility authorized to process the material, and it must be hauled by a Registered Transporter.
  4. No Construction and Demolition Debris shall be burned, buried or otherwise disposed of on the project site.
- G. The Contractor is prohibited from sending any C&D debris material directly to landfill or to any facility that would incinerate or otherwise process such debris using high temperature technology without submitting a written request to and receiving approval from the San Francisco Department of the Environment; see Form A and Form B.
- H. Requirements only for Construction Contracts within the legal and geographical boundaries of the City and County of San Francisco:
1. Registered Transporters and Registered Facilities: Only Registered Transporters can remove mixed construction and demolition debris from a construction and/or demolition site, and they must take this material to a Registered Facility. Materials source separated at the job site should be taken to an appropriate recycling or reuse facility.
    - a. For a list of Registered Facilities and Registered Transporters refer to the website: [www.SFEnvironment.org/c&d](http://www.SFEnvironment.org/c&d)



- b. Diversion rate for mixed C&D debris material taken to Registered Facilities is 65%.
  - 2. Full Demolition Requirements: Contractor conducting full demolition of an existing structure must submit a Demolition Debris Recovery Plan (DDRP) to the San Francisco Department of the Environment (SFE).
    - a. The DDRP must demonstrate a minimum of 65% diversion from landfill of demolition debris, including materials source separated for reuse or recycling.
    - b. The DDRP must be submitted to and approved by SFE before the Department of Building Inspection will issue a Full Demolition Permit.
    - c. This requirement does not apply to City construction contracts outside of the legal and geographical boundaries of the City and County of San Francisco.
    - d. The DDRP is available at the following website: [www.SFEnvironment.org/c&d](http://www.SFEnvironment.org/c&d)
- I. Mixed Construction & Demolition Debris material from projects outside the legal and geographical boundaries of the City and County of San Francisco must be taken to a Recycling Facility that processes the material to achieve maximum recycling. If the facility is a San Francisco Registered Facility the diversion rate is 65%. If the material is taken to a facility not registered with San Francisco, the local jurisdiction's recycling rate for that facility shall be used provided official documentation from the local jurisdiction is attached to all submittals as required in Paragraphs 1.5, 1.6 and 1.7. If a facility does not have a local approved recycling rate, the diversion rate is calculated as zero.
- J. Universal Wastes: Contractor shall handle and dispose of all hazardous waste, including "Universal Wastes," in accordance with the requirements of the California Department of Toxic Substances Control (DTSC). Refer to DTSC website: [www.dtsc.ca.gov](http://www.dtsc.ca.gov) . In general, universal waste may not be discarded in solid waste landfills or with non-hazardous wastes collected for recycling or composting. Contractor shall comply with all hazardous waste regulations, including, but not limited to, the following:
  - 1. Universal wastes shall be stored in containers so that they do not spill, leak, break, or are released into the environment.
  - 2. Label or mark universal wastes, or their containers, to identify their types.
  - 3. Send all universal waste to a facility authorized to collect, recycle or dispose of universal waste.
  - 4. Do not dispose of universal waste in the trash.
  - 5. Do not accumulate more than 5,000 kilograms of universal waste at any one time.
  - 6. Train employees in proper universal waste management including handling, packaging, storing and labeling the universal waste, as well as how to respond to releases. This training may be accomplished by simply giving employees written instructions about universal waste.
  - 7. Keep record of all shipments and receipts of universal waste for three years.
- K. Treated Wood Waste: For complete information on handling and disposal of Treated Wood Waste (TWW), refer to the fact sheet available from the DTSC website. For incidental TWW wastes generated during construction, the Contractor shall comply with the following minimum requirements:
  - 1. Keep TWW segregated from other materials.
  - 2. Store no more than 1,000 pounds of TWW for no longer than 30 days. In the event that Contractor stores more than 1,000 pounds of TWW or stores TWW for more than 30 days, Contractor shall comply with additional requirements for routine generators of TWW. Refer to DTSC fact sheet.
  - 3. Label all TWW bundle/shipments with the following information:

<p><b>TREATED WOOD WASTE - Do not burn or scavenge.</b></p> <p><b>TWW Handler</b></p> <p><b>Name :</b> _____</p> <p><b>Address :</b> _____</p> <p style="text-align: center;"><b>Accumulation</b></p>
---

4. Take TWW to an authorized TWW facility. See the listings at the end of the factsheet for information on facilities who have been authorized to accept TWW in California.
  5. Keep records of all shipments of TWW for three years.
- L. Waste Reduction: Contractor shall implement waste reduction measures, including, but not limited to, the following:
1. Eliminating the procurement of unneeded supplies;
  2. Reduce waste by printing and copying double-sided;
  3. Submit all submittals, reports, and forms in electronic format (PDF);
  4. Fully participate in available and required recycling and composting programs; and
  5. Purchase products made with recycled content such as paper and recycled aggregate.
- M. LEED Credit: Compliance with the 75% diversion goal meets the requirements of LEED MR Credit 2.2 and earns the Project 2 points.
- N. Contractor shall submit the following in accordance with Paragraphs 1.5, 1.6, and 1.7 below:
1. Construction and Demolition Debris Management Plan;
  2. Construction and Demolition Debris Recovery Monthly Summary of Diversion and supporting documentation.
  3. Construction and Demolition Debris Recovery Final Diversion Report.
- O. Contractor shall submit the above items in electronic format (PDF) to the City Representative.

#### 1.5 CONSTRUCTION AND DEMOLITION DEBRIS MANAGEMENT PLAN

- A. The requirements under this Paragraph 1.5 apply to all City construction contracts for City-owned Facilities or City leaseholds located within the nine counties surrounding the San Francisco Bay, regardless of size of the project.
- B. After Award of Contract and before commencement of the Work at the site, the Contractor shall conduct a site assessment to estimate the types and quantities of materials that will be generated by construction and/or demolition at the site and which materials are anticipated to be feasible and practical for reuse and recycling. Contractor shall complete a Construction and Demolition Debris Management Plan (CDDMP) to be discussed with the City Representative.
- C. Contractor shall schedule a meeting with the City Representative to discuss its proposed CDDMP so as to develop a mutual understanding regarding the City's recycling and reuse policies and goals and their application to this project. The contractor must manage all project C&D debris materials to meet a minimum diversion rate of 75%.
- D. Contractor shall obtain tonnage estimates for all C&D debris material from all subcontractors and compile data from all subcontractors into a written and signed CDDMP in a format prescribed by the City. The plan shall include, but not be limited to, the following:
1. The Contractor's information and Project identification.
  2. Procedures to be used for debris management.
  3. A list of the materials and estimated quantities to be reused, recycled, or transported to a Registered Facility.
  4. The names, locations, and permit or license, as applicable, of recycling and reuse facilities and Registered Facilities (for mixed debris) that the Contractor plans to use for this project.
  5. Procedures for source separation for the materials listed in subparagraph 1.4F "Recycling Requirements" of this Section.

6. Source Reduction: Describe any project practices for this project which will reduce waste at the source, such as requiring vendors to deliver materials in reusable packaging.
  7. On-site Processing: Describe procedures in which materials are recycled and/or reused on-site, such as grinding materials for use on-site, or reuse of lumber for concrete frames, etc.
  8. Procedures to educate and train all employees and subcontractors on recycling and reuse procedures to be used at the jobsite.
- E. Use Form C (Construction & Demolition Debris Recovery Worksheet) and check the first box in the center of page 1 on the form. Provide estimated start and end dates for the project. A written narrative should be attached to the form describing project and job site practices and procedures as noted in subparagraph 1.5D above
- F. The CDDMP is subject to approval by the City Representative. Contractor shall revise and resubmit the CDDMP as required by the City Representative.
- G. If an unforeseen circumstance requires a change to the facilities or transporters named and approved on the original CDDMP, the Contractor must submit a written request to the City Representative for approval prior to the change being made; a copy should be sent to the Department of Environment. The request must provide documentation explaining why the change may be necessary. Use Form D (Request to Change Facilities or Transporters), and complete all sections of the form. If any section is omitted, the request will not be considered.
- H. Review of the Contractor's construction and demolition debris management plan will not relieve Contractor of responsibility for compliance with applicable laws and regulations governing control and disposal of solid waste or other pollutants.
- I. In accordance with the Mayor's Directive 06-05 and Chapter 7 of the Environment Code, Contractor shall achieve a diversion rate of 75%.

#### 1.6 CONSTRUCTION AND DEMOLITION DEBRIS RECOVERY MONTHLY SUMMARY OF DIVERSION

- A. Contractor shall submit a signed Summary of Diversion (Summary) to the City Representative with each Progress Payment Application. The Summary shall show actual Construction and Demolition Debris material diversion coinciding with the time period of the Progress Payment. The contractor shall compile data from all subcontractors into one plan/report; all weights are reported in tons and documentation supporting the reported tons shall be attached. Documentation shall include weight tags or other similar proof the hauler received from a facility where material was transported; if a facility issues a receipt with cubic yards only, the contractor shall use the Conversion Rates found in Form E. The documentation issued by the facility shall include the commodity or material type that was delivered to the facility and shall include evidence that the material was from the contracted job; such evidence may include the project address or project/job number provided by the facility on the weight tags or receipts it creates. Diversion reports prepared by vendors, work orders or invoices for services shall not be acceptable unless accompanied by requirements noted above. Use Form C (Construction & Demolition Debris Recovery Worksheet) and check the second box in the center of page 1 of the form and provide the Reporting Period and Progress Payment Number.
- B. Failure to submit the Summary of Diversion and supporting documents shall render the application for progress payment incomplete and delay progress payment.
- C. Contractor shall be responsible for transporting all Mixed C&D Debris Material generated in San Francisco to a Registered Facility by using a Registered Transporter.

#### 1.7 CONSTRUCTION AND DEMOLITION DEBRIS RECOVERY FINAL DIVERSION REPORT

- A. The Contractor shall submit a signed Final Diversion Report showing weight of all Construction and Demolition Debris material diverted for the entire project and the overall diversion rate achieved. Use Form C (Construction & Demolition Debris Recovery Worksheet) and check the third box in the center of page 1 of the form. The Final Diversion Report shall be prepared into one plan/report by the Contractor with data from all subcontractors and submitted to the City Representative.

#### 1.8 JOB SITE ADMINISTRATION

- A. The Contractor shall review the environmental goals of this project with all subcontractors and sub-subcontractors. The Contractor shall make a proactive effort to increase awareness of these goals and ensure full compliance to the Construction and Demolition Debris Management Plan among the Contractor's job site workers and all subcontractors and other workers.
- B. The Contractor shall communicate the presence of demolition debris which is hazardous waste to all workers on the job site and shall establish and clearly identify hazardous waste storage areas. The Contractor shall discuss practices and alternatives to minimize worker exposure to potentially harmful substances expected to be encountered on the job site.
- C. For Construction Contracts within the legal and geographical boundaries of the City and County of San Francisco the Contractor shall provide green, blue and black refuse containers and appropriate signs for field offices to separate recyclable and compostable materials from the trash and subscribe to adequate collection services. To subscribe to these services, contact Recology San Francisco at 415-330-1300. For assistance in setting up recycling and composting programs (i.e. signs and training) in field offices, contact: [SFGovRecycling@SFEnvironment.org](mailto:SFGovRecycling@SFEnvironment.org)
- D. For projects outside the legal and geographical boundaries of the City and County of San Francisco, Contractor shall abide by local jurisdiction's refuse, recycling and composting requirements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION



FORM A
REQUEST TO SEND CONSTRUCTION & DEMOLITION DEBRIS MATERIAL
DIRECTLY TO LANDFILL

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

Environment Code Chapter 7 Section 708(a)(3) states that a contractor is prohibited from sending any Construction & Demolition (C&D) debris material directly to a landfill without submitting a request to and receiving approval from the Department of the Environment. This request form must demonstrate that all reuse and recycling options for the material have been evaluated and determined to be not possible.

Section 1: Project Information
City Department:
1. Project Name:
2. Project/Job Number:
3. Reporting Period:
4. Project Street Address:
5. City & County (if not in SF):
6. Contractor's Company Name:
7. Contractor's Address:
8. City, State, Zip Code:
9. Contractor's Contact:
10. Contact's Title:
11. Office Phone:
12. Cell Phone:
13. e-mail:

Section 2: Request Information
15. Type of Request (please check):
Initial Request. Submit to the City Representative with the Construction & Demolition Debris Management Plan (CCDMP), and send a copy to the Department of Environment for review and possible approval.
Request due to unforeseen circumstances occurring during the project affecting disposition of the material. Send to City Representative and to the Department of Environment for review and possible approval.
16. Material Description:
Type of Material:
Approximate Tons:
Why can't this material be reused or recycled?
What landfill do you intend to use (Name & Location)
17. Provide a comprehensive & detailed description of all efforts you (and/or your subcontractors) have made to find a location to take this material for reuse or recycling. List must include names and locations of all facilities contacted to take the material, name of person(s) you spoke with, date of conversation, and why the material was refused. If the material was deemed hazardous after the project commenced, please provide official documentation from an independent professional (See Env Code Chapt 7, Sec 708(a)(6) for complete requirements). Attach an additional sheet if necessary.

18. Provide information and attach documentation on how this material will be used at the landfill. Your request must demonstrate that the material will be used for beneficial reuse, if possible, before any material is used as alternative daily cover (ADC), and that material is used as landfill disposal only as a last resort if necessary. Please include documentation such as a written statement by the landfill operator that the material will be used as designated.

19. I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING AND INFORMATION IN ALL ATTACHMENTS ARE TRUE AND CORRECT AND THE MATERIAL DESCRIBED WILL BE HANDLED AS NOTED IF THIS REQUEST IS APPROVED.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Submittal Instructions:**

**Initial Request:** Submit completed and signed form to the City Representative with the Construction & Demolition Debris Management Plan (CCDMP) and send a copy to the Department of Environment for review and possible approval.

**Request due to unforeseen circumstances occurring during the project affecting disposition of the material:** Send completed and signed form to City Representative and to the Department of Environment for review and possible approval.

Submit completed and signed form to: Department of the Environment, 1455 Market St, Suite 1200, San Francisco, CA 94103. Attention: C&D Landfill Request. Or email: [mary.williams@sfgov.org](mailto:mary.williams@sfgov.org)

For questions regarding completion of this request, please call the Department of the Environment at (415) 355-3700.

**FOR OFFICIAL CITY USE ONLY**

DATE REQUEST RECEIVED \_\_\_\_\_

APPROVED \_\_\_\_\_ NOT APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_



FORM B
REQUEST TO SEND CONSTRUCTION & DEMOLITION DEBRIS MATERIAL
TO BIOMASS ENERGY GENERATION FACILITY

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

Environment Code Chapter 7 Section 708(a)(4) states that a contractor is prohibited from sending any Construction & Demolition (C&D) debris material directly to any facility that would incinerate such debris or otherwise process such debris using high temperature technology, unless the debris is used as boiler fuel in BioMass Energy Generation, which will only be allowed after the contractor has submitted a request to and received approval from the Department of the Environment. Types of material acceptable for BioMass Energy Generation are wood, wood chips, wood waste and tree and brush prunings. This request must demonstrate that all reuse and recycling options for the material have been evaluated and determined to be not possible.

Section 1: Project Information
City Department:
1. Project Name:
2. Project/Job Number:
3. Reporting Period:
4. Project Street Address:
5. City & County (if not in SF):
6. Contractor's Company Name:
7. Contractor's Address:
8. City, State, Zip Code:
9. Contractor's Contact:
10. Contact's Title:
11. Office Phone:
12. Cell Phone:
13. e-mail:

Section 2: Request Information
14. Material Description:
Type of Material (wood, wood chips, wood waste, tree or brush prunings):
Approximate Tons:
What facility do you intend to use (Name & Location)?
Why can't this material be reused or recycled?
15. Provide a comprehensive & detailed description of all efforts you (and/or your subcontractors) have made to find a location to take this material for reuse or recycling. List must include names and locations of all facilities contacted to take the material, name of person(s) you spoke with, date of conversation, and why the material was refused. Attach a separate sheet if necessary.

16. I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING AND INFORMATION IN ALL ATTACHMENTS ARE TRUE AND CORRECT AND THE MATERIAL DESCRIBED WILL BE HANDLED AS NOTED IF THIS REQUEST IS APPROVED.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Submittal Instructions:**

Submit completed and signed form to: Department of the Environment, 1455 Market Street, Suite 1200, San Francisco, CA 94103. Attention: C&D BioMass Energy Request. Or email: mary.williams@sfgov.org

For questions regarding completion of this request, please call the Department of the Environment at (415) 355-3700.

**FOR OFFICIAL CITY USE ONLY**

DATE REQUEST RECEIVED \_\_\_\_\_

APPROVED \_\_\_\_\_ NOT APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_





FORM C

CONSTRUCTION & DEMOLITION DEBRIS RECOVERY WORKSHEET

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

Section 1: Project Information. City Department: 1. Project Name: 2. Project/Job Number: 3. Reporting Period: 4. Project Street Address: 5. City & County (if not in SF): 6. Contractor's Company Name: 7. Contractor's Address: 8. City, State, Zip Code: 9. Contractor's Contact: 10. Contact's Title: 11. Office Phone: 12. Cell Phone: 13. e-mail: I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOLLOWING IS TRUE AND CORRECT. I AGREE TO USE THE FACILITIES AND TRANSPORTERS NAMED ON THE ORIGINAL PLAN, AND I UNDERSTAND I AM RESPONSIBLE FOR COMPLIANCE BY ALL SUBCONTRACTORS. IF CHANGES ARE NECESSARY TO THE ORIGINAL PLAN, WRITTEN APPROVAL MUST BE RECEIVED FROM CITY REPRESENTATIVE BEFORE CHANGE MAY COMMENCE (See "Request to Change Facilities or Transporters" Form). Submitted by: Title: Signature: Date:

- Construction & Demolition Debris Management Plan (CDDMP)\* (Include estimates from all Subcontractors) Estimated Start Date: Estimated End Date: \*Attach a brief description of how this jobsite will be managed to ensure compliance with all aspects of the plan by all persons working on the project Summary of Diversion: Submitted with Progress Payment Application (Compile Diversion Data from all Subcontractors) Reporting Period (mm/yy): Progress Payment No.: Final Diversion Report (Compile Diversion Data for Entire Project) Date Project Completed:

City Representative Review & Approval

I declare under Penalty of Perjury under the Laws of the State of California that I have reviewed the information provided herein including supporting documentation to ensure that Contractor is in compliance with all Construction/Demolition debris diversion requirements. City Representative Signature: Name (print) Date

Instructions for Completing Section 2 on Page 2 - Debris Recovery Worksheet: (refer to Section 701 of Environment Code Chapter 7 for all definitions)

- Contractor is responsible for preparing and submitting all C&D management plans & reports. Contractor shall compile data from all subcontractors into one plan/report. Column (a): Enter the appropriate Diversion Activity Code associated with the kind of material being handled and how the material is being processed. Column (b): Enter Total Tons of material for each type of material being diverted. Column (c): Enter Tons Recycled for each type of material being diverted. Column (d): Enter Tons Reused for each type of material being diverted. Column (e): Enter name of facility where material will be taken. If project is located in San Francisco, Mixed Debris must be taken to a Registered Facility authorized to process the material. Column (f): Enter name of Transporter hauling the material. If project is located in San Francisco, only Registered Transporters are authorized to haul Mixed Debris. Line (g) below worksheet: Calculate Diversion Rate per formulas provided & instructions. Submit completed form to City Representative for review and approval.

Project/Job Number: \_\_\_\_\_

Reporting Period: \_\_\_\_\_

Progress Pmt. Number: \_\_\_\_\_

**Section 2: Debris Recovery Worksheet**

**IMPORTANT: HAZARDOUS MATERIAL OR U-WASTE IS SUMMARIZED SEPARATELY FROM THIS REPORT. ATTACH A SEPARATE LIST OF THESE MATERIALS, DISPOSAL PLANS & PROFESSIONAL WASTE DETERMINATION. DO NOT INCLUDE ANY HAZARDOUS MATERIALS AND UNIVERSAL WASTE ON THIS WORKSHEET,**

**Diversion Activity Codes:**

- |   |  |
|---|--|
| 1 - Recycling source-separated materials at a recycling facility. | 4 - Reuse of salvageable items.                              |
| 2 - On-site concrete or asphalt crushing for use on site.         | 5 - Reuse of soil or dirt on site.                           |
| 3 - Recycling of mixed C&D debris.                                | 6 - Reuse of dirt or mixed inerts for landfill construction. |
|   | 7 - Other diversion - please describe:                       |

**WORKSHEET**

Type of Material	Diversion Activity Code	Total Tons	Tons Recycled	Tons Reused	Facility Used*	Transporter*	Balance from Original Plan
	(a)	(b)	(c)	(d)	(e)	(f)	
<b>MIXED C&amp;D DEBRIS*</b>	<b>3</b>	<b>(A)</b>					
<b>SOURCE SEPARATED MATERIALS</b>							
Asphalt							
Acoustical Ceiling Tiles							
Bricks, Granite, Finished Stone							
Carpet & Padding							
Concrete							
Corrugated Cardboard							
Dimensional Lumber & Beams							
Fixtures, Hardware, Doors, Windows							
Metal							
Mixed Inerts							
Rigid Plastic							
Soil/dirt/rock							
Trees, Landscape Debris, Wood Scraps							
Wallboard, Gypsum Sheet							
Rock							
Other:							
<b>Sub-Totals (source separated)</b>		<b>(B)</b>	<b>(C)</b>	<b>(D)</b>			
<b>Total</b>	<b>(E = A + B)</b>	<b>(E)</b>					

**\* Diversion Rate Calculation Formulas:**  
 Projects in SF:  $[C+D+(A \times 0.65^*)] \div E \times 100$   
 Outside SF:  $[C+D+(A \times \_\_\_\_\_\_^*)] \div E \times 100$

(g) 
$$\left[ \frac{(C) + (D) + ((A) \times (Rate)^*)}{(E)} \right] \times 100 = \text{DIVERSION RATE } \boxed{\quad \%}$$

\* For projects located in San Francisco: Mixed C&D Debris must be taken to a Registered Facility authorized to process the material, and it must be hauled by a Registered Transporter (lists available at sfenvironment.org/c&d); **diversion rate for Registered Facilities is 65%**. For projects outside SF: the diversion rate for Mixed C&D Debris is 65% if taken to one of our Registered Facilities; if taken to a non-registered facility check with local jurisdiction for that facility's recycling rate. ATTACH OFFICIAL DOCUMENTATION FROM LOCAL JURISDICTION. If a facility does not have a local approved recycling rate, the diversion rate is calculated as zero.



FORM D
REQUEST TO CHANGE
FACILITIES OR TRANSPORTERS
APPROVED ON CONSTRUCTION & DEMOLITION DEBRIS MANAGEMENT PLAN

City and County of San Francisco
Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

If an unforeseen circumstance requires a change to the Facilities or Transporters named and approved on the original Construction & Demolition Debris Management Plan (CDDMP), the Contractor may use this form to submit a written request to the City Representative for approval prior to the change being made.

Section 1: Project Information
City Department
1. Project Name: 2. Project/Job Number: 3. Reporting Period:
4. Project Street Address: 5. City & County (if not in SF):
6. Contractor's Company Name:
7. Contractor's Address: 8. City, State, Zip Code:
9. Contractor's Contact: 10. Contact's Title:
11. Office Phone: 12. Cell Phone: 13. e-mail:

Section 2: FACILITY CHANGE REQUEST
From original, approved plan:
Name of facility Type of material Approximate tons
New Facility Requested:
Name of facility Location Approximate tons
Please explain why this change may be necessary. Use an additional sheet if necessary. If material has been determined to be hazardous, please attach written determination or other verification from an independent professional.

Section 3: TRANSPORTER CHANGE REQUEST
From original, approved plan:
Name of Transporter Material hauled Approximate tons
New Transporter Requested:
Name of Company Material hauled Approximate tons
Please explain why this change may be necessary. Use an additional sheet if necessary.

(PLEASE COMPLETE THE BACK PAGE OF THIS REQUEST)

I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING AND INFORMATION IN ALL ATTACHMENTS ARE TRUE AND CORRECT. IF THIS REQUEST IS APPROVED I AGREE TO USE THE NEW FACILITIES AND/OR TRANSPORTERS NAMED.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Submittal Instructions:**

Submit to the City Representative for review and approval. A copy should be sent to the Department of Environment at 1455 Market Street, Suite 1200, San Francisco, CA 94103, or email to [mary.williams@sfgov.org](mailto:mary.williams@sfgov.org).

For questions regarding completion of this request, please call the Department of the Environment at (415) 355-3700.

**FOR OFFICIAL CITY USE ONLY**

DATE REQUEST RECEIVED \_\_\_\_\_

APPROVED \_\_\_\_\_ NOT APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_



# FORM E CONSTRUCTION & DEMOLITION DEBRIS MATERIAL CONVERSION RATES (CUBIC YARDS TO TONS)

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11 ; SFE Regulation No. SFE13-03-GB

**IMPORTANT:** The weights shown are in POUNDS, and they need to be converted to TONS for use on the waste management report. **2000 pounds = 1 ton**

<u>Material</u>	<u>Size/Amount</u>	<u>Weight/POUNDS</u>
Asphalt/paving, crushed	1 cubic yard	1,380
Brick	1 cubic yard	3,024
Concrete	1 cubic yard	1,855
Dirt	1 cubic yard	2,052
Gravel	1 cubic yard	2,565
Greenwaste - large limbs, stumps	1 cubic yard	1,080
Greenwaste - prunings	1 cubic yard	46.69
Metal, aluminum scrap	1 cubic yard	175
Metal, brass	1 cubic yard	906.43
Metal, copper	1 cubic yard	1,093.52
Metal, ferrous, scrap	1 cubic yard	906
Metal, steel	1 cubic yard	1,620
Mixed C&D Debris	1 cubic yard	400
Mixed inerts	1 cubic yard	2,000
OCC (Cardboard), flattened, uncompacted	1 cubic yard	100
Pallets	1 each 48"x48"	40
Rock	1 cubic yard	2,570
Sand	1 cubic yard	2,441
Wallboard -sheetrock scrap	1 cubic yard	393.5
Wood, scrap	1 cubic yard	329.5

For additional information, visit <http://www.calrecycle.ca.gov/LGCentral/Library/DSG/AppendixI.htm> & CLICK ON CONVERSION FACTOR TABLES AT BOTTOM OF PAGE.