

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. The contract work will consist of remediation of T-117 Sediment and Upland Areas in the Lower Duwamish Waterway (LDW) Superfund Site located in King County, Seattle, Washington. The remediation will be conducted under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (1986) (SARA) as administered by the Environmental Protection Agency (EPA). All applicable Federal, State and local regulations shall be adhered to by the Contractor.
- B. The work includes labor, materials, tools, equipment, supplies, testing, transportation services, and superintendence for the Contractor to perform demolition, excavation, dredging, disposal, upland and dredge backfilling, and all related work at the T117 Sediment and Upland Areas
- C. The base items of this Contract include the following general work:
 - 1. Abatement of regulated building materials and deconstruction of existing upland buildings.
 - 2. Demolition of upland asphalt and concrete surface and subsurface building foundations and marine removal of timber piles, including South Park Marina (Marina) piles (as necessary), and an in-water debris deflector structure.
 - 3. Dredging and excavation of contaminated soil and sediment.
 - 4. All related handling and disposal.
 - 5. Upland and in-water backfilling.
 - 6. Construction water system management
 - 7. Replacement, of South Park Marina (Marina) piles (as necessary) and construction of in-water debris deflector.
 - 8. Restoration of the site through re-grading, landscaping and fencing.
- D. The work being performed includes, but is not limited to, the following activities:
 - 1. Compliance with General Conditions of the Contract, including field supervision and management; administration and home office support; purchasing; site security and emergency services; health and safety supplies; and temporary facilities and utilities for the construction period.
 - 2. Submittals/implementation plans required by the Contract.
 - 3. Mobilization, site work, and temporary facilities, including mobilization of personnel and equipment,; site preparation; meetings; temporary facilities such as trailers, sanitary facilities, transloading facilities, utilities and temporary access; traffic controls; dust, erosion, fugitive emissions, and security controls; and surveying.
 - 4. Dredging of sediment and excavation of bank and upland soil and transloading via barge or land, transportation, and disposal of these materials. An estimated 38,000 cubic yards of upland soil and material and 8,100 cubic yards of neat line sediment with allowable overdredge is

to be removed from the site. Additional material may be required to be removed based on the results of confirmation sampling in the upland and offshore. All dredging and excavation shall be accomplished with mechanical equipment.

5. Demolition and removal of the upland concrete and asphalt surface materials and concrete building foundations. Demolition and removal of timber piles for anchoring and supporting Marina floats and a debris deflector structure as shown on the Drawings. The Contractor will determine how many Marina piles require demolition based on access required with dredging activities.
 6. Replacement of the removed Marina timber piles with new steel piles for anchoring and supporting Marina floats and replacement of the removed Debris Deflector structure with a new Debris Deflector structure.
 7. Placement of upland and sediment backfill using import sources of clean backfill and material. Imported material is required to meet both gradation and chemical requirements.
 8. Monitoring and verification of construction activities.
 9. Demobilization and decontamination of personnel, equipment, and materials at the completion of construction, including demobilization of temporary facilities and utilities, and close-out reporting. This work shall also include a final street sweep of Dallas Ave. S and 17th Ave. S.
- E. All work shall include measures to protect and minimize construction related impacts to the surrounding community.

1.02 LOCATION

- A. The T-117 Sediment and Upland Area is located at 8700 Dallas Ave. S in Seattle, Washington and includes adjacent in-water areas. The upland area encompasses approximately 3 acres. Adjacent properties include Boeing to the south, the Marina to the north-northwest, and Dallas Ave. S to the west.

1.03 SITE CONSTRAINTS

- A. The following special constraints shall be considered by the Contractor in the planning and execution of the Work. This is not intended to be a comprehensive list of constraints that will result from the execution of the Work, but as an aid to the Contractor in development of schedules and in executing the Work. Additional constraints may exist or develop as the Work progresses. In any event, the Contractor is responsible for compliance with the requirements of the various specification sections and the Work procedures and protection requirements contained therein and for identifying all constraints associated with the Work execution and incorporating them into work schedules and proposed construction activities.
1. The T117 Sediment and Upland Area will be restricted to properly trained personnel only. No residential community members or other visitors will be allowed on the site, unless approved by the Engineer.
 2. The T117 Sediment and Upland Area is located within the South Park neighborhood in Seattle. As such, hazards commonly associated with a neighborhood setting and neighboring residences should be considered.

Upland and riverbank typical construction work shall be limited to 7am to 7pm during non-holiday weekdays and within the hours allowed by the Seattle Municipal Code (SMC) noise ordinance (SMC 25.08) for hours on weekends and holidays. The 7am to 7pm restriction for work may be extended for tide-dependent riverbank removal and dredging activities as long as the work is completed within the SMC 25.08 noise restrictions.

3. Contractor shall not block any surrounding residential streets (other than Dallas Ave. S. where shown on the Drawings) with equipment or material, or otherwise limit public use of the surrounding public streets without proper permits and notification and approval by the Engineer. Contractor shall provide parking for all personnel in Contractor designated areas only. Neighborhood street parking is not permitted.
4. All in-water construction (including, but not limited to, dredging, backfilling, demolition, and corrective actions) must be completed in the allowable in-water construction window of December 1, 2013 through February 15, 2014. The in-water construction window has been established by an agreement with the Muckleshoot Tribe Fisheries Division. The Contractor may propose certain work activities to occur before the allowable in-water construction window provided they are accomplished using upland equipment.
5. The Engineer will coordinate with the Muckleshoot Tribe Fisheries Division that has fishing rights to the waterway. Based on this coordination and the Interlocal Agreement between the Port and the Muckleshoot Tribe, there may be restrictions on day or night time operations, should a conflict with tribal treaty fishing occur. The Contractor shall be responsible for fines and compensation for net damage that they cause.

1.04 COORDINATION OF WORK

- A. The Contractor shall, by way of the Engineer, become familiar with other contracts which have been awarded, or are about to be awarded, by the Port for other construction work adjacent to or passing through the project limits for this contract. The Contractor shall coordinate the progress of its Work with the established requirements for completion and phasing.
- B. The Contractor shall coordinate all in-water work directly with the U.S. Coast Guard and shall coordinate vessel movements with the Engineer. All other coordination including upland staging and access areas, tribal fishing operations, and other authorized Contractors or agency performing work at the site will be handled through the Engineer.

1.05 PROJECT LOGISTICS

- A. The Contractor shall have access to the construction site by Dallas Ave. S. The Contractor shall conduct all business through a rolling gate off Dallas Ave. S.
- B. The access may change during the construction of the Contract Work and Contractor shall comply with the changes if notified by the Engineer.
- C. Refer to the Drawings for the location of offsite parking and onsite staging/laydown areas.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices.

End of Section

PART 1 GENERAL

1.01 REQUIRED SUBMITTALS

- A. Preconstruction Submittals:
 - 1. Submittals shall be made in accordance with the requirements of Section 01305 - Preconstruction Submittals and as specified herein.
 - 2. As part of the Preconstruction Submittals, submit a complete cost breakdown of all lump sum bid items showing the value assigned to each part of the Work, including allowance for overhead and profit. Upon acceptance of the Schedule of Values by the Engineer, it shall be used as a basis for all lump sum progress payments.
 - a. The cost of each activity shall be a portion of the lump sum price as it relates to each activity. The cost shall include labor, material, overhead, and fees. Normally, costs for order/delivery activities will not be allowed. The cost of material and equipment shall be associated with the installation of such material and equipment unless otherwise required by the Engineer. The total cost of all activities shall equal the lump sum bid price for the bid item or total contract as applicable.
 - b. On material where the Contractor anticipates requesting payment in advance of installation, it shall be identified as a separate line item in the Schedule of Values.
- B. Applications for Payment:
 - 1. For each application for payment the Contractor shall submit the following:
 - a. Completed "Application and Certificate for Payment" on form as required by Division 1 or as established by the Engineer.
 - b. Schedule and narrative update as required by the applicable schedule section of the Project Manual.
 - c. Certification that as-built drawings are current per Section 01770 - Project Closeout.
 - d. Certification of Payment to subcontractors and suppliers as required per G-08.04(C). Also, the Contractor shall submit, with each application for progress payment, a completed form titled "Monthly Amounts Paid to All Subcontractor Participants." The Prime Contractor is to include all of its Subcontractors on this form.
 - e. "Application and Certificate of Payment" shall be submitted on the date specified in Document 00800, SC-08.04, Progress Payments.
- C. Final Application for Payment:
 - 1. Refer to Section 01770 - Project Closeout and Document 00700 - General Conditions, for other requirements. For application for payment, the Contractor shall submit the following:
 - a. Completed "Application and Certificate for Payment" on form as required in Division 1 or as established by the Engineer showing the Work 100% complete.

- b. Monthly Affirmative Action Utilization Report for final period invoicing.
- c. An "Affidavit of Wages Paid" form for the Contractor and a form for each Subcontractor performing work on the project properly submitted to and approved and signed by the Washington State Department of Labor and Industries.
- d. As Built Record Documents, as required by Section 01730 – As Built Record Documents
- e. Operating and Maintenance Manual, as required by Section 01780 - Operation and Maintenance Data.
- f. Documentation required by the RAWP including all updates through the duration of the project per 01400 – Removal Action Work Plan.
- g. Warranties and bonds, as required by Section 01787 – Warranties and Bonds.

1.02 PREPARATION OF APPLICATIONS FOR PAYMENT

- A. Type all required information on the forms.
- B. Execute certification of signature of authorized officer.
- C. Use data on accepted Schedule of Values in accordance with the scheduling section in Division One.
- D. List each authorized Change Order, listing Change Order number and dollar amount as for an original item of Work.

1.03 SUBMITTAL PROCEDURES

- A. Submit a signed copy of each application for payment at times stipulated in the Supplemental Conditions. Applications are to be submitted to Engineer with originally signed copies of supporting data for approval.

1.04 PAYMENT FOR STORED MATERIAL

- A. Payment for stored items will be in accordance with Document 00700 - General Conditions, G-08.05.
- B. Proof of Need. With payment request for stored material, submit a copy of purchase order and payment voucher clearly identifying the material, specification reference, contract number, and price. The following additional documentation may be included:
 - 1. Notarized certification of payment from supplier.
 - 2. Copy of canceled check to supplier.
 - 3. Lien release from supplier.
- C. Stored material items may be included in monthly application for payment only after Drawings and data submittals, if any are required, have been completed per Contract Documents.
- D. Verification of price and payment: the Contractor shall demonstrate that the costs of materials have been paid and will establish the Port's title to such materials or

equipment or otherwise protect the Port's interest including applicable insurance and transportation for those items stored off-site.

- E. Partial payment for materials and equipment in advance of installation shall not constitute acceptance thereof and will not relieve Contractor of full responsibility for condition and subsequent acceptance by the Port. Faulty materials discovered will be rejected even though partial payment may have been made.

1.05 SUBSTANTIATING DATA

- A. When the Port requires substantiating information, submit data within seven (7) days of request justifying line item amounts in question.

1.06 UNIT PRICES

- A. Any unit prices listed in Document 00410 – Bid Form are complete including labor, plant, equipment, products, fees, and any incidental charges; and including allowance for overhead and profit. Unit prices are not for work required by the Drawings and Specifications that are stated as lump sums in the Base Bid.

1.07 MEASUREMENTS STANDARDS

- A. Measurement and payment descriptions for each item listed in Document 00410 – Bid Form are as set forth throughout the applicable sections of the Contract Documents and as noted herein.
 - 1. All bid items of work acceptably completed under the Contract will be measured by the Engineer according to United States standard measure.
 - 2. Measurements will be made as hereinafter provided unless otherwise provided for by their individual measurement specifications.
 - 3. The method of measurement and computations to be used in determination of quantities of material furnished or of work performed under the Contract will be those methods generally recognized as conforming to accepted engineering practice and will be carried to the proper significant figures or fractions of units for each item to conform to the usual practice of the Port Engineering Department.
 - 4. Items of work for which payment is made by a "Lump Sum" will be measured as a complete unit. Partial payment, if made, will be made according to the completed percentage of the Lump Sum unit as determined by the Engineer.
- B. Weighing Equipment:
 - 1. Scales for the weighing of natural, manufactured or processed construction materials obtained from natural deposits, stockpiles, or bunkers, which are required to be proportioned or measured and paid for by weight, shall be furnished, erected, and maintained by the Contractor, or be certified, permanently installed commercial scales.
 - 2. In the event the Contractor elects to furnish, erect, and maintain weighing equipment at the site, such equipment shall meet the requirements and conditions set forth in State of Washington Standard Specifications for Road, Bridge, and Municipal Construction, current edition.
- C. Measurement of Quantities:

1. Unless otherwise specified, measurements will be made horizontally or vertically. In determining the area for items bid on a square yard basis, the measurements will be on the neat dimension indicated on the Drawings or as altered by the Engineer. No deductions in area will be made for individual fixtures having an area of nine square feet or less.
2. Structures will be measured according to neat lines indicated on the Drawings or as altered by the Engineer to fit field conditions.
3. All items which are measured by the linear foot, such as sewers, water mains, pipe culverts, gutters, under-drains, etc., will be measured parallel to the base or foundation upon which such structures are placed, unless otherwise noted on the Drawings or specified. Pipe is measured to a point $\frac{1}{3}$ into the diameter of the manhole.
4. In computing volumes of excavation, the method used will be average end-area method, or as stated in the appropriate sections of the Specifications.
5. The term "gage," when used in connection with the measurement of plates, means the U.S. Standard Gage, except that when reference is made to measurement of galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing, the term "gage" or thickness means that specified in AASHTO M 36, M 167, M 196, M 197 or M 219.
6. The term "ton" means the short ton consisting of 2,000 pounds avoirdupois. All materials that are measured or proportioned by weight shall be weighed in accordance with the requirements of paragraph 1.09B. If material is shipped by rail, the car weight may be accepted provided that payment is made for only the actual weight of material used. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being measured by weight, shall be weighed empty at least daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.
7. Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. When required by the Engineer, the loads shall be leveled when the vehicles arrive at the point of delivery to facilitate measurement.
8. When a complete structure or structural unit or piece of equipment is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.
9. When standard manufactured items are specified, such as railroad rail, ties, fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions, not including bolts or other connectors. Unit Prices bid should include allowances for any bolts and connectors. Unless more stringently controlled by tolerance in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

10. No measurement will be made for work performed or materials placed outside of lines indicated on the plans or established by the Engineer; materials wasted, used or disposed of in a manner not called for under the Contract; material rejected after it has been placed, by reason of the failure of the Contractor to conform to the provisions of the Contract; hauling and disposing of rejected materials; material remaining on hand after completion of the work; or other Work or material payment for which is contrary to the provisions of the Contract.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this Section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

- A. This section addresses the submittals that must be made by the Contractor and approved by the Engineer prior to issuance of a Notice to Proceed (NTP). The Port has based the contract time on issuing a NTP ninety-nine (99) days after Award and has allowed time in the Contract duration for the Contractor to prepare, submit, and gain approval of the required submittals detailed herein.
- B. The Port will not hold a Preconstruction Conference or issue a NTP, or accept requests for partial payments, or allow for onsite mobilization (less field office setup) until the Preconstruction Submittals have been received and approved by the Engineer.
- C. No contract time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required herein. The Engineer shall be the sole authority on determining the acceptability of the Contractor's submittals.
- D. Early submission is encouraged. A submittal package that has "Accepted" or "Accepted As Noted" before the Preconstruction Conference can result in a Preconstruction Conference and NTP earlier than that originally contemplated. Poorly prepared, incomplete, or inaccurate submittals as well as non-receipt by the Engineer of required submittals will cause the Preconstruction Conference and the NTP to be delayed. The Contract completion date remains "as bid." The Contractor is expressly notified that delay in issuance of NTP, due to incomplete or unacceptable submittals, will reduce the "actual" amount of time the Contractor has to complete the Work of the Contract.

1.02 SUBMITTALS

- A. All submittals shall be made in accordance with Section 01330 – Submittals.
- B. Required Submittals:
 - 1. Removal Action Work Plan per Section 01400.
 - 2. Schedule of Values per Section 01200 – Measurement and Payment Procedures.
 - 3. Submittal Log per Section 01330 - Submittals.
 - 4. Temporary Power Plan per Section 01500 – Temporary Facilities and Controls.
 - 5. Copies of any permits or other regulatory or public agency approvals required within the Contract Documents.
 - 6. Long lead procurement items.
 - 7. Critical materials and systems defined in Division 2 of the Contract Documents that will be installed during the first 120 calendar days following NTP.
 - 8. List of subcontractors in accordance with General Conditions G-05.02.A.
 - 9. Site Assessment Survey per SC-04.01.
 - 10. Regulated Building Materials submittals per section 01315.
 - 11. Change Order labor and equipment rate submittals:

- a. As a part of the Preconstruction Submittals, submit for the General Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance and medical aid premiums as stated in general conditions G-08.06.A.1. The rates shall not contain any travel time, safety, loss efficiency factors, over head or profit. Rates shall be submitted for straight time, overtime and double time. Once the rates have been reviewed and accepted, they will become the basis for pricing labor in Change Order work. Contractor shall provide proof of all labor rate costs as required by the Engineer including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment security department. If labor rates change during the course of the project the contractor may submit new rates for approval.
- b. As a part of the Preconstruction Submittals, submit for the General contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown in the current Rental Rate Blue Book as modified by AGC\WSDOT Equipment Rental Agreement as stated in general conditions G-08.06.3. In the event a specific piece of equipment does not appear or is applicable to the Rental Rate Blue Book as modified by the AGC\WSDOT Rental Rate Agreement specified rate, a rate shall be developed based on the terms of the Rental Rate Blue Book criteria. Once these rates are reviewed and accepted, they shall be used as the basis for pricing Change Order work.
- c. No Change Orders will be processed for the Contractor or subcontractor until their respective labor and equipment rates have been submitted and approved.

1.03 APPROVALS

- A. Submittals will be reviewed and returned to the Contractor as specified in Section 01330 – Submittals.
- B. Any Substitutions proposed by the Contractor must be submitted in accordance with Section 01630 – Substitutions.
- C. Contractor shall be responsible for submitting acceptable Submittals in a timely manner in order to allow NTP to be issued.
- D. NTP will be issued by the Resident Engineer upon approval of the required Preconstruction submittals and completion of the Preconstruction Conference.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this Section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 SUMMARY

- A. Provide project organization information indicating Contractor's project personnel and contact information, and their experience records for acceptance.

1.02 QUALIFICATIONS

- A. Contract project personnel shall have the following qualifications:
1. Project Manager shall not be the same person as the Project Engineer or the Superintendent and shall meet the following minimum requirements:
 - a. The Project Manager shall have experience as a superintendent or engineer for at least five projects involving upland excavation, sediment dredging, and the coordination of multiple trades and subcontracts similar to the type required for this project.
 - b. The Project Manager shall have been the Project Manager of at least one project, successfully performed and completed within the last five years.
 2. Project Engineer shall not be the same person as the Project Manager or the Superintendent and shall meet the following minimum requirements:
 - a. The Project Engineer shall have been the Project Engineer on at least one project successfully performed in the last five years involving sediment dredging, upland excavation, disposal of contaminated sediment and soil, and backfilling.
 - b. The Project Engineer shall have proven project management responsibilities for at least three cleanup projects under EPA or State Order in the past ten years. The projects shall have involved removal and disposal of a minimum of 25,000 cubic yards of PCB-contaminated soil or sediment, including upland excavation and in-water dredging.
 - c. The Project Engineer shall be a Professional Engineer (P.E.) currently licensed by the State of Washington.
 - d. Have current 40-hour HAZWOPER certification.
 - e. Have current CESCL certification from the Washington State Department of Ecology.
 3. Superintendent shall not be the same person as the Project Manager or the Project Engineer and shall meet the following minimum requirements:
 - a. Superintendent on at least one project successfully performed and completed within the last five years which included dredging, upland excavation, disposal of contaminated sediment and soil, and backfilling.
 - b. Superintendent or engineer on at least two additional projects successfully performed and completed within the last five years, which included dredging

- c. Superintendent shall be onsite at all times for all construction activities. If construction occurs during more than one shift in 24 hours, a designated Superintendent shall be onsite.
- 4. Environmental Compliance Manager shall meet the following minimum requirements:
 - (1) Be onsite at all times for all construction activities. If construction occurs during more than one shift in 24 hours, the Project Engineer shall be onsite.
 - (2) Have current 40-hour HAZWOPER certification.
 - (3) Have current CESCL certification from the Washington State Department of Ecology.
 - (4) Have proven oversight responsibilities for at least one cleanup project under EPA or State Order in the past five years. The project shall have involved removal and disposal of a minimum of 25,000 cubic yards of PCB-contaminated soil or sediment, including upland excavation and in-water dredging.
 - (5) Have three years proven experience with construction stormwater and dewatering management, including oversight of treatment systems designed to remove PCBs, metals, turbidity, and other Contaminants of Concern as identified in the Contract.
- 5. Environmental Compliance Inspector(s) shall meet the following minimum requirements:
 - (1) Be onsite at all times for all construction activities. If construction occurs during more than one shift in 24 hours, more than one ECI shall be provided.
 - (2) Have current 40-hour HAZWOPER certification.
 - (3) Have current CESCL certification from the Washington State Department of Ecology.
 - (4) Have proven environmental compliance inspection responsibilities for at least one cleanup project within the past three years. The project shall have involved removal and disposal of a minimum of 10,000 cubic yards of contaminated soil or sediment, including upland excavation and in-water dredging.
- 6. Shoring Design Engineer shall meet the requirements outlined in Section 02217 –Contractor Designed Excavation Support (Shoring). The Contractor shall have a competent person, as required by WAC 296-155-650 (2f) on the site at all times to properly evaluate sloping/shoring requirements of excavations.
- 7. Construction Water Treatment System Operator shall meet the requirements in Section 02245 – Construction Water Management System.

8. Contractor Safety Representative shall meet the requirements in Section 01860 Safety Management.
9. Dredging Personnel including:
 - a. Dredging Project Manager shall meet the following minimum requirements:
 - (1) Eight years of experience managing environmental dredging projects
 - b. Dredging Superintendent shall meet the following minimum requirements:
 - (1) Five years experience working on environmental dredging projects.
 - (2) Three years experience in supervision of environmental dredging projects of similar magnitude
 - (3) Successful completion of three environmental dredging projects as a project Superintendent.
 - c. Dredging operator shall meet the following minimum requirements:
 - (1) Five years experience as a dredging operator working on environmental dredging projects
 - (2) Successful completion of four environmental dredging projects of similar magnitude which used similar equipment to that which is proposed for work on this project
10. Contractor Quality Control Representative shall meet the requirements in Section 01451 Quality Control; Testing Laboratory Services.
11. Environmental Compliance Manager shall meet the requirements in Section 02270 Temporary Erosion and Sedimentation Control Planning and Execution
12. Traffic Control Supervisor shall meet the requirements in Section 01570 Traffic Control
13. Asbestos Supervisor/Competent Person shall meet the requirements in Section 01315 Regulated Materials Submittals.
14. Industrial Hygienist shall meet the requirements in Section 02075 Lead Controls in Construction and Demolition.

1.03 REQUIRED SUBMITTALS

- A. Submit as part of the Contractor's Project Approach in accordance with Section 01400 – Removal Action Work Plan, the Contractor's Project Organization diagram and qualifications and resumes for the project management team, outlining areas of responsibility and authority. Submit the qualifications for individuals that are proposed for each of the positions indicated in 1.02.
 1. Keep organization diagram current.
- B. Resubmit qualifications for acceptance by the Engineer whenever above personnel change.

- C. The Port of Seattle reserves the right to accept or reject the Contractor's proposed personnel. To be accepted, proof that the proposed personnel successfully meet the qualifications specified herein is required.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 DESCRIPTION

A. Work included:

1. In general, project meetings will be held weekly at the job site in accordance with a mutually acceptable schedule. The Engineer will conduct project meetings throughout the construction period.
2. The purpose of the project meetings is to enable orderly review of progress during construction and to provide for systematic discussion and analysis of problems that might arise between the Port, and Designer, and/or Contractor relative to execution of the Work.
3. Kick-Off and Preconstruction Meeting.
4. Special meetings called at the discretion of the Engineer.

1.02 AUTHORITY DESIGNATION

- A. Persons designated by the Contractor to attend and participate in project meetings shall have all required authority to commit the Contractor to solutions as agreed upon in the project meetings

1.03 SUBMITTALS

- A. Agenda Items: To the maximum extent possible, advise the Engineer at least twenty-four (24) hours in advance of the project meeting regarding any agenda items desired to be discussed.

1.04 AGENDA

A. Kick-Off Meeting

1. The Engineer will conduct this meeting typically within ten (10) days of Award.
2. Location: Engineer's Office or as determined otherwise.
3. Attendance:
 - a. Port's Project Manager, Construction Manager and/or Resident Engineer
 - b. Port's Project support team.
 - c. Contractor's Project Manager and Superintendent
 - d. Contractor's Support team
4. Typical Agenda:
 - a. Team Introduction, roles and responsibilities
 - b. Port representatives review requirements for Preconstruction Submittals
 - c. Port representatives review use of CDMS system (Livelihood)

B. Preconstruction Meeting

1. The Engineer will conduct this following acceptance of all required submittals per 01305 – Preconstruction Submittals.

2. Location: Engineer's Office or as determined otherwise.
3. Attendance:
 - a. Port's Project Manager, Construction Manager and/or Resident Engineer
 - b. Port's Project support team
 - c. Designer and professional consultants for mechanical, electrical, civil, and structural disciplines, as applicable
 - d. Contractor's Project Manager, Project Engineer, Superintendent, and Environmental Compliance Manager
 - e. Major subcontractors, as appropriate
 - f. Major suppliers, as appropriate
4. Typical Agenda:
 - a. Team Introduction, roles and responsibilities
 - b. Distribution (by Contractor) and discussion of:
 - (1) List of major subcontractors and suppliers
 - (2) Preliminary progress schedule
 - c. Project overview including Contract Documents
 - d. Contractor Quality Control Program
 - e. Critical Work sequencing
 - f. Status of Environmental Compliance Requirements
 - g. Parking, staging, and lay down requirements
 - h. Major equipment deliveries and priorities, Port furnished materials
 - i. Project coordination
 - j. Communications and emergency contacts
 - k. Designation of responsible personnel
 - l. Procedures and processing of:
 - (1) Field decisions
 - (2) Request for information (RFI)
 - (3) Proposal requests
 - (4) Submittals
 - (5) Change Orders
 - (6) Applications for payment
 - (7) Schedules and reports
 - m. Weekly project meetings
 - n. Procedures for maintaining as-built record documents
 - o. Special site conditions and constraints

- p. Use of premises:
 - (1) Office, work, and storage areas
 - (2) Owner's requirements
 - q. Construction facilities, controls, and construction aids
 - r. Temporary utilities and utility shut-downs
 - s. Safety and first-aid procedures
 - t. Security procedures
 - u. Inspection and testing
 - v. Housekeeping procedures
 - w. Commissioning and Closeout
 - x. Warranty requirements
- C. Weekly Project Meetings
- 1. The Engineer will conduct weekly meetings at the Project Site to coordinate the Work, answer questions, and resolve problems.
 - 2. Location: Engineer's office or as determined otherwise.
 - 3. Attendance:
 - a. Engineer
 - b. Designers and Consultants as needed
 - c. Contractor's Project Manager, Project Engineer, Superintendent, and Environmental Compliance Manager
 - d. Major subcontractors
 - e. Others, as appropriate
 - 4. Such meetings may include, but are not limited to review of: Safety, Outstanding Action Items, Technical Concerns, Submittals, Fabrication, RFIs, CBs, Schedule Review, Environmental Compliance Requirements, Projection of Work, Procurement, Job Concerns, Change Orders, and Progress Payments.
 - 5. Contractor shall provide to the Engineer one electronic copy (PDF format) of the Three Week "Look-Ahead" Schedule for the project meetings per 01324 – Bar Chart Schedule.
- D. Special Meetings
- 1. The Engineer may call special meetings at the project site or at other locations to coordinate work, answer questions, and resolve problems.
 - 2. Pre-Project Closeout Meeting

1.05 PRE-INSTALLATION MEETINGS

- A. Pre-installation meetings shall be held prior to commencing Work or portion of Work by any subcontractor on each definable feature of work in Division 2. The

Engineer may waive this requirement if deemed unnecessary; or request additional meetings as required.

B. Contractor Shall:

1. Require attendance of parties directly affecting, or affected by, work of specific Section.
2. Notify the Resident Engineer four days in advance of meeting date.
3. Prepare agenda, preside at conference, record minutes, and distribute copies within two days after conference to participants.
4. Review conditions of installation, preparation and installation procedures, and coordination with related work.

1.06 PRE-PROJECT CLOSE OUT MEETING

- A. At approximately 80% of Contract completion or 60-days before the anticipated Beneficial Occupancy, whichever occurs first, the Contractor and Engineer will conduct a meeting to discuss acceptance/closeout process, to schedule the events and review responsibilities for actions necessary to produce a timely physical and fiscal closeout. The Engineer will conduct the meeting with an agenda highlighting conditions for closeout as identified in Section 01770 – Project Closeout.

1.07 MEETING NOTES

- A. The Resident Engineer will compile meeting notes (unless otherwise arranged/agreed) of each project meeting and will distribute copies to all interested parties.
- B. The meeting notes compiled by the Resident Engineer will be the official record minutes and all clarifications and/or corrections shall be transmitted in writing to the Resident Engineer within fourteen (14) days of date of receipt of the minutes or unless noted during the next schedule meeting under the appropriate agenda item. Transmitted corrections shall be legibly submitted on company letterhead.
- C. At least one (1) bound volume of all minutes shall be maintained by the Contractor in the job office until project completion.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project

End of Section

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Contractor shall perform the following Project Coordination Requirements:
1. Coordinate the Work of all subcontractors with the Work of the Contractor
 - a. Distribute information and coordinate necessary action of subcontractors and suppliers in response to information and direction provided by the Port (i.e., Requests for Information, Requests for Proposal, executed Change Orders, etc.)
 - b. For temporary utilities
 - c. Among the work of the trades specified in Divisions 2 through 16
 - d. Ensure that notification to and inspections by regulatory agencies are completed in a timely manner
 2. Coordinate the schedules of all subcontractors to:
 - a. Verify timely deliveries of products for installation by other trades
 - b. Verify that labor and materials are adequate to maintain schedules
 3. Conduct conferences among all subcontractors, and other concerned parties, as necessary to:
 - a. Maintain coordination and schedules
 - b. Resolve matters in dispute
 - c. Coordinate utility outages
 4. Participate in Project meetings:
 - a. As required by these Specifications
 - b. To report progress of the Work
 - c. To recommend needed changes in schedules
 - d. To transmit meeting notes to all other trades, as appropriate
 5. Temporary Utilities Required During Construction:
 - a. Coordinate submittals, installation, operation and maintenance, to verify compliance with Project requirements and with Contract Documents, see Section 01500 – Temporary Facilities and Controls
 - b. Verify adequacy of service at required locations
 6. All Required Submittals: Prior to submittal, in accordance with Section 01330 – Submittals, review for compliance with Contract Documents. The Contractor shall review and coordinate all subcontractor submittals of any tier. All submittals must be submitted by the Contractor, and not by others.
 7. Coordination Drawings:
 - a. Prepare as required to ensure coordination of work of, or affected by, mechanical and electrical work, or to resolve conflicts
 - b. Submit to the Engineer for review

- c. Reproduce and distribute approved copies to all concerned parties
8. Observe required testing; maintain a record of tests as required by the Quality Control section of these Specifications.
9. Verify that subcontractors maintain accurate record documents.
10. Substitutions:
 - a. Review proposals and requests:
 - (1) Check for compliance with Contract Documents
 - (2) Verify compatibility with work and equipment of other trades
 - b. Submit to the Engineer for approval in accordance with Section 01630 – Substitutions
11. Observe the work for compliance with requirements of Contract Documents:
 - a. Maintain list of observed deficiencies and discrepancies
 - b. Promptly report and correct deficiencies or discrepancies
12. Assemble documentation for handling of disputes involving trades.
13. Commissioning:
 - a. Check to ensure that utilities and specified connections are complete and that equipment is in operable condition
14. Pre- Final Inspection:
 - a. Prior to inspection, ensure the Contractor's Pre-Final punch list is prepared and delivered to the Resident Engineer
 - b. Assist Engineer; prepare consolidated list of items to be completed or corrected after inspection
15. Assemble As-built Record Document information from subcontractors, incorporate into Contractor's Record Documents, and ensure that completed record documents are submitted to the Resident Engineer in accordance with Section 01730 – As-Built Project Record Documents.

1.02 PROJECT SCHEDULE

- A. The Schedule shall be prepared as required by Section 01324 – Bar Chart Schedule and designate areas of activity of the Contractor and subcontractors for the various items of Work for the Project. The Schedule shall be prepared, submitted for review, and accepted by the Engineer as specified in these contract documents.
- B. Contractor shall:
 1. Maintain Schedule throughout construction period; record changes in responsibilities due to:
 - a. Approved modifications to Contract
 - b. Approved substitutions
 - c. Changes to work responsibility

2. Distribute revised Schedule promptly after each change to:
 - a. Affected subcontractors
 - b. Engineer

1.03 UTILITY DEACTIVATION AND REACTIVATION PLANS

- A. The Contractor shall submit a shutdown plan to the Engineer for review (see attached). The plan shall outline the proposed procedure to deactivate and reactivate utility services, lines and equipment required to be disrupted, disassembled, cut into, or modified during the course of the Work.
- B. Plan Content: The plan shall include but not be limited to:
 1. Shutdown and restart schedules.
 2. Sequences required to deactivate, depressurize, and reactivate the utility service lines and equipment.
 3. Detailed description of proof positive verification and/or tests to assure that utility service line and equipment are properly deactivated before proceeding with the work.
 4. Methods of: discharging residual fluids from lines and equipment; value sequencing; electrical load shedding for deactivating and reactivating service lines, equipment and the system reactivation procedure.
 5. Incorporation of the specific deactivation and reactivation requirements of the relevant technical specifications.
 6. Compliance with safety standards.
 7. Coordination required with the Port or utility owners.
- C. It is the Contractor's responsibility to fully understand and verify the condition of any utility service lines, and equipment at all times during the course of the work. The Contractor shall be responsible for all damages resulting from its actions.

1.04 SHUTDOWNS AND COORDINATION FORMS

- A. If any construction activity or shutdown affects the use of spaces outside the construction area, a Construction Advisory Form (CAF) will be required. The contractor shall coordinate this with the Engineer. The Contractor shall submit the form two weeks prior to commencement of work (see attached).
 1. All shutdown times are subject to operational requirements and shall be coordinated with the Engineer to mitigate impacts to Port operations.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this Section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 GENERAL

- A. The Pre-Construction submittal package for regulated materials as specified in this Section shall be submitted in accordance with Section 01330 Submittals. The Contractor shall package and title each section of the submittal in the order specified herein. Each package shall be identified by name and shall reference the specification section, paragraph number, and subparagraph in a Table of Contents at the beginning of the submittal.
- B. The Contractor shall be aware that each of the four regulated materials sections 02075, 02081, 02082, and 02085 require items similar to those requested in this section. This special submittal section has been devised to provide for one set of regulated materials submittals for the project. The intent of this submittal is **NOT** to request a submittal item (such as a respiratory protection plan) for each section where it may be requested instead the Port would like to employ a paperwork reduction by only submitting one (1) respiratory protection plan. If the Contractor (General and/or Subcontractor) has any questions regarding the submittal requirements of this section, please contact the Engineer for assistance.
- C. The Port will review the submittals in accordance to the procedures as outlined in section 01330 Submittals.

1.02 COMPLIANCE

- A. Failure to comply with these requirements by the Contractor shall be considered as non-responsive. The Port will not issue a Notice to Proceed to the Contractor until pre-work submittals have been submitted and approved.

1.03 SUBMITTAL PACKAGES

- A. Submit Preconstruction submittals as a package in accordance with Section 01305 - Preconstruction Submittals. Individual submittals will not be accepted, unless a different contractor will be performing portions of the regulated building materials work as identified in this contract.
- B. Submit all required construction phase submittals on a daily basis, included with the Contractor's Daily Construction Report, as specified in Section 01400 - Removal Action Work Plan.
- C. Submit all required Closeout submittals in accordance with Section 01770 - Project Closeout.
- D. Clearly label and date each submittal and each report contained in the submittal.
- E. If the Engineer deems that the original or any necessary supplemental progress submittals do not provide the information required, the Port may withhold

progress payments until the necessary information has been submitted by the Contractor and accepted by the Engineer.

1.04 PRECONSTRUCTION SUBMITTALS

A. Preconstruction Submittals

1. Asbestos Health and Safety Plan

B. Fluorescent Lamp (PCB and Mercury) Health and Safety Plan

1. Medical Surveillance Program

2. Lead in Construction Health and Safety Plan

C. Asbestos Work Plan: Shall include a detailed plan of the procedures proposed for use in complying with the requirements, including the following:

1. **Methods:** A description of all techniques, methods, and special equipment to be used during the contract, including methods for typical abatement work required for this project. Examples include; VAT and mastic removal, caulking, and fire doors.

2. **Shop Drawings:** For work authorizations that require the use of a negative pressure enclosure provide shop drawings (using the abatement plans) to show the layout of containment, exhaust route, regulated area barriers, construction barriers (whether they are installed by PCS, the General Contractor, or the abatement contractor). Show where the negative air machines will be placed, decontamination, loadout areas, and make-up air. Include view window locations.

a. **Handling of Waste:** Specific information relating to handling, transport, and disposal of asbestos-containing waste.

b. **Landfill:** Identify the proposed disposal site at which any waste material generated during the project will be disposed and furnish evidence of all necessary government approvals to dispose of the waste.

c. **Laboratory Qualification Information:** Submit the proposed Independent Testing Laboratories written Laboratory Quality Control Program.

1. The Laboratory shall prove proficiency in the AIHA/NIOSH PAT Program. The submitted copy of the Quality Control Program shall minimally meet or exceed WISHA standards. Failure to comply with these standards will require lab work to be subcontracted to another laboratory at no additional cost to the Port of Seattle.

- d. **Air Monitoring Program:** Program shall include the proposed sampling plan, sampling procedures, and field quality control procedures of the firm conducting the air monitoring.
 - e. **Worker Certification:** Submit current copies of Asbestos Supervisor and Worker Certifications for employees scheduled to work on the project in compliance with WAC Chapter 296-65-010.
 - f. **Contractor Certification:** Contractor shall submit proof of current certification of Contractor by Washington Department of Labor and Industries as a certified asbestos abatement firm.
 - g. **Asbestos Supervisor/Competent Person:** Submit the name, current Asbestos Supervisor Certification, and resume of experience of the assigned on-site supervisor. At a minimum, the supervisor shall have successfully completed a Supervisor Training Course in compliance with WAC Chapter 296-65-007. References and work on similar projects will also be reviewed. The Port reserves the right to reject the Supervisor from the project. Should this be the case, the Contractor shall then submit another on-site supervisor for approval as described above.
 - h. **Respirator Fit Test Records:** Submit a copy of the records for personnel performing asbestos work.
 - i. **Notifications:** Submit a copy of all required notifications and permits obtained by the Contractor (Washington State Department of Labor and Industries, and Puget Sound Clean Air Agency).
3. **Lead Work Plan:** Provide a site-specific Work Plan which demonstrates the methods by which handling and disposal of lead-containing coatings will be performed. The Port realizes that this project does not involve actual “lead abatement”; instead the project involves demolition of building components that have paint of varying lead concentrations. Therefore, a statement is required that identifies how the General Contractor and all subcontractors will be complying with the specifications and regulations as they pertain to lead.

At a minimum the Work Plan shall include:

- a. A general description of work practices, engineering controls, air monitoring, and decontamination involving lead-containing coatings. Describe whether the job will involve removing lead paint, or demolition of materials containing lead.
- b. Qualification/certification/training certificates and role of each Contractor’s personnel
- c. Qualifications of the proposed testing laboratory (to perform analysis of air and waste characterization samples)
- d. Site inspection process/logs/documents

- e. Procedures for personnel and equipment cleanup/ decontamination
- f. Lead waste management and disposal plan including:
 - 1) Waste minimization efforts.
 - 2) Container selection and labeling
 - 3) Qualification/certificates of lead waste transportation subcontractor.
 - 4) Qualification/certification of lead waste disposal facilities
 - 5) Documentation of final lead waste transportation and disposition

1.05 CONSTRUCTION PHASE SUBMITTALS

- A. During the course of construction, provide and maintain the following:
 - 1. **Hazardous Chemical Inventory:** In order to comply with the State of Washington's Hazard Communication Standard (Chapter 296-62-054 through - 05427 WAC), the Port requires the Contractor to provide a complete inventory of all potentially hazardous chemicals which the Contractor (including subcontractors) will bring into or produce at the work site. This inventory shall be submitted to the Engineer in accordance with Section 01330. Specific information for each chemical, in the form of Material Safety Data Sheets (MSDSs), and the personal protective equipment required for working with the materials (respirators, special clothing, etc.) shall be included in the submittal. The Contractor shall revise this information as necessary (i.e., when new chemicals are brought onto or produced at the work site), with updates forwarded to the Engineer. A complete and accurate copy of this information shall be immediately available at the Contractor's work site office for reference by Port representatives and the Contractor's employees during the Contractor's working hours. The Port will make a copy of its inventory and MSDSs available to the Contractor within five (5) days after issuing the Notice to Proceed if Port employees will be working with potentially hazardous chemicals at or near the Contractor's project site.
 - 2. **Asbestos:** Submit the following information daily, in the Contractor's Daily Construction Report, to the Engineer. This information shall be submitted prior to the start of work on the next scheduled work shift.
 - a. Air and bulk sample data collection sheets and laboratory analytical results.
 - b. Certified asbestos supervisor daily inspection report

3. **Lead:** Submit the following information daily, in the Contractor's Daily Report, to the Engineer as designated during the pre-construction meeting.
 - a. Air and bulk sample data sheets and laboratory results including chain of custody and analytical results.
- B. Certified Asbestos Supervisor or Superintendent daily inspection report included in the Contractor's Daily Construction Report.

1.06 CLOSEOUT SUBMITTALS

- A. Asbestos Work Records - The Contractor shall submit to the Engineer in accordance with section 01330.
 1. **Project Overview:** Provide a basic project summary identifying the scope and summarizing the work performed by the Contractor. Provide enough information to have a basic understanding of the project and include project and contact names and ID numbers, Contractor's company name, where, when, and what type of work was completed, and discussion of significant problems encountered during the course of the work. The written summary shall include a description of all changes or modifications to the Contractor's pre-construction Work Plan.
 2. **Certification:** Provide written certification from the Contractor's Project Manager or Supervisor that the Contractor has fully inspected the work area and completed work in strict accordance with the Specifications.
 3. **Air Monitoring:** Submit documentation of all contractor/subcontractor air monitoring results relative to regulatory compliance. Include copies of all air monitoring data sheets, chain-of-custody documentation and analysis reports for sampling conducted at the site.
 4. **Project Record Documents:** Provide project records including documentation of all contract changes, and copies of work site entry log books, safety logs, sign-in sheets, and supervisor daily field reports. Provide copies of project meetings for pre-abatement, construction period, and project closeout meetings.
 5. **Disposal Manifests:** Submit copies of all asbestos waste disposal transportation and disposal manifests including signed receipts from the landfill, and chain-of-custody forms.
 6. Submit copies of amendments or modifications to pre-construction Notices and Permits that were filed with regulatory agencies during the course of the project.
 7. Submit copies of inspections or visits by regulatory agencies. Include copies of any citations or notices received by the Contractor from regulatory agencies during the course of the project.
 8. The Port will issue final payment on acceptance of final Closeout submittals by the Engineer.

- B. Lead Work Records at the completion of the contract, the Contractor shall provide a report of completion including;
1. All monitoring information
 2. Documentation of final lead waste
 3. Certification that the work has been completed pursuant to this specification

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

1. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the work will be considered incidental to, and included in, the payments made for “Site Demolition”.

End of Section

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. General Requirements
- B. Progress Schedule - Bar Chart
- C. Coordination
- D. Updates and Progress Payments
- E. Float Time
- F. Weather Impacts and Delays
- G. Time Impact Analysis for changed Conditions
- H. Recovery Schedule
- I. As-Built Schedule

1.02 GENERAL REQUIREMENTS

- A. The Work under this Contract will be planned, scheduled, executed and reported using a bar chart schedule. The bar chart Progress Schedule described here serves as a communication tool between the Port and the Contractor, and the Contractor and its subcontractors. The Contractor shall use the schedule to establish a joint understanding of the assumptions regarding the work, and the various constraints and opportunities that are possible within the plan. As the work progresses, the project team is expected to use the schedule to assess impacts and to formulate the best methods to complete the work on, or ahead of, the contractual completion dates. Specifically, the purpose is as follows:
 - 1. To assure adequate planning, scheduling and reporting during execution of the contract.
 - 2. To assure coordination of the work by and between the Contractor and the various subcontractors and suppliers.
 - 3. To assist the Contractor and Engineer in monitoring the progress of the work and to contemporaneously evaluate proposed changes to the Contract and the project schedule.
 - 4. To assist the Contractor and Engineer in the preparation and evaluation of the Contractor's monthly progress payment.
- B. The Progress Schedule shall be in a bar chart format with a logical association of predecessor and/or successor ties between the activities. The Progress Schedule shall be produced using Primavera or Microsoft Project (the most current version). The Contractor may request to use different software as a substitution, in accordance with Division 1, Section 01630 – Substitutions. If the alternate software is accepted, the Contractor will be required to supply the Engineer with an authorized copy of the software with all user support manuals.
- C. If the Contractor should desire or intend to complete the Work earlier than any required Critical or Completion date, the Port will not be liable to the Contractor for any costs or other damages should the Contractor be unable to complete the Work before this earlier date. The duties and obligations of the Port to the Contractor shall be consistent with and applicable only to the completion of the Work on the

Milestone and Completion dates specified in the Contract, unless the Port and the Contractor otherwise agree and a Change Order is issued.

- D. At any time throughout the course of the Work, the Engineer reserves the right to require additional activities to be added to the Schedule to further define the Contractor's plan and intentions regarding the execution of the Work. In each instance, such activities or changes shall be made by the Contractor at no cost or delay to the Port.

1.03 PROGRESS SCHEDULE - BAR CHART

- A. Pursuant to the General Conditions of this Contract, the following additional scheduling requirements are a part of this Contract.
- B. Work under this Section shall consist of furnishing a Progress Schedule showing in detail how the Contractor plans to execute and coordinate the Work. The Progress Schedule shall be based on, and incorporate the Contract Milestone and Completion Dates included in the Contract, and shall show the order in which the Contractor shall perform the Work, projected dates for the start and completion of separable portions of the Work, and other information concerning Contractor's scheduling as Port may request. Refer to the "Typical Contract Timeline" attached to this Section for an overview of Contract milestones.
- C. Schedule Requirements: The Progress Schedule shall be in the form of a bar chart and shall consist of horizontal lines, or bars, plotted along a time scale. The horizontal bar(s) shall indicate the start and finish dates as well as the total time period of performance for each activity. The Contractor shall arrange the chart so as to show the activities which are necessary to fulfill each and every Milestone and Completion Date requirement. The schedule shall be sorted by phase, area and early start date.
- D. The Schedule Content: The Contractor's Progress Schedule shall include, but not be limited to:
 - 1. Critical procurement activities including mobilization, shop drawings and other submittals, Engineer review of submittals, fabrication, and delivery of key and long-lead equipment and materials;
 - 2. Contract Award; Preconstruction Submittals, Notice To Proceed (NTP); Construction/erection activities; Pre-final Inspection, Final Inspection, Beneficial Occupancy and Substantial Completion.
 - 3. Testing activities; Hold and witness points in construction; Commissioning, and Training.
 - 4. Offsite activities including interfaces with the work of outside contractors, e.g. utilities, power, or any separate contractor.
 - 5. Phased Completion and associated Beneficial Occupancy Dates, if specified.
 - 6. Activities for project contract activities and requirements which include, but are not limited to, O&M manuals and record documents.
 - 7. Activities that are impacted by Change Order or Event.

- E. The identity, and logic of activities comprising the Schedule shall meet the following criteria:
1. The description of work by activity. Activity descriptions and coding shall contain the area of the work as well as the specific type of work.
 2. Activity boundaries shall be easily measurable and descriptions shall be clear and concise. The beginning and end of each activity shall be readily verifiable, and progress shall be quantifiable.
 3. Responsibility for each activity shall be identified with a single-performing organization.
 4. Activity duration shall be in work days. Unless agreed otherwise with the Resident Engineer, activity durations over fifteen (15) working days shall be kept to a minimum and be used only for non-construction activities, such as shop drawing and sample submittals, fabrication and delivery of materials and equipment, concrete curing, and General Conditions activities.
 5. Potential problems or constraints related to the implementation of the construction plan shall be identified in writing.
 6. Foreseeable delays to activities such as normal seasonal weather shall be considered and included in the planning and scheduling of all work.
 7. Imposed completion dates for events other than the Completion Dates are not permitted. Artificial Constraints are also not permitted.
 8. The format for the Progress Schedule shall include an activity information table shown on the left side of the page and a bar graph on the right side of the page. The columns in the activity information table on the left side of the page shall include, but are not limited to; Activity ID, Activity Description, Calendar ID, Original Duration, Remaining Duration, Early Start, Early Finish, Total Float, and Predecessors. The bar chart format shall include the Start Date to the left of the bar and the Activity Description to the right of the bar. The logic ties shall be visible on the bar chart. Critical Activities bars shall be identified by a different color than the non-critical activities.
- F. Submittals:
1. The submittal of the schedule documents shall include:
 - a. A Baseline Schedule which shall include a narrative that explains the basis for the Contractor's schedule of construction and any constraints.
 - b. Monthly Progress Schedule: A computer-generated graphic time-scaled bar chart showing activity descriptions, duration and relationships between activities. The critical path shall be easily identifiable. The monthly progress schedule shall be submitted with the monthly request for payment.
 - c. Three-week "Look Ahead" schedule: Contractor shall provide to the Engineer one electronic copy (pdf format) for the project meetings per Section 01310 – Project Meetings. The three-week "Look Ahead" Schedule shall include the current week (week of the

Project Meeting) and the two following weeks and meet the requirements of paragraph 1.4 for progress schedules.

- d. As-Built project schedule shall be submitted at the end of the Project. The as-built schedule shall show actual start and finish dates for all activities in the schedule. See Section 01730 – Project Record Documents for additional information.
2. All schedules and schedule documents shall be electronic, submitted to the Engineer via Livelink. Submit one (1) color pdf of each schedule report, (except the Look-ahead schedules) together with an electronic data file of the CPM schedule (Microsoft Project) .The bar chart schedules shall be sized for 11” X 17” printouts.
- G. Acceptance Process:
1. When the initial Progress Schedule is accepted by the Engineer, it becomes the Baseline Schedule for the Project. The Baseline Schedule is a required Preconstruction submittal per 01305 – Preconstruction Submittals.
 2. Progress Schedules shall indicate Completion dates for the project that are no later than the Project’s required Completion dates. All activity duration shall be given in work days.
 3. The Engineer will review the Contractor’s Progress Schedule. If required, a meeting will be held between the Engineer and the Contractor to resolve any conflicts between the Contractor’s schedule and the overall Project Construction. The Contractor shall revise the schedule as required by the Engineer to support the project construction and shall submit its revised schedule to the Engineer within five (5) days for final review and acceptance.
 4. Acceptance by the Engineer of the Contractor’s Progress Schedule is advisory only and shall not release the Contractor of the responsibility for accomplishing the Work within each and every Contract-required Milestone and Completion Date. Omissions and errors in the Progress Schedule shall not excuse performance that is not in compliance with the Contract. Acceptance by the Engineer in no way makes the Port an insurer of the Progress Schedule’s success or liable for time or cost overruns from its shortcomings. The Port disclaims any obligation or liability by reason of its acceptance of the Progress Schedule.

1.04 COORDINATION

- A. The Contractor shall coordinate the work with that of other contractors working on or near the project site and shall cooperate fully with the Engineer in maintaining orderly progress toward completion of the Work as scheduled.
- B. The Contractor shall inform the Subcontractors of progress while the Work is underway regarding delivery status of Port-furnished equipment and material and of the progress of construction work being performed.
- C. The Contractor shall involve all applicable subcontractors in the schedule development, updating and revisions.

1.05 UPDATES AND PROGRESS PAYMENTS

- A. Update Procedures
1. The Contractor understands and agrees that its schedule is intended to accurately reflect at all times the status of the Project Construction and projected activities. The Contractor also understands and agrees that updating is a key requirement to accomplish this intent and shall comply with the requirement to update.
 2. The graphic format of the Progress Schedule shall include actual start and actual finish dates for activities that have started or finished. For activities in progress, activity progress shall be shown on the activity bar and the forecasted completion shall indicate the earliest the activity can be completed based upon current project status.
 3. The Contractor understands and agrees that updating the schedule is independent from updating the cost for progress payment purposes.
 4. The Contractor shall submit the updated schedule information. The Contractor and Engineer shall agree on the payment amounts. For lump sum contracts, payment will be based on the approved Schedule of Values. For unit price contracts, payment will be based on General Conditions, Article G-08.04.
 5. Contractor shall submit the approved updated schedule and the pay application along with a written narrative describing the overall progress of the Work. The narrative shall include the following key aspects:
 - a. Progress in the last period
 - b. Critical Path progress and schedule concerns
 - c. Changes to schedule logic or sequencing of the Work
 - d. Potential Delays and Time Impact Analyses
 - e. Submittal Status (focus on critical submittals and concerns)
 - f. Equipment and Material Delivery Status
 6. The Engineer will not be obligated to review or to process any Application for Progress Payment until the Contractor has submitted all update information and the information is accepted.
 7. Throughout the progress of the Work, the Contractor shall prepare and maintain a three-week look-ahead bar chart field schedule reflecting the schedule of Work activities accomplished for the previous week and the Work scheduled for the forthcoming two weeks. This schedule shall be presented at the weekly project meetings (Section 01310 – Project Meetings). Activities on the three-week look-ahead schedules shall be readily identifiable with activities on the Baseline schedule. Submit a pdf of the three-week look-ahead to the Engineer, 24 hours prior to the Progress Meeting.
 8. The initial updating shall take place within fourteen (14) calendar days after the approval of the Contractor's schedule. Subsequent updates shall be made on a monthly basis.

1.06 FLOAT

- A. Schedule float is not for the exclusive use or benefit of either the Contractor or the Port of Seattle. Neither the Port of Seattle nor the Contractor “owns” the float. The project or Work “owns” the float. Liability for delay to Contract or Milestone dates rests with the party whose action (or inaction) caused the delay beyond the float that was available at the time of the delaying action (or inaction).
- B. Extensions of time will be granted only to the extent that the activity or activities affected exceed the total float or slack along the path of activities affected at the time of NTP of a Change Order or the commencement of any delay or condition for which an adjustment is warranted under the Contract Documents. The Contractor shall submit documentation supporting its request for a time extension in a form acceptable to the Engineer and consistent with the requirements of the General Conditions.

1.07 WEATHER IMPACTS AND DELAYS

- A. The Contractor agrees that he shall not be entitled to a time extension due to normal inclement weather, which can be expected at the project locale due to precipitation, snow, temperature, or other weather conditions. Normal inclement weather shall be defined as the range of the most recent ten-year monthly average plus or minus one ten-year standard deviation of accumulated record values from climatological data compiled by the US Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) monitoring station at Seattle-Tacoma International Airport. For example, if the ten-year average rainfall for a month is 8 inches with a ten year standard deviation of 2 inches then the normal monthly range to be expected is from 6 to 10 inches. The Contractor shall include in all Schedules, allowances for normal inclement weather.
- B. The Contractor shall only be entitled to an extension of Contract time, if the Contractor can substantiate to the satisfaction of the Engineer that the severity of the weather was in excess of the normal inclement weather, and such weather conditions actually delayed the critical path of the Work. Time extensions will not be allowed for weather delays to non-critical path portions of the Work.
- C. No extension of time will be made for abnormal inclement weather after the portions of the Work in progress at the time are enclosed, except for site work. Site work delays at that time will be allowed only if the abnormal weather causes a critical path delay to the Contract Time or Milestone date related to that site work. For the purpose of this paragraph, the term “enclosed” is defined to mean when the Work in an area of a structure or building is sufficiently closed in (portions of exterior walls up and portions of roof in place), so as to permit adequate heating to allow the various trades to perform the Work.
- D. The Contractor is responsible for providing any temporary weather enclosures necessary for Work to proceed without weather delays.

1.08 TIME IMPACT ANALYSIS FOR CHANGED CONDITIONS

- A. If the Contractor experiences delays that the Contractor believes are caused by the Port of Seattle, and the Contractor seeks to obtain a Contract time extension, the Contractor shall submit a formal written Time Impact Analysis (TIA). The TIA shall define the impact of each change or delay to the current accepted Progress Schedule. The TIA shall include a written narrative of the impact of such delays, and a schedule that depicts how the changed or delayed work affects other activities in the current accepted Progress Schedule.

- B. In addition to the Contractor's presentation of the impact in the TIA, the Contractor shall include in the TIA, a mitigation plan that reduces or eliminates the claimed delay. The mitigation plan shall include specific Port of Seattle and Contractor actions as well as the cost to the Contractor to proceed with the mitigation.
- C. In the event that the Contractor requests a Contract time extension, the time impacts to critical path activities in the current accepted Progress Schedule shall be clearly shown. Extensions of time will be granted only to the extent that such changes or delays cause the time for the changed activity and related activities to exceed the total float along the affected path of activities at the time of the Port of Seattle directive to proceed with the change or the actual commencement of the delay included in the TIA.
- D. Each formal TIA shall be submitted in accordance with General Conditions GC.04.31. Submit as part of the detailed breakdown required by GC.04.31
- E. A copy of the Port of Seattle accepted TIA will be incorporated in the Change Order signed by the Port of Seattle and the Engineer for such change. Any changes to the Schedule will be incorporated into the next update of the Progress Schedule following the Port's acceptance of the TIA.
- F. The Contractor shall be responsible for all costs associated with the preparation of the TIA and the incorporation of accepted TIAs, or portion of TIAs, in the Progress Schedule.
- G. If agreement is not reached on a TIA, or a portion of a TIA, the Progress Schedule, including any time extensions, shall be revised only to the extent accepted by the Port of Seattle. For any TIA, or portion of a TIA, that is not accepted by the Port of Seattle, the Contractor may submit a claim in accordance with the Conditions of the Contract.

1.09 RECOVERY SCHEDULE

- A. Should any conditions exist, such that certain activities shown on the Contractor's Progress Schedule fall behind schedule to the extent that any of the mandatory Critical dates or Completion dates are in jeopardy, the Contractor shall be required to, at no cost to the Port, prepare and submit to the Engineer a supplementary recovery schedule, in a form and detail appropriate to the need, to explain and display how it intends to reschedule those activities to regain compliance with the Progress Schedule.
- B. After determination of the requirement for a Recovery Schedule, the Contractor shall, within five (5) calendar days, present to Engineer the Recovery Schedule. The Recovery Schedule shall represent the Contractor's best judgment as to how he shall reorganize his work so that he may return to the approved Construction Schedule. The Recovery Schedule shall be prepared to a similar level of detail as the Progress Schedule.
- C. Five (5) calendar days prior to the expiration of the Recovery Schedule, the Engineer and the Contractor will meet at the job site to determine whether the Contractor has regained compliance with the Construction Schedule. At the direction of the Engineer, one of the following will happen:
 - 1. If, in the opinion of the Engineer, the Contractor is still behind schedule, the Contractor will prepare another Recovery Schedule, at the Contractor's expense, to take effect during the immediate subsequent pay period.

2. If, in the opinion of the Engineer, the Contractor has sufficiently regained compliance with the Progress Schedule, the use of the Progress Schedule will be resumed.

1.10 AS-BUILT SCHEDULE

- A. Provide for the Project Record Document an As-Built Schedule prior to request for Final Payment.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this Section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

- A. Individual submittals are required in accordance with the pertinent sections of these Specifications.

1.02 GENERAL

- A. Submittal Log: After award, the Engineer will provide an electronic draft Submittal Log to the Contractor indicating those submittals generally required by the specifications. The Contractor shall check the required submittals for completeness and accuracy against the bid documents and return the completed Submittal Log to the Engineer within 15 calendar days. The Submittal Log shall have the first eight (8) columns filled out, from "Section No." through "Date Due from Contractor." This date shall correspond with that shown on the Project Schedule for each submittal. A copy of the Submittal Log is attached to this Specification Section, for reference purposes only.
- B. All submittal cover sheets shall bear the contract name and number, the date of submission, reference to the specification section and drawing number to which the submittal applies the nature of the submittal, and the Contractor's signature.
- C. Submit all shop drawings, catalog cuts, and brochures in the quantity specified herein, electronically, using the Construction Document Management System (CDMS) Submittal Workflow process or other format as approved by the Engineer.
- D. Prepare a separate submittal form for each product or procedure and identify by referencing the specification section and paragraph number.
- E. The Port will return the submittal electronically via the CDMS Submittal Workflow process, or other format as approved by the Engineer, within 21 days of receipt by the Engineer, unless noted otherwise.
- F. Engineer shall receive submittals, including shop drawings, product data and samples from Contractor and shall review and take other appropriate action on them, but only for conformity with the design concept of the Project and with the provisions and intent of the Contract Documents. Shop drawings, samples, and other submission reviews by Engineer shall not include checking of dimensions or openings for potential conflict. Engineer's acceptance of a specific item shall not indicate acceptance of an assembly of which the item is a component. Submittals will be returned, "Receipt Acknowledged", "Accepted", "Accepted as Noted", "Revise and Resubmit" or "Not Accepted".
- G. Section 01305 – Preconstruction Submittals contains required submittals that must state "Accepted" or "Accepted as Noted" by the Port prior to issuance of Notice to Proceed or performance of the Preconstruction Conference.
- H. See Section 01630 – Substitutions for additional procedures regarding requests for substitutions.
- I. All remaining submittals with the exception of Operation and Maintenance Data must be received by the Engineer within 60 days of Notice to Proceed. Appropriate payment will be withheld at the discretion of the Engineer for delinquent submittals.
- J. The Port of Seattle will allow one (1) review of the original submittal and one (1) submittal reiteration, which is included in the cost of the project. The Port of Seattle has the right to recover any additional cost that may result from the review of any subsequent re-submittals.

1.03 COMPLIANCE

- A. The Port may not pay for materials delivered or incorporated into the Work without an approved submittal.
- B. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS

- A. Quality: Prepare shop drawings accurately to scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work. Calculations associated with shop drawing design shall also be submitted.
- B. Structural Fabrication and Erection Drawings: All shop drawings which indicate structural fabrication or erection details and associated calculations shall bear the seal of a Structural Engineer licensed in the State of Washington.
- C. Thoroughly review all shop and detail drawings prior to submittal, including all those provided by subcontractors and suppliers at any tier, to assure coordination with other parts of the Work. Failure to comply will be cause for rejection. Submittals shall bear the Contractor's approval stamp and initials of the reviewer.
- D. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- E. All drawings submitted to the Engineer shall be drawn on sheets each 24 inches wide by 36 inches long in overall dimensions or on small sheets that are multiples of 8-1/2 inches by 11 inches.
- F. Type of Prints Required: Submit one (1) electronic copy of all shop drawings or supplemental working drawings in accordance with Article G-04.19 of the General Conditions.
- G. All documents submitted to the Port and not returned to the Contractor, shall be retained by the Port, including software and source codes, etc., that is developed or used for the project. See Document 00700, Article G-04.35.

1.05 MANUFACTURERS' LITERATURE

- A. Submit one (1) electronic copy of manufacturers' literature. The electronic data shall have software search features and interactive capabilities.
- B. Product data, catalog cuts, or brochures shall show the type, size ratings, style, color, manufacturer and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. Submit catalog data in electronic form. The electronic data shall have software search features and interactive capabilities. Specific items shall be clearly marked or highlighted. General catalogs or partial lists will not be accepted.

1.06 SAMPLES

- A. The sample submitted shall be the exact or precise article proposed to be furnished.
- B. Submit three (3) samples of each article proposed.

1.07 OPERATION AND MAINTENANCE DATA

- A. See Requirements in Section 01780 – Operation and Maintenance Data.

1.08 MOCKUPS

- A. Provide any mockups required in the Technical Specifications for evaluation by the Engineer, allowing adequate time for review prior to scheduled construction.

1.09 SUBSTITUTIONS

- A. Comply with the requirements of Section 01630 – Substitutions.
- B. Clearly identify the submittal as a Request for Substitution.
- C. Submit all requests for substitutions independently. Do not combine with any other submittal.

1.10 EMPLOYMENT REPORTING

- A. The following submittals shall be made to the State's Labor & Industry (L&I) Department:
 - 1. STATEMENT OF INTENT TO PAY PREVAILING WAGES, for the contractor and all subcontractors, per General Condition G-08.01.
 - 2. AFFIDAVIT OF WAGES PAID, for the contractor and all subcontractors, per Section 01770 - Project Closeout.
- B. The following submittals shall be made to the Port's Central Procurement Office:
 - 1. ELECTRONIC PAYROLL INFORMATION (EPI), for the contractor and all subcontractors on a monthly basis per Document 00830 – Equal Employment, Affirmative Action Requirements and Equal Benefits.

1.11 PROGRESS SCHEDULES

- A. See Section 01324 – Bar Chart Schedule.

1.12 AS-BUILT RECORD DOCUMENTS

- A. See Section 01730 – Project Record Documents.

1.13 COORDINATION

- A. The Contractor shall also include a procedure for monitoring the submittal schedule and tracking submittals, re-submittals, substitution requests or variances from the contract documents.
 - 1. Updated submittal logs shall be submitted periodically throughout the job as required by the Engineer.

- 1.14 Submit shop and detail drawings in related packages. All equipment or material details that are interdependent or are related in any way must be submitted together as a complete package indicating the complete system. Submittals shall not be altered once approved for construction. Clearly mark and date revisions. Major revisions must be resubmitted for acceptance.

1.15 CONTRACTOR'S DAILY CONSTRUCTION REPORT

- A. See the Removal Action Work Plan (RAWP) Section 01400.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices for the Project.

End of Section

Submittal Type Legend AS As Built FR Field Reports OM O&M Manual SA Sample CA Calculations FT Field Test OT Owner Training SD Shop Drawing CC Cert. of Compliance MD Manuf./Product Data PC Pre-Construction SE Service Agreement CI Cert. of Insurance MN Meeting Notes PM Payment/Amounts Paid/Application for Payment TD Test Data CS Copies of Standards MJ Mock-up PP Plan/Procedure WA Warranty CH Schedule NP Notice or Permit QR Qualification Resume WM Waste Manifest																		NOTES: A. All submittals must be reviewed, stamped and signed by Contractor prior to delivery B. Status: 0. Receipt Acknowledged 1. Accepted 2. Accepted As Noted 3. Revise and Resubmit 4. Not Accepted																	
Subm. No	Sect. No	Paragra. No	Title	Type	Sub / Contractor	# Req	# Rcvd	Date Due from Contr	Date Rec from Contr	Date Due to Contr	Date Sent to Reviewer	Date Rec from Reviewer	Date Sent to Contr	Status	F&I Reviewer Name	Maint. Reviewer Name	Other Reviewer Name	LOB Reviewer Name	O&M Docs (Y/N)	Remarks															
01200-001.00	01200	1.01.A.2	Schedule of Values	PC/CH																Pre-Con Submittal															
01200-002.00	01200	1.01.B	Application for Payment	PM																															
01305-001.00	01305	1.02.B	Permits or any other regulatory or public agency approvals	PC/NP																Pre-Con Submittal															
01305-002.00	01305	1.02.B	Long Lead Procurement Items	PC																Pre-Con Submittal															
01305-003.00	01305	1.02.B	Critical Materials and systems to be installed in first 120 Days defined in Sections 2	PC																Pre-Con Submittal															
01305-004.00	01305	1.02.B	List of Subcontractors	PC																Pre-Con Submittal															
01305-005.00	01305	1.02.B	Site Assessment Survey per SC-04.01	PC/AS																Pre-Con Submittal															
01305-006.00	01305	1.02.B	Sources of Upland and Sediment Backfill Materials	PC																Pre-Con Submittal															
01305-007.00	01305	1.02.B	Change Order Labor and Equipment Rates for Contractors and Subcontractors	PC																Pre-Con Submittal															
01305-008.00	01305	1.02.B	Regulated Building Materials Submittals - Asbestos, Fluorescent Lamp, and Lead H&S Plans, Medical Surveillance Program, Asbestos and Lead Work Plans																	Pre-Con Submittal															
01308-001.00	01308	1.04.A	Contractor's Project Organization (as part of RAWP requirement Contractor's Project Approach)	PC/PP																Pre-Con Submittal															
01308-001.00	01315	1.05.A	Hazardous Chemical Inventory																																
01308-002.00	01315	1.05.A	Asbestos data collection sheets, analytical results, and daily inspection reports.																																
01308-003.00	01315	1.05.A	Lead data collection sheets and analytical results.																																
01308-004.00	01315	1.05.B	Asbestos and Lead Work Records																																
01330-001.00	01330	1.02.A	Submittal Log	PC/PP																Pre-Con Submittal															
01324-001.00	01324	1.03.F.1.b	Baseline Schedule	PC/CH																Pre-Con Submittal															
01324-002.00	01324	1.03.F.1.c	Monthly Progress Schedule	CH																															
01324-003.00	01324	1.03.F.1.d	Three Week "Look Ahead" Schedule	CH																Can be sent via Correspondence Workflow															
01400-001.00	01400	1.07.B	Contractor's Project Approach	PC/PP																Pre-Con Submittal															
01400-002.00	01400	1.07.B	Green and Sustainable Remediation Plan (GSR)	PC/PP																Pre-Con Submittal															
01400-003.00	01400	1.07.B	Construction Checklist	PC/CH																Pre-Con Submittal															
01400-004.00	01400	1.03.A.2	Draft Removal Action Work Plan (RAWP)	PC/PP																Pre-Con Submittal															
01400-005.00	01400	1.03.A.3	Final Removal Action Work Plan (RAWP)	PC/PP																Pre-Con Submittal															

Subm. No	Sec. No	Paragra. No	Title	Type	Sub / Contractor	# Req	# Rcvd	Date Due from Contr	Date Rec from Contr	Date Due to Contr	Date Sent to Reviewer	Date Rec from Reviewer	Date Sent to Contr	Status	F&I Reviewer Name	Maint. Reviewer Name	Other Reviewer Name	LOB Reviewer Name	O&M Docs (Y/N)	Remarks
01451-001.00	01451	1.06	Construction Quality Control Plan (CQCP)	PC/PP																Pre-Con Submittal
01500-001.00	01500	1.02	Temporary Power Plan	PC/PP																Pre-Con Submittal
01570-001.00	01570	1.04.A	Traffic Control Plan	PC/PP																Pre-Con Submittal
01631-001.00	01631	1.03	Pollution Prevention Plan (PPP)	PC/PP																Pre-Con Submittal
01631-002.00	01631	1.05.A.2	Insurance Endorsements from HW Transport	CI																
01631-003.00	01631	1.05.A.3	Copy of complete MCS-90 Certificate	CC																
01631-004.00	01631	1.05.A.4	List of All Drivers w/ WA CDL and HW Endorsement	CC																
01631-005.00	01631	3.11	Meeting Minutes from PPP&E Education and Training	MN																
01722-001.00	01722	1.06.A	Survey Plan	PC/PP																Pre-Con Submittal
01722-002.00	01722	1.06.E	Survey Field Notes	FR																
01722-003.00	01722	3.04.D.2	Vessel Position Data	TD																
01722-004.00	01722	3.04.E	Pre Construction Baseline Survey	PC/AS																Pre-Con Submittal
01722-005.00	01722	3.04.E	Progress Surveys	AS																
01722-006.00	01722	3.04.E	Final Dredging Acceptance Survey	AS																
01722-007.00	01722	3.04.E	Final Backfill Acceptance Survey	AS																
01730-001.00	01722	3.04.E	Record Document Survey	AS																
01730-002.00	01730	1.03B	Contractor Certification stating all As-Built (Redline) Drawings are current																	
01730-003.00	01730	1.03C	Final As Built Documents Submittal																	
01770-001.00	01770	1.03.C	Contractor Punch List	CH																
01770-002.00	01770	1.03.C	Request for PreFinal Inspection	NP																
01770-003.00	01770	1.03.C	Certificates of Occupancy	CC																
01770-004.00	01770	1.04.C	Request for Final Inspection	NP																
01770-005.00	01770	1.07.A	Release from Retainage Request	NP																
01787-001.00	01787	1.03.A	Written Warranties	WA																
01860-001.00	01860	1.04.A	Site Specific Construction Health and Safety Plan	PC/PP																Pre-Con Submittal
01860-002.00	01860	1.04.B	Chemical Exposure Plan	PP																
01860-003.00	01860	1.05.B	Construction Safety Inspection Report	FR																
01860-004.00	01860	1.05.B	DOSH Citations	FR																
01860-005.00	01860	1.05.F	Injury Reporting, Near Miss Incidents, Property Damage	FR																
01860-003.00	01860	1.07.D	Safety Recovery Plan	PP																
02110-001.00	02110	1.04.A	Transportation and Disposal Plan	PC/PP																Pre-Con Submittal
02111-001.00	02111	1.04.B	Alternate Disposal Facility Request	NP																
02111-002.00	02111	1.04.D	All Transportation- related shipping docs	CC																
02111-003.00	02111	1.04.E	Waste Receipts from Disposal Facility	WM																
02111-004.00	02111	3.03.D	Land Disposal Restriction Notifications	WM																

Subm. No	Sec. No	Paragra. No	Title	Type	Sub / Contractor	# Req	# Rcvd	Date Due from Contr	Date Rec from Contr	Date Due to Contr	Date Sent to Reviewer	Date Rec from Reviewer	Date Sent to Contr	Status	F&I Reviewer Name	Maint. Reviewer Name	Other Reviewer Name	LOB Reviewer Name	O&M Docs (Y/N)	Remarks
02114-001.00	02114	1.02.A	Soil Stockpile Plan	PC/PP																Pre-Con Submittal
02217-001.00	02217	1.03.A	Excavation Support System Plan	PC/PP																Pre-Con Submittal
02217-002.00	02217	3.02.A	Record Certification of as-constructed excavation support system	AS																
02220-001.00	02220	1.03.A	Demolition Plan	PC/PP																Pre-Con Submittal
02220-002.00	02220	3.04.B.4	Trip Tickets and Receiver Tickets	PP																
02227-001.00	02227	1.05.A	Deconstruction Plan	PC/PP																Pre-Con Submittal
02227-003.00	02227	1.05.C	Waste Management Final Report	PP																
02227-002.00	02227	1.07.C	Submit Waste Manifests, waste tickets, receipts or invoices, and images taken to validate totals	WM																
02245-001.00	02245	1.02	Construction Water Management Plan	PC/PP																Pre-Con Submittal
02245-002.00	02245	1.04.A	Permits and Approvals	NP																
02245-003.00	02245	3.03	Laboratory Analysis of Discharge Chemical Testing	TD																
02269-002.00	02269	1.04	Documentation for trench safety systems design in accordance with WAC	AS																
02269-001.00	02269	1.02.A	Contractor's Erosion and Sedimentation Control Plan (CESCP)	PC/PP																Pre-Con Submittal
02270-002.00	02270	2.01.A	TESC BMP Products	MD																
02270-003.00	02270	3.02.A.7	CESCP Inspection Records	CC																
02270-001.00	02270	3.03.C.5	Road Wash Plan	PP																
02300-001.00	02300	1.03.A	Earthwork Plan	PC/PP																Pre-Con Submittal
02300-003.00	02300	1.03.C	Physical and Chemical Test Reports for Upland and Riverbank backfill	TD																
02300-002.00	02300	1.03.D	Geotextile Fabric Sample	SA																
02325-001.00	02325	1.03.A	Dredging Plan	PC/PP																Pre-Con Submittal
02325-002.00	02325	1.03.B	Vessel Management Plan	PC/PP																Pre-Con Submittal
02325-003.00	02325	2.01.A	Physical and Chemical Test Reports for Dredge Backfill	TD																
02325-004.00	02325	3.02.A	Notification of completion of Dredging Unit (DU) and Survey	CC																
02340-001.00	02340	1.03.B	Settlement Monitoring Plan	PC/PP																Pre-Con Submittal
02340-002.00	02340	1.03.C	Existing Condition Survey of buildings	AS																
02453-001.00	02453	1.03.A	Sheet Pile Driving Plan	PC/PP																Pre-Con Submittal
02460-001.00	02460	1.05.B	Pile Driving Equipment	MD																
02460-002.00	02460	1.05.C	Steel Pipe Pile Detailed Drawings	AS																
02460-003.00	02460	1.05.D	Steel Pipe Pile Material	MD																
02488-001.00	02488	1.02.C	Debris Deflector Shop Drawings	SD																
02488-002.00	02488	1.02.C	Temporary Debris Deflector Catalog Sheets	MD																

Subm. No	Sect. No	Paragra. No	Title	Type	Sub / Contractor	# Req	# Rcvd	Date Due from Contr	Date Rec from Contr	Date Due to Contr	Date Sent to Reviewer	Date Rec from Reviewer	Date Sent to Contr	Status	F&I Reviewer Name	Maint. Reviewer Name	Other Reviewer Name	LOB Reviewer Name	O&M Docs (Y/N)	Remarks		
02488-003.00	02488	1.02.C	Temporary Debris Deflector Placement Location and Duration	PP																		
02522-002.00	02522	1.04.A	Well Decommissioning Notification Forms	NP																		
02522-001.00	02522	1.04.B	Well Records	FR																		
02525-001.00	02525	1.04.B	Dewatering Plan	PC/PP																	Pre-Con Submittal	
02525-002.00	02525	1.04.C	Special Permits	NP																		
02821-001.00	02821	1.03.B	Fencing, Gates, and Appurtenances Shop Drawings	SD																		
02992-001.00	02992	1.02	Hydroseeding Test Report and Product Information	MD																		

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. The Construction Document Management System (CDMS) is a web-based system developed by the Port to manage Contract documents. The CDMS will be used to generate and capture electronic Contract documents, route them to the appropriate individuals, file them, and then allow for easy retrieval. The CDMS shall be used for all Contract communications, submittals, and shop drawings between the Port and the Contractor. CDMS shall not be used for Electronic Payroll Information (EPI) or any type of payroll submittals.

PART 2 PRODUCTS

2.01 CONSTRUCTION DOCUMENT MANAGEMENT SYSTEM

- A. The Port of Seattle will provide the Contractor with one user login for the Port's CDMS located at <https://cdms.portseattle.org> at no cost to the Contractor. Access to the CDMS web site will be provided by way of a Port provided password and user name. The login will be subject to the terms and conditions of use as described in the contract documents and may be revoked by the Port at any time.
- B. Additional logins may be provided at the Port's discretion. Each login will be subject to the same terms and conditions of use as the Contractor's initial login and will similarly be subject to revocation by the Port at any time. Coordination of the integration process will be the responsibility of the Contractor.

2.02 MINIMUM REQUIREMENTS

- A. In order to utilize the CDMS, the Contractor shall use equipment and software that meets the following minimal requirements:
 - 1. Hardware:
 - a. Pentium III compatible processor or higher IBM-compatible PC
 - b. 8 GB free space on hard drive
 - c. 512 MB of RAM (recommend 1 GB for better performance)
 - d. Require VGA or higher-resolution monitor at least 1,024x768 pixel resolution
 - e. 768 link to the Internet (DSL speed)
 - 2. Software:
 - a. Operating System: Windows XP, Windows Vista, or Windows 7
Internet Explorer 8.0
 - b. Adobe Acrobat Reader 7.0 to X (v. 10) for viewing only
 - c. Adobe Acrobat 7.0 to X (v. 10) Professional. Full version necessary for scanning and forms updates (recommend using the same version of Adobe Reader and Adobe Professional).

- d. MS Office 2003, 2007, or 2010 Professional or greater
- e. Java 1.6.0 (Also known as Java Runtime Environment (JRE) 6 (Update 1) and newer is supported.
- 3. Scanner: Duplex high-speed production flatbed scanner with the following specifications:
 - a. A3 Flatbed + ADF (automatic document feeder)
 - b. TWAIN Compliant drivers
 - c. Minimum 200-page Automatic Document Feeder
 - d. Scanning speed: Portrait 56 ppm simplex / 92 ipm duplex
 - e. Scanning resolution: 100 dpi - 400 dpi Optical; up to 600 dpi Interpolated
 - f. Paper size: Check 2.8" x 6.7" to ledger 11" x 17"

PART 3 EXECUTION

3.01 SETUP AND TRAINING

A. Setup

- 1. Prior to use, the Contractor shall be required to have at least two (2) project personnel attend and complete a training session conducted by the Port of Seattle as specified below.
- 2. Following successful completion of the training session the Contractor will be provided with one (1) login with accompanying user name and password.

B. Training

- 1. The Port of Seattle will provide up to eight (8) hours of on the job training. Training shall be coordinated through the Engineer and will provide sufficient indoctrination to the system to allow the Contractor to access the system and use the basic features thereof.
- 2. Additional training may be requested by the Contractor to cover topics or information not included in the initial training session. These requests will be considered by the Engineer based on availability of training personnel.
- 3. Additional training may be requested by the Contractor for personnel in excess of the initial training allowed above. Such additional training requests will be considered by the Engineer based on availability of training personnel and the size of previously scheduled sessions

3.02 SYSTEM USE

A. System Use

1. The Contractor shall use the Port of Seattle's Web-based CDMS specified herein for all project communications, including but not limited to letters, daily reports, weekly reports, written notice of change, requests for change order, cost proposals, submittals, substitution requests, transmittals, requests for information, pay applications, etc. CDMS shall not be used for Electronic Payroll Information (EPI) or any type of payroll submittals.
2. Any information not transmitted via the Construction Document Management System will not be considered official documentation, unless specifically allowed as an exception by the Engineer based on extenuating circumstances. All information transmitted via the CDMS shall be in electronic format. The contractor is required to scan all documents into a legible electronic form and will initiate the Livelink workflow following the Ports standard protocols for format and system use. Workflows not initiated using the proper formatting protocols will not be accepted by the Port. Protocols will be covered in the contractor training held at the beginning of the project.
3. The Port may, from time to time, require hard paper copies of certain documents, including Change Orders and Contracts, to be signed by the Contractor. In these cases, the Port will provide the Contractor with hard copies of the signed documents, and will incorporate signed documents into the system for reference purposes. In the event that the Contractor feels a certain document should be maintained in hard-copy form in addition to electronic form, the Contractor may submit such a request to the Engineer through the CDMS. Documents approved for hard copy in this fashion shall be prepared by the Port of Seattle at the sole expense of the Contractor.
4. The Contractor may request that specific forms or reports be incorporated into the system for use in fulfilling the Contractor's requirements. Upon approval, the Port of Seattle shall make reasonable efforts to prepare said form(s) or report(s) based on the Contractor's requirements at the sole expense of the Contractor.

3.03 CONTACT PERSONNEL

- A. The Contractor shall designate one employee who shall serve as their primary contact in connection with the use of the CDMS for the contract. The Contractor may change its primary contact by providing notice to the Engineer.
- B. The Contractor shall further designate a back-up contact that shall serve as primary contact in the event the primary contact is unavailable.

- C. The Contractor shall provide 24-hour availability telephone numbers for the primary and back-up contacts.

3.04 TERMS OF USE

A. Use And Protection Of Passwords

- 1. The Contractor shall use each password in furtherance of contract work and shall use the password for no other purpose. The Contractor assumes all risks associated with the failure to adequately protect such password. The Contractor further agrees:
 - a. To prohibit the disclosure of any password to any person not authorized by the Contractor to use the password.
 - b. To protect all passwords in a secure manner that will prevent unauthorized use.
 - c. That any Contractor access and/or information developed as a result of utilizing the CDMS by way of the password(s) shall be attributed to the Contractor, and that the Port and other users may rely upon such attribution.

B. Restrictions On Use

- 1. The Contractor shall make every reasonable effort to ensure that:
 - a. Computer codes, files, and programs which may interrupt, destroy, or cause damage shall not be uploaded into the CDMS.
 - b. Computer codes, files, and programs which interfere with the proper working of the CDMS and/or its use by others shall not be allowed access.

3.05 REVOCATION OF LICENSE

- A. The Port may, at any time during the Contract, choose to revoke the Contractor's login or any such additional logins. Such revocation may occur based on misuse, misconduct, termination of the Contract, or other such reasons as deemed justified by the Engineer. Such revocation may occur with or without prior notice to the Contractor or affected user(s).

3.06 DOWNTIME AND SYSTEM AVAILABILITY

- A. Any interruptions in service based on Internet conditions, connection media, or the unavailability of servers for maintenance, repairs, or replacement shall not warrant additional compensation to the Contractor. The Port of Seattle will not be liable for the unavailability of the system for any period of time nor will it be responsible for the inability of the Contractor to access the system or any of its components.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 SUMMARY

- A. This Section provides, in conjunction with other referenced sections, general requirements for the Contractor's Removal Action Work Plan (RAWP). The RAWP refers to a set of plans to be submitted by the Contractor before commencement of the site Work.
- B. The RAWP shall provide detailed and specific designs, procedures, methods and layouts for accomplishment of the Work as specified and delineated in the Contract documents.
- C. The accepted Final RAWP documents shall supplement the Drawings and Specifications during execution of the Work. All Work shall be conducted in accordance with the Drawings and Specifications, and the final accepted RAWP.
- D. The Contractor, through the RAWP, shall demonstrate to the Engineer and reviewing governmental agencies that the Contractor is well prepared and capable of completing the site remediation on schedule and in accordance with the Contract.
- E. The RAWP requires acceptance by the Engineer and EPA prior to the issuance of Notice to Proceed.
- F. The RAWP shall cover all portions of the Work described in the Specifications, including, but not limited to: work areas, equipment and material storage areas, staging areas, stockpiles, access roads, haul roads, and all other areas that may be impacted by the project.

1.02 DESCRIPTION OF WORK

- A. In order to comply with the requirements of this section, the Contractor shall prepare and submit for review and acceptance a Final RAWP.
- B. The RAWP shall be submitted in two separate and distinct stages: Draft RAWP and Final RAWP.
- C. The Contractor shall review all sections of the Contract to ensure that all requirements of this Section are addressed.
- D. The RAWP shall, at a minimum, include and the address the following:
 - 1. Contractor's Project Approach
 - 2. Baseline Schedule
 - 3. Site-Specific Construction Health and Safety Plan
 - 4. Traffic Control Plan
 - 5. Green and Sustainable Remediation Plan (GSR)
 - 6. Pollution Prevention Plan
 - 7. Contractor's Erosion and Sedimentation Control Plan
 - 8. Construction Quality Control Plan
 - 9. Transportation and Disposal Plan
 - 10. Survey Plan
 - 11. Excavation Support System Plan
 - 12. Construction Water Management System Plan
 - 13. Settlement Monitoring Plan
 - 14. Dewatering Plan
 - 15. Earthwork Plan

16. Soil Stockpile Plan
17. Dredging Plan
18. Water Quality Monitoring Plan
19. Demolition Plan
20. Deconstruction Plan
21. Vessel Management Plan
22. Sheet Pile Driving Plan
23. Construction Checklist
24. Contractor's Daily Construction Report Form.

- E. In addition to the above requirements, the Contractor shall:
1. Participate in all required and necessary RAWP coordination meetings.
 2. Revise, modify, and keep the RAWP current and up-to-date at all times.
 3. Maintain all required documentation in an organized and readily available manner. Records shall be provided within 24 hours at the request of the Engineer or EPA.
 4. Provide initial and ongoing RAWP training for all project employees including, but not limited to: Contractor, sub-contractor, truck drivers and others as directed by the Engineer. Training shall address all types of project construction and environmental compliance issues that may arise during the project.

1.03 SUBMITTALS

- A. As part of the required 01305 – Preconstruction Submittals the Contractor shall prepare and submit the following:
1. Each item required for the RAWP plan shall be initially submitted separately through CDMS as part of the draft review process by the Port.
 2. Draft RAWP
 3. Final RAWP.

1.04 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. The most recent version of the reference applies.
1. Code of Federal Regulations (CFR):
 - a. 33 CFR 81 72 COLREGS (International Regulations for Preventing Collision at Sea -1972): Implementing Rules
 - b. 33 CFR 84 Annex I: Positioning and Technical Details of Lights and Shapes
 - c. 33 CFR 85 Annex II: Additional Signal for Fishing Vessels in Close Proximity
 - d. 33 CFR 86 Annex III: Technical Details of Sound Signal Appliances
 - e. 33 CFR 89 Inland Navigation Rules: Implementing Rules.
 2. U.S. Coast Guard (USCG)

- a. M16672.2 (1999) Navigation Rules Instruction Manual.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. The provisions of this section shall apply to the Contractor, subcontractors at all tiers, suppliers, and all others who may have access to the work site by way of the Contractor's activities.
- B. Failure to implement, maintain, and/or comply with the accepted Final RAWP, or with order of the Engineer; or failure to conduct project operations in accordance with this Section will result in the suspension of the Contractor's operations by the Engineer in accordance with Section 00700 – General Conditions, paragraph G-10.04.
- C. The Contractor shall be solely responsible for any damages, fines, penalties, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this Section.
- D. Any damages, fines, penalties, levies, penalties, or judgments incurred as a result of Contractor, subcontractor, or supplier non-compliance with the requirements of this section will be deducted from payment due by Modification.
- E. Any time and material costs incurred by the Port due to damages, fines, penalties, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section will be deducted from payment due by modification.
- F. The Contractor shall be solely responsible for any schedule impacts from damages, fines, penalties, levies, judgments, or stop work orders incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section. The project schedule will not be changed to accommodate the time lost.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL

- A. The RAWP required by this section shall be based upon and modified according to the Contractor's specific schedule and plan for accomplishing the work.
- B. Changes are made to improve and upgrade the "means and methods" used by the Contractor and as the work progresses and submitted for acceptance in accordance with Section 01330 - Submittals.

3.02 Removal Action Work Plan

- A. The RAWP shall describe the proposed methods for the Contractor's execution of the removal action. In accordance with the specifications, the Contractor shall submit multiple plans to support the removal action. These plans collectively shall form the Contractor's RAWP and shall include, at a minimum, descriptions of the specific means, methods, disposal facilities, schedule and personnel.
- B. The RAWP shall be submitted to the Engineer and the EPA for review

and acceptance in two phases as follows:

1. Draft RAWP
 - a. The Contractor shall submit an initial Draft RAWP to the Engineer within 30 Calendar Days of Contract Award.
 - b. Engineer Comments on the initial Draft RAWP will be provided within 10 Calendar Days of the submission.
 - c. If deemed necessary by the Engineer, the Engineer's comments will be reviewed in a draft RAWP Review Conference. The Engineer will notify the Contractor of the date and time of the conference.
 - d. The purpose of the review conference will be to resolve any remaining comments on the RAWP document and to reach agreement on the scope of required revisions and modifications to be incorporated in the revised Draft RAWP.
 - e. The Contractor shall submit the revised Draft RAWP to the Engineer within 21 Calendar Days of receipt of Engineer's comments and/or conclusion of the review meeting.
 - f. The revised Draft RAWP will be submitted to EPA by the Engineer.

2. Final RAWP
 - a. The Contractor shall submit the initial Final RAWP to the Engineer within 21 Calendar Days of receipt of Engineer's and EPA comments on the revised Draft RAWP.
 - b. If deemed necessary by the Engineer, the Engineer's comments will be reviewed in a Final RAWP Review Conference. The Engineer will notify the Contractor of the date and time of the conference.
 - c. The purpose of the review conference will be to resolve any remaining comments on the Final RAWP document and to reach agreement on the scope of required revisions and modifications to be incorporated in the revised Final RAWP.
 - d. If the EPA has additional comments, the Contractor shall submit additional revisions to the Engineer within three (3) Calendar Days of EPA comments.
 - e. The RAWP will be considered final once all comments are appropriately addressed and accepted by the EPA and the Engineer.

- C. Conference Attendance
 1. The following personnel shall attend the Draft and Final RAWP Review Conference(s):
 - a. Engineer, EPA, Port representatives, and sub-contractors
 - b. Contractor's Project Manager and Project Engineer
 - c. Contractor's Superintendent
 - d. Contractor's Environmental Compliance Manager (ECM).

 2. The following additional personnel shall attend the Draft and

Final RAWP Conference(s) if requested by the Engineer:

- a. Contractor's Quality Control Representative (QCR)
- b. Contractor's Safety and Health Manager (Certified Industrial Hygienist)
- c. Representative of any sub-contractor with significant involvement in preparation of the RAWP.

D. Conference Minutes

1. The Contractor shall be responsible for recording the minutes of the review conference and shall include all significant proceedings and decisions.
2. Details on the resolution of all review comments shall be addressed. Within five (5) working days following the conference, the Contractor shall submit the minutes to the Engineer.

E. RAWP Contents

1. Contractor's Project Approach
 - a. The Contractor's Project Approach shall describe, in narrative form, the methods to be employed in the removal action including equipment types, modes of operation, schedules, sequence of activities, proposed personnel and subcontractors, disposal facilities and materials suppliers, proposed transloading location, transloading wastewater handling and disposal methods, and other aspects necessary to describe how and when the specified work will be performed.
 - b. The Contractor's Project Approach shall be concise and written with sufficient detail to demonstrate the Contractor's understanding of the Work.
 - c. The Contractor shall identify the key personnel required in the specifications:
 - (1) Identifications and resumes of key personnel.
 - (2) Diagram showing reporting/communication structure
 - (3) Emergency and After-Hours calling list including Contractor, Engineer, and local municipal contacts
 - (4) Detailed project staffing plans showing staffing levels for each task and each phase of work, along with any plans for shift work.
 - d. The Contractor's Project Approach shall include a site plan showing locations of all temporary facilities and upland staging and access areas, including work areas, on-site equipment and material storage areas, transloading/stockpiling layout, temporary facilities, access and haul routes, site trailers, trash dumpsters, and temporary sanitary facilities.
 - e. The site plan shall also indicate the proposed location and dimensions of any area to be fenced and used by the

- Contractor, avenues of ingress/egress to the fenced area, details of the fence installation, office trailer, and employee parking areas. Any areas that may have to be graveled to prevent the tracking of mud shall also be identified.
- f. The Contractor shall identify any areas to be used for stockpiling/transloading contaminated material and separate stockpile area(s) for import material. Any decontamination areas shall be identified. The site plan shall be updated as defined in Section 01500 – Temporary Facilities and Controls.
 - g. Potential upland staging areas for development of the site plan are shown on the Drawings. The site plan shall clearly indicate the upland staging and access areas, and proposed dates and durations of their use.
 - h. The Contractor shall obtain and include copies of all required permits for the offsite transloading and disposal facility in the Contractor’s Project Approach.
 - i. The Contractor’s Project Approach shall include the qualifications of Contractor’s independent surveyor subcontractor.
2. Baseline Schedule per Section 01324 – Bar Chart Schedule.
 - a. A baseline schedule shall be submitted by the Contractor for each construction element as part of the RAWP.
 - b. The Schedule shall be periodically updated as required in Section 01324 – Bar Chart Schedule. The RAWP shall include a table or chart showing estimated production rates and equipment necessary for the Contractor to meet the required construction milestones and each work element listed in the schedule as well as other specific details contained in Section 01324 – Bar Chart Schedule.
 3. Site-Specific Construction Health and Safety Plan. The Site Specific HASP shall be prepared in accordance with and implement the requirements of Section 01860 – Safety Management.
 4. Traffic Control Plan. This plan shall be prepared in accordance with and implement the requirements of Section 01570 – Traffic Control.
 5. Green and Sustainable Remediation (GSR) Plan
 - a. The Contractor shall submit a GSR Plan aimed at promoting sustainable technologies and practices for implementing the cleanup. The GSR Plan shall include a description of all of the GSR elements in the Contractor’s approach as outlined in the Drawings or in these Specifications or independently proposed by the Contractor, including:

- (1) Methods for emission reduction controls and policies at a minimum shall include:
 - (a) Contractor shall use cleaner engines, cleaner fuel, and cleaner diesel control technology on diesel powered equipment with engines greater than 50 horsepower where practicable.
 - (b) Use of cleaner engines, cleaner fuel, and cleaner diesel control technology on diesel powered equipment with engines greater than 50 horsepower where practicable, including non-road engines meeting Tier 1 or cleaner standards and on-road engines meeting 2004 on-highway Heavy Duty Engine Emission Standards or cleaner
 - (c) O&M Inspection schedules for equipment to maximize efficiency
 - (d) Use of electrical power where possible for activities such as for water treatment and operation of support facilities
 - (e) Idling time limit of 5 minutes before engines on trucks and equipment shall be shut off. This shall include turning off all diesel engines on construction equipment when not in active use. Engines may be permitted to idle after 5 minutes should:
 - (i) Vehicles be stationary in traffic
 - (ii) It be necessary to operate auxiliary systems associated with the equipment
 - (iii) It be necessary to maintain safe operation of the truck or equipment
 - (iv) It be necessary in the event of repair of the truck or equipment.
- (2) Methods for transportation minimization and green transportation at a minimum shall include:
 - (a) Contractor shall offer incentives for use of public transportation or carpooling by site workers.
- (3) Methods of recycling, reuse, and waste minimization at a minimum shall include:
 - (a) Installation of used sheet piles on the site where practical, provided, the piles have sound interlocks

- (b) Segregation and recycling of site demolition debris as described in Section 02220 - Site Demolition
 - (c) Use of local and recycled materials when possible
 - (d) Limiting the use of water in dust control by preventing over-watering or runoff
 - (e) Limiting the use of water in decontamination through onsite water treatment and reuse.
- (4) Use of local materials and facilities
- (5) Metrics and methods to track emission reductions and other GSR elements
 - (a) Contractor may choose to use software models and supplemental materials in evaluating the environmental “footprint” of the site remediation.
 - (b) Contractor shall list calculations showing the reduction in emissions based on the GSR elements listed in this Section.
- (6) Justification for any proposed approach that does not meet the minimum GSR requirements included in the Contract documents
- (7) Environmentally sustainable business practices
 - (a) The Contractor will be required to generate and manage construction related documentation, including, but not limited to, document submittals, requests for information, correspondence, schedules, and Drawings. This construction related documentation shall be done using a web-based electronic data management process.
- 6. Pollution Prevention Plan. This plan shall be prepared in accordance with and implement the requirements of Section 01631 – Pollution Prevention Planning and Execution.
- 7. Contractor's Erosion and Sedimentation Control Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02270 – TESC Planning and Execution.
- 8. Construction Quality Control Plan. This plan shall be prepared in accordance with and implement the requirements of Section 01451 – Quality Control; Testing Laboratory Services.
- 9. Transportation and Disposal Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02111 – Waste Material Disposal.
- 10. Survey Plan. This plan shall be prepared in accordance with and

- implement the requirements of Section 01722 – Surveying.
11. Excavation Support System Plan. This plan shall be prepared in accordance with and implement the requirements of Section – 02217 Contractor Designed Excavation Support (Shoring).
 12. Construction Water Management System Plan. This plan shall be prepared with and implement the requirements of Section 02245 Construction Water Management System.
 13. Settlement Monitoring Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02340 – Earthwork Instrumentation and Monitoring.
 14. Dewatering Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02525 – Dewatering.
 15. Earthwork Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02300 – Earthwork.
 16. Soil Stockpile Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02114 – Stockpiling and Loading of Contaminated Soil.
 17. Dredging Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02325 – Dredging.
 18. Water Quality Monitoring Plan. The Contractor shall finalize the draft Water Quality Monitoring Plan included in the exhibits to incorporate the dredging plan and add all required attachments.
 19. Demolition Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02220 – Site Demolition.
 20. Deconstruction Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02227 – Deconstruction.
 21. Vessel Management Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02325 – Dredging.
 22. Sheet Pile Driving Plan. This plan shall be prepared in accordance with and implement the requirements of Section 02454 – Sheet Piling.
 23. Construction Checklist. The Contractor shall develop and submit a Construction Checklist based on requirements of the contract documents and include items that should be in place and operational prior to the start of any ground breaking activities.
 - a. The Construction Checklist shall focus on required site

- controls and Health and Safety requirements necessary to begin work.
- b. The Construction Checklist shall be utilized to track all items to be complete before work begins.
24. Contractor's Daily Construction Report Form. The Contractor shall provide a form acceptable to the Engineer to track project information and details about the weather, workforce, and equipment along with a summary of all schedule activities worked on each day.
- a. Divide the activities worked on by trade and employer. Identify activities by activity number per the accepted schedule. Identify activities that are behind schedule. State the cause and amount of the delay and propose what action is necessary to bring the activity back on schedule. If multiple daily shifts are used, submit a report for each shift. Present the results of any QC inspections, tests or other monitoring activities, such as water quality monitoring or treated water discharge monitoring.
 - b. The reports shall document any noncompliant conditions, communication of such conditions to the Engineer, and correction actions taken to attain compliance.
 - c. Submit the completed report to the Resident Engineer no later than start of work the next workday. Submit a daily report for each day that you are on-site.
 - d. Include required information for all subcontractors at any tier working on the Contract in addition to Prime Contractor.
 - e. The Contractor's Daily Construction Report shall include information related to the following items:
 - (1) Daily Quality Control Reports –Section 01451 – 1.07(B)
 - (2) Daily Traffic Report – Section 01570 – 3.02(A)(2)(f)
 - (3) Hazardous Material Usage – Section 01631 – 3.06(A)(5)
 - (4) Pollution Prevention Plan Education Minutes – Section 01631 – 3.11(A)
 - (5) Construction Safety Inspection Report – Section 01860 – 1.05(B)(10)
 - (6) Weekly Safety Meeting Topics and Attendees – Section 01860 – 1.05(B)(11)
 - (7) Weekly Disposal Report – Section 02111 – 1.04(C)
 - (8) Sloping and Benching, including acceptable grades, dimensions, soil types, and soil conditions – Section 02217 – 3.03(D)

- (9) Vehicle Decontamination Inspection Log – Section 02223 - 3.02(E)
- (10) Water Treatment Activities Daily Report – Section 02245 – 1.05(B)(5)
- (11) Temporary Erosion and Sedimentation Control Inspection Records – Section 02270 3.02(A)(7)
- (12) Daily Excavation Report – Section 02300 – 1.03(B)
- (13) Backfill Compaction Test Results – Section 02300 3.04(D)
- (14) Daily Dredge Report – Section 02325 – 1.03(C)
- (15) Settlement Monitoring Data – Section 02340 – 1.08
- (16) Driving Records for Sheet Pile -Section 02454 – 1.03(B)
- (17) Driving Records for Steel Pile – Section 02460 – 1.04(E)
- (18) Dewatering Observation Records – Section 02525 – 3.10(B)(3)
- (19) Regulated Buildings Material Records – Section 01315 - 1.03 (B); Section 01315 - 1.05 (A and B)
- (20) Deconstruction components – Section 02227 - 1.04.B.

F. Environmental Compliance Personnel

1. The Contractor shall designate a sufficient number of Environmental Compliance Personnel as necessary to maintain regulatory and contract compliance at all times. These employees shall be responsible for overseeing and managing all requirements of this section. At a minimum, the Contractor shall have a Project Engineer, an ECM, and an Environmental Compliance Inspector (ECI) per Section 01308 – Contractor’s Project Organization. Responsibilities shall include:
 - a. Project Engineer
 - (1) The Project Engineer shall be responsible for overseeing the ECM and ECIs as well as being responsible for development, management, submittal and maintenance of the RAWP for the life of the Contract and ensuring compliance with all requirements of this section.
 - (2) The final RAWP shall be stamped by the Project Engineer in addition to individual sheets of the RAWP including, but not limited to, hydraulics, trenching, dewatering, and stormwater management calculations.
 - (3) The Project Engineer shall attend all RAWP

meetings, as directed by the Engineer.

- b. Environmental Compliance Manager
 - (1) The ECM shall report to the Project Engineer and shall have direct, day-to-day control and oversight of the RAWP.
 - (2) Under the direction of the Project Engineer, the ECM shall oversee all inspections, documentation, recordkeeping, reporting, submittals, modifications, schedules and other requirements of the RAWP, and as directed by the Engineer.
 - (3) The ECM shall:
 - (a) Attend all RAWP meetings, as directed by the Engineer.
 - (b) Have no duties other than daily oversight of the RAWP.

- c. Environmental Compliance Inspector(s)
 - (1) The ECIs shall report to the ECM and shall inspect the project elements to verify and document compliance with this section.
 - (2) The ECI shall have no duties other than inspecting the project for RAWP compliance.

I. Recordkeeping

- 1. Reports summarizing the scope of inspections, the personnel conducting the inspection, the date(s) of the inspection, major observations relating to the implementation of the RAWP, and actions taken as a result of these inspections shall be prepared and submitted to the Engineer in the Contractor's Daily Construction Report.
- 2. All inspection reports shall be kept on-site during the life of the project and available for review upon request of the Engineer and/or the EPA.
- 3. Copies of all inspection records shall be submitted to the Engineer daily.
- 4. In addition to the day to day activity summary of activities and all other information required to be included in the reporting, the reports shall contain the following specific language:
 - a. A statement that, in the judgment of the person conducting the site inspection, the site is either in compliance or out of compliance with the requirements of the RAWP.
 - b. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance, as well as a schedule of implementation. If the site inspection indicates that the site is out of compliance, the ECM shall notify the Engineer immediately.
 - c. Name, title, and signature of the ECM or ECI

conducting site inspection and the following statement:
“I certify that this report is true, accurate, and complete,
to the best of my knowledge and belief.”

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

A. Measurement for the “Removal Action Work Plan” will be as a unit.

4.02 PAYMENT

A. Payment for “Removal Action Work Plan” will be made at the contract lump sum price as stated in the Schedule of Unit Prices and shall be full compensation for furnishing all labor, equipment, tools, and materials necessary to develop, implement, modify, revise, and maintain the “Removal Action Work Plan” as detailed on the Drawings and specified herein through the duration of the Contract, with the exception of items measured and paid separately. Payments will be made as follows:

1. Upon final acceptance of the “Removal Action Work Plan”, 25%.
2. After Notice to Proceed and before issuance of Substantial Completion, 50% will be pro-rated and paid monthly for all documentation requirements of the RAWP. Non-compliance will result in the withholding of payment for the month of non-compliance.
3. Upon Substantial Completion, the remaining 25% will be paid.

End of Section

PART 1 GENERAL

1.01 SUMMARY

- A. General: The list of environmental laws set forth in this section is provided pursuant to the Regulatory Requirements which pertain to this scope of work. The Contractor shall fully comply with the provisions of such laws as they may apply to the Work.

1.02 REGULATORY REQUIREMENTS

- A. This project is under the jurisdiction of Environmental Protection Agency (EPA) Region 10. Project work will be performed according to guidance from EPA; therefore any designated Applicable or Relevant and Appropriate Requirements (ARARs) for this Superfund site will be approved and regulated by EPA. The non-time-critical removal action (NTCRA) at T-117 will be conducted in general accordance with the provisions of relevant local, state, and federal regulations.
- B. The Contractor is referred to the Final Design Report Phase I: Sediment and Upland Cleanup LDW Superfund Site T-117 Early Action Area, dated October 9, 2012 for a full description of the ARARs for each medium, the standards, and substantive requirements. Contract documents shall supersede the Final Design Report in the event of any conflicting information. Any conflicting information shall be communicated to the Engineer and the EPA. The citations are noted below.
 - 1. Sediment Management Standards (WAC 173-204)
 - 2. Model Toxics Control Act (WAC 173-340)
 - 3. Federal Water Pollution Control Act/ Clean Water Act (33 USC 1251-1376; 40 CFR 100-149, and 230; 33 CFR 320, 323, 325, and 328)
 - 4. Washington Water Pollution Control Act – State Water Quality Standards for Surface Water (RCW 90.48; WAC 173-201A)
 - 5. Section 10 of the Rivers and Harbors Act (33 CFR 320 and 322)
 - 6. Washington Hydraulics Code (WAC 220-110)
 - 7. Toxic Substances Control Act (40 CFR 761)
 - 8. Washington Dangerous Waste Regulations (WAC 173-303)
 - 9. Solid Waste Disposal Act (42 USC Sec. 325103259, 6901-6991), as administered under 40 CFR 257, 258
 - 10. Minimum Functional Standards for Solid Waste Handling (WAC 173-304)
 - 11. Solid Waste Handling Standards (WAC 173-350)
 - 12. Washington State Clean Air Act (RCW 70.94)
 - 13. General Requirements for Air Pollution Sources (WAC 173-400, Puget Sound Clean Air Agency [PSCAA] Regulations I and III)
 - 14. National Pollutant Discharge Elimination System (NPDES; 40 CFR 122 and 125)
 - 15. State Discharge Permit Program (WAC 173-216 to -220)
 - 16. National Pretreatment Standards (40 CFR 403)

17. City of Seattle Wastewater treatment requirements (Metro District Wastewater Discharge Ordinance)

1.03 LIST OF ENVIRONMENTAL STATUTES, ORDINANCES AND REGULATIONS

- A. General: The following is a list of federal, state, and local environmental statutes, ordinances, and regulations that affect or may affect this Project and are related to the prevention of environmental pollution and the preservation of public natural resources. This list is not to be considered all-inclusive, nor shall the absence of a law from this list be construed to relieve the Contractor from complying with such law, to the extent it is applicable to the Contractor.
- B. Federal Statutes, Ordinances, and Regulations
 1. National Environmental Policy Act: Establishes a Federal policy on the environment and requires the appropriate federal agency, in any federally assisted or authorized project, to prepare an environmental impact statement for any "major action significantly affecting the quality of the human environment".
 2. Resource Conservation and Recovery Act - The Resource Conservation and Recovery Act (RCRA) applies to the identification, generation, transportation, and disposal of any hazardous wastes generated at T-117. All wastes generated from the property will be characterized and disposed of at the appropriate disposal facility (e.g., Subtitle C or Subtitle D), in accordance with RCRA. Specific sections of RCRA which may apply are:
 - a. 40 Code of Federal Regulations (CFR) 260 - Hazardous Waste Management System- General
 - b. 40 CFR 260.10 & 260.24 – Characteristics of hazardous wastes
 - c. 40 CFR 261 - Identification and Listing of Hazardous Wastes
 - d. 40 CFR 262 - Standards Applicable to Generators of Hazardous Waste
 - e. 40 CFR 262.20, 262.21, 262-22, 262-23, 262-30, 262.31 and 262.32 – Hazardous waste manifesting and labeling
 - f. 40 CFR 263.30 and 263.21 – Off-site transport of hazardous waste
 - g. 40 CFR 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
 - h. 40 CFR 268 - Land Disposal Restrictions.
 3. Toxic Substances Control Act- Toxic Substances Control Act (TSCA; 40 CFR 761) establishes prohibitions of and requirements for the manufacture, processing, distribution in commerce, use, cleanup, storage, and disposal of PCBs after January 1, 1978. TSCA regulations for PCBs apply to materials containing concentrations of PCBs equal to or greater than 50 parts per million (ppm). EPA evaluates the form and concentration of PCBs "as found" at the site, which is subject to disposal requirements set forth in 40 CFR 761.60(a) (2) to 761.60(a) (5) and storage requirements of 40 CFR 761.65. Since PCBs are the primary hazardous COCs at T-117, this cleanup is being conducted in accordance with TSCA. As TSCA (Toxic

Substances Control Act - 40 CFR 761) materials will be generated at the property, RCRA would apply to these wastes.

4. EPA Off-Site Rule- EPA has developed the Off-Site Rule to avoid having wastes from CERCLA actions contribute to present or future environmental problems. This is accomplished by directing CERCLA wastes to facilities determined to be environmentally sound. EPA must make an affirmative determination that a receiving facility is in compliance and that releases are controlled before a facility may receive CERCLA wastes. EPA's Off-Site Rule acceptability status is dynamic in nature. Region 10 conducts a verification of continued acceptability on facilities that have previously been found acceptable under the rule. This occurs any time an Off-Site Rule status is requested and the previous check was conducted more than 60 days prior. All the receiving landfill and recycling facilities selected for this project will be in compliance with all EPA requirements under the Off-Site Rule. EPA will be notified and will need to approve each receiving disposal and recycling facility.
5. National Contingency Plan -The National Oil and Hazardous Substances Pollution Contingency Plan, commonly called the National Contingency Plan (NCP), is the federal government's blueprint for responding to both oil spills and hazardous substances releases. The authority to proceed with the cleanup is provided by the NCP.
6. Federal Clean Water Act (Ambient Water Quality Criteria) -The Federal CWA (40 CFR 100-149 and 40 CFR 131) establishes ambient water quality criteria for the protection of aquatic organisms and human health. Ambient criteria developed under the CWA are non-enforceable guidelines that identify protective concentrations of various chemical constituents in surface waters. Stormwater runoff from the site must comply with surface criteria during cleanup at the point of discharge into surface water.
7. National Pollutant Discharge Elimination System-The National Pollutant Discharge Elimination System (NPDES; 40 CFR 122 and 125 and Washington State NPDES Program WAC 173-216 and -220) establishes standards for discharges of point sources, piped stormwater, or runoff into surface waters. Any discharge to the LDW will be under the substantive requirements of an NPDES permit, in coordination with Ecology. NPDES requirements do not apply to any water collected that will be transported to an offsite commercial facility.
8. Endangered Species Act -The Endangered Species Act (ESA) (7 U.S.C. § 136, 16 U.S.C. § 460 et seq.) of 1973 is designed to protect critically imperiled species from extinction and to protect the ecosystems upon which they depend. The ESA forbids federal agencies from authorizing, funding, or carrying out actions which may jeopardize endangered species. Potential adverse effects to threatened and endangered species, as well as conservation measures intended to prevent them, are discussed in the Section 7 ESA Consultation Memorandum (Appendix I). No threatened or endangered resident species are known to occupy the T-117 EAA; however, migratory salmonids use the LDW as a migratory corridor. Federal agencies must confer with the

- National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service (USFWS) on any action that may impact listed species.
9. Occupational Safety and Health Administration -Forty-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) training, with current annual 8-hour refresher, will be required for all onsite workers and other workers with potential for handling or exposure to site soil or groundwater, with the exception of truck drivers and surveyors (unless their activities require potential exposure to contaminated materials). Truck drivers will receive orientation on the Site Specific Construction Health and Safety Plan; no other health and safety training will be required, provided that all out-of-cab activities are restricted to covering of loads, necessary vehicle inspections, and signing of manifests.
 10. U.S. Fish and Wildlife Coordination Act -This act prohibits water pollution with substances deleterious to fish, plant, or bird life. The Cleanup will remove contaminated materials, the Sediment Area will be backfilled with clean fill, and the Upland Area site completion will include a clean fill cover. Discharge of water from the project area and surface water outside of the dredging dilution zone will meet water quality criteria protective of wildlife.
 11. Transportation Requirements-The United States Department of Transportation (DOT) regulates transportation of hazardous wastes. Some soil will contain PCBs above TSCA criteria (greater than 50 ppm) and will be transported in compliance with all applicable laws and regulations.
 12. Migratory Bird Treaty Act-The Migratory Bird Treaty Act (16 U.S.C. 703-712) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under this act, taking, killing, or possessing migratory birds is unlawful.
 13. National Historic Preservation Act-The National Historic Preservation Act (NHPA; 16 U.S.C. 470) established an independent federal agency, the Advisory Council on Historic Preservation, to oversee actions licensed by the federal government which may have an effect on properties listed in the National Register of Historic Places, or eligible for such listing.
 14. Archaeological Resources Protection Act-The Archaeological Resources Protection Act is specifically designed to prevent looting and destruction of archeological resources. If archeological resources are encountered as part of the cleanup, the Contractor shall comply with all the requirements of the Archaeological Monitoring and Discovery Plan.
 15. Native American Graves Protection and Repatriation Act -The Native American Graves Protection and Repatriation Act, 1990 Public Law 101-601, provides for the protection of Native American graves and other cultural items. If the items are excavated, the Contractor shall comply with all the requirements of the Archaeological Monitoring and Discovery Plan.
 16. Clean Water Act: Establishes a federal policy on water quality and directs each state to promulgate water quality laws and regulations to achieve the goals set forth in the act. In addition, the act requires a permit for discharge of pollutants and sets forth oil spill prevention provisions and penalties

17. The Marina Mammal Protection Act (MMPA) prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas. It also prohibits the importation of marine mammals and marine mammal products into the U.S. National Marine Fisheries Service (NMFS) is charged with protecting whales, dolphins, porpoises, seals, and sea lions. Walrus, manatees, otters, and polar bears are protected by the USFWS. The MMPA established a moratorium on the taking of marine mammals in U.S. waters. It defines "take" to mean "to hunt harass, capture, or kill" any marine mammal or attempt to do so.
 18. Rivers and Harbors Act of 1899: Provides that discharge of refuse without a permit into navigable waters is prohibited.
 19. Port and Waterways Safety Act of 1972: Provides vessel design and construction standards to protect the marine environment.
 20. Comprehensive Environmental Response, Compensation, and Liability Act: Provides standards and procedures for the investigation and remedial activities to clean up hazardous substances which substances that have been discharged into the environment.
- C. State Statues, Ordinances, and Regulations:
1. Model Toxics Control Act - MTCA (RCW 70.105D, WAC 173-340) sets standards to identify, investigate, and clean up facilities where hazardous substances have come to be located. MTCA is an appropriate regulation to consider during cleanup of T-117.
 2. Sediment Management Standards - SMS (WAC 173-204) criteria are used to "reduce and ultimately eliminate adverse effects on biological resources and significant health threats to humans from surface sediment contamination".
 3. Washington Industrial Safety and Health Act -The Washington Industrial Safety and Health Act (WISHA; WAC 296-155) sets safety standards for construction. This code specifies health and safety standards for responding to releases or substantial threats of release of hazardous substances at hazardous waste sites.
 - a. Solid Waste Disposal Regulations -Minimum Functional Standards for Solid Waste Handling (WAC 173-304) are applicable to non-hazardous waste management generated during remedial activities, excavation, and disposal of solid wastes. Non-hazardous soil will be handled and disposed in accordance with these requirements.
 4. State Environmental Policy Act - The State Environmental Policy Act (SEPA) Chapter 43.21C RCW and related rules, WAC 197-11, require an environmental review of proposed project actions such as construction projects or adoptions of agency plans that may affect the environment. The purpose of SEPA is to fully and publicly disclose potential impacts, provide opportunity for public input, and ensure potential impacts are considered in decision-making. NEPA documents and procedures may be used to comply with SEPA requirements.
 5. Washington Hazardous Waste Management Act and Dangerous Waste Regulations- Washington Hazardous Waste Management Act (Chapter

70.105 RCW) and Dangerous Waste Regulations (WAC 173-303) set forth requirements for designating solid wastes to determine whether they are “dangerous waste” or “extremely hazardous waste” and for handling such waste. State and federal laws prohibit land disposal of certain hazardous or dangerous wastes.

6. Water Pollution Control Act -The Water Pollution Control Act (Chapter 90.48 RCW) establishes permitting requirements for point source discharges to surface waters of Washington State. It includes narrative and quantitative limitations for compliance with surface water standards.
 7. Hydraulic Code Regulations; Construction in State Waters -Regulations governing construction in State waters below the ordinary high water mark are established by RCW 77.55, Construction Projects in State Waters and by the Hydraulic Code rules, WAC 220-110. These regulations provide for protection of fish and shellfish during in-water construction. The substantive requirements of the regulations will be confirmed through consultation with the state Department of Fish and Wildlife and will be incorporated in planning and design of the cleanup.
 8. Shoreline Management Act -The Shoreline Management Act (RCW 90.58, and related rules) manages appropriate uses and developments along shorelines of the state via state-monitored, locally administered permitting programs (see additional discussion below related to the King County Shoreline Master Program). The act establishes preferences for water-dependent uses, protection of shoreline ecological resources, and public access with the shoreline jurisdiction, defined as aquatic areas and lands within 200 feet of the ordinary high water mark. Consistent with state Enrolled Senate Bill 1653, shoreline critical areas are regulated under the local Shoreline Master Program regulations.
- D. Local Statues, Ordinances, and Regulations:
1. Air Quality Requirements - Air quality requirements for workers are governed by OSHA, , and ambient air quality requirements for the Puget Sound region are governed by the Puget Sound Clean Air Agency (PSCAA). PSCAA Regulation I includes criteria for visual emissions, suspended particulates less than 10 microns in diameter, lead, and carbon monoxide.
 2. Puget Sound Clean Air Agency - Before beginning any demolition project in areas under the jurisdiction of the PSCAA, including King County, the following requirements apply Regulation III – Article 4: Asbestos Control Standards.
 3. King County Code -The Shoreline Master Program (King County Code [KCC] Title 25) manages construction within the shoreline district. Cleanup activities along the shoreline will be in compliance with these regulations. Potential public access requirements of the Shoreline Master Program are not applicable because the cleanup project does not establish a new/future use of the site.
 4. The King County Clearing and Grading Code (KCC 16.82) regulates clearing and removal of vegetation, excavation, grading, and earthwork within unincorporated King County, as well as stormwater, erosion and

sedimentation, and aquatic habitat impacts/loss. It also protects water quality from adverse impacts associated with erosion and sedimentation and critical areas from adverse clearing and grading activities. The RAWP and CESCOP will define measures that provide substantive compliance with these regulations. Required TESC measures will include specifications for final stockpile contours, clearly identified locations for staging and stockpiles, and clearly identified locations for truck wheel wash. Erosion control BMPs will be installed downslope and adjacent to all disturbed areas and will comply with applicable portions of the state Stormwater Management Manual for Western Washington and the King County Surface Water Design Manual.

5. The King County Surface Water Management Program (KCC Title 9) protects the County's surface water and groundwater quality by providing minimum requirements for reducing and controlling the discharge of contaminants. This code prohibits the discharge of contaminants into surface water, stormwater, and groundwater and outlines preventive measures to restrict contaminants from entering such waters. Stormwater infiltration and control measures consistent with applicable portions of the King County 2009 Surface Water Design Manual will be installed after interim site completion.
6. King County Building and Construction Standards (King County Title 16) and Washington State Building Code (WAC 51-50; International Building Codes 105.1 adopted by reference with exceptions noted) regulate the demolition of buildings and structures and the installation of the debris deflector, marina dock piles (if floats are removed), and sheet pile wall. The Contractor will be required to maintain a current Washington State Contractor's license.
7. King County Noise Code (King County Title 12.88) governs construction through the timing restrictions and the noise limits included in the King County noise code requirements (KCC, Chapter 12.88). This rule defines maximum permissible sound levels based on the zoning of the source. Note that receiving properties adjacent to the site are within the City of Seattle and would be subject to limits established in the SMC.
8. Seattle Municipal Code -SMC; Chapter 25.08 restricts maximum permissible sound levels for sound sources located within the City of Seattle. For the purposes of this project, it will be assumed that construction noise will be generated from an industrial source (excavation on lands zoned as industrial) with the receiving property being residential (representing the residents of the South Park neighborhood and the marina). In addition, the noise-producing activity is Construction, as defined by the Seattle Municipal Code. Using these assumptions, and based on the applicable codes, the maximum permissible sound level for the residential area is 85 dB(A) for Industrial to Residential noise generation between the hours of 7:00 am and 10:00 pm on weekdays and 9:00 am and 10:00 pm on weekends and legal holidays (New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, and Christmas Day). The maximum permissible sound levels are measured from the real property of another person or at a distance of 50 ft from the equipment, whichever is greater. Specific permissible sound levels

associated with various equipment used on construction sites are described in SMC 25.08.425.

1.04 REQUIRED SUBMITTALS

- A. Specific submittal requirements are called out in the applicable specification section.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. The provisions of this section shall apply to the Contractor, subcontractors at all tiers, suppliers and all others who may have access to the work site by way of the contractor's activities.
- B. Failure to implement, maintain, and/or comply with the accepted Final RAWP, or by order of the Engineer; or failure to conduct project operations in accordance with this specification section will result in the suspension of the Contractor's operations by the Engineer in accordance with Section 00700 – General Conditions, paragraph G-10.04.
- C. The Contractor shall be solely responsible for any damages, fines, penalties, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this Section.
- D. Any damages, fines, penalties, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section will be deducted from payment due by Modification.
- E. Any time and material costs incurred by the Port due to damages, fines, penalties, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section will be deducted from payment due by modification.
- F. The Contractor shall be solely responsible for any schedule impacts from damages, fines, penalties, levies, judgments, or stop work orders incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section. The project schedule will not be changed to accommodate the time lost.

1.06 AUTHORITY OF ENGINEER

- A. The Engineer has the authority to limit clearing, excavation, demolition, dredging filling and any other Contractor operation, and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, wetlands or other areas of water impoundment.
- B. In the event that any pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or are ordered by the Engineer, such work shall be performed by the Contractor at his/her own expense.
- C. In the event that areas adjacent to the work area are suffering degradation due to erosion, sediment deposit, water flows, or other causes, the Engineer may stop construction activities until the situation is rectified.
- D. In the event that the Washington State Department of Ecology or the Environmental Protection Agency issues an Inspection Report, a Notice of Non-

Compliance, Notice of Violation or Enforcement Action, the Engineer will stop all construction activities until it has been determined that the project is in compliance. The number of working days will not be changed to accommodate the work stoppage. All costs associated with work stoppages, mitigation of the event, and/or training shall be paid by the Contractor.

- E. In the event that the Contractor discharges storm water, ground water, or process water to storm drains, ditches, gutters or any conveyance that discharges to a receiving water as defined by the Department of Ecology without prior approval of the Engineer, the Engineer will stop all construction activities and require that all parties involved in the unapproved discharge be removed from the project for a time determined by the Engineer. The project schedule will not be changed to accommodate the time lost.
- F. All costs associated with mitigation of the unauthorized discharge, including but not limited to, cleaning storm system conveyances, work stoppages, training and/or removal of personnel from the project shall be paid by the Contractor.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 QUALITY CONTROL FOR COMPLIANCE

- A. All of the work under this contract must be fully tested in accordance with these Specifications. The Contractor shall furnish all labor and materials for the testing of the water quality, backfill compaction and other units which he has constructed, or which he has modified, and all such costs for labor and material shall be borne by the Contractor.
- B. Comply with the Quality Control provisions as specified herein. Perform quality control inspection required by this contract unless specifically designated to be performed by the Port.
- C. Contractor Quality Control (QC) shall consist of plans, procedures, and organization necessary to provide materials, equipment, workmanship, fabrication, construction, and operations that comply with the requirements of the Contract Documents. Contractor QC shall cover construction operations, including fabrication both on-site and off-site, and shall be keyed to the construction schedule.
- D. The Contractor shall provide field inspection services and sampling required for acceptance testing not completed by the Engineer to ensure compliance of the completed work with the requirements of the contract documents. Specific acceptance tests to be performed by the Contractor's testing laboratory are as listed in individual specification sections listed in the attached Inspection and Testing Matrix.
- E. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

1.02 SAMPLING AND TESTING

- A. Initial sampling and testing necessary to secure approval of materials shall be the Contractor's responsibility.
- B. Subsequent sampling and testing, required as the work progresses to insure continued control of materials and compliance with all of the requirements of the contract documents, shall also be the responsibility of the Contractor.
- C. Contractual requirements for testing shall include:
 - 1. General Conditions
 - 2. Supplementary Conditions
- D. Individual tests required in accordance with the pertinent sections of these Specifications and the contract drawings, where applicable. Sampling and testing necessary to provide compliance with the requirements of the specifications include, but shall not be limited to, the following:
 - 1. Surface water quality during dredging.
 - 2. Discharge water quality from the construction water treatment system.
 - 3. Backfill soil and sediment chemical testing.
 - 4. Field compaction and control densities.

1.03 SERVICES OF AN INDEPENDENT TESTING LABORATORY

- A. It shall be the Contractor's responsibility to obtain and pay for the services of an approved independent laboratory to take all samples and perform all tests necessary for initial approval of materials. The Contractor shall furnish electronic certified copies of the results of all tests to the Engineer. No materials shall be placed without prior acceptance by the Engineer.
- B. It shall be the Contractor's responsibility to obtain and pay for the services of an approved independent laboratory to perform all analytical testing of water samples taken to demonstrate compliance with the Water Quality Certification (WQC).

1.04 SURVEILLANCE BY THE ENGINEER

- A. All items of material and equipment shall be subject to surveillance by the Engineer at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed herein and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to surveillance by the Engineer at the site for the same purpose.
- B. Surveillance by the Engineer does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.
- C. The Engineer may perform acceptance testing of all or portions of the Work at his/her discretion.

1.05 COORDINATION MEETING

- A. As part of the Preconstruction Meeting the Contractor shall meet with the Port's Representatives to discuss the Contractor's Quality Control System. Items for discussion shall include:
 - 1. Identification of the Contractor's QC Representative (CQC)
 - 2. Persons responsible for shop drawing review
 - 3. Forms of recording the Contractor's QC program
 - 4. Testing administration
 - 5. Fabrication, on-site and off-site
 - 6. Interrelationship of the Contractor and Port's Quality Control administration

1.06 CONTRACTOR QUALITY CONTROL REQUIREMENTS

- A. Quality Control Organization: Identify a Contractor QC Representative (QCR), who shall be on work site at all times during progress of the Work with complete authority to take action necessary to ensure compliance with the Contract Documents. Staff the Contractor's QC organization at a satisfactory level as required to perform the activities outlined in this Section.
- B. Qualifications of QCR

1. Must have prior experience as a Project Engineer, QCR, Site Superintendent, or inspector on a project of comparable size, scope, and complexity to this project
 2. Must be approved by the Engineer before work on this Contract can begin
 3. Performance will be judged principally on the timelines, accuracy, and completeness of their assessment of the condition of the elements of the work. The Engineer will monitor the performance of the QCR and if they fail to perform in accordance with the requirements of this specification, they will be replaced. Contract work will not be permitted to be performed without an acceptable QCR, unless specifically authorized by the Engineer.
 4. The Contractor Quality Control Representative shall have the following experience:
 - a. Prevention, control, and clean up of construction-caused pollution from petroleum, hazardous materials, and construction wastes
 - b. Knowledge of basic hazard and risk assessment techniques
 - c. An understanding of basic hazardous material terms
 - d. Ability to perform basic control, containment, and confinement operations within the capabilities of the resources and personnel protective equipment available
 - e. Installation, inspection, maintenance, and removal of Pollution
- C. The Contractor's Quality Control Representative shall be responsible for coordinating the Chapter 17 UBC special inspections. The CQC Representative shall:
1. Prepare a schedule of the special inspections required.
 2. Notify the Port's special inspector 24 hours in advance of the requirement for special inspections.
 3. Coordinate the work to assure obstructions, such as form work, are not put in place until the required special inspections have been performed.
 4. Monitor the correction of all discrepancies noted by the Special Inspector.
 5. Note all special inspections and correction of discrepancies noted by the special inspector in the Contractor's Daily Construction Report.
- D. Control of On-Site and Off-Site Construction: Contractor's Quality Control system shall include the following phases of control and management for definable features of work:
1. Pre-installation Meeting and Inspection Phase: A Pre-installation Meeting will be held prior to beginning work on each definable feature of work in Division 2.
 2. In-Process Inspection Phase: The follow-up phase shall be performed continuously to verify that quality standards are maintained throughout the project. Adjustment to control procedures may be required based upon the

results of this phase and control testing. Report the results of the inspection in the daily Contractor QC report.

3. Final Inspections: Final Inspections will be scheduled by the Port's Representative after the Contractor' QC Representative notifies the Engineer that the facility and its systems are complete and satisfactory.

E. Preparation Meetings

1. The Contractor will conduct a meeting with the subcontractor, Port, Contractor quality control and safety personnel, and any appropriate material suppliers at the beginning of each phase of the work. Preparation meetings will be required for every specification section and as required by the Engineer. The intent of this meeting is to review submitted and approved materials, sequence of field activities, contract details, and potential safety hazards before any problems occur in the field. Field work shall not commence prior to this meeting.
2. The Contractor should submit a list of preparation meetings which will be held during the project and an anticipated schedule for these meetings. This list shall be submitted for approval by the Engineer as part of the Quality Control Plan as part of the. Preparation meeting agenda should cover:
 - a. Introduction of responsible parties.
 - b. Discussion of submitted and approved materials.
 - c. Status of material and equipment delivery.
 - d. Preview of areas where work will begin.
 - e. Brief outline of the construction procedures and interface with existing work.
 - f. Quality control tests scheduled for the phase.
 - g. Job hazard analysis.
 - h. Checklist for quality control activities during the phase.

1.07 SUBMITTALS

- A. The Contractor shall submit a project specific Contractor Quality Control Plan as part of Section 01400 Removal Action Work Plan. This plan shall include, as a minimum:
 1. Statement of company QC philosophy and policy.
 2. Company organization and designation of responsibility of QC activity at both corporate and job site level.
 3. Qualifications of QC personnel.
 4. Employee QC awareness.
 5. Procedure for incorporating all subcontractors' QC plans into Contractor QC plan.
 6. Description of routine daily and periodic QC activities.

7. Description of examination, testing or inspection activities, including certifications and reports.
 8. Procedure to control design changes and revisions.
 9. Submittal and shop drawing control procedures.
 10. Procedure for nonconformance reporting and disposition.
 11. Procedure for control at off-site fabrication or production shops.
 12. List of publications or references governing work on this job site.
 13. Exhibits of any QC forms or checklists routinely used.
 14. A line and grade survey controls plan.
- B. Daily Quality Control Reports: Contractor's QC Representative shall maintain daily Quality Control (QC) Reports for each workday and shall submit copies in the Contractor's Daily Construction Report. QC Reports shall be factual records containing numerical data of the Work and quality control activities. Submit QC Reports on approved forms. The Contractor's QC Representative shall verify and sign all reports. Verification shall contain the statement that all supplies and materials incorporated in the work are in compliance with the terms of the contract except as noted.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

INSPECTION AND TESTING MATRIX

PROJECT: Terminal 117 Cleanup Sediment and Upland Area

TESTING REQUIREMENTS: Section 01860 - Safety Management

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Employee Monitoring	Chapter 296-843 WAC and in accordance with OSHA regulations.	1.06.B1 k and l	Varies	Contractor
Perimeter Community Health and Safety Monitoring	fugitive dust, total PCBs, VOCs, diesel exhaust, hydrogen sulfide, noise, and light requirements	1.04B	Varies	Engineer

TESTING REQUIREMENTS: Section 02114 - Stockpiling and Loading of Contaminated Soil

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Stockpile floor samples in areas overlying clean soils	Varies	3.07B	Per Stockpile	Engineer

TESTING REQUIREMENTS: Section 02085- Asbestos Abatement

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Negative Pressure Testing	Smoke Test	3.08.B	For each enclosure; at least once every shift	Contractor
Abatement Work Clearance	NIOSH 7400 procedures and WISHA referen	3.11	Minimum of one (1) sample will be taken at a flow rate of 1 to 12 liters per minute with a minimum of 1200 liters of air	Contractor

TESTING REQUIREMENTS: Section 02300 - Earthwork

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Confirmation Soil Sampling and Riverbank Sampling	Varies	1.03A.2 and 3.02H	Per grid cell and per riverbank transect	Engineer
Import Material	Varies for each imported material	2.01, 2.02, 2.03, 2.04 and 2.06	Per source material and prior to import to Site	Contractor
2006 Backfill Material	Meet Import Material Requirements	3.02C	Minimum of two (2) samples	Contractor
Compaction Testing	ASTM D1557, ASTM D1556, D2167, or D6938	3.04	Testing shall be performed at least once for each lift and at a minimum of one per 10,000 sf.	Contractor

TESTING REQUIREMENTS: Section 02325 - Dredging

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Water Quality Monitoring Plan	Will be determined in the Water Quality Monitoring Plan	1.02	Will be determined in the Water Quality Monitoring Plan	Contractor
Import Material	Varies for each imported material	2.03	Per source material and prior to import to Site	Contractor
Confirmation Sediment Sampling	Varies	3.02	Per dredge unit	Engineer

TESTING REQUIREMENTS: Section 02340 - Earthwork Instrument Monitoring

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Settlement Monitoring	Will be specified in the Settlement Monitoring Plan	3.03	Will be specified in the Settlement Monitoring Plan	Contractor

INSPECTION AND TESTING MATRIX

PROJECT: Terminal 117 Cleanup Sediment and Upland Area

TESTING REQUIREMENTS: Section 02245 - Construction Water Management System

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Effluent Samples - daily	turbidity, dissolved oxygen, temperature, residual flocculent, and pH using a field meter	1.04.D	Daily	Contractor
Effluent Samples - weekly	Laboratory analysis of PCB Aroclors, metals, and total suspended solids.	1.04D	Weekly	Contractor
Effluent Samples - GAC (before and after first GAC)	Laboratory analysis of PCB Aroclors	1.04D	Weekly	Contractor
Proof of Treatment	PAHs, TPH (diesel range), and for dioxins/furans	1.04D	Beginning of treatment and after 30 days of treatment	Contractor

TESTING REQUIREMENTS: Section 02992 - Hydroseeding and Landscaping

TEST	TEST PROCEDURES	SPECIFICATION REFERENCE	TESTING FREQUENCY	TESTING RESPONSIBILITY
FIELD TESTS				
Seed Testing		2.01		Contractor
Spraying	Test sheets or pans	3.02.D		Contractor

PART 1 GENERAL

1.01 SUMMARY

- A. Install, maintain, and operate all temporary facilities and controls as long as needed for the safe and proper completion of the work.
- B. Section Includes:
 - 1. Temporary Access
 - 2. Temporary Electricity
 - 3. Temporary Lighting
 - 4. Temporary Heating, Cooling, And Ventilating
 - 5. Communications
 - 6. Temporary Water
 - 7. Temporary Sanitary Facilities
 - 8. Barriers And Enclosures
 - 9. Fences
 - 10. Staging And Entrance Areas
 - 11. Protection Of Installed Work
 - 12. Security
 - 13. Progress Cleaning And Waste Removal
 - 14. Street Cleaning And Dust Control
 - 15. Field Offices And Sheds
 - 16. Removal Of Construction Facilities And Temporary Controls
 - 17. Use And Occupancy
 - 18. Noise Controls

1.02 TEMPORARY ACCESS

- A. South Park Marina
 - 1. Debris Deflector – The Contractor shall remove the existing debris deflector, install a temporary debris deflector, and install the new debris deflector by February 15, 2014.
 - 2. Piling Removal – The Contractor shall permanently remove the cluster of old unused piles located at the south end of the Marina, shown on the Drawings and “labeled shoreline pile removal required”.
 - 3. Bank Sediment Cleanup – An ingress and egress will be available for a three (3) week time period to occur between June 15, 2013 and September 30, 2013 to allow upland access to the Marina Removal Area, shown on the Drawings. The Contractor shall notify the Engineer six (6) weeks prior to the continuous access period selected by the Contractor.
 - 4. Temporary Floats – The Contractor shall identify which of the South Park Marina floats require relocation and which of the pilings require removal to

perform the dredging in the Sediment area shown on the Drawings. Notification to the Engineer is required at least 6 weeks prior to starting the work. Work can start no earlier than December 1, 2013. Replacement piles must be installed by February 15, 2014.

5. Dredging – The Contractor shall notify the Engineer 45 days prior to starting dredging activities. All dredging work shall be completed by February 15, 2014.
6. Marina Structures/Buildings –The Contractor shall photo-document the existing conditions, set survey control points, and provided optical survey monitoring during all excavation activities. The Contractor shall provide notice to the Engineer six (6) weeks prior to requiring access.
7. Restoration –The Contractor shall removal all equipment, supplies or materials in the temporary access area and shall pressure wash asphalt or concrete surfaces, repair in damages to the road surfaces, walk ways, structures/buildings, or to any vegetation.

B. Boeing Property

1. Truck Haul Route: The Contractor will have access to the areas of the Boeing Property shown on the Drawings for use for hauling between May 2013 and June 2014. This area will require clearing, grubbing and removal of fencing and guard rails for access routes. The Contractor shall install temporary fencing to separate trucks from cars and pedestrians.
 - a. The Contractor shall provide a vehicle ramp for access from the right-of-way for 16th Avenue South up to the Boeing parking lot (the “preferred/primary haul route”). The ramp shall be designed by a professional engineer registered in the state of Washington and suitable for use of loaded and unloaded trucks anticipated to be entering and leaving the site. The driving surface over the constructed ramp shall be pavement (not gravel) and designed to provide suitable traction for the vehicles and resistance to turning, stopping and vertical load forces anticipated to be applied by the trucks. Contractor shall limit access to the ramp to construction vehicles only. Ramp design and calculations shall be submitted for review prior to start of construction in the RAWP as part of the Traffic Control Plan detailed in Section 01570 – Traffic Control. The contractor will be responsible for any modifications or repair of the ramp required for their operations.
 - b. The Contractor shall protect all underground and overhead utilities which include placing steel plates over portions of the haul routes which intersect utilities, shown on the Drawings.
2. The Contractor shall use areas identified for construction trailers and employee parking between May 2013 and June 2014. The Contractor may install a temporary power drop, communication connections, restroom facilities, and automobile access (via South Trenton Street). No excavation equipment, staging, or hazardous material may be stored in these areas.
3. The Contractor shall place temporary fencing around all work areas and between May 2013 and June 2014 install a personnel gate and stairs in the

existing fence between the T-117 and Boeing property, shown on the Drawings.

4. Excavation Area on Boeing property: A small excavation area is located on Boeing property. The Contractor shall provide two (2) weeks notice to the Engineer before they access the area for removal and cleanup. The Contractor shall remove portions of the fencing for access and shall replace the fencing, to pre-existing conditions, once the excavation is completed along the Boeing property.
5. Restoration – Following completion of work, the Contractor shall replace or restore any areas of the Boeing property that were disturbed, to the Engineer's satisfaction. This includes, but not limited to, removing all structures, facilities, trailers, connections, equipment and materials associated with the work, removing any fill material on the Boeing property, restoring any vegetation and grades, repairing any damaged pavement, and locking the personnel gate and providing Boeing with all keys.

C. City of Seattle

1. The Contractor may use the right of way area shown on the Drawings for placement of temporary construction water treatment system and associated water treatment appurtenances, vehicular access, parking and queuing, and placement of portable restroom facilities between May 1, 2013 and April 30, 2014. No storage of hazardous materials or construction staging is permitted. A smaller sub set of this area, shown on the Drawings, must be returned to City of Seattle by October 31, 2013.
2. All existing stormwater conveyance pipes, catch basins, and associated structures along S Donovan St, Dallas Ave S, and 17th Ave S must be protected and maintained operational. Any damage to these structures resulting from Contractor's activities must be repaired immediately to ensure proper operation of the stormwater collection system and will not be included in the cost of this Contract. Any necessary repairs shall be approved by the Engineer.
3. Any temporary utility relocation required by the Contractor shall be approved in advance by the Engineer.
4. Any spills or leaks of chemicals, stormwater, or other water, wastewater or waste shall be cleaned up immediately by the Contractor.
5. Restoration - Following completion of the Work, the streets along Dallas Ave S, 17th Ave S, and S Donovan St shall be pressure washed and cleaned to remove any residual materials resulting from the Port's activities. Following removal of the temporary construction water treatment system, the Contractor shall restore the right of way area to conditions existing prior to occupancy. In addition, the paved area shall be pressure washed and cleaned prior to the Contractor vacating the site.
6. Seattle Public Utility (SPU) shall be provided access to discharge stormwater to the Duwamish Waterway in the event of a large storm or a period of extended rainfall that exceeds the capacity of the City of Seattle's storage tanks. SPU and/or the City of Seattle will be allowed to access the area with workers trained to access an environmental cleanup site. The

location of this access will be coordinated with the Engineer at the time the access is needed to accommodate T117 cleanup activities and the City of Seattle's required access.

1.03 TEMPORARY ELECTRICITY

- A. Contractor shall provide and pay for all power and associated services required from utility source.
- B. Provide power outlets for construction operations, with branch wiring and distribution boxes located as required. Provide flexible power cords as required.
- C. Provide main service disconnect and overcurrent protection at convenient location.
- D. Provide adequate distribution equipment, wiring, and outlets to provide single-phase, branch circuits for power and lighting.

1.04 TEMPORARY LIGHTING

- A. Provide and maintain fluorescent/LED lighting for construction operations to achieve minimum lighting levels required by the Safety Standards for Construction Work (WAC 296-155-165).
- B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- C. Maintain lighting and provide routine repairs.
- D. In public areas the Contractor shall provide temporary lighting to maintain lighting levels present prior to beginning of work at all times during all contractor operations.
- E. The Contractor shall comply with the following lighting minimum requirements::
 - 1. Residential receiving properties = 0.5 foot candles
 - 2. Industrial receiving properties = 1.0 foot candle

1.05 TEMPORARY HEATING, COOLING, AND VENTILATING

- A. Provide and pay for heating, cooling and ventilating devices and heat as needed to maintain specified conditions for construction operations.
- B. Permanent equipment shall not be used for temporary heating, cooling, or ventilating purposes. Prior to operation of temporary equipment for heating, cooling, or ventilating purposes, verify that installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.
- C. Maintain minimum ambient temperature of 50 degrees F and maximum temperature as required by Washington State Labor and Industries in indoor areas where construction is in progress, unless indicated otherwise in the specifications.
- D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gas.

1.06 COMMUNICATIONS

- A. Provide, maintain and pay for telephone and data services to Contractor's and Port's field offices throughout the duration of the project.

- B. The Contractor shall provide his own means of job site communication.
 - 1. Mobile communications equipment (i.e., Radio) must be approved in advance by the Engineer.
- 1.07 TEMPORARY WATER
 - A. Provide, maintain and pay for suitable quality water service required for construction operations.
 - B. Drinking water for employees shall be provided in accordance with WISHA requirements.
 - C. The Contractor shall notify the Engineer a minimum of 7 days in advance of disconnection of a temporary water connection.
 - D. Connections to potable water systems shall be made in accordance with all applicable rules and regulations.
 - E. Construction water shall be disposed of in accordance with Section 02245 – Construction Water Management System.
- 1.08 TEMPORARY SANITARY FACILITIES
 - A. Provide and maintain required facilities and enclosures per Local, State and Federal requirements.
- 1.09 FENCES
 - A. Provide a 6-foot-high chain link fence with gates around the perimeter of the site and as specified elsewhere in the Contract for security during the entire length of construction or unless approved otherwise by the Engineer.
- 1.10 STAGING AND ENTRANCE AREAS
 - A. In addition to the truck wheel wash requirements outlined in Section 02223 – Decontamination, the Contractor shall provide and maintain stabilized access to all staging and access areas to ensure entrance, staging areas and surrounding roads are free from mud and dust.
- 1.11 PROTECTION OF INSTALLED WORK
 - A. Protect installed work and provide special protection where specified in individual specification sections.
 - B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
 - C. Prohibit traffic across landscaped areas.
- 1.12 SECURITY
 - A. Provide security and facilities to protect the Work and the Port's operations from unauthorized entry, vandalism, or theft.
 - B. The construction site shall be closed to the public at all times
 - C. Ensure the security of neighboring facilities in the event construction activities endanger those facilities or commodities.
 - D. Abide by special requests of security personnel and Police and Fire Departments.
- 1.13 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
 - B. Collect and remove waste materials, debris, and rubbish from site and dispose off-site in a legal manner.
- 1.14 STREET CLEANING AND DUST CONTROL
- A. See Specification Section 02270 – Temporary Erosion and Sediment Control Planning and Execution. The Contractor shall ensure the “no visible dust” standard is achieved throughout the project. EPA, Port, and Contractor representatives will be making continuous observations and reporting them to the Engineer. Community members can also make and report dust observations.
- 1.15 FIELD OFFICES AND SHEDS
- A. Contractor Offices: Weather tight, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture drawing rack, and drawing display table.
- 1.16 STAIRWAYS
- A. Stairways should be constructed per OSHA guidelines.
- 1.17 REMOVAL OF CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
- A. Remove temporary utilities, equipment, facilities, and materials, prior to Substantial Completion or as directed by the Resident Engineer.
 - B. Clean and repair damage caused by installation or use of temporary work.
 - C. Removal of temporary facilities and controls, including but not limited to restoration of site, haul route, and Contractor trailer and parking areas to preconstruction conditions shall be an element of the final inspection. See 01770 – Project Closeout.
- 1.18 USE AND OCCUPANCY
- A. Materials Storage, Staging, and Parking
 - 1. The Contractor will be allowed space for the storage of materials and the pursuance of the Work under this Contract in the area shown on the Drawings.
 - 2. Contractor employee parking will be confined to the areas shown on the Drawings.
 - B. Contractor will be allowed additional space for the storage of materials and the pursuance of Work under this Contract in the areas as approved by the Engineer. The Contractor shall limit storage of materials, tools, and other items necessary to the work to areas within the project boundaries. Items stored outside the designated areas shall be prohibited without prior approval of the Engineer.
- 1.19 NOISE CONTROLS
- A. At all times keep objectionable noise generation to a minimum by:
 - 1. Equipping air compressors with silencing packages.
 - 2. Equipping jackhammers with silencers on the air outlet.
 - 3. Phasing when multiple loud pieces of equipment are used.

4. Equipment that can be electrically driven instead of gas or diesel is preferred. If noise levels on equipment cannot reasonably be brought down to criteria, listed as follows, either the equipment will not be allowed on the job or use time will have to be scheduled subject to approval of the Engineer.
 5. All construction vehicles and equipment on the project operating between 10:00 p.m. and 7:00 a.m. shall be equipped with an ambient noise sensing variable volume backup alarm system. The system shall be in compliance with Washington Administrative Code (WAC) 296-155-615.
- B. Objectionable noise received on neighboring (non-Port owned) properties is defined as any noise exceeding the noise limits of State Regulations (WAC 173-60-040) or City ordinance, as stated below, or as any noise causing a public nuisance in a residential area, as determined by the Port and community representatives, or by the nuisance provisions of local ordinances.
- C. Contractor shall comply with SMC 25.08
- D. The Contractor's operation shall at all times comply with all County and City requirements as well as the following requirements:
1. The project work hours are 7:00 am to 7:00 pm
 2. Noise to residential receiving properties not to exceed 85 dB(A) between the hours of 7:00 am and 10:00 pm weekday, 9:00 am and 10:00 pm weekends. For night time hours, noise is not to exceed 75 dB(A). For the same time periods, noise received at commercial properties (South Park Marina) may not exceed 90 dB(A) and 80 dB(A), respectively.
 3. For certain short-duration construction activities, the Maximum Permissible Sound Levels may be exceeded as follows:
 - 5 dB(A) for 15 minutes in any 1-hour period
 - 10 dB(A) for a 5 minutes in any 1-hour period
 - 15 dB(A) for a 90 seconds in any 1-hour period.
 4. During pile driving, sound measured at the receiving property line or 50 feet from the equipment, whichever is greater, may exceed the performance criteria in any 1-hour period between the hours of 8:00 am and 5:00 pm on weekdays and 9:00 am and 5:00 pm on weekends. But in no event may the sound level exceed:
 - 90 dB(A) continuously
 - 93 dB(A) for 30 minutes
 - 96 dB(A) for 15 minutes
 - 99 dB(A) for 7 1/2 minutes.
 5. The Port will collect continuous noise monitoring will be conducted during work hours at two site perimeter locations: on the fence line along Dallas

Avenue S, closest to the nearest residence, and along the shoreline near the South Park Marina.

6. Instantaneous noise levels will be checked, by the Port, with a hand-held noise dosimeter, as needed. During loud activities, or during complaints, the hand-held meter will be used and checked continuously by the Port.
- E. The Contractor will modify work at the direction of the Engineer, if applicable noise levels are exceeded.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION – Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Mobilization shall consist of preconstruction expenses and costs of preparatory work and operations performed by the Contractor which occur before 10% of the Awarded Contract Price is earned from other Bid Items. Items which are not to be included in the item of mobilization are:
 - 1. Any portion of the Work covered by a specific Bid Item or incidental work which is to be included in a Bid Item or Items.
 - 2. Profit, interest on bond money, overhead or management costs.
- B. Demobilization shall consist of post-construction expenses and work that occurs after 95% of the Awarded Contract Price is earned.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. Based on the Lump Sum Bid Item price for "Mobilization/Demobilization", partial payments will be made as follows:
 - 1. When 10% of the Awarded Contract Price is earned, excluding mobilization and amounts paid for materials on hand, 60% of the amount bid for "Mobilization/Demobilization" will be paid.
 - 2. When 95% of the Awarded Contract Price is earned from other Bid Items, excluding mobilization and amounts paid for materials on hand, the remaining amount bid for "Mobilization/Demobilization" will be paid.

End of Section

PART 1 GENERAL

1.01 SUMMARY

- A. This Section provides all measures to address traffic control issues for nearby rights of way as required for vehicles entering and leaving the site and for traffic and pedestrian control measures required at Boeing's South Park facility and at nearby intersections on 14th Ave. South.

1.02 REQUIREMENTS INCLUDED

- A. Construction Parking Control
- B. Flaggers
- C. Haul Routes

1.03 TRAFFIC SIGNS AND SIGNALS

- A. The Contractor shall provide flaggers, signs, and other traffic control devices not otherwise specified as being furnished by the Port of Seattle. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, and other traffic control devices necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations, which may occur on private properties, highways, roads, drives, or streets. No work shall be done on or adjacent to the above locations until all necessary signs and traffic control devices are in place.
- B. These flaggers, signs, and other traffic control devices shall be used for the safety of the public, the Contractor's employees, and Port of Seattle's personnel and to facilitate the movement of the traveling public. They may be used for the separation or merging of public and construction traffic when in accordance with a specific approved traffic control plan.
- C. Upon failure of the Contractor to immediately provide flaggers; erect, maintain, and remove signs; or provide, erect, maintain, and remove other traffic control devices when ordered to do so by the Engineer, the Port of Seattle may, without further notice to the Contractor or the Surety, perform any of the above and deduct all of the costs from the Contractor's payments.
- D. The Contractor shall be responsible for providing adequate flaggers, signs, and other traffic control devices for the protection of the work and the public at all times regardless of whether or not the flaggers, signs, and other traffic control devices are ordered by the Engineer, furnished by the Port of Seattle, or paid for by the Port of Seattle or by any modifications made by the Contractor. The Contractor shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.
- E. The Contractor shall advise the Engineer a minimum of two weeks prior to implementing any lane closures or diversions.

1.04 SUBMITTALS

- A. The Contractor shall submit a Traffic Control Plan as part of Section 01400 – Removal Action Work Plan and in accordance with the requirements of this Section.

1. The Traffic Control Plan shall indicate
 - a. Any traffic control issues on nearby rights of way (e.g. if temporary lane closures or flaggers are needed for trucks entering and leaving the site.
 - b. Traffic and pedestrian control measures, including coordination of haul routes on Boeing's South Park facility and at intersections on nearby 14th Ave. S.
 - c. Boeing property access ramp design as specified in Section 01500 – Temporary Facilities and Controls.
- B. Daily Traffic Report shall include:
 1. When signs and traffic control devices are installed and removed,
 2. Locations of signs and traffic control devices,
 3. Revisions to the traffic control plan,
 4. Lighting utilized at night, and
 5. Observations of traffic conditions.

1.05 CONFORMANCE TO ESTABLISHED STANDARDS

- A. Flagging, signs, and all other traffic control devices furnished or provided shall conform to the standards established in the latest adopted edition of the Manual on Uniform Traffic Control Devices (MUTCD) published by the U.S. Department of Transportation and the Modifications to the MUTCD for Streets and Highways for the State of Washington. Copies of the MUTCD may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Modifications to the MUTCD for Streets and Highways for the State of Washington may be obtained from the Department of Transportation, Olympia, Washington 98504.

PART 2 PRODUCTS

2.01 SIGNS, SIGNALS, AND DEVICES

- A. Post-mounted and wall-mounted traffic control and informational signs as specified herein.
- B. Manual and Automatic Traffic Control Signals: As approved by local jurisdictions.
- C. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.
- D. Flagger Equipment: As required by local jurisdictions.
- E. Manual on Uniform Control Devices (UCD) approved equipment.

2.02 FLAGGING, SIGNS, AND ALL OTHER TRAFFIC CONTROL DEVICES

- A. Traffic Control Labor
 1. The Contractor shall furnish all personnel for flagging, escorting, and for the setup and removal of all traffic control devices.
 2. Temporary traffic control devices and construction signs necessary to control traffic during construction operations.

3. Flaggers and spotters shall have a current certification (flagging card) acceptable to the State Department of labor and Industries (WAC 296-155-305) and have current flagger training per WSDOT. Workers engaged in flagging or traffic control shall wear reflective vests and hard hats. During hours of darkness, white overalls or white or yellow rain gear shall also be worn. The vests and other apparel shall be in conformance with "High Visibility Apparel" requirements of the Standard Specifications. During hours of darkness, flagger stations shall be illuminated to ensure that flaggers can easily be seen without causing glare to the traveling public. The Contractor shall furnish the MUTCD standard Stop/Slow paddles (18 inches wide, letters 6 inches high and reflectorized) for the flagging operations.
4. Where required by local authorities, the Contractor shall arrange and pay for Law Enforcement personnel to assist in traffic control.

B. Construction Signs

1. All signs required by the approved traffic control plan(s) as well as any other appropriate signs prescribed by the Engineer will be furnished by the Contractor. The Contractor shall provide the posts or supports and erect and maintain the signs in a clean, neat, and presentable condition until the necessity for them has ceased. All non-applicable signs shall be removed or completely covered with either metal or plywood during periods when they are not needed. When the need for any of these signs has ceased, the Contractor, upon approval of the Engineer, shall take down these signs, posts, or supports. All posts or supports shall be removed from the project and shall remain the property of the Contractor
2. Construction signs will be divided into two classes. Class A construction signs are those signs that remain in service throughout the construction or during a major phase of the work. They are mounted on posts, existing fixed structures, or substantial supports of a semi-permanent nature. Sign and support installation for Class A signs shall be in accordance with the Contract Plans or the Standard Plans. Class B construction signs are those signs that are placed and removed daily, or are used for short durations which may extend for one or more days. They are mounted on portable or temporary mountings. If it is necessary to add weight to the signs for stability, only a bag of sand that will rupture on impact shall be used. The bag of sand shall: (1) be furnished by the Contractor, (2) have a maximum weight of 40 pounds, and (3) be suspended no more than 1 foot from the ground. In the event of disputes, the Engineer will determine if a construction sign is considered as a Class A or B construction sign.
3. When Class A or B construction signs are required, the work to provide these signs shall be:
 - a. Furnishing, removing and disposing of the posts or supports for the signs;
 - b. Initial installation and subsequent removal of both Class A and B construction signs; and
 - c. All other incidentals necessary for providing Class A or B construction signs according to the approved traffic control plan(s).

4. Signs, posts, or supports that are lost, stolen, damaged, destroyed, or those which the Engineer deems to be unacceptable, while their use is required on the project, shall be replaced by the Contractor without additional compensation.
- C. Temporary Traffic Control Devices
1. Contractor shall be furnishing barricades, flashers, cones, barrels, and other channelization devices, including:
 - a. Initial delivery to the project site (or temporary storage) in good repair and in clean usable condition,
 - b. Repair or replacement when they are damaged and they are still needed on the project, and
 - c. Removal from the project site when they are no longer needed on the project.
 2. As conditions permit, the Contractor shall, at the end of each day, leave the work area in such condition that it can be traveled without damage to the work and without danger to traffic.
 3. The Contractor shall be responsible for protection of the work and traffic at all times regardless of flagging and the Contractor shall be liable for damages and injuries suffered by reason of the Contractor's operations or any negligence in connection therewith.

PART 3 EXECUTION

3.01 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations. Monitor parking of construction personnel's vehicles. Maintain vehicular access to and through parking areas. Prevent parking on or adjacent to access roads or in non-designated areas.

3.02 TRAFFIC CONTROL SUPERVISOR

- A. Traffic Control Supervisor
1. The Contractor shall designate an individual or individuals to perform the Traffic Control Supervisor's (TCS) duties for the project. The TCS shall have a current Work Zone Traffic Control Supervisor certification card and a current Flagger Certification card from WSDOT.
 2. The TCS's duties shall include:
 - a. Discussing proposed traffic control measures and coordinating implementation of the Contractor-adopted traffic control plan(s) with the Engineer.
 - b. Coordinating all traffic control operation, including those of subcontractors, suppliers, and any adjacent construction or maintenance operation.
 - c. Coordinating the project's activities with appropriate police, fire control agencies, city or county, Engineer, medical emergency agencies, school districts, and transit companies.

- d. Inspecting traffic control devices for proper location, visibility, installation, message, cleanliness, and effect on the traveling public. Traffic control devices should be inspected each work shift except that Class A signs need to be checked only once a week. Traffic control devices left in place for 24 hours or more should also be inspected once during the non-working hours when they are initially set up (during daylight or darkness, whichever is opposite of the working hours).
 - e. Reviewing nighttime lighting and its effect on the traveling public.
 - f. Preparing a daily traffic report which shall be submitted to the Resident Engineer with the Contractor's Daily Report (CM03) to become a part of the project records.
 - g. Ensuring that corrections are made if traffic control devices are not functioning as required. The TCS may make minor revisions to the traffic control plan to accommodate site conditions as long as the original intent of the traffic control plan is maintained and the revision has concurrence of the Engineer.
 - h. Overseeing all requirements of the contract that contribute to the convenience, safety, and orderly movement of vehicular and pedestrian traffic.
 - i. Having the latest adopted edition of the MUTCD including the Modifications to the MUTCD for Streets and Highways for the State of Washington and applicable standards and specifications available at all times on the project.
 - j. Attending all project meetings where traffic management is discussed. Traffic control management shall be provided by the TCS on a 24-hour per day basis.
3. The Contractor shall maintain a 24-hour telephone number at which the TCS can be contacted. The Contractor shall make arrangements so that the TCS will be available on every working day, on call at all times, and available upon the Engineer's request at other than normal working hours. During non-work periods, the TCS shall be able to respond within a 45-minute time period after notification by the Engineer. The TCS shall have appropriate manpower, equipment, and material available at all times in order to expeditiously correct any deficiency in the traffic control system.
 4. The Contractor shall identify an alternate TCS that can assume the duties of the assigned or primary TCS in the event of that person's inability to perform. Such alternate TCSs shall be adequately trained and certified to the same degree as the primary TCS.
 5. A reflective vest and a hard hat shall be worn by the TCS.
 6. The Contractor shall provide a vehicle for every TCS. The vehicle used by the TCS shall be equipped with a roof or post-mounted flashing amber light visible for 360 degrees.
 7. The TCS shall not act as a flagger except in an emergency or in relief for short periods of time. Possession of a current flagging card by the TCS is mandatory.

3.03 FLAGGERS

- A. Provide trained and equipped flaggers to regulate traffic when construction operations or traffic encroach on public traffic lanes according to the requirements of WAC 296-155-305.
- B. All flaggers shall have a current Flagger Certification card from WSDOT
- C. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.04 TRAFFIC CONTROL PLAN

- A. Contractor shall obtain any approvals of a traffic control plan (TCP) that meets the substantive requirements of a TCP from the City of Seattle Department of Transportation (SDOT) or those required by any other local jurisdictions.
- B. Contractor shall obtain any street use permits necessary for completion of the Work.
- C. The traffic control plan shall show a method of handling traffic. All flaggers are to be shown on the traffic control plan except for emergency situations. The Contractor shall designate and adopt in writing the specific traffic control plan or plans required for their method of performing the work. If the Contractor's methods differ from the contract traffic control plan(s), the Contractor shall propose modification of the traffic control plan(s) by showing the necessary construction signs, flaggers, and other traffic control devices required for the project. The Contractor's letter designating and adopting the specific traffic control plan(s) or any proposed modified plan(s) shall be submitted to the Engineer for approval at least ten calendar days in advance of the time the signs and other traffic control devices will be required.
- D. Contractor shall obtain any approvals of traffic control plans required by local jurisdictions.

3.05 HAUL ROUTES

- A. Drawings indicate haul routes for use by construction traffic. Contractor shall secure any necessary Permits/Approvals.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to regulate traffic or to minimize interference with public traffic.

3.06 TRAFFIC SIGNS AND SIGNALS

- A. At approaches to site and on site, install at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
- B. Install and operate manual or automatic traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations at all times.
- C. Relocate as Work progresses, to maintain effective traffic control.

3.07 REMOVAL

- A. Remove equipment and devices when no longer required for the project. Restore surfaces to original condition.

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. No separate measurement will be made for for “Traffic Control”.

4.02 PAYMENT

- A. No separate payment will be made for the “Traffic Control Plan” as required by this section. The cost for this portion of the Work will be considered incidental to the “Removal Action Work Plan” as described in 01400 – Removal Action Work Plan.
- B. The lump sum unit price for Traffic Control shall include all costs for the work required to provide, install, maintain, and remove all traffic controls, including the furnishing of all necessary tools, equipment, labor and incidental expenses and materials required.

End of Section

PART 1 GENERAL

1.01 SUMMARY

- A. This Section describes product options available to the Contractor, plus procedures for securing approval of proposed substitutions during construction.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
 - 2. Make submittals in accordance with pertinent provisions of Section 01330 – Submittals.

1.02 PRODUCT OPTIONS

- A. The Contract is based on standards of quality established in the Contract Documents.
 - 1. In agreeing to the terms and conditions of the Contract, the Contractor has accepted a responsibility to verify that the specified products will be available and to place orders for all required materials in such a timely manner as is needed to meet his agreed construction schedule.
 - 2. The Owner has not agreed to the substitution of materials called for in the Contract Documents, except as it may specifically otherwise state in writing.
- B. Materials Specified by Name:
 - 1. Whenever materials, equipment or processes are specified or described in the Contract Documents by using the proprietary name of an item or the name of a particular manufacturer, fabricator, supplier or distributor, the naming of the item is intended to establish the type, function and standard of quality and performance required by this Contract. It is not the intent of the Port to exclude other materials, equipment, or processes or to limit competition in bidding. Therefore, unless the proprietary name referred to in the specifications is followed by words indicating that no substitution is permitted, materials, equipment, or processes of other manufacturers, fabricators, suppliers, or distributors will be considered by the Engineer for substitution.
 - 2. Consideration will be given to a proposed substitute only when sufficient information is submitted to the Port by the Contractor to allow the Engineer to determine that the proposed substitute material, equipment, or process is in fact equivalent in all respects to the materials, equipment, or processes named in the specifications.
 - 3. Materials proposed by the Contractor to be used in lieu of materials so specified by name shall in all ways equal or exceed the qualities of the named materials.
- C. Products specified by reference to standard specifications such as ASTM and similar standards do not require further approval except for interface within the Work.

- D. Where the phrase “or equal,” or “or equal as approved by the Engineer,” occurs in the Contract Documents, do not assume that the materials, or equipment, will be approved as equal until the item has been specifically so approved for this Work by the Engineer.
- E. No proposed substitute shall be ordered or installed by the Contractor without the Engineer’s prior written permission. If a substitute is used, the Contractor assumes full responsibility for the substitution and expressly warrants that the substitute meets the requirements of the Contract Documents.
- F. Aesthetics: Material and components used to construct visible portions of the Work have been selected to produce an aesthetically pleasing effect. All proposed substitutions in visible areas of the work shall be compatible with the original aesthetic effect.

1.03 DELAYS

- A. Delays in construction arising by virtue of the non-availability of a specified material and/or method will not be considered by the Engineer as justifying an extension of the contract time.
- B. Proposal of substitutions are at the Contractor’s risk. Contractor should not assume that any substitutions proposed will be approved by the Engineer until such written approval is received.

1.04 SUBMITTALS

- A. Submittals shall be in accordance with Section 01330 – Submittals and this paragraph.
- B. Requests for review of proposed substitute materials or equipment will not be accepted by the Engineer from anyone other than the Prime Contractor.
- C. If the Contractor wishes to furnish or use substitute materials, equipment, or processes in connection with this Contract, the Contractor shall make a written application to the Engineer for consideration of the substitute, together with a certification by the Contractor that the proposed substitute will adequately perform the functions called for in the project design, is of similar and equal substance to the equipment, material, or process named, is suited to the same use, complies with all codes, laws, or regulations affecting the Work and is capable of performing the same function as the materials, equipment, or process named in the Contract Documents. Substitutions shall be provided at no additional cost or time impact to the project. The Contractor is responsible to coordinate all associated work that may be affected by the substitution. The application shall also state whether or not acceptance of the substitute will require a change in the Contract Documents to adapt the design to the substitute and whether or not the use of the substitute is subject to payment of any license fee or royalty by the Contractor. The Contractor shall reimburse the Port for costs associated with review of the substitution.
- D. All variations of the proposed substitute from the materials, equipment, or process named in the specifications shall be identified in the Contractor’s application, including variations between maintenance, repair and replacement service entities.
- E. Should any proposed product substitution require any re-design work by the Design Consultant or the Design Consultant’s consultants to accommodate the substitute product, costs for such re-design work shall be the responsibility of the Contractor.

- F. Substitution submittal procedure:
 - 1. All substitution submittals shall be accompanied with the attached Substitution Request Form completely filled out. Limit each request form to one proposed substitution.
 - 2. Submit complete sets of substitution request forms and supporting data with all copies of the submittal required by Section 01330 – Submittals.
 - 3. Clearly indicate with red arrows on the supporting data the proposed substitution and accessories.

1.05 EVALUATION AND REVIEW

- A. The evaluation and acceptance or rejection of the proposed substitute shall not be grounds for an increase in the Contract Time or the Contract Sum.
- B. The Engineer may require that the Contractor furnish, at no additional expense to the Port, additional data concerning the proposed substitute. The Engineer will be allowed a reasonable time within which to evaluate the proposed substitute. The Engineer will be the sole judge of the acceptability of the proposed substitute.

1.06 TIME

- A. The Contractor shall allow forty-five (45) days for review and evaluation of requests for substitutions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

Section 01630 Substitution Request Form

TO:

PROJECT NAME:

We hereby submit for consideration, the following product instead of the specified item for the above project:

Section	Paragraph	Specified Item
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Proposed Substitution:

Attach complete dimensional information, engineering calculations, and technical data including laboratory tests, if applicable.

Include complete information on changes to Drawings and/or specifications which proposed substitution will require for its proper installation.

Submit with request all necessary samples and substantiating data to provide equal quality, performance, and appearance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance. Differences in quality of materials and construction shall be indicated.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. The proposed substitution will have no affect on applicable codes.
6. The manufacturer's guarantee or warranties of proposed product is equivalent to; or exceeds that of the specified product.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01630 - Substitutions

List of names and location of three similar projects on which product was used, date of installation, and Architect's name and phone number.

CERTIFICATION OF EQUAL
PERFORMANCE AND
ASSUMPTION OF LIABILITY
FOR EQUAL PERFORMANCE:

UNDERSIGNED ATTESTS THAT
FUNCTION AND QUALITY ARE
EQUAL TO OR SUPERIOR TO
SPECIFIED ITEMS

Submitted By:

Signature

Title

Above signature must be by person having authority to legally bind his firm to the above terms.

Firm

Address

City / State

Zip

Telephone

Date

FOR USE BY THE ENGINEER:

Accepted: _____

Accepted as Noted: _____

Not Accepted: _____

Rec'd Too Late: _____

By: _____

Date: _____

Remarks: _____

PART 1 GENERAL

1.01 SUMMARY

- A. This section consists of planning for and executing temporary pollution prevention measures shown in the Contract or directed by the Engineer. These measures guide the control of, response to and disposal of potential pollutants or hazardous materials over the life of the contract.
- B. This work shall apply to all areas associated with the project including, but not limited to, the following work areas:
 - 1. Excavation areas
 - 2. Equipment and material storage areas
 - 3. Staging/Laydown areas
 - 4. Contractor support areas
 - 5. Stockpiles
 - 6. Construction Water Treatment System
 - 7. Transloading facility
 - 8. Roadways over which material removed from the site are transported
 - 9. Lower Duwamish Waterway (during transport of sediment to the transload facility)

1.02 DESCRIPTION OF WORK

- A. To comply with this specification the Contractor shall:
 - 1. Develop and submit a site specific Pollution Prevention Plan
 - 2. Revise the Pollution Prevention Plan during the life of the contract, if needed
 - 3. Install, maintain, and remove all spill prevention, containment, countermeasures, and pollution prevention Best Management Practices (BMPs) during the life of the contract
 - 4. Adhere to the requirements of the draft Water Quality Monitoring Plan (See Appendices) and the EPA-provided Water Quality Certification
 - 5. Contain, clean up, and dispose of all hazardous materials or potential pollutants
 - 6. Perform other work shown on the contract documents or as directed by the Engineer
 - 7. Maintain any required Contractor pollution liability insurance including insurance liability for the transportation of hazardous materials for the duration of the contract.
 - 8. Maintain a proper Hazardous Material Endorsement for any driver that is transporting hazardous material in a vehicle that

requires the driver to maintain a valid and current
Commercial Driver's License in the State of Washington

1.03 POLLUTION PREVENTION PLAN

- A. The Contractor shall develop and submit to the Port of Seattle a site specific Pollution Prevention Plan as part of Section 01400 – Removal Action Work Plan. The Pollution Prevention Plan must be a site-specific document that outlines the administrative, operational, and structural Best Management Practices that will be implemented on the project. Approved BMPs may be found in the Stormwater Management Manual for Western Washington, Department of Ecology, August 2001, or current addition.
- B. The Pollution Prevention Plan must, at a minimum, include the following:
 - 1. Site specific description and drawings
 - 2. Contractor pollution prevention contact personnel
 - 3. Known or potential hazardous materials inventory list
 - 4. Materials safety data sheets (MSDSs) for hazardous materials identified on the inventory list
 - 5. Hazardous material containers labeling system
 - 6. Hazardous material container storage and handling procedures
 - 7. Hazardous material spill prevention planning and execution
 - 8. Hazardous material spill control and response, notification, planning and execution
 - 9. Hazardous material cleanup and disposal planning and execution
 - 10. Removal of Creosote-Treated Piles
 - 10. Subcontractors' Acknowledgment
 - 11. Education

1.04 SUBMITTALS

- A. As part of the Section 01400 Removal Action Work Plan, the Contractor shall submit the following information:
 - 1. Pollution Prevention Plan and the required contents
 - 2. Insurance endorsements verifying liability coverage for job-site work and any transportation of hazardous materials to or away from the jobsite.
 - 3. Copy of a completed MCS-90 Certificate if required under the Motor Carrier Act of 1980 for transportation of hazardous material which verifies compliance with the financial responsibility requirements of the Act;
 - 4. A list of all drivers who will be hauling hazardous material in a vehicle that requires the driver to maintain a Commercial Driver's License in the State of Washington under RCW

46.25.080. These drivers must show evidence of a proper Hazardous Material Endorsement in accordance with Washington RCW 46.25.070 and 46.25.085.

1.05 DEFINITIONS

- A. Absorbent: Any material capable of absorbing oils, water-based materials, solvents, acids, and other hazardous materials. Absorbent materials include: pads, kitty litter, floor dry, and other commercially available materials.
- B. Best Management Practice (BMP): The variety of administrative, operational, and structural measures that will be implemented to prevent discharges and reduce the amount of contaminants in stormwater and other media. (Example: Providing secondary containment for liquid storage is a BMP).
- C. Container: Any portable device, in which a material is stored, transported, treated, disposed of, or otherwise handled.
- D. Daily Report: The Contractor shall submit daily to document the Contractor's and Sub-contractor's daily activities.
- E. Dangerous Waste: Solid wastes designated by the State of Washington under WAC 173-303 as Dangerous Waste, Extremely Hazardous Waste, and/or Mixed Waste. The State of Washington is authorized to implement Federal Hazardous Waste Regulations (see also Hazardous Waste Definition).
- F. Hazardous Material: A substance or material, including a hazardous substance, hazardous waste, marine pollutant, including but not limited to: diesel, gasoline, petroleum products, solvents, paints, acids, lubricants, curing compounds, form release agents, adhesives, sealants, and epoxies (see also Hazardous Waste definition).
- G. Hazardous Material Storage Area: The area used by the Contractor to store hazardous materials.
- H. Hazardous Material Container Labeling System: The system used by the Contractor for identifying the secondary containers used to store hazardous materials or wastes. Acceptable methods include: Department of Transportation (DOT), Hazardous Material Information System (HMIS), and the National Fire Protection Association Fire Diamond (NFPA Hazard Rating).
- I. Hazardous Waste: Solid wastes designated by 40 CFR 261 and regulated as hazardous and/or mixed waste by the EPA.
- J. Material Safety Data Sheets (MSDSs): Written or printed material available for each chemical that includes information on: the physical properties, hazards to personnel, fire and explosion potential, safe handling recommendations, health effects, fire-fighting techniques, reactivity, and disposal.
- K. Secondary Container: Any container, other than the original manufacturer's container, that is used for transferring, holding, storing, or otherwise containing hazardous materials or wastes.

- L. Secondary Containment: A device designed, installed, or operated to prevent any migration of wastes or accumulated liquid to the soil, groundwater, or surface water. The device must hold at least 110 percent of the volume of the largest container being stored. The device must have the strength to contain a spill and be made of materials that will not be degraded by the wastes or accumulated liquids it is intended to contain.
- M. Sorbent: A material used to soak up free liquids by adsorption, absorption, or both.
- N. Storm Drainage System (SDS): Consists of any drain, inlet, catch basin, slot drain, pipe, gully, fissure, ditch, or other form of conveyance that collects and transports stormwater.

1.06 REFERENCES

- A. The following rules, requirements, and regulations may apply to this work:
 - 1. Washington State Dangerous Waste Regulations: WAC 173-303
 - 2. Part C - Hazardous Communication of WAC 296-62-054, "Right to Know"
 - 3. Puget Sound Stormwater Management Plan, Puget Sound Water Quality Action Team, 1998.
 - 4. Federal Hazardous Waste Regulations: 40 CFR Subchapter I – Solid Wastes 261, 262, 263, 265, 268, 273, 279, 370 ()
 - 5. Stormwater Management Manual for Western Washington, Department of Ecology
 - 6. Surface Water Design Manual, King County Public Works, September 1998
 - 7. Water Quality Standards for the State of Washington, WAC 173-201A
 - 8. Operation of Motor Vehicles: RCW 4.24.314, 46.25.070, 46.25.080, 46.25.085, 46.48.170

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 SITE DESCRIPTION AND DRAWINGS

- A. A written site description that addresses the following shall be included in the Pollution Prevention Plan:
 - 1. Physical description and location of the construction site and staging areas
 - 2. Construction activities that will involve the use of hazardous materials or generate hazardous waste
 - 3. Location of material storage areas and project staging areas
 - 4. Designated fueling areas
 - 5. Proximity to any natural or manmade drainage conveyances including ditches, catch basins, ponds,

wetlands, and pipes

6. Public areas relating to construction project
 7. Proximity to other construction sites.
- B. Drawings shall be included in the Pollution Prevention Plan that show the construction site(s), location of fueling areas, equipment storage areas, catch basins and other man-made and natural drainage conveyances within the work area and storage areas. The drawings may be hand drawn sketches but must include the appropriate spatial information.

3.02 CONTRACTOR POLLUTION PREVENTION CONTACT PERSONNEL

- A. The Contractor shall identify in the Pollution Prevention Plan at least one project personnel, identified as the Contractor Quality Control Representative, (QCR) that will be available 24 hours a day to administer and respond to hazardous materials management requirements of the Contract. The following information for this person(s) must be provided:
1. Name
 2. Phone Number(s)
 3. Email Address
 4. Address
- B. Duties
1. Maintain permit file on site at all times which includes the Pollution Prevention Plan, Temporary Erosion and Sedimentation Control Plan, and any associated permits and plans
 2. Direct BMP installation, inspection, maintenance, modification, and removal
 3. Be available 24 hours per day, 7 days per week by telephone
 4. Update all drawings with changes made to the Pollution Prevention Plan
 6. Immediately notify the fire department (911) of any hazardous material spill
 7. Inspect Pollution Prevention Plan requirements (infrastructure and activities) including BMPs to ensure adequacy
 8. Facilitate, participate in, and take corrective actions resulting from inspections performed by outside agencies, Port employees, and Port consultants.

3.03 HAZARDOUS MATERIAL INVENTORY LIST

- A. A complete list of all known or potential hazardous materials or waste to be used or generated during all phases of the construction project

shall be included in the Pollution Prevention Plan.

3.04 MATERIALS SAFETY DATA SHEETS (MSDSs)

- A. MSDSs shall be included in the Pollution Prevention Plan for all materials on the Hazardous Material Inventory List.
- B. For all hazardous materials not submitted in the original Hazardous Material Inventory List, the Contractor shall provide to the Engineer a completed Form A-3 and MSDS prior to bringing the material onsite and shall submit a revised inventory list (or plan if required) within 7 days.
 - 1. Hazardous materials shall be permitted on the work site only with prior written acknowledgement of receipt of Form A-3 and MSDS by the Engineer.

3.05 HAZARDOUS MATERIAL CONTAINER LABELING SYSTEM

- A. The Pollution Prevention Plan shall address and the Contractor shall implement the following:
 - 1. Identification of container with a legible label containing the material's product name and manufacturer, as was written on the material's original container label
 - 2. Appropriate hazard warnings, which identify the chemical's health risks, flammability, and reactivity.
- B. The Contractor shall implement the following:
 - 1. Mark each container with the contract project number and company owner of the container
 - a. The mark shall be permanent, easily identifiable and placed with care to prevent defacing of the marker through abrasion, chemical reaction, or other means that would hinder marker identification.
 - 2. At all times during the Work, the Contractor shall ensure that proper and identifiable labels are attached to all hazardous materials and secondary containment

3.06 HAZARDOUS MATERIAL CONTAINER STORAGE AND HANDLING

- A. Solid chemicals, chemical solutions, paints, petroleum products, solvents, acids, caustics solutions, and any waste materials, including used batteries, shall be stored in a manner that will prevent the inadvertent entry of these materials into waters of the state, including groundwater. Storage shall be in a manner that will prevent spills due to overfilling, tipping, or rupture. In addition, the Pollution Prevention Plan shall address and the Contractor shall implement the following specific requirements:
 - 1. All liquid products must be stored on durable, impervious surfaces and within a berm or other means of secondary containment capable of containing 110% of the largest single container volume in the storage area.
 - 2. Waste liquids shall be stored under cover, such as tarps or

- roofed structures, in addition to secondary containment. Any waste storage areas, whether for waste oil or hazardous waste, shall be clearly designated as such and kept segregated from products to be used on the site.
3. All areas for fuel storage and refueling, and servicing of construction equipment and vehicles shall be located at least 150 feet from any open water or wetlands with the exception of refueling of barge derricks, which can be refueled and serviced while in the water.
 4. In the event the Drawings designate a hazardous material storage area, the Contractor shall be restricted to storing hazardous materials or waste specific to the Project work to the area designated in the Contract Document Drawings.
 5. All hazardous materials and waste containers shall be stored with the container lid secured, to prevent spills or leaking.
 6. Upon completion of a specific task for which hazardous material(s) were used, the Contractor shall document in the Contractor's Daily Construction Report the amount of hazardous material removed from the site, and the product and manufacturer name(s) of such material(s).
 7. No stockpiling or staging of materials shall occur below the mean higher high water mark of any water body.

3.07 HAZARDOUS MATERIAL SPILL PREVENTION

- A. The Pollution Prevention Plan shall address and the Contractor shall implement the following:
 1. Hazardous Material Transfer
 - a. All hazardous materials shall be transferred from primary to secondary containers using secondary containment with spill kits in close proximity.
 2. Vehicle and Equipment Fueling
 - a. All equipment fueling operations shall utilize pumps, funnels, absorbent pads, and/or drip pans.
 - b. Fueling shall not take place within 100 feet of any natural or manmade drainage conveyance including ditches, catch basins, ponds, wetlands, and pipes.
 - c. Fueling shall be restricted to designated fueling areas as shown on the contract documents or as approved by the Engineer as a part of the Pollution Prevention Plan.
 - d. A spill kit will be located within 100 feet of the fueling operation.
 3. Vehicle and Equipment Maintenance
 - a. Engine, transmission, and hydraulic oil may be added,

- as needed utilizing funnels and drip pans.
 - b. Absorbent pads shall be placed to prevent fluid contact with soil.
 - c. No fresh or used engine fluids will be stored on the project site.
 - d. No vehicle maintenance other than emergency repair shall be performed on the project site.
4. Small Engine Fueling and Maintenance
- a. All small engine fueling operations shall utilize funnels.
 - b. Absorbent pads shall be placed to prevent fluid contact with soil.
 - c. Fueling shall not take place within 150 feet of any manmade drainage or open water or wetlands, with the exception of refueling of barge derricks, which may need to be refueled and serviced while in the water.
 - d. Contractor shall not drain and replace engine fluids on Port property.
 - e. These fluids may be added, as needed utilizing funnels.
 - f. Fluid addition shall be done over drip pans.
 - g. Absorbent pads shall be placed to prevent fluid contact with soil.
5. Equipment Storage
- a. Drip pans and absorbent pads shall be placed under all equipment that is unused for more than 4 hours, overnights, weekends, and holidays.
6. Spill Response Kits
- a. Spill kits shall be stored at designated locations on the project site, including the hazardous material storage areas and in close proximity to any fueling operation.
 - b. Spill kits shall, at a minimum, contain the following:
 - (1) 1 spill response procedures sheet
 - (2) 12 oil absorbent pads
 - (3) 12 water-based absorbent pads
 - (4) 1 roll of Visqueen
 - (5) 5 gallons of loose absorbent material e.g., kitty litter or floor sweep
 - (6) 24 heavy duty garbage bags
 - (7) 1 shovel

- (8) 1 broom
- (9) 10 copies of a spill report form
- (10) Oil-absorbing floating booms, appropriate for the size of the work area, shall be available on site whenever heavy equipment operates within 150 feet of open water and there is a potential for hazardous materials to enter surface waters.

3.08 HAZARDOUS MATERIAL SPILL CONTROL AND RESPONSE

- A. The Pollution Prevention Plan shall describe how the Contractor will control and respond to hazardous material spills. At a minimum, the Contractor's response to the spill must include appropriate immediate action to protect human health and the environment (e.g., diking to prevent contamination of state waters).
- 1. Hazard assessment - assess the source, extent, and quantity of the spill.
 - 2. Containment and personal protection - If the spill cannot be safely and effectively controlled, evacuate the area and immediately notify outside response services (go to Step 5). If the spill can be safely and effectively controlled, secure the area and proceed immediately with spill control (impacts to waters of the State should be given the highest priority after human health and safety).
 - 3. Containment and elimination of source - Contain the spill with absorbent materials or a soil berm around the affected area. Eliminate the source of the spill by closing valves, sealing leaks, providing containment, or deactivating pumps.
 - a. Spill control measures may include damming the spill, covering floor drains, catch basins, and/or preventing the contaminant from entering water systems. Contaminants include turbidity as well as chemicals.
 - 4. Cleanup - When containment is complete, clean or remove the spilled material with absorbents or by pumping and containerizing the material for offsite disposal.
 - 5. Notification - Report all spills immediately to the applicable responders, as necessary. Prepare a written report documenting the actions taken and notifications made. Provide copies of any reports submitted to any agency as a part of a spill response.
 - a. POS Seaport Environmental Notification:
206-295-7912
 - b. National Response Center 1-800-424-8802
 - c. Washington Emergency Management Division
1-800-258-5990

- d. Ecology Northwest Regional Office 425-649-7000
- e. Seattle Fire Department 911
- f. Provide the following information:
 - (1) Time spill occurred or was discovered
 - (2) Location of the spill and equipment involved
 - (3) Estimated volume of spill
 - (4) Measures taken to contain the spill and secure the area.
- g. Oil-absorbing floating booms shall be stored in a location that facilitates their immediate deployment by trained crews in the event of a spill. Contractor shall have all equipment on the site and ready for use that will be required to deploy floating booms, and shall train onsite personnel to operate the equipment and deploy and maintain the booms. The spill response equipment shall be onsite and available whenever heavy equipment operates within 150 feet of open water and there is a potential for hazardous materials to enter surface waters.

3.09 HAZARDOUS MATERIAL CLEANUP AND DISPOSAL

- A. The Pollution Prevention Plan shall describe how the Contractor will characterize, clean up, and remove all hazardous material and waste generated from Contractor operations. At a minimum, the Pollution Prevention Plan shall include or communicate the following:
 - 1. For the purposes of this section, clean shall be defined as the Work site being free of all hazardous material(s), waste(s) container(s), containment device(s), scrap material(s), used spill pads or absorbent pads, or any other hazardous material debris resulting from the Contractor activities.
 - 2. The Port of Seattle will retain title to all hazardous waste presently on the site, encountered during deconstruction, demolition, removal, and excavation. This does not include hazardous materials generated by the Contractor, such as used motor oils, paints, lubricants, cleaners, or spilled materials. Contractor will be the generator and owner of these wastes and shall clean and dispose of such waste according to the Contract documents and shall follow local, state, and federal regulations. The Port of Seattle will be the hazardous waste generator and will sign all hazardous waste manifests for non-contractor generated hazardous wastes. Nothing contained within these Contract documents shall be construed or interpreted as requiring the Contractor to assume the status of owner or generator of hazardous waste substances for non-contractor generated hazardous wastes.
 - 3. Hazardous materials and waste shall be disposed in a fully permitted disposal facility with the approvals necessary to

accept the waste materials that are disposed. Use of the Port of Seattle's EPA Identification Number for disposal purposes must be coordinated with the Engineer, and all documentation such as manifests, land disposal restriction forms, and profiles must be delivered to the Engineer.

4. Handling of any contaminated soils shall abide by specification Section 02114 – Stockpiling and Loading of Contaminated Soils.
5. Contaminated materials, such as absorbent materials, rags, containers, and gloves shall be collected and placed in labeled containers.
6. Any unanticipated hazardous material, waste, or contaminated soils encountered during construction that are not generated by the Contractor shall be immediately brought to the Engineer's attention for determination of appropriate action. Contractor shall not disturb such hazardous materials or contaminated soils until directed by the Engineer.

3.10 REMOVAL OF CREOSOTE-TREATED PILES

- A. During removal of creosote-treated piles, containment booms and absorbent sausage booms (or other oil-absorbent fabric) shall be placed around the perimeter of the work area to capture wood debris, oil, and other materials released into marine waters. All accumulated debris will be collected and removed from the waterbody daily.

3.11 SUBCONTRACTOR ACKNOWLEDGEMENT

- A. The Contractor is responsible for executing and complying with the Pollution Prevention Plan during all work. The Contractor must provide a written acknowledgement from all subcontractors, at all tiers, that they have read, understand, and will comply with the Pollution Prevention Plan. This written acknowledgement must be included in the Pollution Prevention Plan as part of the preconstruction submittal. The subcontractor acknowledgement section of the Pollution Prevention Plan must be updated as needed throughout the life of the contract.

3.12 EDUCATION

- A. The Contractor shall describe in the Pollution Prevention Plan how he will educate all personnel including subcontractors. At a minimum, the Contractor shall train staff through regularly scheduled meetings to discuss environmental protection subjects relevant to this project. This may be added to any existing weekly meetings (such as safety meetings). Training content shall emphasize consideration of the nearby community and sensitive areas, emergency response, spill prevention, and inspections. The Contractor shall keep meeting minutes detailing attendees and subjects discussed. These minutes shall be submitted to the Engineer monthly in the Construction Daily Construction Report.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in, the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surveys provided by the Port
- B. Contractor Survey Requirements. All work must be performed by a surveyor registered in the State of Washington.
- C. Elevation Datum: All elevations indicated on drawings refer to National Ocean Survey Mean Lower Low Water (MLLW) Datum unless otherwise noted for Seaport projects.

1.02 SURVEYS PROVIDED BY THE PORT

- A. The Port will provide those and only those services listed below:
 - 1. Establish primary survey control points.
 - 2. Other surveys as directed by the Resident Engineer.
- B. All other survey work needed for construction is the sole responsibility of the Contractor.

1.03 REFERENCE STANDARDS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. The most recent version of the reference applies.
 - 1. U.S. Army Corps of Engineers (USACE) - EM 1110-1-1005 (Jan 2007)
USACE Engineering and Design - Control and Topographic Surveying
<http://www.usace.army.mil/publications/eng-manuals/em1110-1-1005/toc.htm>
 - 2. U.S. Army Corps of Engineers (USACE) - EM 1110-2-1003 (Jan 2002)
USACE Hydrographic Surveying Engineering Manual
<http://www.usace.army.mil/publications/eng-manuals/em1110-2-1003/toc.htm>

1.04 CONTRACTOR QUALIFICATIONS

- A. All survey, layout, and related work for progress surveys shall be performed under the supervision of and sealed by a professional land surveyor or civil engineer registered in the State of Washington. The surveyor(s) or engineer shall have actively engaged in hydrographic and land survey operations during the past three (3) years. The surveyor or engineer shall have at least five (5) years' experience in computing earthwork quantities.
- B. The Contractor and Port will agree on the staking requirement and frequency for each of the selected tasks from the checklist.

1.05 INDEPENDENT SURVEYOR QUALIFICATIONS AND RESPONSIBILITIES

- A. Contractor shall retain an independent surveying firm that will be responsible for conducting certain surveying, field engineering, and related reporting activities, as specified in this section. Contractor's independent surveyor shall satisfy the following minimum qualification requirements:

1. Specified surveying and related field engineering and reporting shall be performed under the supervision of a professional land surveyor with current registration in the State of Washington.
 2. Riverine surveys shall be supervised by a hydrographer certified by the American Congress of Surveying and Mapping.
 3. Surveying firm shall utilize, and be proficient in the use of, the survey equipment and methods specified in this section.
 4. Surveying firm and project personnel shall have performed hydrographic surveying services for at least five dredging projects of similar size and complexity (provide list of projects, reference contacts and phone numbers).
 5. Surveying firm shall provide proof of insurance.
- B. Contractor's proposed independent surveying firm will be subject to review and approval by the Engineer.
- C. The responsibilities of the Contractor's independent surveyor shall include, but not be limited to the following:
1. Verification of existing monuments, benchmarks, and control points established for the Work.
 2. Establishment of supplemental benchmarks, control points, staff gauges, etc., as needed to conduct the Work.
 3. Installation of automatic recording tide gauge for dredging operations.
 4. Initial layout of all Work elements.
 5. Daily calibration and verification of survey system accuracy.
 6. Pre-dredge and pre-excavation, progress, and final survey of all soil excavation, sediment excavation, dredging, and backfill daily progress surveys and reporting.
 7. Surveys of all work prior to confirmation sampling to demonstrate that the grades on the plans have been achieved.
 8. As-built surveys of all completed Work.
 9. Calculation of construction quantities for Contractor's progress payment requests.
 10. Maintenance of the "Project Record" Drawings.
 11. Preparation of as-built construction record drawings.
- D. Contractor shall assume full responsibility for the coordination, scheduling, accuracy, and quality of the independent surveyor's work. The independent surveyor shall coordinate with Contractor's QC manager as necessary to fulfill project QC requirements, in accordance with Section 01311 – Project Coordination and Section 01451 – Quality Control: Testing Laboratory Services.
- E. In addition to the submittals specified in this section, Port reserves the right to request at any time, copies of all other survey data, calculations, and supporting documentation generated by the independent surveyor in support of the Work.

1.06 SUBMITTALS

- A. The Contractor shall submit a Survey Plan as part of Section 01400 Removal Action Work Plan that includes:. The Survey Plan shall include:
 - 1. A schedule for all survey work and drawings that show the survey vessel track lines for each hydrographic survey, if using single-beam sonar methods.
 - 2. Specifications and calibration certificates for all proposed survey equipment.
 - 3. The name, address, telephone number and qualifications of the surveyor, crew chief, superintendent, and all other persons who are proposed to perform survey or survey-related duties.
 - 4. Independent Surveyor Subcontractor Qualifications. Contractor shall submit with the Survey Plan and the bid proposal the qualifications of Contractor's independent surveyor subcontractor. Contractor's independent surveyor shall meet the minimum qualifications specified in Article 1.05 of this Section.
- B. Independent Surveys: Contractor shall submit to the Engineer within 24 hours of completing Independent Surveys. Include AutoCAD electronic file, plan view drawings with 1-ft contour intervals and spot elevations depicting high and low points plotted at 1" = 50 feet. The AutoCAD electronic file shall include a triangulated irregular network (TIN) based DTM. ASCII-format processed survey data shall be provided in x, y, z (easting, northing, elevation) format. Each data file shall include a descriptive header including, but not limited to: software and equipment information, client, project, horizontal and vertical datum, units, tidal correction, survey type, alignment, and stations surveyed.
- C. On the day the Contractor submits request for progress payment, the Contractor shall furnish to the Engineer copies of all field notes, computations, any records relating to the quantity survey or to the layout of the work, and PC-compatible versions of any computer software required to interpret the finished data and records. The Contractor is responsible for converting data and drawing files to a standard software version approved by the Engineer. Standard ASCII format is pre-approved for data files. Survey data shall be provided in x, y, z (easting, northing, elevation) format. Each data file shall include a descriptive header including, but not limited to: software and equipment information, client, project, horizontal and vertical datum, units, tidal correction, survey type, alignment, and stations surveyed.
- D. The Contractor shall maintain on site a complete, accurate log of control of survey work as it progresses.
- E. The Contractor shall keep updated survey field notes in a standard field book. These field notes shall include all upland survey work performed by the Contractor's surveyor in establishing line, grade, and slopes for the construction work. The Contractor shall keep separate updated field notes for riverine survey work performed by the Contractor. Copies of these field notes shall be provided to the Engineer upon request and, upon physical completion of the Contract Work, the field books shall be submitted to the Engineer and become the property of the Engineer.

- F. Sediment Excavation, Dredging, and Backfill Progress Surveys. Contractor shall submit to the Engineer within 12 hours of completing excavation or backfill activity, the results of ongoing progress surveys and records (Windows Offshore Positioning Software (WINOPS); DREDGEPACK by Hypack, Inc.; or equivalent) required to document compliance with the minimum sediment excavation, dredging, and capping limits shown on the Drawings. The progress surveys shall be conducted in accordance with Part 3 of this Section, and the results shall be reported in a format consistent with Paragraph 3.07, or as approved by the Engineer, and as described in Contractor's field engineering and surveying plan.

1.07 REQUIRED CONTRACTOR SUPPORT

- A. The Engineer has set primary control points as indicated on the drawings.
- B. If the primary control points need to be re-set, the Contractor shall provide sufficient space and safe facilities to enable the Engineer to set control points and perform other work required by this specification.
- C. Requests for setting primary control points shall be made at least 2 weeks prior to the need. Delays due to Contractor failure to give timely notice to the Engineer for surveying services are at the sole risk and expense of the Contractor.

1.08 PRESERVATION OF STAKES AND MARKS

- A. All primary controls shall be set once by the Engineer or others and shall be carefully preserved by the Contractor. The Contractor will be charged for the replacement costs of stakes and marks damaged or destroyed by the Contractor's operation. Such charges will be deducted by the Port from amounts otherwise due or to become due the Contractor at current Port time and material rates.
- B. Major survey control points will not be removed by the Contractor without the approval of the Engineer.

1.09 CONTRACTOR SURVEYS

- A. The Contractor shall establish such additional lines, grades and controls as are needed for construction.
- B. All work performed shall be in conformance with the lines, grades and dimensions indicated on the drawings. If a discrepancy is noted between the drawings, the same shall immediately be brought to the Engineer's attention. Where tolerances are stated, the work performed shall be within those tolerances. The Engineer will determine if the work conforms to such lines, grades and dimensions and his determination shall be final.
- C. The Contractor assumes full responsibility for detailed dimensions and elevations measured from primary control points.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION

3.01 GENERAL

- A. The Contractor shall exercise care during the execution of the Work to minimize any disturbance to existing property and to the landscape and waters in the areas surrounding the work Site. Survey crews shall comply with all provisions of the Site-Specific Construction Health and Safety Plan when traversing into controlled or contaminated areas.
 - 1. If the survey work provided by the Contractor does not meet the contract requirements, the Contractor shall, upon the Engineer's Written Notice, remove and replace the individual or individuals doing the survey work. The Port may subcontract control of surveying at the Contractor's expense which will be deducted from moneys due or to become due the Contractor.
 - 2. The Engineer reserves the right to check all work laid out by the Contractor during the progress of the work, as deemed necessary to verify conformance with the plans and specifications. The Contractor shall allow a reasonable time to permit such checks (24 hours, excluding Sundays and holidays) before completing the work. These checks will be made during the regular working hours.

3.02 SURVEY CONTROL AND REFERENCE POINTS

- A. The benchmark used for the design is noted on the Drawings and shall be used by the Contractor for establishing the primary survey control points and supplemental survey control points. For all surveys, the horizontal datum that shall be used by the Contractor is Washington State Plane Coordinate System NAD83 (1991), North zone, U.S. Feet. All surveys shall be shown in mean lower low water (MLLW), in U.S. feet.
- B. The Contractor shall protect all survey control points prior to starting site work and preserve permanent reference points during construction. The Contractor shall not relocate site reference points without prior written approval from the Engineer.
- C. The Contractor shall promptly report to the Engineer the loss, damage, or destruction of any reference point or relocation required because of changes in grades or other reasons. The Contractor shall replace dislocated survey control points based on original survey control at no additional cost to the Engineer. Replacement of dislocated survey control points shall be done by a land surveyor licensed in the State of Washington.

3.03 INSPECTION

- A. The Contractor shall verify locations of Site reference and survey control points prior to starting work. The Contractor shall promptly notify the Engineer of any discrepancies discovered. The Contractor shall also verify layouts periodically during Construction.

3.04 SURVEY REQUIREMENTS

- A. The Contractor shall reference survey and site reference points to the provided control monuments and record locations of survey control points, with horizontal and vertical data, on Project Record Documents.
- B. Topographic Surveys.

1. Topographic surveys for areas above +2 feet MLLW shall be done before and after all excavation and backfilling activities and in accordance with USACE Engineering and Design - Control and Topographic Surveying [USACE EM 1110-1-1005 (Jan 2007)]. Along the riverbank, these surveys shall be done to supplement the hydrographic surveys required for the in-water work. Surveys shall be done with cross-section intervals not to exceed 20 feet on center, including grade breaks from which a 1-foot contour map will be required in an electronic format. The topographic surveys shall cover all work areas from the chain-link fence along Dallas Avenue South down to +2 feet MLLW, or sufficiently low to tie in with hydrographic survey data.
 2. The Contractor shall, with its own forces, obtain working or construction lines or grades as needed. All control surveys for elevation shall be +/-0.01 foot and, for horizontal, control angles shall be to the nearest 20 seconds +/-10 seconds, and measured distances shall be to +/-0.01 foot. All upland measurement surveys shall be within the following accuracies: Horizontal: +/- 0.033 feet +1 ppm at 1 RMS (67% confidence level) Vertical: +/- 0.066 feet +1 ppm at 1 RMS (67% confidence level). RTK-GPS methods are acceptable during PDOP values of 7.0 or less and the utilization of a Geoid model or site calibration. The RTK-GPS system shall be verified on at least 3 survey control points near the limits of the site, established by differential leveling methods from a project benchmark. Multi-path environments shall be avoided. Range pole tips should be equipped with a "topo shoe" or device to prevent the tip of the range pole from penetrating the ground surface, or a conscious effort made to capture the ground surface and prevent the tip of the range pole from sinking into the ground.
 3. The Contractor shall provide all materials as required to properly perform surveys, including but not limited to: instruments, tapes, rods, measures, mounts and tripods, stakes and hubs, nails, ribbons, other reference markers, and all else required. All material shall be of good professional quality and in first-class condition.
 4. All lasers, transits, and other instruments shall be calibrated and maintained in accurate calibration throughout the execution of the work. Calibration certificates shall be submitted to the Engineer prior to the use of any instrument.
 5. The Contractor shall furnish all materials and accessories (i.e., grade markers, stakes, pins, spikes, etc.) required for proper location of grade points and line. All marks given shall be carefully preserved and, if destroyed or removed without the Engineer's approval, they shall be reset, if necessary, at the Contractor's expense.
- C. Hydrographic Surveys.
1. Hydrographic survey procedures (positioning modes, electronic positioning system [EPS] calibration, data reduction, adjustment, processing, and plotting) shall conform to industry standards. Horizontal location observations shall compensate for errors, geodetic corrections, and atmospheric variations. Data recordation, record annotation, and processing procedures shall be consistent with recognized hydrographic survey standards, in accordance with USACE Hydrographic Surveying

- Engineering Manual, for Navigation and Dredging Support Surveys [USACE EM 1110-2-1003 (Jan 2002)]. Failure to perform and process such surveys in accordance with recognized standards will result in a rejection and nonpayment for work performed. Tide data from National Oceanic and Atmospheric Administration (NOAA) tide gauge #9447130 shall be used to adjust the survey data to MLLW and to compare with real-time kinematic (RTK) vertical data. A tide board shall be established at the site and monitored on an interval of every 5 minutes or 0.05 foot change.
2. The Contractor shall conduct all hydrographic surveys using a real-time kinematic differential global positioning system (RTK-GPS). The pre dredge, post dredge, and post backfill surveys shall be accomplished using a multi-beam echosounder system with total area coverage. The progress surveys shall be accomplished using a single-beam, single frequency echosounder system or multi-beam echosounder sonar system to identify and confirm dredging progress. The survey vessel shall be equipped with the RTK-GPS for determining the horizontal and vertical location of the soundings. The system shall be capable of +/- 2 inch horizontal positioning accuracy and +/- 3 inches vertical positioning accuracy. The sounding equipment shall produce a high resolution, permanent record that accurately depicts bottom profiles. All sonar collection methods and equipment shall be in accordance with the USACE Hydrographic Surveying Engineering Manual, for Navigation and Dredging Support Surveys [USACE EM 1110-2-1003 (Jan 2002)]. All proposed surveying equipment shall be approved by the Engineer prior to the beginning the Work, as required by Section 01400 – Removal Action Work Plan.
 3. The Contractor shall conduct and document the quality control procedures recommended by the equipment manufacturer.
 4. Soundings.
 - a. A multi-beam survey will be required for the Pre-Construction Baseline survey, the Final Dredging Acceptance, the Final Back Fill Acceptance survey, and the Record Document survey. The multibeam survey will be accomplished during tidal water surface elevations equal or greater than +6 feet MLLW or equal or greater than +4 feet above the in-water/ upland barrier elevation. In addition, the sounding and survey lines shall be coordinated and identified in relation with the sections shown on the Drawings above +2 feet MLLW.
 - b. Sounding lines shall extend a minimum of 50 feet beyond the project survey boundaries or as otherwise approved by the Engineer. Intervals between soundings on each line shall not exceed 1 foot during raw data collection and the data shall not be decimated more than 5 feet for the digital Terrain Modeling (DTM). In areas that there are toes of slope and tops the 5 foot decimated data may need to be augmented at a denser interval, to accurately depict the toes or tops of cut slopes.
 - c. All post-fill cap completion surveys as well as the post-dredging and excavation surveys shall be completed on the same sounding lines as the pre-construction survey. Print out of sounding values on

- survey charts shall not deviate more than 5 feet left or right from the initial survey line.
- d. Soundings shall be based on MLLW datum. The sounding and survey lines shall be field marked on the single-beam echosounder chart during actual dredging and data acquisition. The location, time of survey, tide height, and direction that line is surveyed shall also be marked on the single-beam echosounder chart.
 - e. All sonar collection procedures, methods and equipment specifications shall be in accordance with the USACE Hydrographic Surveying Engineering Manual, for Navigation and Dredging Support Surveys [USACE EM 1110-2-1003 (Jan 2002)].
 - f. Cross-line checks, vessel squat tests, position latency, bar checks, and sonar patch tests (as applicable) shall be submitted with the Pre-Construction Baseline Survey.
5. Field notes shall indicate the location of each sounding line for pay surveys (pre and post dredge) and for progress surveys, the date and time (hour and minutes) each sounding line is taken, and explanation for any line terminated early. The tide shall be recorded for each line surveyed and noted on the section during the survey or a time and tide reading correlation table or field notes. Notes shall include tidal data (i.e., height of tide [MLLW datum]), bar checks or sound velocity cast, position check on a known project control monument, time of the tide readings, and date and location of the tide gauge used for each area surveyed.
6. At the pre-construction conference, the Contractor's chief surveyor and independent surveyor subcontractor shall meet with the Engineer to discuss the survey proceedings, methods, and equipment to be employed for the Contractor's surveys.
- D. Positioning Control During Dredging.
- 1. A short- to medium-range electronic positioning system (EPS) shall be activated during all in-water operations. This EPS shall be established, operated, and maintained by the Contractor during the period of the contract when in-water work is actively underway. The EPS shall display and record the barge and bucket locations continuously (i.e., real-time positioning) during all in-water operations. The Contractor may also propose, for approval by the Engineer, alternate methods for monitoring the bucket position. The Engineer shall have access to the monitoring equipment to determine the location of backfilling and dredging equipment during the Work.
 - 2. A continuous graphic printout plotter and/or graphic monitor shall be on any vessel using an EPS. A complete record copy of the position data (vessel track and bucket position history), including date, time, coordinates, and root-mean square (RMS) (i.e., quality of position closure) shall be submitted to the Engineer as part of the Daily Contractor Quality Control Report, in accordance with Section 01451 - Quality Control; Testing Laboratory Services.

- a. The EPS system shall be, at a minimum, similar or equal in design, performance, accuracy, operation characteristics, and frequency to those identified in the USACE Hydrographic Surveying Engineering Manual and listed in paragraph 1.1 of the Hydrographic Manual.
 - b. The Contractor shall be responsible for maintaining the established horizontal control to locate active and/or passive shore-based EPS transmitter/receiver devices. All control shall meet Third Order, Class I, accuracy standards as defined under paragraph 1.3 of the Hydrographic Manual.
 - c. EPS calibration techniques shall conform to standard hydrographic surveying practice consistent with minimization of systematic errors inherent to and consistent with the selected EPS system, as specified under Chapters 1 and 4 of the Hydrographic Manual. The Contractor shall be responsible for accurate and reliable EPS calibration for the duration of this contract, and shall document calibration records as part of the Daily Contractor Quality Control Report.
 - d. The Contractor shall have a backup system in the event that the primary system is rendered inoperable. In the event that both the primary and backup systems are rendered inoperable, the Contractor shall make provisions within 36 hours to be operational. No additional cost to either the Port or increase in the Contract time will be allowed. In the event of a failure in either shore-based or ship-based electronic equipment, the Engineer shall be immediately notified of the time of failure and time of repair.
 - e. The Contractor shall establish and maintain a tide gauge where it can clearly be seen by the operator, and check the tide gauge against the NOAA tide gauge at the beginning of each day. To establish vertical control to the MLLW datum, the Contractor shall adjust data to MLLW using tide data from the NOAA tide gauge. The tide data shall also be used to compare to the RTK vertical data. Tidal changes shall be recorded in MLLW datum, with these changes visually provided to the backfilling or dredging operator at all times during backfilling or dredging. A printed record of the tidal changes shall become part of the Daily Contractor Quality Control Report in accordance with Section 01451 - Quality Control; Testing Laboratory Services.
- E. Independent Survey Events. The Contractor shall employ an independent licensed professional surveyor with an ACSM Hydrographer Certification to perform hydrographic and topographic surveys as specified at the below listed events during this Contract. These surveys shall verify that all Contract dredging depths and backfill cover grades and thicknesses are being obtained as specified, and to determine pay volumes for dredging. The areal coverage of independent hydrographic surveys shall encompass the entire project area plus an additional area of at least 20 ft beyond the outside perimeter of the Work above - 6 feet MLLW and at least 50 feet beyond the outside perimeter of the work below -6 feet MLLW.

Independent Survey Events

Event	Method
Pre-Construction Baseline	Multi-beam echo sounding with topographic survey above +2 MLLW.
Progress Surveys	Single Beam sounding during dredging and back fill.
Final Dredging Acceptance	Multi-beam echo sounding with topographic survey above +2 MLLW.
Final Back Fill Acceptance	Multi-beam echo sounding with topographic survey above +2 MLLW.
Record Document Survey (After Back Fill)	Multi-beam echo sounding with topographic survey above +2 MLLW.

1. Pre-Construction Baseline Survey. The data derived from a multi-beam survey shall be used in establishing initial conditions, for computing the quantities for excavation and dredging, and for verifying required backfill thicknesses. No dredging, excavation, or backfilling shall be permitted before the Engineer has approved the Pre-Construction Baseline Survey plan drawing and CAD files.
2. Progress Surveys. The daily and interim data derived from a single beam survey will be used to control dredging efforts/accuracy.
3. Final Dredging Acceptance Survey(s). The data derived from a first pass survey by a multi-beam shall be used in verifying required dredge/excavation depths and grades, and for computing the quantities for excavation. The Multi-beam survey may be repeated and compensated one additional time for confirmation of second pass dredging as required based on the first pass survey and sediment testing. Additional surveys will be completed at no cost to the Port should additional work be required to attain the required dredge/excavation depths and grades.
4. Final Back Fill Acceptance Survey(s). The data derived from single beam surveys after back fill placement shall be used in verifying required back fill elevations and grades. This survey shall be repeated at no cost to the Port should additional work be required to attain the required backfill elevations and grades.
5. Record Document Survey. This survey shall document the final accepted dredging and back fill as constructed, in accordance with Article 3.09 of this Section. The data derived from this survey shall be used in preparing the Record Drawings in accordance with Section 01730 – As Built Record Documents.

6. All independent surveys shall be accomplished with the same independent licensed professional surveyor and equipment, and use the same data processing and interpolation methods.

3.05 PREPARATION

- A. Establish and protect benchmarks, survey control points, existing structures, fences, floats, gangways, riprap, sidewalks, and paving from traffic, construction equipment, dredging equipment and vessel traffic.
- B. Furnish, set, and maintain, in good order, all ranges, buoys and other markers necessary to define the Work and to facilitate inspection. Also establish and maintain a tide gauge in a location where it may be clearly seen during dredging operations and inspection. Include all costs for providing the tide gauge and other survey control in the bid price for dredging and dredged material disposal.
- C. Establish a method of horizontal positioning and vertical control before excavation and dredging begins. The proposed method and maintenance of the horizontal positioning and vertical control system shall be subject to the approval of the Engineer and if, at any time, the method fails to provide accurate location for the excavation or dredging operation, the Contractor will be required to suspend operations. Layout all Work using horizontal and vertical measurements from physical structures as indicated on the drawings. The accuracy of all measurements taken from these points is the Contractor's responsibility. Furnish and maintain all stakes, templates, platforms, equipment, range markers, transponder stations, and labor as may be required to lay out the Work from the control points or features shown on the Drawings. Maintain all points established for the Work until authorized to remove them.
- D. Establish a positioning control system for dredging. Employ a method to locate and control horizontal dredging position within an accuracy of +/- 3 inches and vertical positioning within an accuracy of +/- 6 inches. Record observation data in standard surveying field book format or on automated data logger. Correct observed ranges for scale, calibration, and automatic variations when present.
- E. Prior to dredging or excavation, remove all visible surface large debris (greater than 24 inches in any dimension), derelict piling, and indicated structures, in accordance with Section 02220 – Site Demolition.

3.06 SURVEYS

- A. Pre-Construction Baseline survey: The Contractor's independent surveyor shall conduct a Pre-Construction Baseline survey at least five working days prior to dredging and excavation activities. The Engineer shall be notified, in writing, at least five working days in advance of baseline survey, and the Engineer shall be permitted to accompany the survey party and to inspect the data and methods used in preparing the baseline map. This survey will serve as the Pre-Construction Baseline for the basis of payment.
- B. Final Dredging and Excavation Acceptance Survey: The Contractor's independent surveyor shall conduct a post construction survey for dredging and another for excavation no later than two (2) working days after the completion of all dredging and excavation activities. The Engineer shall be notified, in writing, at least two (2) working days in advance of the post-dredge/excavation survey, and the Engineer shall be permitted to accompany the survey party and to inspect the data and

methods used in preparing the final assessment and estimate. If the post-dredge and post excavation surveys confirm the area to be at design grade, the work within that area will be complete. Should the work be determined to be incomplete, the Contractor shall immediately perform such additional work as may be necessary to satisfactorily complete the work to the satisfaction of the Port. Final estimates will be subject to deductions and adjustments to deductions previously made because of excessive over-depth dredging and/or excavation and/or dredging/excavation outside the indicated or authorized areas, or disposal of material in an unauthorized manner.

- 3.07 UPLAND EXCAVATION, SEDIMENT EXCAVATION, DREDGING, AND BACKFILLING PROGRESS SURVEYS
- A. Progress surveys for excavation, dredging, and backfilling activities shall be conducted on a daily basis, using the equipment and methods specified in Article 3.04, and elsewhere in this Section.
 - B. The point spacing and track-line spacing for land-based and riverine-based progress surveys, respectively, shall be conducted on a maximum 20 by 20 ft grid system, generally oriented orthogonal to the contours, with additional points at grade breaks, as specified in Contractor's field engineering and survey plan, and as approved by the Engineer. Once established, the same grid system shall be utilized for all progress surveys.
 - C. The areal coverage of daily progress surveys for land-based soil excavation and backfill areas shall encompass the entire area of that day's work, plus an additional area of at least 10 ft beyond the outside perimeter of the excavation (including areas that have been previously excavated and backfilled). Survey and record the toe, crest, and corners of all cut and fill slopes.
 - D. The areal coverage of daily progress surveys for riverine-based sediment dredge areas shall encompass the entire area of that day's dredging, plus an additional area of at least 20 ft beyond the outside perimeter of the dredged area (including areas that have been previously dredged). WINOPS, DREDGEPACK by Hypack, Inc. or equivalent, shall be used to monitor dredging progress.
 - E. The results of daily progress surveys shall be submitted to the Engineer within 12 hours of completing the daily dredging, excavation or backfilling activity, as applicable. The Engineer will utilize the daily progress survey submittals to verify that dredging, excavation, and backfill limits are within the specified tolerances. The Port reserves the right to direct Contractor to cease soil excavation, sediment dredging, and/or backfill activities, at no expense to Port, in the event that Contractor fails to submit the results of progress surveys within the specified time frame.
 - F. The progress surveys shall be submitted in the form of a grid plan and cross-section drawings, prepared by the Contractor. The grid plan shall indicate the location of each cross-section. The cross-sections shall be computer generated, and shall conform to the following format and informational requirements:
 - 1. Plot cross-sections at a horizontal scale of 1 in = 10 ft (maximum) and vertical scale of 1 inch =5 ft (maximum), with axes shown on margins.
 - 2. Note grid line identification number and/or coordinates for each cross-section

3. Show existing grade, specified neatline dredging and excavation, allowable over depth limits, actual excavation grades, and final cap and backfill grades.
 4. Show survey point locations.
 5. Indicate applicable dates for excavation, dredging, backfilling, capping and associated surveying activities.
 6. Date and sign each cross-section prior to submitting to the Engineer.
- G. The Contractor shall conduct progress computations for any period for which progress payments are requested. For progress payments, dredge/excavation quantity calculations shall be prepared by the Contractor using the Triangulated Irregular Network (TIN) volume technique, and using Autodesk Civil 3D, Autodesk Land Development Desktop, HYPACKTM MAX, Terramodel or other commercially available software as approved by the Engineer. Additionally, the Engineer will make such computations as are necessary to verify the quantities of progress payments. Final measurement of dredge/excavation quantities will be made by the Engineer and will be based on the Final Dredging and Excavation Acceptance survey in accordance with Section 01200 – Measurement and Payment Procedures.
- H. Survey Records. On the day the Contractor submits request for progress payment, the Contractor shall furnish the Engineer originals of all field notes, computations, any records relating to the quantity survey (dredging) or to the layout of the Work, and a PC-compatible version of any computer software required to interpret the finished data and records. The Engineer will use them as necessary to verify the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Engineer.
- I. The Port may conduct independent progress surveys for quality assurance purposes. The Port will notify the Contractor if review of the survey data indicates a discrepancy between Contractor's and the Port's progress survey, and the Port may request that the Contractor re-survey the area(s) where discrepancies are present. Any re-surveying and associated re-work required due to surveying error(s) on the part of the Contractor or Contractor's independent surveyor shall be provided at no additional cost to the Port.
- J. In the event that the Contractor's or Port's progress surveys indicate that the Work is out of compliance with the Contract Documents, the Port may direct Contractor to adjust excavation, dredging, and/or backfilling procedures until compliance is achieved, at no additional expense to the Port. The Port further reserves the right to direct Contractor to stop sediment excavation, dredging, and/or backfilling activities if it is determined, in the opinion of the Port, that Contractor's methods are not suitable to achieve the specified construction tolerances. In the event that the Port stops the work, the Contractor shall take whatever measures are required, including mobilization of alternative equipment, to achieve the specified construction tolerances, at no additional cost to the Port.

3.08 FINAL AS-BUILT SURVEY

- A. Upon completion of the Work, Contractor shall complete a final as-built survey and plan drawings of the Work for inclusion in the construction records report to be prepared by the Engineer.

- B. The as-built survey shall include a topographic survey and a hydrographic survey of all final grades within the project limits. A separate plan drawing shall also be prepared showing the final dredge/excavation grades within the work area. The accuracy of the topographic and hydrographic surveys shall be consistent with the requirements of Article 3.04 for surveying, respectively. The as-built survey shall include the location of all existing structures within the project limits, any cut or broken piling stubs that remain, as well as any structures installed or modified as part of the Work.
- C. The results of the as-built survey shall be presented in the form of contour plan drawings with 1- ft contour intervals. The location of installed utilities and structures shall be clearly indicated with appropriate symbols. Toe and catch points shall be indicated for all slopes. Spot elevations shall be indicated in areas of limited topographic relief, as appropriate. The associated survey data shall also be submitted to the Engineer, in accordance with the requirements of Article 1.06 of this Section.

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. No separate measurement will be made for “Surveying – Upland”.
- B. No separate measurement will be made for “Surveying – Offshore”.

4.02 PAYMENT

- A. No separate payment will be made for the “Survey Plan” as required by this section. The cost for this portion of the Work will be considered incidental to the “Removal Action Work Plan” as described in 01400 – Removal Action Work Plan.
- B. Payment for “Surveying – Upland” will be made at the Contract lump sum price as stated in the Schedule of Unit Prices and will be full compensation for furnishing all labor, equipment, materials, and incidentals required to complete the Work.
- C. Payment for “Surveying – Offshore” will be made at the Contract lump sum price as stated in the Schedule of Unit Prices and will be full compensation for furnishing all labor, equipment, materials, and incidentals required to complete the Work.

End of Section

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

A. General:

1. Throughout progress of the Work of this Contract, the Contractor shall maintain an accurate record of all Project record documents.
2. The Contractor shall revise (1) set of Contract drawings by redline process to show the as-built conditions during the course of the project.
3. Preparation of As-Built (Redline) Drawings is a requirement of the Contract. The terms drawings, Contract drawings, drawing files and as-bid drawings refer to Contract As-Bid, including Addendum drawings, that the Contractor is required to revise to produce an as-built record of the project. These drawings will be used by the Port at a future time as the basis of revision to the CAD drawing files and therefore must clearly communicate the changes in graphics and text to the CAD operator performing the drawing revisions.

1.02 QUALITY ASSURANCE

A. General:

1. The responsibility for maintenance of changes to the Project record documents shall be assigned to one person on the Contractor's staff.

B. Accuracy of Records:

1. General: These working, As-Built (Redline) Drawings shall be kept accurate and current per the requirements of paragraph 3.01, Maintenance of As-Built (Redline) Drawings.
2. As-Built (Redline) Drawings: Thoroughly coordinate all changes to the Contract Drawings by making redline entries on an ongoing basis on a single set of As-bid drawings maintained at the job site. Accuracy shall be such that future users of information showing the as-built condition of the Work may reasonably rely on the information shown. The Engineer's acceptance of the accuracy and current status of the record of changes to the As-Built (Redline) Drawings will be a prerequisite to the Engineer's acceptance of requests for each progress payment. Appropriate payment may be withheld if Redlines are not up to date at the times of applications for progress payments.

C. As-Built (Redline) Drawings kick-off conference

1. Convene a meeting with the Engineer prior to making entries in the As-Built (Redline) Drawings set to clarify level and style of information requirements. Attendees should include the Contractor's field manager, the Contractor's staff member(s) responsible for making the entries, the Port's Resident Engineer and the Port's inspector responsible for periodic review of the Redlines for content and currency.

D. Inspection and Quality of the Redlines

1. A checklist is appended to this Section: (Appendix # 1-- Redlines Quality Checklist). This checklist will be used by the Port's Inspectors reviewing the Redlines for currency and quality prior to the engineer's acceptance of the

periodic payment applications. Acceptance of the Redlines is a prerequisite to acceptance of each payment application. The checklist will serve to define Contract requirements for quality and content of entries.

1.03 SUBMITTALS

A. Progress Submittals:

1. Prior to submitting each request for progress payment, obtain the Engineer's acceptance of the working As-Built (Redline) Drawings as currently maintained.
2. A Contractor Certification stating all As-Built (Redline) Drawings are current shall be submitted with the Pay Application per 01200 – Measurement and Payment Procedures.

B. Beneficial Occupancy:

1. At the time of Beneficial Occupancy, provide one full-size copy of the As-Built (Redline) Drawings including design-build drawings to the Engineer

C. Final As Built Documents Submittal - Submit one hard copy and one electronic copy of the final As-Built Documents to the Engineer. Substantial Completion cannot be issued until all as-built documents have been received and "Accepted". As-built documents include the following:

1. Summary report and all backup data for all water quality monitoring results
2. Summary and all backup data for all waste disposed from the site
3. Summary and all detailed backup from water treatment systems
4. Health and safety summary – include incidents and follow up, monitoring results, changes in work activities to comply with perimeter sampling results,
5. GSR metric reporting
6. Deconstruction metric reporting
7. Summary and all detailed backup data from backfilling operations including compaction data and physical/chemical quality data
8. Settlement monitoring data
9. Summary of all existing site material reused as backfill on site
10. Summary of all pile driving data including pile construction details, installation depths, installation methods, and or any modifications during installation.
11. Monitoring well closure/removal documentation
12. Any additional data or record keeping documents requested by the Engineer during construction.
13. Any actions conducted as a response to community concerns, questions or complaints.
14. Asbestos and Lead Work Records.

1.04 PRODUCT HANDLING: AS-BUILT (REDLINE) DRAWINGS

- A. During prosecution of the Work, the Contractor shall use all means necessary to maintain a record of changes to the Contract drawings completely protected from deterioration and from loss and damage. Such changes shall be recorded upon the Redlines which will be composed of Contractor markups on project drawing prints supplied by the Engineer.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION

3.01 MAINTENANCE OF REDLINE DRAWINGS

- A. Identification:
 - 1. Upon receipt of the project drawings from the Engineer, identify one full size copy of the Drawings with the title "REDLINES".
- B. Preservation:
 - 1. Devise a suitable method for protecting the project Redlines for the duration of the contract to the acceptance of the Engineer.
 - 2. Do not use the Redlines for any purpose except entry of new data and for review by the Engineer.
 - 3. Maintain the Redlines at the site of Work as designated by the Engineer.
- C. Making Entries to the Redlines:
 - 1. Using an erasable red-colored pencil (not ink or indelible pencil); clearly indicate the changed graphics and text. It is not necessary to describe the directive, when, why or who authorized the change. The directive (RFI/ CB/CO #) should be identified only for the purpose of checking. It is not necessary for the Contractor to redraw what is clearly shown and dimensioned on a sketch accompanying the Change Directive; however the sketch should be attached to the back of the preceding sheet.
 - 2. Make clear what information a sketch replaces, e.g. the "footprint" of the changed area, by "cloud" or similar device.
 - 3. Distinguish between annotations intended to be copied exactly by a future drafter creating Record Drawing files, and information that is supplemental and not meant to be copied. Examples of supplemental information would include notes to the drafter and information purely for the Contractor's information in monitoring the change. A suggested approach is to make all markings not to be copied by a CAD operator in a color other than red, reserving red for information to be copied exactly.
- D. The working and final As-Built (Redline) Drawings shall show, the following information:
 - 1. All changes in the work generated by documents such as Change Orders, Construction Bulletins, and Requests for Information (RFIs). Identify the documents generating changes from the As-bid documents. These changes shall show the actual work with the same level of accuracy and completeness as the original Contract documents. Do not include markings or reference to documents that do not generate a graphic or text change.

2. Any sketches that accompanied the Change directive shall be attached to the drawing sheet or the back of the sheet preceding it.
3. The actual location, identification and sizes of material, equipment, utilities and elements of the project to the same level of detail as the original Contract (As-bid) drawings.
4. The correct scale, grade, elevations, dimensions and coordinates of changes.
5. Changes or modifications that result from final inspection.

3.02 CHANGES SUBSEQUENT TO SUBSTANTIAL COMPLETION

- A. The Contractor shall be responsible for recording changes in the Work subsequent to completion of that Work, including changes resulting from replacements, repairs and alterations made by the Contractor as part of his warranty.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

Appendix #1: Redlines Quality Checklist

For use by the Port's Inspector and for further definition of Port's requirements, supplementing specified requirements

CHECK ITEM	EXAMPLE/COMMENT
<p>Check that supplementary information is coded in such a way that it will not be transferred to the final record documents</p>	<p>Example: lines or notes not to be copied might be marked in a different color.</p> <p>An example of supplementary information might be references to dates or meetings or field conversations that the Contractor may want recorded on the Redlines for their own record purposes but that are not relevant to the physical as-built condition.</p>
<p>Check that the changes are marked exactly as they should be indicated in revised drawings</p>	<p>An example of unacceptability would be a relocated light fixture shown by a circle around the item with an arrow leader pointing to the new location.</p> <p>Correctly it should be drawn in the final location in which it was actually installed exactly as a drafter would be intended to draw it with all circuits or connections included and previous circuits and connections shown deleted.</p>
<p>Check that a drafter could access the information from which the change was constructed</p>	<p>The change should be clouded or otherwise identified with a reference to the actual directive from which it was constructed (CB, RFI, etc.) - this may not necessarily be the official Change Order. The traditional practice of attaching the directive to the back of the preceding sheet is recommended.</p>
<p>Check that the original information superseded by a sketch attachment to the change directive is clearly identified</p>	<p>It is not necessary for the Contractor to redraw what is clearly shown and dimensioned on the sketch. However it should be clear what information the sketch replaces.</p>
<p>Check that the Contractor is keeping some kind of log or checklist of changes pending completion of the installation or construction in the cases where the Contractor does not record the change until the</p>	<p>This is important when the practice adopted is to not mark the changes until the work is completed to assure accurate "as-built" information. Without the checklist, the Contractor can easily lose track and it will be more difficult for the Port Inspector to check the status.</p>

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work is completed	
In the case of Item 5 above, check the Contractor's method for verifying that the change directive does reflect the in-place (As built) work	If the work is not constructed exactly per the sketch accompanying the CB, RFI, etc., the variation should be noted in a way that would be clear to a drafter.

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED:

- A. Related Work
- B. General Requirements
- C. Beneficial Occupancy
- D. Substantial Completion
- E. Notice of Completion
- F. Release of Retainage
- G. Contractors Checklist
- H. Warranty
- I. Post Substantial Completion Insurance Requirements
- J. Measurement and Payment

1.02 GENERAL REQUIREMENTS

- A. The Contractor shall ensure that all procedures and actions identified in this section and elsewhere in the Contract Documents necessary to fully complete the Work are accomplished in a timely and effective manner. Lack of compliance with the closeout requirements will result in delays to any or all of the milestones identified herein.
- B. Refer to the attached contract timeline, which identifies the major closeout actions and milestones to be accomplished.

1.03 BENEFICIAL OCCUPANCY

- A. Beneficial Occupancy is established when the Owner takes permanent possession of the Work, or a portion of the Work, and it is sufficiently complete to allow full, unrestricted and permanent use of the facility from an operational standpoint, leaving only minor, incidental work to be accomplished for Substantial Completion.
- B. The date of Beneficial Occupancy is established in a Certificate of Beneficial Occupancy issued by the Resident Engineer.
- C. In order to achieve Beneficial Occupancy, the Contractor must:
 - 1. Complete the Pre Final Inspection process
 - a. The Contractor will prepare a punchlist prior to requesting a Pre Final Inspection by the Engineer. Punchlist items shall be limited to administrative requirements of the contract (such as those shown on the attached flowchart and elsewhere in the Contract Documents), training, landscaping, and minor deficiencies in the Work requiring correction. A Pre Final Inspection shall not be requested or granted if the Work is incomplete.
 - b. Contractor shall make the request for Pre Final Inspection to the Engineer in writing and with the punchlist attached at least three (3) working days prior to the requested date of inspection. The EPA will attend the Pre Final Inspection.

2. Obtain and submit to the Engineer any required Certificates of Occupancy required from local authority.
3. Refer to other sections in the contract as well as the attached Contractor's Project Closeout Checklist for additional items.

1.04 SUBSTANTIAL COMPLETION

- A. Substantial Completion is the stage in the progress of the Work when the Work is complete and in accordance with the Contract Documents, with the exception of items required for issuance of the Notice of Completion of a Public Works Contract indicated on the attached "Typical Contract Timeline". The date of Substantial Completion is the end of Contract Time and the start of the warranty period.
- B. The date of Substantial Completion is established in a Certificate of Substantial Completion issued by the Resident Engineer.
- C. In order to achieve Substantial Completion, the Contractor must:
 1. Satisfactorily complete any Training for Port personnel and Commissioning activities for equipment and systems required by the contract including the provision of any spare parts to the Port.
 2. Satisfactorily complete the Resident Engineer Punchlist resulting from the Pre Final Inspection, including demobilization and restoration of the project site, logistics storage and project work areas".
 3. Submit for approval to the Engineer any Special Warranties, Bonds, or follow-on contracts required by the contract documents. Perform Final Cleaning of the project site as required by the Contract Documents.
 4. Upon completion of the above items, the Contractor shall request a Final Inspection from the Engineer in writing at least three days prior to the requested date. The EPA will attend the Final Inspection.
 5. Satisfactorily pass the Final Inspection
 6. Return all badges, keys, locks, or other items loaned/signed out by the Contractor, subcontractors, suppliers and vendors have been returned.
 7. Submit all Final As-Built Record Documents per Section 01730 – As-Built Record Documents.
 8. Refer to other sections in the contract as well as the attached Contractor's Project Closeout Checklist for additional items.
- D. Physical Completion is when all physical work is done and the Contractor is off the site (except for warranty work), this includes:
 1. Contractor demobilization is satisfactorily completed.
- E. Administrative work includes but is not limited to:
 1. All ID badges issued to the Contractor's personnel, including subcontractors, sub-subcontractors, suppliers and vendors, and including complete accountability for any badges lost or stolen are returned.
 2. All temporary locks, keys or other items loaned or signed-out to the Contractor, including subcontractors, sub-subcontractors, suppliers and vendors are returned.

3. Project Record Documents have been submitted and approved by the Engineer.
4. EEO/WMBE/DBE and Electronic Payroll Information documents are filed with the proper Port authority.
5. Outstanding claims settled (or identified in writing by the Contractor as unsettled at the time of application for Final Payment).
6. Final Payment requested.

1.05 FINAL ACCEPTANCE

- A. Final Acceptance Date is the date which all contract work, physical and administrative is completed, and the Port of Seattle Director, Engineering Services has accepted the project, except for:
 1. Affidavits of Wages Paid
 2. Releases from State Agencies
 3. Claims previously made in writing and identified by the Contractor, a Subcontractor, or material supplier as unsettled at the time of application for Final Payment.

1.06 NOTICE OF COMPLETION OF PUBLIC WORKS CONTRACT

- A. Notice of Completion of Public Works Contract will be issued when the project has been accepted by the Director, Engineering Services and all Affidavits of Wages Paid for the project have been received.
- B. On the Notice of Completion of Public Works Contract the Date Work Accepted marks the start of the time for any claims against the contract retainage or the payment and performance bonds per the Revised Code of Washington.

1.07 RELEASE OF RETAINAGE TO CONTRACTOR

- A. The Contractor must request release of retainage from the Port.
- B. Affidavit of Wages Paid by the Contractor and Subcontractors are submitted by the Contractor to Labor and Industries (L & I). L & I will provide approval to the Contractor and Subcontractor/s. It is the Contractor's responsibility to provide a copy of each of the approved L & I Affidavit of Wages Paid, including any and all subcontractors, to the Port of Seattle.
- C. The Port issues a Notice of Completion of Public Works Contract to the Department of Revenue (DOR) and provides a copy to the Contractor. Department of Revenue will issue a Certificate of Payment of State Excise Taxes by Public Works Contractor which is sent to the Port.
- D. The Port issues the preceding Notice of Completion of Public Works Contract to L & I. L & I will issue a certificate showing the Contractor is current with payments of industrial insurance and medical aid premiums which is sent to the Port.
- E. The Port issues the preceding Notice of Completion of Public Works Contract to Employment Security. Employment Security will issue a Certificate of Payment of Contributions, Penalties and Interest on Public Works Contract, showing the Contractor has paid in full or provided for contributions, penalties and interest which is sent to the Port.

F. Once the Port of Seattle has received releases from Employment Security, L & I and DOR; has received the Contractor's Release of Claims and final payment request; and the Director of Engineering Services has accepted the work, the retainage can be released.

G. This process typically takes a minimum of 60 days.

1.08 CONTRACTOR'S PROJECT CLOSEOUT CHECKLIST

A. Attached to this Section is a Contractor's Project Closeout Checklist for use in tracking completion of the items required herein.

1.09 WARRANTY

A. The Contractor warrants to the Port that all materials and equipment delivered or furnished under this Contract to be free from defects in design, material or workmanship and against damage caused prior to Substantial Completion or Beneficial Occupancy. As is consistent with Article G-04.09 and unless otherwise specified, this warranty extends for a period of one (1) year from the effective date of the Certificate of Completion or Beneficial Occupancy.

B. The Contractor shall promptly repair or replace all defective or damaged items delivered under the Contract. The Contractor may elect to have any replaced item returned to the plant at no additional expense to the Port.

C. In the event of equipment failure, during such time or in such a location where immediate repairs are mandatory, the Contractor shall respond promptly, irrespective of time, and in all cases within 24 hours. If the Contractor is not available, Port maintenance personnel will make repairs. The Contractor shall then reimburse the Port for parts and labor necessary to correct deficiencies as defined within the warranty clause and time. Repairs as described in this paragraph, by Port personnel, shall not void the warranty.

D. Special warranties required under this Contract - See Section 01787 – Warranties and Bonds.

1.10 POST-SUBSTANTIAL COMPLETION INSURANCE REQUIREMENTS

A. Refer to General Conditions G-11.04(B) on Completed Operation requirements.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

CONTRACTOR'S PROJECT CLOSEOUT CHECKLIST

ITEM:	BY:	DATE:
1. Request Pre-Final Inspection - provide Contractor's Punchlist to RE		
2. Pre-Final Inspection		
3. Certificate of Beneficial Occupancy		
4. Complete RE Punchlist		
5. Request Final Inspection		
6. Final Inspection		
7. Complete commissioning activities		
8. Perform final cleaning of project site per contract		
9. Demobilization complete		
10. Training of Port personnel		
11. Final O & M data and warranties		
12. Provide spare parts		
13. Submit special warranties, bonds or follow-on contracts as required by contract		
14. All I.D. badges, including subcontractors, suppliers and vendors have been returned		
15. All temporary locks, keys or other items loaned/signed out by the Contractor, subcontractors, suppliers and vendors have been returned		
16. Project record documents submitted and		

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Section 01770 - Project Closeout

"Accepted" by RE		
17. Certificate of Substantial Completion		
18. Contractor confirms all EEO, Electronic Payroll Information (EPI) and WMBE/DBE documents have been submitted		
19. All Contractor claims settled		
20. Final progress payment requested 100% (all items complete)		
21. Subcontractor and supplier claims settled		
22. Receive Release of Claims from Contractor and verification that all Subcontractors Industrial Insurance is in good standing		
24. Work Accepted by Director Engineering Services		
23. Contractor submits Affidavit of Wages Paid for Contractor and all subcontractors		
25. Notice of Completion of Public Works Contract sent to state agencies and Contractor		
26. Port receives releases from L&I, Employment Security and Department of Revenue		
27. Contractor requests release of retainage		
27. Release retainage or retainage bond		

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - 1. Refer to General Conditions for terms of Contractor's overall warranty of the Work.
 - 2. Specific requirements for warranties for work and products, and installations that are specified to be warranted are included in individual sections of Divisions 2 through 17.
 - 3. General closeout requirements are included in Section 01770 – Project Closeout.
 - 4. Certifications and other commitments and agreements for continuing services to the Port are specified elsewhere in Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on work that incorporates products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Contractor.

1.02 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as result of such failure or that must be removed and replaced to provide access for correction of warranted work.
- B. Reinstatement of Warranty: When work covered by warranty has failed and been corrected by replacement or rebuilding, reinstate warranty by written endorsement. The reinstated warranty shall be equal in all respects to the original warranty duration and coverage.
- C. Replacement Cost: Upon determination that work covered by warranty has failed, replace or rebuild work to an acceptable condition complying with requirements of Contract Documents. Contractor is responsible for cost of replacing or rebuilding defective work regardless of whether the Port has benefited from use of work through a portion of its anticipated useful service life.
- D. The Port's Recourse: Written warranties made to the Port are in addition to implied warranties, and shall not limit duties, obligations, rights, and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Port can enforce such other duties, obligations, rights, or remedies.
 - 1. Port reserves right to reject warranties and to limit product selections to products with warranties not in conflict with requirements of Contract Documents.
 - 2. Port reserves right to refuse to accept work for project where a special warranty, certification, or similar commitment is required on such work or part of work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.03 SUBMITTALS

- A. Submit written warranties to the Engineer 60 days prior to the Pre-Final Inspection. Warranties start dates commence on the date of the Certification of Substantial Completion or Beneficial Occupancy, whichever comes first.
- B. A sample form for special warranties is included at end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier, or manufacturer. Submit draft to the Engineer for approval prior to final submission.
 - 1. Refer to individual Sections of Divisions 2 through 17 or specific content requirements, and particular requirements for submittal of special warranties.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

- 4.01 No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices bid for the Project.

End of Section

SAMPLE

SPECIAL LIMITED PROJECT WARRANTY FOR

WHEREAS, _____

(Contractor),

Address _____

Telephone (____) ____ - ____ ext. _____ has performed _____

(work) on the following project: _____

Address _____

For the Port of Seattle

and, WHEREAS, the Contractor has agreed to warrant said work _____

NOW, THEREFORE, the Contractor hereby warrants said work in accordance with the terms hereof, complying with the terms of the Contract with the Port dated _____, that _____

WARRANTY PERIOD _____, STARTING _____, TERMINATING _____.

IN WITNESS THEREOF, this instrument has been duly executed this ____ day of _____, 20__, for

Contractor _____ as its _____
(typed name) (position)

Name of Firm _____

Address _____

And has been countersigned in accordance with terms and conditions, for the Manufacturer

_____ as its _____
(typed name) (position)

Name of Firm _____

Address _____

PART 1 GENERAL

1.01 CONTRACTOR FULLY RESPONSIBLE FOR SAFETY

- A. The Contractor assumes full and sole responsibility for and shall comply with all laws, regulations, ordinances, and governmental orders pertaining to safety in the performance of this Contract. The Contractor shall conduct all operations under this Contract so as to offer the least possible obstruction and inconvenience to the Port, its tenants, the public and abutting property owners. The Contractor shall be responsible for employing adequate safety measures and taking all other actions reasonably necessary to protect the life, health, and safety of employees and the public and to protect adjacent and Port-owned property in connection with the performance of the Work.
- B. The Contractor shall have the sole responsibility for the safety, efficiency, and adequacy of the Contractor's equipment and methods and for any damage or injury resulting from their failure or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the Project, including safety of all persons and property in performance of the Work. This requirement shall apply continuously and is not limited to normal working hours. Nothing the Port may do, or fail to do, with respect to safety in the performance of the Work shall relieve the Contractor of this responsibility.

1.02 REFERENCES

- A. The Contractor shall comply with the provisions found in the Port of Seattle Construction Safety & Health Manual, the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions and amendments thereto; the provisions of the Division of Occupational Safety & Health (DOSH) Washington Industrial Safety Act of 1973 (WISHA); and the requirements of the following chapters of the Washington Administrative Code (WAC):
 - 1. Chapter 296-24 WAC General Safety and Health Standards
 - 2. Chapter 296-62 WAC General Occupational Health Standards
 - 3. Chapter 296-155 WAC Safety Standards for Construction Work
 - 4. Chapter 296-800 WAC Safety & Health Core Rules
 - 5. ANSI/ASSE Standards
- B. In addition, the Contractor shall comply with the following requirements when they are applicable:
 - 1. Local Building and Construction Codes
 - 2. United States Coast Guard regulations
 - 3. Seattle Fire Department Codes
 - 4. National Fire Prevention Act 70E
 - 5. National Electrical Code.

NOTE: In cases of conflict between different safety regulations, the more stringent regulation shall apply.

1.03 DEFINITIONS

A. Manager, of Construction Safety Services

An employee of the Port or designated consultant who is responsible for the day-to-day management of the Port of Seattle's Construction Safety Program, and such agents, including the Field Safety Manager, as authorized to act in his/her behalf.

B. Field Safety Manager

An employee of the Port or designated consultant who conducts and monitors jobsite inspections and verifies Contractor compliance with identified corrective actions.

1.04 SUBMITTALS

A. The Contractor shall submit the information described in Paragraph 1.05.A.

B. The Contractor shall submit a Chemical Exposure Plan for any products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, or silica and for any processes involving floor sealers, traffic coatings, terrazzo sealers, or specialty paints. The plan shall include employee exposure control methods and isolation methods to prevent spread of chemicals outside the work area and to safeguard the public.

1.05 CONTRACTOR RESPONSIBILITIES

A. SITE SPECIFIC CONSTRUCTION HEALTH AND SAFETY PLAN

1. The Contractor shall submit, for the Port's review and comment, a Site-Specific Construction Health and Safety Plan as part of the Section 01400 Removal Action Work Plan. The submittal shall be made in accordance with Section 01305 – Preconstruction Submittals. An outline of the matters to be address in the Safety Plan is set forth in Appendix A to this Division. The Port's review of, or comment on, the Site-Specific Construction Health and Safety Plan shall not, in any way, relieve the Contractor of any responsibility or liability for the Plan. Delay in submitting a written Site-Specific Construction Health and Safety Plan will not constitute grounds for a contract schedule extension or delay claim.
2. The Port will not issue a Notice to Proceed (NTP), until the Site Specific Construction Health and Safety Plan has been received and accepted by the Engineer and Manager of Construction Safety Services.
3. The Site Specific Construction Health and Safety Plan shall be provided to, and the contractor shall obtain written acknowledgment by, all subcontractors used in the completion of the Work, both upland and in-water.

B. GENERAL OBLIGATIONS

The Contractor is responsible for accident prevention and job site safety. This responsibility cannot be delegated to subcontractors, suppliers, the Port, or other persons. To this end, the Contractor shall:

1. Promote a safe and healthy work environment.
2. Provide an accident prevention program.

3. Promote training programs to improve the skill and competency of all employees in the field of occupational safety and health.
4. Instruct all employees of safe work methods and practices when assigning work.
5. Ensure that employees have and use the proper protective equipment and tools for the job.
6. Ensure that all heavy equipment operators (e.g., cranes, loaders and forklifts) are properly qualified and trained on the specific piece of equipment in use.
7. Plan and execute all work to comply with the stated objectives and safety requirements contained in the contract provisions, Federal, State, and local laws and regulations and industry standards.
8. Cooperate fully with the Port and its Consultants and insurers (if applicable) in connection with all matters pertaining to safety.
9. Maintain an orientation program for new employees, including subcontractor employees that includes, at a minimum, a review of:
 - a) Potential hazards in the work areas
 - b) Required personal protective equipment and apparel
 - c) The following prohibited conduct shall result in the immediate removal from the project: gambling, fighting or horseplay, possession of firearms, alcohol consumption, or illegal use, possession, or sale of a controlled substance or being under their influence.
 - d) Emergency procedures
10. Perform daily inspections of the project, documented on the Construction Safety Inspection Report (Appendix D), review and direct immediate action to correct any substandard safety conditions or practices, including those of any Subcontractor, regardless of classification. The Contractor shall specifically respond in writing to any substandard safety conditions or practices identified by the Port or its designated Representative. The Construction Safety Inspection Report shall be submitted to the Engineer on a weekly basis as part of that day's Contractor's Daily Construction Report.
11. Hold daily site health and safety meetings with all employees prior to the commencement of the work. These meetings shall review the planned work for the day and corresponding health and safety issues. Hold at least one scheduled safety meeting with all employees each week. Such meetings shall include a discussion of all observed unsafe work practices or conditions, the accident experience, and all corrective actions. The Contractor shall encourage safety suggestions from employees. Topics of the safety meetings and a list of attendees shall be submitted with the Contractor's Daily Construction Report.
12. Hold a site health and safety meeting with all authorized site visitors. This meeting shall include, at a minimum, necessary PPE, locations of work (exclusion zones, contaminant reduction zones, etc.), decontamination

procedures, emergency evacuation procedures, accident prevention, and sign in/out procedures.

13. Hold at least one all-hands safety meeting with all employees and subcontractor employees - subcontractors at any tier each month. An agenda shall be prepared and distributed for this meeting. The meeting shall include a safety update and pertinent safety information for upcoming work. The Contractor shall encourage input and involvement from the subcontractors.
14. Ensure prompt medical treatment is administered to any injured employee.
15. Undertake a complete investigation of all accidents and implement corrective action to prevent a recurrence.
16. Prepare and implement a Site Specific Construction Health and Safety Plan as set forth in Paragraph 1.05.A.
17. Comply with the Administrative Procedures set forth in Paragraph 1.08.
18. Provide the Engineer and Manager of Construction Safety Services with copies of all DOSH citations immediately upon receipt.
19. Ensure that all of its subcontractors, suppliers, etc., are provided with a copy of this specification and are informed of their obligations regarding safety.
20. Ensure that all Contractor and subcontractor personnel at any tier have completed a one and one-half (1 ½) hour Port of Seattle safety orientation to be held by the Port of Seattle at a time and location to be specified by the Port, prior to commencing work. The time expended and any associated costs such as travel time, parking, and other expenses are to be borne by the Contractor.

C. CONTRACTOR SAFETY SUPERVISOR

1. It is recognized that the responsibility for safety lies with the Contractor. Each Contractor shall appoint an individual(s) responsible for safety. This individual(s) must be employed in a supervisory position, empowered by their employer to take corrective action; be present on the project while work is being performed; and spend the amount of time necessary to ensure the Contractor's compliance with safety requirements.
2. A safety inspection shall be performed and documented for each shift worked, by the Contractor's safety representative.
3. The Contractor shall submit a resume of the experience and qualifications for the proposed Contractor Safety Supervisor(s) as part of the Site Specific Construction Health and Safety Plan submittal. Please refer to part D. Definitions, subparagraphs 1 and 2 below. The Port will review the resumes and a personal interview may be required. The Port may reject anyone it deems "Not Qualified."

D. COMMUNITY HEALTH AND SAFETY MONITORING

1. The Port will perform monitoring around the perimeter to assess compliance with air quality (fugitive dust, total PCBs, VOCs, diesel exhaust, hydrogen sulfide), noise, and light requirements.

2. These include:

Air Quality Parameter	Air Quality Criteria
Fugitive Dust	<p><u>Qualitative Standard</u> Contractor is responsible for ensuring the “no visible dust” standard is achieved throughout the project. based on PSCAA Regulation I, Section 9.0</p> <p><u>Quantitative Standard</u> Daily time-weighted average (TWA) for PM₁₀ = 105 µg/m³ based on 70% of PM₁₀ NAAQS of 150 µg/m³ <i>(measured using a DataRAM 4000 particulate monitor)</i></p>
Total PCBs	<p>Daily TWA = 0.11 µg/m³ derived from EPA Region 9 PRGs <i>(measured by EPA Method TO-4A using a TE-1000 PUF Sampler)</i></p>
VOCs	<p><u>Qualitative Standard</u> Odor detected and reported by site worker or community</p> <p><u>Quantitative Standard</u> A measurement of 20 ppm sustained for 1 minute <i>(measured using a MiniRae PID)</i></p>
Diesel Exhaust	<p>Daily TWA = 20 µg/m³ based on abandoned ACGIH TLV <i>(measured as elemental carbon by NIOSH Method 5040)</i></p>
Hydrogen Sulfide	<p><u>Qualitative Standard</u> Odor detected and reported by site worker or community.</p> <p><u>Quantitative Standards</u> Daily TWA = 2 µg/m³ based on WAC 173-460-150 <i>(measured using a Jerome hydrogen sulfide analyzer)</i></p>
Other Quality Parameters	<u>Other Quality Criteria</u>
Residential receiving properties	<p>Not to exceed 85 dB(A) between the hours of 7:00 am and 10:00 pm weekday, 9:00 am and 10:00 pm weekends. For night time hours, noise is not to exceed 75 dB(A). For the same time periods, noise received at commercial properties (South Park Marina) may not exceed 90 dB(A) and 80 dB(A), respectively.</p>
Short-duration construction activities	<ul style="list-style-type: none"> • 5 dB(A) for 15 minutes in any 1-hour period • 10 dB(A) for a 5 minutes in any 1-hour period • 15 dB(A) for a 90 seconds in any 1-hour period.
Pile driving	<p>Sound measured at the receiving property line or 50 feet from the equipment, whichever is greater, may exceed the performance criteria in any 1-hour period between the hours of 8:00 am and 5:00 pm on weekdays and 9:00 am and 5:00 pm on weekends. But in no event may the sound level exceed:</p> <ul style="list-style-type: none"> • 90 dB(A) continuously • 93 dB(A) for 30 minutes • 96 dB(A) for 15 minutes

	99 dB(A) for 7 1/2 minutes.
Lighting	Residential receiving properties = 0.5 foot candles Industrial receiving properties = 1.0 foot candle

3. Contractor shall perform Work in a manner that achieves the air quality, noise, and light criteria. Contractor shall be solely responsible for the cost of implementing mitigation measures required to achieve compliance with these criteria.

E. DEFINITIONS

1. Contractor's Safety Supervisor: shall either be a Full Time Safety Professional or a Site Safety Officer depending on and determined by the provisions outlined in 1.05(F).
2. Fulltime Safety Professional qualifications include:
 - a) Shall have no other duties.
 - b) An individual possessing a minimum of five years progressive experience managing safety programs on large construction projects comparable to this contract in scope and complexity.
 - c) Be knowledgeable concerning all federal, state, local, and Port of Seattle regulations applicable to construction safety.
 - d) Possess "Competent Person" certification in construction safety disciplines related to the work performed and possess verifiable training. This individual shall also be responsible for identifying "Competent Persons" required by State and Federal safety standards for which they are not certified.
 - e) Have successfully completed the OSHA 500 Safety and Health Course. This requirement may be waived in lieu of a safety and health degree or professional safety certification.
 - f) Have successfully completed the OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with current annual 8-hour refresher.
 - g) Have successfully completed the OSHA 8 Hour HAZWOPER Supervisor training.
 - h) Training and current certification for CPR and First Aid is preferred.
 - i) Be capable of performing accident investigations and developing a concise report.
 - j) Is proficient in the development and presentation of "tool box" meetings and safety training.
3. At the Port's discretion the requirements for Contractor safety personnel can be reviewed and action taken to decrease or increase the number of individuals.

4. The Contractor Safety Supervisor shall be primarily responsible for ensuring Contractor's compliance with the safety requirements provided in this Division. Without limiting the generality of the foregoing, the Contractor Safety Representative shall:
 - a) Review all subcontractor and sub-tier contractor's Site Specific Safety Programs and Job Hazard Analysis (JHA) for compliance with applicable POS Construction Safety, State, and Federal Standards and ensure that they receive a copy and are briefed on Section 01860 - Safety Management.
 - b) Perform a site specific safety orientation for all employees, subcontractors and sub tier contractors prior to beginning work. This is in addition to the Port's safety orientation.
 - c) Perform daily safety inspections of the Contractor and Subcontractor's project to evaluate the project for unsafe conditions and/or practices, and take the appropriate corrective action when required.
 - d) Immediately report all injuries of personnel, vehicles, "Near Miss" incidents, and property damage to POS Manager, Construction Safety Services and insure immediate corrective action is taken. Assist in the preparation of all accident investigations and ensure reports are submitted within 24 hours of occurrence.
 - e) Ensure meaningful, weekly safety meetings are held for all on-site employees. Provide the job foremen with appropriate training materials to conduct weekly "tool box" safety meetings and attend safety meetings to evaluate their effectiveness. Maintain documentation of topics discussed and attendees, with copies submitted to the Engineer through the Contractor's Daily Construction Report.
 - f) Be responsible for the control, availability, and use of necessary safety equipment, including personal protective equipment and apparel for the employees.
 - g) Shall attend a monthly safety committee meeting scheduled by the Manager of Construction Safety Services to discuss and resolve relevant issues related to safety and health on Port of Seattle projects.
5. Contractor Safety Representative not performing their duties in accordance with this document shall be replaced at the Port's discretion by an individual meeting the requirements of this section. In addition, the Contractor Safety Representative may not be removed from this contract or replaced without the Port's advanced written approval. The Contractor shall notify the Engineer and Manager of Construction Safety Services when this person cannot be on duty while work is being performed and shall submit the name(s) and qualifications of the individual assigned to perform said duties.

F. ACCIDENT PREVENTION

1. The Contractor has the responsibility to correct hazardous conditions and practices. When more than one Contractor is working within a given job site, any project management personnel shall have the authority to take action to prevent physical harm or significant property damage. If it is determined there is “Imminent Danger” the Contractor shall:
 - a) Take immediate action to remove workers from the hazard and stabilize or stop work until corrective actions can be implemented to eliminate the hazard.
 - b) Immediately identify and implement corrective action to eliminate the hazard.
 - c) Immediately notify the Engineer and Manager of Construction Safety Services or others as necessary. The Engineer will notify the proper authorities if the damage cannot be promptly corrected and could develop into an emergency.
 - d) Each worker shall immediately report any condition suspected to be unsafe or unhealthy to their job foreman or safety representative. If there is no resolution of the concern at that level, the employee shall report the concern to the Engineer and Manager of Construction Safety Services.

G. ONSITE FIRST AID

1. At least two people shall be available at the work site at all times to render first aid. These persons must have a valid certificate in first-aid training from the American Red Cross, or equivalent verifiable training program. A minimum ratio of one such qualified person for every 10 employees shall be maintained throughout the project. Additionally, the Contractor shall:
 - a) Post emergency procedures which shall include telephone numbers and locations of facilities including, but not limited to, hospitals, physicians, police, fire and emergency medical services, in conspicuous locations at the job site and at all telephone locations.
 - b) Provide in a readily accessible location, first-aid supplies of sufficient size and number to handle common first-aid incidents.
 - c) Identify personnel qualified to render first aid with suitable emblems affixed to the rear of their hard hats for identification.
 - d) Regularly discuss actions to be taken during emergencies with the Contractor’s supervisory personnel and at “tool box” safety meetings.

1.06 PORT OF SEATTLE’S RIGHTS

A. INSPECTIONS/INVESTIGATIONS

1. The Port may, in any reasonable manner, observe and inspect the Contractor’s safety and accident prevention procedures for all activities and personnel working at the construction sites, including the Contractor, subcontractors, visitors, and materials or equipment suppliers. This specifically includes, but is not limited to, the right to attend all safety meetings.

2. The Port shall receive copies of any daily Construction Safety Inspection Reports (Appendix D) completed by the Contractor or anyone performing work for, on behalf of, or under the Contractor.
3. The Port shall receive written copies of accident or incident reports completed by the Contractor within 24-hours of occurrence, using the accident investigation reports found in the Port of Seattle Construction Safety & Health Manual or contractor equivalent. This reporting shall include but not be limited to those reports prepared pursuant to OSHA and/or DOSH regulations.
4. The Port may, in any reasonable manner, observe or participate in any accident investigation conducted by the Contractor or anyone performing work for, on behalf of or under the Contractor. The Port may also, at its sole discretion and in any reasonable manner, undertake its own accident investigation.

B. CORRECTIVE ACTIONS/STOP-WORK

1. The Port shall have the right to require the Contractor to address unsafe working conditions, including taking corrective action when unsafe working conditions are observed (e.g., lack of good housekeeping practices, use of equipment in obviously poor condition, failure to adhere to statutory construction regulations).
2. The Port shall have the right to require the removal from the work site of any person, property or equipment that, in the Port's opinion, is deemed unsafe.
3. The Port shall have the right to require the Contractor to immediately cease any action and/or stop the Work (or any portion thereof) in the event that any condition exists that, in the Port's opinion, constitutes an imminent danger or serious harm.
4. The Port shall have the right to suspend the Work (or any portion thereof) pending the completion of any accident/incident investigation, whether undertaken by Contractor, the Port or others.

C. PORT'S ACTION/INACTION DOES NOT RELIEVE CONTRACTOR

1. Nothing the Port may do, or fail to do, with respect to safety in the performance of the Work shall relieve the Contractor of its responsibility to comply strictly with this Division and all standards referenced in Section 1.02 of this document.

D. PORT'S ACTION/INACTION NO BASIS FOR ADJUSTMENT

1. The Port's exercise of any rights under this Section shall not be a basis for any adjustment in the Contract Price or Time.

E. PORT OF SEATTLE INCLUDES CONSULTANTS

1. The terms "Port of Seattle", "POS", and "Port" specifically includes the Port's designated consultants.

1.07 PORT MANDATED SAFETY REQUIREMENTS

- A. Prior to Notice to Proceed (NTP), the Contractor's Project Manager and Safety Representative shall meet with the Engineer and Manager of Construction Safety Services to review and discuss the safety requirements of this contract.
- B. SPECIFIC SAFETY PROVISIONS
 - 1. In addition to Federal, State, and Local regulations pertaining to operations and safety, the Contractor shall adhere to the following Port mandated safety requirements:
 - a) Asbestos and Contractor Personnel Asbestos Training: Ensure that all workers have received the initial and annual Asbestos Awareness training prior to the start of work.
 - b) Entry into Confined Spaces: Work on this project may require entry into confined spaces as defined by WAC 296-809. The Contractor shall read and follow the requirements of the Port of Seattle's Confined Space Entry Program, as found in the Port of Seattle Construction Safety and Health Manual. The Contractor's Confined Space Entry Program must meet or exceed these requirements.
 - 1) The Contractor shall provide the Engineer a copy of its Confined Space Entry Program as part of the Contractor's Site Specific Construction Health and Safety Plan Submittal. As part of this submittal, the Contractor shall complete the "Confined Space Entry Program Certificate" (Appendix B).
 - 2) Should the Contractor employ subcontractors to work in confined spaces it shall be the Contractor's responsibility to submit the required documentation for each subcontractor.
 - 3) No work shall be allowed to start in a confined space until the required submittals have been made. In the event the Contractor does not comply with these regulations, ACCESS WILL BE DENIED and the Engineer notified. Delays caused by failure to submit the required documentation shall not be considered a reason for extension of contract time.
 - c) Electrical - Safe Clearance Procedures
 - 1) Entry into High Voltage Areas: Work on this project may require entry into manholes, vaults, electrical rooms or other High Voltage areas.
 - 2) In the event entry is required, the Contractor is obligated to identify any High Voltage areas that may be involved in the project and immediately notify the Engineer if they have not been properly identified. Before entry into a High Voltage work area the Contractor shall notify the Engineer and contact STIA Electrical Shop at (206) 787-5311(Airport) or the Seaport Electrical Shop at (206) 787-3350.
 - d) Fire Prevention: The Contractor shall ensure that fire prevention measures onsite are in accordance with OSHA, DOSH, NFPA and

- POS standards. Approved safety cans shall be used for flammable and combustible liquids. Signs and fire extinguishers shall be provided where required.
- e) Traffic Control: Ensure compliance with Section 01570 - Traffic Control.
 - f) Hazardous Materials: Ensure compliance with Section 01631 - Pollution Prevention Planning and Execution.
 - g) Open Flame Devices: Prohibit the use of unapproved fuel-burning types of lanterns, torches, flares or other open-flame devices on Port property.
 - h) Hot Work Permit:
 - 1) Seaport: Open Flame Welding and spark producing equipment and tasks require the Contractor to implement a formal “Hot Work Permit” Program outlined in the Port of Seattle Construction Safety and Health Manual. Cutting and Welding tasks also require the Contractor to secure a “Hot Work Permit” from the Seattle Fire Department in accordance with Document 00800, Article SC-04.11.
 - i) Liquid propane storage and use below grade is prohibited.
 - j) Excavating & Trenching: Coordination with the Engineer shall be required for work performed on the site.
 - k) Construction activities that pose a potential risk of exposure to contaminated soil (such as excavations) shall be supervised by personnel who have both a current 40-hour Hazardous Waste certification and an 8-hour Hazardous Waste Supervisor’s certification. These individuals shall be able to identify the potential need for upgrading the level of health and safety protection. All personnel working in direct contact with contaminated soil shall have a current 40-hour Hazardous Waste certification and medical monitoring, as required in Hazardous Waste Operations, Chapter 296-843 WAC and in accordance with OSHA regulations. The plan shall also include emergency procedures and medical treatment, fire protection, Job Hazard Analysis (JHA), and PPE requirements.
 - l) The Contractor is responsible for soil sampling and air monitoring to determine hazards and exposures to their employees.
 - m) The Site-Specific Construction Health and Safety Plan shall include guidelines for the protection of construction-related workers against occupational musculoskeletal injury risk factors arising from operations connected with the construction, maintenance and repair, and demolition of structures, using a hierarchy of controls. Manual Material Handling, Body Positioning, and Dynamic Stretching shall be addressed. Contractors will need to consult with their Contractor Safety Representative to determine which tasks require an ergonomics prevention program and which selection of controls are needed to minimize injury.

- n) As defined in WAC 296-155 – Part L, individuals involved in operating hoisting equipment, including but not limited to cranes, boom trucks, and forklifts so configured, shall possess recognized certification. Additionally, qualified riggers and signal persons shall also possess recognized certifications. Copies of the certification(s) shall be submitted in accordance with Section 01305 - Pre-Construction Submittals.
- o) Personal Protective Equipment Policy: To reduce the possibility of injuries, the Contractor shall implement a policy that requires 100% use of hardhats, safety glasses, and gloves for all personnel under their control. It is the responsibility of the Contractor to supply the proper personal protective equipment for the task.
- p) Protection of the Public: As part of the Site Specific Construction Health and Safety Plan, the Contractor shall submit a plan for the protection of the public on or adjacent to construction and demolition operations. This plan shall include, but not be limited to, barricades, fencing, and signage. "Public" is defined as anyone not associated with the project - general public, POS and tenant employees.
- q) At the Port's request, provide safety awareness training for Contractor supervisory personnel and Port management in one or more of the following: cranes & rigging, electrical, fall protection, trenching & excavation, steel erection, heavy equipment, public protection.

C. DISCIPLINARY ACTION MATRIX:

- 1. Defining "The Plan"
 - a) The object of this matrix is to consistently and effectively control safety hazards such as unsafe acts, and unsafe conditions that lead to injuries of employees, the general public, or that cause property damage.
 - b) The matrix also provides a basis for the Contractor's program by standardizing how safety infractions committed by those employees will be handled.
 - c) All employees of the Contractor, subcontractor, sub tier contractor, vendor, or tenant are covered under this matrix regardless of classification.
 - d) Damage to equipment or property due to unsafe act or using damaged equipment.
 - e) Listed are the minimum requirements for discipline. The Contractor has the right to incorporate more stringent procedures from their corporate policy into this matrix. The Contractor shall not submit two Disciplinary Action Programs.
 - f) Individuals observed by the Contractor's management performing unsafe acts or creating unsafe conditions shall be disciplined under this matrix.

- g) Individuals observed by the Port of Seattle management shall also be subject to disciplinary action. POS management shall immediately contact the Contractor's management or provide written information to the Contractor's management as to violation, time, date, employer, and employee.
 - h) The Contractor's Safety Manager shall perform the act of documenting and distributing the "Written Violation Notice."
2. Defining "Violation"
- a) Violations are defined as:
 - b) "General Violations" are considered to be those infractions that may not cause serious injury or illness to an individual but are still violations of written safety policies and procedures. Examples include housekeeping, unregulated ACM incidents, property damage, mushroomed tools, etc. "General Violations" do not necessarily require a written warning unless they become classified as "Repeat Violations."
 - c) "Serious Violations" are those violations that if left uncorrected could cause serious injury or illness to an individual. Examples include employees exposed to fall or impalement hazards or serious bodily harm.
 - d) "Imminent Danger" are violations/situations that will most likely cause permanent disability or death to an individual. Examples can include falls, electrical, or trenching hazards and unsafe equipment.
 - e) "Repeat Violations" are situations that arise as a result of a previously identified infraction not being abated in the time frame required or numerous violations of the same classification. "Repeat Violations" can also be defined as a situation where one supervisor has multiple employees working under their direction who are in violation of a written Federal, State, project, or company policy.
 - f) Violations are not limited to the examples listed above.
- NOTE: An "employee" may be removed from the project at any time for a safety violation that endangers his life or the life of a fellow employee.
3. Defining "Employee"
- a) As mentioned earlier, all employees of the Contractor, subcontractor, vendor, or tenant are included in this program.
 - b) Job title classifications can include but are not limited to trades person, foreman, supervisor, superintendent, etc.
 - c) Any person (s) directly reprimanded for their own actions or inactions, regardless of their position, shall be reprimanded as a "Worker."

4. Defining the “Procedure”
 - a) Individuals observed committing infractions of written Federal, State, site, or company safety policies shall be brought to the attention of the Contractor’s management.
 - b) The Contractor shall in a timely manner, notify the identified employee(s) that they are in violation of written safety rules or procedures and shall abate the hazard.
 - c) In the event of “Imminent Danger or” a “Serious Violation”, the Contractor or POS shall immediately notify and remove the employee(s) from the hazardous situation.
 - d) The Contractor shall provide timely written warning to the identified individual(s), as well as the direct supervisor and superintendent of that individual(s). The supervisor’s names shall be recorded on the “Written Violation Notice.”
 - e) To discourage “Repeat Violations” or supervisor apathy, the supervision is subject to disciplinary action as stated in the matrix.
 - f) The Contractor shall utilize the “Written Violation Notice” provided in this section.
5. Defining the “Results”
 - a) Personnel (including supervisors) receiving a Written Violation Notice shall be retrained in the appropriate standard or procedures. Said training shall be documented in writing and submitted to the Engineer.
 - b) Written Violation Notices received will remain in force for the duration of the project.
 - c) Removal from the project of an “employee” for a minimum of 3 working days.
 - d) Removal of an “employee” from any Port of Seattle project for one year.
 - e) Written notice sent to the appropriate corporate president.
 - f) Copies of all “written violation notices” are to be submitted to the Engineer with a copy forwarded to the Manager of Construction Safety Services within 24-hours of issuance of notice.

DISCIPLINARY ACTION MATRIX

FOCUS POINT /INCIDENT	1ST VIOLATION	2ND VIOLATION	3RD VIOLATION	NOTES
Worker	Verbal & Written Notice	3 Days Off	Removed From POS Projects For One Year	
Worker's Direct Foremen	Written Notice	Written Notice	3 Days Off	3 Worker Lay-offs = Removal From POS Projects For One Year
Worker's Direct Superintendent	Written Notice	Written Notice	Written Notice to Sub/Prime Superintendent and President of Sub/Company	3 Worker Lay-offs = 3 Days Off For Superintendent
Prime Contractor's Superintendent	Written Notice	Written Notice	Written Notice to President of Prime Company	3 Worker Lay-offs = 3 Days Off For Superintendent*

*Section 01860 - Safety Management Paragraph 1.07.C, this individual may also be removed from the project.

DISCIPLINARY ACTION MATRIX

WRITTEN VIOLATION NOTICE

PROJECT NAME: _____ PROJECT #: _____

CONTRACTOR: _____

EMPLOYEE BEING REPRIMANDED _____

DATE: _____ TIME: _____

VIOLATION:

TASK BEING PERFORMED:

CORRECTIVE ACTION/TRAINING REQUIRED:

WITNESS: _____

FOREMAN: _____

SUPERINTENDANT: _____

GC SUPERINTENDANT: _____

FIRST NOTICE: _____ SECOND NOTICE: _____ THIRD NOTICE: _____

EMPLOYEE LAY-OFF OR REMOVAL REQUIRED (YES/NO): _____

WRITTEN NOTICE TO COMPANY PRESIDENT REQUIRED (YES/NO): _____

ISSUED BY: _____ COMPANY: _____

D. SAFETY PERFORMANCE

If the Contractor experiences ongoing safety concerns such as a Lost Work Day Case or Recordable Incident Rate greater than the Bureau of Labor Statistics National Average for Construction, experiences repeated violations of safety & health rules and regulations or “Imminent Danger” situations, or fails to abate violations in a timely manner, the Contractor shall be subject to the following action at the Port’s discretion:

1. Removal and replacement of management personnel.
2. Submit a written Safety Recovery plan to the Engineer and Manager of Construction Safety Services detailing what changes will be made to their safety program and a timeline as to when the changes will be implemented.
3. Hiring an independent safety consultant who shall audit the Contractor’s procedures and operations. The consultant shall compile a plan detailing what changes the Contractor shall implement. This report shall be submitted to the Engineer, Construction Manager, and Manager of Construction Safety Services.
4. Notwithstanding Section 01860 Paragraph 1.05 (B)(9)(c), Disciplinary Action Matrix, above in 1.07 (C)(2), shall be used for determining the appropriate corrective action.
5. Conduct a “Safety Stand Down” (suspend all work or any portion thereof) in accordance with the provisions of the General Conditions, Article G-10-04. Suspended work shall not be allowed to resume until the Contractor has completed the following actions for review and acceptance by the Engineer:
 - a) Hazardous conditions leading up to the Safety Stand Down shall be abated.
 - b) Training of such type and duration shall be conducted to educate personnel on the awareness of, identification of, and correction of hazards leading up to the stand down.
 - c) Document the completion of items a. and b. above.

E. TOUR GUIDELINES

1. It is imperative that the highest degree of protection is afforded to all individuals touring any Port construction site. The following guidelines have been prepared as general instructions for the organization, direction and safe conduct of such tours:
 - a) Escorted Visitors: While on the job site, non-construction personnel or groups shall be accompanied at all times by an authorized representative, the Engineer, the Contractor or other designee familiar with the job site.
 - b) Notification and Tours: Personnel tours including technical inspections need to be cleared through the Engineer, allowing maximum advance notice. The Engineer shall be consulted to coordinate the tour plan, identify specific rules, and to ensure necessary safety precautions are taken.

- c) Safety Enforcement: Before entering a job site, all visitors must be informed regarding the need for careful, orderly conduct and notified of any special hazards that may be encountered.
- d) Personal Protective Equipment: All visitors and tour groups must comply with proper dress, footwear, personal protective equipment or other safety requirements deemed appropriate.

1.08 CONTRACTOR ADMINISTRATIVE PROCEDURES

A. PROJECT SAFETY INSPECTIONS

1. Unsafe conditions or acts having the potential to cause bodily injury or property damage are classified as either “Imminent Danger” or “Serious.” In either case, action shall be taken immediately to correct the situation. Any item(s) that cannot be corrected immediately are required to be abated within 24-hours of notification. In the interim, other steps shall be taken to insure the safety of employees or the public.
2. The Port’s Construction Safety Inspection Report is required for recording any unsafe conditions or acts noted (see Appendix D). This Report shall be used by anyone performing a documented inspection of a project site.

Contractor may use their own site inspection form daily and summarize findings on a weekly basis on the POS Construction Safety Inspection Report. This report is to be submitted to the Engineer on a weekly basis.

The following instructions apply to the use of this form:

- a) Detailed Information: The information at the top of the form is required and shall be completed by the individual conducting the inspection.
- b) Item Number: Number each item beginning with 001.
- c) Print legibly using a ballpoint pen.
- d) Safety Violation: Provide specific information such as “9 ft section of top rail broken at the Smith Avenue escalator entrance, repair.” Give the exact location of the violation.
- e) Reference: The individual conducting the inspection shall document the proper safety regulations.
- f) Contractor’s Corrective Action: The Contractor shall note the action taken to abate the violation. If an item is abated immediately, it will be so noted on the report.
- g) Date Corrected: The Contractor, upon abatement shall enter the date in the appropriate column.
- h) Report Prepared By: The person conducting the inspection shall sign and date the form.
- i) Submittal Procedure:
 - 1) A copy of the inspection form shall be submitted to the Contractor’s Project Manager or designated representative. This will be accomplished through e-mail from the Port’s

Construction Safety Services department. Copies will also be routed to the Engineer via e-mail.

- 2) When corrective action has been completed, the Contractor's Project Manager or Designee will sign and date a copy of the form (electronic or hard), forwarding it to the Engineer.
- 3) A member of the Engineer's staff will review the form and follow-up to insure that the "Contractor's Corrective Action" has been addressed, initialing each item corrected.
- 4) The Engineer will discuss the noted violations at the weekly Contractor progress meeting.
- 5) The signed copy of the form (electronic or hard) shall be returned to the Manager of Construction Safety Services within five working days.

B. ACCIDENT INVESTIGATION AND REPORTING PROCEDURES

1. All accidents and incidents occurring from operations or work performed under the contract shall be reported, verified, investigated, and analyzed as prescribed by the Port of Seattle Construction Safety & Health Manual. Contractors and other individuals involved in the work shall instruct employees and other personnel to follow these procedures if someone is injured.
 - a) Seek medical assistance for anyone injured. The injured person's supervisor will see that first-aid is administered.
 - b) When a serious accident or emergency occurs/exists, secure the incident area tightly and quickly except for rescue and emergency personnel.
 - c) Send individuals as required, to assist or direct any emergency personnel arriving on the site.
 - d) The accident scene shall not be disturbed until released by the Incident Command or Manager of Construction Safety Services, except for circumstances where "Imminent Danger" exists to those performing any emergency services.
 - e) Immediately notify the Engineer and Manager of Construction Safety Services (or designee) regarding any accident or injury requiring more than First Aid treatment, any third-party incident, or any equipment or property damage estimate in excess of \$1,000. Notify the Manager of Construction Safety Services of all other incidents including near miss incidents as soon as possible following the event.
 - f) Washington State Department of Labor and Industries must be notified immediately by the Contractor in the event of an accident involving the death or hospital admission of any employee.
 - g) Employees must report all injuries or occupational-related illnesses as soon as possible to their employer or immediate supervisor.

- h) A detailed written report, identifying causes and recommending corrective action, must be submitted to the Engineer and Manager, Construction Safety Services within 24 hours. No supervisor may decline to accept a report of an injury from a subordinate.
- i) Within 48-hours of a Recordable or Lost Work Day Case Injury, incident involving 3rd party, or property damage incident, the Contractor shall meet with the Engineer and Manager of Construction Safety Services. The meeting shall discuss the status of the injured employee, the root cause of the incident, corrective action implemented, the Job Hazard Analysis, and retraining of the employee and supervisor.
- j) Report all accident exposures and near miss incidents that occur on the job site. These records are to be maintained and submitted to the Engineer or other designated authority upon request and shall include but not be limited to:
 - 1) First-aid injuries not reported on the OSHA No. 300 Form.
 - 2) The Contractor's OSHA 300 Form.
- k) The above information shall be provided only to authorized personnel including the Engineer and Manager of Construction Safety Services.
- l) All questions from the media regarding any incident occurring on site shall be referred to the Port's Public Affairs Manager via the Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices.

End of Section

APPENDIX A

SAMPLE CONTRACTOR’S SAFETY PLAN

The Contractor is responsible for reviewing the requirements found and referenced in this Document, the Contract, the Port of Seattle Construction Safety & Health Manual as a minimum, and incorporating any additional specific or unique safety requirements into their written plan. The Contractor’s Safety Plan shall include but not be limited to the following guidelines:

A. GENERAL PROVISIONS

1. **Compliance:** Provisions for accident investigations and reporting, formal incident review, reporting, corrective action and disciplinary action procedures meeting the minimum Port of Seattle requirements.
2. **Job Hazard Analysis (JHA):** The Contractor shall complete detailed, written Job Hazard Analysis for the work to be performed, identifying hazards that may exist or be created, outline the equipment to be used, and what procedures and/or safety equipment will be used to eliminate or reduce those hazards. The Contractor shall use the form provided in the Port of Seattle’s Construction Safety & Health Manual or contractor equivalent. Supplemental Daily Pre-Task Plans are strongly encouraged.
3. **Medical Treatment:** Provide medical treatment in compliance with Federal, State and local requirements. Names of individuals CPR and First Aid trained.
4. **Site Specific Emergency Procedures:** As related to injuries, weather or emergencies at an active POS facility including pre-determined sites for assembly and measures for accounting of employees shall be included. Emergency numbers shall be posted at the given work area(s):

Fire or Ambulance from a non-Port hard-line phone	911
Fire or Police from a Port hard-line phone	9911
Fire or Police Emergency (Airport)	(206) 787-5380
Fire (Seaport)	911
Police (Seaport)	(206) 787-5380
5. **DOSH/OSHA Requirements and Personal Protection:** Safety and health provisions for providing adequate lighting, ventilation, hearing conservation, CO monitoring, and housekeeping. A written Personal Protective Equipment Assessment for head, face, eye, hand, work over water, and torso protection shall be included.
6. **Worker Training:** Occupational Safety and Health Administration (OSHA 40-hour) Hazardous Waste Operations and Emergency Response (HAZWOPER) training, with current annual 8-hour refresher, will be required for all onsite workers and other workers with potential for handling or exposure to site soil, sediment, or groundwater, with the exception of

truck drivers and surveyors (unless their activities require potential exposure to contaminated materials).

7. **Personnel Instruction:** The Contractor must identify the greatest number of employees to be working at any one time during peak construction periods, the company policies for initial safety indoctrination of all employees, and company plans for continued safety education for all employees, including: weekly safety meetings, POS Safety Orientation, Ergonomics, Asbestos Awareness training, Hazardous Waste Operations, and English as a second language.
8. **Responsibilities:** Acknowledgment that the Contractor is totally responsible for compliance with OSHA, DOSH, Port or other applicable rules and orders. Additionally, the plan will require a place of employment that is free of unsanitary or hazardous conditions that would harm an employee's health or safety.
9. **Safety Inspections:** Detailed information concerning how safety inspections will be conducted, their frequency, and their documentation.
10. **Safety Personnel:** State the name of the Contractor's Safety Representative(s), their experience and qualifications (i.e. Training in the OSHA 500 (or equivalent), 30-hour or 10-hour) Indicate their authority to take the appropriate measures to eliminate hazards or stop work until hazardous conditions are corrected.
11. **Safety Requirements, Electrical:** Testing, inspection and repair of electrical equipment, GFCI Program, lockout/tagout procedures, how existing circuits will be located and the installation of electrical circuits in accordance with the National Electric Code or Port Mandated Requirements.
12. **Safety Requirements, Equipment:** Operation, documented daily inspection, and maintenance for trucks and heavy equipment such as backhoes, dozers, motor graders, elevated work platforms, powered industrial trucks, and all hand and power tools.
13. **Safety Requirements, Ladders:** Types of ladders for specific uses and their training requirements.
14. **Site Layout:** A layout drawing of the site indicating access roads, fire and ambulance lanes, location of first aid stations, location of required alarm systems, location of offices, parking for private vehicles and equipment, and storage of all flammable and/or combustible liquids, gases, or other hazardous materials.
15. **Storage:** Requirements for storage of flammable and combustible liquids or gases.
16. **Field Sanitation:** Provisions for toilet and hand washing facilities, including the frequency at which they will be cleaned and maintained.


B. SPECIAL PROVISIONS

Depending on the type of construction, additional items must be incorporated into the Contractor's Safety Plan.

1. **Confined Space Entry:** Procedures for confined space entry and work operations in and around confined spaces as well as emergency measures. These procedures must meet or exceed the Port of Seattle requirements found in the Port of Seattle Construction Safety & Health Manual. Prior to daily entry, prime/general contractor shall be notified.
2. **Steel Erection:** These requirements shall meet or exceed the guidelines of Chapter 296-155 WAC Part P, and shall include: pre-planning, hoisting operations, fall protection procedures, overhead protection and Site-Specific Erection Plan.
3. **Cranes:** Use of cranes or derricks and the testing and inspection thereof, including hooks, latches, wire rope, operator certification, boom stops, load charts, wind speed, warning devices, fire extinguishers, crane operation signals, suspended work platform pre-lift planning, and critical lift plans.
4. **Excavations:** Excavation plans must indicate sloping, documented daily inspections, shoring, barricading, excavation access, *fall protection*, and excavated material storage.
5. **Fall Protection:** How 100% protection will be maintained, identify the use of personal fall arrest equipment, fall protection systems, and fall protection work plans for heights 4-feet. NOTE: The *Monitor System is prohibited*.
6. **Formwork:** Submittal of formwork and false work drawings for review and approval to the Engineer.
7. **Hazard Communication Program:** Including MSDS, their location, Master List of Chemicals, Personal Protective Equipment, Training, Labeling, and MSDS review and special procedures for sealers, coatings or specialty paints.
8. **Interruption of Fire/Security Systems:** Plans shall include measures and/or procedures to provide interim fire and security protection to facilities or areas affected by interruptions. These include automatic detection devices and alarms, automatic sprinkler systems, fire pumps, fire hydrants, applicable water supplies and reservoirs.
9. **Lock-out/Tag-out:** Procedures for lock-out/tag-out of energy sources during work operations. The Contractor shall include as part of the Lock-out/Tag-out program protocol for *Clearance Orders and Switching Orders* on electrical and mechanical systems.
10. **Scaffolding:** Red/Yellow/Green “Use” tag system, planking, guardrails, toe boards, anchor points, fall protection, access points, and inspections of.
11. **Fire Protection:** Including Hot Work Permits, Welding, shields, fire extinguishers, ventilation, PPE, fire watch and cylinder storage.
12. **Work Adjacent To Occupied Spaces:** Procedures for ensuring occupants of spaces adjoining, above and below construction areas will be protected from hazards created by construction, including but not limited to, falling debris, equipment noise, and penetration of partitions, ceilings, and floors.
13. **Competent Persons:** Where regulatory requirements (DOSH) specify the use of Competent Persons, the Contractor shall submit in writing the

- names of those persons. Their area of competency and applicable experience/training documentation.
14. **Energized Electrical Work Plan:** Submit detailed procedures for working on and guarding of energized equipment or conducting system outages.
 15. **Seaport Safety:** Contractors shall submit a safety plan complying with all Federal, State, Corp of Engineers, Port of Seattle, and Coast Guard rules applicable to this type of construction.
 16. **Health Considerations:** The Contractor shall submit a plan that addresses safety & health procedures for working in contact with contaminated soils. This plan shall be revised and resubmitted in the event that conditions encountered during the work are different than those initially planned for. It shall also include:
 - a) Identification and evaluation of the hazards and risks associated with each work task.
 - b) The names and qualifications of each contractor's representative(s) in charge of the work and present at the project when pipeline removal is performed.
 - c) Identification of supervisory personnel and alternative responsibilities for site safety/response operations.
 - d) Determine levels of personnel protection to be worn for various site operations.
 - e) List equipment with adequate nomenclature by item that will be used at the job site and the date and location where the Engineer can inspect this equipment.
 - f) Establishment of emergency procedures, such as: escape routes, fire protection, signals for withdrawing work parties from the site, emergency communications, wind indicators, including facility notification.
 - g) Identification and arrangements with the nearest medical facility for emergency medical care of both routine-type injuries and toxicological problems. Submit the name, location, and telephone number of this facility.
 17. **Conveyor Safety Policy:** To include procedures for deactivation of conveyor systems, lockout/tagout of systems, working around operating conveyors and required Port of Seattle conveyor safety training.
 18. **STS Tunnel Access Procedures:** What procedures employees will follow if work requires access into the STS system.
 19. **Demolition:** The Contractor shall submit a plan to include how they will safely demolish existing structures, ensure security, safe guard employees and the public from falling material, electrical hazards and air quality issues. An Engineering Survey performed and signed by a Qualified Person shall be included.
 20. **Public Protection Plan:** The actions the Contractor will take to protect the public while performing construction or demolition on the project. The plan

shall include, but not be limited to, barricades, fencing, and signage.
"Public" is defined as anyone not associated with the project - general public, POS and tenant employees.

	JOB HAZARD ANALYSIS WORKSHEET			Site Specific Plan Addendum	
				Person in Charge* for Reporting Hazards and Injuries:	
Location/address:				Phone Number:	
Title of Job/Operation:		Date:		* requires OSHA 10 & complete documented daily inspections	
Analysis Made By:		Work Order #:		Emergency action plan	Call Fire Dept 787-5380 on airport grounds. 911 everywhere else. For large scale emergency meet at:
Analysis Reviewed By:		Contact person:			<hr/>
Location of Master Prevention Program:					<hr/>
Sequence of Basic Job Steps	Potential Hazards/Ergonomics		Recommended Safe Job Procedures and Required PPE		
Supervisor Signature:			Received by RE/CM:		

DIVISION 1 – GENERAL REQUIREMENTS
Section 01860 - Safety Management

Will the Scope of Work consist of the following tasks? (check all that apply)		^(a) List Chemicals to be used on the project. Material Safety Data Sheets attached <input type="checkbox"/> Yes <input type="checkbox"/> No *Physical MSDS must be on-site. ^(*) A Chemical Exposure Plan will be required for products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, silica and processes involving floor sealers, traffic coatings, terrazzo sealers or specialty paints.
Traffic control*	Confined Space Entry*	
Welding, Cutting, Grinding*	Heavy Equipment	
Trenching or Excavation*	Flammable or Combustible materials ^(a)	
Carpentry	Steel Erection*	
Painting, Staining, Sealant ^{*(a)}	Ladder or Scaffold work	
Demolition (Structural)*	Roofing	
Energized Electrical*	Regulated Materials	
Use of a Crane/Boom/Hoisting device*	Hazardous Materials	
Work from heights of 6' or greater*	Conveyors*	
* Requires additional paperwork – checklists, plans, permits, shut-down notice, etc.		

Description of public protection measures ("Public" is defined as anyone not associated with the project - general public, POS, Tenant, and Airline Employees):

Employee Disciplinary for non-compliance with set forth safety policies and procedures will be consistent Port of Seattle's disciplinary action matrix as described within your site-specific safety plan and site-specific orientation.

Sign Up			
Print Name	Signature	Print Name	Signature

APPENDIX B

CONTRACTOR CONFINED SPACE ENTRY PROGRAM CERTIFICATE

I hereby certify that the attached Confined Space Entry Program meets or exceeds the requirements of DOSH standards WAC 296-809 and the Port Of Seattle's Confined Space Entry Program.

My employees will utilize the Port of Seattle (POS) confined space entry permit(s). They will complete all other sections of the permit that are appropriate for the confined space being entered.

My employees will be informed that they must coordinate their confined space entry procedures with other Contractors and POS employees working in or around the confined space. On Airport projects, if entering into a Permit Required Confined Space, we will first contact the Port of Seattle Fire Department, notifying them of the specific location and activity to be performed.

My employees, who will be acting as authorized entrants, attendants, entry supervisors, and air testers, have been trained in accordance with the DOSH procedures and will be made aware of all of the POS procedures for entering confined spaces.

After the confined space entry project is complete my employees will make the Engineer and Construction Safety aware of any new hazards confronted or created during entry operations. On Airport projects, my employees will contact the Port of Seattle Fire Department and advise them that operations have ceased.

A copy of finalized permit with all attachments will be provided to the Engineer at the end of each project.

Contractor's Name: _____

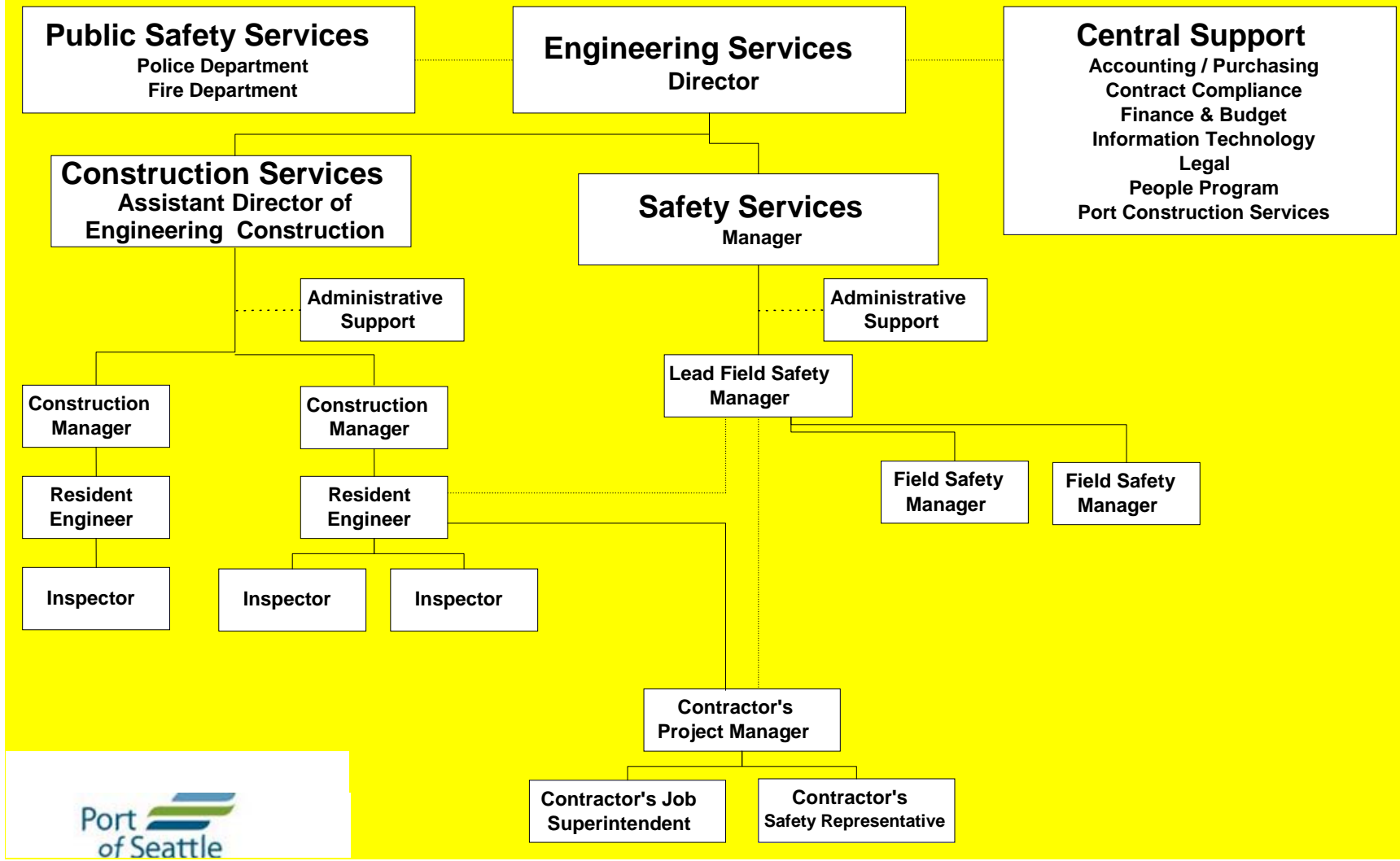
Contractor's Signature: _____

Company Name: _____ Date: _____

Port of Seattle Resident Engineer: _____

Date: _____

Appendix C Construction Safety Program Organization Chart



APPENDIX D

Construction Safety Inspection Report

Contractor:
Contract#:
Project Name:
Accompanied by:
Date:

ITEM	SAFETY VIOLATION	REFERENCE	CONTRACTOR'S CORRECTIVE ACTION	DATE ITEM CORRECTED	CM Initial
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Report Prepared By:

Title:

Date:

Contractor Project Manager:

Signature:

Date:

All recommendations shall be abated in accordance with the contract and the report signed and returned within 5 working days.

Copies to: Manager, Construction Safety Services

01860 Safety Management Specification

Rev: 06/06/11