

SECTION 01500: CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Worker health and safety.
- B. Site safety.
- C. Temporary Utilities.
- D. Temporary Controls.
- E. Construction Facilities.

1.2 REFERENCES AND STANDARDS

- A. Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).
- B. "Safety and Health Regulations for Construction" promulgated by Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.) as currently amended.
- C. Hazardous Waste Operations: Chapter 296-843, Washington Administrative Code.

1.3 RELATED SECTIONS

- A. Section 01300 - Submittals.
- B. Section 01700 - Contract Closeout.

1.4 SUBMITTALS

- A. Contractor is to provide Ecology's Representative with two (2) copies of site Health and Safety Plan (HASp) a minimum of 14 days prior to commencing with Work. One copy of this plan is to be available on-site at all times.

1.5 WORKER HEALTH AND SAFETY

- A. Soil sampling conducted at the site indicates the presence of heavy metals, including arsenic, cadmium, lead and zinc. A summary of soil metals concentrations is available at www.ridolfi.com/spokaneriver.

- B. Site workers must have OSHA 1910.120 (40-hour HAZWOPER) training and the HASP must have procedures to maintain worker safety in the presence of metals-contaminated soil.
- C. Contractor is to provide and maintain appropriate personnel protection equipment for employee use during operations on-site.
- D. Keep additional personnel protection equipment on hand for use by visitors to the site.
- E. Contractor is to provide documentation that employees working on-site have read the Health and Safety Plan for the site.
- F. Provide Ecology's Representative with two copies of any subsequent changes to the Health & Safety Plan.

1.6 SITE SAFETY

- A. The Contractor will use high visibility fencing, barricades and/or signage to prevent the public from entering Work areas, including but not limited to: stockpiles, equipment, partially completed work and active construction areas.
- B. The Contractor shall not require any employee to work under conditions that are unsanitary, hazardous, or dangerous to the employee's health or safety, as determined under "Safety and Health Regulations for Construction" promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.), as amended.
- C. The Contractor shall fully comply with "Safety and Health Regulations for Construction" promulgated by the Secretary of Labor, which may be obtained from the Superintendent of Documents, Government Printing Office, Washington D.C. 20402-9325.

1.7 TEMPORARY UTILITIES

- A. Electricity: There is no electrical service at the site.
- B. Water Service: There is no water service at the site. Water required for construction operations and personnel use must be provided by the contractor.
- C. Sanitary Facilities: Provide and maintain required temporary sanitary facilities at time of project mobilization. Maintain in clean and sanitary condition. Upon completion of construction, remove temporary sanitary facilities.

1.8 TEMPORARY CONTROLS

- A. Dust Control:
 - 1. Use dust palliatives, sprinkling, or other measures.
- B. Housekeeping:
 - 1. Provide suitable facilities for cleaning personnel, equipment, and vehicles.
 - 2. Do not allow equipment or personnel vehicles to track soil off-site.

1.9 CONSTRUCTION FACILITIES

- A. Temporary Construction Entrance:
 - 1. Utilize construction equipment that can be accommodated on existing access trail to the site.
 - 2. Provide means of removing mud from vehicle wheels before entering streets consistent with local regulations.
 - 3. Restore access trail to the site prior to completion. *[We may need to add specifics based on access discussions with County Parks]*
- B. Parking:
 - 1. There is a parking lot at the head of the trail leading to the site near Exit 299 on I-90.
- C. Progress Cleaning and Waste Removal:
 - 1. Maintain areas free of waste materials, debris, and rubbish. Maintain site and access areas in a clean and orderly condition.
 - 2. Remove debris and rubbish from the site. Do not bury debris or rubbish.
 - 3. Collect and remove waste materials, debris, and rubbish from site at least weekly and legally dispose off-site.
- D. Removal of Temporary Utilities, Facilities, and Controls:
 - 1. Remove temporary utilities, equipment, facilities, and materials prior to Final Application for Payment inspection.

1.10 MEASUREMENT AND PAYMENT

- A. Work under Section 01500 - Construction Facilities and Temporary Controls is considered part of mobilization / demobilization and will be paid under that line item.

2 PART 2 PRODUCTS

Not Used.

3 PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01700: CONTRACT CLOSEOUT

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Project record documents.

1.2 RELATED SECTIONS

- A. Section 01500 - Construction Facilities and Temporary Controls.
- B. Section 01400 - Construction Quality Control/Quality Assurance.

1.3 CLOSEOUT PROCEDURES

- A. Final Inspection:
 - 1. The Contractor shall request the scheduling of a final inspection in writing at least 10 calendar days prior to the scheduled completion date. The project shall be in a state in which all Work under the Contract, including modification work, is or will be 100 percent complete prior to inspection by Ecology's team members. Ecology's Representative will either confirm in writing the date of inspection requested or will make arrangements for a mutually acceptable date.
 - 2. If, during this inspection, deficiency items are discovered, those items will be developed into a punch-list and provided to the Contractor for completion within a reasonable specified time frame. A formal "punch list" will be forwarded to the Contractor within seven (7) calendar days with the time frame established for completion of all items. A "back-check" inspection will be conducted to verify all deficient items were completed. If deficiencies are not completed by the Contractor and accepted by Ecology within the time frame established, Ecology may take the necessary steps to complete all outstanding Work items under another source and deduct that amount from the Contract by modification.
 - 3. If after conclusion of the "final inspection" it is determined that the facility is not in a state for "final acceptance," but has a high percentage of the Work complete and the project area is available for the purpose for which it was intended with no omission in essential parts, Ecology's Representative may conclude that the Contract Work is substantially complete. Ecology's Representative will establish by letter the actual substantial completion date (which limits the assessment of liquidated

damages upon the Contractor) and establish a time frame upon which the punch-list items are to be completed.

4. If after the conclusion of the "final inspection" it is determined that the facility is neither in a state for "final acceptance," nor can substantial completion be established within the Contract performance period, the Contractor will be placed on notice that **liquidated damages** will be assessed. Reinspection will take place upon request and assurance by the Contractor that all Work has been completed, per procedures outlined above. The results of the completed inspection will form the basis of requirements for final acceptance.

- B. Reinspection: If the reinspection of deficient or incomplete items becomes necessary, the cost of reinspection will be at the expense of the Contractor.
- C. Provide final submittals to Ecology's Representative that are required by Ecology or other authorities in the condition and within the time frames stated within the Contract Documents.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Completely remove waste, surplus materials, rubbish, and construction facilities from the site.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 1. Drawings
 2. Specifications
 3. Addenda
 4. Change Orders and other modifications to the Contract
 5. Reviewed Product Data and Samples
 6. Manufacturer's instruction for assembly, installation, and adjusting
 7. Quality Control documentation and test results per Section 01400
- B. Ensure entries are complete and accurate, enabling future reference by Ecology's Representative.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.

- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Drawings.
- G. Submit all record documents to Ecology's Representative prior to Final Application for Payment.

1.6 MEASUREMENT AND PAYMENT

- A. There is no separate measurement and payment for the Work under this Section. All labor, materials, tools and equipment necessary to satisfactorily complete the work are considered to be incidental to and included in the prices bid for the various items of work.
- B. Final Payment Request: A release of claims must be submitted before final payment. The final payment request will be rejected and returned to the Contractor if all items required under the Contract have not been completed, submitted, approved, and accepted prior to the receipt of the request, i.e., deficient Work items, record drawings, payrolls, reports, etc.

1.7 FINAL ACCEPTANCE

- A. Final acceptance of the Contract Work occurs when acceptance of all requirements under the Contract have been completed and accepted by Ecology.

2 PART 2 PRODUCTS

Not Used.

3 PART 3 EXECUTION

Not Used.

END OF SECTION



SECTION 02200: EARTHWORK

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Site grading.
- B. Topsoil.
- C. Cap materials.

1.2 RELATED SECTIONS

- A. Section 01300 - Submittals.
- B. Section 01400 - Construction Quality Assurance/Quality Control.
- C. Section 02110 - Site Preparation.

1.3 REFERENCES

- A. ASTM D1556 - Density and Unit Weight of Soil in Place by the Sand-Cone Method.
- B. ASTM D2922 - Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- C. ASTM D6475 - Test Method for Measuring Mass Per Unit Area of Erosion Control Blankets.
- D. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
- E. ASTM D5035 - Test Method for Breaking Strength and Elongation of Textile Fabrics (Strip Method).
- F. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- G. ASTM D3786 - Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics- Diaphragm Strength Tester Method.

- H. ASTM D4833 - Test Method for Index Puncture Resistance of Geotextile, Geomembranes and Related Products.
- I. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
- J. ASTM D4355 - Standard Test Method for Deterioration of Geotextiles form Exposure to Ultraviolet Light and Water.
- K. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile.
- L. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
- M. ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils.
- N. ASTM D4972 - Standard Test Method for pH of Soils.

1.4 DEFINITIONS

- A. Topsoil: Natural surface soil possessing characteristics that produce and sustain trees, shrubs, grass, forbs, and other vegetative growth.
- B. Cap Materials: Clean material from commercially available sources that is free of debris, concrete, sod, or clumps.
- C. Compaction: Compaction of soil materials consists of rolling, sprinkling, tamping and otherwise working the soil to achieve the specified Standard Proctor density test results.
- D. Grading: Operations required for smoothing disturbed areas and bringing site grade to lines and grades indicated on the Plans.

1.5 BACKGROUND DATA

- A. A soil investigation has been performed in support of this project to identify the nature and extent of metals-contaminated soil. The Washington Recreational Sites Starr Road and Island Complex- Final Field Sampling Report prepared by U.S. Army Corps of Engineers, January 7, 2005 and the Spokane River Shoreline Site at Murray Road- Sampling and Testing Report, prepared by Washington Department of Ecology, December 2006 are available for review at www.ridolfi.com/spokaneriver.

1.6 REGULATORY REQUIREMENTS

- A. Work performed under this Contract shall comply with OSHA requirements in 29 CFR 1910 and 29 CFR 1926, especially OSHA's Hazardous Waste Operations and Emergency Response Standard 29 CFR 1926.65/29 CFR 1910.120 and state specific OSHA requirements where applicable.
- B. Interpretation of standards shall be submitted to the appropriate agency for resolution prior to commencing with the Work.
- C. Where requirements of this specification, applicable laws, criteria, ordinances, regulations and referenced vary, the most stringent requirements shall apply.

1.7 PROTECTION

- A. Protect trees, shrubs, ground cover, and other features to remain. Limited vegetation removal may be necessary to construct the coir lift. Field consultation with Ecology's representative will be necessary to determine specific plant species to be protected and extent of protection. Specific coir lift anchoring and locations will be field determined in consultation with Ecology's representative in order to maximize existing plant protection. See design Plans for more information on plant protection.
- B. Protect bench marks, site control, and access trail to remain.
- C. Construction activity must be limited to the specific remedial areas specified in the design. Access to these areas and material/equipment staging must occur within the dry river channels. Restore all disturbed areas not designated for improvements. Areas excluded from all construction activity will generally include all upland areas with the exception of the trail.
- D. Provide dust control measures adequate to satisfy regulatory standards.

1.8 SUBMITTALS

- A. Provide Ecology's Representative with duplicates of all samples as outlined in Section 01400 - Construction Quality Control/Quality Assurance.
- B. Mechanical Analysis: Provide one per material type or change in material, in accordance with ASTM D422.
- C. Topsoil: Provide Ecology's Representative with topsoil source location information and copies of agricultural laboratory Western States' Standard Fertility Screen test results indicating suitability of material as topsoil.

1. Provide 1 test minimum per topsoil source. Analyze to ascertain percentage of nitrogen (nitrate, ammonia and Kjeldahl), phosphorus, potash, calcium, boron, manganese, and zinc soluble salts, organic matter content, textural class; and pH value. Measure soil pH in accordance with ASTM D4972.
 2. Submit minimum 1-gallon bag sample of proposed topsoil material to Ecology's Representative.
 3. Field moisture and laboratory moisture results.
- D. Moisture/Density - Provide Ecology's Representative with moisture/density test results for all field and laboratory tests.
- E. A sample of the coir material and manufacturer specifications, which meet the following specifications, shall be provided to Ecology's representative a minimum of 14 days prior to installation. Material must be approved before installation can proceed.
- F. A sample of the trail enhancement geotextile fabric and manufacturer specifications, which meet the following specifications, shall be provided to Ecology's representative a minimum of 14 days prior to installation. Material must be approved before installation can proceed.
- G. A representative wooden stake to be used for securing coir fabric shall be provided to Ecology's representative a minimum of 14 days prior to installation. Stake material must be approved before installation can proceed.

1.9 MEASUREMENT AND PAYMENT

- A. Topsoil: Measurement is by the cubic yard of actual quantity of material delivered and placed. Includes testing, supply and delivery of suitable topsoil materials, stockpiling, scarifying substrate surface, placing where required, light compaction and ripping of over compacted areas. Payment is by the unit price per cubic yard bid for topsoil.
- B. Cap Materials: Measurement is by the ton of actual quantity of material delivered and placed. Cap material will be measured by the ton in the haul vehicle at the point of delivery or as set forth by the load ticket. Includes Cap Material testing, on-site stockpiling as necessary, loading, haul, placement and compaction. Payment is by the unit price per ton bid for Cap Material.