1. MOBILIZATION

Description

This item shall consist of preparation work and operations performed by the Contractor in accordance with the provisions of Section 1-09.7 of the Standard Specifications. Mobilization shall also include Demobilization in accordance with the pay schedule identified herein. All costs for acquiring, preparing, and cleaning up the staging areas for the project shall be considered part of this item.

Measurement and Payment

Based on the lump sum contract price for, 'Mobilization', partial payments will be made as in accordance with Section 1-09.7 of the Standard Specifications.

2. SITE PREPARATION & BRIDGE UNLOAD

Description

This item also includes clearing and grubbing within the earthwork footprint of channel construction and borrow area; unloading the bridge; and preparing the borrow area by (a) stripping topsoil and stockpiling it to the side, (b) recontouring the pit following excavation for borrow material, and (c) replacing topsoil to the top surface.

Measurement and Payment

Measurement and Payment for "Site Preparation" shall be lump sum.

The lump sum contract price for "Site Preparation" shall be full compensation for all costs incurred for equipment, materials and labor for furnishing, installing, securing, maintaining and removal of work described in this specification.

3. ENVIRONMENTAL CONTROLS

Description

This item consists of environmental protection measures complying with the conditions and measures listed in the plans on sheets labeled "HIP-III Conservation Measures". The work consists of furnishing, monitoring, operating, maintaining, and removing pumps, and installation of BMPs for diversion of surface water and control of dewatering discharge and turbidity.

Environmental controls shall be installed and operating prior to any grading or extensive land clearing. These controls must be satisfactorily maintained until construction and landscaping are complete.

This work shall include preparation of a Spill Prevention, Control, and Countermeasures (SPCC) Plan and preparing for implementation of the plan in accordance with Section 1.07.15(1) of the Standard Specifications.

Two pumping schemes are included in this work (see recommended sequence in plans):

1. Diversion: collect "clean" surface waters upstream of the work area (isolated by cofferdams), and discharge it to downstream of the work area.
2. Dewater: for construction water containing high turbidity, discharge to infiltration areas on the floodplain.

Materials

1. Cofferdam

The Contractor shall provide all required materials for the project. Materials for Bulk Bag Cofferdam are described in the project plans.

If the Contractor elects to use an alternate method for temporary cofferdam, the Contractor shall provide to the Owner shop drawings and/or vendor cut sheets for substitutions and submit cofferdam/diversion plan for review prior to implementation.

2. Pumping

Pump sizing and number of pumps shall be the responsibility of the Contractor. A minimum of one 6” trash pump is recommended for diversion. A minimum of one 3” trash pump is recommended for dewatering.

Any device used for diverting water from the creek shall be equipped with a fish guard to prevent passage of fish into the diversion device pursuant to RCW 77.57.010 and 77.57.070. The pump intake shall be screened by one of the following to prevent fish from entering the system:

- Perforated Plate: 0.094 inch (maximum opening diameter).
- Profile bar: 0.069 inch (maximum opening diameter).
- Woven Wire: 0.087 inch (maximum opening in the narrow direction)

The minimum open area for all types of fish guards is 27%.

The screened intake shall consist of a facility with enough surface area to ensure that the velocity through the screen is less than 0.4 feet per second. Screen maintenance shall be adequate to prevent injury or entrapment to juvenile fish and the screen shall remain in place whenever water is withdrawn from the stream through the pump intake.

Construction Requirements

1. Cofferdams

No turbidity from construction activities shall enter the waterway. The contractor shall isolate the work area from the waterway by installing cofferdams.

If bulk bag cofferdam is the selected method, bulk bag cofferdam construction requirements are described in the Plans.

2. Pumping

Pump creek around work area by collecting stream flow from within fish exclusion area at upper cofferdam. Discharge downstream of lower cofferdam. Install a plastic sheet at discharge area as a splash pad to protect the streambed.

Pump to collect construction water from work area and discharge to infiltration areas. Monitor discharge to ensure no turbidity enters the creek. If infiltration becomes an ineffective means to control turbidity, additional and alternative methods, such as pumping into stilling basins or filtration geotextile fabric shall be required at the Contractor's expense.

Measurement and Payment

Measurement and Payment for “Environmental Controls” shall be lump sum. The lump sum contract price for “Environmental Controls” shall be full compensation for all costs incurred for equipment, materials and labor for furnishing, installing, securing, maintaining and removal of work described in this specification. If additional environmental protection measures are required to control turbidity, they shall be considered incidental to Site Preparation and no additional compensation will be made.

4. TEMPORARY EROSION CONTROL

Description

This item consists of furnishing and applying certified weed-free straw mulch to the common borrow area after it has been recontoured and topsoil distributed.

Materials

Straw Mulch – submit certificate of 100% weed free straw.

Construction Requirements

Straw mulch shall be applied at the rate of 2500 pounds per acre to achieve at least 95 percent visual blockage of the soil surface.

Measurement and Payment

Measurement and Payment for “Temporary Erosion Control” shall be lump sum.

The lump sum contract price for “Temporary Erosion Control” shall be full compensation for all costs incurred for equipment, materials and labor for furnishing and installing straw mulch.

5. REMOVAL OF STRUCTURE AND OBSTRUCTION

Description

The work includes removing and relaying (or disposal) of two existing culverts.

Construction Requirements

Remove existing culverts. Take care to remove culverts so that they remain intact and relatively undamaged. Relay one or both in the existing road breach to provide a flood relief flow path under road. After removal, if the culverts are found to be unusable, they shall become the property of the contractor for disposal.

Measurement

No specific unit of measurement will be made for the lump sum item of “Removal of Structure and Obstruction”.

Payment

The lump sum contract price for “Removal of Structure and Obstruction” shall be full compensation for all costs incurred for equipment, materials and labor for the described work, including excavation and grading associated with removal and relay of culverts.

6. BRIDGE AND CHANNEL EARTHWORK

Description

This work consists of grading the channel to the lines, grades, and cross-sections shown in the Plans in accordance with Section 2-03 and amended by these provisions:

Materials

8-18” boulders from a source provided by the Owner (1 mile from site).

3/4"-minus crushed aggregate from a source provided by the Owner (10 miles from site).

Local existing stream gravel, cobble, and boulders, and existing road fill.

Construction Requirements

The work includes:

- Load and haul materials to and from stockpile areas.
- Excavating bridge installation area.
- Grading channel bed and banks.
- Install a blanket of 8-18” diameter boulders.
- Install 3/4"-minus bedding material below footings. Compact to 95% relative compaction.
- Backfill behind abutment walls using salvaged free draining granular material, compacted to 95% relative compaction.
- Placing uncompacted salvaged streambed materials along front face of abutment walls for support while backfilling and compacting behind abutment walls.

The Contractor is advised that shallow groundwater will be encountered.

Measurement and Payment

“Bridge and Channel Earthwork” will be measured by the cubic yard. All excavated material will be measured in the position it occupied before the excavation was performed. An original ground measurement was taken using digital terrain modeling survey techniques. The original ground will be compared with the planned finished section shown in the Plans. Slope/ground intercept points defining the limits of the measurement will be as staked. No additional measurement will be made. No additional compensation will be made for excavated material that is stockpiled, re-excavated, and moved again.

Payment will be made in accordance with Section 1-04.1.

“Bridge and Channel Earthwork”, per cubic yard.

The unit Contract price per cubic yard for “Bridge and Channel Earthwork” shall be full compensation for all costs occurred for excavating, loading, hauling, stockpiling, placing fill, compacting, and grading.

7. INSTALL BRIDGE, 45’ x 15’

Description

This item includes the installation of a prefabricated concrete bridge, abutment walls, and footings, 45’ long x 15’ wide, as shown in the Plans.

Construction Requirements

The Contractor shall prepare the subgrade for the abutment footings in accordance with the information shown on the manufacturer’s. If water is present within the excavation, the Contractor shall dewater the excavation before placing the bedding material. Bedding shall be compacted to a minimum of 95% of maximum density per modified Proctor (ASTM D1557).

Contractor shall install bridge in accordance with the manufacturer’s instructions. Installation requirements include lifting and accurately placing sections in the location shown on the drawings.

Bridge pieces which do not meet required tolerances or are damaged during installation are subject to rejection.

Measurement

There is no specific unit of measurement for the lump sum bid item “Install Bridge, 45’x15’”.

Payment

The lump sum contract price for “Install Bridge, 45’x15’” shall be full pay for all materials, tools, labor, and equipment necessary to furnish and install the bridge, including but not limited to engineering design drawings, shop drawings, precast fabrication, subgrade preparation, and other miscellaneous items necessary for a complete installation, all in accordance with the Contract documents.

Geotextile for underground drainage associated with the bridge shall be incidental to this bid item.

8. ROAD REGRADE

Description

This Work consists of loading, hauling, and placing Borrow as needed to fill roadways as shown in the Plans.

Materials

A nearby Borrow source is provided by the Owner.

Construction

Where shown in the plans, install borrow to fill and regrade road. Compact fill in 12” lifts.

Furnish and install two 12”x20’ CMP culverts as cross drains.

Measurement and Payment

The unit Contract price per cubic yard for “Road Regrade” shall be full compensation for all costs incurred for excavating, loading, hauling, placing, and grading of the material, and furnishing and installing two 12”x20’ culverts.

9. CRUSHED SURFACING TOP COURSE

Description

This item consists of loading, hauling, and placing crushed surfacing on roadway where shown in the Plans and conforming to Section 4-04 and 9-30.9(3) of the Standard Specifications. Crushed surfacing top course shall also be used as “compacted crushed rock base” below the bridge footings, compacted and installed per the dimension in the bridge plans.

Materials

The Owner will provide the source material, which is stockpiled 10 miles from the site.

Construction Requirements

Crushed Surfacing shall be shaped and compacted per 4-04.3(5) and 4-04.3(7). The compacted Crushed Surfacing depth should be greater than 0.5 feet.

Measurement and Payment

Payment shall be per cubic yard measured in the truck at the point of loading and shall include all labor, materials and equipment to place, grade and compact the material as specified. Water used in placing and compacting surfacing materials on the roadway will be incidental to this item.