

## **SPECIFICATIONS FOR WORK**

### **TECHNICAL PROVISIONS**

#### **Incorporation of Montana Public Works Technical Specifications.**

The Technical Specifications as found in Montana Public Works Standard Specifications (MPWSS), Seventh Edition, April 2021; are hereby incorporated by reference and made a part of this Contract:

#### **Incorporation of Montana Fish, Wildlife & Parks Technical Specifications and Modifications to MPW Technical Specifications.**

In addition to the MPWSS Technical Specifications are the following Montana Fish, Wildlife & Parks Technical Specifications (modifications to MPWSS Technical Specifications).

SECTION 01010-	Summary of Work
SECTION 01050 -	Field Engineering
SECTION 01450 -	Mobilization/Demobilization
SECTION 01570-	Construction Traffic Control
SECTION 01750 -	Final Cleanup
SECTION 01800 -	Erosion and Sediment Control
SECTION 02230 -	Street Excavation, Backfill, and Compaction
SECTION 02235 -	Crushed Base Course
SECTION 02910 -	Revegetation

## SECTION 01010

### SUMMARY OF WORK

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

#### PART 1 GENERAL

##### 1.3 WORK SEQUENCE

Add the following:

- A. Complete all work **on or before, September 1, 2023.**

##### 1.4 CONTRACTOR USE OF PREMISES

Add the following:

- A. Contractor may elect to camp on the Beartooth WMA during the duration of the project, with approval of the OWNER. Contractor shall follow all rules and regulations posted on the WMA. No potable water services are available.

**END OF SECTION 01010**

## **SECTION 01050**

### **FIELD ENGINEERING**

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

#### **PART 3 EXECUTION**

##### **1.1 CONSTRUCTION SURVEY**

- A. Engineer will provide survey control (northing/easting) and benchmarks (local datum) for all designed alignments and profiles, as shown on the project drawings.
- B. Contractor will be responsible for setting slope stakes and grade stakes at 50' intervals on tangent sections and at 25' on horizontal curves, based on Owner provided control and alignment staking. The contractor will be responsible to provide own blue top staking prior to paving. Limit grade stake tolerances to +/-0.04'.

#### **PART 4 MEASUREMENT AND PAYMENT**

Add the following:

- A. Contractor construction surveying will not be measured for payment, and is considered incidental to other bid items in this contract.

**END OF SECTION 01050**

## SECTION 01450

### MOBILIZATION/DEMobilIZATION

Added Section.

#### **PART 1                    GENERAL**

##### 1.1    DESCRIPTION

- A. This item shall consist of the preparatory work and operations necessary performed by the Contractor for the movement of personnel, equipment, supplies, and incidentals to and from the work site. The work includes those actions necessary for obtaining necessary permits required for mobilization; for the establishment of all offices and facilities necessary to work on the project; for premiums on contract bonds; for insurance for the contract; and for other work on the various items on the project site. Mobilization costs for subcontracted work shall be considered to be included.
- B. Contractor's cost for administration, bonding, insurance, and site documents shall be included in mobilization and shall not be paid as a separate item.
- C. All equipment moved to the project sites shall be in good mechanical condition and free of fuel, oil, lubrication, or other fuel leaks. The Contractor shall immediately remove any equipment potentially or actually discharging environmentally damaging fluids.
- D. All equipment moved to the project sites shall be thoroughly cleaned before it is brought to the sites to prevent the introduction of weed seeds. Equipment removed from the sites may not be returned to the sites again until it is thoroughly cleaned again.

#### **PART 2                    PRODUCTS – NOT USED**

#### **PART 3                    EXECUTION – NOT USED**

#### **PART 4                    MEASUREMENT AND PAYMENT**

##### 4.1    MEASUREMENT

- A. There will be no direct measurement of this item.

##### 4.2    PAYMENT

- B. Partial payments for mobilization/demobilization will be made based on the lump sum bid price as follows:

- 25% of the amount bid for mobilization/demobilization when the Contractor has moved on-site and begun construction activities.
- 50% of the amount bid for mobilization/demobilization when 25% of the contract amount (exclusive mobilization/demobilization) has been completed.
- 75% of the amount bid for mobilization/demobilization when 50% of the contract amount (exclusive mobilization/demobilization) has been completed.
- 100% of the amount bid for mobilization/demobilization when 75% of the contract amount (exclusive mobilization/demobilization) has been completed.

**END OF SECTION 01450**

## **SECTION 01570**

### **CONSTRUCTION TRAFFIC CONTROL**

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

#### **PART 2 PRODUCTS**

##### **2.1 TRAFFIC CONTROL DEVICES**

Add the following:

- D. Provide Type III barricades at all roadways closed to public access. Erect “Road Closed” or “Road Closed To Thru Traffic” sign(s) on all Type III barricades.
- E. At areas designated closed to public access that are wider than a standard roadway width (16’), provide orange tubular markers (28” height) that delineate the closed area. Yellow ribbon caution tape may be used between tubular markers.

#### **PART 4 MEASUREMENT AND PAYMENT**

Delete this section and replace with the following.

##### **4.1 MEASUREMENT AND PAYMENT**

- A. Construction traffic control will not be measured for payment, and is considered incidental to other bid items in this contract.

**END OF SECTION 01570**

## **SECTION 01750**

### **FINAL CLEANUP**

Added Section.

#### **PART 1 GENERAL**

##### **1.1 DESCRIPTION**

- A. This work consists of final cleanup of the project site prior to final acceptance.

#### **PART 2 PRODUCTS – NOT USED**

#### **PART 3 EXECUTION**

##### **3.1 CONTRACTOR RESPONSIBILITIES**

The contractor shall be responsible for final clean up at the end of the project to a level satisfactory to the owner. All construction debris, no matter how small, shall be collected and removed from the site. All wheel ruts shall be filled in and be leveled to match the adjacent grade and material. Re-seeding or re-sodding, or other re-surfacing may be necessary to repair any construction related impacts or damage.

All survey markings, stakes, temporary paint marks, flagging and other devices shall be removed regardless of who installed them. All excess pavement, concrete, gravel, soil, or other construction materials not intended for permanent use shall be removed.

All final slopes shall be dressed manually to remove woody debris, accumulated trash and oversized material. Any new slope or topsoil surfaces shall be hand raked to provide a uniform appearance. The contractor shall dress all gravel, pavement and concrete edges to eliminate abrupt edges and provide a smooth transition. All construction related temporary sediment control devices shall be removed as soon as practical.

#### **PART 4 MEASUREMENT AND PAYMENT**

##### **4.1 PAYMENT**

Unless specifically noted otherwise, all final cleanup work shall be incidental to other work items in the contract and no separate payment shall be made.

**END OF SECTION 01750**

## SECTION 01800

### EROSION AND SEDIMENT CONTROL

Added Section.

#### PART 1 GENERAL

##### 1.1 DESCRIPTION

- A. This work consists of furnishing, constructing, and maintaining permanent and temporary erosion control and sediment control measures as shown on the project drawings and/or project related construction permits.

#### PART 2 PRODUCTS

##### 2.1 GENERAL

- A. Temporary and erosion control products utilized include but are not limited to backfill material; berms; brush barriers; erosion control blankets, bales, wattles, logs, rolls; erosion control culvert pipe; detention basins; fertilizer; geotextile; mulch; plastic lining; riprap; sandbags; seed; silt fence; and water.

##### 2.2 EROSION CONTROL WATTLES

- A. Where designated, provide a sediment retention product made from straw and coconut fiber reinforced with a 100% bio-degradable netting. Use wood stakes to secure sediment retention product in place, spacing per the manufacturer's recommendations. An acceptable product is *Sediment Stop*, manufactured by *North American Green*, or approved equal.

##### 2.2 EROSION CONTROL BLANKETS

- A. Where designated, provide a sediment retention product made from straw and coconut fiber reinforced with a 100% bio-degradable netting. Use wood stakes to secure sediment retention product in place, spacing per the manufacturer's recommendations. An acceptable product is *BioNet® S150BN™*, manufactured by *North American Green*, or approved equal.

#### PART 3 EXECUTION

##### 3.1 INSTALLATION

- A. Provide permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction according to the contract erosion control plan, environmental permits, and as directed by the Project Representative. These erosion control measures shall be designed, implemented, and maintained by the

Contractor in accordance with Best Management Practices (BMPs) to control erosion and sediment release from the work site.

- B. Install permanent and temporary erosion control measures according to the Storm Water Pollution Prevention Plan (SWPPP), if applicable, approved construction permits, and erosion control drawings.
- C. When erosion control measures are not functioning as intended, immediately take corrective action.

**PART 4                      MEASUREMENT AND PAYMENT**

**4.1      MEASUREMENT AND PAYMENT**

- A. Erosion Controls will be measured and paid as Lump Sum (LPSM) including all labor, equipment, materials and incidentals required for the completion of the work.

**END OF SECTION 01800**

## SECTION 02230

### STREET EXCAVATION, BACKFILL AND COMPACTION

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

#### PART 1 GENERAL

##### 1.3 DENSITY CONTROL TESTING

###### A. FIELD DENSITY TESTING

Delete this section and add the following:

In-place field density tests for quality assurance are at Contractors expense meeting AASHTO T 310 and ASTM D6938, Nuclear Densometer Methods. Quality assurance field density testing frequency is once per compacted lift, or as directed by Engineer.

Retesting of failing areas is at the expense of the Contractor.

###### B. LABORATORY MAXIMUM DENSITY and OPTIMUM MOISTURE

Delete this section and add the following:

Quality assurance tests will be made by the Contractors independent testing laboratory for each on-site natural soil or each source of off-site material, including borrow material, to determine the laboratory maximum density values and optimum compaction moisture content under AASHTO T99 or ASTM D698.

#### PART 3 EXECUTION

##### 3.1 CLEARING AND GRUBBING

Add the following:

Obtain necessary burning permits if cleared and grubbed material is burned on site. All stumps within construction limits shall be grubbed under this contract.

##### 3.4 EXCAVATION

Add the following:

Sheeting, Shoring, and Bracing: Except where trench banks are cut back on a stable slope, provide and maintain all sheeting, shoring, and bracing necessary to protect workers, and to protect adjoining grades and structures from caving, sliding, erosion or other damage in accordance with Occupational Safety and Health Standards (29 CFR Part 1926 – Construction Standards for Excavations), the Site Specific Health and Safety Plan, and other applicable codes and governing authorities.

## **PART 4 MEASUREMENT AND PAYMENT**

### **4.1 METHOD OF MEASUREMENT AND PAYMENT**

Delete this section and add the following:

#### **A. CLEARING AND GRUBBING**

1. Clearing and grubbing will not be measured for payment and is considered incidental to other work items in this Contract.

#### **B. EXCAVATION AND EMBANKMENT**

1. Excavation and embankment will be measured and paid by the Cubic Yard (CY) of in-place compacted material.

**END OF SECTION 02230**

## SECTION 02235

### CRUSHED BASE COURSE

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

#### PART 2 PRODUCTS

##### 2.2 CRUSHED BASE MATERIAL

Delete the following items shown as **bold** strikethrough:

B. Use crushed stone or gravel consisting of hard, durable particles or fragments of stone, free of excess of flat, elongated, soft or disintegrated pieces, dirt, or other deleterious matter, ~~and having a percent of wear of not exceeding 50 at 500 revolutions when tested under AASHTO T96.~~

C. Crush material so that the percentage of fractured particles in the finished product is as constant and uniform as practical. Crush to produce material where at least 50% of the material retained on the No. 4 sieve has at least one fractured face.

##### 2.3 GRADATION

E. The liquid limit for that portion of the fine aggregate passing a No. 40 sieve cannot exceed 25, nor the plasticity index exceed 6, as determined by AASHTO T89 and T90.

**END OF SECTION 02235**

## SECTION 02910

### REVEGETATION

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

#### PART 1 GENERAL

##### 1.1 DESCRIPTION

Add following:

This work also includes conserving, placing, and finishing topsoil placement at designated areas on the project drawings or as directed by the Engineer.

#### PART 2 PRODUCTS

##### 2.1 SEED

Add the following:

Utilize the following seed mix for all areas to be seeded. Contractor shall submit seed certification labels to the OWNER for approval prior to use at the site.

Seed Name	% Pure Live Seed	Lbs. Per Acre
Western Wheatgrass	30	*
Bluebunch Wheatgrass	20	*
Hard Fescue	20	*
Slender Wheatgrass	15	*
Smooth Bromegrass	15	*

\* Drilled Rate = 8 lbs/acre, Broadcast and Hydroseed Rate = 16 lbs/acre

##### 2.2 TOPSOIL

Add the following:

Utilize all salvaged topsoil conserved from clearing and grubbing operations to cover excavation and embankment slopes prior to fertilizing, seeding, or mulching.

##### 2.4 FERTILIZER

Add the following:

When broadcast seeding, apply the fertilizer separately. When drill seeding, do not apply seed and fertilizer in a single mixture. The fertilizer must be applied separately, either broadcast before seed application, or surface banded during seeding.

#### **PART 4 MEASUREMENT AND PAYMENT**

##### **4.1 GENERAL**

Delete this section and add the following:

- A. Revegetation will be measured and paid by the lump sum (LPSM) including all labor, equipment, materials and incidentals required for the completion of the work.
- B. Placing conserved topsoil will not be measured for payment and is considered incidental to other work items in this Contract.

**END OF SECTION 02910**