

SPECIAL PROVISIONS

SP-01 DEFINITIONS AND TERMS

ENGINEER. The engineer who designed the project acting directly or through an authorized representative, who is responsible for engineering and administrative supervision of the project. The engineer may designate a Construction Manager. The Construction Manager is assigned to the project and may act as the ENGINEER's representative. The term ENGINEER refers to the engineer or the designated Construction Manager.

SP-02 GENERAL

This Section of the Contract Documents describes the Work required as shown on the Drawings. The Technical Specifications applicable to each component of the Project are referenced for convenience, though all applicable specifications for each item may not be included. Except for obvious errors, discrepancies between these Special Provisions and the Technical Specifications will be governed by the Special Provisions.

SP-03 DESCRIPTION OF INDIVIDUAL BASE BID ITEMS

The Base Bid Work, methods of measurement, and methods of payment for each Bid Item are stated in this section. Some Drawings and Technical Specifications apply to all Bid Items. CONTRACTOR will complete all Work under this Base Bid in accordance with the Drawings, Special Provisions, and Technical Specifications in their entirety. Estimated Quantities for each Bid Item are shown on the Bid Form and/or Line Items. References to the Bid Form includes the Line Items. CONTRACTOR will comply with all applicable Federal and State laws, regulations, and requirements in performing the Work.

SP-03 Bid Item No. 1 – MOBILIZATION

Description: CONTRACTOR will perform all actions and operations necessary for the movement of personnel, equipment, supplies and incidentals to and from the Project Site, the establishment of all necessary facilities, obtaining required permits, bonds, and insurance, submitting and obtaining approval for all pre-construction submittals, royalties, and all other actions and operations which must be performed, or costs incurred, prior to beginning all Work not described in this Bid Item and costs incurred after finishing all Work not described in this Bid Item. **The Bid price amount for this Bid Item should not exceed 10% of the Total Bid Price shown on the Bid Form. Any Bid for which this Bid Item exceeds 10% of the Total Bid Price may be wholly rejected by Owner.**

Work Included:

1. Movement to and from the Site of all personnel, equipment, supplies and incidentals necessary to complete the Work.
2. Establishment of all facilities necessary for the Work
3. Obtain permits not provided by Owner, insurance, and bonding.
4. Provide, maintain, and remove sanitation facilities.
5. Provide, maintain, and remove trash receptacles.
6. Dispose all trash, garbage, and other waste materials generated by CONTRACTOR.
7. Repair all property damage caused by CONTRACTOR.
8. All Site reclamation.
9. All other Work which must be performed, or costs incurred, prior to beginning other elements of the Work or after completion of Work.

Measurement: No Measurement for Bid Item 1 – MOBILIZATION will be made.

Payment: Payment for Bid Item 1 – MOBILIZATION will be made according to the lump sum bid price on the Bid Form in the Contract Documents. Fifty percent (50%) payment for this Bid Item will be allowed once CONTRACTOR submits Bonds and Insurance Certificates, fully mobilizes to the Site, and obtains approval for all submittals required prior to beginning the Work. Full payment for this Bid Item will be allowed after CONTRACTOR completes the Work, completes final cleanup, and fully demobilizes equipment and materials.

SP-04 Bid Item No. 2 – WORK AREA ACCESS AND FIRE PROTECTION

Description: CONTRACTOR will perform all actions and operations necessary for the movement of personnel, equipment, supplies and incidentals within the Project Site, the establishment of all necessary temporary roads, ramps, or other means necessary to transport materials from staging areas to work areas. Prior to the start of the Work, the CONTRACTOR shall develop and submit to the ENGINEER for approval, a Fire Prevention and Control Plan (FPCP) specific to the project activities. The FPCP shall include the following:

- a. Identification of potential fire hazards associated with the Work and a description of the measures that will be implemented to prevent the occurrence of such hazards.
- b. A description of the equipment and materials that will be used for the proposed fire protection provisions, including any fire-suppression equipment that will be available on site.
- c. A plan for maintaining a readily available supply of water or other extinguishing agent to be used in the event of a fire.
- d. Procedures for reporting fires and summoning fire-fighting resources.

The CONTRACTOR shall ensure that all equipment used for the Work is properly maintained and in good working order, and that all personnel involved in the Work are properly trained in fire prevention and control measures.

The CONTRACTOR shall monitor the Work site for the duration of the Work, and shall take immediate action to suppress any fires that occur. The CONTRACTOR shall maintain a sufficient number of trained personnel and firefighting equipment on site to ensure prompt response to any fire.

The CONTRACTOR shall comply with all applicable fire safety regulations and requirements, including those of the local fire department and other relevant authorities.

If at any time during the Work, the ENGINEER determines that the CONTRACTOR is not complying with this provision, the ENGINEER may issue a stop work order until such time as the CONTRACTOR demonstrates that adequate measures are in place to prevent and control fires.

The CONTRACTOR shall be responsible for any damages resulting from fires caused by their negligence or failure to comply with this provision.

Work Included:

1. Construction of temporary haul routes within the Site sufficient for movement of all personnel, equipment, supplies and incidentals necessary to complete the Work.
2. Implementation of all fire protection provisions.

Measurement: No Measurement for Bid Item 2 – WORK AREA ACCESS AND FIRE PROTECTION will be made.

Payment: Payment for Bid Item 2 – WORK AREA ACCESS AND FIRE PROTECTION will be made according to the lump sum bid price on the Bid Form in the Contract Documents. Fifty percent (50%) payment for this Bid Item will be allowed once CONTRACTOR completes initial site access work. Full payment for this Bid Item will be allowed after CONTRACTOR completes the Work, completes final cleanup, and fully demobilizes equipment and materials.

SP-05 Bid Item No. 3 – WATER MANAGEMENT AND WORK AREA ISOLATION

Description: CONTRACTOR will perform all actions and operations necessary for the movement of water within the Project Site, the establishment of all necessary temporary berms, installation of culverts, and other means necessary to divert water around the work areas. This Bid Item includes furnishing and installing dewatering pipe as shown on the Drawings. Pipe installation shall include the necessary fittings and connections to connect pipe sections. Estimated pipe materials and dimensions are shown on the Drawings. CONTRACTOR shall confirm pipe materials, dimensions, and locations. Earthwork and grading for pipe and cleanout installation are incidental to this bid item. Also includes installation of any necessary Best Management Practices (BMPs).

Work Included:

1. Construction of temporary berms, installation of culverts, incidentals, and other means necessary to divert water around the work areas.
2. Preparing pipe bedding surface
3. Providing and filling bulk bags for use as pipe supports and temporary berms.
4. Installing pipe, fittings, and connections.
5. Backfilling or otherwise restraining pipe.
6. Installing BMPs as required.
7. All labor, tools, equipment, materials, and incidentals necessary to complete the work area isolation as specified.

Measurement: No Measurement for Bid Item No. 3 – WATER MANAGEMENT AND WORK AREA ISOLATION will be made.

Payment: Payment for Bid Item No. 3 – WATER MANAGEMENT AND WORK AREA ISOLATION will be made according to the lump sum bid price on the Bid Form in the Contract Documents. Fifty percent (50%) payment for this Bid Item will be allowed once CONTRACTOR completes initial water management and work area isolation tasks. Full payment for this Bid Item will be allowed after CONTRACTOR completes the Work, completes final cleanup, and fully demobilizes equipment and materials.

SP-06 Bid Item No. 4 – FURNISH BOULDERS

Description: Boulders will be of minimum dimension as specified in Drawings and generally rectangular in shape to allow for maximum interlocking (see Figure 1). Boulders shall be measured along the B-Axis. All boulders shall have a minimum A-Axis dimension of 30 inches. Boulders should be placed with the C-axis placed vertically and the B-Axis placed parallel to the direction of flow. Top-level boulders used in step pool weirs may be thinner along the C-axis than those used for footers. A wide range of boulder sizes is acceptable and encouraged. The CONTRACTOR should have flexibility to select stone that can be placed to match the design section, provided the median boulder size is at least 30 inches along the A-axis. CONTRACTOR shall deliver approved boulders to the designated Project staging area. ENGINEER shall inspect and approve a sample of boulders prior to delivery of any boulders to the Site. ENGINEER will conduct periodic inspections of boulders during delivery to the Site. ENGINEER will reject boulders that

do not meet the specified gradation. Sourcing of boulders from on-site locations is allowed and locations shall be approved by ENGINEER.

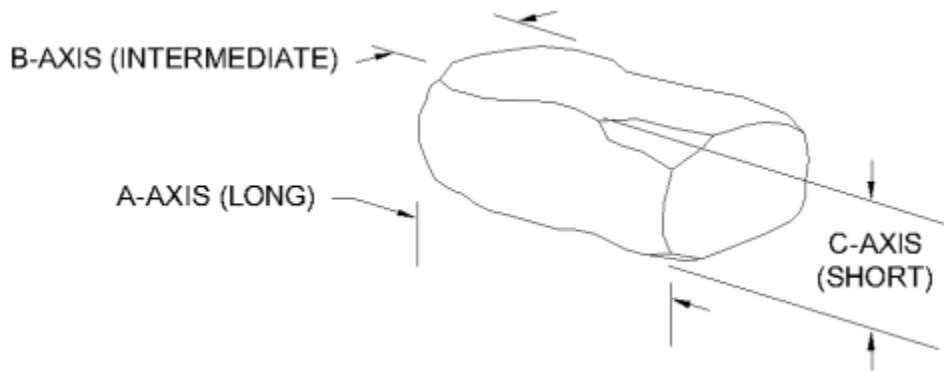


Figure 1. Typical boulder shape

Work Included:

1. Furnishing boulders needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, royalties and incidentals necessary to complete the Work.

Measurement: Measurement for Bid Item 4 - FURNISH BOULDERS will be per cubic yard used in Bid Item No. 9 – CONSTRUCT STEP POOLS, as measured by the ENGINEER.

Payment: Payment for Bid Item 4 - FURNISH BOULDERS will be made according to the unit price per cubic yard on the Bid Form in the Contract Documents.

SP-07 Bid Item No. 5 – FURNISH SUBGRADE MATERIAL

Description: Subgrade material will meet requirements noted in Drawings. Subgrade material shall be void-filled riprap that is designed to emulate natural material found in steep gradient streams. It contains a well-graded mix of riprap, cobbles, gravels, sands, and fines that fill all voids and acts as an internal filter, therefore a separate bedding layer between subgrade and rock is not required. In applications where it is difficult to establish vegetation, void-filled riprap is better able to resist the direct, prolonged impingement of water.

CONTRACTOR shall deliver approved Subgrade material to the designated Project staging area. ENGINEER shall inspect and approve samples of Subgrade material components prior to delivery of any Subgrade material to the Site. Subgrade material will be mixed on site by CONTRACTOR as directed by ENGINEER. ENGINEER will conduct periodic inspections of Subgrade material during delivery to the work sites. ENGINEER will reject Subgrade material that does not meet the specified gradation.

Work Included:

1. Furnishing, mixing, loading and hauling Subgrade material needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, royalties and incidentals necessary to complete the Work.

Measurement: Measurement for Bid Item 5 - FURNISH SUBGRADE MATERIAL will be per cubic yard as indicated on the Bid Form.

Payment: Payment for Bid Item 5 - FURNISH SUBGRADE MATERIAL will be made according to the unit price per cubic yard on the Bid Form in the Contract Documents.

SP-08 Bid Item No. 6 – FURNISH STREAMBED MATERIAL

Description: Subgrade material will meet requirements noted in Drawings. Streambed material shall be void-filled riprap that is designed to emulate natural material found in steep gradient streams. It contains a well-graded mix of riprap, cobbles, gravels, sands, and fines that fill all voids and acts as an internal filter, therefore a separate bedding layer between Streambed and rock is not required. In applications where it is difficult to establish vegetation, void-filled riprap is better able to resist the direct, prolonged impingement of water. Streambed material includes additional alluvial boulders placed and compacted to emulate a natural streambed.

CONTRACTOR shall deliver approved Streambed material to the designated Project staging area. ENGINEER shall inspect and approve samples of Streambed material components prior to delivery of any Streambed material to the Site. Streambed material will be mixed on site by CONTRACTOR as directed by ENGINEER. ENGINEER will conduct periodic inspections of Streambed material during delivery to the work sites. ENGINEER will reject Streambed material that does not meet the specified gradation.

Work Included:

1. Furnishing, mixing, loading and hauling streambed material needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, royalties and incidentals necessary to complete the Work.

Measurement: Measurement for Bid Item 6 - FURNISH STREAMBED MATERIAL will be per cubic yard as indicated on the Bid Form.

Payment: Payment for Bid Item 6 - FURNISH STREAMBED MATERIAL will be made according to the unit price per cubic yard on the Bid Form in the Contract Documents.

SP-09 Bid Item No. 7 – FURNISH FLOODPLAIN FILL

Description: Subgrade material will meet requirements noted in Drawings. Streambed material shall be void-filled riprap that is designed to emulate natural material found in steep gradient streams. It contains a well-graded mix of riprap, cobbles, gravels, sands, and fines that fill all voids and acts as an internal filter, therefore a separate bedding layer between Streambed and rock is not required. In applications where it is difficult to establish vegetation, void-filled riprap is better able to resist the direct, prolonged impingement of water. Floodplain Fill quantity includes topsoil incorporated into the mix to support growth of floodplain vegetation and additional 4” – 6” of topsoil to be placed and lightly compacted on floodplain surface following all other construction and before seeding and mulching.

CONTRACTOR shall deliver approved Streambed material to the designated Project staging area. ENGINEER shall inspect and approve samples of Streambed material components prior to delivery of any Streambed material to the Site. Streambed material will be mixed on site by CONTRACTOR as directed by ENGINEER. ENGINEER will conduct periodic inspections of Streambed material during delivery to the work sites. ENGINEER will reject Streambed material that does not meet the specified gradation.

Work Included:

1. Furnishing, mixing, loading, and hauling fill material needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, and incidentals necessary to complete the Work.

Measurement: Measurement for Bid Item 7 - FURNISH FLOODPLAIN FILL will be per cubic yard as indicated on the Bid Form.

Payment: Payment for Bid Item 7 - FURNISH FLOODPLAIN FILL will be made according to the unit price per cubic yard on the Bid Form in the Contract Documents.

SP-10 Bid Item No. 8 – FURNISH GEOTEXTILE FABRIC

Description: This Bid Item includes furnishing geotextile fabric for installation in the constructed step pools. Geotextile fabric shall meet the following specifications:

Weight	7-8 ounces per square yard
Tensile Strength	180-220 pounds
Tensile Elongation	50%
Trapezoid Tear	70-100 pounds
CBR Puncture Strength	400-500 pounds
Apparent Opening Size	70-80 US Sieve
Permittivity	1.2-1.7 per second
UV Resistance @ 500 hours	70%

Work Included:

1. Furnishing geotextile fabric needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

Measurement: Measurement for Bid Item 8 – FURNISH GEOTEXTILE FABRIC will be per square foot of geotextile fabric installed, as measured by the ENGINEER.

Payment: Payment for Bid Item 8 – FURNISH GEOTEXTILE FABRIC will be made according to the unit price per square foot on the Bid Form in the Contract Documents.

SP-11 Bid Item No. 9– EARTHWORK

Description: This Bid Item includes earthwork for step pool channel subgrade preparation and finished floodplain grading. Earthwork includes placement and grading of Subgrade Material and Floodplain Fill as shown on the Drawings. Excavation for step pool structures, willow trenches and floodplain roughness is not included in this bid item. Salvage of boulders from the existing channel is included in this bid item. Payment for stockpiling, mixing, loading, and hauling the fill will be under Bid Item 5.

Work Included:

1. Placement of Subgrade Material in the existing channel.
2. Grading and preparation of the subgrade surface for step pool construction.
3. Finish grading of floodplain areas to comply with specified horizontal and vertical tolerances.

4. All labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

Measurement: No measurement for Bid Item 9 – EARTHWORK will be made.

Payment: Payment for Bid Item 9 – EARTHWORK will be made according to the lump sum bid price on the Bid Form in the Contract Documents.

SP-12 Bid Item No. 10 – CONSTRUCT STEP POOLS

Description: This Bid Item includes construction of boulder step pools. Step pool construction includes placement of boulders, wood, geotextile fabric and streambed material at the locations and grades identified in the Drawings. Details and specifications for step pool construction are provided in the Drawings. CONTRACTOR shall haul boulders and streambed material from the designated Project staging area to the points of installation. CONTRACTOR shall excavate structure footprint to subgrade elevations as shown on the Drawings. CONTRACTOR shall place streambed material in the pools per the Drawings. Earthwork and grading for step pool construction are incidental to this bid item. Payment for the wood, boulders, geotextile fabric, and streambed material are under separate bid items.

Work Included:

1. Hauling boulders, wood, geotextile fabric and streambed material from the designated Project staging area to the points of structure installation.
2. Excavating the structure footprint to subgrade elevations.
3. Placing boulders, wood, geotextile fabric, and streambed material in the existing stream channel and backfilling in accordance with the Drawings and specified horizontal and vertical tolerances.
4. All labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

Measurement: Measurement for Bid Item 10 – CONSTRUCT STEP POOLS will be by linear foot of step pool structures installed, as measured by ENGINEER.

Payment: Payment for Bid Item 10 – CONSTRUCT STEP POOLS will be made according to the unit price per linear foot on the Bid Form in the Contract Documents.

SP-13 Bid Item No. 11 – INSTALL FLOODPLAIN ROUGHNESS

Description: This Bid Item includes installation of floodplain roughness as shown on the Drawings. Floodplain roughness includes grading furrows and ridges and partially burying small logs and brush. Floodplain roughness includes habitat wood placement in step pools. Details and specifications for floodplain roughness are provided in the Drawings. CONTRACTOR shall haul small logs and brush from the designated Project staging area to the points of installation. Earthwork and grading for floodplain roughness are incidental to this bid item. Payment for the harvest and transport of the small logs and brush will be under Bid Item 13, Furnish Trees and Brush.

Work Included:

1. Hauling small logs and brush from the designated Project staging area to the points of installation.
2. Excavating furrows and ridges on floodplain surfaces.
3. Placing and partially burying small logs and brush on floodplain surfaces.
4. Placing habitat wood in the step pools.
5. All labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

Measurement: Measurement for Bid Item 11 – INSTALL FLOODPLAIN ROUGHNESS will be by square foot of floodplain roughness installed, as measured by ENGINEER.

Payment: Payment for Bid Item 11 – INSTALL FLOODPLAIN ROUGHNESS will be made according to the unit price per square foot on the Bid Form in the Contract Documents.

SP-14 Bid Item No. 12 – INSTALL WILLOW TRENCHES

Description: This Bid Item includes installation of willow trenches on the floodplain. Willow trench installation includes placement of live vegetative cuttings at the locations identified in the Drawings. Details and specifications for willow trench installation are provided in the Drawings. CONTRACTOR shall haul live willow cuttings from the designated Project staging area to the points of installation. CONTRACTOR shall excavate structure footprint to subgrade elevations as shown on the Drawings. CONTRACTOR shall place willow cuttings in the excavated trench and backfill the trench per the Drawings. Earthwork and grading for willow trench installation are incidental to this bid item. Willow cutting harvest is included in Bid Item 14.

Work Included:

1. Hauling live willow cuttings from the designated Project staging area to the points of installation.
2. Excavating the trench to subgrade elevations.
3. Placing willow cuttings in the trench and backfilling in accordance with the Drawings.
4. All labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

Measurement: Measurement for Bid Item 12 – INSTALL WILLOW TRENCHES will be by linear foot of willow trenches installed, as measured by ENGINEER.

Payment: Payment for Bid Item 12 – INSTALL WILLOW TRENCHES will be made according to the unit price per linear foot on the Bid Form in the Contract Documents.

ALTERNATE ITEMS

SP-15 Bid Item No. 13 – FURNISH FINES

Description: Fines will meet requirements in Drawings. Fines are to be washed into the project at the direction of the ENGINEER. CONTRACTOR shall deliver approved fines to the designated Project staging area. ENGINEER shall inspect and approve a sample of fines prior to delivery of any streambed material to the Site. ENGINEER will reject fines material that do not meet the specified gradation.

Work Included:

1. Furnishing fines needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, royalties and incidentals necessary to complete the Work.

Measurement: Measurement for Bid Item 13 - FURNISH STREAMBED MATERIAL will be per cubic yard as indicated on the Bid Form.

Payment: Payment for Bid Item 13 - FURNISH STREAMBED MATERIAL will be made according to the unit price per cubic yard on the Bid Form in the Contract Documents.

SP-16 Bid Item No. 14 – FURNISH VEGETATIVE CUTTINGS

Description: This Bid Item consists of harvesting and transporting approximately 1,800 live vegetative cuttings needed for the Project as shown on the drawings. Harvest locations are immediately upstream of the Project site as shown on the Drawings. No road construction will be allowed to access harvest sites. CONTRACTOR will smooth tracks and other disturbed areas upon exiting each harvest site. CONTRACTOR will stage material at the designated Project staging area.

Work Included:

1. Furnishing vegetative cuttings needed for the Work as shown on the Drawings.
2. All labor, tools, equipment, materials, royalties and incidentals necessary to complete the Work.

Measurement: No measurement will be made for Bid Item 15 - FURNISH VEGETATIVE CUTTINGS.

Payment: Payment for Bid Item 14 – FURNISH VEGETATIVE CUTTINGS will be made according to the lump sum bid price on the Bid Form in the Contract Documents.

SP-17 Bid Item No. 15 – BROADCAST SEEDING

Description: This Bid Item includes supplying and application of seed to all floodplain and reclamation areas disturbed by the Work. Seed will be applied using the broadcast method where seed is spread on the soil surface. Seed mix will consist of the following:

Common Name	Scientific Name	PLS #/ac
<i>Graminoids</i>		
Baltic rush	Juncus balticus, FAC-Wetland	0.5
bluebunch wheatgrass	Pseudoroegneria spicata	1.5

slender wheatgrass	<i>Elymus trachycaulus</i>	2.5
western wheatgrass	<i>Pascopyrum smithii</i>	1.5
Spreading bentgrass	<i>Agrostis stolonifera</i> FAC-Wetland	2
rough fescue	<i>Festuca campestris</i>	2
Forbs		
Feathery False Solomon's Seal	<i>Mianthemum racemosum,</i>	0.25
Large-leaf Avens	<i>Geum macrophyllum</i> – FAC-Wetland)	0.5
blanketflower	<i>Gaillardia aristata</i>	0.5
Hardwoods		
Red Alder*	<i>Alnus rubra</i>	0.5
Totals		11.75

Note: Seed mix and seeding rates are subject to change with ENGINEER approval.

* Red Alder to be seeded after average date of first frost or planted as containerized plant.

Work Included:

1. Supplying seed and broadcast seeding of ENGINEER-designated floodplain and reclamation areas with approved seed mixes.
2. All labor, tools, equipment, and incidentals necessary to complete the Work as specified.

Measurement: Measurement for Bid Item 15 – BROADCAST SEEDING will be by the acre seeded, as measured by ENGINEER.

Payment: Payment for Bid Item 15 – BROADCAST SEEDING will be made according to the unit price per acre on the Bid Form in the Contract Documents.

SP-18 Bid Item No. 16 – APPLY WEED FREE STRAW MULCH

Description: This Bid Item includes supplying and application of certified weed free straw mulch to all floodplain and reclamation areas disturbed by the Work. Mulch will be applied using the broadcast method. Mulch will consist of certified weed free straw applied at a rate of 2 tons/acre. Anchor the mulching materials by disking into the surface, staking and string, or paper netting.

When applied to seeded areas, mulch shall be applied as soon as possible after seeding, but within three days. Mulch shall be applied to unseeded areas and secured in place within 48 hours after completion of construction. Such areas are to be seeded or receive other treatment later.

Additional Criteria where grass is to be seeded: Apply mulch to the surface after fertilizing and seeding. When work is completed too late for normal seeding or too early for dormant seeding to be completed, prepare the seedbed, mulch and secure the mulch immediately after completion of the structure. Delay seeding until after potential for fall germination is past, then broadcast seed on the surface by hand seeding. Spread evenly over the area.

Work Included:

1. Furnishing mulch needed for the Work as shown on the Drawings.
2. Working mulch into soil, staking, or anchoring as necessary to prevent loss of mulch and soil erosion.
3. All labor, tools, equipment, materials, royalties and incidentals necessary to complete the Work.

Measurement: Measurement for Bid Item 16 – APPLY WEED FREE STRAW MULCH will be by the acre mulched, as measured by ENGINEER

Payment: Payment for Bid Item 16 – APPLY WEED FREE STRAW MULCH will made according to unit price per acre on the Bid Form in the Contract Documents.