

SECTION 01011 - STORMWATER CONTROL, PONDS

(Follow all instructions and make all edits with "Track Changes" turned on. This Section is not published in the Oregon Standard. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project, unless the item(s) that are included in the subsection, paragraph, sentence, or bullet are not required on the Project and then they should be deleted. In general do not re-number or re-letter subsections when item(s) are deleted. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Section 01011 is not a Standard Specification and is included for this Project by Special Provision.

Description

01011.00 Scope - This Work consists of furnishing and installing stormwater ponds as shown.

Materials

(Delete material items that do not apply and include other materials as necessary.)

01011.10 Materials - Furnish Material meeting the following requirements:

Concrete	00440
Drainage Geotextile, Type 1	02320
Facility Field Markers	00842.10
Granular Drain Backfill	00430.11
Manholes, Catch Basins, and Inlets	00470.11
Riprap	00390.11
Riprap Geotextile, Type 1	02320
Storm Sewer Pipe	00445.11
Subsurface Drain Pipe	00430.10

(Use the following subsection .11 when porous pavers are required. Fill in the blank with one of the following types of pavers to use only in storage ponds: heavy duty, medium duty, or light duty. Obtain the type to use from the Designer.)

01011.11 Porous Pavers - Furnish _____ porous pavers from the QPL.

01011.12 Water Quality Mixture - Furnish medium compost meeting the requirements of Section 03020. Furnish soil meeting the following gradation requirements:

Percent Passing

Sieve Size	(by Weight)
No. 4	100
No 10	95 - 100
No. 40	40 - 60
No. 100	10 - 25
No. 200	5 - 10

Sample soil according to AASHTO R 90. Determine sieve analysis according to AASHTO T 27 and AASHTO T 11.

Blend the medium compost and soil so that the mixture:

- Is composed of between 20 percent and 25 percent medium compost material and between 75 percent and 80 percent soil material.
- Has a pH between 5.5 and 8.0.
- Does not have clumps greater than 3 inches in any direction.

Construction

01011.40 General - Construct storage facility as shown. Perform excavation and fine grading work only when the facility area is dry and only from the top of the pond area. Do not stockpile material in the facility area.

01011.41 Storage Pond - Scarify the subsoil area a minimum 12 inches deep. After scarification, place the water quality mixture in maximum 12-inch Lifts. Compact each Lift with a water filled landscape roller.

01011.42 Bioretention Pond:

(a) Scarify - Scarify the subsoil area a minimum 12 inches deep.

(b) Laying Pipe - Lay the pipe according to Section 00445. Place pipe with perforations down unless otherwise directed.

(c) Joining Pipe - Fasten pipes together with coupling fittings or bands as specified for the type of pipe used. Cap the upstream end of the pipe.

(d) Inspection and Repair - Place Type 2 water quality mixture only after all the pipe is laid, joined, and inspected. Remove and reinstall or replace all pipe that is out of alignment, has settled, or is damaged at no additional cost to the Agency.

(e) Placement of Water Quality Mixture - Place water quality mixture in maximum 12-inch Lifts. Compact each Lift by using a water filled roller.

(f) Seeding - Seed according to 01030.13.

01011.43 Facility Field Markers - Install field markers as shown and according to Section 00842.

Maintenance

01011.70 Cleaning - If a stormwater control facility is used for erosion and sediment control, remove all accumulated sediment and debris before completing the facility.

Measurement

01011.80 Measurement - No measurement of quantities will be made for Work performed under this Section. The estimated quantities of Materials are:

(Use the following "Storage Pond" heading and item list when Pay Item (a) is included in the Pay Item list below. Identify ponds by the Drainage Facility Identification Number (DFI). List each DFI separately. Obtain the DFI, the items, and the quantities from the Designer. Fill in all the required blanks. Delete items that do not apply. Copy and paste for multiple facilities.)

Storage Pond (DFI) Quantities:

Item	Quantity
Excavation	_____ Cu. Yd.
Drainage Geotextile, Type 1	_____ Sq. Yd.
Riprap Geotextile, Type 1	_____ Sq. Yd.
Loose Riprap, Class _____	_____ Cu. Yd.
Water Quality Mixture,	_____ Cu. Yd.
Catch Basin, _____	_____ Each
Concrete Storm Sewer Manhole (Flow Control)	_____ Each
_____ Inch Storm Sewer Pipe	_____ Foot
Porous Pavers	_____ Sq. Ft.

(Use the following "Bioretention Pond" heading and item list when Pay Item (b) is included in the Pay Item list below. Identify ponds by the Drainage Facility Identification Number (DFI). List each DFI separately. Obtain the DFI, the items, and the quantities from the Designer. Fill in all the required blanks. Delete items that do not apply. Copy and paste for multiple facilities.)

Bioretention Pond (DFI) Quantities:

Item	Quantity
Excavation	_____ Cu. Yd.
Drainage Geotextile, Type 1	_____ Sq. Yd.
Riprap Geotextile, Type 1	_____ Sq. Yd.
Loose Riprap, Class _____	_____ Cu. Yd.
Granular Drain Backfill	_____ Cu. Yd.
Water Quality Mixture	_____ Cu. Yd.
Catch Basin, _____	_____ Each
Concrete Storm Sewer Manhole (Flow Splitter)	_____ Each
_____ Inch Storm Sewer Pipe	_____ Foot
_____ Inch Subsurface Drain Pipe	_____ Foot
Porous Pavers	_____ Sq. Ft.

Field facility markers will be measured according to 00842.80.

Payment

(Delete the "(s)" or parentheses from the word "item(s)", as appropriate.)

01011.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract lump sum amount for the item(s):

(Delete Pay Item(s) from the list that are not included in the Schedule of Items, but do not change the alpha characters next to the Pay Items.)

Pay Item	Unit of Measurement
(a) Storage Pond, _____	Lump Sum
(b) Bioretention Pond, _____	Lump Sum

The drainage facility identification number is inserted in the blank.

Field facility markers will be paid for according to 00842.90.

Payment will be payment in full for furnishing and placing all Materials, and for providing all Equipment, labor, and Incidentals necessary to complete the Work as specified.