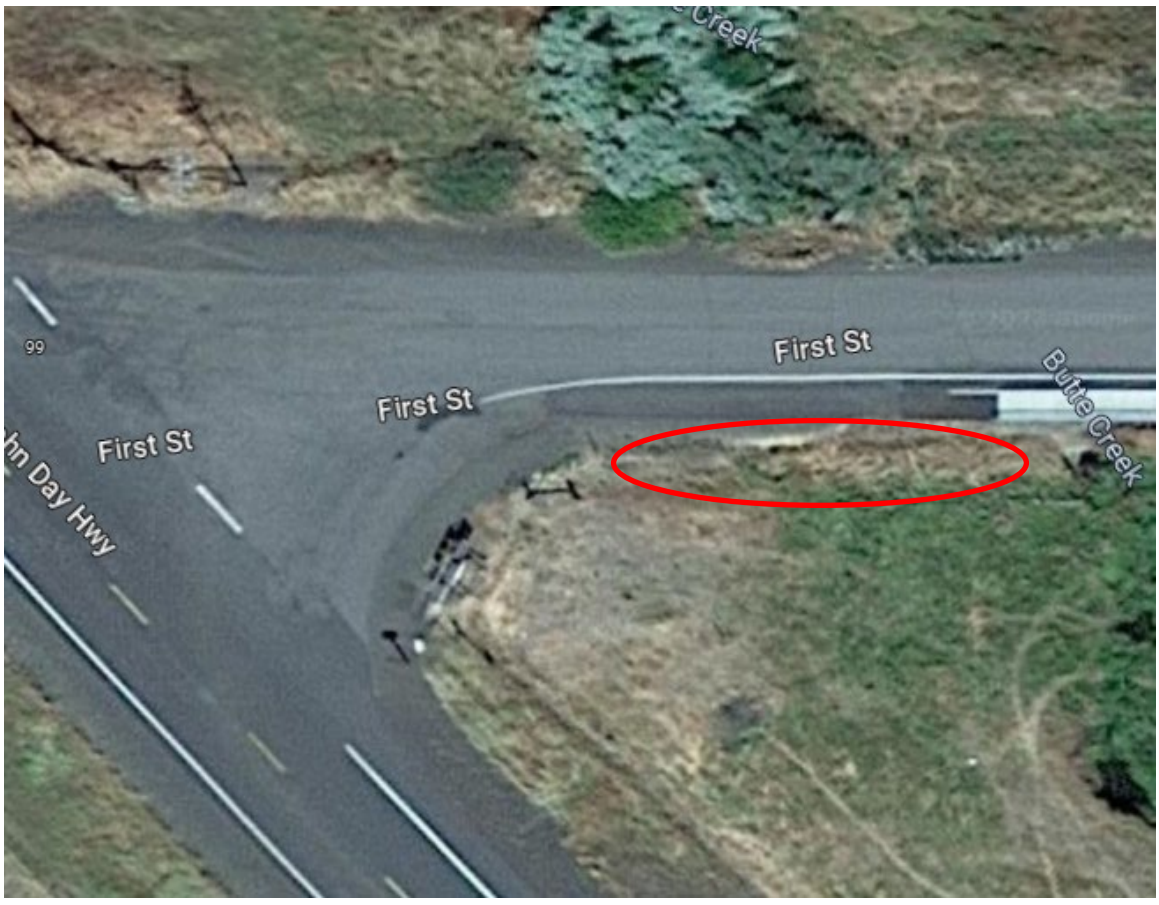
OPERATION & MAINTENANCE MANUAL

DFI No. : D01121
Facility Type: Bioretention Pond/Swale Combo



October, 2017

INDEX

1. Identification

Drainage Facility ID (DFI):	**D01121**
Facility Type:	Pond/Swale Combo
Construction Drawings:	51V-006
Location:	District: 9
	Highway No.: 005
	Mile Post: 57.60
	Description: This facility is located East of the highway on an ODOT owned road (1st Street) that leads into Fossil.

2. Facility Contact Information

Contact the Engineer of Record, Region Technical Center, or Geo-Environmental's Senior Hydraulics Engineer for:

- Operational clarification
- Maintenance clarification
- Repair or restoration assistance

Engineering Contacts:

Region Technical Center Hydro Unit Manager

Or

Geo-Environmental Senior Hydraulics Engineer (503) 986-3365.

3. Construction

Engineer of Record: Wade Coatney – Region 4 Tech. Center, Ph: 541-388-6234

Facility construction: 2018

Contractor:

4. Storm Drain System and Facility Overview

A detention pond/water quality biofiltration swale combo (referred to from this point forward as a pond/swale combo) combines the forms and

functions of a water quality swale and a detention pond. In a pond/swale combo, the biofiltration swale is situated within the bottom confines of the detention facility. The facility retains the storm events up to the two year design storm. Storms larger than this flow through the system, allowing it to functioning as a swale.

The facility is located on the shoulder of 1st Street [approx. 100 feet east of OR19 (Hwy 005)] just west of Butte Creek, on grade with the road. The drainage basin for this facility is the southern half of 1st Street from OR19 (Hwy 005), east to the beginning of the drainage curb. No pipe or inlets exist to collect or convey water to or from this facility. Stormwater sheet flows directly into this facility. When the facility overflows, it will flow along the road embankment, down to Butte Creek.

A. Maintenance equipment access:
   Access will be obtained by parking on 1st Street adjacent to the facility. Access is only allowed on foot.

B. Heavy equipment access into facility:

   ☐ Allowed (no limitations)
   ☐ Allowed (with limitations)
   ☒ Not allowed

C. Special Features:

   ☐ Amended Soils
   ☐ Porous Pavers
   ☐ Liners
   ☐ Underdrains

Photo looking south, August 2023 from Google street view.

5. Facility Haz Mat Spill Feature(s)

This facility can be used to store approximately 130 cubic feet of liquid prior to overflowing. No special measures need to be taken to allow the facility to retain haz mat in the facility.

6. Auxiliary Outlet (High Flow Bypass)

Auxiliary Outlets are provided if the primary outlet control structure cannot safely pass the projected high flows. Broad-crested spillway weirs and over flow risers are the two most common auxiliary outlets used in stormwater treatment facility design. The auxiliary outlet feature is either a part of the facility or an additional storm drain feature/structure.

The auxiliary outlet feature for this facility is:

☒ Designed into facility
The facility is designed to infiltrate the 2-year storm. Flow above what the facility can infiltrated will inundate the facility and flow through, acting as a swale. The facility itself is design to convey stormwater on larger flows. The natural drainage slope is towards Butte Creek.

☐ Other, as noted below

7. Maintenance Requirements

Routine maintenance table for non-proprietary stormwater treatment and storage/detention facilities have been incorporated into ODOT's Maintenance Guide. These tables summarize the maintenance requirements for ponds, swales, filter strips, bioslopes, and detention tanks and vaults. Special maintenance requirements in addition to the routine requirements are noted below when applicable.

The ODOT Maintenance Guide can be viewed at the following website:

http://www.oregon.gov/ODOT/HWY/OOM/MGuide.shtml

Maintenance requirements for proprietary structures, such as underground water quality manholes and/or vaults with filter media are noted in Appendix C when applicable.

The following stormwater facility maintenance table (See ODOT Maintenance Guide) should be used to maintain the facility outlined in this Operation and Maintenance Manual or follow the Maintenance requirements outlined in Appendix C when proprietary structure is selected below:

☒ Table 1 (general maintenance)
☒ Table 2 (stormwater ponds)
☒ Table 3 (water quality biofiltration swales)

☐ Table 4 (water quality filter strips)
☐ Table 5 (water quality bioslopes)
☐ Table 6 (detention tank)
☐ Table 7 (detention vault)
☐ Appendix C (proprietary structure)
☐ Special Maintenance requirements:

8. Waste Material Handling

Material removed from the facility is defined as waste by DEQ. Refer to the roadwaste section of the ODOT Maintenance Yard Environmental Management System (EMS) Policy and Procedures Manual for disposal options: http://egov.oregon.gov/ODOT/HWY/OOM/EMS.shtml

Contact any of the following for more detailed information about management of waste materials found on site:

ODOT Clean Water Unit	(503) 986-3008
ODOT Statewide Hazmat Coordinator	(503) 229-5129
ODOT Region Hazmat Coordinator	(541) 388-6088
ODEQ Northwest Region Office	(503) 229-5263

Appendix A

Content:

- **Operational Plan and Profile Drawing(s)**

N

Butte Creek

First Street

(To Fossil)

Mile Point 57.6

John Day Hwy OR19
(Hwy 005)

Ⓐ

Ⓑ

Facility
(DFI D01121)

Facility
(DFI D01122)

LEGEND:

- Photo Location / Direction
- Ⓐ Inlet
- Ⓑ Outlet
- Berm
- Inlet
- Storm Pipe (Facility)
- Existing Culvert
- Conveyance Direction
- Pavement / Facility Flow Path

OREGON DEPARTMENT OF TRANSPORTATION

Prepared By: Wade Coatney

Drafted By: Wade Coatney

DFI D01121
MAINTENANCE DISTRICT 9 HWY 005
FACILITY TYPE
HIGHWAY MP 57.6
WHEELER COUNTY

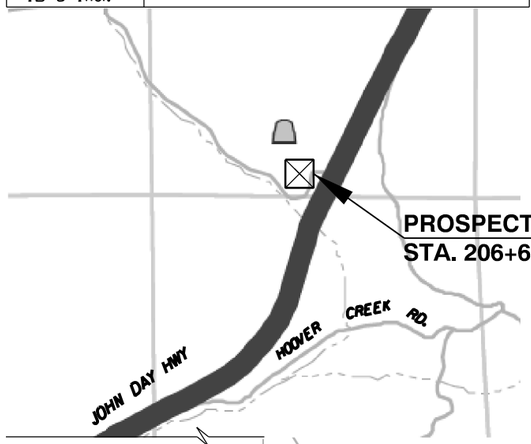
03_18730pl.dgn :: Default 10/6/2017 2:35:43 PM hwye40p

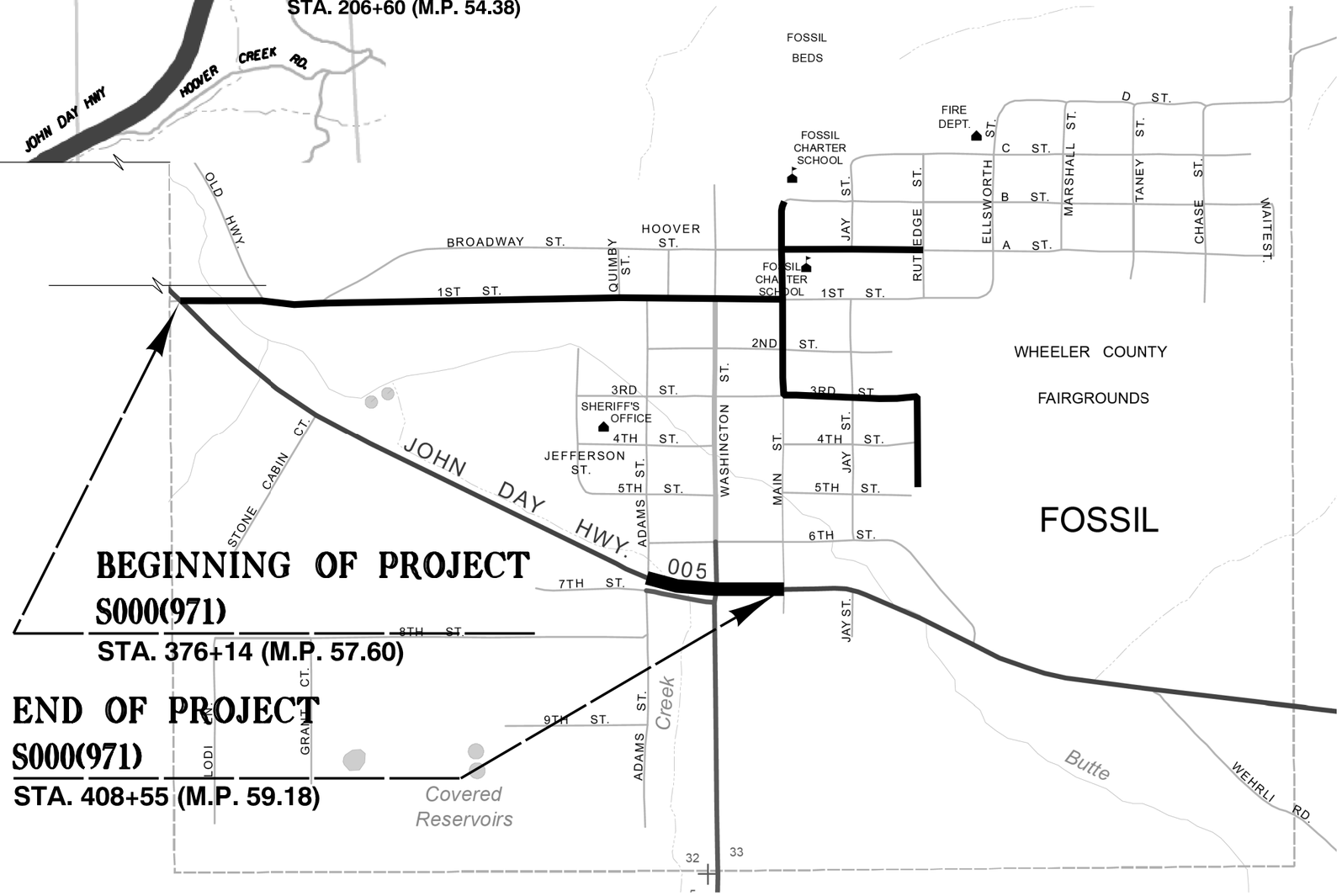
Rotation: 0° Scale: 1"=30'

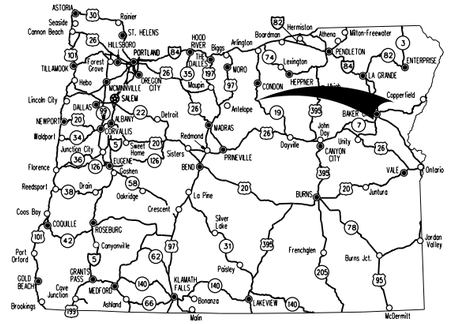
Appendix B

Content:

- **ODOT Project Plan Sheets**
  - ***Title Sheet***
  - ***Typical Sections***
  - ***Details***
  - ***General Construction Sheets***







51V-006

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	*Title Sheet*
1A	*Index Of Sheets Cont'd. & Std. Drg. Nos.*
1A-2	*Layout Sheet*
1B Thru 1B-5 Incl.	*Control Data Sheet*

STATE OF OREGON

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT

GRADING, DRAINAGE, STRUCTURE, PAVING & SIGNING

FOSSIL HERITAGE TRAIL (FOSSIL) PROJECT

JOHN DAY HIGHWAY

WHEELER COUNTY
NOVEMBER 2017

PROSPECTIVE DISPOSAL SITE
STA. 206+60 (M.P. 54.38)

BEGINNING OF PROJECT
S000(971)
STA. 376+14 (M.P. 57.60)

END OF PROJECT
S000(971)
STA. 408+55 (M.P. 59.18)

Overall Length Of Project - 3.1 Miles

ATTENTION:
Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through OAR 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Center Is (503) 232-1987.)

SAFETY FIRST

LET'S ALL WORK TOGETHER TO MAKE THIS JOB SAFE

N

T. 6 S., R. 21 E., W.M.

OREGON TRANSPORTATION COMMISSION

Tammy Baney	CHAIR
David Lohman	COMMISSIONER
Alando Simpson	COMMISSIONER
Sean O'Hollaren	COMMISSIONER
Paula Brown	COMMISSIONER
Matthew L. Garrett	DIRECTOR OF TRANSPORTATION

These plans were developed using ODOT design standards. Exceptions to these standards, if any, have been submitted and approved by the ODOT Chief Engineer or their delegated authority.

Approving Authority: ______________________
Signature & date

Jon Heacock, Region 4 TCM
Print name and title

____
Concurrence by ODOT Chief Engineer

FOSSIL HERITAGE TRAIL (FOSSIL) PROJECT
JOHN DAY HIGHWAY
WHEELER COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	S000(971)	1

PE002504 000 J13

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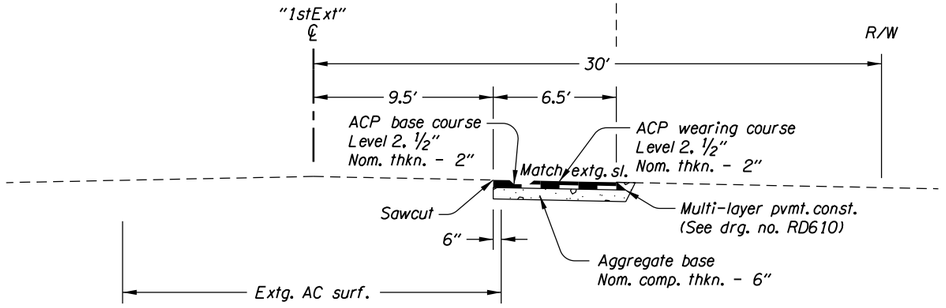
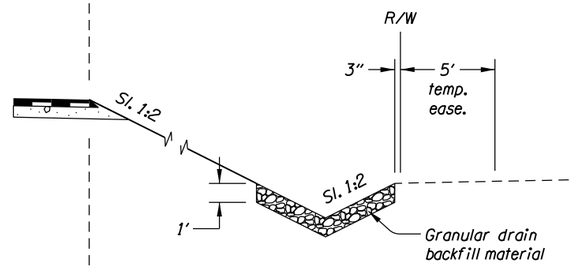
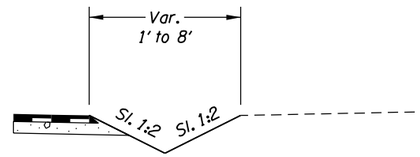


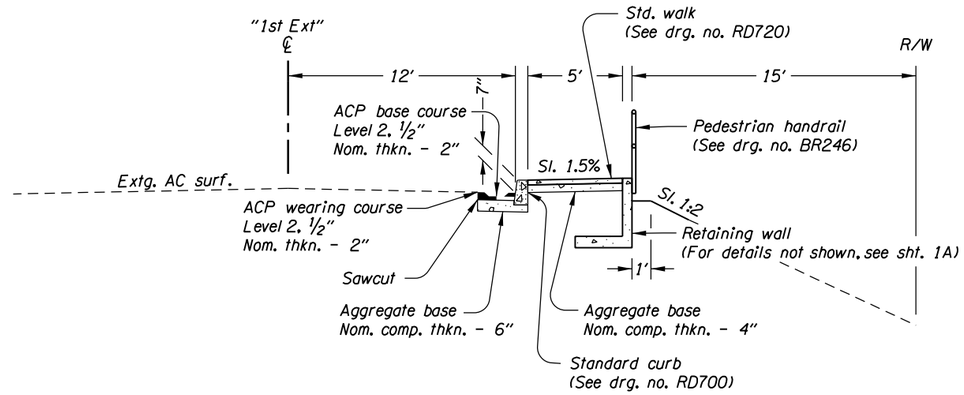
STA. "1stExt" 1+36 To STA. "1stExt" 2+25
"1stExt" 2+75 To "1stExt" 6+15



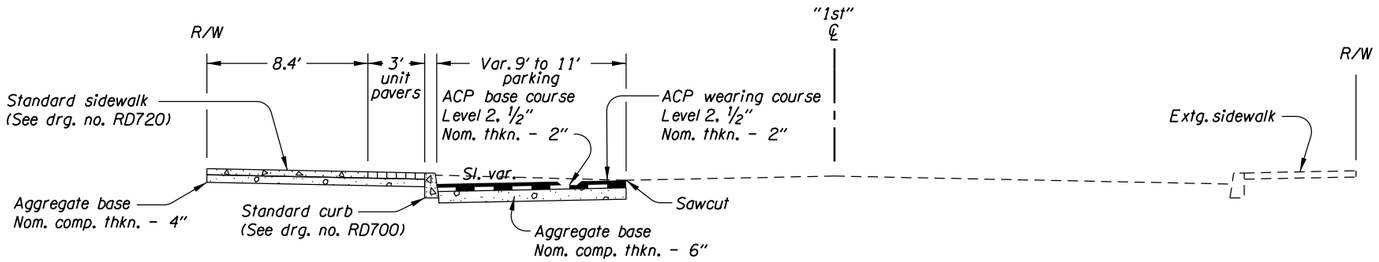
Sta. "1stExt" 2+62 to Sta. "1stExt" 3+45



Sta. "1stExt" 1+50 to Sta. "1stExt" 2+05



STA. "1st Ext" 2+25 To STA. "1st Ext" 2+75



STA. "1st" 3+55 To STA. "1st" 6+28

NOTE:
1. Side-slopes are shown as vert. to horiz.
2. Curb exposure to be 6", unless shown otherwise.
3. Delineate 6' shoulder with 4" white striping from Sta. "1st Ext" 1+36 to Sta. "1st" 19+50

REGISTERED PROFESSIONAL ENGINEER
49581
OREGON
JULY 12, 2005
BRIAN D. PASLAY
RENEWS: 12-31-2018

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OREGON DEPARTMENT OF TRANSPORTATION

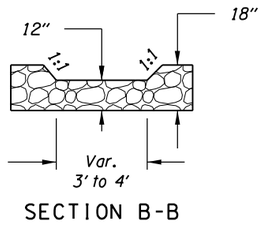
REGION 4 TECHNICAL CENTER

FOSSIL HERITAGE TRAIL (FOSSIL) PROJECT
JOHN DAY HIGHWAY
WHEELER COUNTY

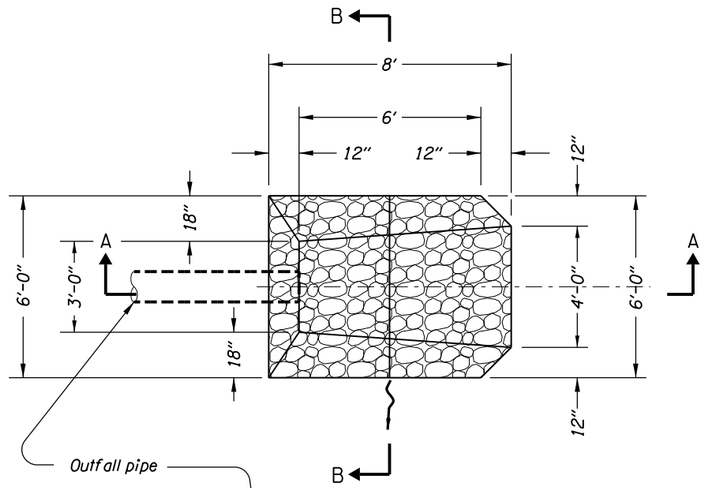
Reviewed By - Martin R. Matejsek
Designed By - Brian D. Paslay
Drafted By - Joseph J. Rodriguez

TYPICAL SECTIONS

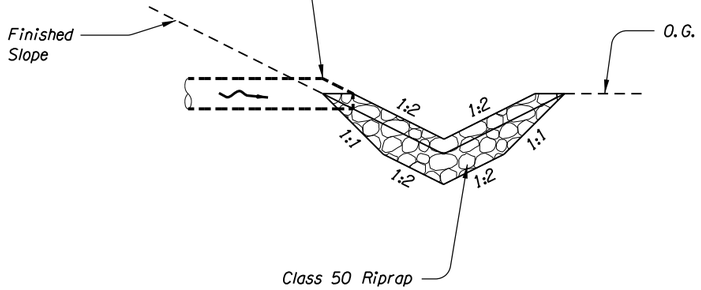
SHEET NO. 2



SECTION B-B

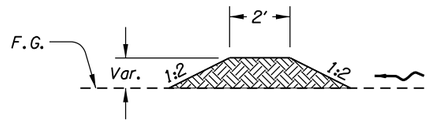


PLAN

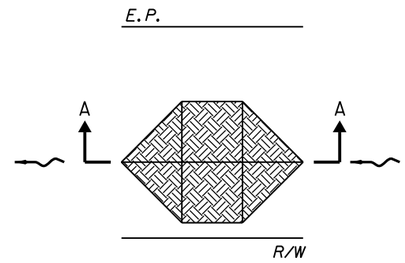


SECTION A-A

RIPRAP ENERGY DISSIPATOR



SECTION A-A



PLAN

EARTHEN BERM

OREGON DEPARTMENT OF TRANSPORTATION

REGION 4 TECHNICAL CENTER

REGISTERED PROFESSIONAL ENGINEER
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OREGON
JULY 12, 2005
BRIAN D. PASLAY
RENEWS: 12-31-2018

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JOHN DAY HIGHWAY
WHEELER COUNTY

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Designed By - Brian D. Paslay
Drafted By - Joseph J. Rodriguez

DETAILS

SHEET NO. 2B-26

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Sec. 32, T. 6 S., R. 21 E., W.M.

51V-006

(1) Const. std. sidewalk
(See drg. no. RD720)

(2) Const. standard curb
(See drg. no. RD700)

(3) Const. pedestrian handrail
(See drg. no. BR246)

(4) Const. shoulder widening

(5) Const. retaining wall
(For details, see shts. GT & GT-2)

(6) Sta. "1st Ext" 2+59, Rt.
Inst. 12" storm sewer pipe - 10'
5' Depth
Const. type "G-1" inlet with sump
(See drg. nos. RD300, RD302, RD339, RD364 & RD365)

(7) Sta. "1st Ext" 2+69, Rt.
Inst. 12" storm sewer pipe - 76'
5' Depth
Const. type "G-1" inlet with sump

(8) Sta. "1st Ext" 3+45, Rt.
Inst. 12" storm sewer pipe - 13'
5' Depth
Const. sloped end
Const. type "G-1" inlet with sump
Const. riprap energy dissipator
(For details, see sht. 2B-26)
(See drg. no. RD316)

(9) Install temporary type 1 fencing
(See drg. no. RD810)

(10) Install type 1 fencing - 172'
includes 16' gateway
(See drg. no. RD810)

(11) Inst. Type "S2" Marker
DFI no. D01121
(See drg. no. RD399)

(12) Inst. Type "S2" Marker
DFI no. D01122

(13) Inst. Type "S1" marker, green - 2
(See drg. no. RD399)

(14) Inst. Type "S1" marker, red - 2

(15) Const. earthen berm
(For details, see sht. 2B-26)

N

"1st_Ext" 1
"1st_Ext" 2
"1st_Ext" 3
"1st_Ext" 4
"1st_Ext" 5
"1st_Ext" 6
"1st_Ext" 0+00.00
"1st" 25+72.05
"1st_Ext" 6+15.00
"1st" 25

OLD HWY.
FIRST ST.
JOHN DAY HWY.
Ditch
R/W
Temp ease
U T
U W
N 89°12'09" E
S 88°30'19" W

377
378
379
380

OREGON DEPARTMENT OF TRANSPORTATION

REGION 4 TECHNICAL CENTER

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GENERAL CONSTRUCTION

SHEET NO. 3

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