

OPERATION & MAINTENANCE MANUAL

DFI No. : D00979

**Facility Type: Water Quality Extended
Dry Detention Pond**



March 2016

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1. Identification

Drainage Facility ID (DFI): **D00979**
Facility Type: Water Quality Extended Dry Detention Pond
Construction Drawings: DOWL Project No. 2122.13626.01
Location: District: 10
Highway No.: Paulina Highway (OR380, NE Combs Flat Road)
Mile Post: 0.022/0.085
Description: This facility is located along the east side of Paulina Highway (OR380, NE Combs Flat Road) just north of Ochoco Creek. Access via Paulina Highway.

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: DOWL, Justin Mason, PE, 541.385.4722

Facility construction: 2015

Contractor: Taylor NW

4. Storm Drain System and Facility Overview

Water quality extended dry detention ponds are depressed basins that temporarily store stormwater runoff following a storm event. These facilities are designed to store and gradually release or attenuate stormwater runoff via a control structure or release mechanism, and completely drain after the design storm has passed.

This facility is located along the east side of Paulina Highway (OR380, NE Combs Flat Road) just north of Ochoco Creek. Access may be obtained directly from the shoulder of the northbound travel lane.

The drainage area for this swale includes the paved surfaces of Paulina Highway (OR 380, NE Combs Flat Road) and the stormwater sheet-flow runoff, flowing toward the facility. Underground drain rock provides storage and allows for infiltration into underlying soils. An auxiliary outlet (high flow bypass) conveys stormwater runoff to Ochoco Creek through an 8-inch diameter pipe.

A. Maintenance equipment access:

This facility is located along the east side of Paulina Highway (OR380, NE Combs Flat Road) just north of Ochoco Creek. Access may be obtained directly from the shoulder of the northbound travel lane.

B. Heavy equipment access into facility:

- Allowed (no limitations)
- Allowed (with limitations)
- Not allowed

C. Special Features:

- Amended Soils
- Porous Pavers
- Liners
- Underdrains



Photo 1: Detention pond facility looking north toward 3rd Street (US HWY 26).



Photo 2: Detention pond facility looking south toward Ochoco Creek.



Photo 3: 8-inch Ochoco Creek.

5. Facility Haz Mat Spill Feature(s)

The facility can be used to store a volume of liquid by blocking the 8-inch diameter outlet pipe located at the auxiliary outlet of 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 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 auxiliary outlet is included in the design of the facility by including a field inlet and pipe network with outfall to Ochoco 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:

<https://www.oregon.gov/ODOT/HWY/OOM/pages/mguide.aspx>

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://www.oregon.gov/ODOT/HWY/OOM/pages/ems.aspx>

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) 667-7442
ODOT Region Hazmat Coordinator	(541) 388-6186
ODEQ Northwest Region Office	(503) 229-5263

Appendix A

Content:

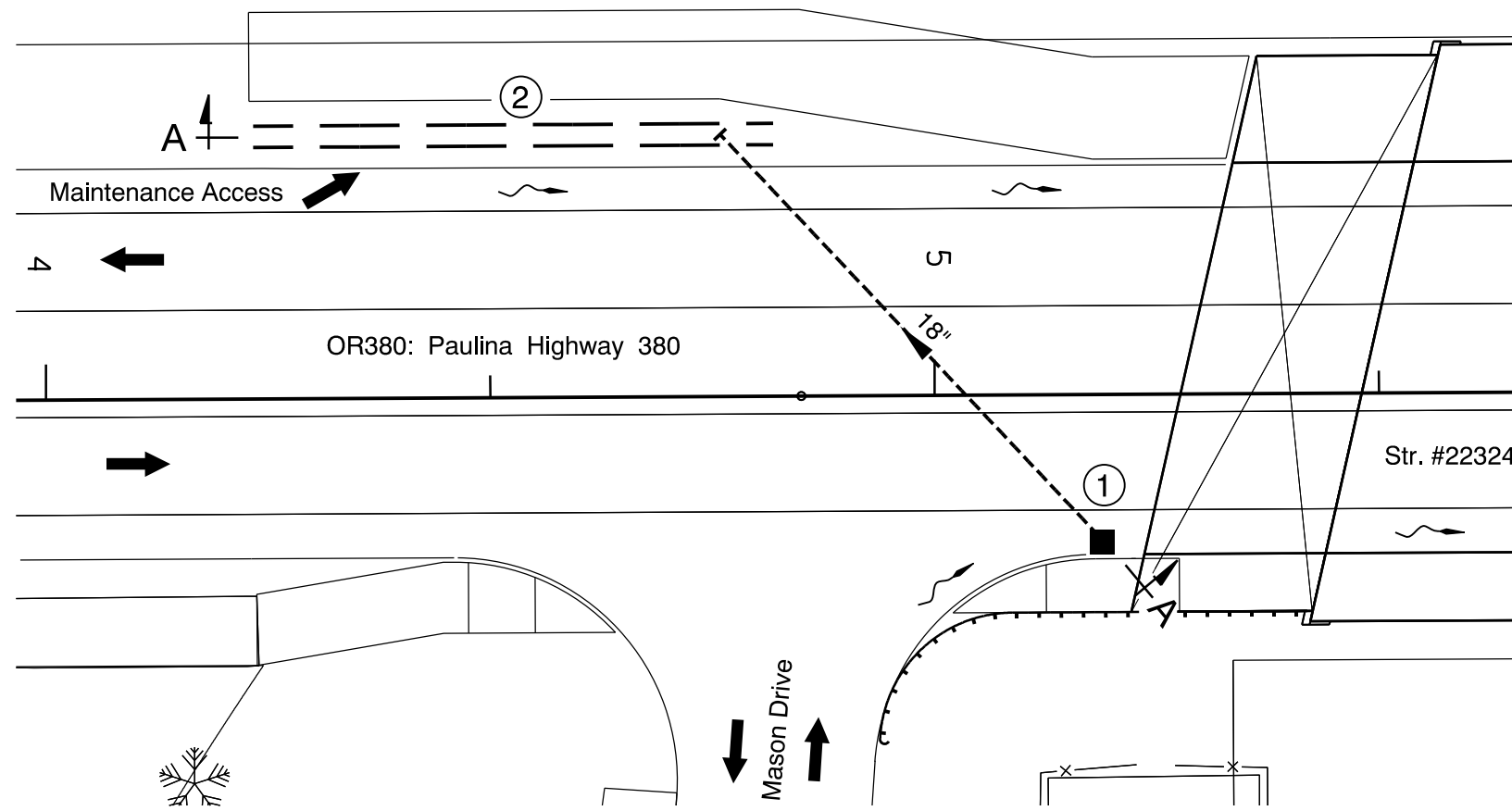
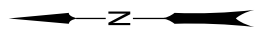
- **Operational Plan and Profile Drawing(s)**

Appendix B

Content:

- **ODOT Project Plan Sheets**
 - *Cover/Title Sheet*
 - *Water Quality/Detention Plan Sheets*
 - *Other Details*

APPENDIX A



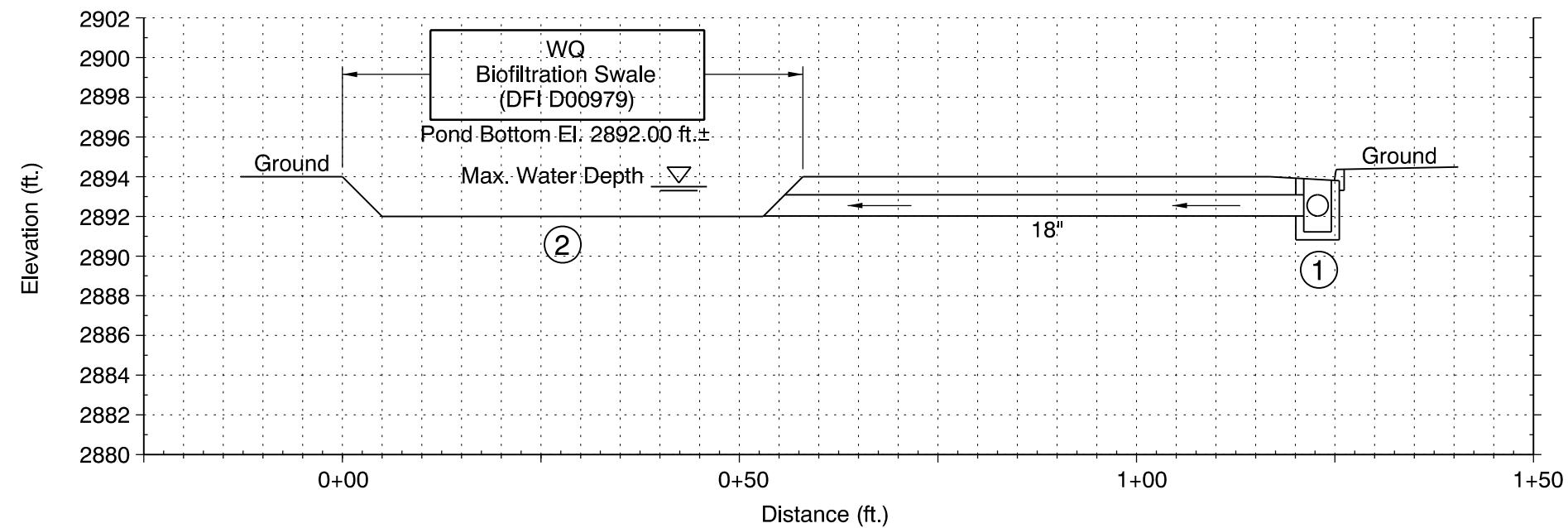
PLAN
N.T.S.

LEGEND

- ① Type 'G-1' Inlet
- ② WQ Biofiltration Swale
- Storm Pipe (Facility)
- 18" Inlet
- █ Inlet
- ~ Flow Path
- ← Conveyance Direction
- ▽ Max. Water Depth

NOTES:

- 1. Elevations shown are for reference.



SECTION A-A
N.T.S.

Sht. 1 of 1



Prepared By:
Michael W. Ogden

Drafted By:
Michael L. Graves

DFI D00979
MAINTENANCE DISTRICT 10 HWY 380
WQ BIOFILTRATION SWALE
PAULINA HIGHWAY
CROOK COUNTY

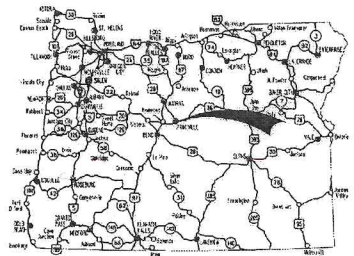
APPENDIX B

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT
GRADING, DRAINAGE, STRUCTURES & PAVING

**OR380: OCHOCO CREEK BRIDGE
REPLACEMENT PROJECT
PAULINA HIGHWAY**

CROOK COUNTY
APRIL 2016



Overall Length Of Project - 0.07 Miles

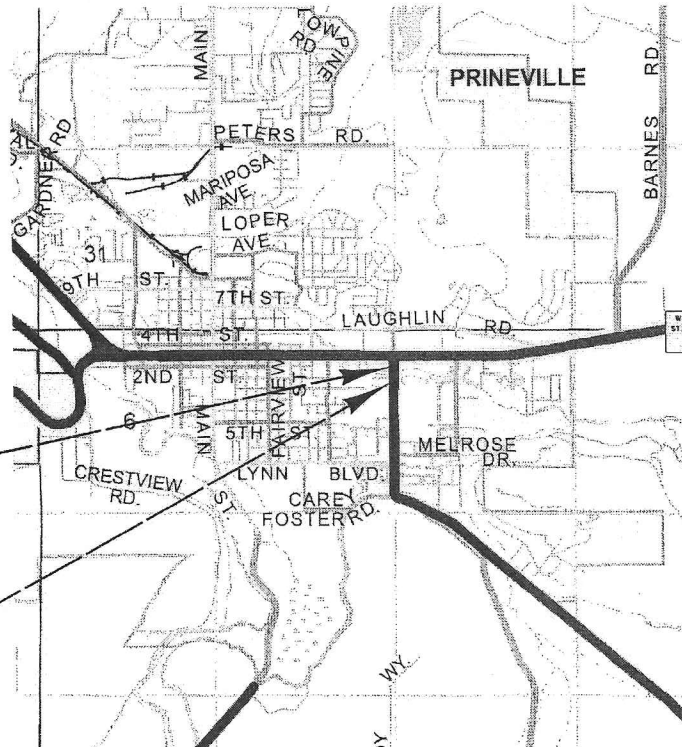
ATTENTION:
Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. These Rules Are Set Forth In OAR 952-001-0010 Through OAR 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Notes: The Telephone Number For The Oregon Utility Center Is (503) 232-1907.)



T. 15 S., R. 16 E., W.M.



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
1A	Index Of Sheets Con'd. & Std. Drg. Nos.
1B	Survey Control Data



BEGINNING OF PROJECT

STP-S380 (002)

STA. 3+97 (M.P. 0.08)

END OF PROJECT

STP-S380 (002)

STA. 7+67 (M.P. 0.15)

PE002433-000

OREGON TRANSPORTATION COMMISSION
Tommy Baney CHAIR
Devin Lohman COMMISSIONER
Susan Morgan COMMISSIONER
Alonso Simpson COMMISSIONER
Sean O'Halloran COMMISSIONER
Matthew L. Corbett 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

**OR380: OCHOCO CREEK BRIDGE
REPLACEMENT PROJECT
PAULINA HIGHWAY
CROOK COUNTY**

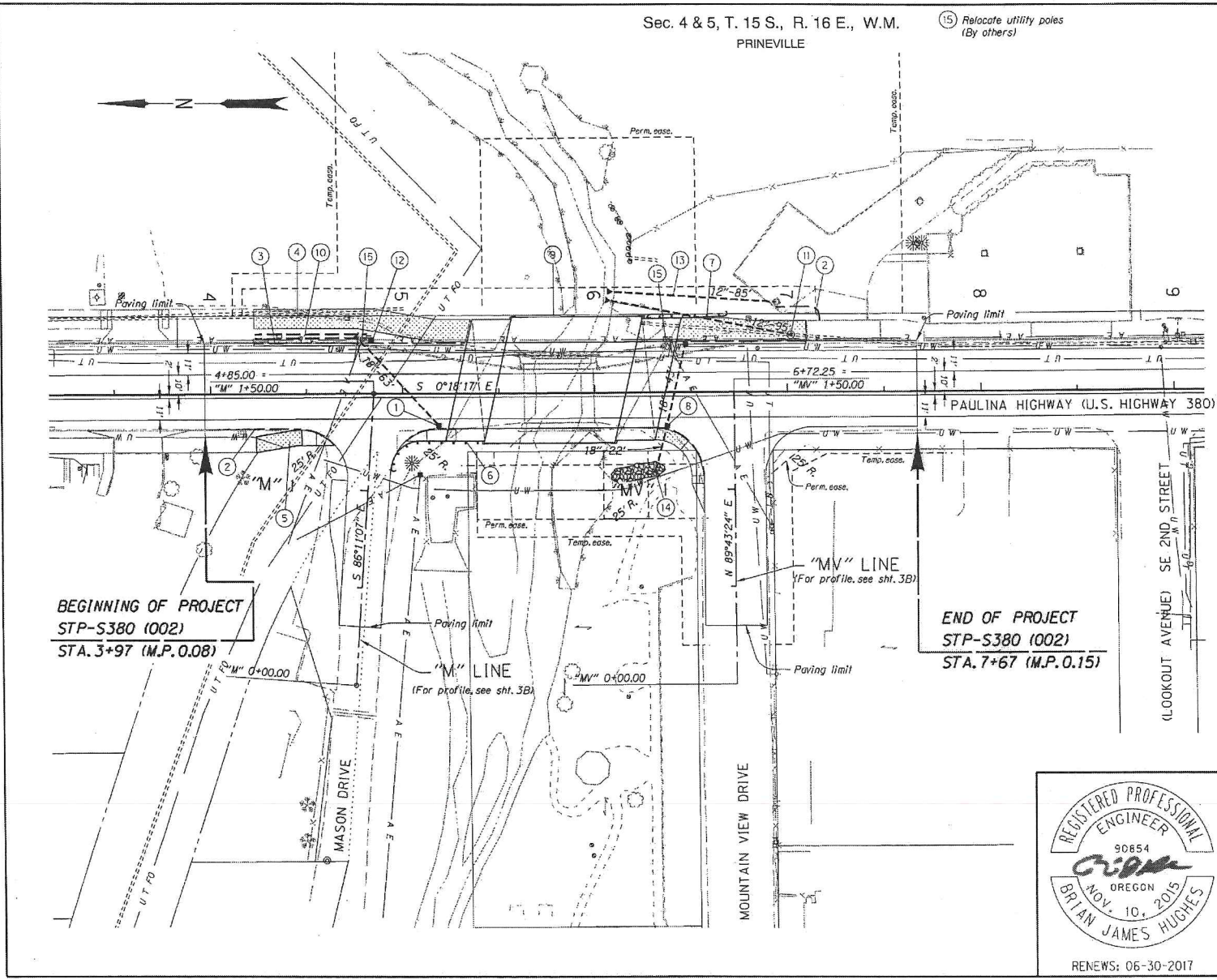
FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	STP-S380 (002)	1

Sec. 4 & 5, T. 15 S., R. 16 E., W.M.
PRINEVILLE

15 Relocate utility poles
(By others)

49V-050

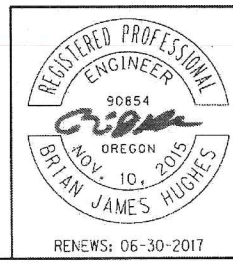
- 1 Sta. 5+19
Const. type "G-1" inlet w/ sump
Inst. 18" storm sew. pipe - 63'
5' depth
- 2 Const. standard curb
(See drg. no. RD700)
- 3 Const. curb and gutter
(See drg. No. RD700)
- 4 Const. asph. conc. sidewalk
(See drg. no. RD720)
- 5 Const. P.C. conc. sidewalk
(For details, see sht. 2B-3)
- 6 Sta. 4+96 to Sta. 5+42
Const. 31" guardrail - 25' (Type 2A)
Const. 31" guardrail - 12.5' (Type 3I)
Const. 31" guardrail transition
Const. anchor (Type 1)
Inst. end piece (Type C)
(See drg. nos. RD400, RD405, RD410, RD415 & RD480)
- 7 Sta. 6+24.5 to Sta. 6+68
Const. 31" guardrail transition
Const. guardrail terminal, non-flared - 25'
Test level - 2
(See drg. no. RD420)
- 8 Sta. 6+47
Const. type "G-1" inlet w/ sump - 2
Inst. 18" storm sew. pipe - 65'
5' depth
- 9 Structure no. 22324
Const. structure - 66'
Rdwy. width 44' with 6.5' walk, Rt. 12' walk, L.I.
and reinf. Panel at bridge ends
(For drg. nos., see sht. 1A)
- 10 Const. extension of existing swale DFI no. 00979 - 65'
(For details, see sht. 2B-4)
- 11 Sta. 7+02.29-14 Rt.
Const. manhole
Inst. 12" storm sew. Pipe - 95'
20' depth
- 12 Const. modified curb opening
(For details, see sht. 2B)
- 13 Inst. 12" storm sew. Pipe - 85'
20' depth
- 14 Const. riprap basin energy dissipater
(For details, see sht. 2B-4)

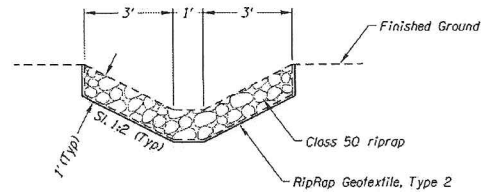


BEGINNING OF PROJECT
STP-S380 (002)
STA. 3+97 (M.P. 0.08)

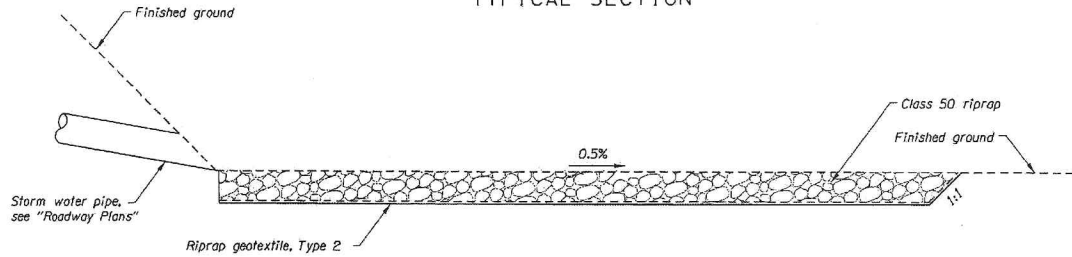
END OF PROJECT
STP-S380 (002)
STA. 7+67 (M.P. 0.15)

OREGON DEPARTMENT OF TRANSPORTATION	
REGION 4 TECHNICAL CENTER	
OR380: OCHOCHO CREEK BRIDGE REPLACEMENT PROJECT PAULINA HIGHWAY CROOK COUNTY	
Reviewed By - Brian D. Paslay Designed By - Brian J. Hughes Drafted By - Joseph J. Rodriguez	
GENERAL CONSTRUCTION	SHEET NO. 3

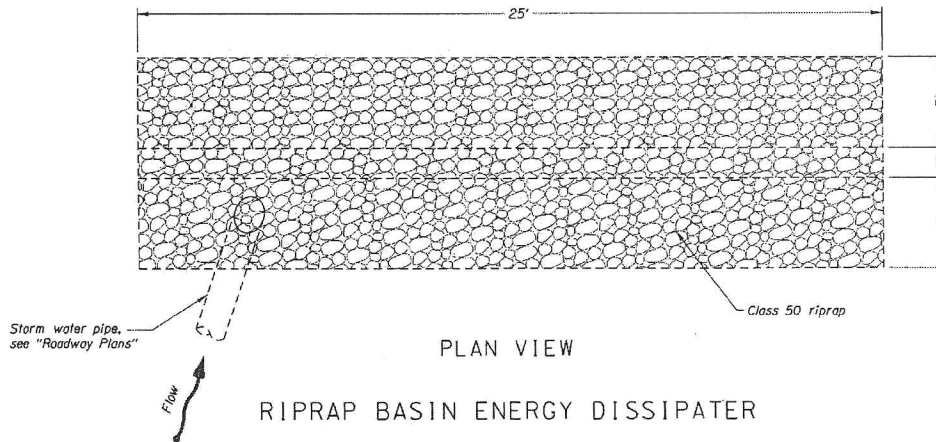




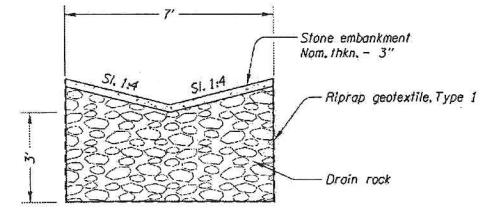
TYPICAL SECTION



ELEVATION VIEW



PLAN VIEW
RIPRAP BASIN ENERGY DISSIPATER



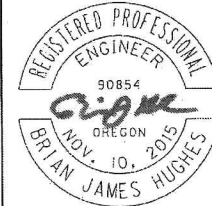
WATER QUALITY SWALE
DFI NO. 00979

OREGON DEPARTMENT OF TRANSPORTATION

REGION 4 TECHNICAL CENTER

**OR380: OCHOCHO CREEK BRIDGE
REPLACEMENT PROJECT
PAULINA HIGHWAY
CROOK COUNTY**

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



RENEWS: 06-30-2017

DETAILS

SHEET NO.
2B-4