OPERATIONS AND MAINTENANCE MANUAL FOR STORMWATER DETENTION AND TREATMENT FACILITIES

DFI No. 00865
Facility Type: Biofiltration Swale

April, 2018

INDEX

1. Identification

Facility Types: Water Quality Biofiltration Swale 00865

Location: Randy Pape Highway 69
Milepost 12.16

2. Facility Contact Information

Chris Carman, ODOT Hydraulics Engineer (503) 986-2691.

3. Construction

Engineer of Record: ODOT Designer - Region 2 Tech. Center,
Chris Carman, (503) 986-2691

Facility construction: 2017

4. Overview

Treatment of pollutants from the highway are achieved through sedimentation and infiltration through the water quality mix shown in section B-B in the operational plan.

5. Facility Haz Mat Spill Feature

The swale can be used to store a volume of liquid by blocking the outlet of the swale. A barrier such as a temporary berm made of sandbags could be used to prevent liquid from draining from the swale.

6. Auxiliary Outlet (High Flow Bypass)

Auxiliary Outlets are provided if the primary outlet control structure can not 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
☒ Other
This facility does not contain an auxiliary outlet feature. The facility was designed to receive runoff from the road and discharge into cross pipes.

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/mg/02/act125_waterqualityfacilandtables.pdf

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

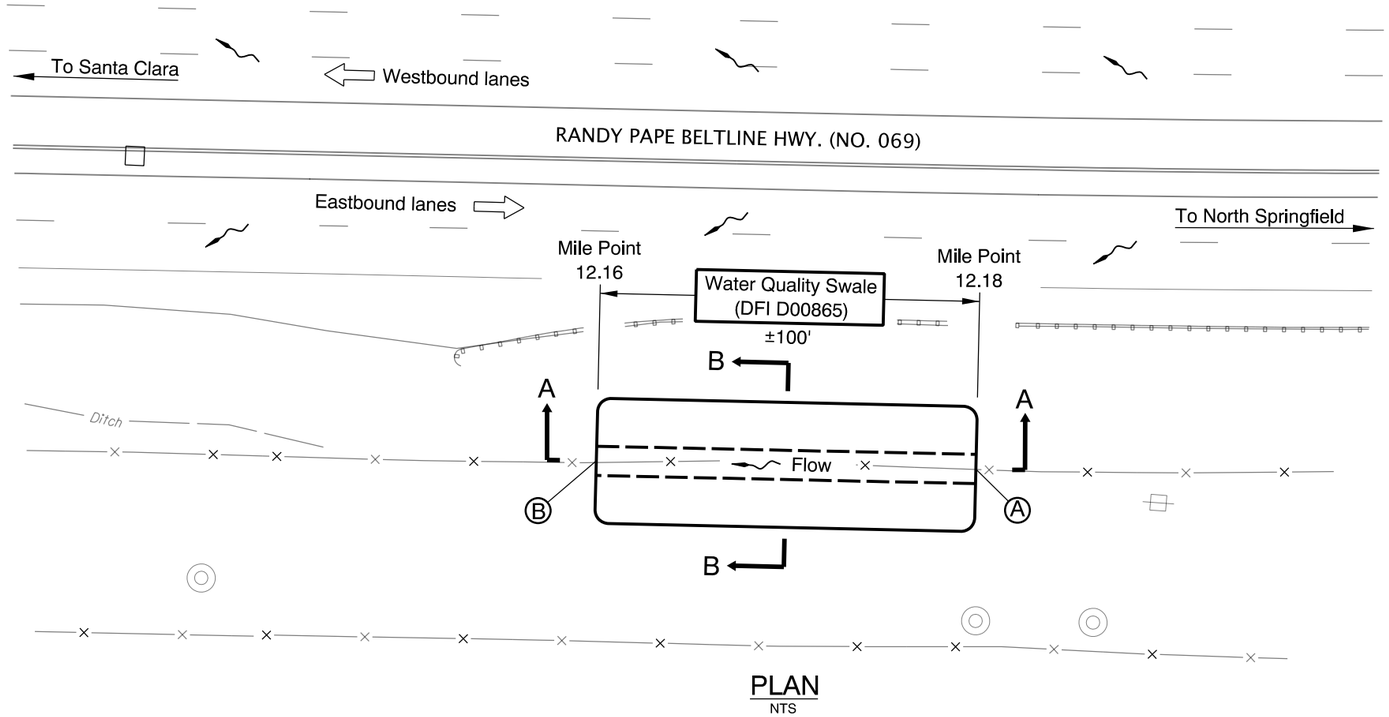
Material removed from the facility is defined as waste by DEQ. Refer to the roadwaste section 5.18 of the ODOT Maintenance Yard Environmental Management System (EMS) Policy and Procedures Manual for disposal options:

https://www.oregon.gov/ODOT/HWY/OOM/EMSdoc/ems_manual.pdf

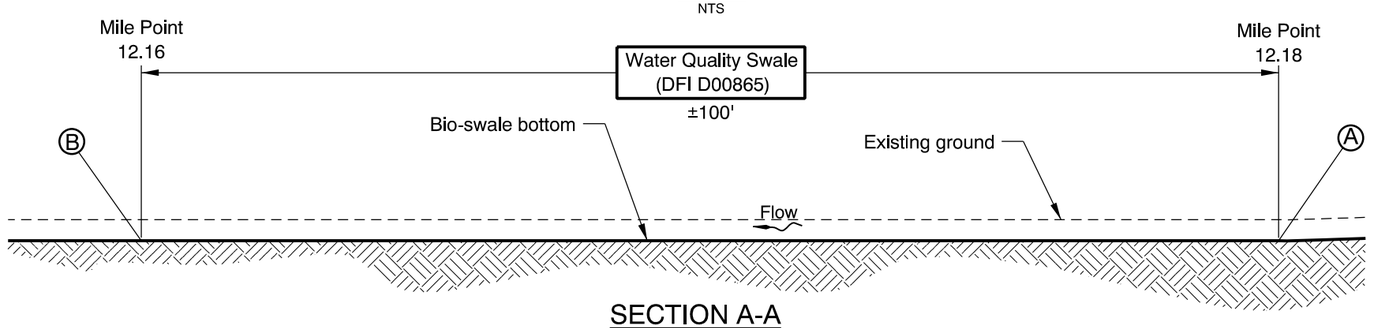
Contact any of the following for more detailed information about management of waste materials found on site:

ODOT Clean Water Unit	(503) 986-3008
ODOT Statewide Hazmat Coordinator	(503) 229-5129
ODOT Region Hazmat Coordinator	(503) 986-2647
ODEQ Northwest Region Office	(503) 229-5263

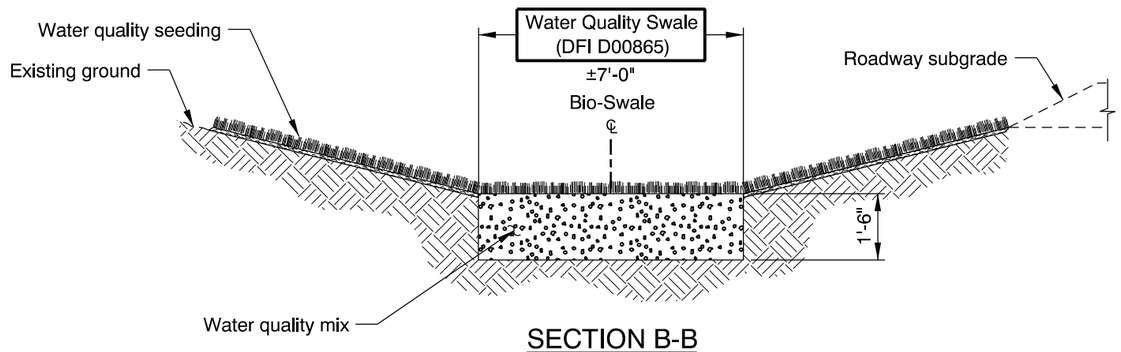
APPENDIX A: Operations Plan and Profile Drawing(s)



PLAN
NTS



SECTION A-A
NTS



SECTION B-B
NTS

LEGEND:
- Ⓐ Swale Inlet
- Ⓑ Swale Outlet
- Pavement / Facility Flow Path
- Conveyance Direction
- Ditch Line
- Storm Pipe (Facility)
- Swale Boundary
- Traffic Direction

OREGON DEPARTMENT OF TRANSPORTATION

Prepared By: Christopher Carman

Drafted By: Jeff Coon

DFI D00865
MAINTENANCE DISTRICT 5 HWY 069
WATER QUALITY BIOFILTRATION SWALE
BELTLINE HIGHWAY MP 12.16
LANE COUNTY

DFI_00865.dgn :: Default 4/19/2018 2:45:40 PM hwyr64u

Rotation: 0° Scale: 1"=40'

APPENDIX B: Design Drawing(s)

49V-024

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
1A, 1A-2	Index Of Sheets Cont'd.
1A-3	Standard Drg. Nos.
1B	Plan Sheet Layout

STATE OF OREGON

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT

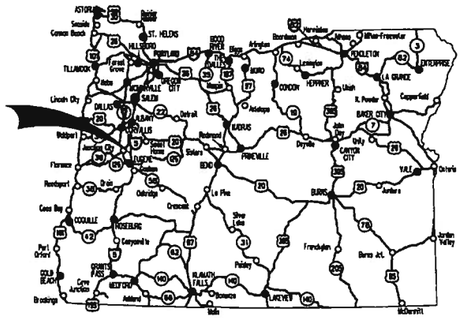
GRADING, DRAINAGE, STRUCTURES, PAVING, SIGNING, ILLUMINATION, ITS, SIGNAL & ROADSIDE DEVELOPMENT

I-5 @ BELTLINE INTERCHANGE - UNIT 4 (EUGENE/SPRINGFIELD) SEC.

PACIFIC HIGHWAY

LANE COUNTY

MARCH 2016



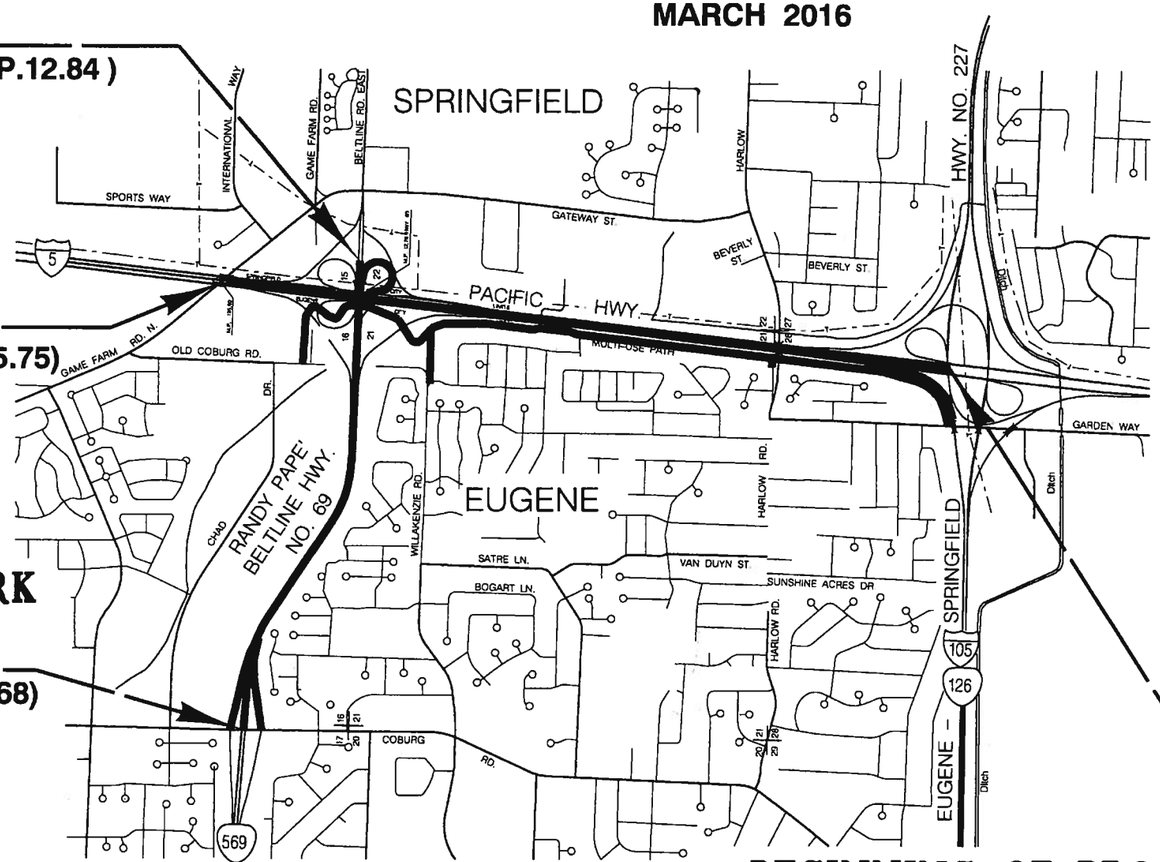
Overall Length Of Project - 1.75 Miles

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.)

END OF WORK
SO-S001(477)
STA. "BL"353+00 (M.P.12.84)

END OF PROJECT
SO-S001(477)
STA. "SB"425+25 (M.P. 195.75)

BEGINNING OF WORK
SO-S001(477)
STA. "BL"291+44 (M.P. 11.68)



BEGINNING OF PROJECT
SO-S001(477)
STA. "SB"518+00 (M.P. 194)

T. 17 S., R. 3 W., W.M.

LET'S ALL WORK TOGETHER TO MAKE THIS JOB SAFE

OREGON TRANSPORTATION COMMISSION

Tammy Baney	CHAIR
David Lohman	COMMISSIONER
Susan Morgan	COMMISSIONER
Alando Simpson	COMMISSIONER
Sean O'Hollaren	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.

BY: _____ 12.30.15
Signature & date

James E. West - R2 Tech Center Manager
Print name and title

Concurrence by ODOT Chief Engineer

I-5 @ BELTLINE INTERCHANGE - UNIT 4 (EUGENE/SPRINGFIELD) SEC.
PACIFIC HIGHWAY
LANE COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	SO-S001(477)	1

PE001973-010

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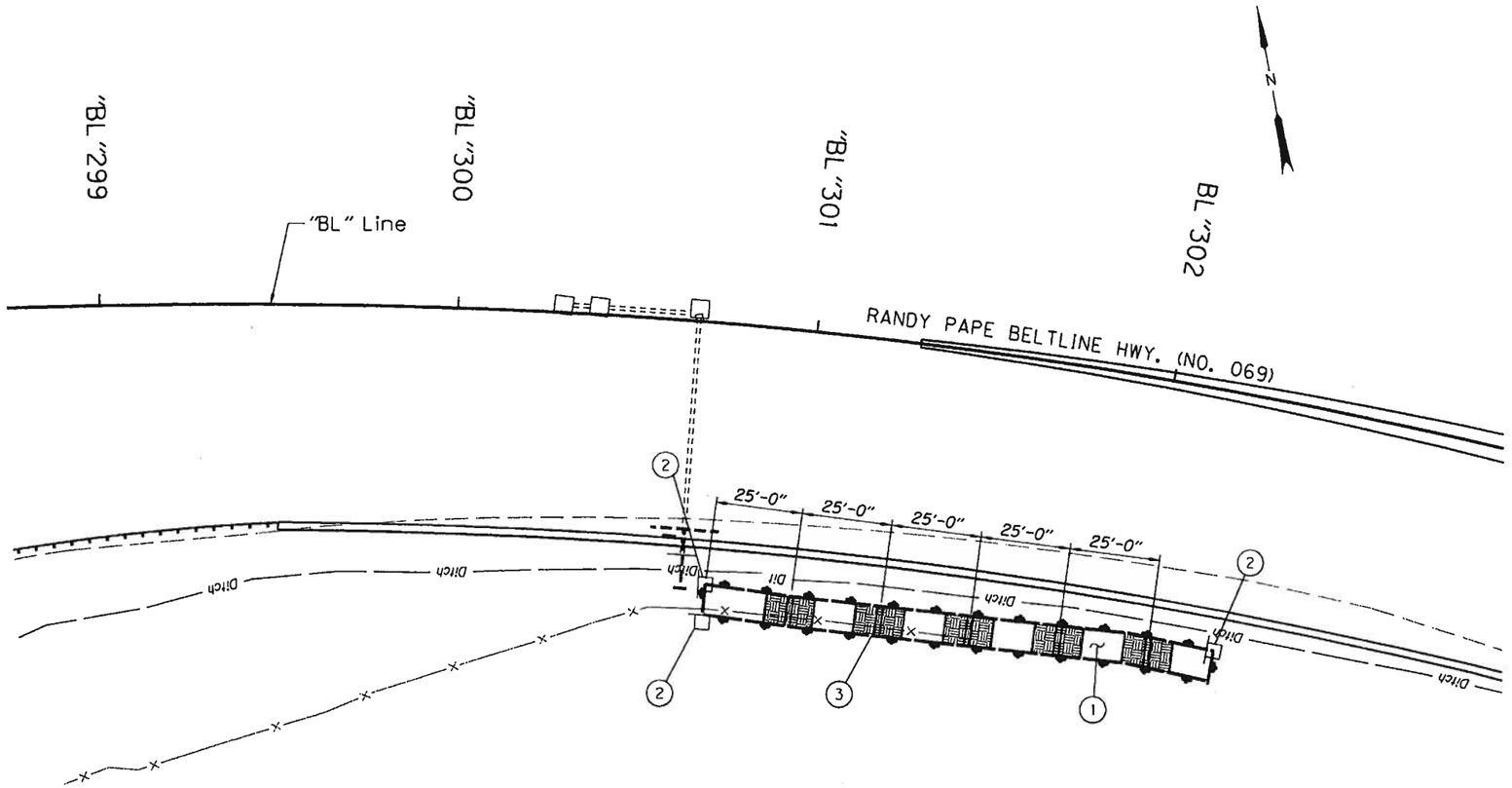
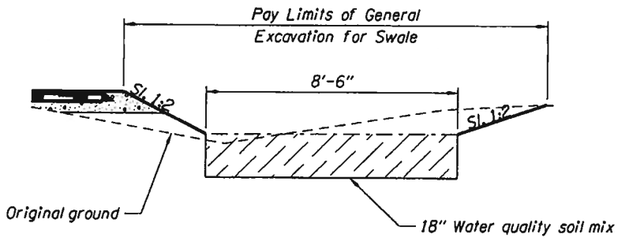
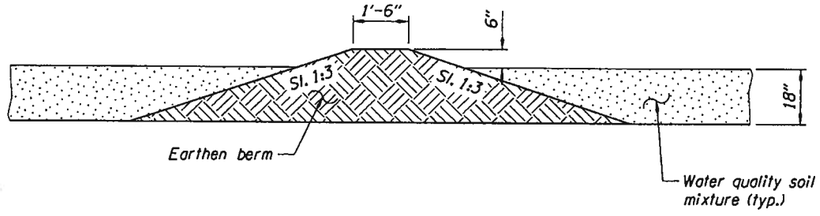


PLAN

1. Sta. "BL" 300+75.00 to Sta. "BL" 302+25.00
   Construct water quality biofiltration swale - No. 00864
   Water quality mixture - 71 cu. yds.
   General excavation - 30 cu. yds.
2. Stormwater facility marker 00864
   (See RD399)
3. Earthen Berm - 5
   (For details see detail)



WATER QUALITY SWALE DETAIL



EARTHEN BERM DETAIL

All slopes shown vertical to horizontal.

REGISTERED PROFESSIONAL ENGINEER
17807
OREGON
JULY 25, 1995
CHRIS CARMAN
RENEWS: 12-31-2015

OREGON DEPARTMENT OF TRANSPORTATION

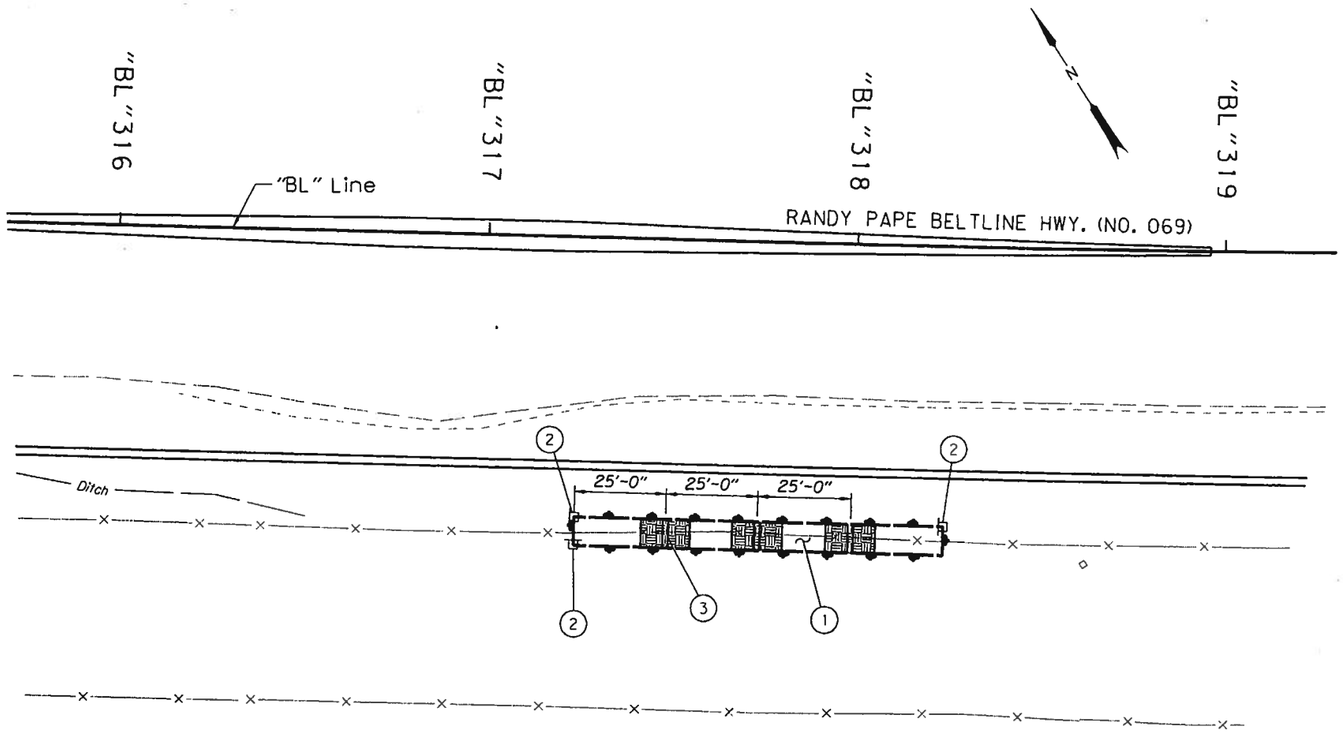
REGION 2 TECH CENTER

I-5 @ BELTLINE INTERCHANGE - UNIT 4 (EUGENE/SPRINGFIELD) SEC.
PACIFIC HIGHWAY
LANE COUNTY

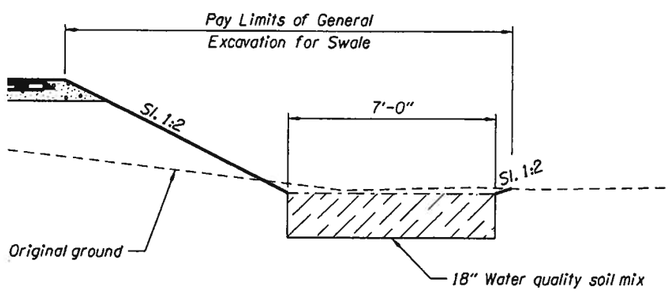
Reviewed by - Bruce Cormichael
Designed by - Christopher Carman
Drafted by - Julie Rentz

STORMWATER PLAN

SHEET NO. GJ



PLAN



WATER QUALITY SWALE DETAIL

(1) Sta. "L" 317+25.00 to Sta. "L" 318+25.00
Construct water quality biofiltration swale - No. 00865
Water quality mixture - 39 cu. yds.
General excavation - 8 cu. yds.

(2) Stormwater facility marker 00865
(See RD399)

(3) Earthen Berm - 3
(For details see sht. GJ)

All slopes shown vertical to horizontal.

REGISTERED PROFESSIONAL ENGINEER
17807
OREGON
JULY 25, 1995
CHRIS CARMAN
RENEWS: 12-31-2015

OREGON DEPARTMENT OF TRANSPORTATION

REGION 2 TECH CENTER

I-5 @ BELTLINE INTERCHANGE - UNIT 4 (EUGENE/SPRINGFIELD) SEC.
PACIFIC HIGHWAY
LANE COUNTY

Reviewed by - Bruce Carmichael
Designed by - Christopher Carman
Drafted by - Julie Rentz

STORMWATER PLAN

SHEET NO. GJ-2