

MOUNTAIN VIEW CULVERT 1348 REPLACEMENT PROJECT

ISLAND COUNTY, WA

PROJECT JL# 00601-0801 CDP 20-04

VICINITY MAP

PROJECT LOCATED IN SECTION 25, TOWNSHIP 31, RANGE 02E, W.M.



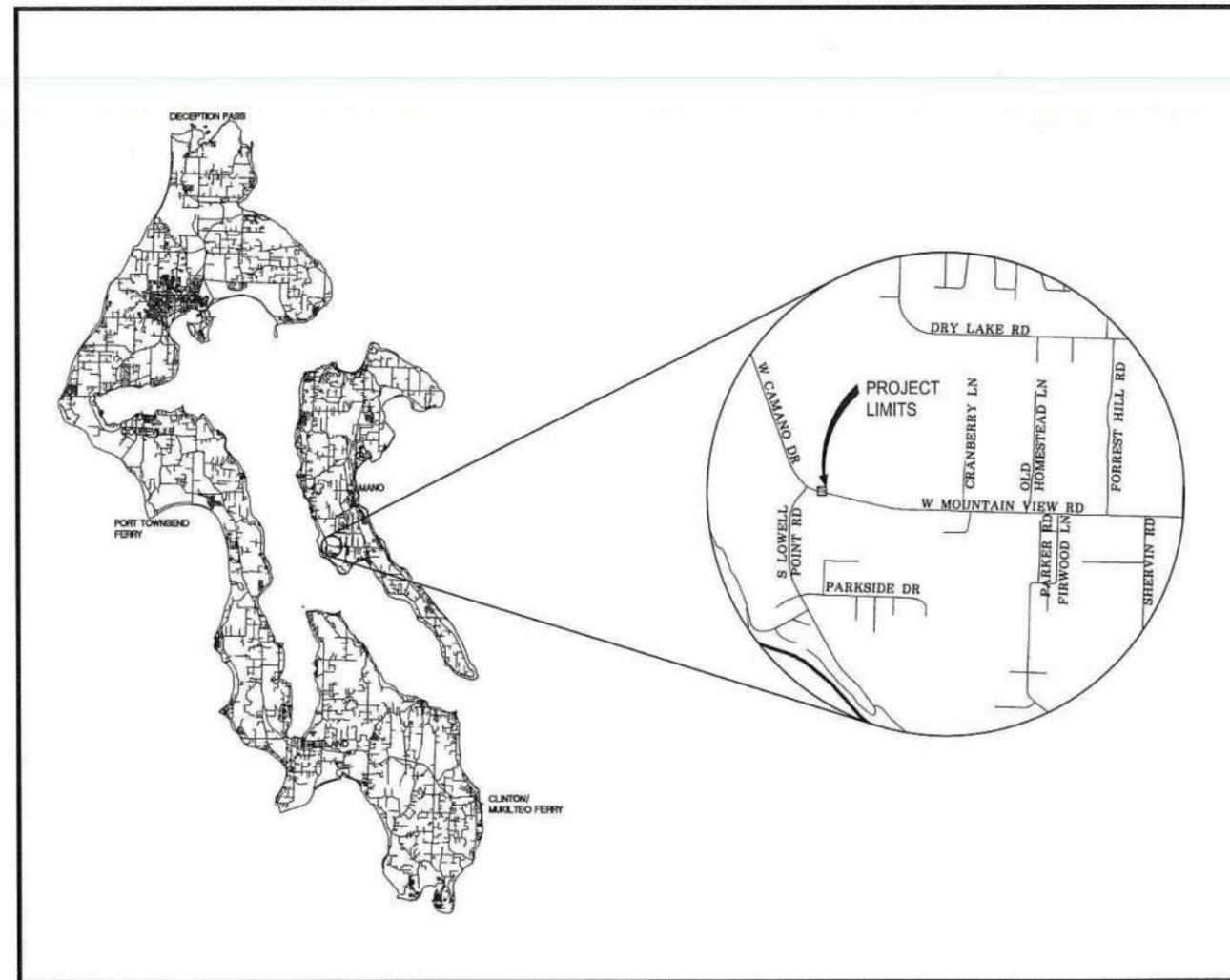
ISLAND COUNTY GOVERNMENT CONTACTS

ISLAND COUNTY OFFICIALS:

- MELANIE BACON DISTRICT 1
- JILL JOHNSON DISTRICT 2
- JANET ST CLAIR DISTRICT 3

ISLAND COUNTY PUBLIC WORKS DEPARTMENT:

- ED SEWESTER, P.E. COUNTY ENGINEER
- NICK TUTTLE ENGINEERING MANAGER



SHEET SERIES INDEX

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RECOMENDED FOR APPROVAL / APPROVED FOR CONSTRUCTION

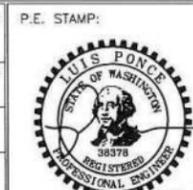
Nick Tuttle
NICK TUTTLE
ENGINEERING MANAGER

Ed Sewester
ED SEWESTER, P.E.
COUNTY ENGINEER



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SURVEYED BY: ISLAND COUNTY		DATE STARTED: 01/28/21
DRAWN BY: EJV/LMH		DATE STARTED: 03/05/2021
DESIGNED BY: ERIC VAVRA	INITIAL EJV	DATE 12/1/22
CHECKED BY: LUIS PONCE	INITIAL LP	DATE 12/1/22



DATE	REVISIONS	BY

R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687
DWG 19022.1 PLOT

BID SET

SCALE: H: N/A
V: N/A



SECT. 25, TWP. 31N., R. 2E. W.M.
JL No. 00601-0801 R&E No. 19022.1

MOUNTAIN VIEW CULVERT
1348 REPLACEMENT PROJECT

COVER

1
OF
5

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LEGEND

EXISTING		PROPOSED	
---TB---	= EXISTING TOP OF BANK	---	= PROPOSED PERMANENT DRAINAGE EASEMENT
---BB---	= EXISTING BOTTOM OF BANK	---	= PROPOSED ROAD CL
---95---	= EXISTING MAJOR CONTOUR	---	= PROPOSED SILT FENCE
---94---	= EXISTING MINOR CONTOUR	---	= PROPOSED TREE/SHRUB LINE
///	= EXISTING GRAVEL	---	= PROPOSED CLEARING AND GRUBBING LIMITS
---	= EXISTING PROPERTY BOUNDARY	---	= PROPOSED CULVERT
---	= EXISTING RIGHT OF WAY		
---	= EXISTING RIGHT OF WAY CL		
---	= EXISTING SECTION LINE		
---	= EXISTING ROAD CL		
---	= EXISTING WETLANDS BOUNDARY		
---	= EXISTING STREAM		
---	= EXISTING STRIPE		
---	= EXISTING EDGE OF PAVEMENT		
---OHP---	= EXISTING OVERHEAD POWER		
---W---	= EXISTING WATER MAIN		
---	= EXISTING CULVERT		
---	= EXISTING TREE LINE		
---	= EXISTING WETLAND		

SYMBOLS

EXISTING	PROPOSED
MB	●
⊕	= SETTLEMENT MONITORING POINT
✱	
⊙	
⊖	
⊕	
⊙	
⊙	

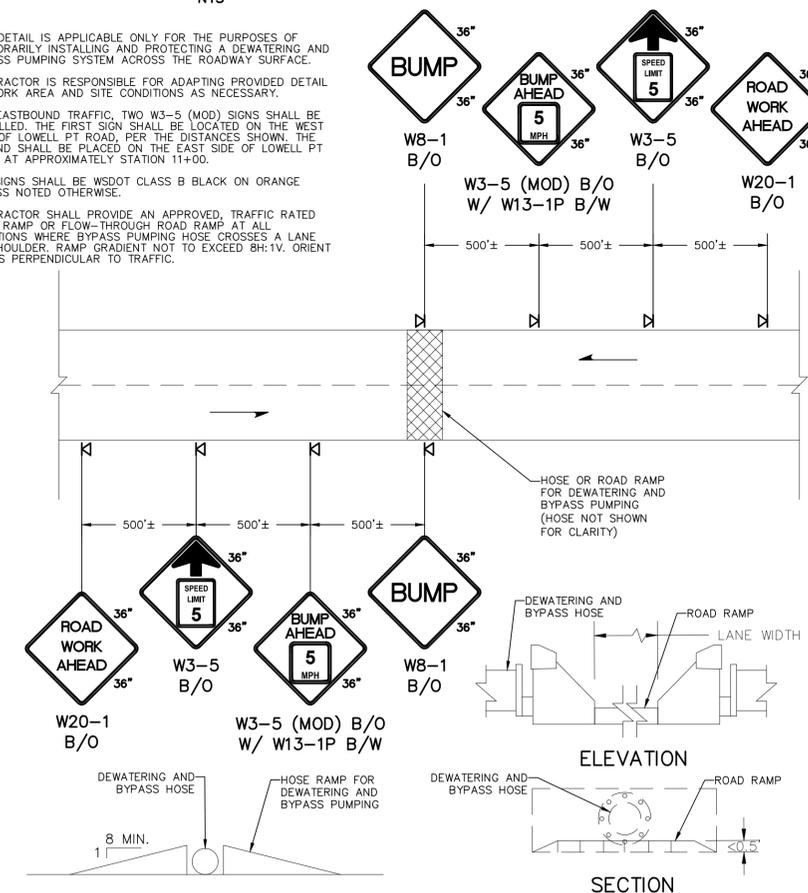
ABBREVIATIONS

CL	= CENTERLINE
CONC	= CONCRETE
CULV	= CULVERT
DIA	= DIAMETER
EX, EXIST	= EXISTING
FT/FT	= FEET PER FOOT
IE, INV	= INVERT ELEVATION
LF	= LINEAR FEET
MIN	= MINIMUM
NE	= NORTHEAST
NW	= NORTHWEST
NTS	= NOT TO SCALE
PP	= POWER POLE
PVC	= POLYVINYL CHLORIDE
STA	= STATION
STD	= STANDARD
SW	= SOUTHWEST
TESC	= TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	= TYPICAL
W	= WEST
WSDOT	= WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

BUMP AHEAD SIGNAGE FOR HOSE RAMP

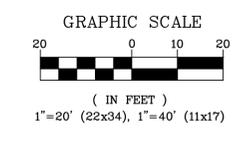
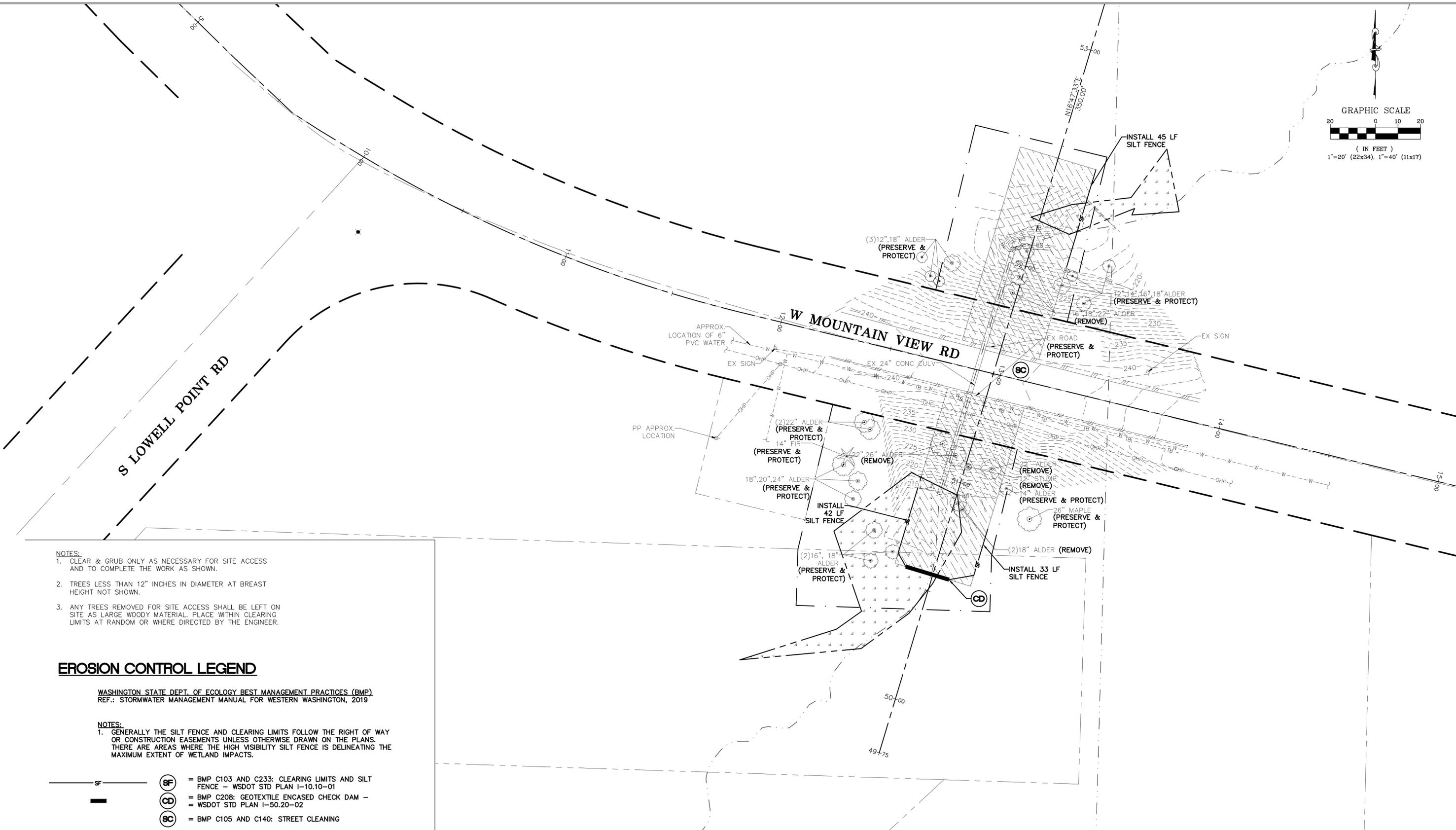
NOTES:

- THIS DETAIL IS APPLICABLE ONLY FOR THE PURPOSES OF TEMPORARILY INSTALLING AND PROTECTING A DEWATERING AND BYPASS PUMPING SYSTEM ACROSS THE ROADWAY SURFACE.
- CONTRACTOR IS RESPONSIBLE FOR ADAPTING PROVIDED DETAIL TO WORK AREA AND SITE CONDITIONS AS NECESSARY.
- FOR EASTBOUND TRAFFIC, TWO W3-5 (MOD) SIGNS SHALL BE INSTALLED. THE FIRST SIGN SHALL BE LOCATED ON THE WEST SIDE OF LOWELL PT ROAD, PER THE DISTANCES SHOWN. THE SECOND SHALL BE PLACED ON THE EAST SIDE OF LOWELL PT ROAD AT APPROXIMATELY STATION 11+00.
- ALL SIGNS SHALL BE WSDOT CLASS B BLACK ON ORANGE UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL PROVIDE AN APPROVED, TRAFFIC RATED HOSE RAMP OR FLOW-THROUGH ROAD RAMP AT ALL LOCATIONS WHERE BYPASS PUMPING HOSE CROSSES A LANE OR SHOULDER. RAMP GRADIENT NOT TO EXCEED 8% TV. ORIENT RAMPS PERPENDICULAR TO TRAFFIC.



TYPICAL HOSE RAMP DETAIL TYPICAL ROAD RAMP DETAIL

<p>Office of the ISLAND COUNTY ENGINEER 1 NE 6th Street Coupeville, WA 98239-5000 T. 360-679-7331 F. 360-678-4550</p>	SURVEYED BY: ISLAND COUNTY COMPANY NAME DATE STARTED: 01/28/21	P.E. STAMP: 	SCALE: H: N/A V: N/A	SECT. 25, TWP. 31N., R. 2E. W.M. JL No. 00601-0801 R&E No. 19022.1 MOUNTAIN VIEW CULVERT 1348 REPLACEMENT PROJECT LEGEND AND ABBREVIATIONS	2 OF 5
	DRAWN BY: EJV/LMH DATE STARTED: 03/05/2021	DESIGNED BY: ERIC VAVRA INITIAL DATE EJV 12/1/22			
DATE REVISIONS BY					



- NOTES:**
1. CLEAR & GRUB ONLY AS NECESSARY FOR SITE ACCESS AND TO COMPLETE THE WORK AS SHOWN.
 2. TREES LESS THAN 12" INCHES IN DIAMETER AT BREST HEIGHT NOT SHOWN.
 3. ANY TREES REMOVED FOR SITE ACCESS SHALL BE LEFT ON SITE AS LARGE WOODY MATERIAL. PLACE WITHIN CLEARING LIMITS AT RANDOM OR WHERE DIRECTED BY THE ENGINEER.

EROSION CONTROL LEGEND

WASHINGTON STATE DEPT. OF ECOLOGY BEST MANAGEMENT PRACTICES (BMP)
REF.: STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, 2019

- NOTES:**
1. GENERALLY THE SILT FENCE AND CLEARING LIMITS FOLLOW THE RIGHT OF WAY OR CONSTRUCTION EASEMENTS UNLESS OTHERWISE DRAWN ON THE PLANS. THERE ARE AREAS WHERE THE HIGH VISIBILITY SILT FENCE IS DELINEATING THE MAXIMUM EXTENT OF WETLAND IMPACTS.

- = BMP C103 AND C233: CLEARING LIMITS AND SILT FENCE - WSDOT STD PLAN I-10.10-01
- = BMP C208: GEOTEXTILE ENCASED CHECK DAM - WSDOT STD PLAN I-50.20-02
- = BMP C105 AND C140: STREET CLEANING

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**MOUNTAIN VIEW CULVERT
1348 REPLACEMENT PROJECT**

EXISTING CONDITIONS, TESC AND DEMO

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BUFFER RESTORATION PLANTING TABLE					
PLANT TYPE	SCIENTIFIC NAME	COMMON NAME	SIZE OF PLANT	PLANT SPACING	PLANT QUANTITY (EA)
TREES	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	1 GALLON	10' ON CENTER	20
	THUJA PLICATA	WESTERN RED CEDAR	1 GALLON	10' ON CENTER	20
	ACER MACROPHYLLUM	BIG LEAF MAPLE	1 GALLON	10' ON CENTER	23
SHRUBS	SYMPHORICARPOS ALBUS	SNOWBERRY	1 GALLON	4' ON CENTER	82
	RUBUS SPECTABILIS	SALMONBERRY	1 GALLON	4' ON CENTER	82
	OEMLERIA CERASIFORMIS	INDIAN PLUM	1 GALLON	4' ON CENTER	82
	ROSA NUTKANA	NOOTKA ROSE	1 GALLON	4' ON CENTER	82

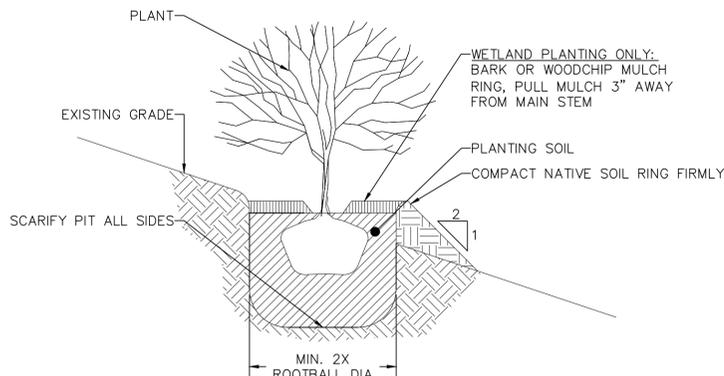
WETLAND RESTORATION PLANTING TABLE				
SCIENTIFIC NAME	COMMON NAME	SIZE OF PLANT	PLANT SPACING	PLANT QUANTITY (EA)
RUBUS SPECTABILIS	SALMONBERRY	1 GALLON	4' ON CENTER	19
CAREX OBNUPTA	SLOUGH SEDGE	BARE ROOT EMERGENT PLUGS/ 4" POTTED PLANTS	4' ON CENTER	19
LYSICHITON AMERICANUS	SKUNK CABBAGE	BARE ROOT EMERGENT PLUGS/ 4" POTTED PLANTS	4' ON CENTER	19

LEGEND

-  = BUFFER RESTORATION PLANTING (INCLUDING SEEDING AND MULCHING THE SHOULDERS AND SLOPES)
-  = WETLAND RESTORATION PLANTING
-  = THALWEG FILL AREA

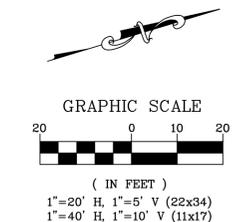
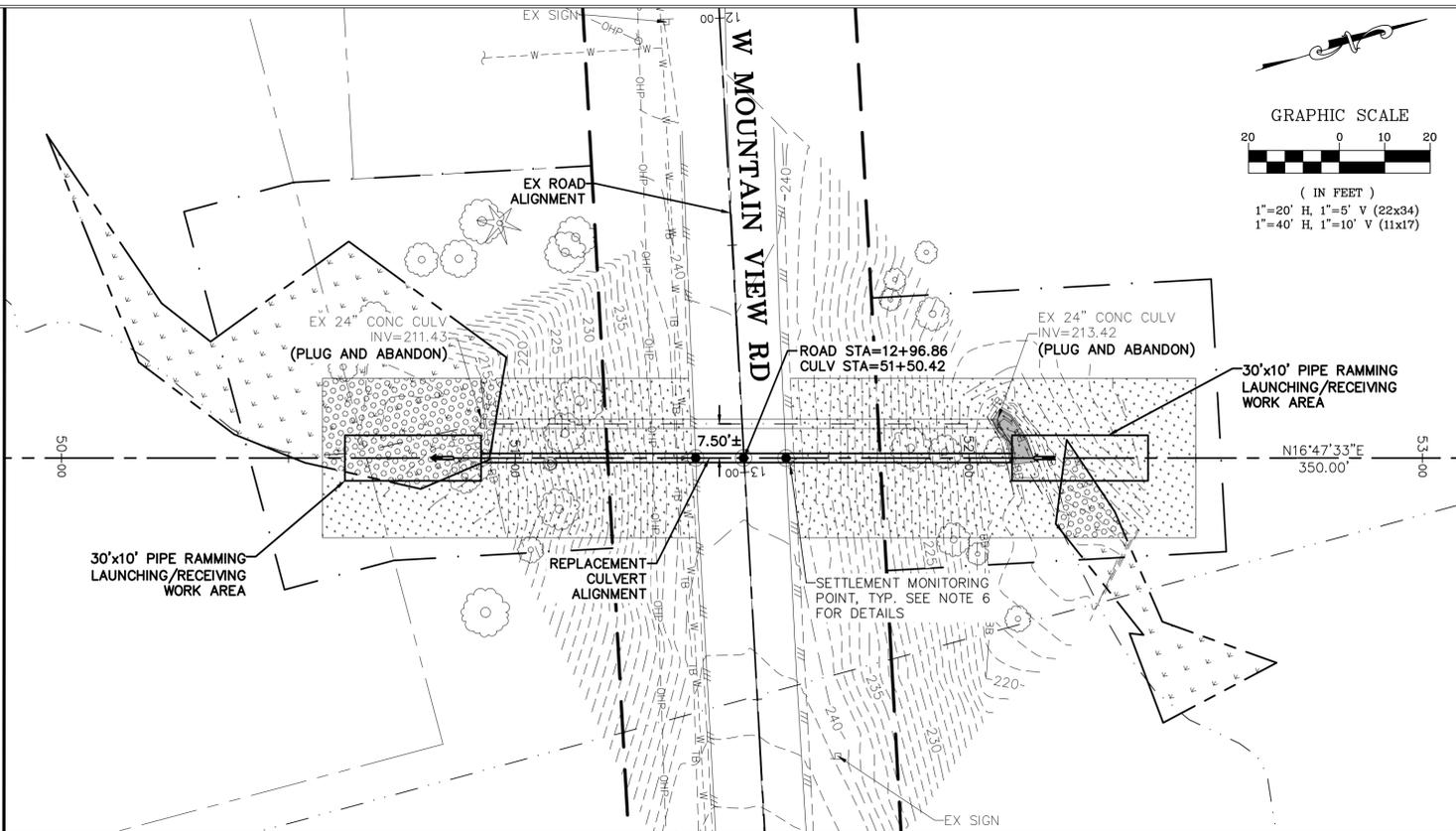
RESTORATION PLANTING NOTES:

- AFTER THE CULVERT HAS BEEN INSTALLED AND EXISTING GRADES RESTORED, THE FINAL DISTURBANCE AREA WILL BE ASSESSED TO IDENTIFY THE QUANTITIES OF EACH TYPE OF VEGETATION NEEDED FOR SITE RESTORATION. FOR EXAMPLE, IF TREES THAT REMAIN PROVIDE ADEQUATE COVER, THE TOTAL QUANTITY OF TREES SPECIFIED IN THE TABLE MAY NOT BE REQUIRED. QUANTITIES LISTED IN THE TABLES ARE THE MAXIMUM NEEDED FOR SITE RESTORATION BASED ON THE CLEARING AND GRUBBING LIMITS SHOWN AND SHOULD BE USED FOR BIDDING PURPOSES.
- THE AREAS TO BE REPLANTED SHOULD BE PREPARED BY REMOVING ALL MANMADE DEBRIS, AND ENSURING THE SOILS ARE NOT COMPACTED AFTER EXISTING GRADES ARE RE-ESTABLISHED.
- PLANTING SHOULD OCCUR FROM OCTOBER TO EARLY MARCH WHEN THE GROUND IS NOT FROZEN.
- PLANT SPECIES SHOULD BE RANDOMLY SPACED WITHIN THE FINAL DISTURBANCE AREA TO BE RESTORED USING THE ON-CENTER SPACING INDICATED IN THE TABLES.

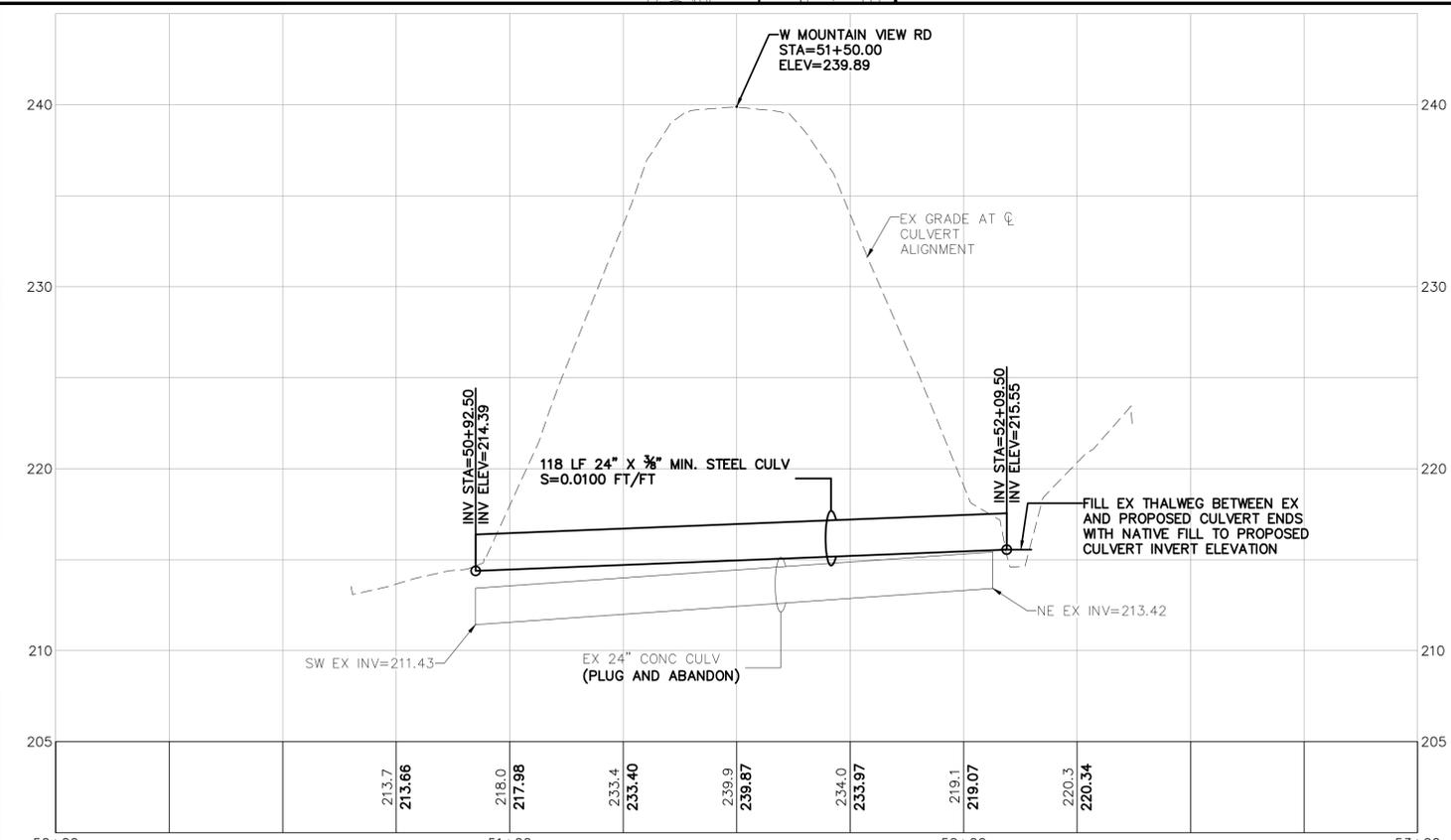


TREE/SHRUB PLANTING DETAIL

NTS



- NOTES:**
- RESTORE DISTURBED SHOULDERS AND SLOPES TO EXISTING LINE AND GRADE AND APPLY PERMANENT SEEDING AND MULCHING. FOLLOW RESTORATION PLAN, DETAILS THIS SHEET. LEAVE ANY REMOVED TREES AS LARGE WOODY MATERIAL AND PLACE AT RANDOM WITHIN CLEARING LIMITS OR WHERE DIRECTED BY THE ENGINEER. PLACEMENT SHALL NOT IMPED E STREAM FLOWS. TRIMMING, BUCKING, OR LIMBING OF REMOVED TREES IS NOT REQUIRED.
 - NO OPEN CUT TRENCHES ALLOWED.
 - GROUND WATER IS LIKELY TO BE ENCOUNTERED. SEE GEOTECHNICAL ENGINEERING SERVICES REPORT FOR ANTICIPATED GROUNDWATER ELEVATIONS.
 - CONTRACTOR SHALL BE PREPARED TO DEWATER AND BYPASS PUMP SURFACE AND STREAM WATER TO PROTECT WORK AREA AND PREVENT UPSTREAM FLOODING. SEE PROJECT SPECIFICATIONS FOR DEWATERING AND BYPASS PUMPING REQUIREMENTS.
 - CONTRACTOR SHALL COORDINATE ANY ANTICIPATED OVERHEAD POWER CONFLICTS WITH UTILITY OWNER PRIOR TO SITE MOBILIZATION.
 - CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A PRE-CONSTRUCTION AND POST-CONSTRUCTION SURVEY OF THE EXISTING PAVEMENT SURFACE ALONG THE PROPOSED CULVERT. MONITORING POINTS SHALL BE ESTABLISHED APPROXIMATELY WHERE SHOWN AND SURVEYED PER THE FOLLOWING SCHEDULE AND AS DIRECTED BY THE ENGINEER:
 - PRIOR TO CULVERT INSTALLATION (BASELINE)
 - ONCE PER DAY DURING PIPE RAMMING OPERATIONS
 - ONCE PER DAY FOR 1 WEEK AFTER PIPE RAMMING OPERATIONS ARE COMPLETE
 - IF TOTAL MEASURED SETTLEMENT AT ANY MONITORING POINT IS GREATER THAN 1/2", PIPE RAMMING OPERATIONS SHALL BE STOPPED AND THE SETTLEMENT REPORTED TO THE ENGINEER. OPERATIONS SHALL NOT RESUME WITHOUT APPROVAL FROM THE ENGINEER.
 - ACTUAL PIPE THICKNESS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. SEE PROJECT SPECIFICATIONS FOR THIS AND OTHER PIPE RAMMING PLAN REQUIREMENTS.



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V: 1"=5'

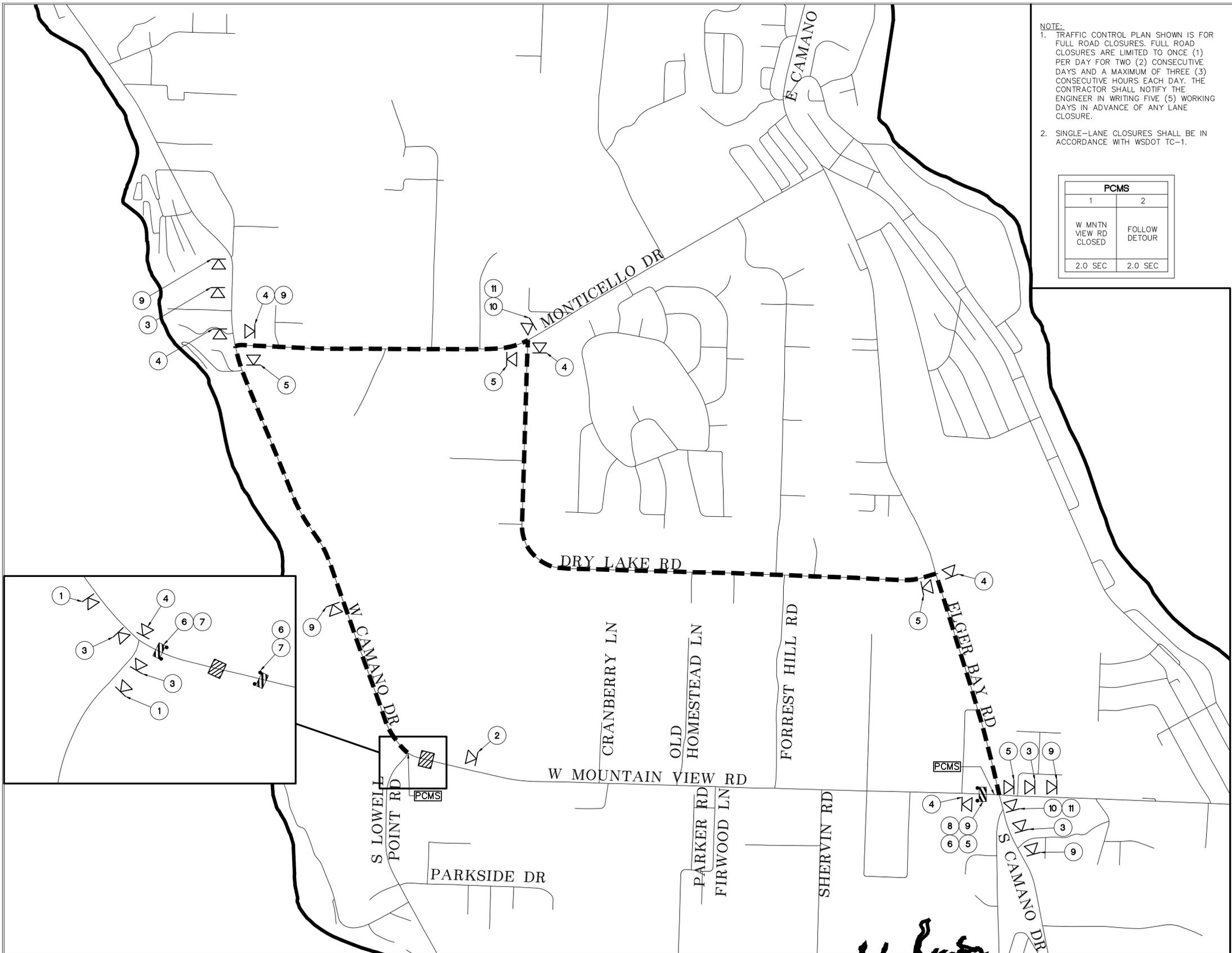


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MOUNTAIN VIEW CULVERT
1348 REPLACEMENT PROJECT

PLAN AND PROFILE

4 OF 5



NOTE:
 1. TRAFFIC CONTROL PLAN SHOWN IS FOR FULL ROAD CLOSURES. FULL ROAD CLOSURES ARE LIMITED TO ONCE (1) PER DAY FOR TWO (2) CONSECUTIVE DAYS AND A MAXIMUM OF THREE (3) CONSECUTIVE HOURS EACH DAY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING FIVE (5) WORKING DAYS IN ADVANCE OF ANY LANE CLOSURE.
 2. SINGLE-LANE CLOSURES SHALL BE IN ACCORDANCE WITH WSDOT TC-1.

PCMS	
1	2
W MNTN VIEW RD CLOSED	FOLLOW DETOUR
2.0 SEC	2.0 SEC

LEGEND

- = SIGN (SHOWN FACING LEFT)
- = PORTABLE CHANGEABLE MESSAGE SIGN
- = PROPOSED WORK AREA
- = PROPOSED DETOUR PATH

<p>1 W20-3 B/O</p> <p>2 W20-3a B/O</p> <p>3 W20-2 B/O</p> <p>4 M4-9L B/O</p> <p>5 M4-9R B/O</p> <p>6 </p>	<p>7 R11-2 B/W</p> <p>8 R11-3A B/W</p> <p>9 R11-3A (MOD) B/W</p> <p>10 D3-1</p> <p>11 M4-8 B/O</p> <p> PLACE MNTN VIEW SIGN ABOVE, TYP.</p> <p></p>
--	--

NOTES:
 (1) EXAMPLE WITH MNTN VIEW RD SIGN

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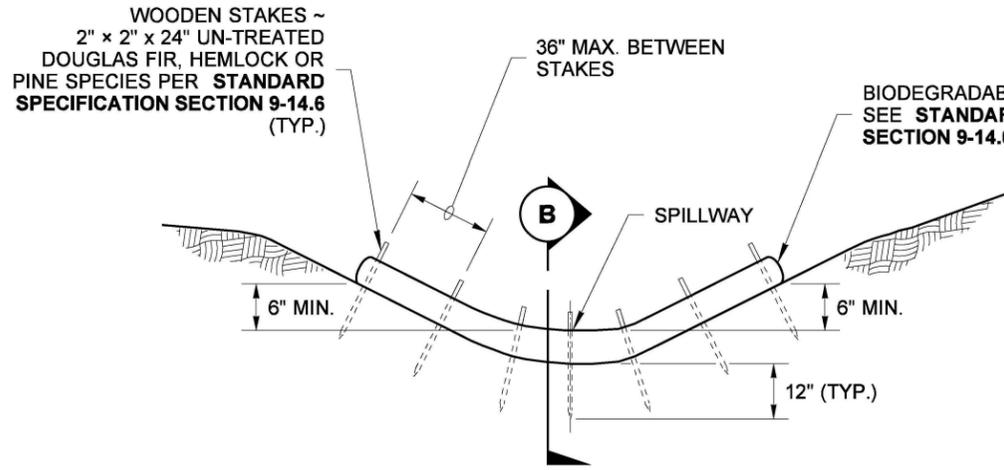
**MOUNTAIN VIEW CULVERT
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TRAFFIC DETOUR PLAN

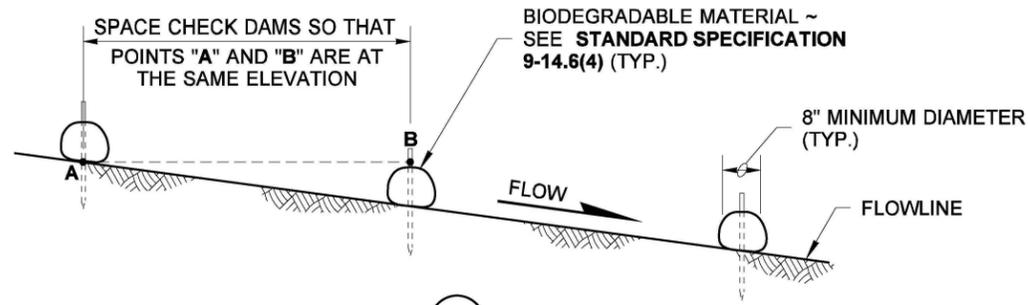
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APPENDIX D
APPLICABLE WSDOT STANDARD PLANS

DRAWN BY: FERN LIDDELL



TYPICAL CHANNEL SECTION



CHANNEL PROFILE ~ SECTION B

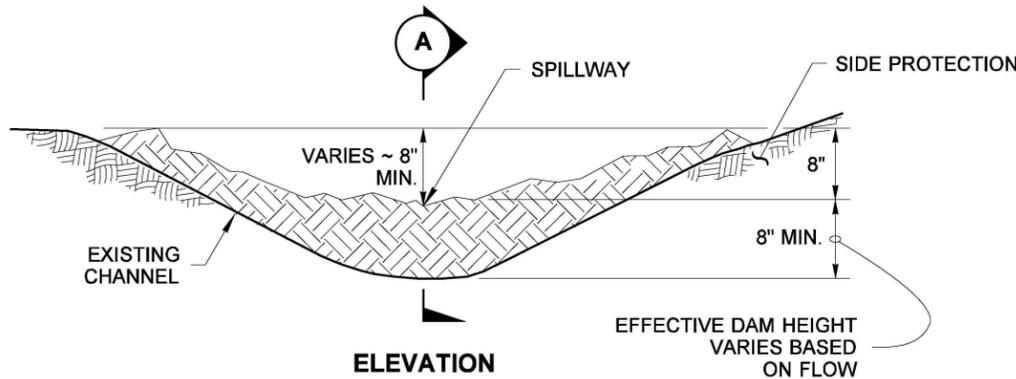
BIODEGRADABLE CHECK DAM

BIODEGRADABLE CHECK DAM NOTE

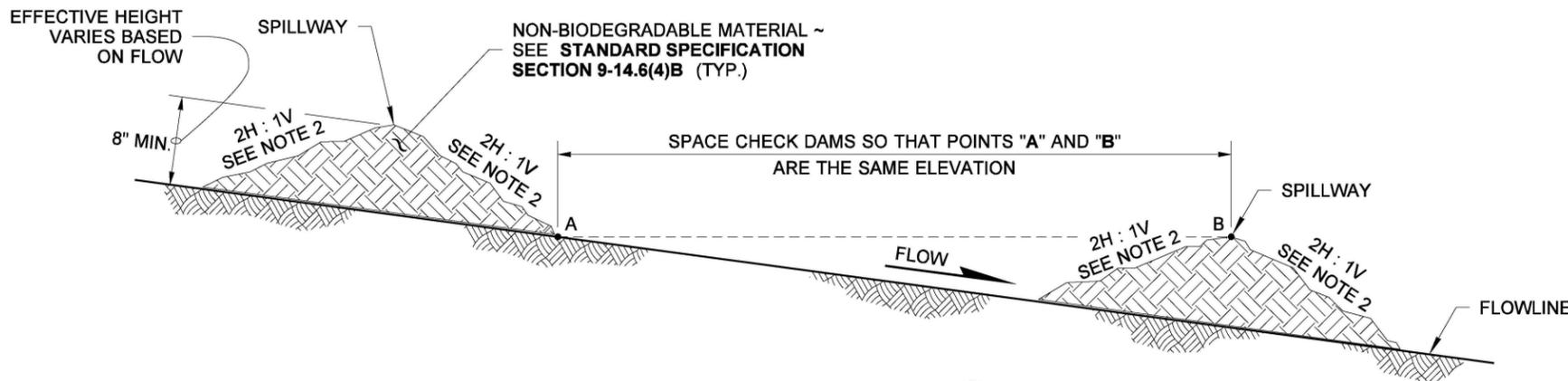
1. Biodegradable Check Dams may need additional or modified staking to prevent undercutting or scouring.

NON-BIODEGRADABLE CHECK DAM NOTES

1. Non-Biodegradable Manufactured Check Dam devices approved for use under **Standard Specification Section 9-14.6(4)B** shall be installed per manufacturer's recommendations and shall perform in accordance with **Standard Specification Section 8-01.3(6)**.
2. Rock Check Dams with slopes parallel to the roadway that are steeper than 10 H : 1 V shall be placed outside of the clear zone or behind traffic barrier.
3. To ensure adequate detention time, Rock Check Dams used as sediment control may need to be enhanced with plastic that meets the requirements of **Standard Specification Section 9-14.6(3)** or fabric that meets the geotextile requirements of **Standard Specification Section 9-33.2(1), Table 6**.



ELEVATION



EXTENDED SECTION A

NON-BIODEGRADABLE CHECK DAM

GENERAL NOTES

1. Check Dams shall meet the requirements of **Standard Specification Sections 8-01.3(6) and 9-14.6(4)**.
2. In channels, install the sloped ends of the Check Dam a minimum of 8" higher than the spillway to ensure water flows over the dam and not around it.
3. Perform maintenance in accordance with **Standard Specification Section 8-01.3(15)**.
4. Remove Check Dams in accordance with **Standard Specification Section 8-01.3(16)**.



Jul 6, 2022

CHECK DAMS ON CHANNELS

STANDARD PLAN I-50.20-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Mark Gaines
Mark Gaines (Jul 6, 2022 14:33 PDT)

Jul 6, 2022

STATE DESIGN ENGINEER



Washington State Department of Transportation

