

PORTAL WAY / I-5

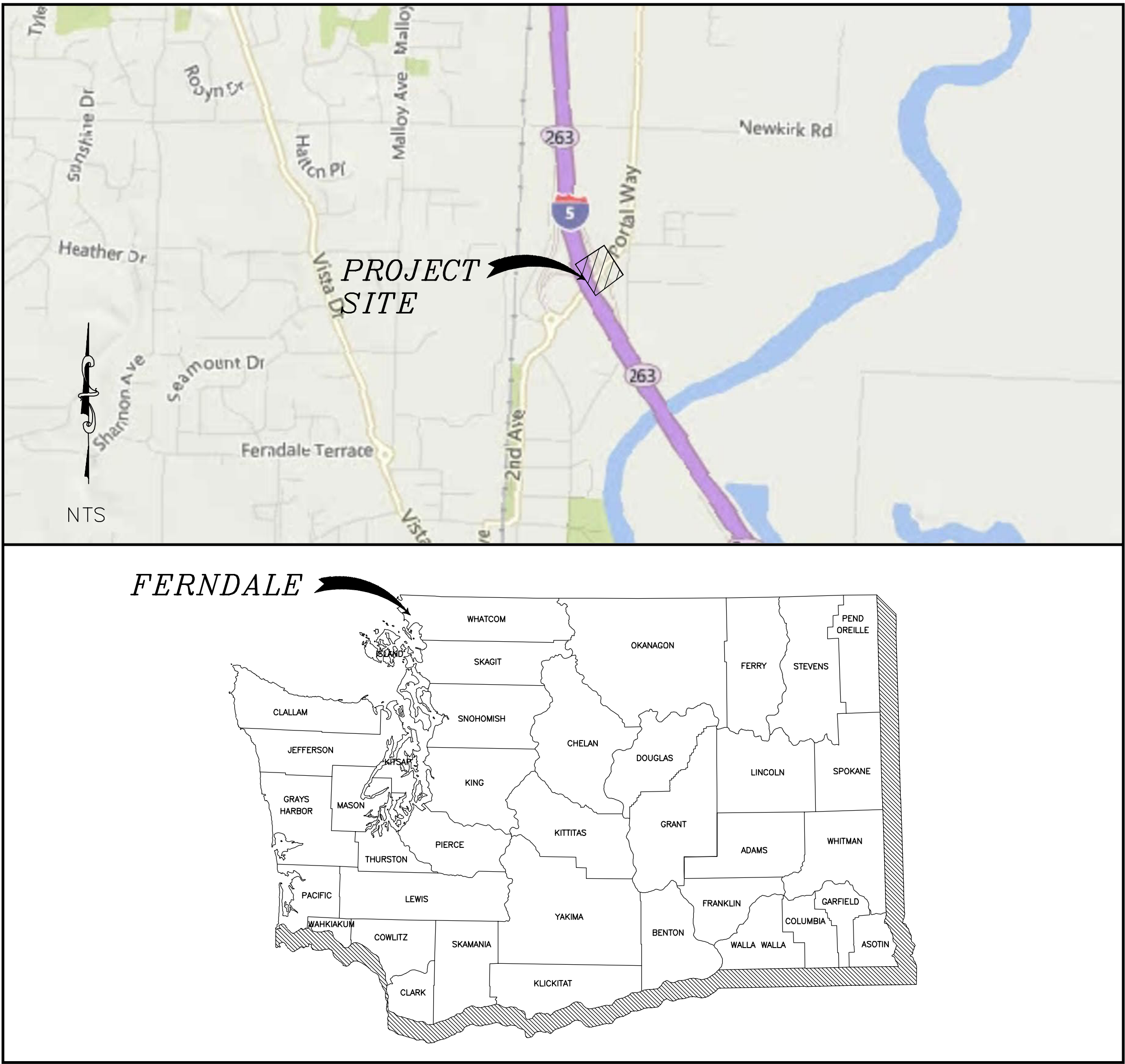
ROUNDAABOUT IMPROVEMENTS

FERNDALE, WA

PROJECT No. ST2016-03

VICINITY MAP

PROJECT LOCATED IN SECTION 20, TOWNSHIP 39N, RANGE 2E, W.M.



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SS2	SIGN SPECIFICATIONS
SN1	SIGNING PLAN
SN2	SIGNING PLAN
IL1	ILLUMINATION PLAN
IT1	ITS RELOCATION PLAN



CONSTRUCTION SET

DESIGNED BY
LP
DRAWN BY
RWG
CHECKED BY
LP

R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY	

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

PORTAL WAY / I-5
ROUNDAABOUT IMPROVEMENTS
COVER

DWG 16033 COVER

JOB#
16033

SCALE

H: N/A

V: N/A

DATE
4/5/2018
SHEET
1
of 20

Ø	= DIAMETER	EVCS	= END VERTICAL CURVE STATION	MOD	= MODIFIED	S	= SOUTH
AC	= ASBESTOS CEMENT	EX, EXIST	= EXISTING	MON	= MONUMENT	SCH	= SCHEDULE
AD	= ALGEBRAIC DIFFERENCE	IR	= EXISTING IRRIGATION	MPOC	= MID-POINT ON CURVE	SD	= STORM DRAIN
ASPH	= ASPHALT	F&C	= FRAME AND COVER	MTR	= METER	SDCB	= STORM DRAIN CATCH BASIN
BLDG	= BUILDING	F&G	= FRAME AND GRATE	MW	= MONITORING WELL	SDMH	= STORM DRAIN MANHOLE
BVCE	= BEGIN VERTICAL CURVE ELEVATION	FF	= FINISHED FLOOR	N	= NORTH	SE	= SOUTHEAST
BVCS	= BEGIN VERTICAL CURVE STATION	FG	= FINISHED GRADE	NE	= NORTHEAST	SN	= EXISTING SIGN
C&G	= CURB & GUTTER	FL	= FLOW LINE	NW	= NORTHWEST	SP	= STANDARD PLAN
CATV	= CABLE TELEVISION	FT	= FEET	OC	= ON CENTER	SSMH	= SANITARY SEWER MANHOLE
CDF	= CONTROLLED DENSITY FILL	FT/FT	= FEET PER FOOT	PWMT	= PAVEMENT	STA	= STATION
℄	= CLASS, CENTERLINE	GALV	= GALVANIZED	PC	= POINT OF CURVATURE	STD	= STANDARD
CMP	= CORRUGATED METAL PIPE	GRVL	= GRAVEL	PCC	= POINT OF COMPOUND CURVATURE, SW	SW	= SOUTHWEST
CMU	= CONCRETE MASONRY UNIT	GV	= GATE VALVE		= PORTLAND CEMENT CONCRETE	TEL	= TELEPHONE
COMP	= COMPACTED	HDPE	= HIGH DENSITY POLYETHYLENE	PED	= PEDESTAL	TL	= TRAFFIC LOOP
CON	= CONIFER	HMA	= HOT MIX ASPHALT	POC	= POINT ON CURVE	TYL	= TYPICAL
CONC	= CONCRETE	HP	= HIGH POINT	POSS	= POSSIBLE	UP	= UTILITY POLE
CONT	= CONTOUR	HYD	= HYDRANT	PRC	= POINT OF REVERSE CURVE	UTIL	= UTILITY
CPSSP	= CORRUGATED POLYETHYLENE STORM SEWER PIPE	IE, INV	= INVERT ELEVATION	PROP	= PROPOSED	VC	= VERTICAL CURVE
		IW	= INJECTION WELL	PT	= POINT OF TANGENCY	VL	= VAULT
CULV	= CULVERT	L	= LENGTH	PVC	= POLYVINYL CHLORIDE	VPC	= VERTICAL POINT OF CURVATURE
D/W	= DRIVEWAY	LDGS	= LANDSCAPING	PVI	= POINT OF VERTICAL INTERSECTION	VPT	= VERTICAL POINT OF INTERSECTION
DEC	= DECIDUOUS	LF	= LINE FEET	PWR	= POWER	W	= WEST
DI	= DUCTILE IRON	LOC	= LOCATION	R	= RADIUS	WM	= WATER METER
E	= EAST	LP	= LOW POINT	R&C	= RING AND COVER	WMT	= WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
EOP, EP	= EDGE OF PAVEMENT	LT	= LEFT	RET	= RETAINING	WSDOT	
EQUIV	= EQUIVALENT	MAX	= MAXIMUM	ROW	= RIGHT OF WAY		
EVCE	= END VERTICAL CURVE ELEVATION	MIN	= MINIMUM	RT	= RIGHT	XEOA	= EXISTING EDGE OF ASPHALT

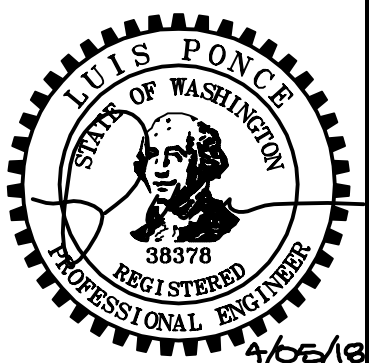
1. FIELD WORK PERFORMED BY LARRY STEELE AND ASSOCIATES, INC., BELLINGHAM, WA. TOPOGRAPHIC SURVEY PERFORMED IN JULY, 2016.
2. HORIZONTAL DATUM: BASIS OF BEARING IS NAD 83/11, WASHINGTON STATE PLANE NORTH ZONE, DERIVED FROM CONVENTIONAL SURVEY METHOD TIED TO WSDOT SURVEY CONTROL POINTS GP29020-55 AND W327, VERTICAL DATUM: NAVD 88 HOLDING THE PUBLISHED ELEVATION FROM WSDOT SURVEY CONTROL POINT GP29020-55

EXISTING

TB	= EXISTING TOP OF BANK
BB	= EXISTING BOTTOM OF BANK
DITCH	= EXISTING DITCH ☞
GRADE BREAK	= EXISTING GRADE BREAK
95	= EXISTING MAJOR CONTOUR
95	= EXISTING MINOR CONTOUR
GUARDRAIL	= EXISTING GUARDRAIL
FENCE	= EXISTING FENCE
GRAVEL	= EXISTING GRAVEL
WALL	= EXISTING WALL
BUILDING	= EXISTING BUILDING
PROPERTY BOUNDARY	= EXISTING PROPERTY BOUNDARY
RIGHT OF WAY	= EXISTING RIGHT OF WAY
RIGHT OF WAY ☞	= EXISTING RIGHT OF WAY ☞
EASEMENT	= EXISTING EASEMENT
ROAD ☞	= EXISTING ROAD ☞
WETLANDS BOUNDARY	= EXISTING WETLANDS BOUNDARY
TRAFFIC STRIPING	= EXISTING TRAFFIC STRIPING
EDGE OF PAVEMENT	= EXISTING EDGE OF PAVEMENT
FLOWLINE	= EXISTING FLOWLINE
TOP BACK OF CURB	= EXISTING TOP BACK OF CURB
SIDEWALK	= EXISTING SIDEWALK
POWER BURIED	= EXISTING POWER BURIED
OHP	= EXISTING OVERHEAD POWER
UGC	= EXISTING COMMUNICATIONS BURIED
OHC	= EXISTING OVERHEAD COMMUNICATIONS
FO	= EXISTING FIBER OPTICS BURIED
TV	= EXISTING TV BURIED
T	= EXISTING TELEPHONE BURIED
C	= EXISTING CONDUIT
G	= EXISTING GAS MAIN
W	= EXISTING WATER MAIN
IRR	= EXISTING IRRIGATION LINE
FM	= EXISTING SANITARY SEWER FORCE MAIN
SS	= EXISTING SANITARY SEWER
SD	= EXISTING STORM DRAIN
OHW	= EXISTING ORDINARY HIGH WATER
CULVERT	= EXISTING CULVERT
TREE LINE	= EXISTING TREE LINE
CONCRETE	= EXISTING CONCRETE
RR TRACKS	= EXISTING RR TRACKS
SIGNAL POLE	= EXISTING SIGNAL POLE
SIGNAL POLE W/ LUMINAIRE	= EXISTING SIGNAL POLE W/ LUMINAIRE
STREET LIGHT ASSEMBLY	= EXISTING STREET LIGHT ASSEMBLY
YARD LIGHT	= EXISTING YARD LIGHT
GUY WIRE	= EXISTING GUY WIRE
GAS METER	= EXISTING GAS METER
GAS VALVE	= EXISTING GAS VALVE
TRANSFORMER PAD	= EXISTING TRANSFORMER PAD
POWER VAULT	= EXISTING POWER VAULT
JBOX	= EXISTING JBOX
SOIL BORING LOCATION	= EXISTING SOIL BORING LOCATION
MAIL BOX	= EXISTING MAIL BOX
WATER SPIGOT	= EXISTING WATER SPIGOT
WATER BLOW OFF	= EXISTING WATER BLOW OFF
WATER METER	= EXISTING WATER METER
WATER VALVE	= EXISTING WATER VALVE
FIRE HYDRANT	= EXISTING FIRE HYDRANT
TRAFFIC SIGNAL VAULT	= EXISTING TRAFFIC SIGNAL VAULT
SEWER MANHOLE	= EXISTING SEWER MANHOLE
STORM DRAIN CATCH BASIN TYPE I	= EXISTING STORM DRAIN CATCH BASIN TYPE I
STORM DRAIN CATCH BASIN TYPE II	= EXISTING STORM DRAIN CATCH BASIN TYPE II
UTILITY POLE	= EXISTING UTILITY POLE
MONITORING WELL	= EXISTING MONITORING WELL
STORM CLEANOUT	= EXISTING STORM CLEANOUT
SEWER CLEANOUT	= EXISTING SEWER CLEANOUT
SIGN	= EXISTING SIGN
TELEPHONE PEDESTAL	= EXISTING TELEPHONE PEDESTAL
COMMUNICATIONS VAULT	= EXISTING COMMUNICATIONS VAULT
BENCH MARK	= EXISTING BENCH MARK
NAIL AND SHINER	= EXISTING NAIL AND SHINER
IRON PIPE	= EXISTING IRON PIPE
MONUMENT (IN CASE)	= EXISTING MONUMENT (IN CASE)
MONUMENT (SURFACE)	= EXISTING MONUMENT (SURFACE)
ANGLE POINT	= EXISTING ANGLE POINT
TREE STUMP	= EXISTING TREE STUMP
TREE	= EXISTING TREE
VEGETATION	= EXISTING VEGETATION

TB	= PROPOSED TOP OF BANK
BB	= PROPOSED TOE OF BANK
95	= PROPOSED DITCH ♿
95	= PROPOSED GRADE BREAK
X X X	= PROPOSED MAJOR CONTOUR
X X X	= PROPOSED MINOR CONTOUR
X X X	= PROPOSED GUARDRAIL
X X X	= PROPOSED FENCE
X X X	= PROPOSED GRAVEL
X X X	= PROPOSED WALL
X X X	= PROPOSED BUILDING
X X X	= PROPOSED PAVEMENT VALLEY
X X X	= PROPOSED RIGHT OF WAY
X X X	= PROPOSED AUTOTURN
X X X	= PROPOSED CONSTRUCTION EASEMENT
X X X	= PROPOSED ROAD ♿
X X X	= PROPOSED SAWCUT
X X X	= PROPOSED TRAFFIC STRIPE
X X X	= PROPOSED ROAD EDGE OF PAVEMENT
X X X	= PROPOSED CURB AND GUTTER
X X X	= PROPOSED PATH
X X X	= PROPOSED SIDEWALK
PR	= PROPOSED POWER LINE
X X X	= PROPOSED ROCK WALL
X X X	= PROPOSED PARKING STRIPE
TS	= PROPOSED TRAFFIC SIGNAL CONDUCTOR
FO	= PROPOSED FIBER OPTICS
X X X	= PROPOSED SILT FENCE
C	= PROPOSED CONDUIT
X X X	= PROPOSED HANDRAIL
IRR	= PROPOSED IRRIGATION LINE
W	= PROPOSED WATER MAIN
FM	= PROPOSED SANITARY SEWER FORCE MAIN
SS	= PROPOSED SANITARY SEWER
SD	= PROPOSED STORM DRAIN
X X X	= PROPOSED CULVERT
X X X	= PROPOSED TREE LINE
X X X	= PROPOSED CONC. SIDEWALK/DRIVEWAY
X X X	= PROPOSED INFILTRATION TRENCH
X X X	= PROPOSED INFILTRATION FILTER MEDIA
X X X	= PROPOSED GRIND
X X X	= PROPOSED DEMOLITION AREA
X X X	= PROPOSED ASPHALT
X X X	= PROPOSED RIGHT OF WAY TAKE
■	= PROPOSED STORM DRAIN INLET
■	= PROPOSED COUPLER
■	= PROPOSED WATER METER
⊗	= PROPOSED WATER VALVE
⊙	= PROPOSED STORM DRAIN CATCH BASIN
●	= PROPOSED SANITARY SEWER MANHOLE
⊕	= PROPOSED STORM DRAIN CATCH BASIN
⊖	= PROPOSED HYDRANT
⦶	= PROPOSED UTILITY POLE
□ □ □	= PROPOSED JBOX (TYPE I, II, III)
◇	= PROPOSED MONITORING WELL
◻	= PROP STORM CLEANOUT
◻	= PROPOSED SANITARY SEWER CLEAN OUT
♠	= PROPOSED SIGN
↔	= FLOW ARROW
⌚	= PROPOSED TREE

= SECTION MARK



DESIGNED BY	LP
DRAWN BY	RWG
CHECKED BY	LP

P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

PORTAL WAY / I-5 ROUNDBOUT IMPROVEMENTS LEGEND AND ABBREVIATIONS

DATE _____

4/5/2018

JOB#

16033

SCALE

H: N/A

SHEET 2

of 20

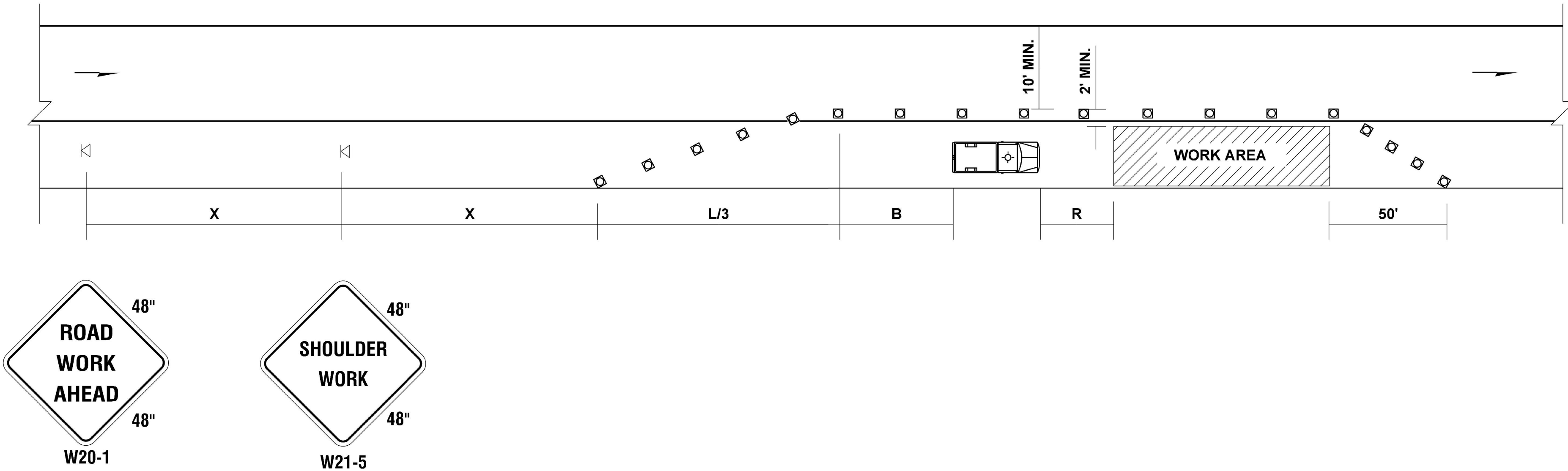
SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	-	-	-	-	-	-
10'	40	60	90	90	-	-	-	-	-	-
USE A 3 DEVICES TAPER FOR SHOULDERS LESS THEN 8'										

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/40	30	60
25/30	20	40

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 45 MPH	45-55 MPH	> 55 MPH		< 45 MPH	45-55 MPH		> 55 MPH			
100'	123'	172'		74'	100'		150'			
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

NOT TO SCALE



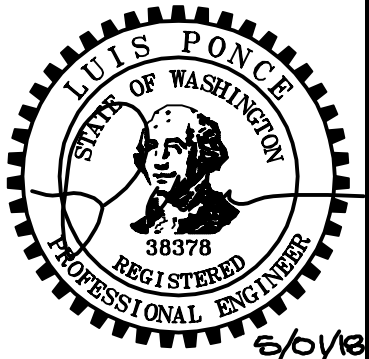
LEGEND

- ✕ SIGN LOCATION
- ▣ CHANNELIZING DEVICES – TRAFFIC SAFETY DRUMS. TYPE C STEADY BURN WARNING LIGHTS REQUIRED DURING HOURS OF DARKNESS.
- 🚗 PROTECTIVE VEHICLE

PHASE 1
SHOULDER WIDENING
SHOULDER CLOSURE - LOW SPEED
(40 MPH OR LESS)

NOT TO SCALE

- NOTES:
- DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
 - ALL SIGNS ARE BLACK ON ORANGE.



CONSTRUCTION SET

DESIGNED BY
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LP



**Reichhardt & Ebe
ENGINEERING INC**
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813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

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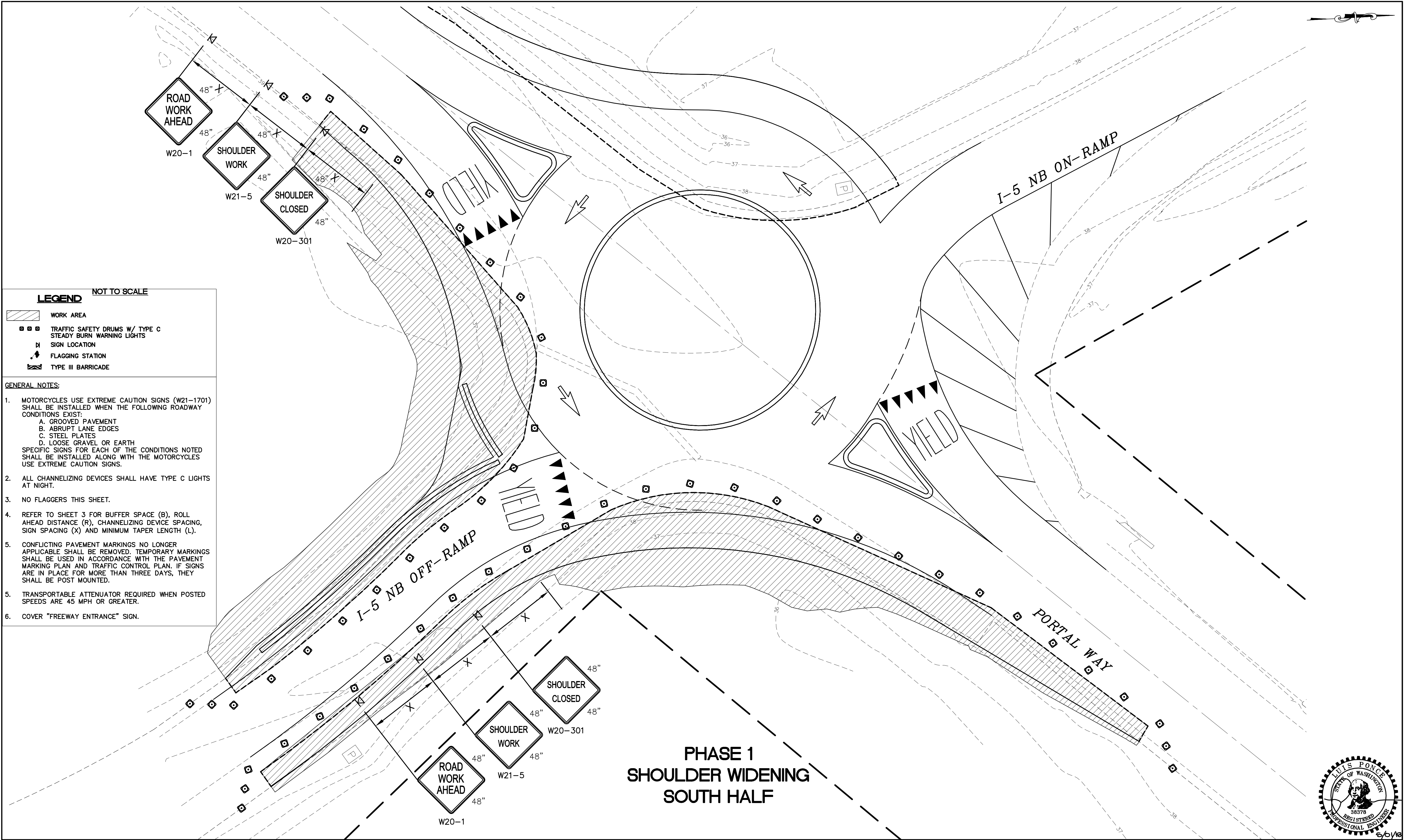
CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

PORTAL WAY / I-5
ROUNDAABOUT IMPROVEMENTS
WSDOT TYPICAL SHOULDER CLOSURE

DWG 16033 TC PLAN
JOB# 16033

SCALE
H: N/A V: N/A

DATE 5/1/2018
SHEET 3 of 20



CONSTRUCTION SET

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LP

R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
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2095 MAIN ST
FERNDAL, WA 98248

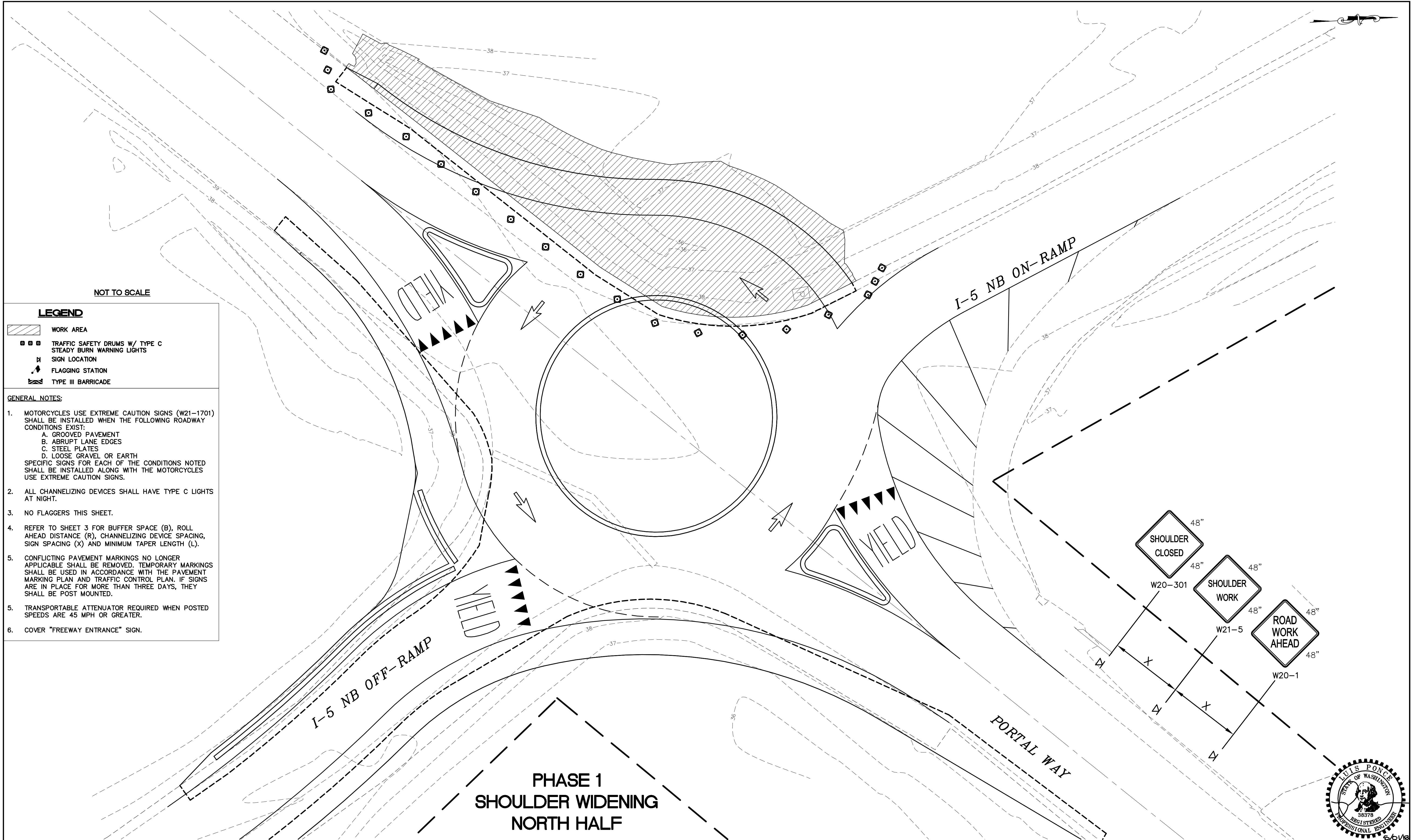
PORTAL WAY / I-5
ROUNDAOUT IMPROVEMENTS
I-5 EXIT 263 - NB RAMPS - S. SHOULDER CLOSURE

DWG 16033 TC PLAN
JOB# 16033

SCALE
H: N/A V: N/A

DATE 5/1/2018
SHEET 4
of 20





NOT TO SCALE

LEGEND

- WORK AREA
- TRAFFIC SAFETY DRUMS W/ TYPE C STEADY BURN WARNING LIGHTS
- SIGN LOCATION
- FLAGGING STATION
- TYPE III BARRICADE

GENERAL NOTES:

- MOTORCYCLES USE EXTREME CAUTION SIGNS (W21-1701) SHALL BE INSTALLED WHEN THE FOLLOWING ROADWAY CONDITIONS EXIST:
 - A. GROOVED PAVEMENT
 - B. ABRUPT LANE EDGES
 - C. STEEL PLATES
 - D. LOOSE GRAVEL OR EARTHSPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH THE MOTORCYCLES USE EXTREME CAUTION SIGNS.
- ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
- NO FLAGGERS THIS SHEET.
- REFER TO SHEET 3 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
- CONFLICTING PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED. TEMPORARY MARKINGS SHALL BE USED IN ACCORDANCE WITH THE PAVEMENT MARKING PLAN AND TRAFFIC CONTROL PLAN. IF SIGNS ARE IN PLACE FOR MORE THAN THREE DAYS, THEY SHALL BE POST MOUNTED.
- TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.
- COVER "FREEWAY ENTRANCE" SIGN.

CONSTRUCTION SET

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R&E Reichhardt & Ebe
ENGINEERING INC

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CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

PORTAL WAY / I-5
ROUNDAUT IMPROVEMENTS
I-5 EXIT 263 - NB RAMPS - N. SHOULDER CLOSURE

DWG 16033 TC PLAN

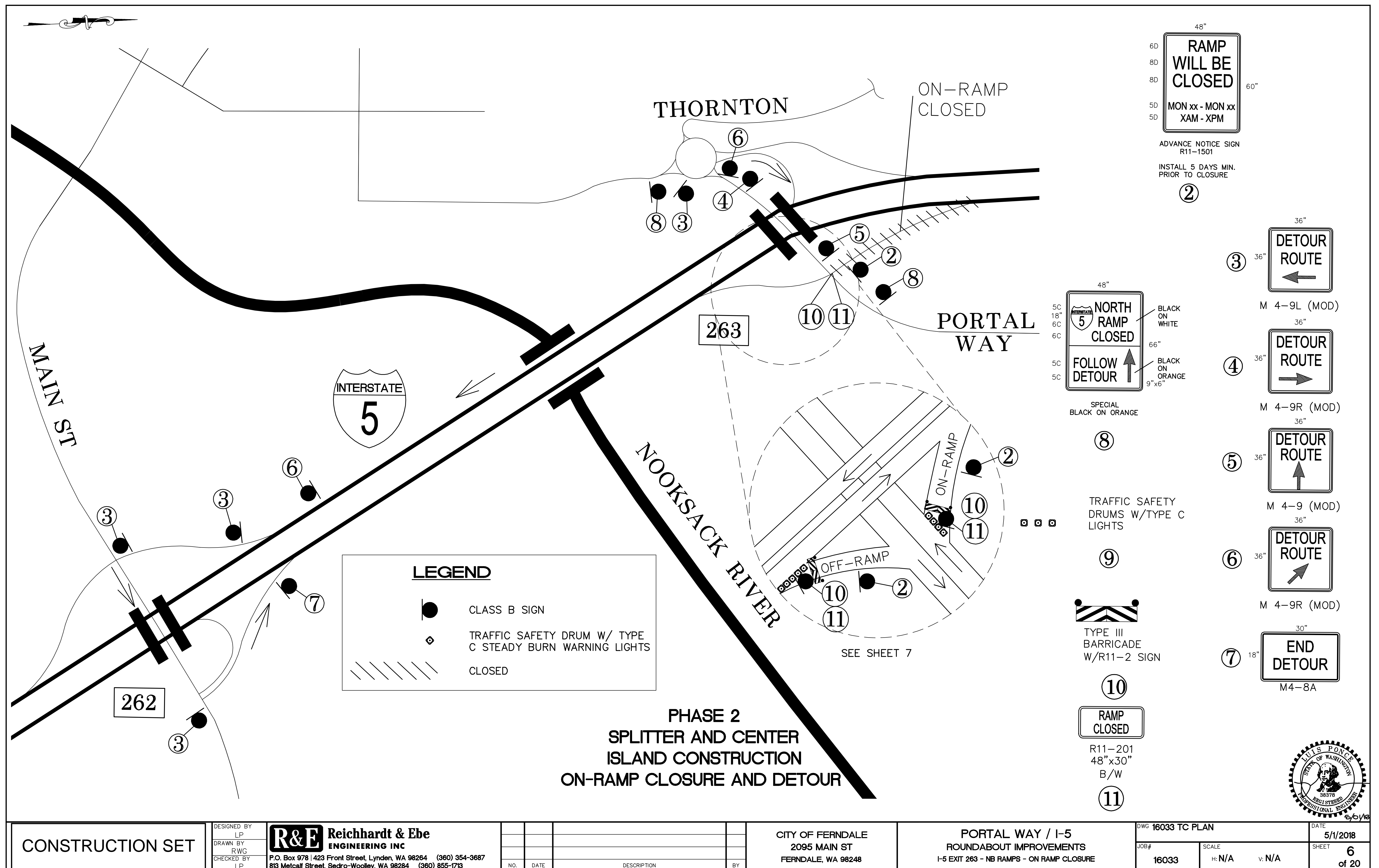
JOB#
16033

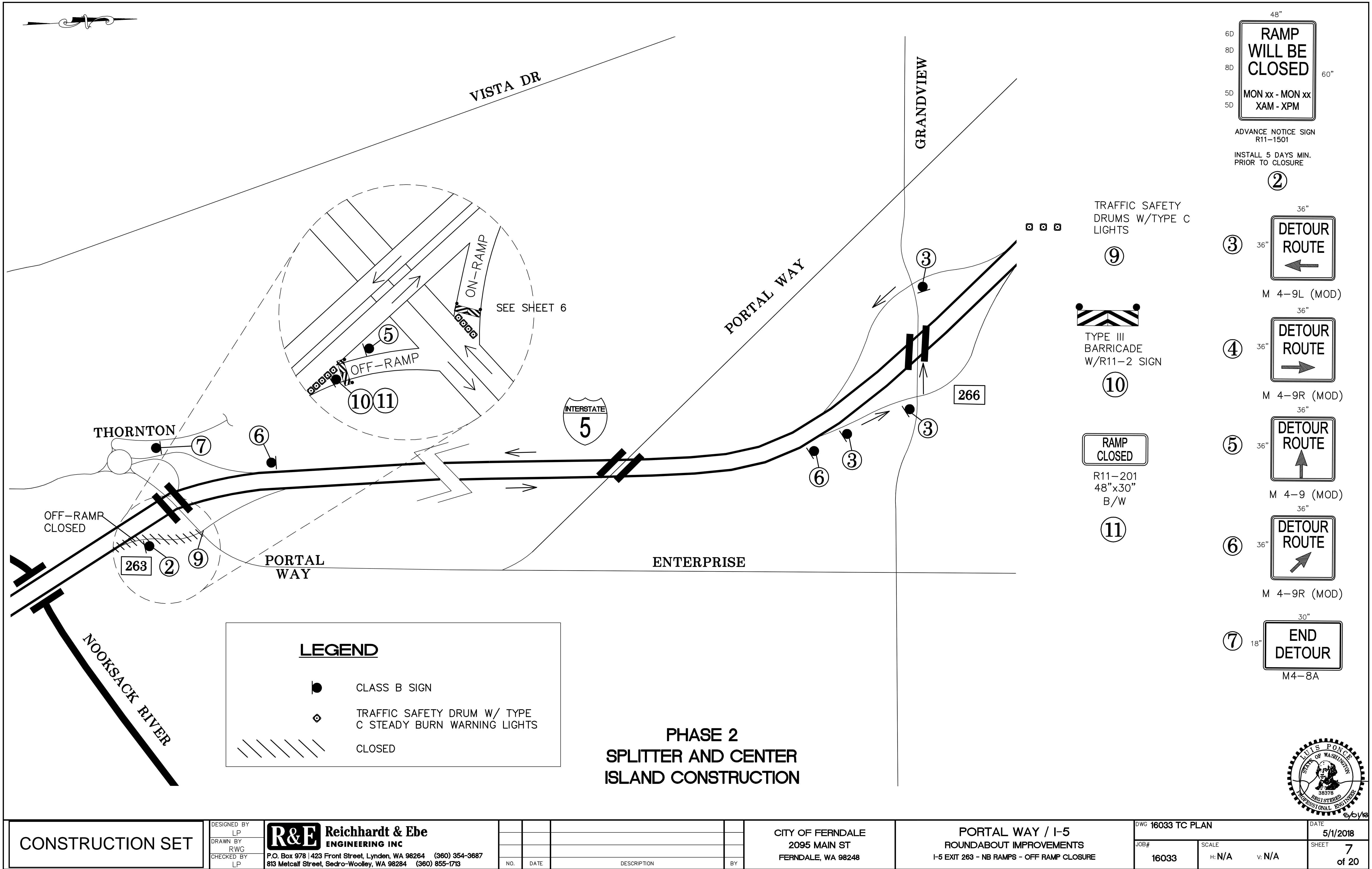
SCALE
H: N/A V: N/A

DATE
5/1/2018

SHEET
5
of 20







48"
60"
6D
8D
8D
5D
5D

**RAMP
WILL BE
CLOSED**

MON xx - MON xx
XAM - XPM

ADVANCE NOTICE SIGN
R11-1501

INSTALL 5 DAYS MIN.
PRIOR TO CLOSURE

2

3

36"
36"
**DETOUR
ROUTE**

M 4-9L (MOD)

4

36"
36"
**DETOUR
ROUTE**

M 4-9R (MOD)

5

36"
36"
**DETOUR
ROUTE**

M 4-9 (MOD)

6

36"
36"
**DETOUR
ROUTE**

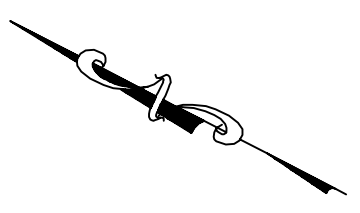
M 4-9R (MOD)

7

30"
18"
**END
DETOUR**

M4-8A





LEGEND

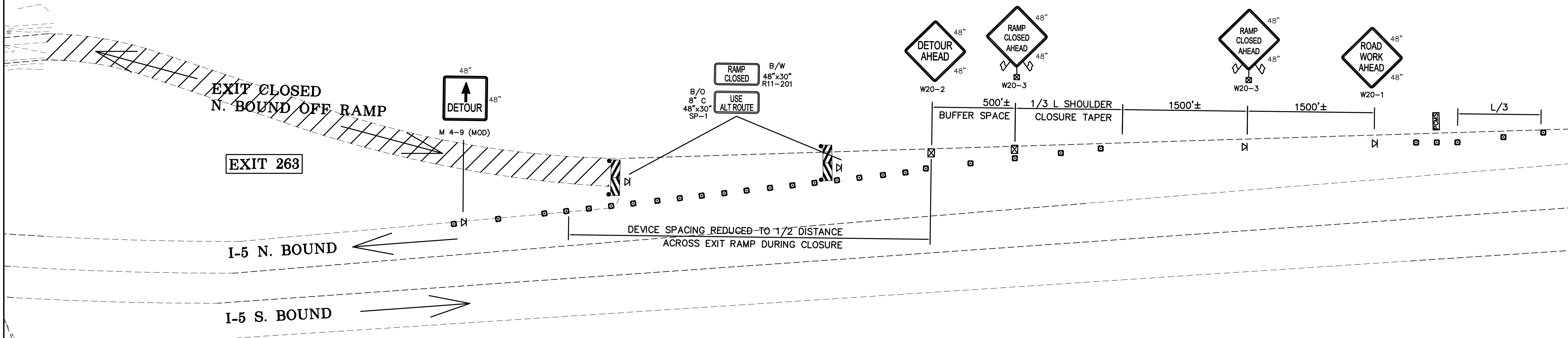
- SIGN LOCATION (CLASS B)
- SIGN LOCATION (CLASS A)
- SIGN LOCATION - TRIPOD MOUNTED
- FLAGGING STATION
- OR TRAFFIC SAFETY DRUMS WITH TYPE C LIGHTS
- TYPE III R AND TYPE III L BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN

CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/65	40	80
35/45	30	60
25/30	20	40

PCMS	
1	2
EXIT XXX CLOSED	USE EXIT XXX
2 SEC	2 SEC
FIELD LOCATE 1 MILE ± PRIOR TO CLOSURE	

LANE WIDTH (FEET)	MINIMUM TAPER LENGTH IN FEET (L)									
	POSTED SPEED LIMIT (MPH)									
	25	30	35	40	45	50	55	60	65	70
6	63	90	123	165	270	300	330	360	390	420
8	84	120	162	210	360	405	450	480	520	560
10	105	150	204	270	450	500	550	600	650	700
11	115	165	225	295	495	550	605	660	715	770
12	125	180	245	320	540	600	660	720	780	840
3 DEVICES MINIMUM SPACED 10' O.C. IN TAPERS FOR SHOULDER WIDTHS LESS THAN 6 FEET										

NO FLAGGERS OR SPOTTERS



PHASE 2
SPLITTER AND CENTER
ISLAND CONSTRUCTION



CONSTRUCTION SET

DESIGNED BY
LP
DRAWN BY
RWG
CHECKED BY
LP



Reichhardt & Ebe
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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

PORTAL WAY / I-5
ROUNDBOUT IMPROVEMENTS
I-5 EXIT 263 - NB RAMPS - OFF-RAMP SIGNAGE

DWG 16033 TC PLAN

JOB#
16033

SCALE
H: N/A

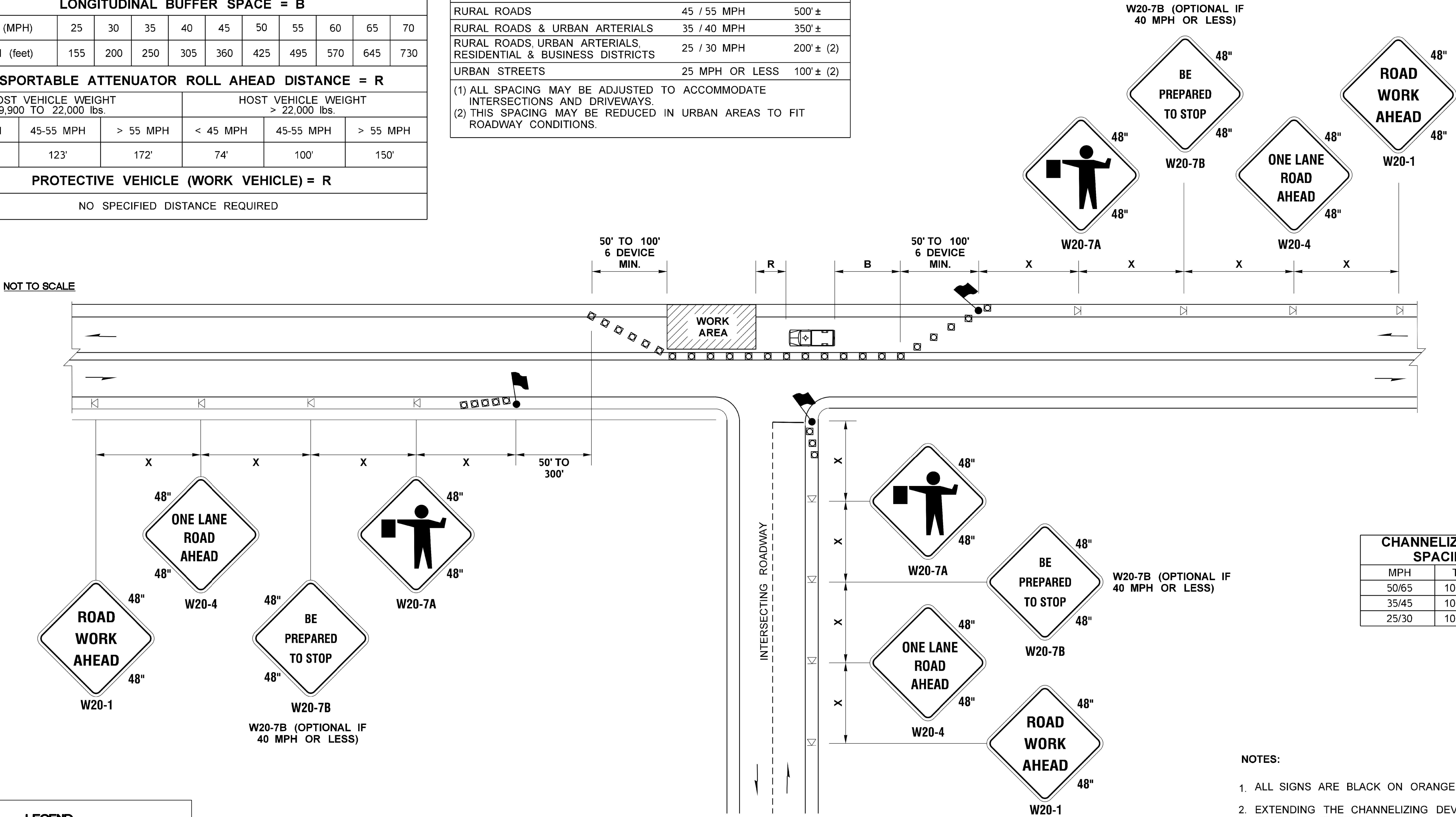
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SHEET
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of 20

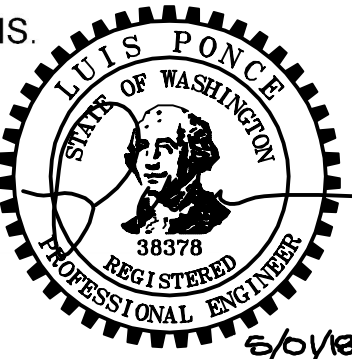
BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.				HOST VEHICLE WEIGHT > 22,000 lbs.						
< 45 MPH	45-55 MPH	> 55 MPH		< 45 MPH	45-55 MPH		> 55 MPH			
100'	123'	172'		74'	100'		150'			
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		



CHANNELIZATION DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/65	10 TO 20	80
35/45	10 TO 20	60
25/30	10 TO 20	40

- NOTES:
- ALL SIGNS ARE BLACK ON ORANGE.
 - EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
 - NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
 - SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.



LEGEND

SIGN LOCATION

FLAGGING STATION

TRAFFIC SAFETY DRUMS W/
STEADY BURN WARNING LIGHTS

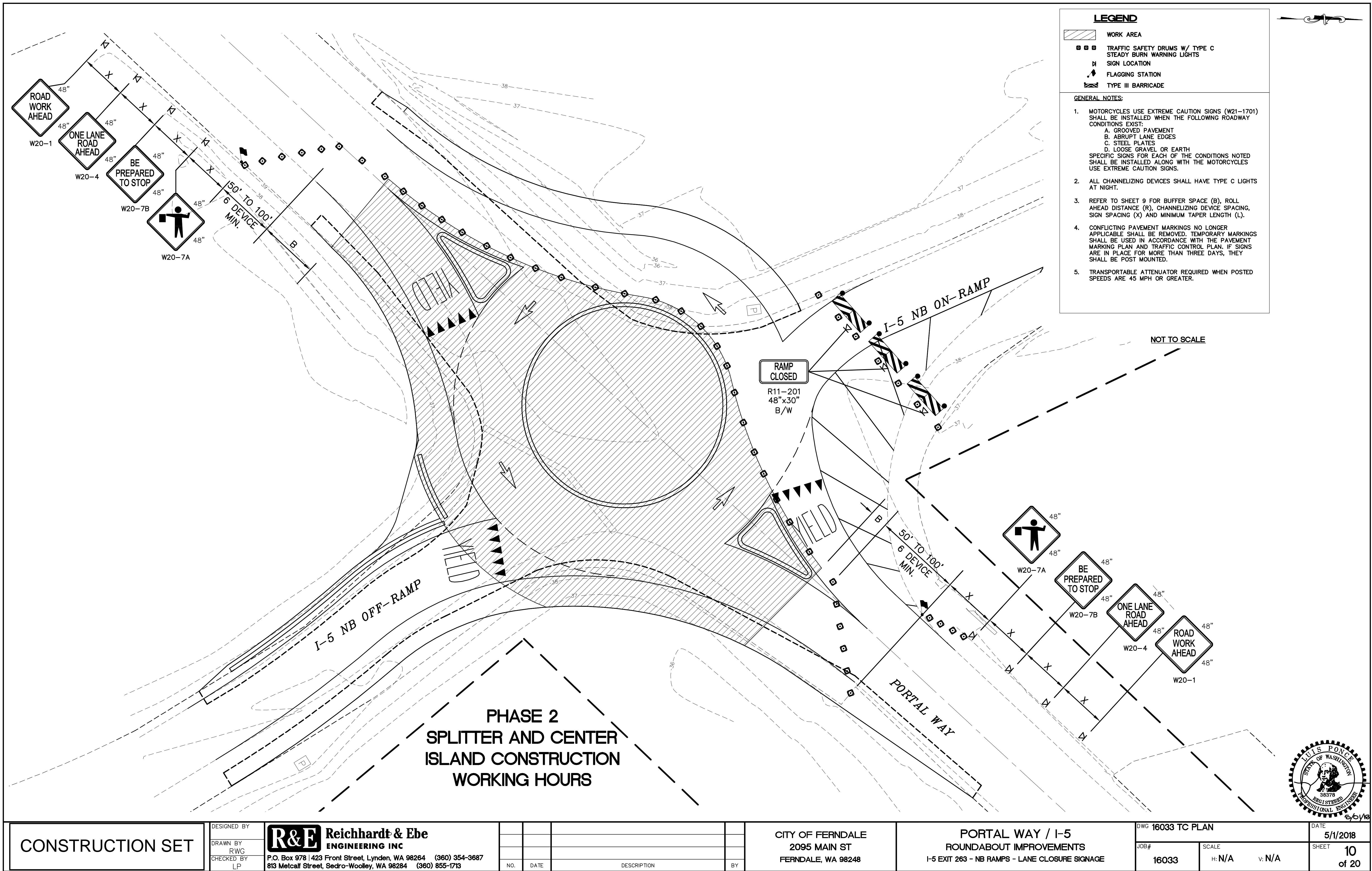
PROTECTIVE VEHICLE

PHASE 2
SPLITTER AND CENTER
ISLAND CONSTRUCTION

ONE-LANE, TWO-WAY TRAFFIC CONTROL
WITH FLAGGERS

NOT TO SCALE

CONSTRUCTION SET	DESIGNED BY	<div><div>R&E</div><div>Reichhardt & Ebe ENGINEERING INC</div><div>P.O. Box 978 423 Front Street, Lynden, WA 98264 (360) 354-3687 813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713</div></div>					CITY OF FERNDAL 2095 MAIN ST FERNDAL, WA 98248	PORTAL WAY / I-5 ROUNDABOUT IMPROVEMENTS WSDOT TYPICAL LANE CLOSURE	DWG 16033 TC PLAN		DATE 5/1/2018
	DRAWN BY RWG								JOB# 16033	SCALE H: N/A V: N/A	SHEET 9 of 20
	CHECKED BY LP										
			NO.	DATE	DESCRIPTION	BY					



LEGEND

WORK AREA

TRAFFIC SAFETY DRUMS W/ TYPE C STEADY BURN WARNING LIGHTS

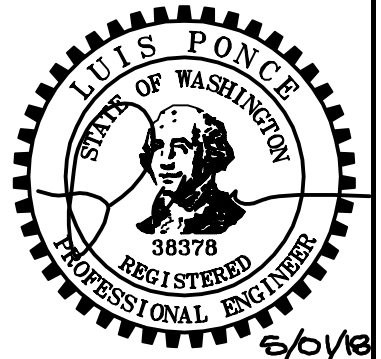
SIGN LOCATION

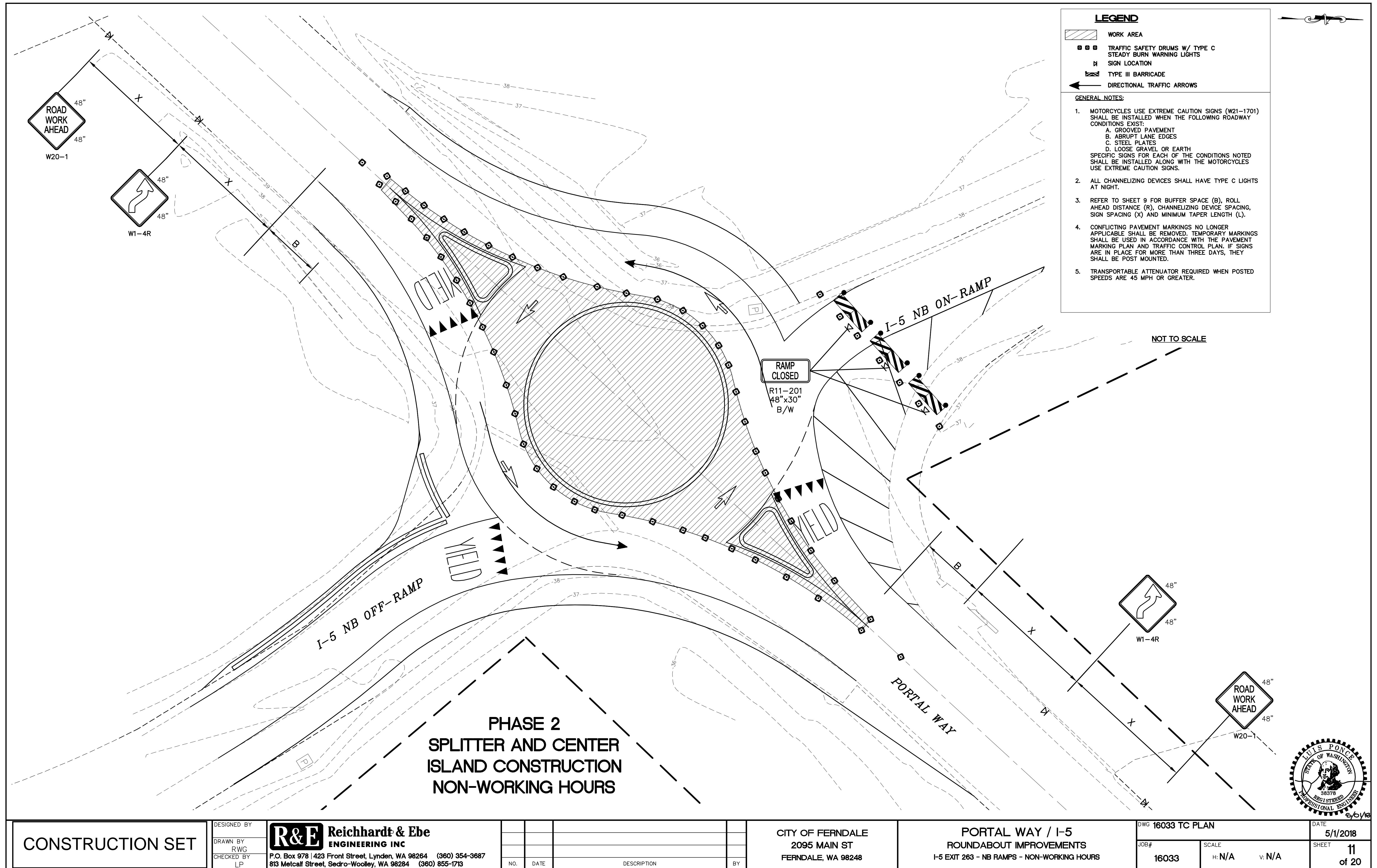
FLAGGING STATION

TYPE III BARRICADE

GENERAL NOTES:

- MOTORCYCLES USE EXTREME CAUTION SIGNS (W21-1701) SHALL BE INSTALLED WHEN THE FOLLOWING ROADWAY CONDITIONS EXIST:
 - A. GROOVED PAVEMENT
 - B. ABRUPT LANE EDGES
 - C. STEEL PLATES
 - D. LOOSE GRAVEL OR EARTHSPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH THE MOTORCYCLES USE EXTREME CAUTION SIGNS.
- ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
- REFER TO SHEET 9 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
- CONFLICTING PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED. TEMPORARY MARKINGS SHALL BE USED IN ACCORDANCE WITH THE PAVEMENT MARKING PLAN AND TRAFFIC CONTROL PLAN. IF SIGNS ARE IN PLACE FOR MORE THAN THREE DAYS, THEY SHALL BE POST MOUNTED.
- TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.





LEGEND

WORK AREA

TRAFFIC SAFETY DRUMS W/ TYPE C STEADY BURN WARNING LIGHTS

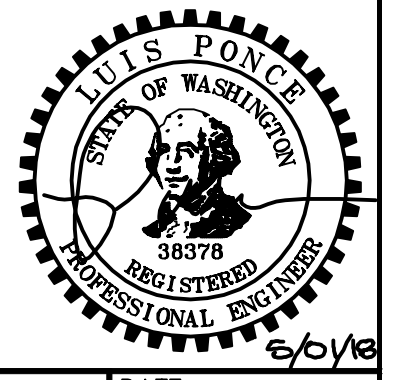
SIGN LOCATION

TYPE III BARRICADE

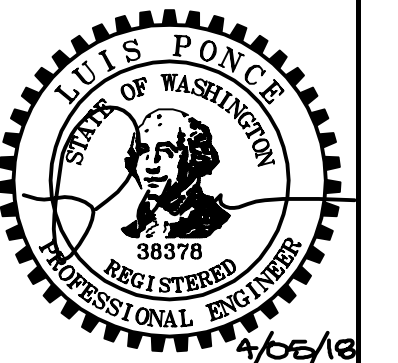
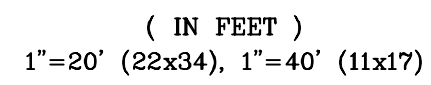
DIRECTIONAL TRAFFIC ARROWS

GENERAL NOTES:

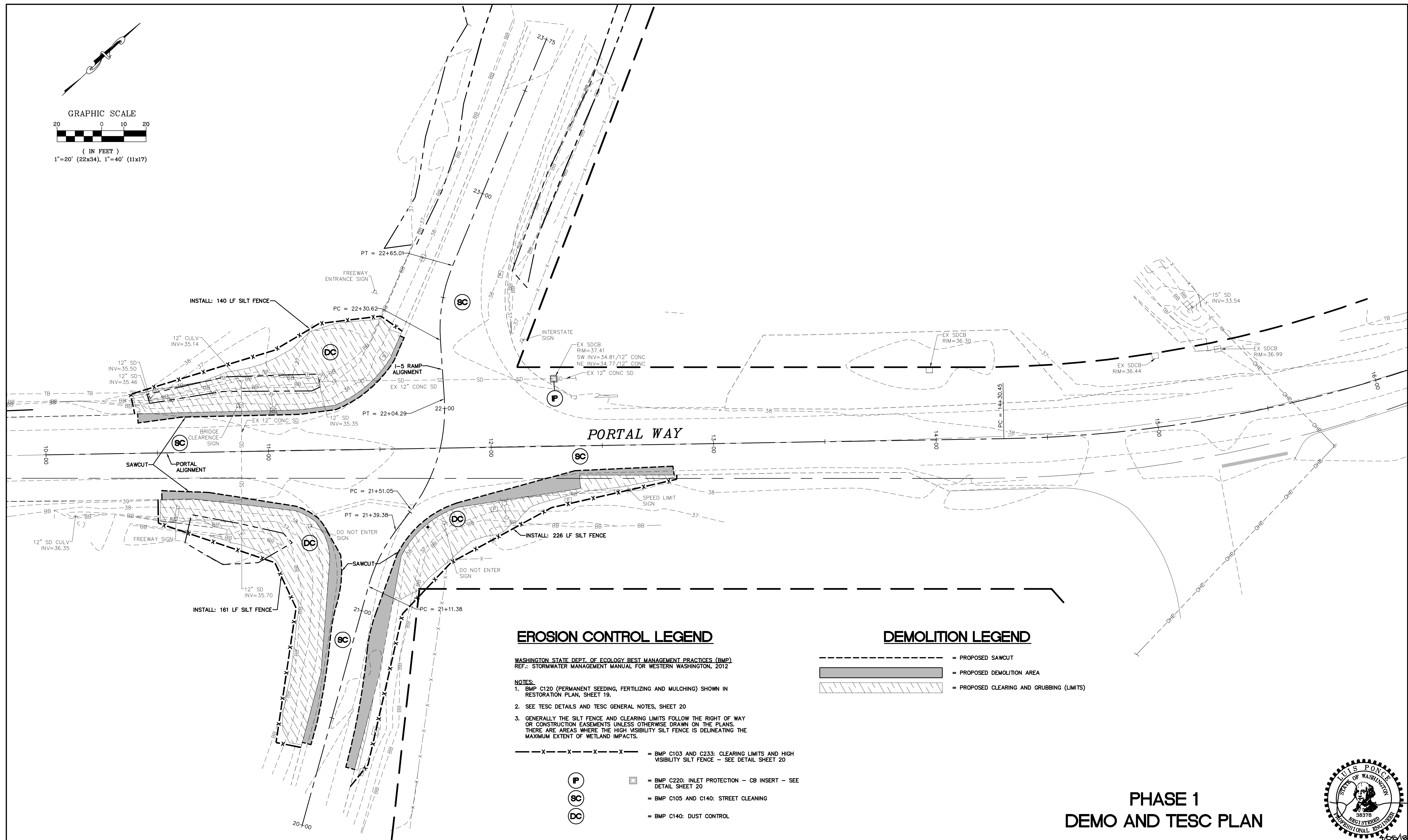
- MOTORCYCLES USE EXTREME CAUTION SIGNS (W21-1701) SHALL BE INSTALLED WHEN THE FOLLOWING ROADWAY CONDITIONS EXIST:
 - A. GROOVED PAVEMENT
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- ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
- REFER TO SHEET 9 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
- CONFLICTING PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED. TEMPORARY MARKINGS SHALL BE USED IN ACCORDANCE WITH THE PAVEMENT MARKING PLAN AND TRAFFIC CONTROL PLAN. IF SIGNS ARE IN PLACE FOR MORE THAN THREE DAYS, THEY SHALL BE POST MOUNTED.
- TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.



CONSTRUCTION SET		DESIGNED BY	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 423 Front Street, Lynden, WA 98264 (360) 354-3687 813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713	NO.	DATE	DESCRIPTION	BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248	PORTAL WAY / I-5 ROUNDAUT IMPROVEMENTS I-5 EXIT 263 - NB RAMPS - NON-WORKING HOURS	DWG 16033 TC PLAN		DATE 5/1/2018	
		DRAWN BY RWG CHECKED BY LP								JOB# 16033	SCALE H: N/A V: N/A	SHEET 11 of 20	



SHEET 12 of 20



DESIGNED BY	LP/OAM
DRAWN BY	OAM/LMH
CHECKED BY	LP

R&E **Reichhardt & Ebe**
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

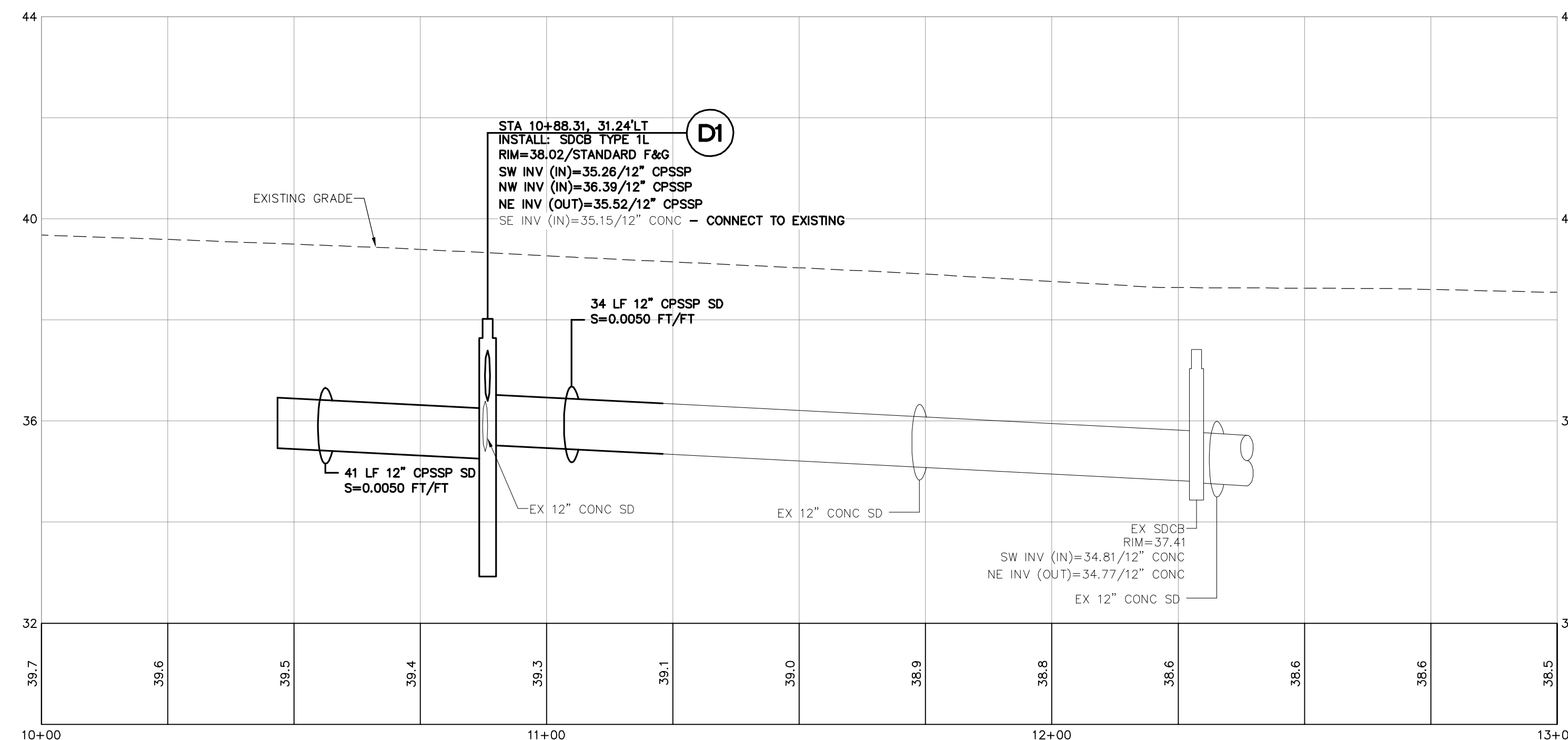
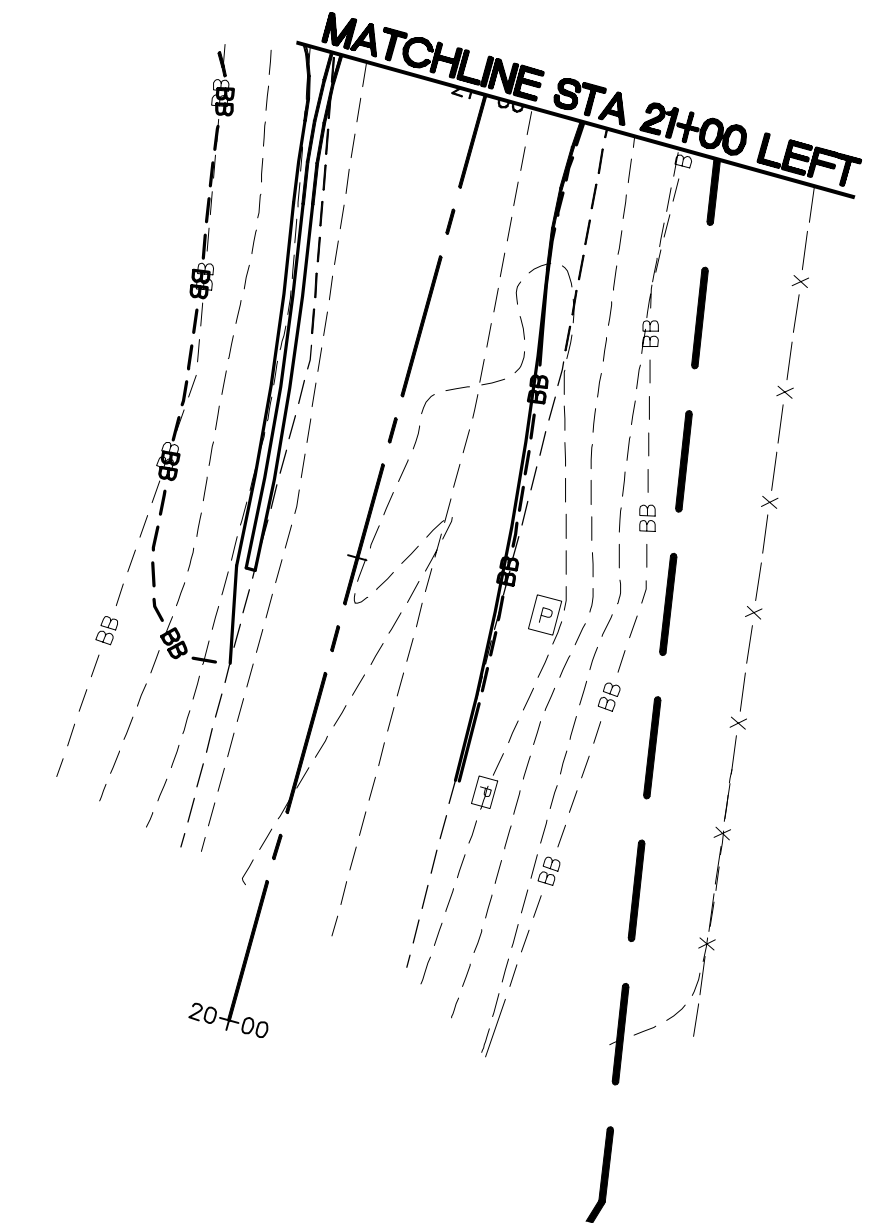
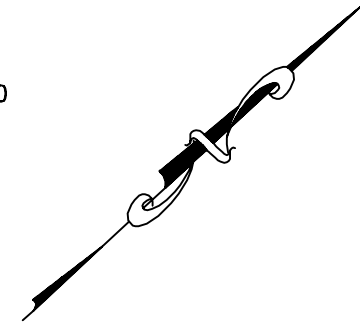
PORTAL WAY / I-5
 ROUNDABOUT IMPROVEMENTS
 DEMO AND TESC PLAN - PHASE 1

JOB#
16033

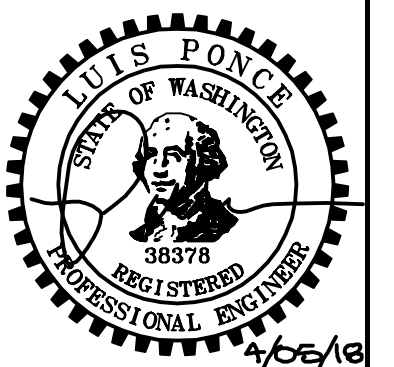
SCALE
H: 1"=20' V: N/A

SHEET 13 of 20

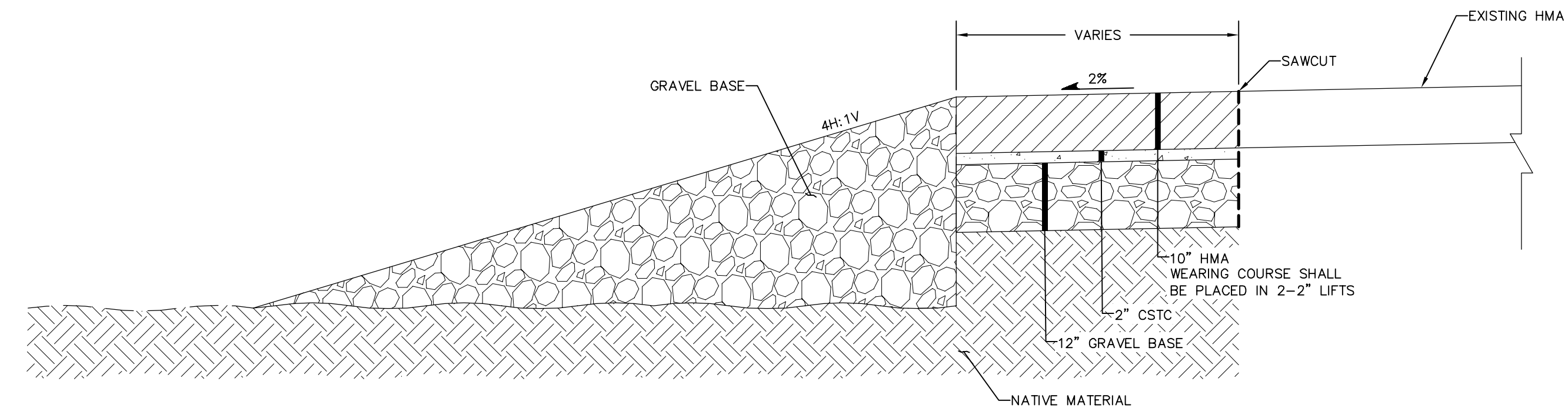




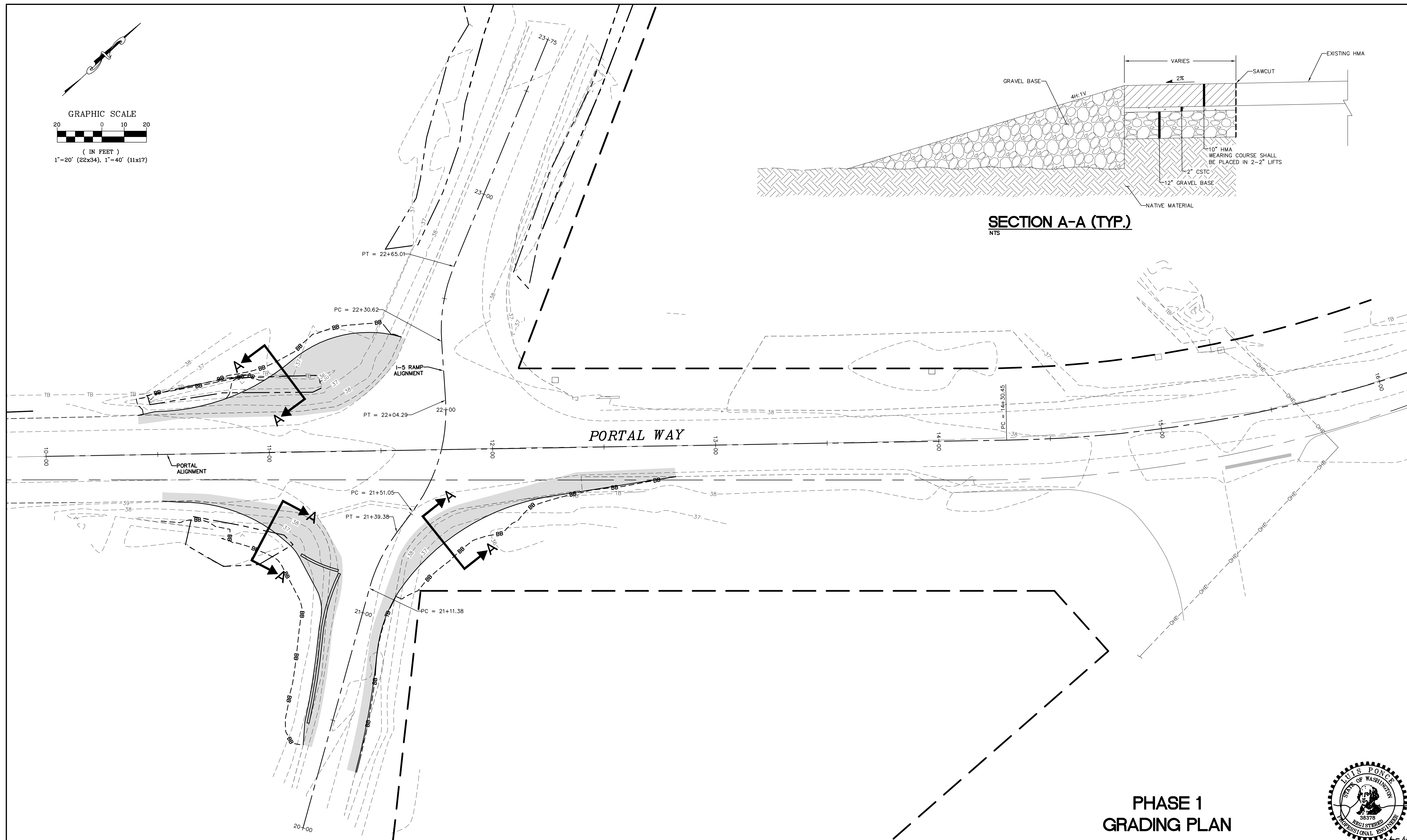
PHASE 1 PLAN AND PROFILE



SHEET 14 of 20



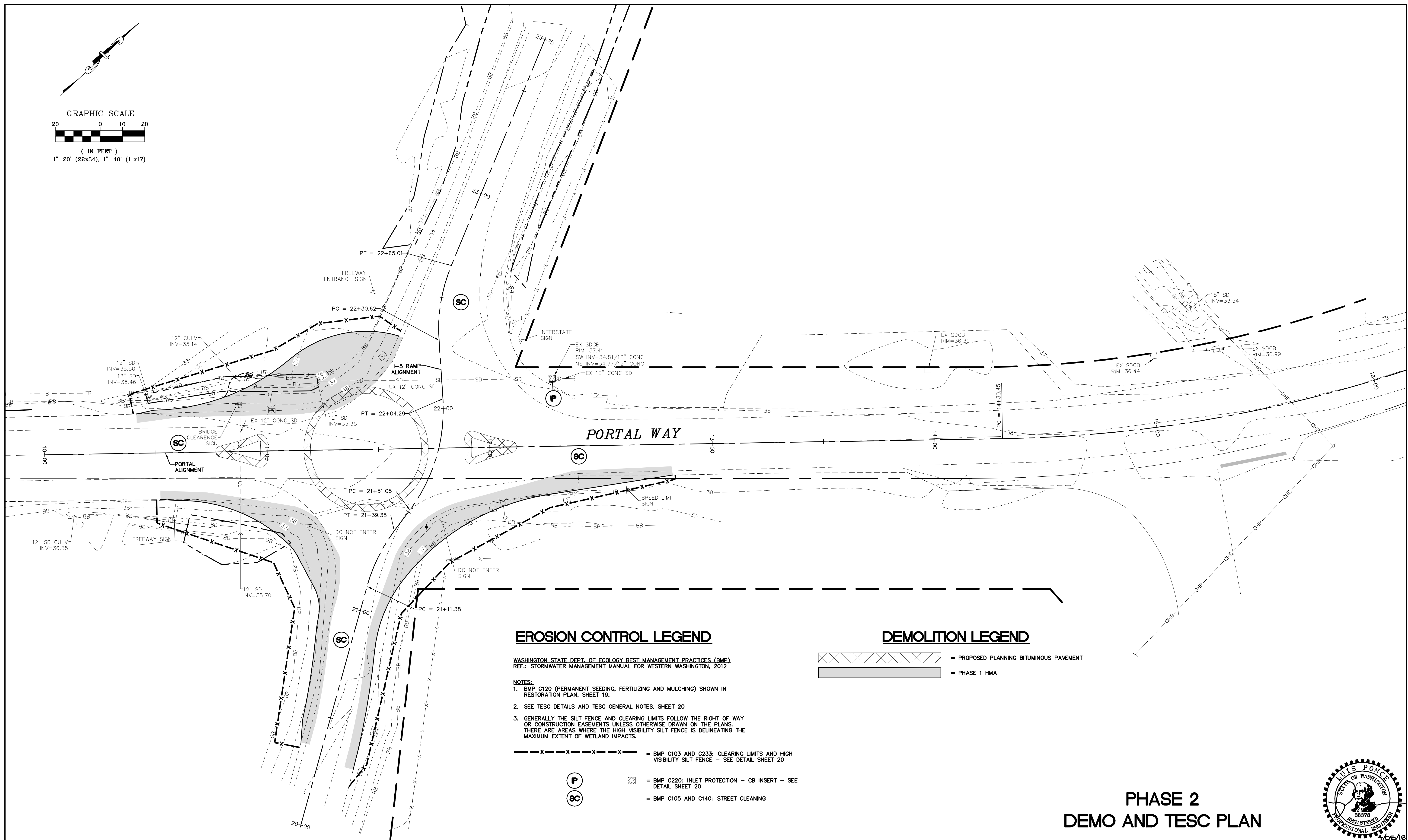
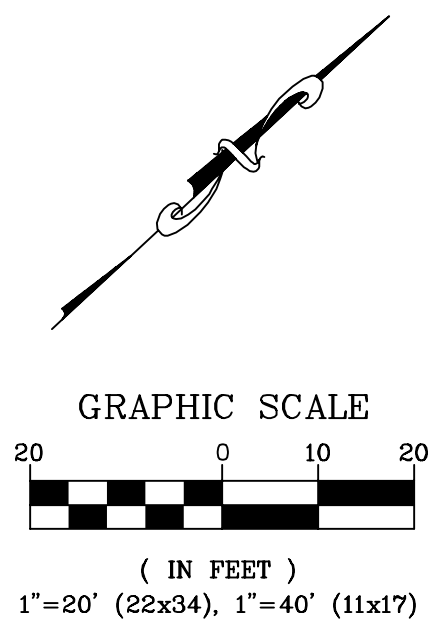
NTS



PHASE 1 GRADING PLAN



DWG 16033 GRADING		DATE 4/5/2018
JOB# 16033	SCALE H: 1"=20' V: N/A	SHEET 15 of 20



EROSION CONTROL LEGEND

WASHINGTON STATE DEPT. OF ECOLOGY BEST MANAGEMENT PRACTICES (BMP)
REF.: STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, 2012

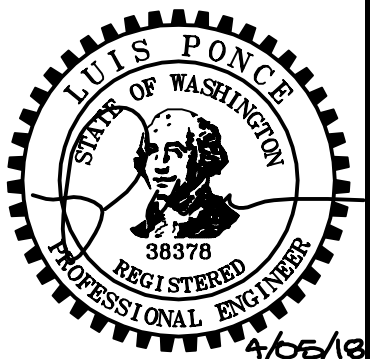
- NOTES:
- BMP C120 (PERMANENT SEEDING, FERTILIZING AND MULCHING) SHOWN IN RESTORATION PLAN, SHEET 19.
 - SEE TESC DETAILS AND TESC GENERAL NOTES, SHEET 20
 - GENERALLY THE SILT FENCE AND CLEARING LIMITS FOLLOW THE RIGHT OF WAY OR CONSTRUCTION EASEMENTS UNLESS OTHERWISE DRAWN ON THE PLANS. THERE ARE AREAS WHERE THE HIGH VISIBILITY SILT FENCE IS DELINEATING THE MAXIMUM EXTENT OF WETLAND IMPACTS.

- X — X — X — X — X — = BMP C103 AND C233: CLEARING LIMITS AND HIGH VISIBILITY SILT FENCE — SEE DETAIL SHEET 20
- (P) = BMP C220: INLET PROTECTION — CB INSERT — SEE DETAIL SHEET 20
- (SC) = BMP C105 AND C140: STREET CLEANING

DEMOLITION LEGEND

- ▨ = PROPOSED PLANNING BITUMINOUS PAVEMENT
- = PHASE 1 HMA

PHASE 2 DEMO AND TESC PLAN



CONSTRUCTION SET

DESIGNED BY
LP/OAM
DRAWN BY
OAM/LMH
CHECKED BY
LP

**R&E Reichhardt & Ebe
ENGINEERING INC**
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

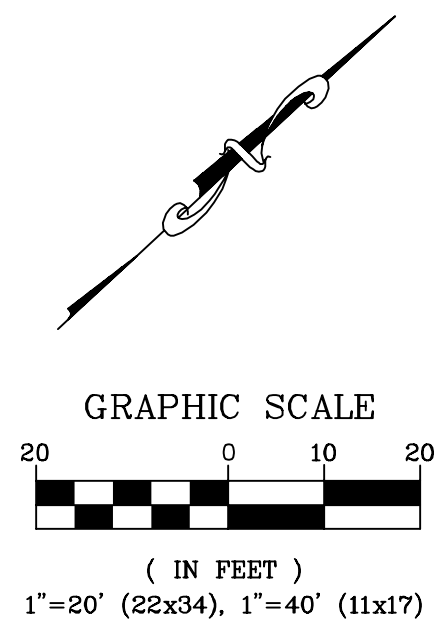
PORTAL WAY / I-5
ROUNDOUT IMPROVEMENTS
DEMO AND TESC PLAN - PHASE 2

DWG 16033 EXCOND, TESC, DEMO

JOB#
16033

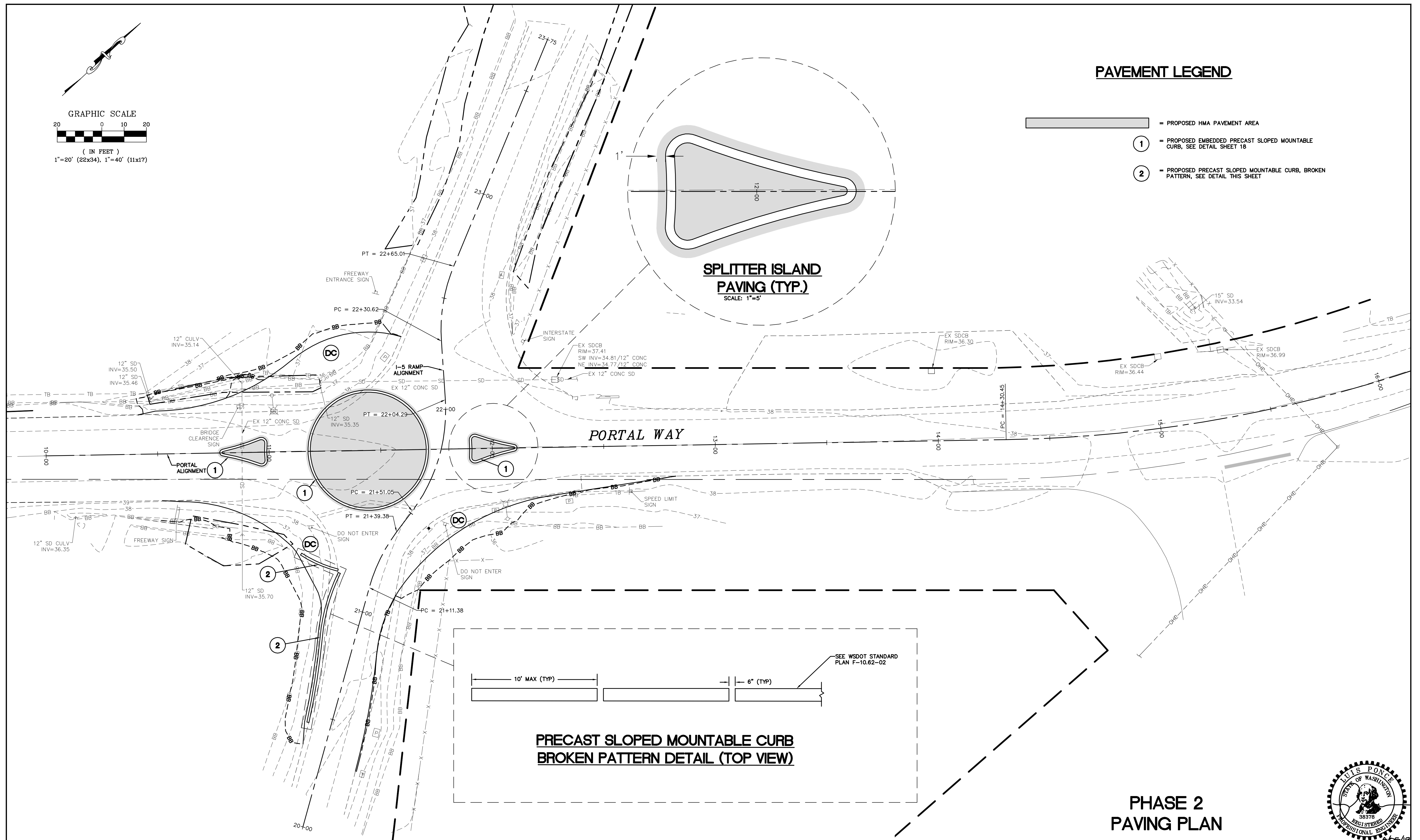
SCALE
H: 1"=20' V: N/A

DATE
4/5/2018
SHEET
16
of 20



PAVEMENT LEGEND

- = PROPOSED HMA PAVEMENT AREA
- = PROPOSED EMBEDDED PRECAST SLOPED MOUNTABLE CURB, SEE DETAIL SHEET 18
- = PROPOSED PRECAST SLOPED MOUNTABLE CURB, BROKEN PATTERN, SEE DETAIL THIS SHEET



CONSTRUCTION SET

DESIGNED BY
LP/OAM
DRAWN BY
OAM/LMH
CHECKED BY
LP

R&E Reichhardt & Ebe
ENGINEERING INC

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813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

PORTAL WAY / I-5
ROUNABOUT IMPROVEMENTS
PAVING PLAN - PHASE 2

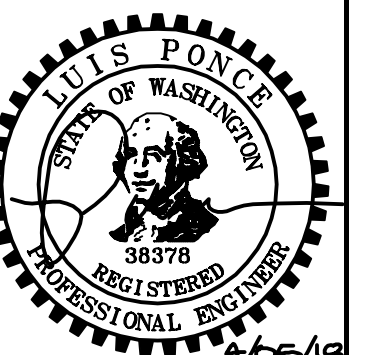
DWG 16033 EXCOND, TESC, DEMO

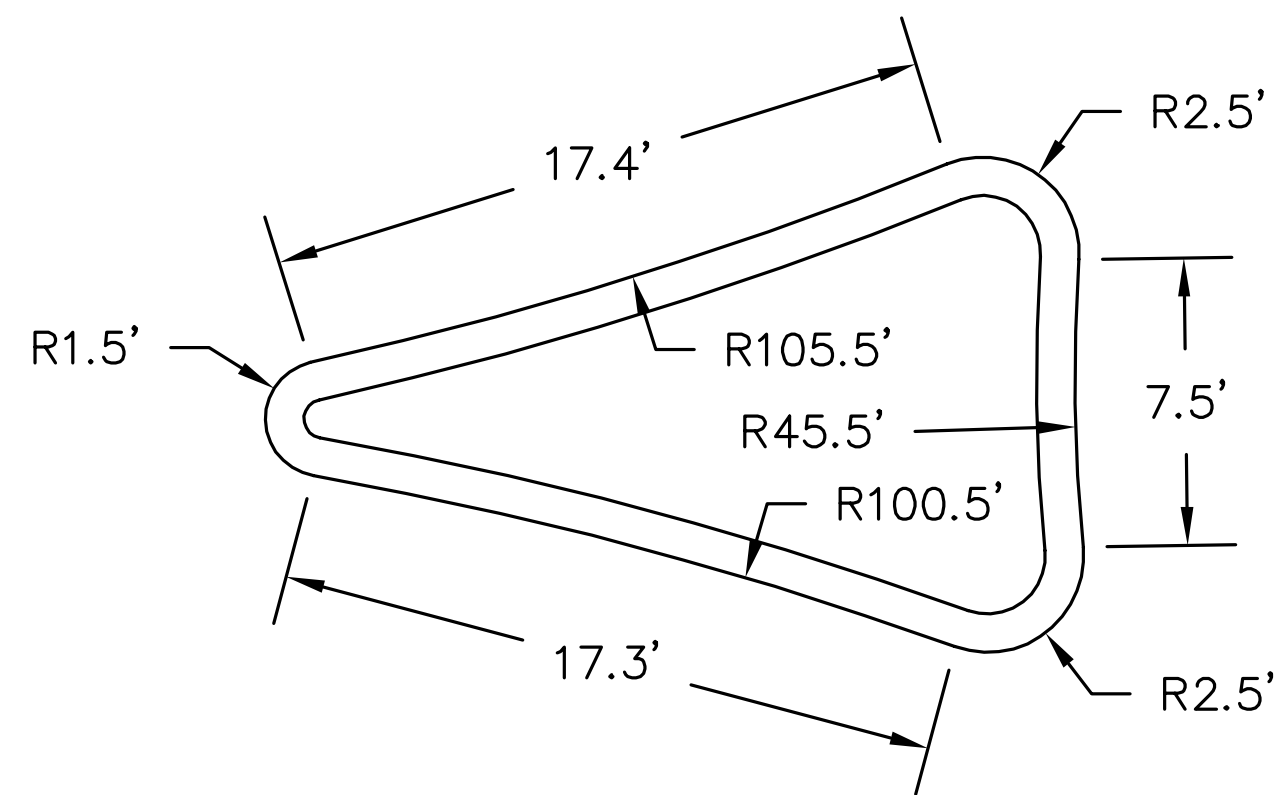
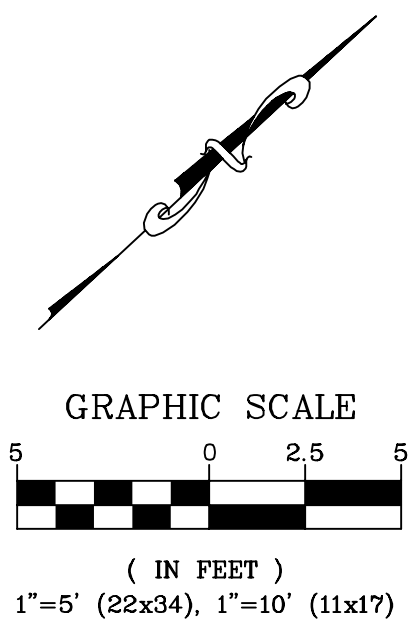
JOB#
16033

SCALE
H: 1"=20' V: N/A

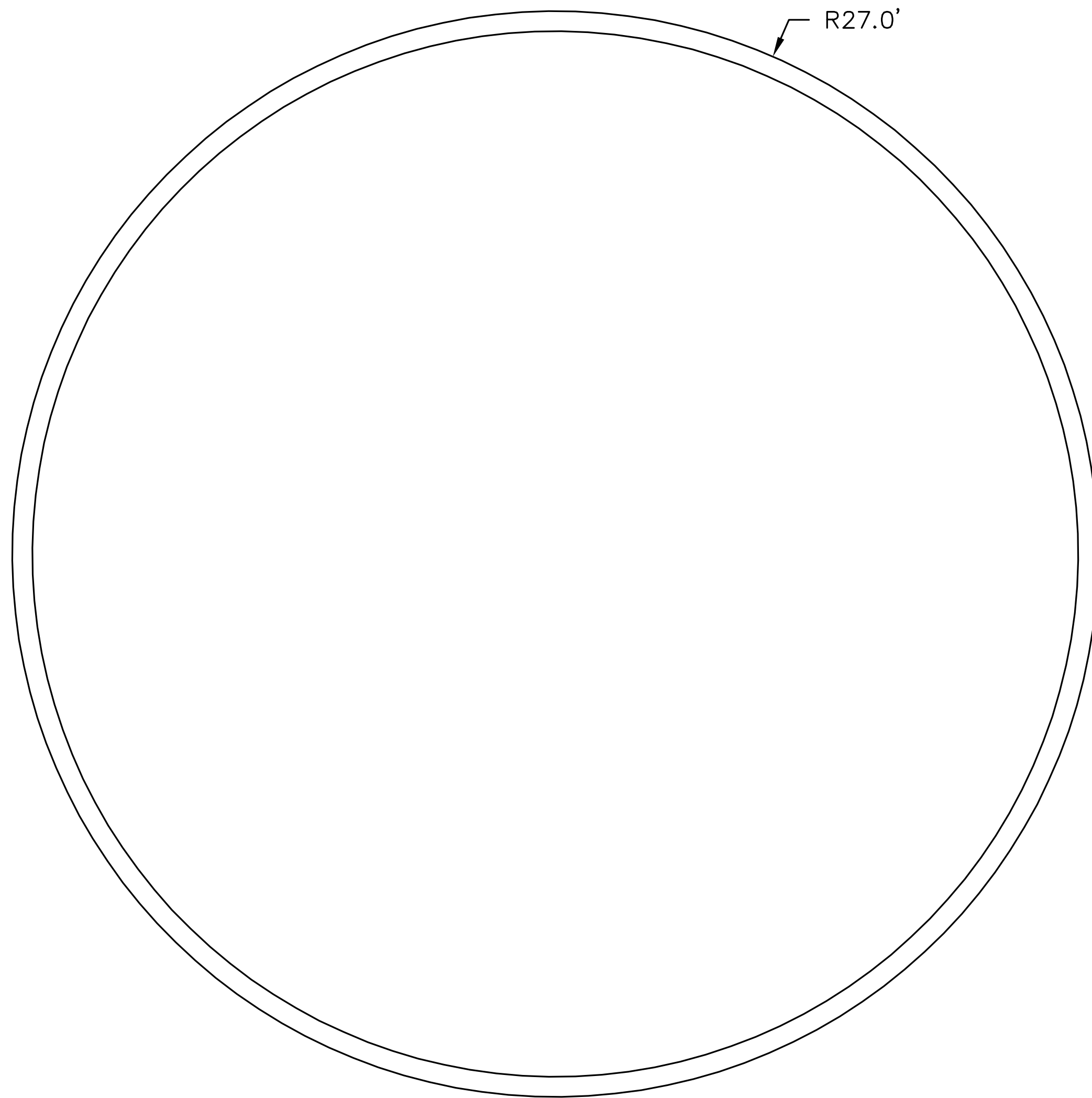
DATE
4/5/2018

SHEET
17
of 20

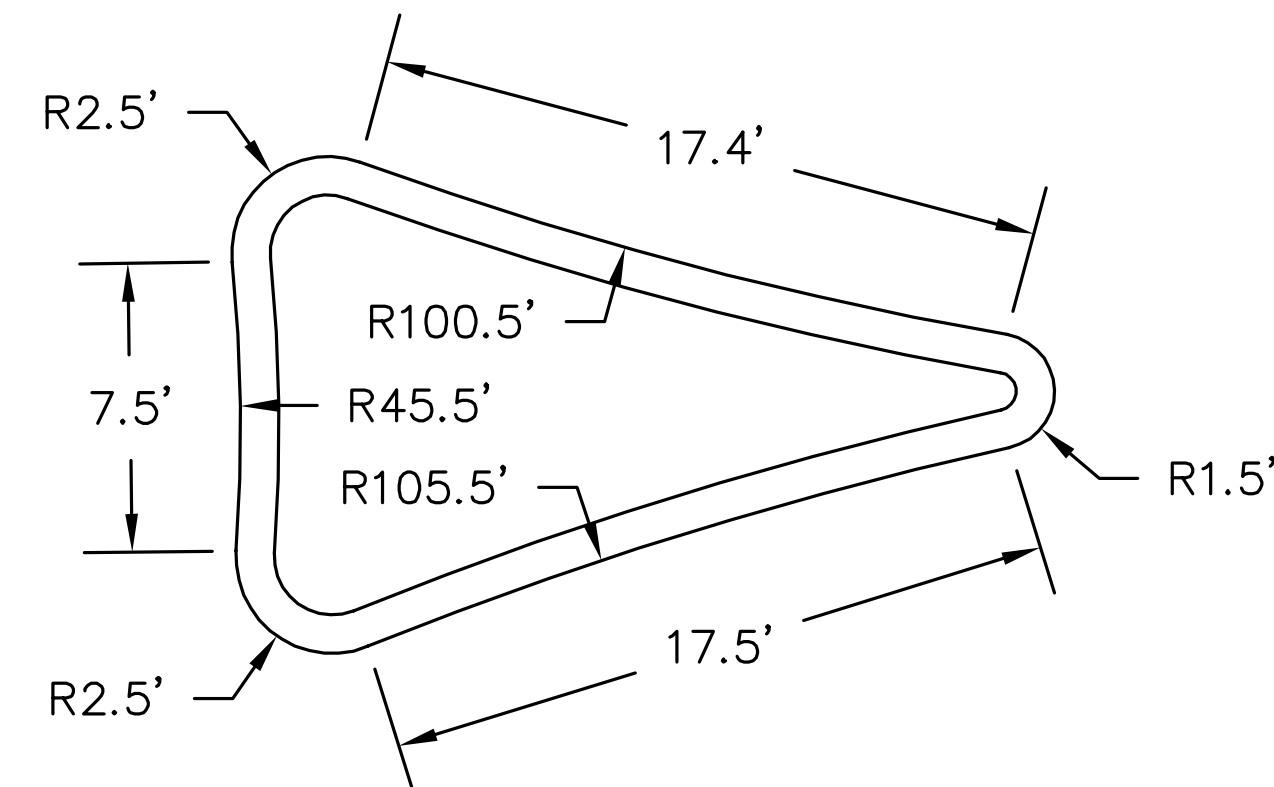




SPLITTER ISLAND DETAIL
WEST LEG
AREA=163.5 SQ. FT.



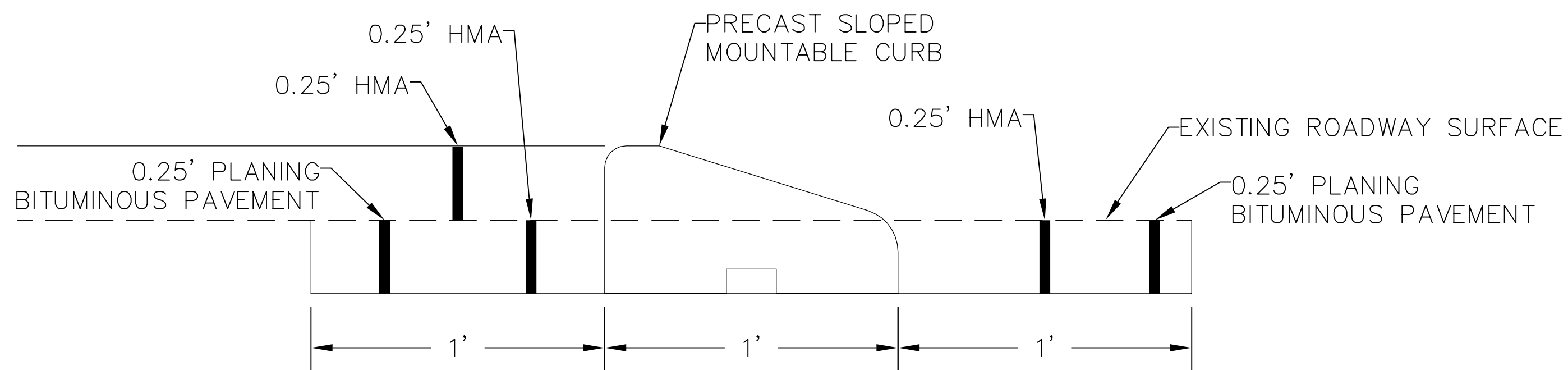
CENTER ISLAND DETAIL
AREA=2,290.2 SQ. FT.



SPLITTER ISLAND DETAIL
EAST LEG
AREA=164.7 SQ. FT.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
2. HMA IN SPLITTER & CENTER ISLANDS TO BE PAINTED YELLOW.



EMBEDDED CURB DETAIL
NTS

PHASE 2
TRAFFIC ISLAND



CONSTRUCTION SET

DESIGNED BY
LP/OAM
DRAWN BY
OAM/LMH
CHECKED BY
LP

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813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

PORTAL WAY / I-5
ROUNDAABOUT IMPROVEMENTS
TRAFFIC ISLAND CURB DETAIL - PHASE 2

DWG 16033 EXCOND, TESC, DEMO

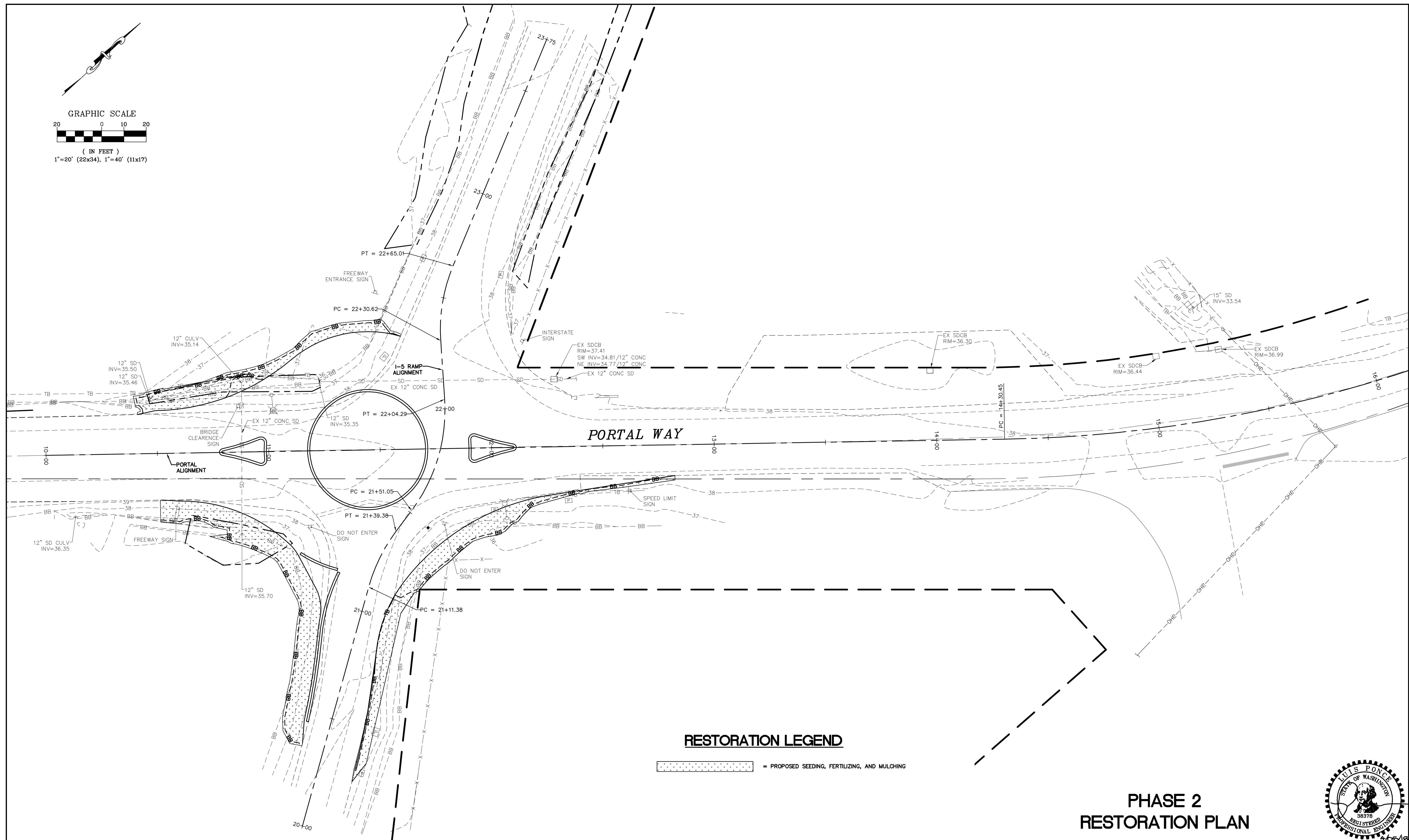
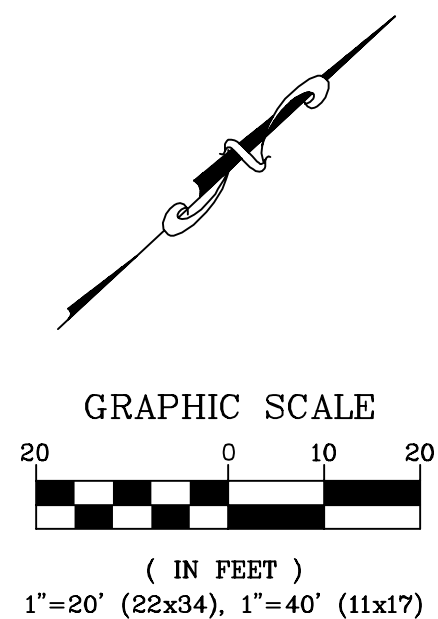
DATE
4/5/2018

JOB#
16033

SCALE
H: 1"=5'

V: N/A

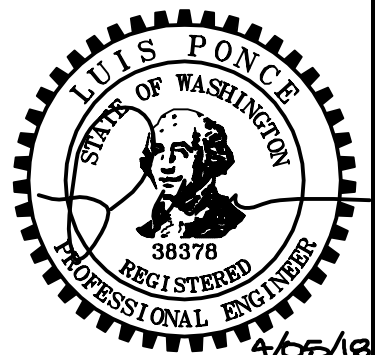
SHEET
18
of 20



RESTORATION LEGEND

[Stippled Pattern] = PROPOSED SEEDING, FERTILIZING, AND MULCHING

PHASE 2
RESTORATION PLAN



CONSTRUCTION SET

DESIGNED BY
LP/OAM
DRAWN BY
OAM/LMH
CHECKED BY
LP

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813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

PORTAL WAY / I-5
ROUNDOUT IMPROVEMENTS
RESTORATION PLAN - PHASE 2

DWG 16033 EXCOND, TESC, DEMO
JOB# 16033
SCALE H: 1"=20' V: N/A

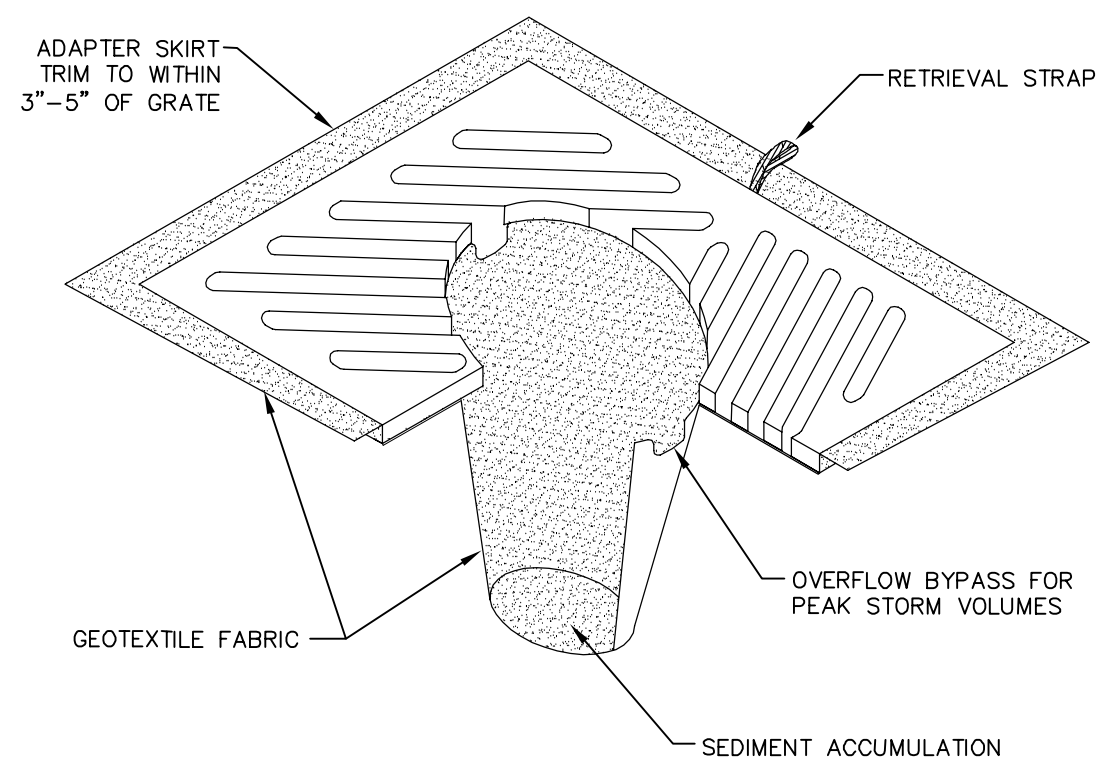
DATE 4/5/2018
SHEET 19
of 20

TESC GENERAL NOTES

1. THIS PLAN REPRESENTS THE MINIMUM REQUIREMENTS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE ENGINEER AS ARE FOUND NECESSARY.
2. THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO ALL OTHER SITE CONSTRUCTION.
3. ALL CLEARING LIMITS SHALL BE VISIBLY MARKED PRIOR TO CLEARING.
4. ANY VEGETATION NOT IN THE CONSTRUCTION AREA SHALL BE LEFT UNDISTURBED.
5. CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE ENGINEER OF ANY PROPOSED CHANGES IN PLAN PRIOR TO CONSTRUCTION OF THAT CHANGE. CONTRACTOR SHALL KEEP RECORD OF DEVIATIONS AND FORWARD TO THE ENGINEER.
6. MAINTENANCE AND OPERATION OF THE EROSION CONTROL AND SEDIMENTATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SEDIMENTATION AND EROSION CONTROL MEASURES, AS SHOWN AND AS INSTALLED ON AN AS NEEDED BASIS.
7. THE CONSTRUCTED EROSION CONTROL AND SEDIMENTATION PLAN SHALL BE APPROVED BY THE ENGINEER PRIOR TO PERFORMING ANY SITE GRADING OR CLEARING.
8. CONTRACTOR WILL HAVE A WATER TRUCK AVAILABLE ON SITE AT ALL TIMES. CONTRACTOR WILL WATER SURFACES OFTEN ENOUGH TO ABATE DUST AS APPROVED BY THE ENGINEER. WATERING WILL INCLUDE WEEKENDS AND HOLIDAYS.
9. THE CONTRACTOR SHALL PERFORM ALL STREET CLEANING BY HAND OR WITH A SELF-PROPELLED PICKUP STREET SWEEPER. A STANDARD SELF-PROPELLED STREET SWEEPER WILL NOT BE ALLOWED.
10. ALL DISTURBED AREAS SHALL BE HYDROSEEDDED. GRASS SEEDING SHALL BE BROADCAST IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
11. ALL CUT AND FILL SLOPES SHALL BE SEEDDED AND FERTILIZED FOR EROSION CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR SLOPE EROSION UNTIL VEGETATION IS FIRMLY ESTABLISHED.
12. ALL STORM DRAIN FACILITIES WITHIN THE PROJECT BOUNDARY, OR WHICH ARE IMPACTED BY THE PROJECT ARE TO BE CLEARED OF SEDIMENT AND DEBRIS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
13. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

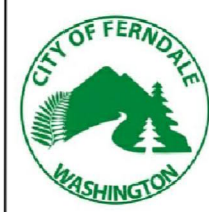
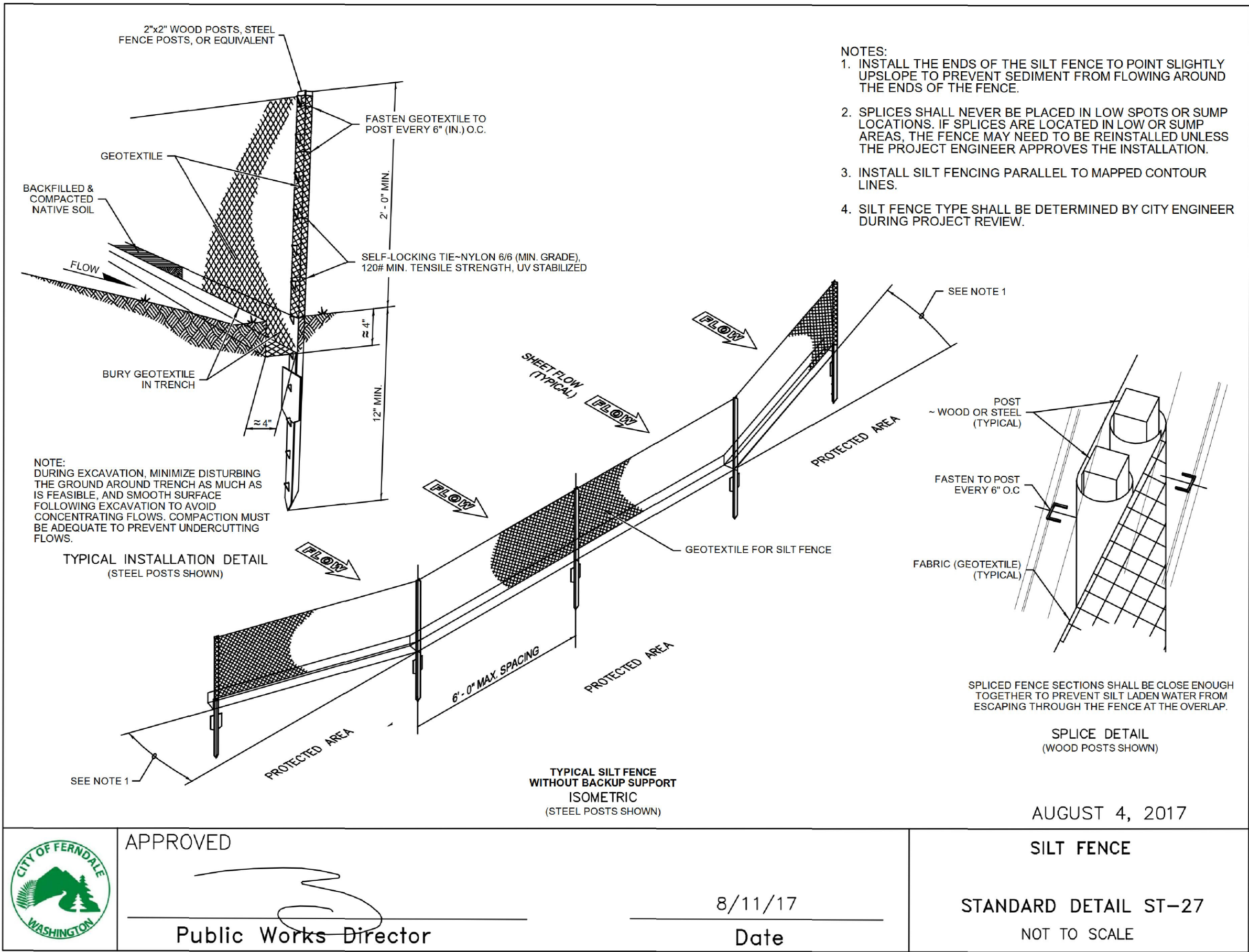
DUST CONTROL:
CONTRACTOR SHALL LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE EXCAVATION AND GRADING SHALL TAKE PLACE MAINTAINING THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL. DUST CONTROL METHODS SHALL BE PERFORMED BY METHODS LISTED IN NOTE NUMBER EIGHT OF THE TESC GENERAL NOTES. SURFACES SHALL BE SPRAYED WITH WATER AS NEEDED IN ORDER TO ABATE DUST AS APPROVED BY THE ENGINEER.

STREET CLEANING:
CONTRACTOR SHALL PERFORM ALL STREET CLEANING AT A MINIMUM OF AT LEAST ONCE AT THE END OF EVERY DAY WORKED AND ON AN AS NEEDED BASIS BASED ON VEHICLE TRACK OUT. STREET CLEANING SHALL BE PERFORMED BY THE METHODS LISTED IN NOTE NUMBER 10 OF THE TESC GENERAL NOTES AND SHALL NOT ALLOW SEDIMENT INTO STORMWATER CONVEYANCE DITCHES OR STRUCTURES. STREET CLEANING METHODS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION.



INLET PROTECTION
NTS

- NOTES:
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING & GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
 2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
 3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, & RE-INSERTING IT INTO THE CATCH BASIN.



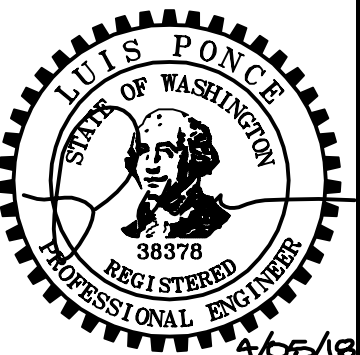
APPROVED

Public Works Director

8/11/17
Date

AUGUST 4, 2017
SILT FENCE

STANDARD DETAIL ST-27
NOT TO SCALE



CONSTRUCTION SET

DESIGNED BY
LP
DRAWN BY
RWG/LMH
CHECKED BY
LP

R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

PORTAL WAY / I-5
ROUNDBOUT IMPROVEMENTS
DETAILS

DWG 16033 DETAILS

JOB#
16033

SCALE
H: N/A

V: N/A

DATE
4/5/2018
SHEET
20
of 20

SEC. 20, T. 39N. R. 2E., W.M.

CURVE DATA						
P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	S	DESIGN SPEED
A 21+25.38	21°23'17"	75.00'	14.16'	28.00'	—	25 MPH
A 21+77.67	40°40'14"	75.00'	27.80'	53.24'	—	25 MPH
A 22+47.82	26°16'20"	75.00'	17.50'	34.39'	—	25 MPH
P 16+39.90	39°20'51"	610.00'	218.10'	418.91'	—	35 MPH

GENERAL NOTES

- ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
- REMOVE EXISTING PLASTIC STOP LINE AND ALL CONFLICTING PAINTED EDGE LINES AND DOUBLE CENTERLINES.

PAVEMENT MARKING TYPE

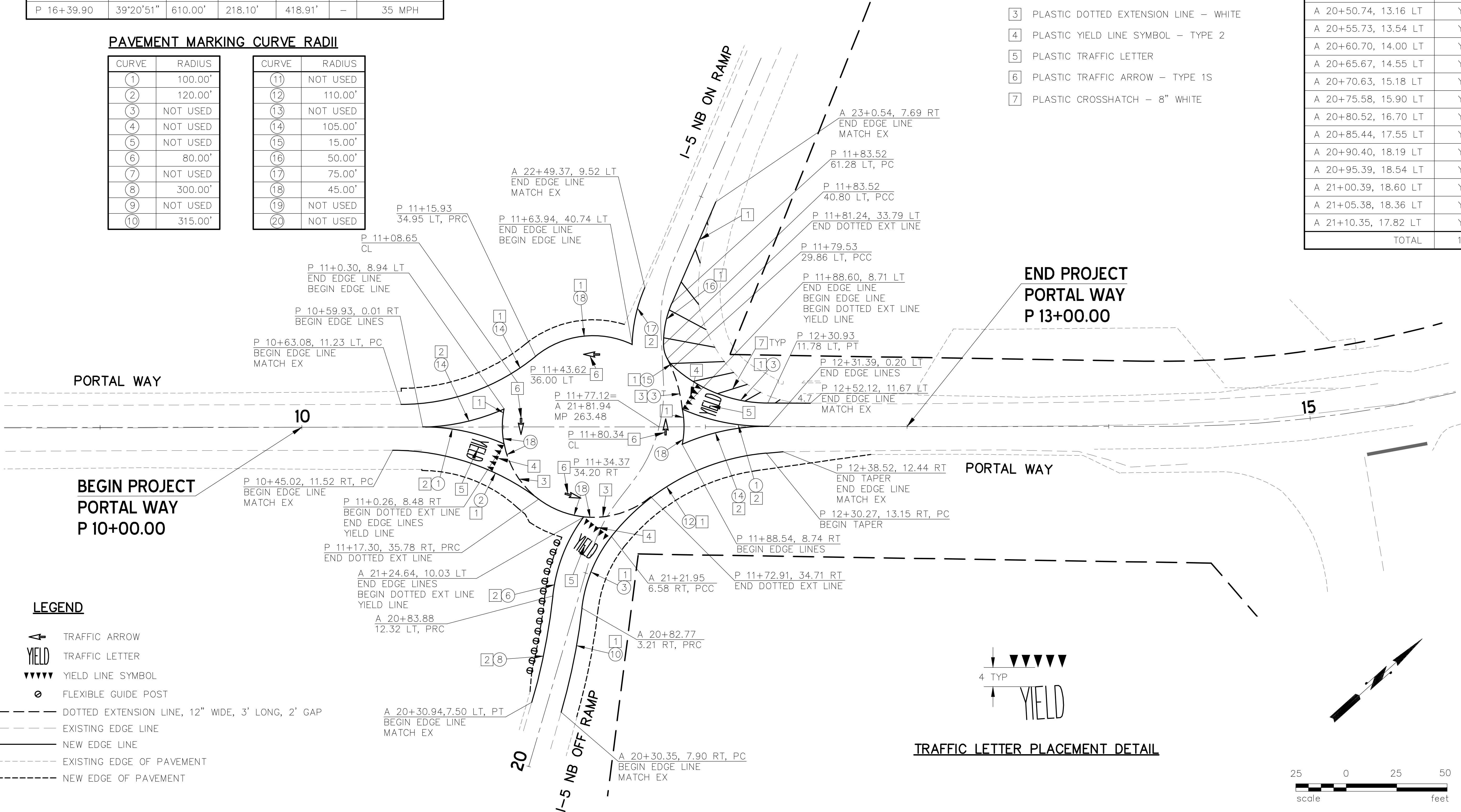
- 1
- PLASTIC EDGE LINE – WHITE
- 2
- PLASTIC EDGE LINE – YELLOW
- 3
- PLASTIC DOTTED EXTENSION LINE – WHITE
- 4
- PLASTIC YIELD LINE SYMBOL – TYPE 2
- 5
- PLASTIC TRAFFIC LETTER
- 6
- PLASTIC TRAFFIC ARROW – TYPE 1S
- 7
- PLASTIC CROSSHATCH – 8" WHITE

FLEXIBLE GUIDE POST

LOCATION	TYPE
A 20+45.75, 12.87 LT	Y
A 20+50.74, 13.16 LT	Y
A 20+55.73, 13.54 LT	Y
A 20+60.70, 14.00 LT	Y
A 20+65.67, 14.55 LT	Y
A 20+70.63, 15.18 LT	Y
A 20+75.58, 15.90 LT	Y
A 20+80.52, 16.70 LT	Y
A 20+85.44, 17.55 LT	Y
A 20+90.40, 18.19 LT	Y
A 20+95.39, 18.54 LT	Y
A 21+00.39, 18.60 LT	Y
A 21+05.38, 18.36 LT	Y
A 21+10.35, 17.82 LT	Y
TOTAL	14

PAVEMENT MARKING CURVE RADII

CURVE	RADIUS	CURVE	RADIUS
1	100.00'	11	NOT USED
2	120.00'	12	110.00'
3	NOT USED	13	NOT USED
4	NOT USED	14	105.00'
5	NOT USED	15	15.00'
6	80.00'	16	50.00'
7	NOT USED	17	75.00'
8	300.00'	18	45.00'
9	NOT USED	19	NOT USED
10	315.00'	20	NOT USED



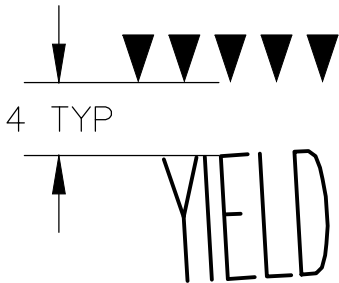
END PROJECT
PORTAL WAY
P 13+00.00

BEGIN PROJECT
PORTAL WAY
P 10+00.00

LEGEND

- TRAFFIC ARROW
- TRAFFIC LETTER
- YIELD LINE SYMBOL
- FLEXIBLE GUIDE POST
- DOTTED EXTENSION LINE, 12" WIDE, 3' LONG, 2' GAP
- EXISTING EDGE LINE
- NEW EDGE LINE
- EXISTING EDGE OF PAVEMENT
- NEW EDGE OF PAVEMENT

TRAFFIC LETTER PLACEMENT DETAIL



DRAWN	RMH				
DESIGNED	RMH				
CHECKED	3/29/18 RMH				
PROJ. ENGR.					
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DATE		REVISION		BY	APP'D

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P.O. Box 978
Lynden, Washington 98264

CITY OF FERDALE
P.O. Box 936
Ferndale, Washington 98248

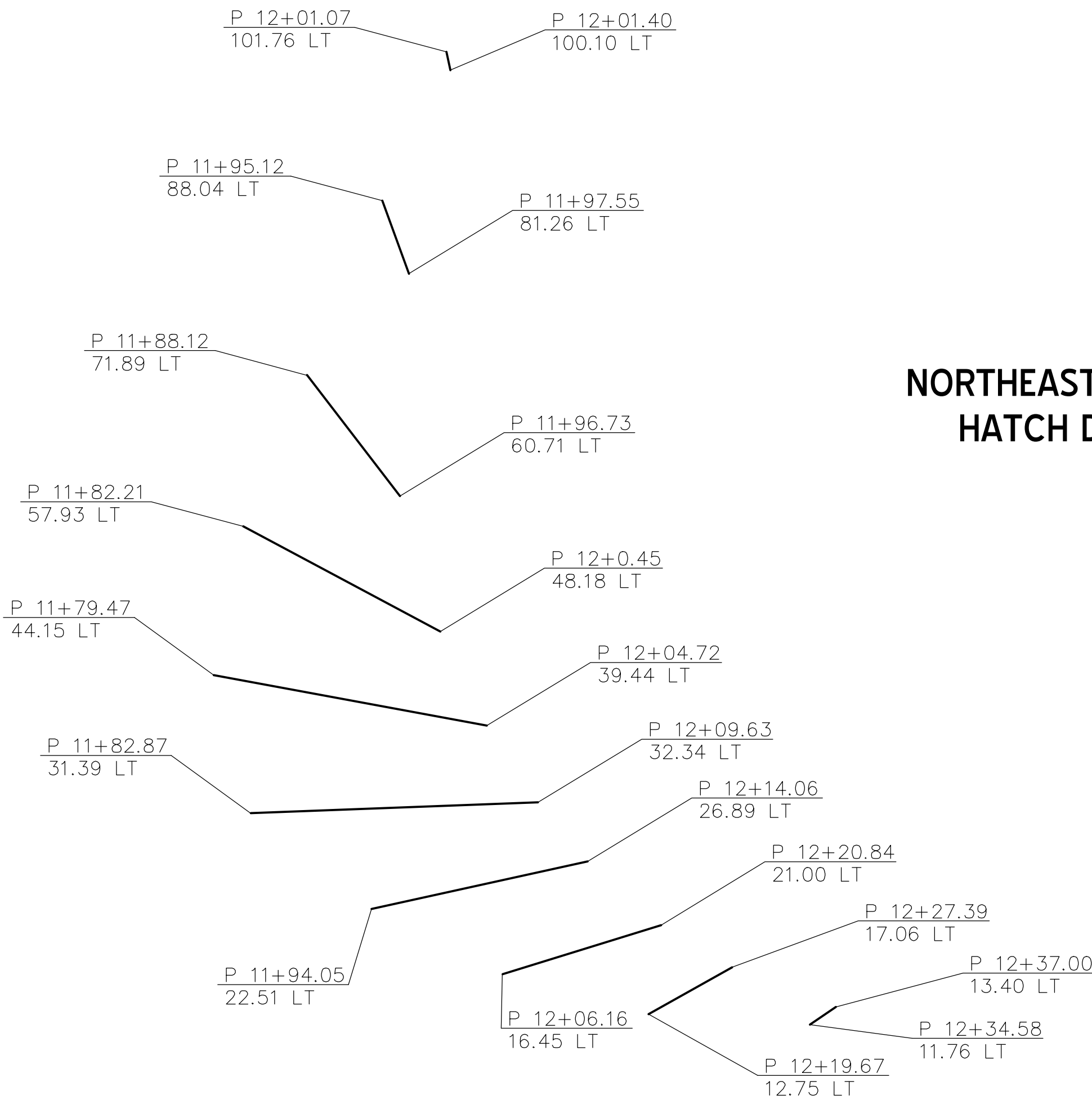


HTE HERMAN TRAFFIC ENGINEERING

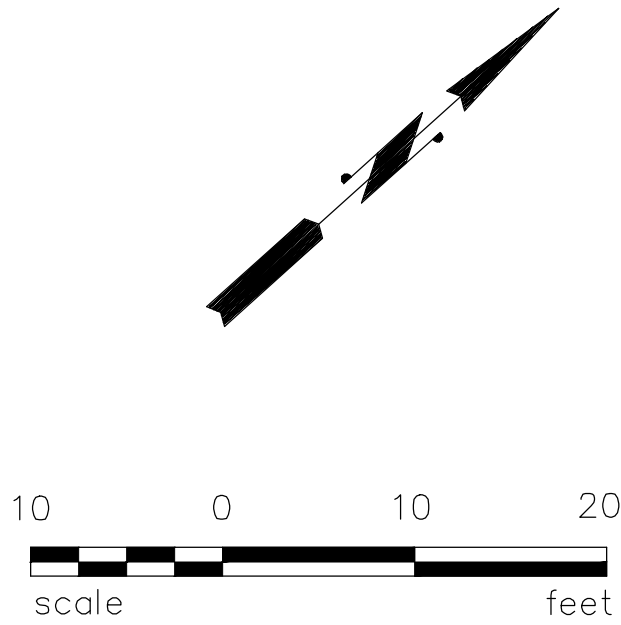
11215 Southeast 220th Place, Kent, Washington 98031
253-236-4941 tel. hte@comcast.net

I-5	MP 263.48	MK1
I-5 NB RAMPS/PORTAL WAY		
FERDALE, WHATCOM COUNTY		SHEET
MARCH, 2018		OF
PAVEMENT MARKING PLAN		SHEETS

SEC. 20, T. 39N. R. 2E., W.M.





NORTHEAST CORNER
HATCH DETAIL



GENERAL NOTES

1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

						REICHHARDT & EBE ENGINEERING, INC. P.O. Box 978 Lynden, Washington 98264						1-5		MP 263.48		MK2		
DRAWN	RMH											I-5 NB RAMPS/PORTAL WAY				SHEET		
DESIGNED	RMH											FERNDALE, WHATCOM COUNTY		MARCH, 2018		OF		
CHECKED	3/29/18 RMH											PAVEMENT MARKING PLAN				SHEETS		
PROJ. ENGR.																		
DRAWING FILE	MK_rev2.DWG																	
	DATE		REVISION		BY	APP'D												

A) POST LENGTHS AND "W" VALUES SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR PRIOR TO FABRICATION AND INSTALLATION.

B) FOR STRUCTURE AND MOUNTING DETAILS SEE STANDARD PLAN SERIES "G".

C) FOR CODE REFERENCES AND STANDARD DETAILS SEE WASHINGTON STATE SIGN FABRICATION MANUAL.

D) ALL 2.5" PERFORATED SQUARE STEEL TUBE (PSST) POSTS SHALL BE 12 GAGE.

E) 2.5" SQ (SB) AND 2.5" SQ (5) PSST POSTS SHALL HAVE A 12 GAGE 2 1/4" PSST INSERT OF THE SAME LENGTH.

F) ALL WIDE FLANGE STEEL POSTS SHALL BE ASTM A36.

G) ALL ROUND STEEL POSTS ARE MEASURED TO OUTSIDE DIAMETER AND SHALL HAVE TYPE AP SIGN SUPPORTS.

H) ALL SIGNS 36" OR WIDER SHALL BE BRACED IN ACCORDANCE WITH STANDARD PLAN G-50.10.

I) 5", 6", 7" AND 8" SQUARE STEEL TUBE SIGN POSTS SHALL HAVE TYPE TP-B BASES. ASTM A36 W6x12 FOUNDATION SPECIFICATIONS SHALL BE USED UNLESS OTHERWISE NOTED IN THE PLANS.

J) NOT USED.

K) 3" SOLID SQUARE STEEL TUBE POSTS SHALL BE 7 GAGE AND SHALL HAVE A 10" TRIANGULAR SLIP BASE UNLESS OTHERWISE NOTED. SEE STANDARD PLAN G-24.40, TYPE SB-1 AND SB-3 SLIP BASE ASSEMBLY.

L) NOT USED.

M) NOT USED.

N) ALL OVERHEAD SIGN MOUNTING HARDWARE SHALL BE NEW UNLESS OTHERWISE SHOWN ON THE PLANS OR SIGN SPECIFICATION SHEETS.

* FOR YELLOW BACKGROUND USE TYPE VIII OR IX FLUORESCENT SHEETING.

SEE STANDARD PLANS G-24.40 AND G-24.50

DRAWN RMH				REICHHARDT & EBE ENGINEERING, INC.					I-5 NB RAMPS/PORTAL WAY				I-5	MP 263.48	SS1
DESIGNED RMH				P.O. Box 978					HERMAN TRAFFIC ENGINEERING				FERDALE, WHATCOM COUNTY		SHEET
CHECKED 3/29/18 RMH				Lynden, Washington 98264					CITY OF FERDALE				MARCH, 2018		OF
PROJ. ENGR.				P.O. Box 936					11215 Southeast 220th Place, Kent, Washington 98031				SIGN SPECIFICATIONS		SHEETS
DRAWING FILE SN_rev2.DWG				Ferndale, Washington 98248				253-236-4941 tel. hte@comcast.net							
DATE				REVISION											
BY				APP'D											

SIGN SPECIFICATIONS

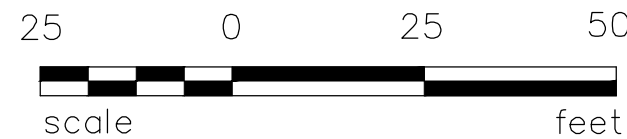
SIGN NO.	SIGN CODE	SIGN DESCRIPTION	LOCATION	SIGN SIZE		SHEETING TYPE	LETTER SIZE OR CODE	POST MATERIAL	POST SIZE	POST LENGTH				CLEARANCE		REMARKS
				X	Y					H1	H2	H3	H4	V	W	
1A	W2-6P	ROUNDAABOUT AHEAD	P 6+71, RT	36"	18"	III OR IV	STANDARD	STEEL	2.5" SQ (5)	15'				11.25'	14'	SEE CN 1
1B	W2-6	ROUNDAABOUT SYMBOL		36"	36"	III OR IV	STANDARD							7'		MOUNT BELOW SIGN NO. 1A
1C	W13-1 (10)	10 MPH		24"	24"	III OR IV	STANDARD							5'		MOUNT BELOW SIGN NO. 1B
2	D1-901 MOD.	I-5 NORTH VANCOUVER B.C.	P 10+45, RT	9.5'	6.5'	II	SEE DETAIL	STEEL	3" SQ (SB)	14'	16'			7'	16'	SEE CN 2
		WITH LEFT FISHHOOK ARROW														
R-3		I-5 NORTH VANCOUVER B.C.	P 10+54, RT													REMOVE SIGN AND WOOD POSTS (2)
		WITH LEFT ARROW														
4		14'-0"	P 10+43, LT					STEEL	2.5" SQ (5)	14'				7'	13'	RELOCATE SIGN FROM P 10+87 LT, SEE CN 1
R-5		WOOD POST	P 10+87, LT													REMOVE WOOD POST
6		VISITOR INFORMATION	P 10+59, LT					LIGHT STANDARD						7'	15'	RELOCATE WITH LIGHT STANDARD
7A	R1-2	YIELD	P 10+88, RT	36"	36"	III OR IV	STANDARD	STEEL	2.5" SQ (5)	13'				7.5'	16'	SEE CN 1
7B	R6-5P	ROUNDAABOUT DIRECTIONAL		30"	30"	III OR IV	SEE DETAIL							5'		MOUNT BELOW SIGN NO. 7A
R-8		STOP	P 11+16, RT													REMOVE SIGN AND WOOD POST
9		DO NOT ENTER	P 11+22, RT						3" SQ (SB)	14'				7'	10'	RELOCATE SIGN FROM P 11+16 RT, SEE CN3
10		ONE WAY>	P 11+22, RT											11'		RELOCATE SIGNS (2) FROM P 11+16 RT TO ABOVE
		<ONE WAY												11'		AND PERPENDICULAR TO SIGN NO. 9
R-11		STOP	P 11+70, RT													REMOVE SIGN AND WOOD POST
12		DO NOT ENTER	P 11+74, RT						3" SQ (SB)	14'				7'	16'	RELOCATE SIGN FROM P 11+70 RT, SEE CN 2
13		ONE WAY>	P 11+74, RT											11'		RELOCATE SIGNS (2) FROM P 11+70 RT TO ABOVE
		<ONE WAY												11'		AND PERPENDICULAR TO SIGN NO. 12
14A	R1-2	YIELD	P 11+66, RT	36"	36"	III OR IV	STANDARD	STEEL	2.5" SQ (SB)	13'				7.5'	16'	SEE CN 2
14B	R6-5P	ROUNDAABOUT DIRECTIONAL		30"	30"	III OR IV	SEE DETAIL							5'		MOUNT BELOW SIGN NO. 14A
15A	R1-2	YIELD	P 12+08, LT	36"	36"	III OR IV	STANDARD	STEEL	2.5" SQ (5)	13'				7.5'	23'	SEE CN 2
15B	R6-5P	ROUNDAABOUT DIRECTIONAL		30"	30"	III OR IV	SEE DETAIL							5'		MOUNT BELOW SIGN NO. 15A
16		I-5 SOUTH^ NORTH>	P 13+94, LT					STEEL	2.5" SQ (5)	15'				7'	17'	SEE CN 2
R-17		WOOD POST	P 12+15, LT													REMOVE WOOD POST
18A	W2-6P	ROUNDAABOUT AHEAD	P 17+26, LT	36"	18"	III OR IV	STANDARD	STEEL	2.5" SQ (5)	15'				11.25'	14'	SEE CN 2
18B	W2-6	ROUNDAABOUT SYMBOL		36"	36"	III OR IV	STANDARD							7'		MOUNT BELOW SIGN NO. 18A
18C	W13-1 (10)	10 MPH		24"	24"	III OR IV	STANDARD							5'		MOUNT BELOW SIGN NO. 18B
R-19		STOP AHEAD	SEE PLAN DIMENSION													REMOVE SIGN AND TRIM POST
20A	W2-6P	ROUNDAABOUT AHEAD	SEE PLAN DIMENSION	36"	18"	III OR IV	STANDARD	STEEL	2.5" SQ (SB)	15'				11.25'	14'	SEE CN 2
20B	W2-6	ROUNDAABOUT SYMBOL		36"	36"	III OR IV	STANDARD							7'		MOUNT BELOW SIGN NO. 20A
20C	W13-1 (10)	10 MPH		24"	24"	III OR IV	STANDARD							5'		MOUNT BELOW SIGN NO. 20B

CONSTRUCTION NOTES (CN):

1. EDGE OF SIGN SHALL BE MINIMUM 2' BEHIND BACK OF SIDEWALK.
2. EDGE OF SIGN SHALL BE MINIMUM 6' BEHIND EDGE OF PAVEMENT.
3. EDGE OF SIGN SHALL BE MINIMUM 2' BEHIND FACE OF CURB.

DRAWN RMH DESIGNED RMH CHECKED 3/29/18 RMH PROJ. ENGR. DRAWING FILE SN_rev2.DWG				REICHHARDT & EBE ENGINEERING, INC. P.O. Box 978 Lynden, Washington 98264 CITY OF FERDALE P.O. Box 936 Ferndale, Washington 98248						<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> 1-5 MP 263.48 </div> <div style="text-align: center;"> <h2 style="margin: 0;">1-5 NB RAMPS/PORTAL WAY</h2> <p style="margin: 0;">FERDALE, WHATCOM COUNTY MARCH, 2018</p> <h3 style="margin: 0;">SIGN SPECIFICATIONS</h3> </div> </div>		SS2 SHEET OF SHEETS	
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W2-6P (1A)
W2-6 (1B)
W13-1 (10) (1C)

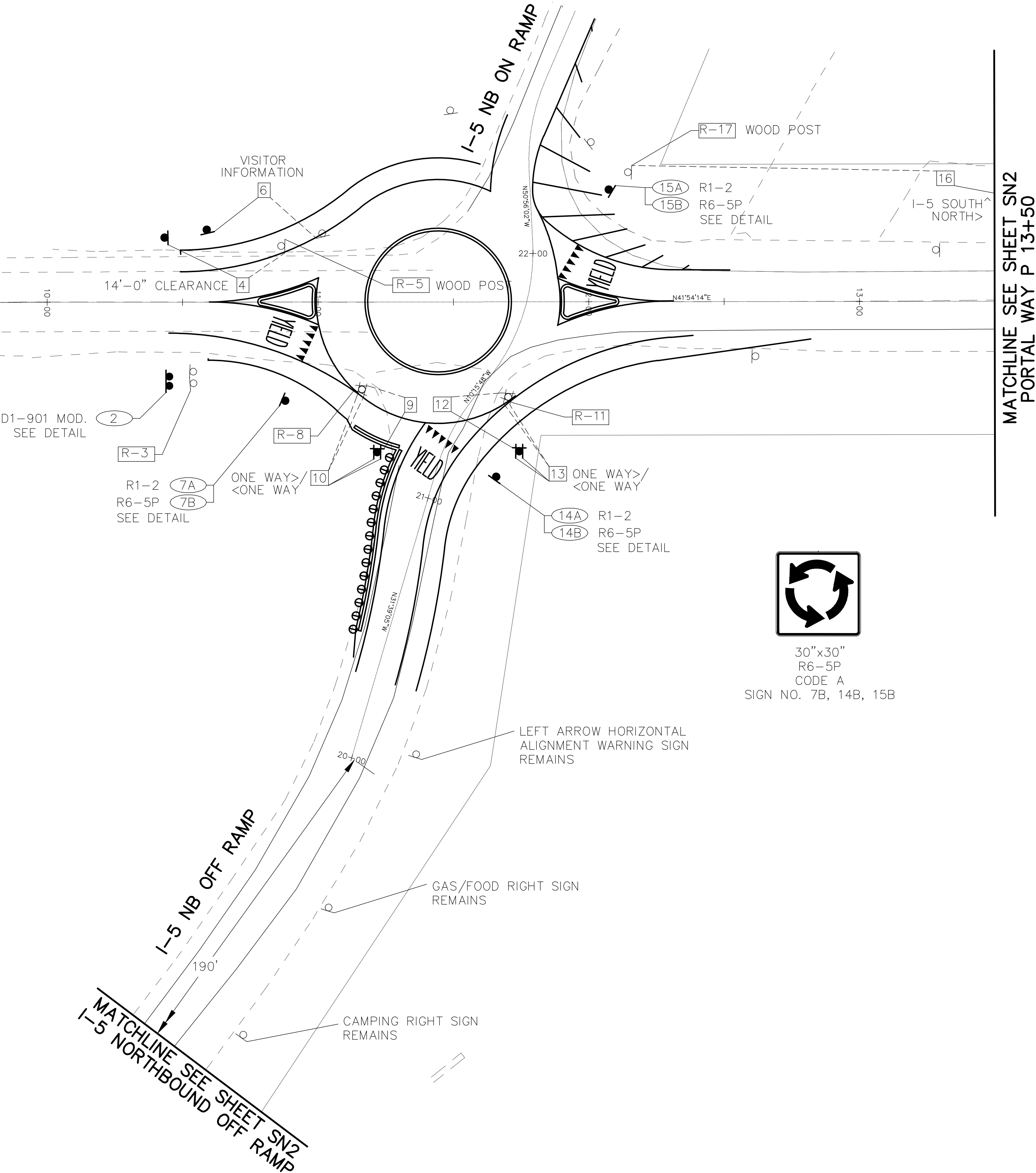


LEGEND

- SIGN NOTE
- SIGN REMOVAL NOTE
- PROPOSED LOCATION
- SIGN RELOCATION NOTE
- EXISTING LOCATION
- EXISTING SIGN & POST
- NEW SIGN & POST(S)



9.5'x6.5'
D1-901 MOD.
CODE A
SIGN NO. 2



DRAWN	RMH				
DESIGNED	RMH				
CHECKED	3/29/18 RMH				
PROJ. ENGR.					
DRAWING FILE	SN_rev2.DWG				
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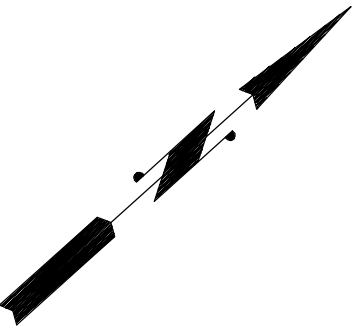
I-5	MP 263.48	SN1
I-5 NB RAMPS/PORTAL WAY		
FERDALE, WHATCOM COUNTY		SHEET
MARCH, 2018		OF
SIGNING PLAN		SHEETS

SEC. 20, T. 39N. R. 2E., W.M.

MATCHLINE SEE SHEET SN1
I-5 NORTHBOUND OFF RAMP

LEGEND

- SIGN NOTE
- SIGN REMOVAL NOTE
- PROPOSED LOCATION
- SIGN RELOCATION NOTE
- EXISTING LOCATION
- EXISTING SIGN & POST
- NEW SIGN & POST(S)



I-5 NB OFF RAMP

PORTAL WAY

MATCHLINE SEE SHEET SN1
PORTAL WAY P 13+50

W2-6P 18A
W2-6 18B
W13-1 (10) 18C

RIGHT ARROW HORIZONTAL
ALIGNMENT WARNING SIGN
REMAINS

WRONG WAY SIGN
REMAINS

CURVE WARNING SIGN
35 MPH PLAQUE
REMAIN

EXIT 263 RIGHT SIGN
REMAINS

20A W2-6P
20B W2-6
20C W13-1 (10)

DRAWN	RMH				
DESIGNED	RMH				
CHECKED	3/29/18 RMH				
PROJ. ENGR.					
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I-5 MP 263.48

I-5 NB RAMPS/PORTAL WAY

FERDALE, WHATCOM COUNTY MARCH, 2018

SIGNING PLAN

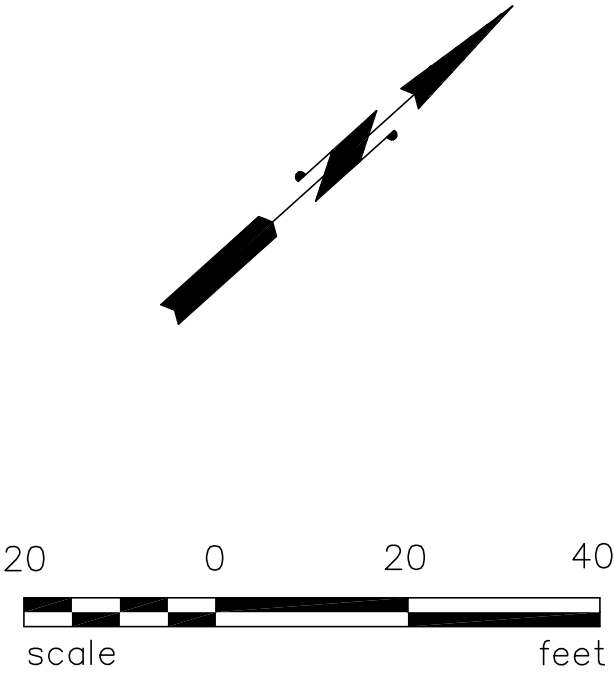
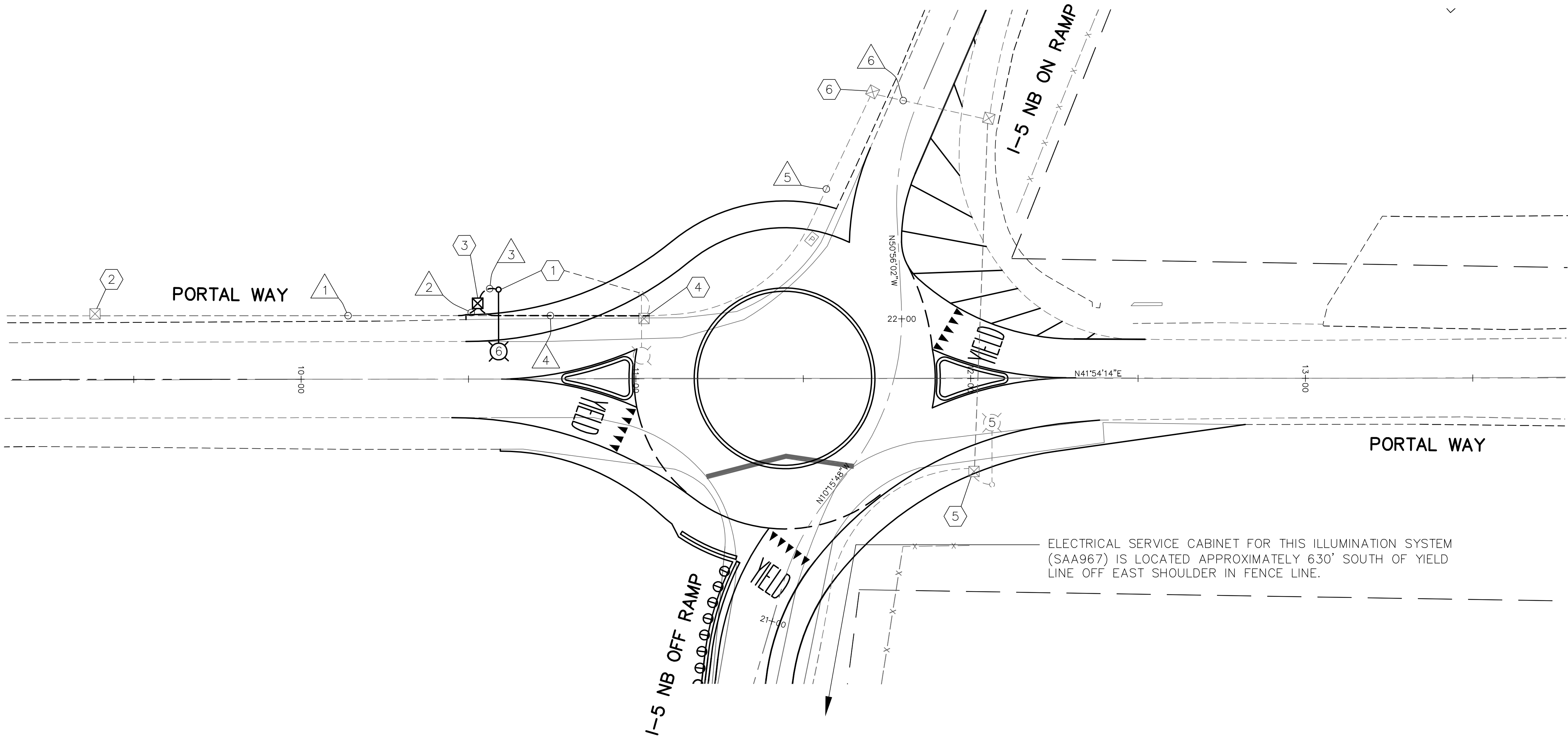
SN2

SHEET

OF

SHEETS

SEC. 20, T. 39N. R. 2E., W.M.



LEGEND

EXISTING	PROPOSED	
		LIGHT STANDARD AND LUMINAIRE
		TYPE 1 JUNCTION BOX
		CONDUIT
		CONSTRUCTION NOTE
		WIRE NOTE

GENERAL NOTES

1.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2016 WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND ITS AMENDMENTS, SPECIAL PROVISIONS, WSDOT STANDARD PLANS AND NATIONAL ELECTRICAL CODE (ALL CURRENT VERSIONS).
2.
- WORK SHALL BE STAGED SO NO PORTION OF EXISTING STREET LIGHTING SYSTEM IS INOPERABLE DURING HOURS OF DARKNESS.
3.
- INSTALL A ONE FOOT WIDE AND ONE FOOT DEEP RECTANGULAR CONCRETE COLLAR AROUND THE PERIMETER OF EACH NEW TYPE 1 AND TYPE 2 JUNCTION BOX INSTALLED IN GRADE. THE EXPOSED PORTIONS SHALL BE FORMED TO HAVE A NEAT APPEARANCE. THE TOP EDGES SHALL HAVE A 3/4-INCH CHAMFER ON THE TOP EDGE OF THE FOUNDATION. THE CONCRETE MIX DESIGN SHALL BE COMMERCIAL CONCRETE PER STANDARD SPECIFICATION 6-02.3(2)B.

CONSTRUCTION NOTES

- 1
- CONSTRUCT FOUNDATION AND RELOCATE EXISTING LIGHT STANDARD AND LUMINAIRE TO NEW FOUNDATION. REMOVE EXISTING FOUNDATION IN ITS ENTIRETY. SEE LUMINAIRE SCHEDULE. USE WSDOT STANDARD PLAN J-28.30-03.
- 2
- DISCONNECT EXISTING CONDUCTORS AT JUNCTION BOX TO EAST AND PULL BACK TO JUNCTION BOX. REPULL EXISTING CONDUCTORS THROUGH NEW CONDUIT TO NEW JUNCTION BOX TO EAST.
- 3
- INTERCEPT EXISTING CONDUIT AND SWEEP INTO NEW JUNCTION BOX (WEST RUN ONLY). INSTALL OTHER CONDUIT AND CONDUCTORS PER WIRING SCHEDULE.
- 4
- REMOVE EXISTING JUNCTION BOX, CONDUIT SWEEPS AND CONDUCTORS. EXTEND EXISTING CONDUIT WEST TO JUNCTION BOX AT NEW LIGHT STANDARD LOCATION. ABANDON EXISTING CONDUIT TO WEST.
- 5
- ADJUST EXISTING JUNCTION BOX TO GRADE.
- 6
- SPLICE EXISTING CONDUCTORS TO NEW CONDUCTORS IN EXISTING JUNCTION BOX.

LUMINAIRE SCHEDULE

LUM. NO.	POLE LOCATION	CIRCUITS	TYPE-DISTRIBUTION-WATTAGE	MAST ARM LENGTH	H1	FOUNDATION TYPE	BASE TYPE
6	STA 10+59.00, 26.73' LT.	EX A	EX	EX	EX	B	EX

WIRING SCHEDULE

CONDUIT RUN △	CONDUIT SIZE	CONDUCTORS		CIRCUIT	REMARKS
		ILLUM #8	GROUND #8		
1	EX 1.25"	EX 2	EX 1	B	REMOVE AND REPULL EX CONDUCTORS
2	1.25"	EX 2	EX 1	B	REROUTE EX CONDUCTORS THRU NEW CONDUIT
3	1"	2	1	A	
4	1.25"	4	1	A,B	EXTEND EX CONDUIT TO NEW JUNCTION BOX
5	EX 1.25"	4	1	A,B	REPLACE EX CONDUCTORS
6	EX 2"	EX 4	EX 1	A,B	EX CONDUIT AND CONDUCTORS REMAIN

NOTE: WHERE EXISTING CONDUITS WILL BE EXTENDED, CONTRACTOR SHALL VERIFY EXISTING CONDUIT TYPE AND SIZE PRIOR TO PROCURING MATERIALS.

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DESIGNED	RMH											FERNDALE, WHATCOM COUNTY		MARCH, 2018	
CHECKED	3/29/18 RMH											ILLUMINATION PLAN		OF	
PROJ. ENGR.														SHEETS	
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		DATE		REVISION		BY	APP'D								

SEC. 20, T. 39N. R. 2E., W.M.

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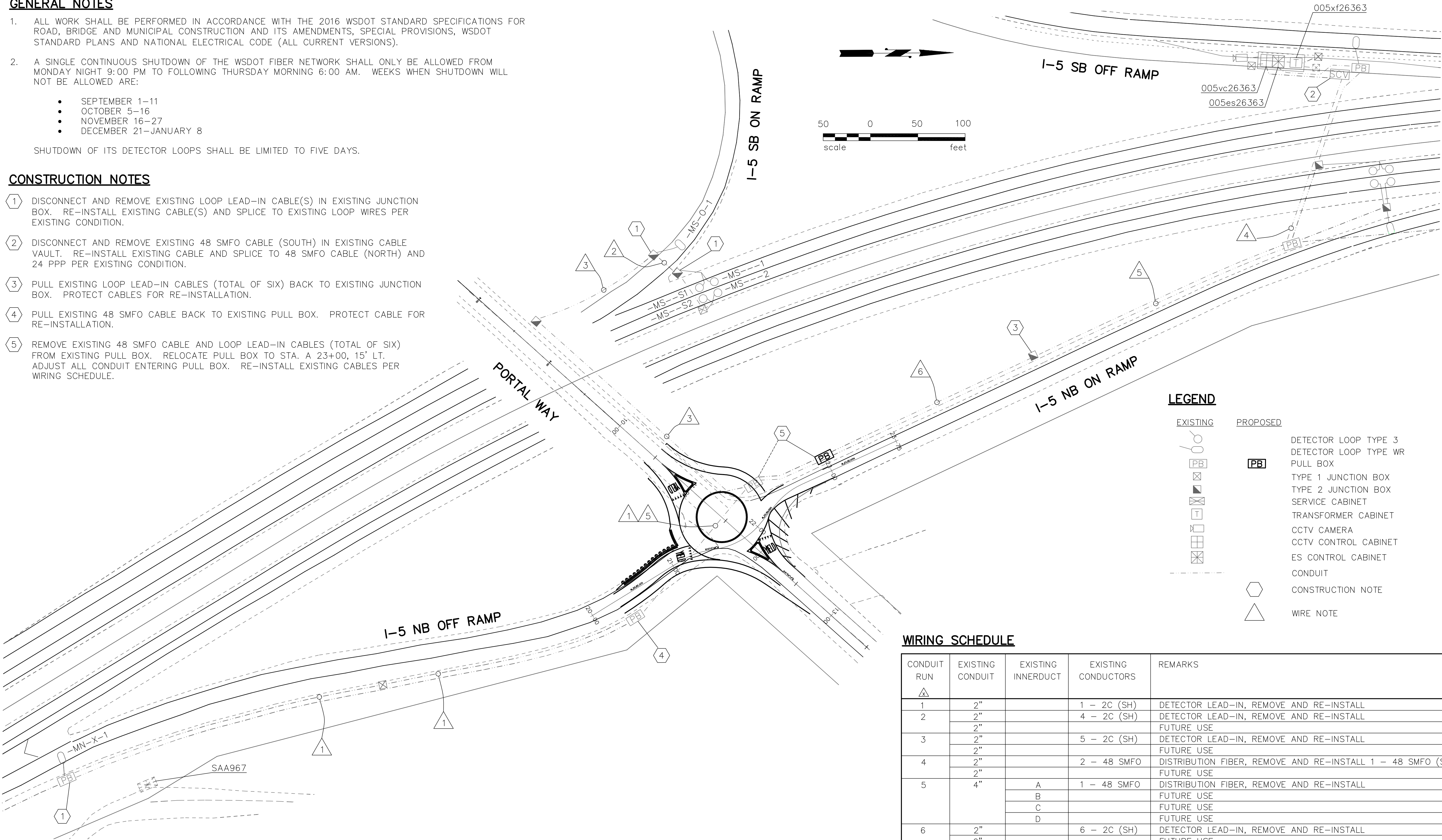
2.
- A SINGLE CONTINUOUS SHUTDOWN OF THE WSDOT FIBER NETWORK SHALL ONLY BE ALLOWED FROM MONDAY NIGHT 9:00 PM TO FOLLOWING THURSDAY MORNING 6:00 AM. WEEKS WHEN SHUTDOWN WILL NOT BE ALLOWED ARE:

- SEPTEMBER 1–11
- OCTOBER 5–16
- NOVEMBER 16–27
- DECEMBER 21–JANUARY 8

SHUTDOWN OF ITS DETECTOR LOOPS SHALL BE LIMITED TO FIVE DAYS.

CONSTRUCTION NOTES

- 1
- DISCONNECT AND REMOVE EXISTING LOOP LEAD-IN CABLE(S) IN EXISTING JUNCTION BOX. RE-INSTALL EXISTING CABLE(S) AND SPLICE TO EXISTING LOOP WIRES PER EXISTING CONDITION.
- 2
- DISCONNECT AND REMOVE EXISTING 48 SMFO CABLE (SOUTH) IN EXISTING CABLE VAULT. RE-INSTALL EXISTING CABLE AND SPLICE TO 48 SMFO CABLE (NORTH) AND 24 PPP PER EXISTING CONDITION.
- 3
- PULL EXISTING LOOP LEAD-IN CABLES (TOTAL OF SIX) BACK TO EXISTING JUNCTION BOX. PROTECT CABLES FOR RE-INSTALLATION.
- 4
- PULL EXISTING 48 SMFO CABLE BACK TO EXISTING PULL BOX. PROTECT CABLE FOR RE-INSTALLATION.
- 5
- REMOVE EXISTING 48 SMFO CABLE AND LOOP LEAD-IN CABLES (TOTAL OF SIX) FROM EXISTING PULL BOX. RELOCATE PULL BOX TO STA. A 23+00, 15' LT. ADJUST ALL CONDUIT ENTERING PULL BOX. RE-INSTALL EXISTING CABLES PER WIRING SCHEDULE.



DRAWN	RMH				
DESIGNED	RMH				
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