

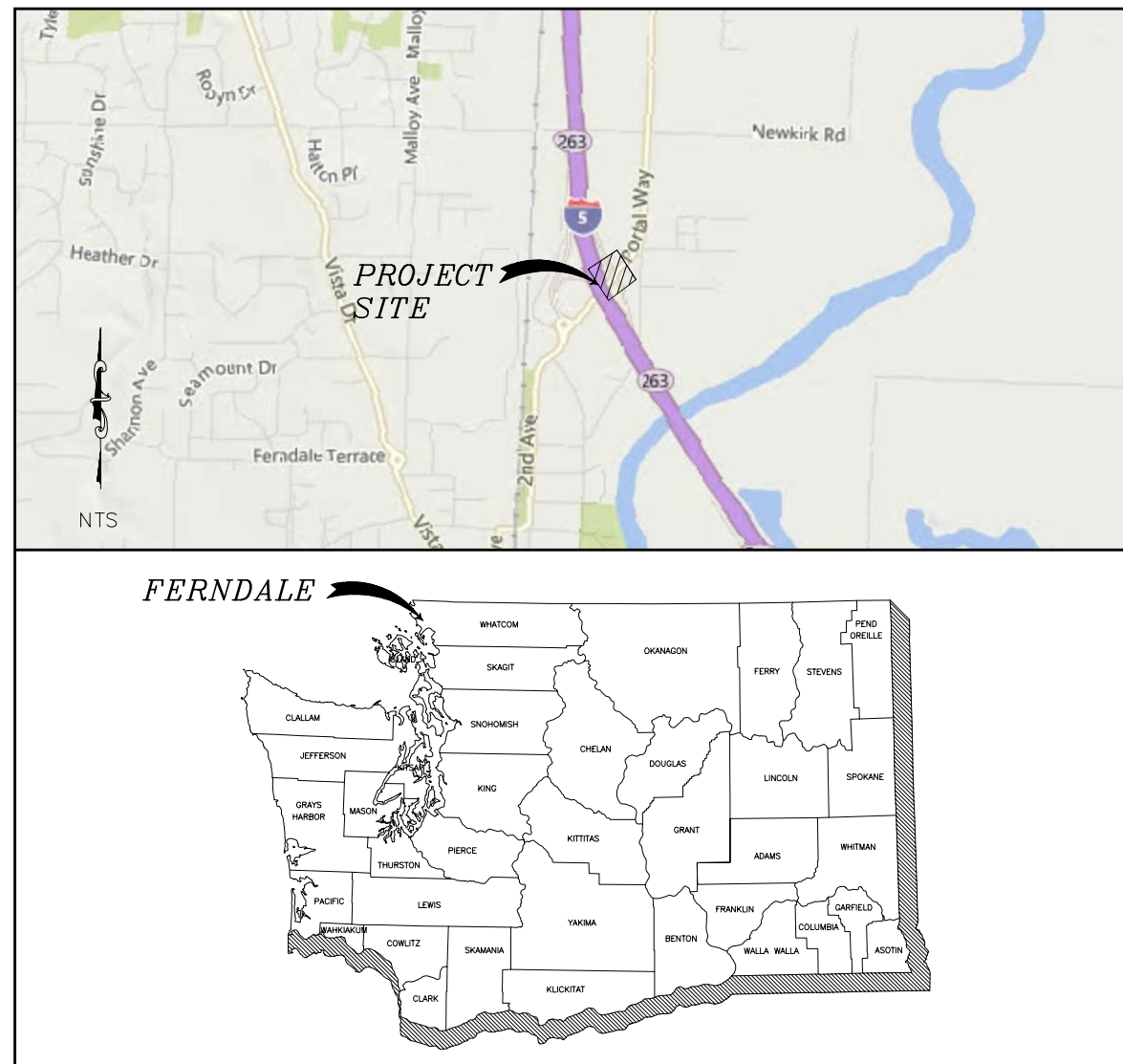
# PORTAL WAY / I-5 ROUNDAABOUT IMPROVEMENTS

FERNDALE, WA

PROJECT No. ST2016-03

## VICINITY MAP

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



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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

**ABBREVIATIONS**

# = 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	PVMNT = 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 = SOUTHWEST
CMU = CONCRETE MASONRY UNIT	GV = GATE VALVE	PORTLAND CEMENT CONCRETE	TEL = TELEPHONE
COMP = COMPACTED	HDPE = HIGH DENSITY POLYETHYLENE	FED = PEDESTAL	TL = TRAFFIC LOOP
CON = CONIFER	HMA = HOT MIX ASPHALT	POC = POINT ON CURVE	TYP = 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	IE, INV = INVERT ELEVATION	PROP = PROPOSED	VC = VERTICAL CURVE
STORM SEWER PIPE	IW = INJECTION WELL	PT = POINT OF TANGENCY	VLT = VAULT
CULV = CULVERT	L = LENGTH	PVC = POLYVINYL CHLORIDE	VPC = VERTICAL POINT OF CURVATURE
D/W = DRIVEWAY	LDCS = LANDSCAPING	PVI = POINT OF VERTICAL INTERSECTION	VPI = VERTICAL POINT OF INTERSECTION
DEC = DECIDUOUS	LF = LINEAR FEET	PWR = POWER	VPT = VERTICAL POINT OF TANGENCY
DI = DUCTILE IRON	LOC = LOCATION	R = RADIUS	W = WEST
E = EAST	LP = LOW POINT	R&C = RING AND COVER	WM = WATER METER
EOP, EP = EDGE OF PAVEMENT	LT = LEFT	RET = RETAINING	WSDOT = WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
EQUIV = EQUIVALENT	MAX = MAXIMUM	ROW = RIGHT OF WAY	XEOA = EXISTING EDGE OF ASPHALT
EVCE = END VERTICAL CURVE ELEVATION	MIN = MINIMUM	RT = RIGHT	

**NOTES**

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

**LEGEND**

<b>EXISTING</b>		<b>PROPOSED</b>	
--- TB --- TB	= EXISTING TOP OF BANK	--- TB --- TB	= PROPOSED TOP OF BANK
--- BB --- BB	= EXISTING BOTTOM OF BANK	--- BB --- BB	= PROPOSED BOTTOM OF BANK
---	= EXISTING DITCH	---	= PROPOSED DITCH
---	= EXISTING GRADE BREAK	---	= PROPOSED GRADE BREAK
-95-	= EXISTING MAJOR CONTOUR	-95-	= PROPOSED MAJOR CONTOUR
--- -95---	= EXISTING MINOR CONTOUR	--- -95---	= PROPOSED MINOR CONTOUR
□ □ □ □	= EXISTING GUARDRAIL	□ □ □ □	= PROPOSED GUARDRAIL
--- X --- X --- X ---	= EXISTING FENCE	--- X --- X --- X ---	= PROPOSED FENCE
---	= EXISTING GRAVEL	---	= PROPOSED GRAVEL
---	= EXISTING WALL	---	= PROPOSED WALL
////	= EXISTING BUILDING	////	= PROPOSED BUILDING
---	= EXISTING PROPERTY BOUNDARY	---	= PROPOSED PROPERTY BOUNDARY
---	= EXISTING RIGHT OF WAY	---	= PROPOSED RIGHT OF WAY
---	= EXISTING RIGHT OF WAY Ⓞ	---	= PROPOSED RIGHT OF WAY Ⓞ
---	= EXISTING EASEMENT	---	= PROPOSED CONSTRUCTION EASEMENT
---	= EXISTING ROAD	---	= PROPOSED ROAD
---	= EXISTING WETLANDS BOUNDARY	---	= PROPOSED SAWCUT
---	= EXISTING TRAFFIC STRIPING	---	= PROPOSED TRAFFIC STRIPING
---	= EXISTING EDGE OF PAVEMENT	---	= PROPOSED ROAD EDGE OF PAVEMENT
---	= EXISTING FLOWLINE	---	= PROPOSED CURB AND GUTTER
---	= EXISTING TOP BACK OF CURB	---	= PROPOSED PATH
---	= EXISTING SIDEWALK	---	= PROPOSED SIDEWALK
---UGP---	= EXISTING POWER BURIED	PR	= PROPOSED POWER LINE
---OHP---	= EXISTING OVERHEAD POWER	◇◇◇◇◇◇◇◇◇◇	= PROPOSED ROCK WALL
---UGC---	= EXISTING COMMUNICATIONS BURIED	---	= PROPOSED PARKING STRIPE
---OHC---	= EXISTING OVERHEAD COMMUNICATIONS	TS	= PROPOSED TRAFFIC SIGNAL CONDUCTOR
---FO---	= EXISTING FIBER OPTICS BURIED	FO	= PROPOSED FIBER OPTICS
---TV---	= EXISTING TV BURIED	--- X --- X --- X ---	= PROPOSED SILT FENCE
---T---	= EXISTING TELEPHONE BURIED	C	= PROPOSED CONDUIT
---C---	= EXISTING CONDUIT	---	= PROPOSED HANDRAIL
---G---	= EXISTING GAS MAIN	IRR	= PROPOSED IRRIGATION LINE
---W---	= EXISTING WATER MAIN	W	= PROPOSED WATER MAIN
---IRR---	= EXISTING IRRIGATION LINE	FM	= PROPOSED SANITARY SEWER FORCE MAIN
---FM---	= EXISTING SANITARY SEWER FORCE MAIN	SS	= PROPOSED SANITARY SEWER
---SS---	= EXISTING SANITARY SEWER	SD	= PROPOSED STORM DRAIN
---SD---	= EXISTING STORM DRAIN	---	= PROPOSED CULVERT
---OHV---	= EXISTING ORDINARY HIGH WATER	---	= PROPOSED TREE LINE
---	= EXISTING CULVERT	---	= PROPOSED CONC. SIDEWALK/DRIVEWAY
---	= EXISTING TREE LINE	---	= PROPOSED INFILTRATION TRENCH
---	= EXISTING CONCRETE	---	= PROPOSED INFILTRATION FILTER MEDIA
---	= EXISTING RR TRACKS	---	= PROPOSED GRIND
---	= EXISTING SIGNAL POLE	---	= PROPOSED DEMOLITION AREA
---	= EXISTING SIGNAL POLE W/ LUMINAIRE	---	= PROPOSED ASPHALT
---	= EXISTING STREET LIGHT ASSEMBLY	---	= PROPOSED RIGHT OF WAY TAKE
---	= EXISTING YARD LIGHT	---	= PROPOSED STORM DRAIN INLET
---	= EXISTING GUY WIRE	---	= PROPOSED COUPLER
---	= EXISTING GAS METER	---	= PROPOSED WATER METER
---	= EXISTING GAS VALVE	---	= PROPOSED WATER VALVE
---	= EXISTING TRANSFORMER PAD	---	= PROPOSED STORM DRAIN CATCH BASIN TYPE II
---	= EXISTING POWER VAULT	---	= PROPOSED SANITARY SEWER MANHOLE
---	= EXISTING JBOX	---	= PROPOSED STORM DRAIN CATCH BASIN TYPE I
---	= EXISTING SOIL BORING LOCATION	---	= PROPOSED HYDRANT
---	= EXISTING MAIL BOX	---	= PROPOSED UTILITY POLE
---	= EXISTING WATER SPIGOT	---	= PROPOSED JBOX (TYPE I, II, III)
---	= EXISTING WATER BLOW OFF	---	= PROPOSED MONITORING WELL
---	= EXISTING WATER METER	---	= PROP STORM CLEANOUT
---	= EXISTING WATER VALVE	---	= PROPOSED SANITARY SEWER CLEAN OUT
---	= EXISTING FIRE HYDRANT	---	= PROPOSED SIGN
---	= EXISTING TRAFFIC SIGNAL VAULT	---	= FLOW ARROW
---	= EXISTING SEWER MANHOLE	---	= PROPOSED TREE
---	= EXISTING STORM DRAIN CATCH BASIN TYPE I	---	
---	= EXISTING STORM DRAIN CATCH BASIN TYPE II	---	
---	= EXISTING UTILITY POLE	---	
---	= EXISTING MONITORING WELL	---	
---	= EXISTING STORM CLEANOUT	---	
---	= EXISTING SEWER CLEANOUT	---	
---	= EXISTING SIGN	---	
---	= EXISTING TELEPHONE PEDESTAL	---	
---	= EXISTING COMMUNICATIONS VAULT	---	
---	= EXISTING BENCH MARK	---	
---	= EXISTING NAIL AND SHINER	---	
---	= EXISTING IRON PIPE	---	
---	= EXISTING MONUMENT (IN CASE)	---	
---	= EXISTING MONUMENT (SURFACE)	---	
---	= EXISTING ANGLE POINT	---	
---	= EXISTING TREE STUMP	---	
---	= EXISTING TREE	---	
---	= EXISTING VEGETATION	---	

**CONSTRUCTION SET**

DESIGNED BY LP  
DRAWN BY RWG  
CHECKED BY LP

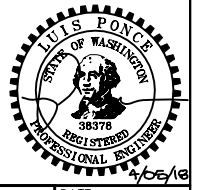
**R&E Reichhardt & Ebe ENGINEERING INC**  
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687  
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

**CITY OF FERNDALE**  
2095 MAIN ST  
FERNDALE, WA 98248

**PORTAL WAY / I-5**  
ROUNDABOUT IMPROVEMENTS  
LEGEND AND ABBREVIATIONS

DWG 16033 COVER		DATE 4/5/2018
JOB# 16033	SCALE H: N/A v: 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.

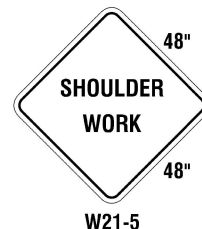
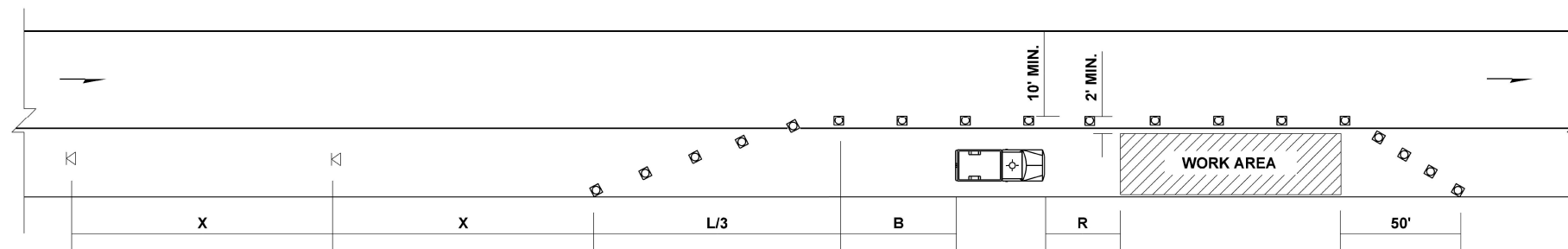
MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	-	-	-	-	-	-
10'	40	60	90	90	-	-	-	-	-	-

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**

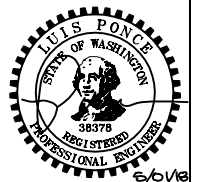
- ⊠ SIGN LOCATION
- ▣ CHANNELIZING DEVICES - TRAFFIC SAFETY DRUMS. TYPE C STEADY BURN WARNING LIGHTS REQUIRED DURING HOURS OF DARKNESS.
- PROTECTIVE VEHICLE

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

NOT TO SCALE

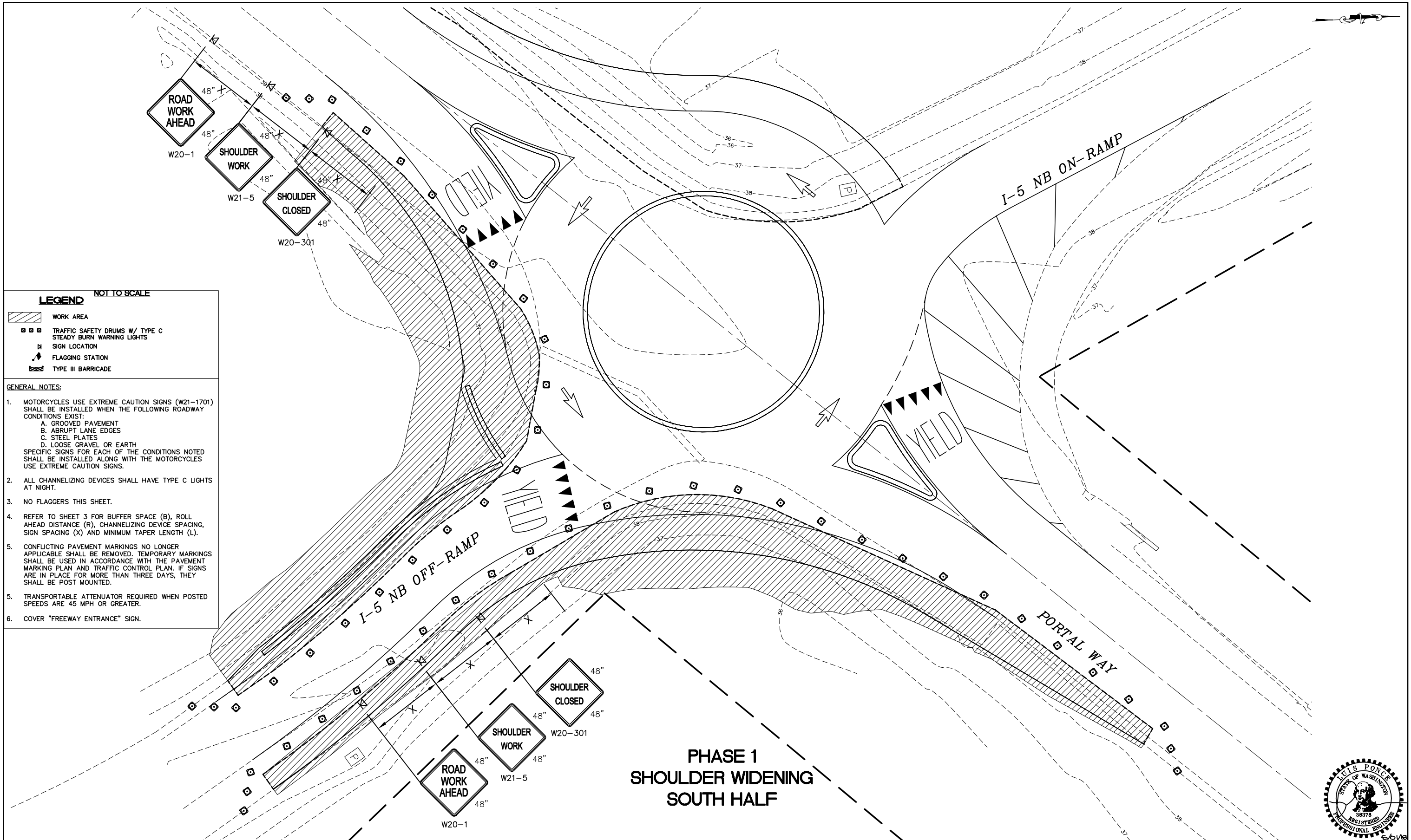
NOTES:

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



<b>CONSTRUCTION SET</b>	DESIGNED BY	<b>R&amp;E Reichhardt &amp; Ebe ENGINEERING INC</b> 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 ROUNDABOUT IMPROVEMENTS WSDOT TYPICAL SHOULDER CLOSURE	DWG 16033 TC PLAN		DATE
	DRAWN BY RWG		NO.	DATE	DESCRIPTION	BY			JOB# 16033	SCALE H: N/A V: N/A	DATE 5/1/2018

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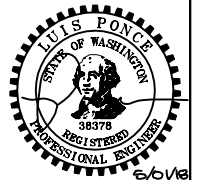


**LEGEND** NOT TO SCALE

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

- GENERAL NOTES:**
1. 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 EARTH
 SPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH THE MOTORCYCLES USE EXTREME CAUTION SIGNS.
  2. ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
  3. NO FLAGGERS THIS SHEET.
  4. REFER TO SHEET 3 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
  5. 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.
  5. TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.
  6. COVER "FREEWAY ENTRANCE" SIGN.

**PHASE 1  
SHOULDER WIDENING  
SOUTH HALF**



**CONSTRUCTION SET**

DESIGNED BY  
DRAWN BY  
CHECKED 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

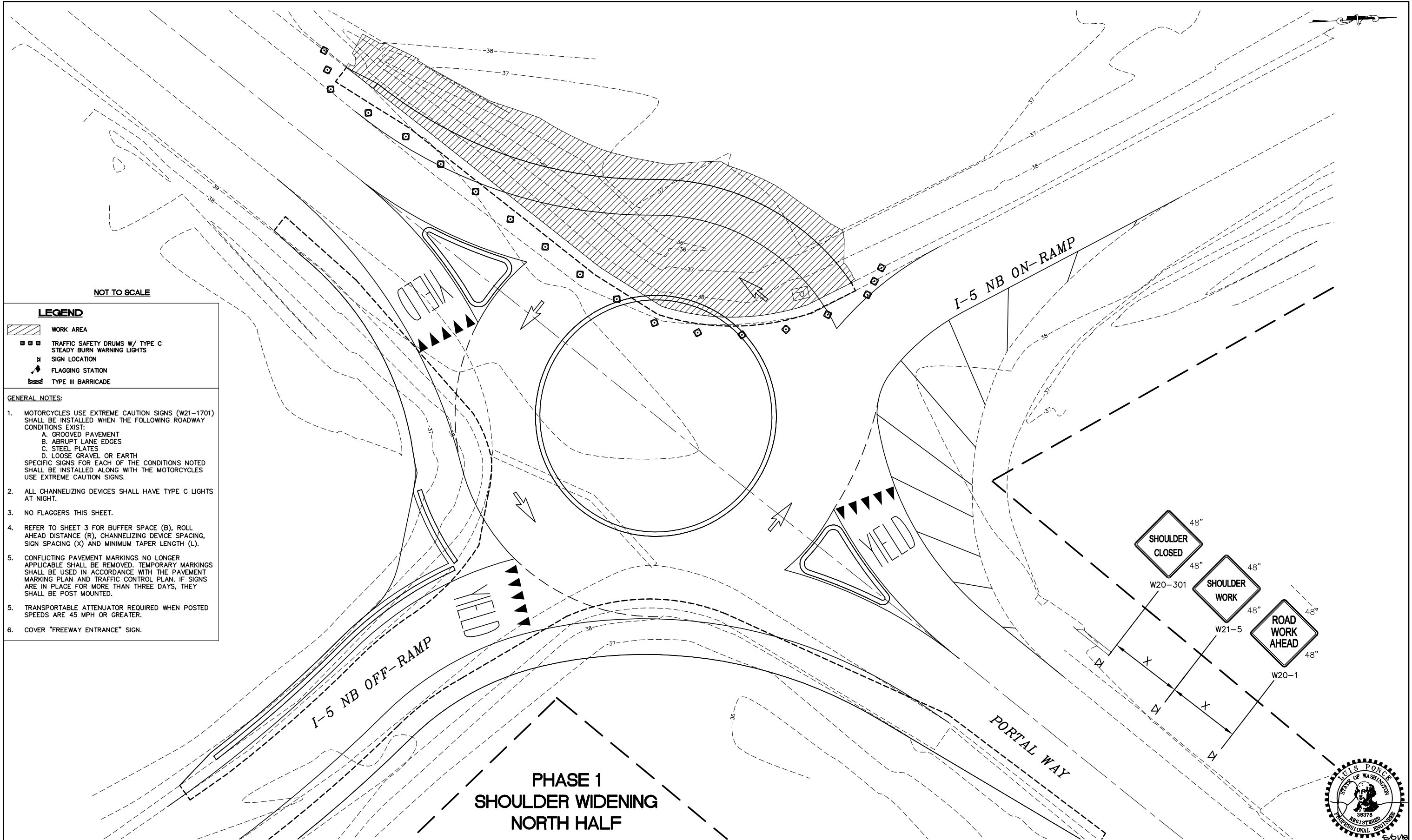
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE  
2095 MAIN ST  
FERDALE, WA 98248

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

DWG 16033 TC PLAN		DATE
JOB#	SCALE	SHEET
16033	H: N/A V: N/A	4 of 20

P:\Projects\16033 TC PLAN.dwg, 4/15/2018 10:58:16 AM, RCP, X:\dwg\Barricade



NOT TO SCALE

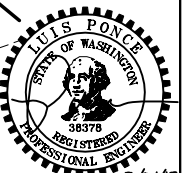
**LEGEND**

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

**GENERAL NOTES:**

1. 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 EARTH
 SPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH THE MOTORCYCLES USE EXTREME CAUTION SIGNS.
2. ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
3. NO FLAGGERS THIS SHEET.
4. REFER TO SHEET 3 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
5. 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.
5. TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.
6. COVER "FREEWAY ENTRANCE" SIGN.

**PHASE 1  
SHOULDER WIDENING  
NORTH HALF**



**CONSTRUCTION SET**

DESIGNED BY  
DRAWN BY  
CHECKED 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

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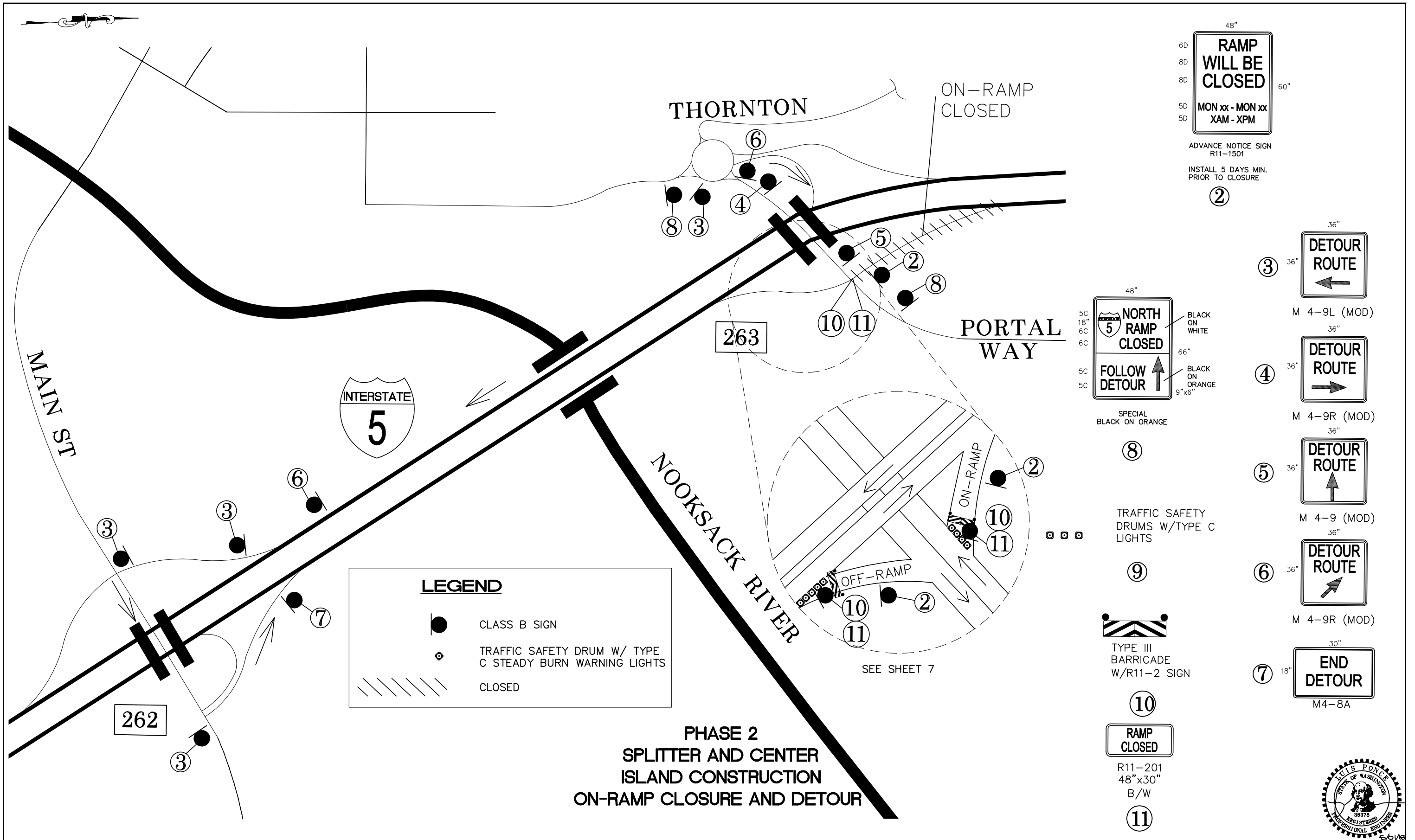
CITY OF FERNDALE  
2095 MAIN ST  
FERNDALE, WA 98248

**PORTAL WAY / I-5**  
ROUNDBOUT 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



**PHASE 2  
SPLITTER AND CENTER  
ISLAND CONSTRUCTION  
ON-RAMP CLOSURE AND DETOUR**

**LEGEND**

- CLASS B SIGN
- TRAFFIC SAFETY DRUM W/ TYPE C STEADY BURN WARNING LIGHTS
- CLOSED

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

48"

5C  
18"  
6C  
6C  
5C  
5C

**NORTH  
RAMP  
CLOSED**

**FOLLOW  
DETOUR**

BLACK ON WHITE  
BLACK ON ORANGE  
9"x6"

SPECIAL  
BLACK ON ORANGE

⑧

36"

**DETOUR  
ROUTE**

←

③

M 4-9L (MOD)

36"

**DETOUR  
ROUTE**

→

④

M 4-9R (MOD)

36"

**DETOUR  
ROUTE**

↑

⑤

M 4-9 (MOD)

36"

**DETOUR  
ROUTE**

↗

⑥

M 4-9R (MOD)

30"

**END  
DETOUR**

⑦

M4-8A

TYPE III  
BARRICADE  
W/R11-2 SIGN

⑨

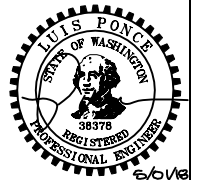
48"x30"

**RAMP  
CLOSED**

R11-201  
48"x30"  
B/W

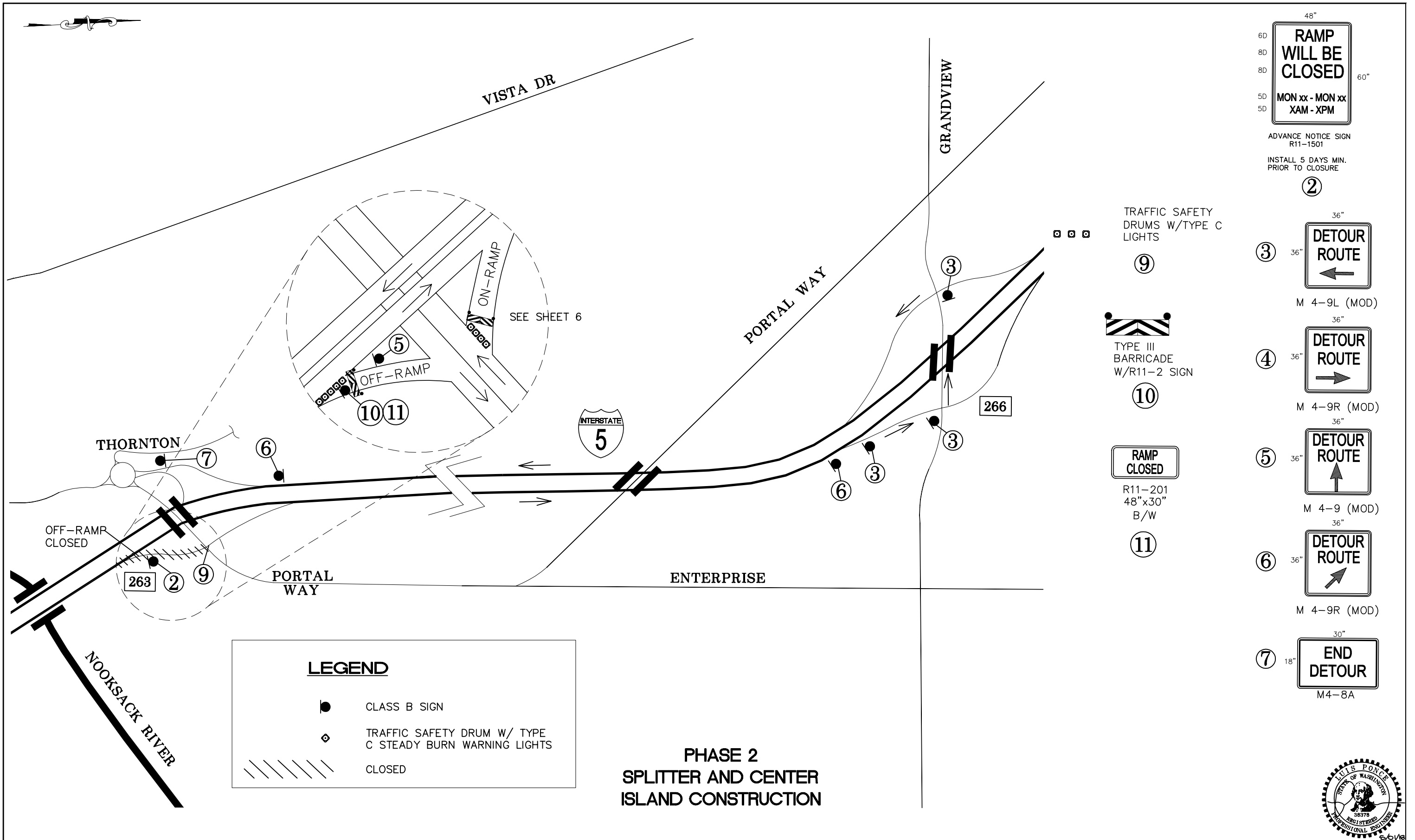
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CONSTRUCTION SET	DESIGNED BY LP	<b>R&amp;E</b> Reichhardt & Ebe ENGINEERING INC P.O. Box 978   423 Front Street, Lynden, WA 98264 (360) 354-3687 813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713	NO.	DATE	DESCRIPTION	BY	CITY OF FERDALE 2095 MAIN ST FERDALE, WA 98248	PORTAL WAY / I-5 ROUNDAABOUT IMPROVEMENTS I-5 EXIT 263 - NB RAMPS - ON RAMP CLOSURE	DWG 16033 TC PLAN	DATE 5/1/2018
	DRAWN BY RWG		NO.	DATE	DESCRIPTION	BY	16033	SCALE H: N/A V: N/A	SHEET 6 of 20	

P:\Projects\16033 TC PLAN.dwg, 6:15:07 AM, 5/1/2018, NB RAMPS - ON RAMP CLOSURE, 02/2018, 7:50:27 AM, PDF-XChange Software



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**LEGEND**

- CLASS B SIGN
- TRAFFIC SAFETY DRUM W/ TYPE C STEADY BURN WARNING LIGHTS
- CLOSED









**PHASE 2  
SPLITTER AND CENTER  
ISLAND CONSTRUCTION**



<b>CONSTRUCTION SET</b>	DESIGNED BY LP	<b>R&amp;E Reichhardt &amp; Ebe ENGINEERING INC</b> <small>P.O. Box 978   423 Front Street, Lynden, WA 98264 (360) 354-3687 813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713</small>	DRAWN BY RWG	NO.    DATE    DESCRIPTION    BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248	<b>PORTAL WAY / I-5 ROUNDBOUT IMPROVEMENTS</b> <small>I-5 EXIT 263 - NB RAMPS - OFF RAMP CLOSURE</small>	DWG 16033 TC PLAN	DATE 5/1/2018
	CHECKED BY LP		JOB# 16033		SCALE H: N/A    V: N/A		SHEET 7 of 20	

P:\Projects\16033 TC PLAN.dwg, 7:15:07 PM, 5/1/2018, NB RAMPS - OFF RAMP CLOSURE, 5/2/2018 7:56:32 AM, P:\P\16033.dwg, 5/2/2018

**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

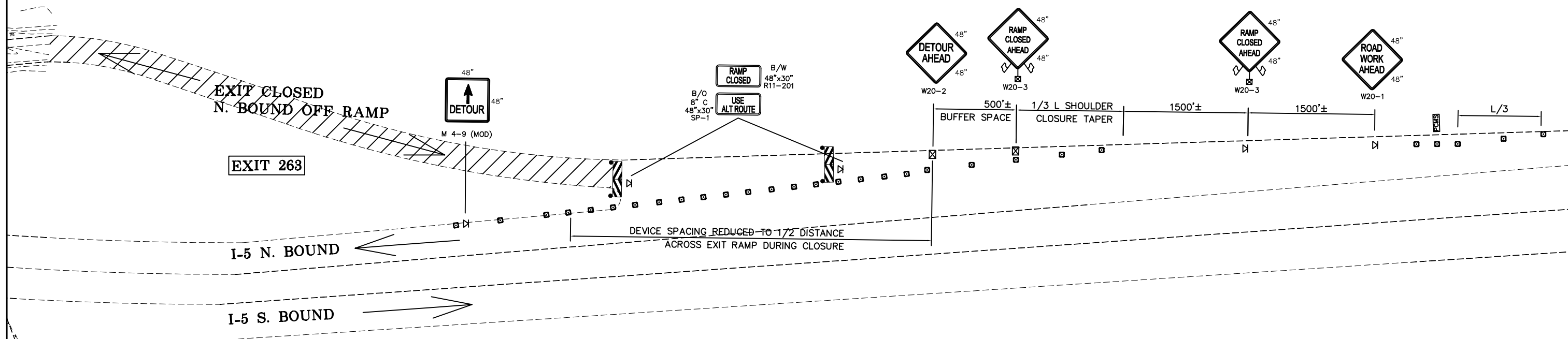
CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/65	40	80
35/45	30	60
25/30	20	40

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**



<b>CONSTRUCTION SET</b>	DESIGNED BY LP	<b>R&amp;E Reichhardt &amp; Ebe ENGINEERING INC</b> 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 ROUNDBOUT IMPROVEMENTS I-5 EXIT 263 - NB RAMPS - OFF-RAMP SIGNAGE	DWG 16033 TC PLAN		DATE 5/1/2018
	DRAWN BY RWG		CHECKED BY LP	16033						JOB#	SCALE H: N/A V: N/A

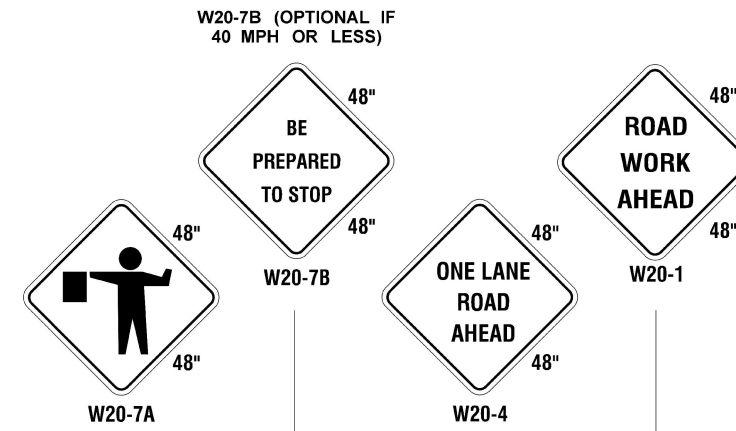
P:\Projects\16033 TC PLAN.dwg, 8:15:07 AM, NB RAMPS - OFF-RAMP SIGNAGE, 5/2/2018 8:58 AM, PCF-JC/eng/Standard



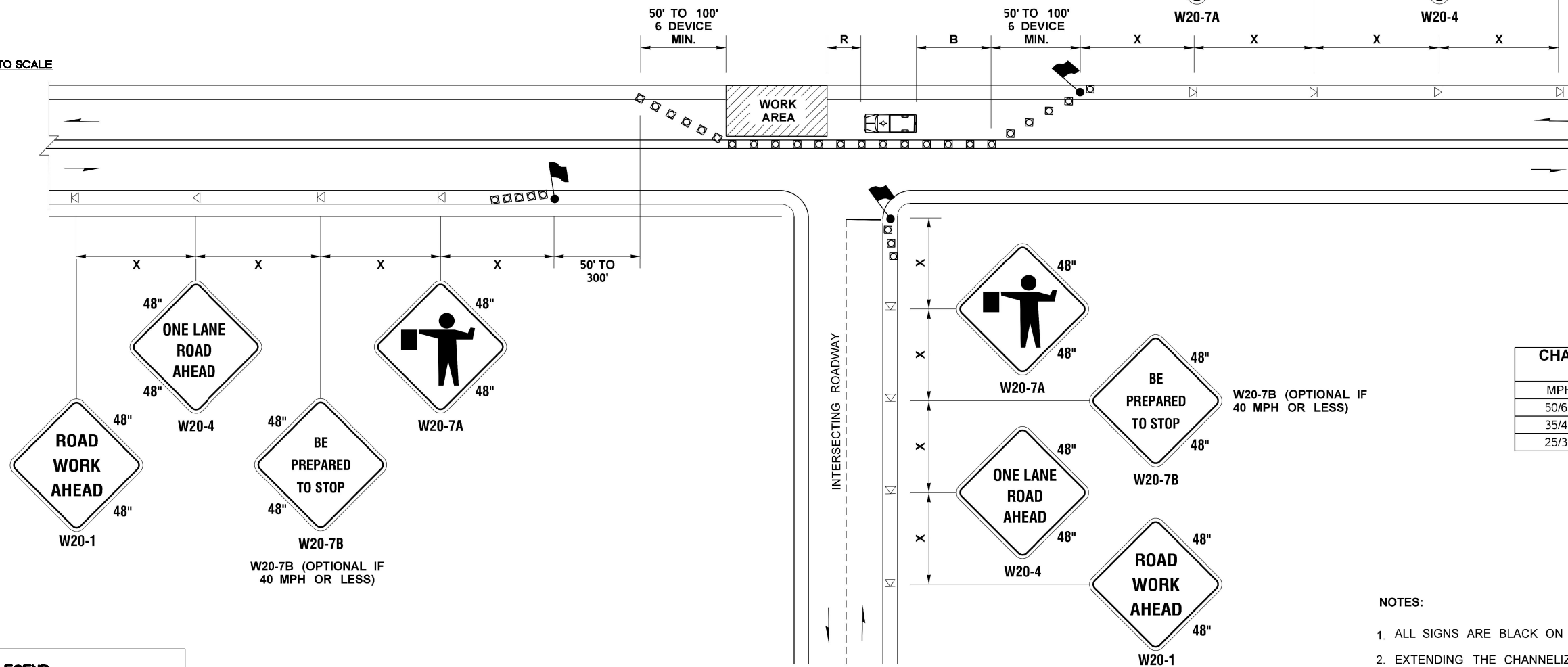
BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 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.



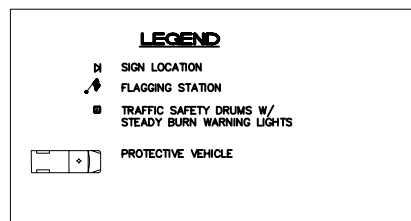
NOT TO SCALE



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:

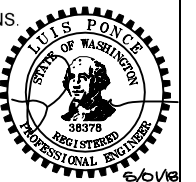
1. ALL SIGNS ARE BLACK ON ORANGE.
2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
4. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.



**PHASE 2  
SPLITTER AND CENTER  
ISLAND CONSTRUCTION**

**ONE-LANE, TWO-WAY TRAFFIC CONTROL  
WITH FLAGGERS**

NOT TO SCALE



CONSTRUCTION SET

DESIGNED BY  
DRAWN BY  
CHECKED 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

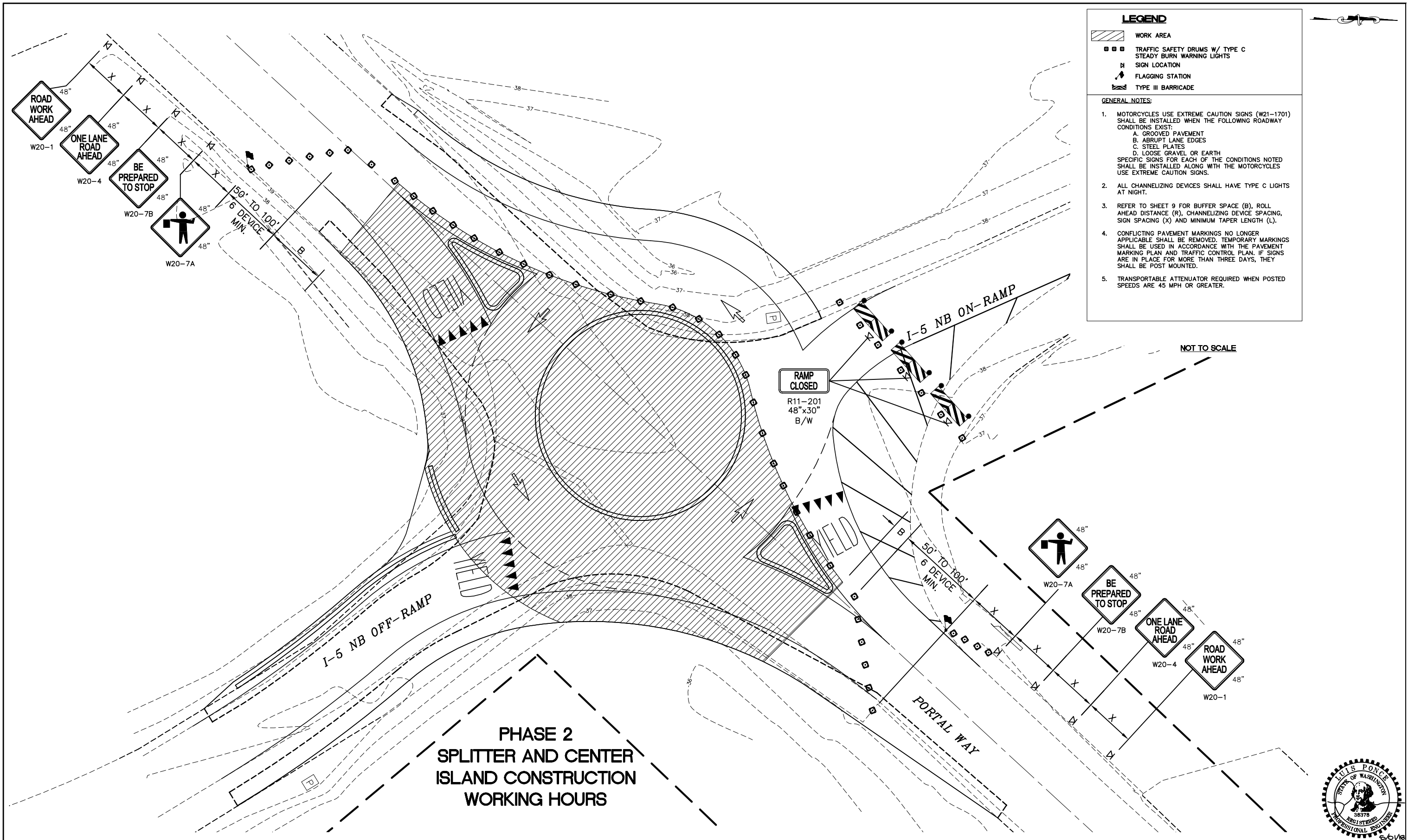
CITY OF FERNDAL  
2095 MAIN ST  
FERNDAL, WA 98248

PORTAL WAY / I-5  
ROUNDBOUT IMPROVEMENTS  
WSDOT TYPICAL LANE CLOSURE

DWG 16033 TC PLAN  
JOB# 16033  
SCALE H: N/A V: N/A

DATE 5/1/2018  
SHEET 9 of 20

P:\Projects\16033 TC PLAN.dwg, 3 WSDOT TYPICAL LANE CLOSURE 5/2/18 7:58:41 AM, PDF, XChange Standard



**LEGEND**

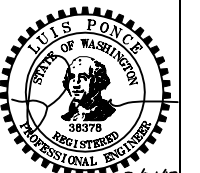
- WORK AREA
- TRAFFIC SAFETY DRUMS W/ TYPE C STEADY BURN WARNING LIGHTS
- SIGN LOCATION
- FLAGGING STATION
- TYPE III BARRICADE

**GENERAL NOTES:**

1. 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 EARTH
 SPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH THE MOTORCYCLES USE EXTREME CAUTION SIGNS.
2. ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
3. REFER TO SHEET 9 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
4. 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.
5. TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.

NOT TO SCALE

**PHASE 2  
SPLITTER AND CENTER  
ISLAND CONSTRUCTION  
WORKING HOURS**



CONSTRUCTION SET

DESIGNED BY  
DRAWN BY  
CHECKED BY

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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

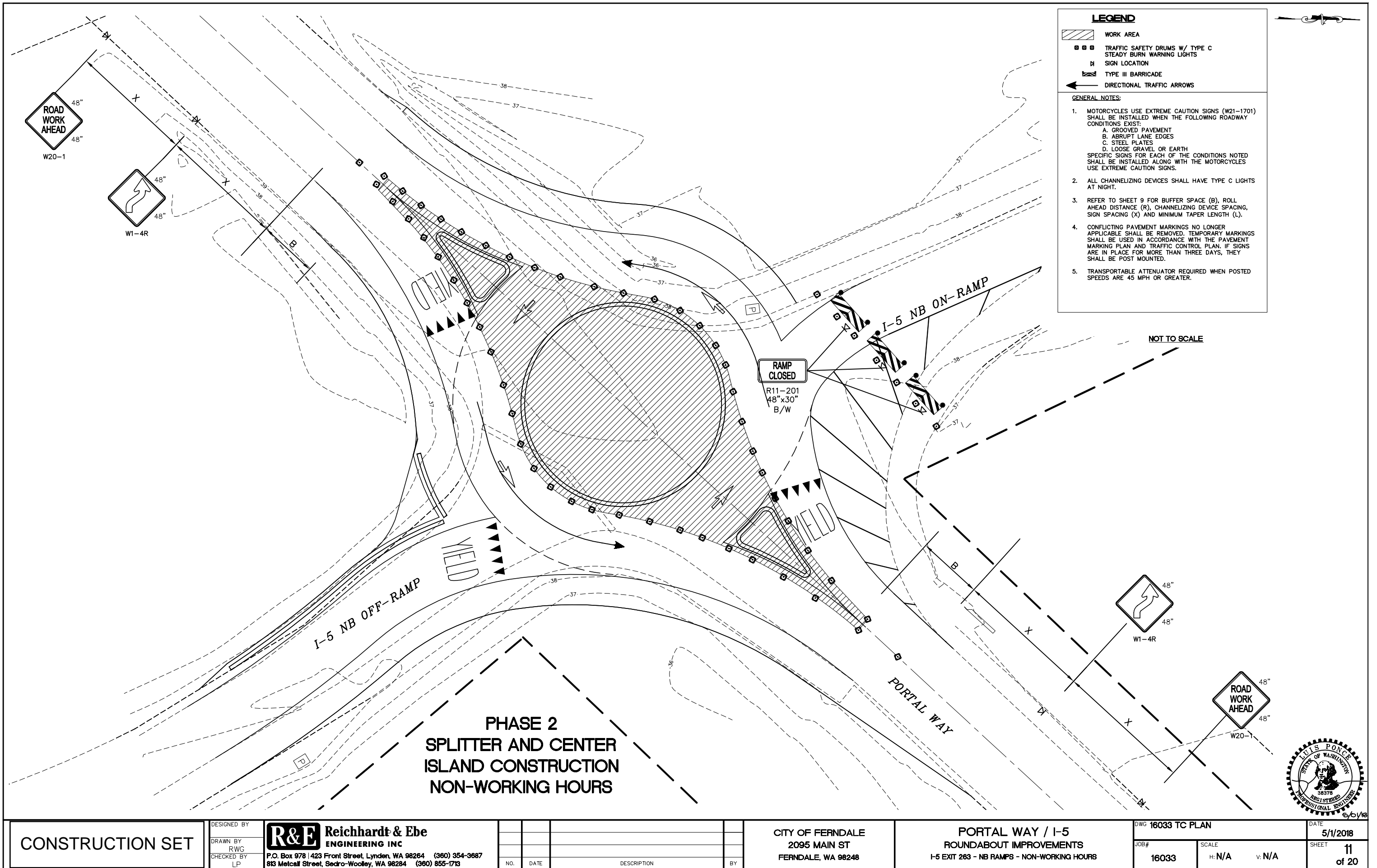
CITY OF FERNDALE  
2095 MAIN ST  
FERNDALE, WA 98248

PORTAL WAY / I-5  
ROUNDBOUT IMPROVEMENTS  
I-5 EXIT 263 - NB RAMPS - LANE CLOSURE SIGNAGE

DWG 16033 TC PLAN  
JOB# 16033  
SCALE H: N/A V: N/A

DATE 5/1/2018  
SHEET 10 of 20

P:\Projects\16033 TC PLAN.dwg, 10:15:07 2018 - NB RAMPS - LANE CLOSURE SIGNAGE, 5/2/2018 7:58:06 AM, PDF, 24x36, 24x36



**LEGEND**

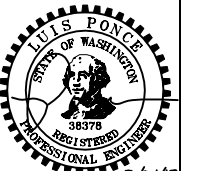
- WORK AREA
- TRAFFIC SAFETY DRUMS W/ TYPE C STEADY BURN WARNING LIGHTS
- SIGN LOCATION
- TYPE III BARRICADE
- DIRECTIONAL TRAFFIC ARROWS

**GENERAL NOTES:**

1. 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 EARTH
 SPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH THE MOTORCYCLES USE EXTREME CAUTION SIGNS.
2. ALL CHANNELIZING DEVICES SHALL HAVE TYPE C LIGHTS AT NIGHT.
3. REFER TO SHEET 9 FOR BUFFER SPACE (B), ROLL AHEAD DISTANCE (R), CHANNELIZING DEVICE SPACING, SIGN SPACING (X) AND MINIMUM TAPER LENGTH (L).
4. 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.
5. TRANSPORTABLE ATTENUATOR REQUIRED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER.

**PHASE 2  
SPLITTER AND CENTER  
ISLAND CONSTRUCTION  
NON-WORKING HOURS**

NOT TO SCALE



**CONSTRUCTION SET**

DESIGNED BY  
DRAWN BY  
CHECKED BY

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

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE  
2095 MAIN ST  
FERNDALE, WA 98248

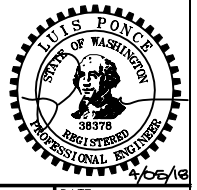
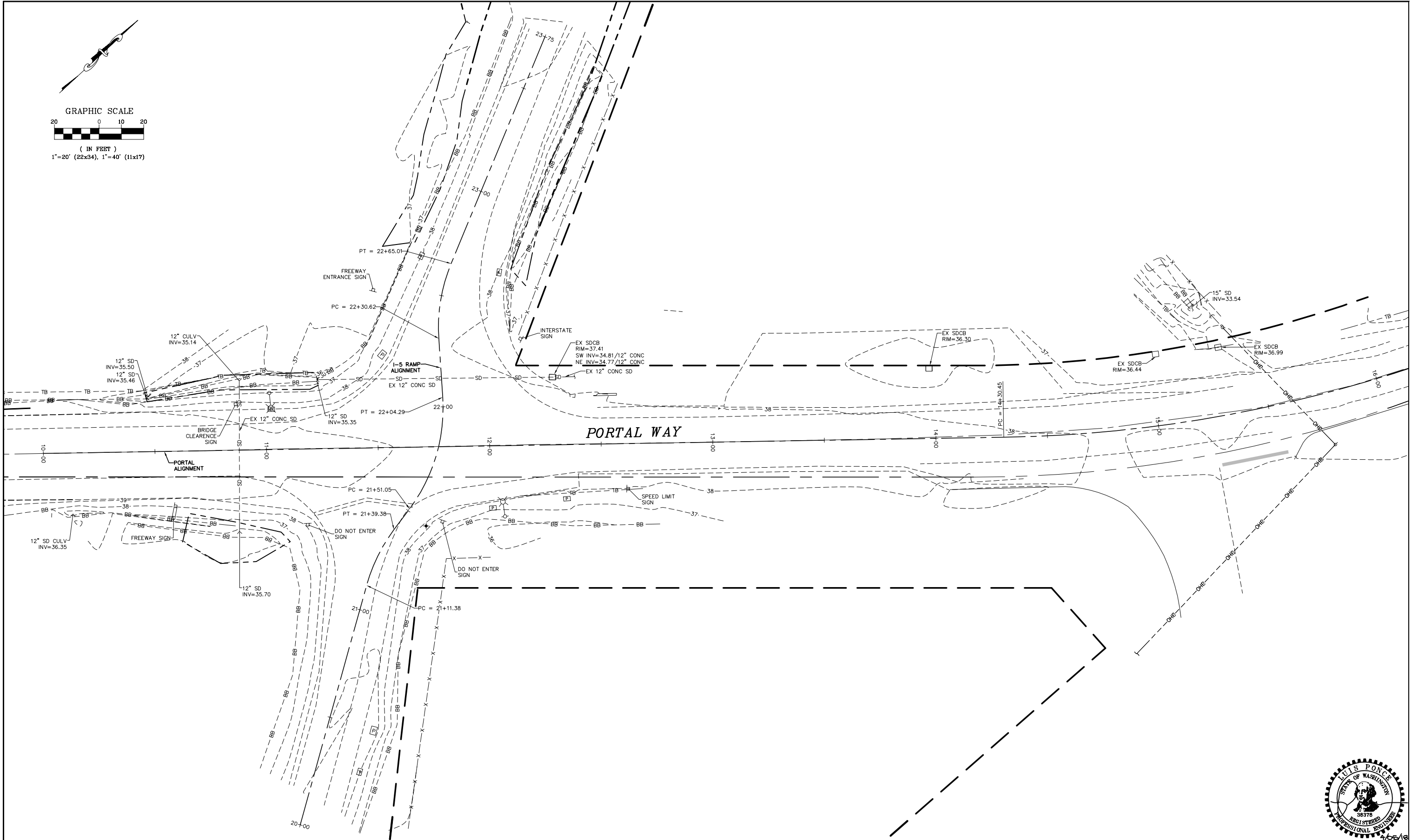
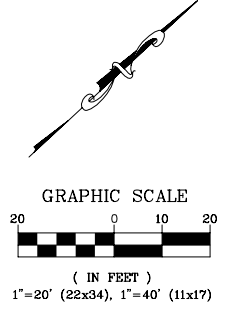
PORTAL WAY / I-5  
ROUNDABOUT IMPROVEMENTS  
I-5 EXIT 263 - NB RAMPS - NON-WORKING HOURS

DWG 16033 TC PLAN  
JOB# 16033

SCALE  
H: N/A V: N/A

DATE 5/1/2018  
SHEET 11 of 20

P:\Projects\16033 TC PLAN.dwg, 11:16:07 AM, 5/1/2018, NON-WORKING HOURS, 5/2018, 7:20:01 AM, RCP, XZhang, 3/2018



**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

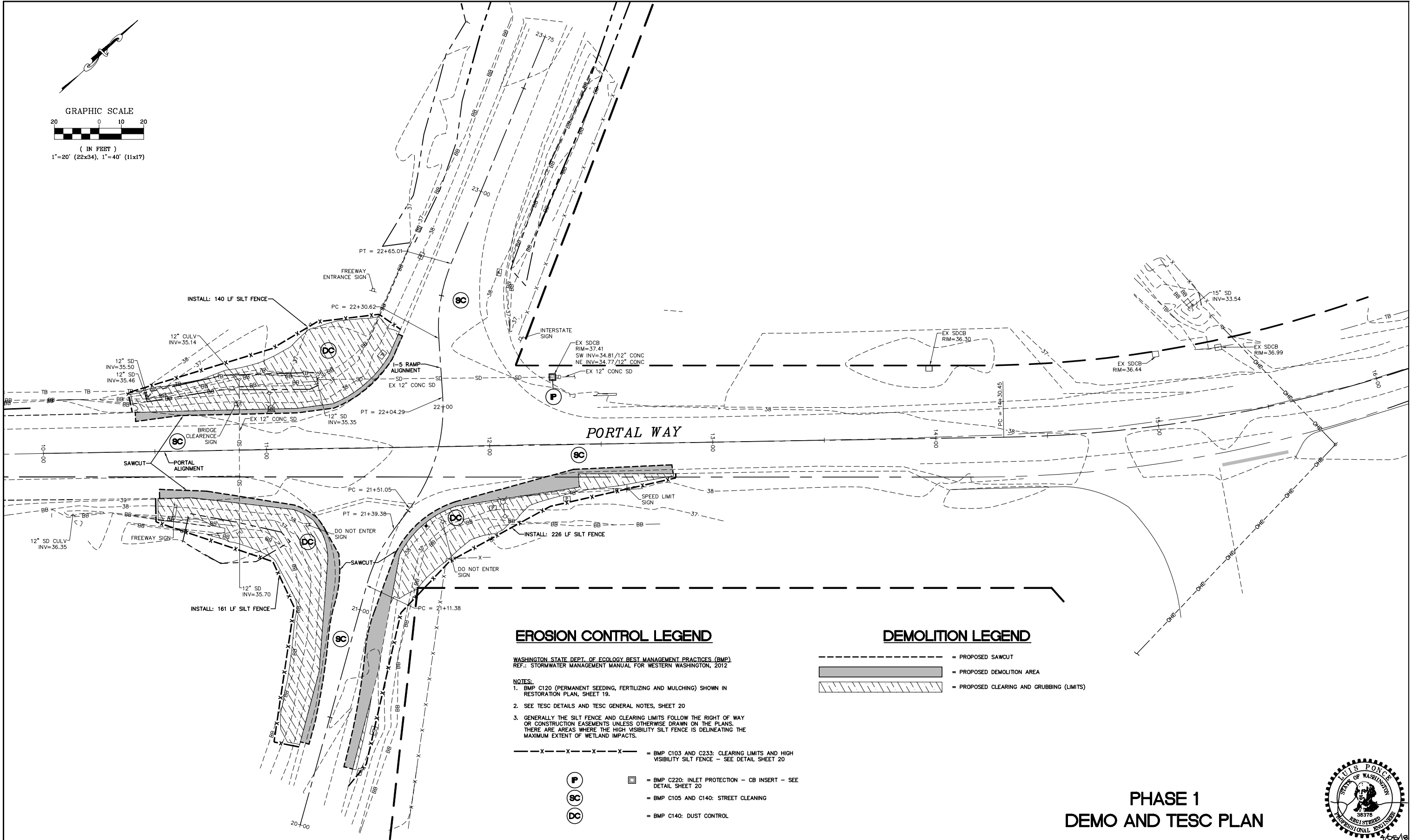
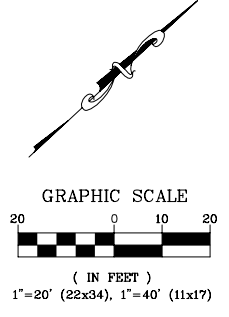
CITY OF FERDALE  
2095 MAIN ST  
FERDALE, WA 98248

**PORTAL WAY / I-5**  
**ROUNDBOUT IMPROVEMENTS**  
EXISTING CONDITIONS

DWG #	16033	SCALE	H: 1"=20' V: N/A
JOB #	16033	DATE	4/5/2018
SHEET	12		
	of 20		

DATE: 4/5/2018  
SHEET: 12 of 20

P:\Projects\16033\AN\_SHEETS\16033\_EXCOND\_TESC\_DEMO.dwg, 15: EXISTING CONDITIONS, 4/5/2018 9:41:26 AM, PDF: SDpage Sheet.dwg



### EROSION CONTROL LEGEND

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

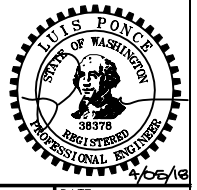
- NOTES:**
- BMP C120 (PERMANENT SEEDING, FERTILIZING AND MULCHING) SHOWN IN RESTORATION PLAN, SHEET 19.
  - SEE TESC DETAILS AND TESC GENERAL NOTES, SHEET 20
  - GENERALLY THE SILT FENCE AND CLEARING LIMITS FOLLOW THE RIGHT OF WAY OR CONSTRUCTION EASEMENTS UNLESS OTHERWISE DRAWN ON THE PLANS. THERE 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
- (DC) = BMP C140: DUST CONTROL

### DEMOLITION LEGEND

- - - - - = PROPOSED SAWCUT
- [Hatched Box] = PROPOSED DEMOLITION AREA
- [Hatched Box] = PROPOSED CLEARING AND GRUBBING (LIMITS)

## PHASE 1 DEMO AND TESC PLAN



**CONSTRUCTION SET**

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

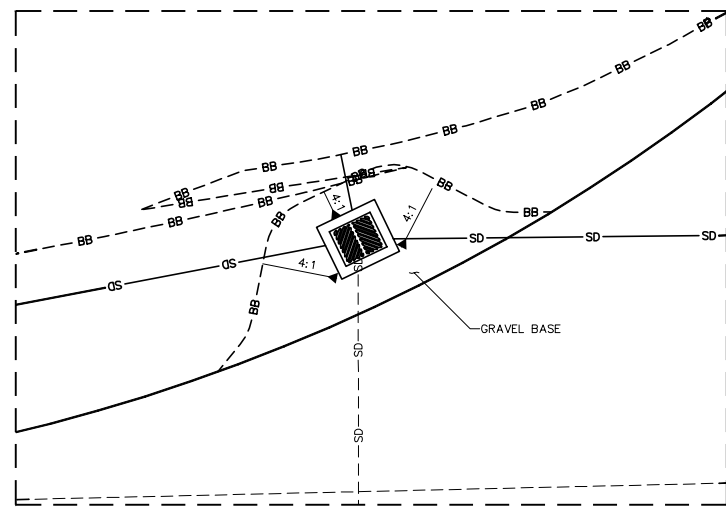
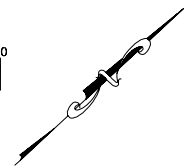
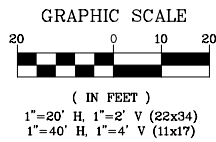
**R&E Reichhardt & Ebe ENGINEERING INC**  
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687  
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

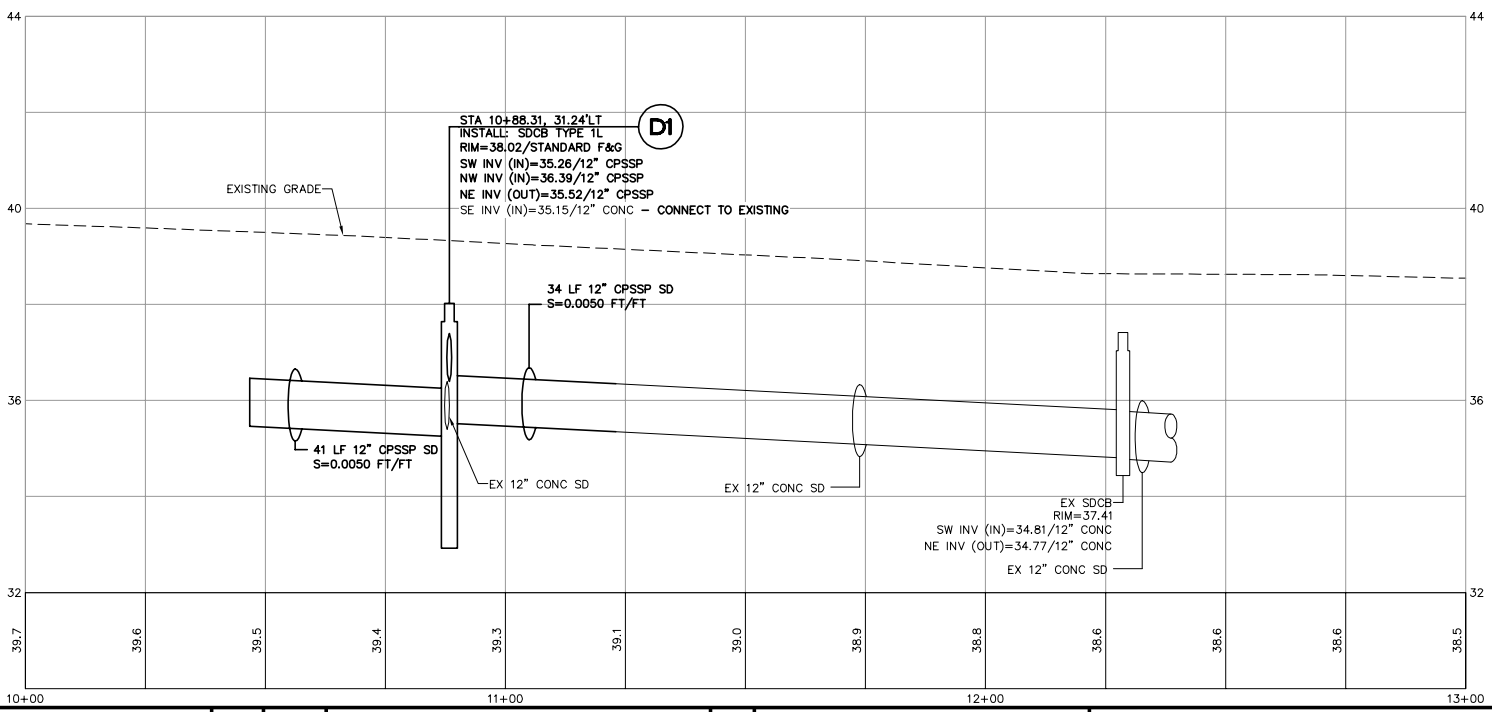
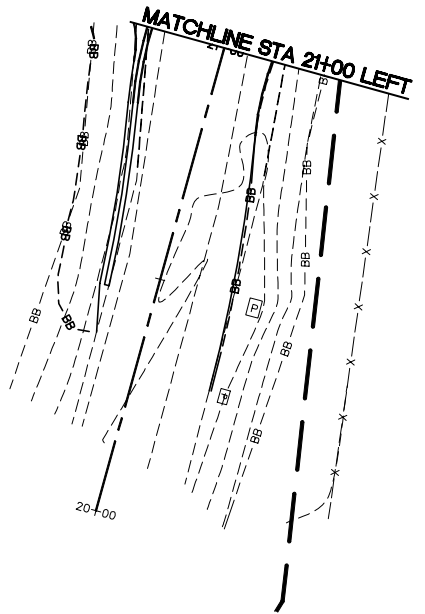
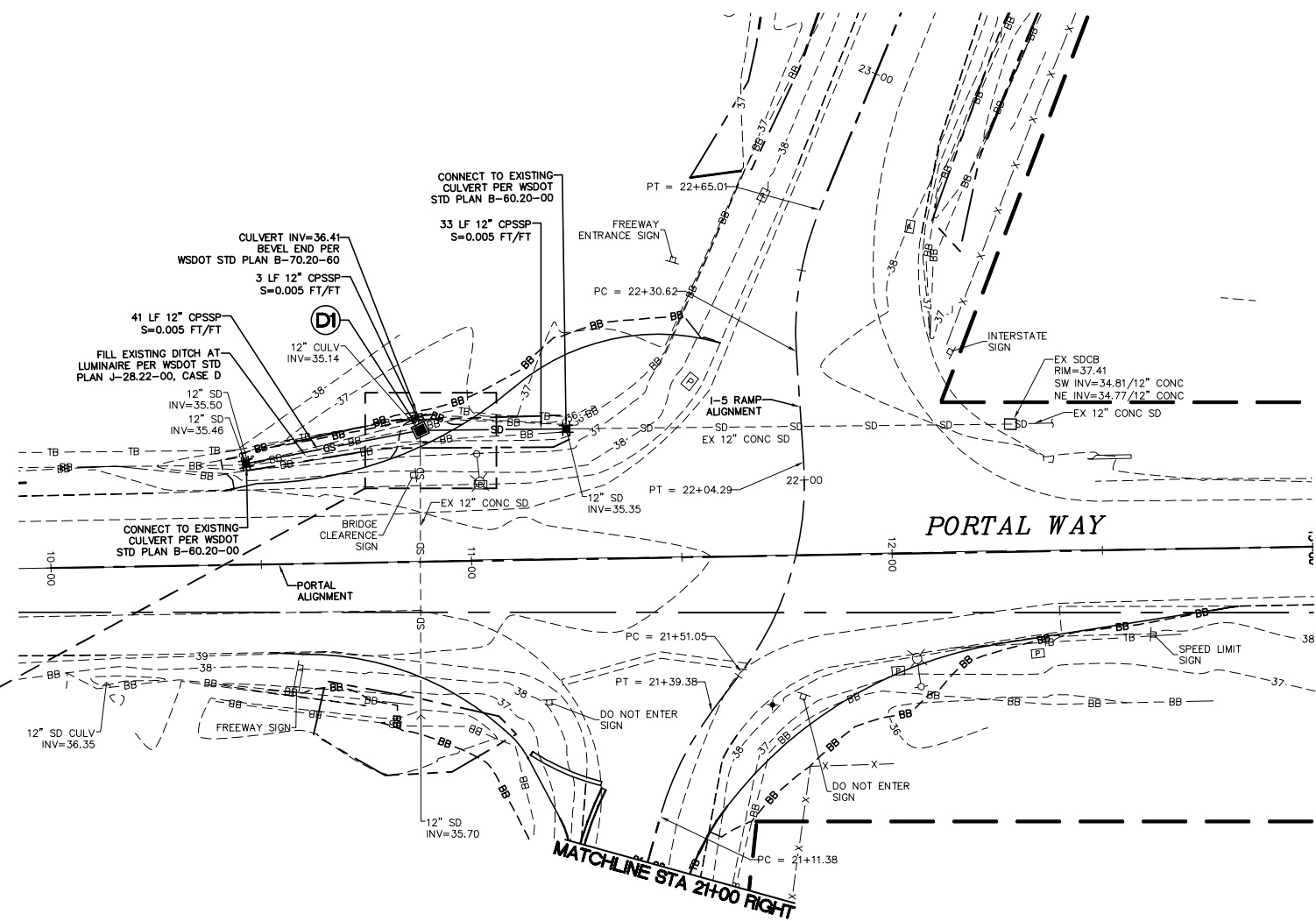
CITY OF FERNDALE  
2095 MAIN ST  
FERNDALE, WA 98248

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

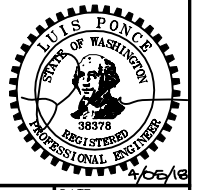
DWG 16033 EXCOND, TESC, DEMO		DATE	4/5/2018
JOB#	16033	SHEET	13
SCALE	H: 1"=20'	V: N/A	of 20



**CATCH BASIN GRADING**  
NTS



**PHASE 1  
PLAN AND PROFILE**



**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

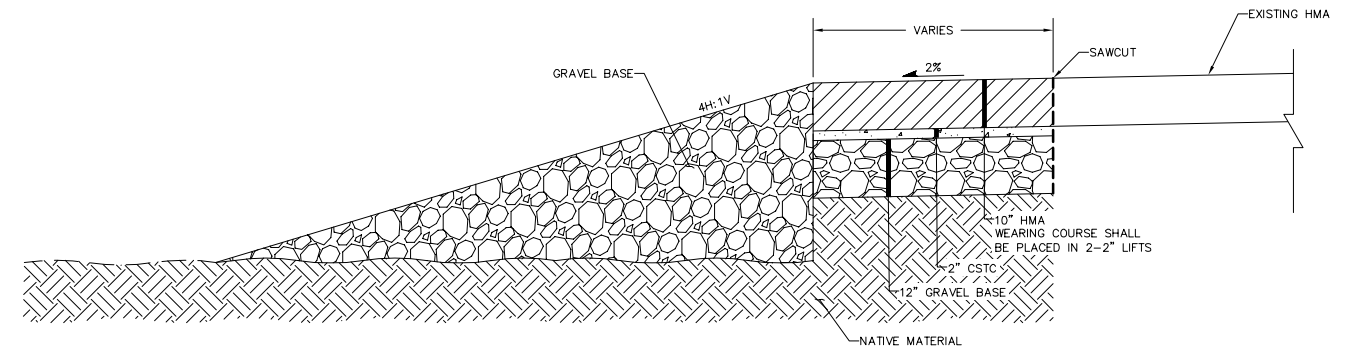
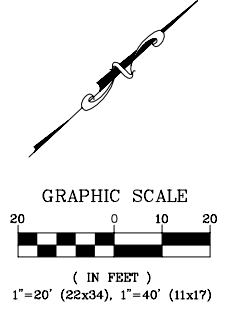
CITY OF FERDALE  
2095 MAIN ST  
FERDALE, WA 98248

PORTAL WAY / I-5  
ROUNDBOUT IMPROVEMENTS  
PLAN AND PROFILE - PORTAL WAY - PHASE 1

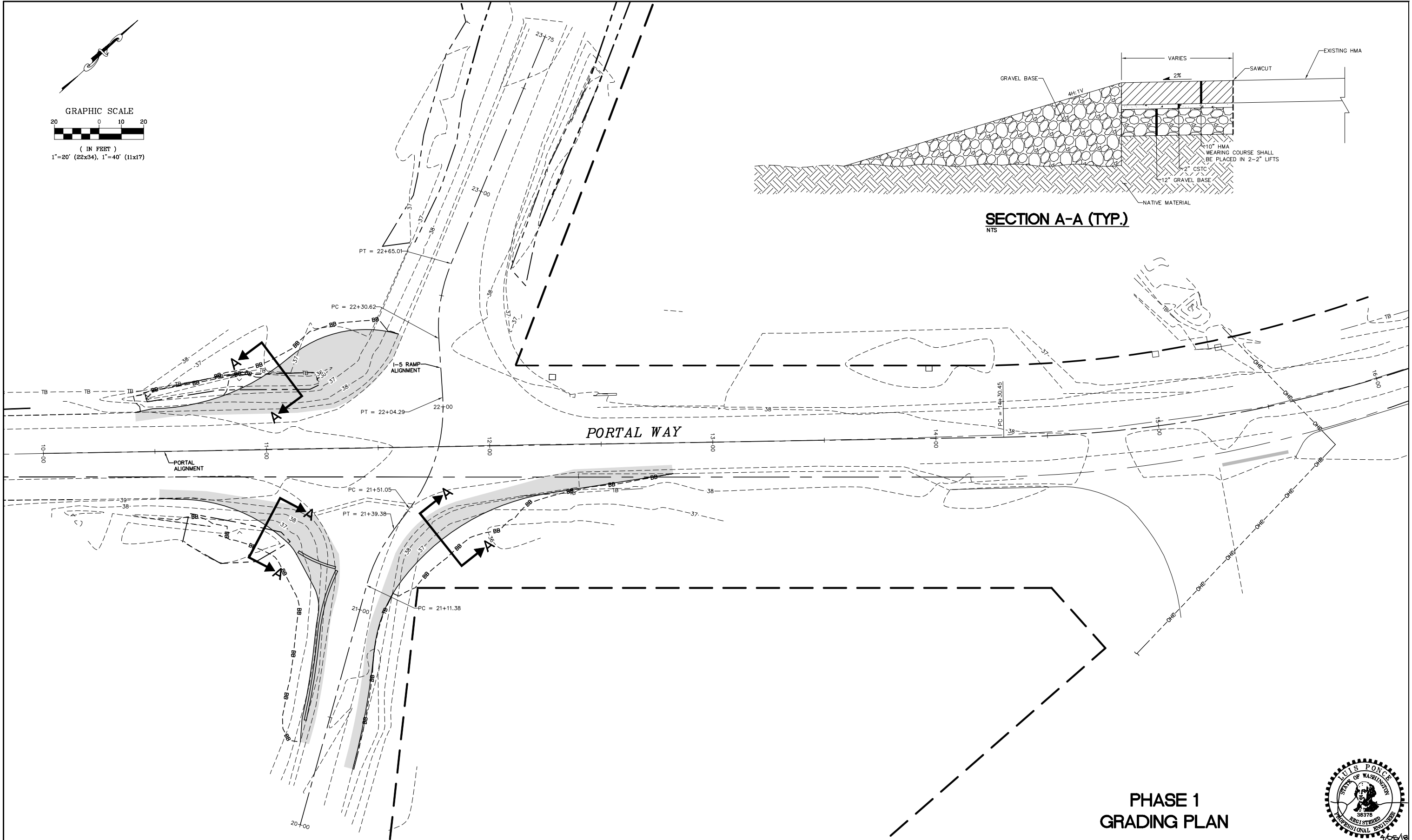
DWG 16033 PLAN AND PROFILE  
JOB# 16033  
SCALE H: 1"=20' V: 1"=2'

DATE 4/5/2018  
SHEET 14 of 20

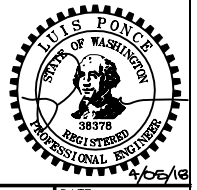
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**SECTION A-A (TYP.)**  
NTS



**PHASE 1  
GRADING PLAN**



**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

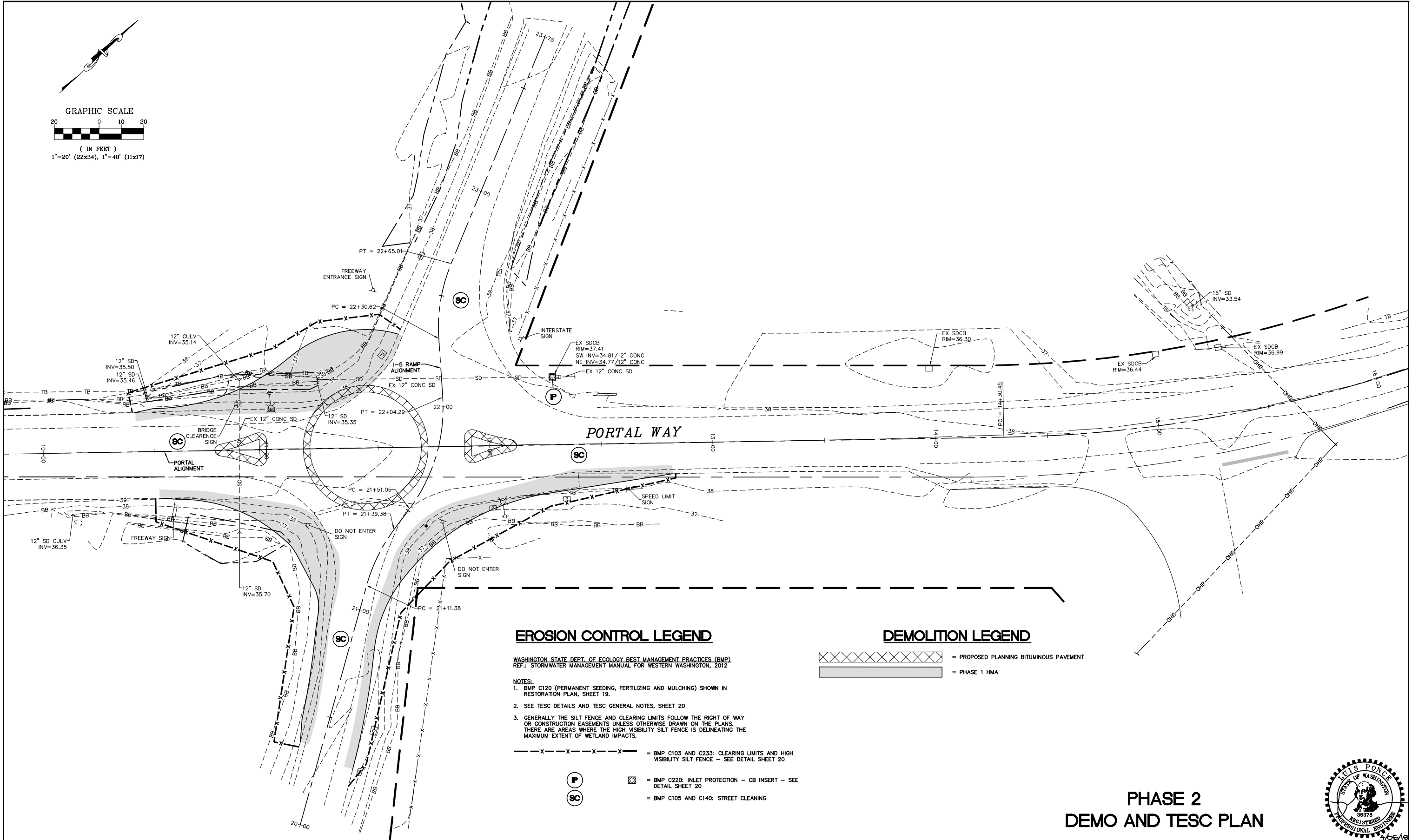
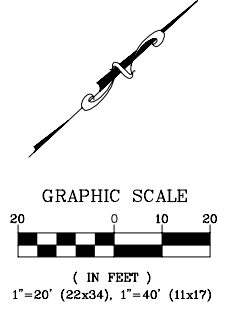
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE  
2095 MAIN ST  
FERNDALE, WA 98248

PORTAL WAY / I-5  
ROUNDBOUT IMPROVEMENTS  
GRADING PLAN - PHASE 1

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

P:\Projects\16033\AN\_SHEETS\16033 GRADING.dwg, 16 GRADING PLAN - PHASE 1, 4/5/2018 8:41:48 AM, P:\X\Change Standard



**EROSION CONTROL LEGEND**

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

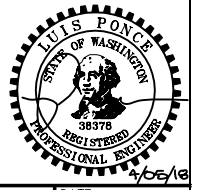
- NOTES:**
- BMP C120 (PERMANENT SEEDING, FERTILIZING AND MULCHING) SHOWN IN RESTORATION PLAN, SHEET 19.
  - SEE TESC DETAILS AND TESC GENERAL NOTES, SHEET 20
  - GENERALLY THE SILT FENCE AND CLEARING LIMITS FOLLOW THE RIGHT OF WAY OR CONSTRUCTION EASEMENTS UNLESS OTHERWISE DRAWN ON THE PLANS. THERE 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**

- [Cross-hatched box] = PROPOSED PLANNING BITUMINOUS PAVEMENT
- [Solid grey box] = 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

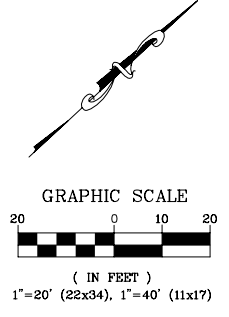
CITY OF FERNDALE  
 2095 MAIN ST  
 FERNDALE, WA 98248

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




DWG 16033 EXCOND, TESC, DEMO		DATE	4/5/2018
JOB#	16033	SHEET	16
SCALE	H: T=20'	V: N/A	of 20

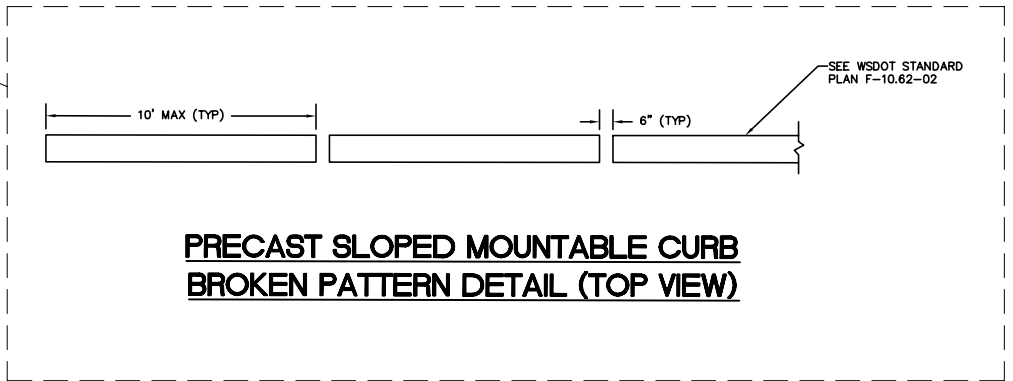
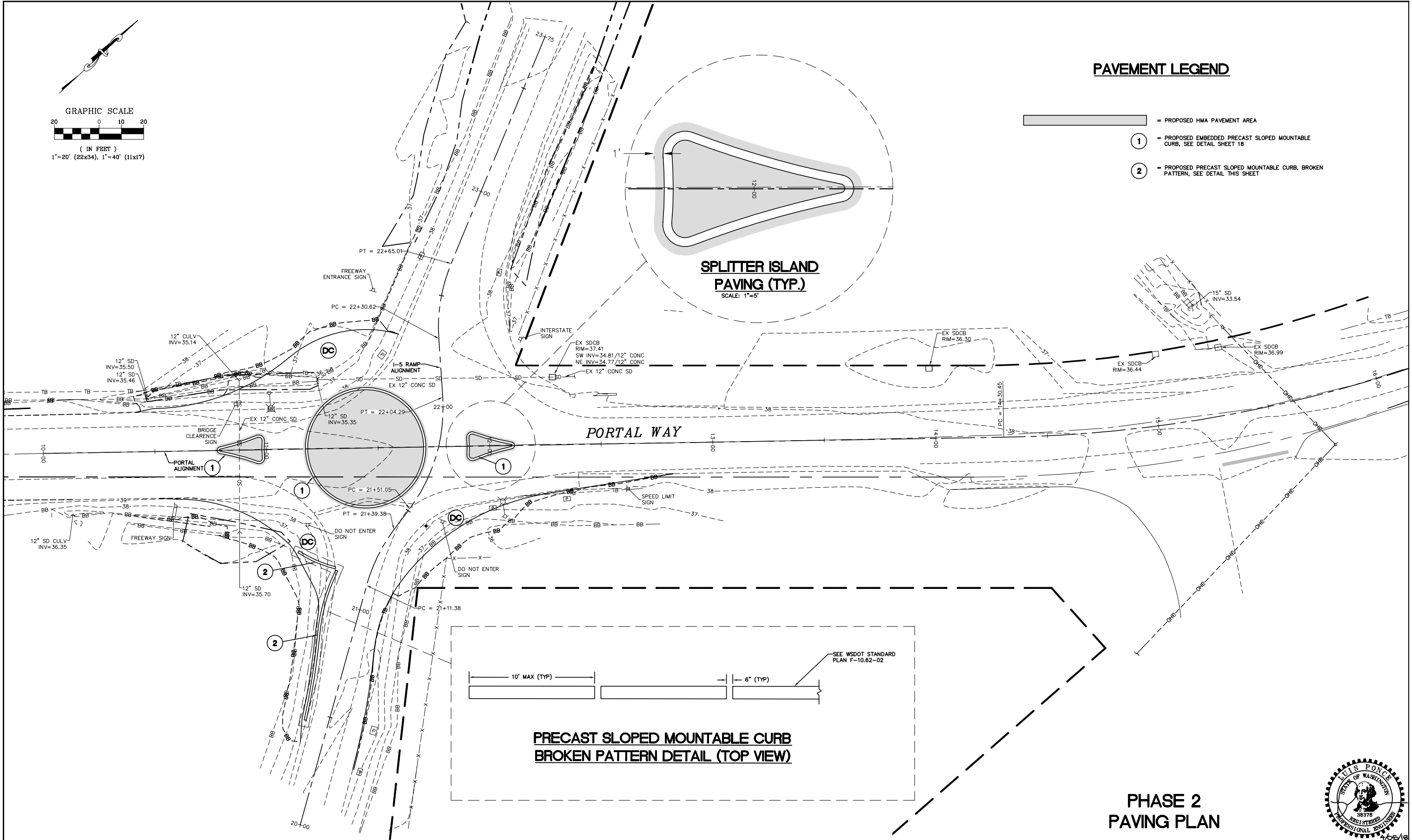
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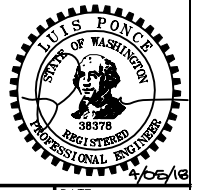


**PAVEMENT LEGEND**

-  = 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



**PHASE 2  
PAVING 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

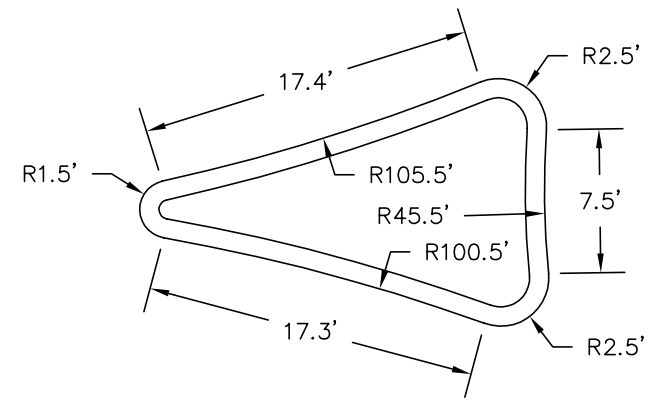
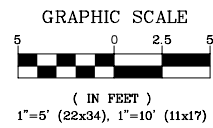
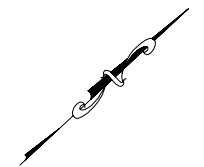
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE  
2095 MAIN ST  
FERDALE, WA 98248

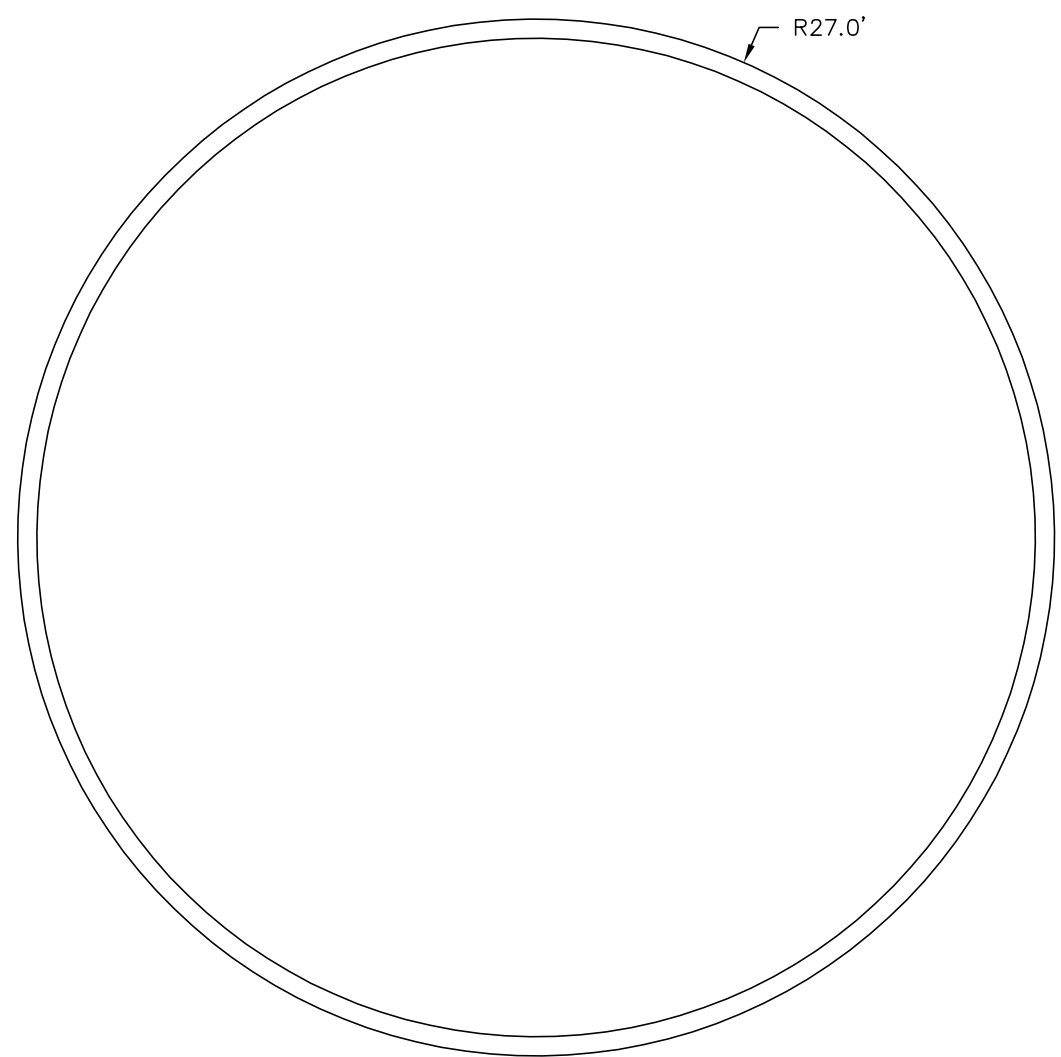
PORTAL WAY / I-5  
ROUNDBOUT IMPROVEMENTS  
PAVING PLAN - PHASE 2

DWG 16033 EXCOND, TESC, DEMO		DATE 4/5/2018
JOB# 16033	SCALE H: 1"=20' v: N/A	SHEET 17 of 20

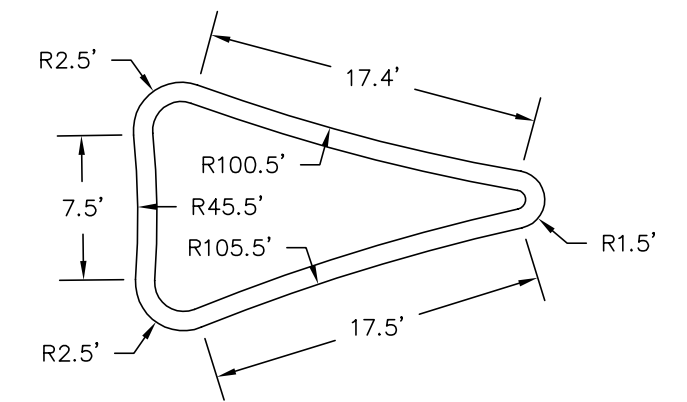
P:\Projects\16033\AN\_SHEETS\16033\_EXCOND\_TESC\_DEMO.dwg, 17 PAVING PLAN - PHASE 2, 4/5/2018 9:52:04 AM, PDF, Schuyler Barkard



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

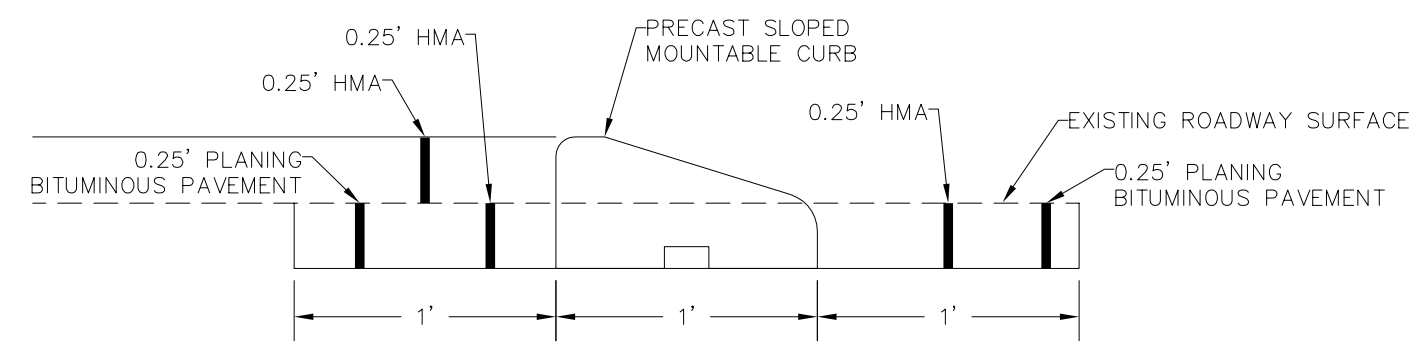


CENTER ISLAND DETAIL  
 AREA=2,290.2 SQ. FT.



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.



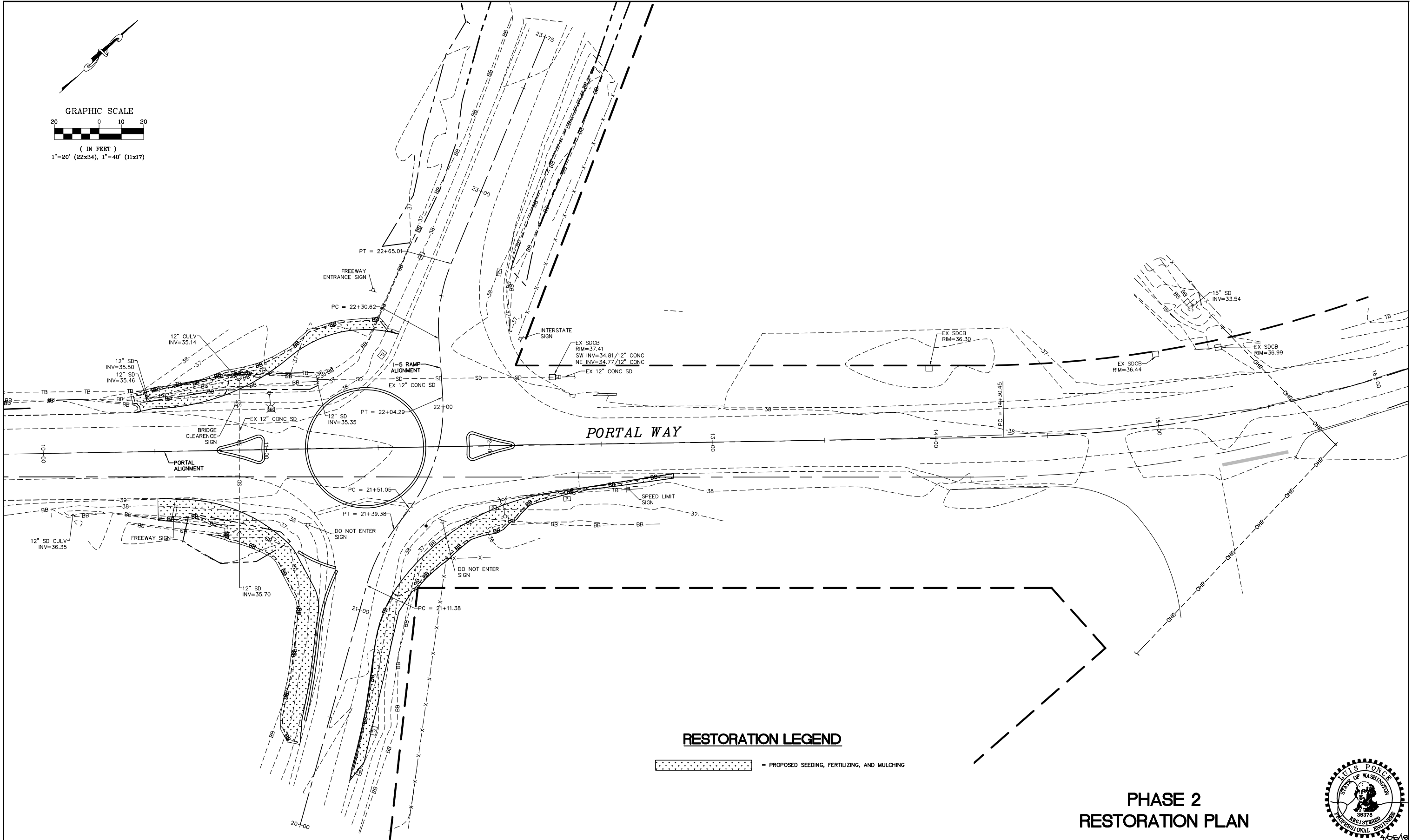
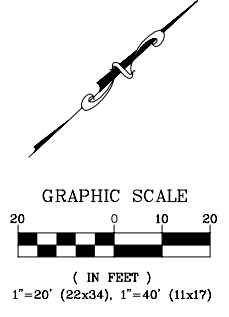
EMBEDDED CURB DETAIL  
 NTS

PHASE 2  
 TRAFFIC ISLAND



CONSTRUCTION SET	DESIGNED BY LP/OAM	<b>Reichhardt &amp; Ebe</b> <b>ENGINEERING INC</b> 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 ROUNDABOUT IMPROVEMENTS TRAFFIC ISLAND CURB DETAIL - PHASE 2	DWG 16033 EXCOND, TESC, DEMO	DATE 4/5/2018
	DRAWN BY OAM/LMH		CHECKED BY LP							JOB# 16033

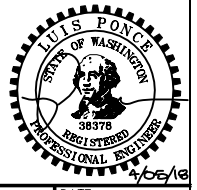
P:\Projects\16033\16033\_01\16033\_01\_18\_Traffic Island Curb Detail - Phase 2.dwg, 4/5/2018 4:02:09 AM, PDF, Change Set 1



**RESTORATION LEGEND**

= PROPOSED SEEDING, FERTILIZING, AND MULCHING

**PHASE 2  
RESTORATION 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 FERDALE  
2095 MAIN ST  
FERDALE, WA 98248

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

DWG #	16033	SCALE	H: T=20' v: N/A
JOB #	16033	DATE	4/5/2018
SHEET	19		
	of 20		

DATE  
4/5/2018  
SHEET  
19  
of 20

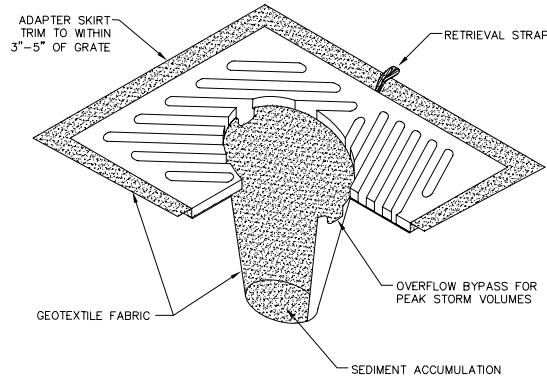
P:\Projects\16033\AN\_SHEETS\16033\_EXCOND\_TESC\_DEMO.dwg, 18 RESTORATION PLAN - PHASE 2, 4/5/2018 9:42:14 AM, PDF: 20mg, 20mg

# 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 HYDROSEEDED. GRASS SEEDING SHALL BE BROADCAST IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
11. ALL CUT AND FILL SLOPES SHALL BE SEEDED 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.

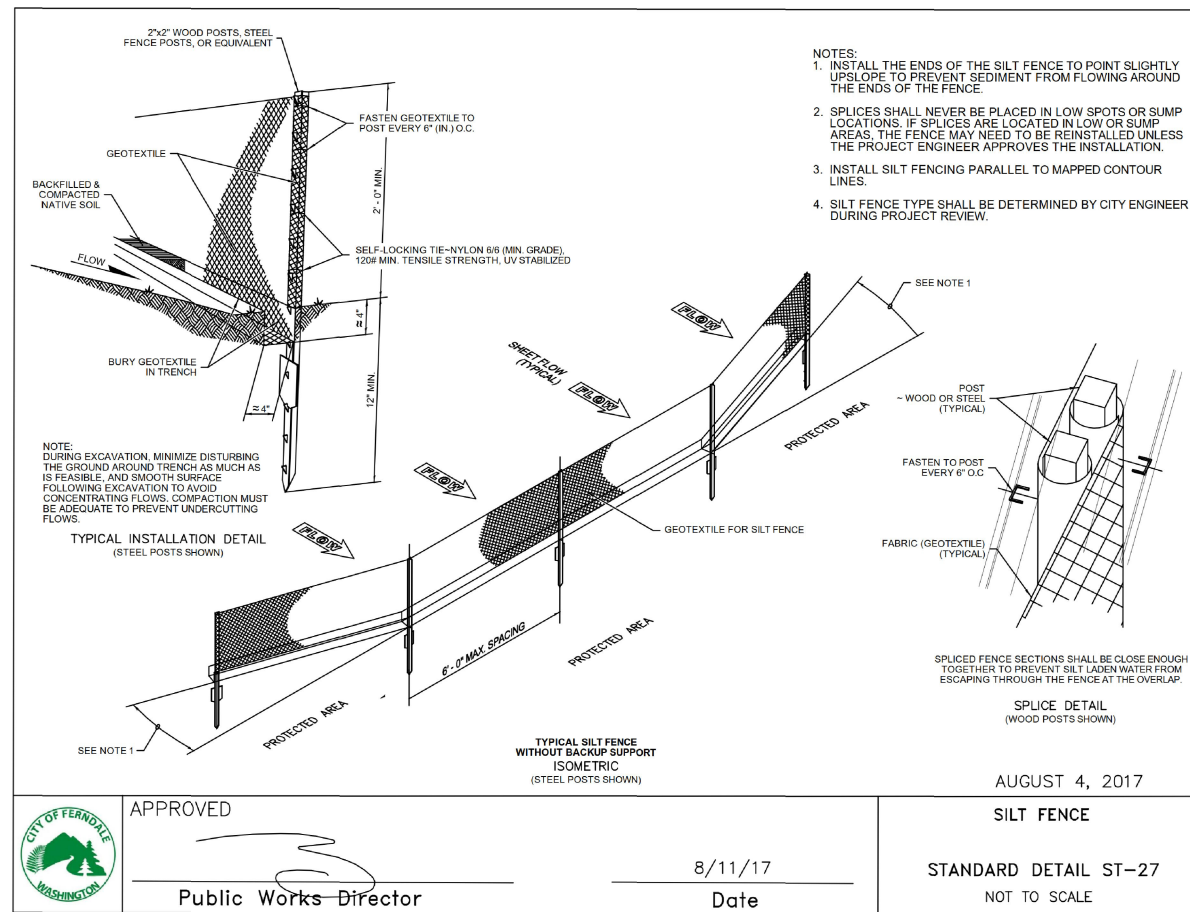
**DUST CONTROL:**  
CONTRACTOR SHALL LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE EXCAVATION AND GRADING SHALL TAKE PLACE MAINTAINING THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL. DUST CONTROL METHODS SHALL BE PERFORMED BY METHODS LISTED IN NOTE NUMBER EIGHT OF THE TESC GENERAL 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.



- 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.

## INLET PROTECTION



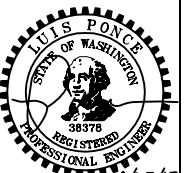
APPROVED  
*[Signature]*  
Public Works Director

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 FERNDALE  
2095 MAIN ST  
FERNDALE, 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**

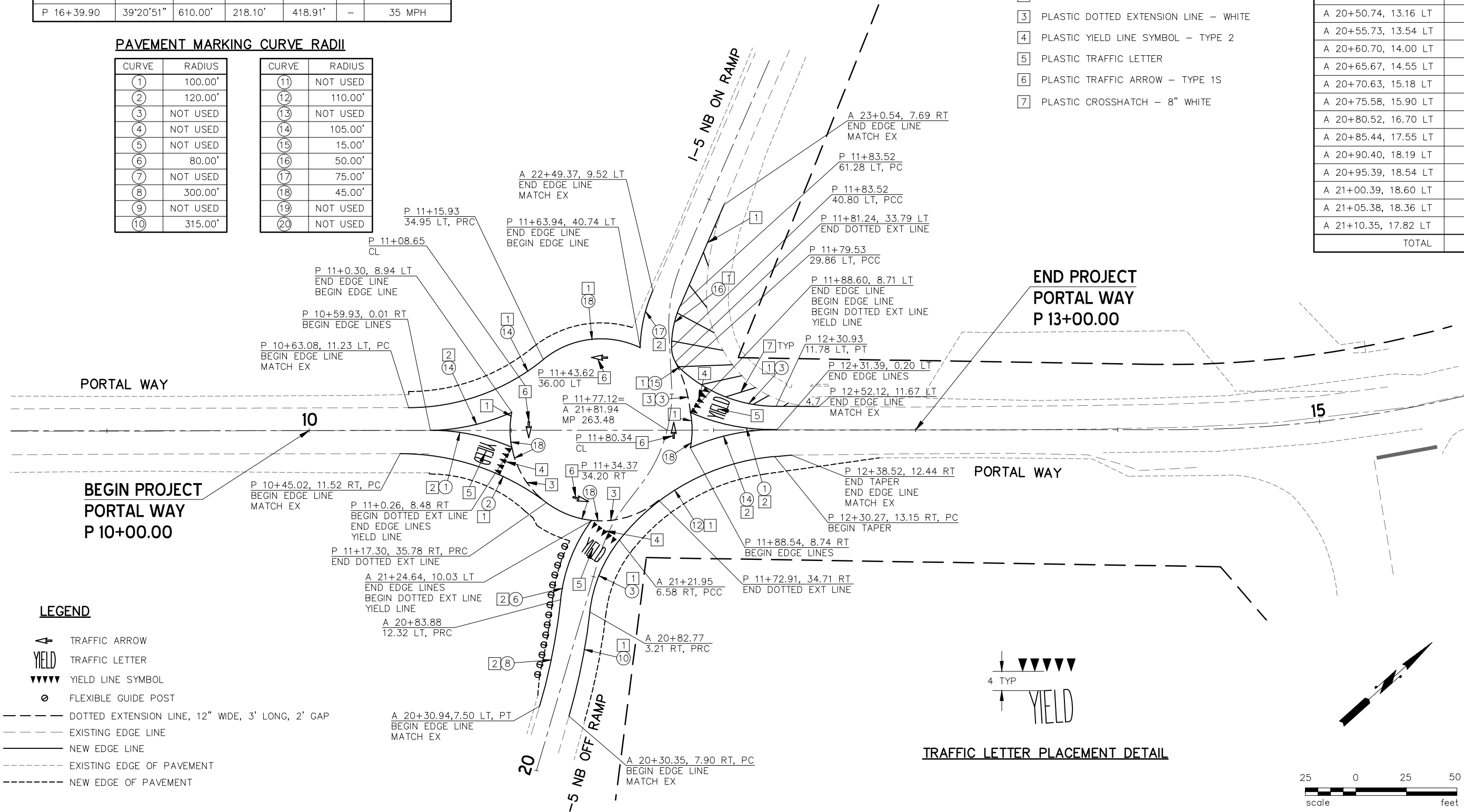
- PLASTIC EDGE LINE - WHITE
- PLASTIC EDGE LINE - YELLOW
- PLASTIC DOTTED EXTENSION LINE - WHITE
- PLASTIC YIELD LINE SYMBOL - TYPE 2
- PLASTIC TRAFFIC LETTER
- PLASTIC TRAFFIC ARROW - TYPE 1S
- PLASTIC CROSSHATCH - 8" WHITE

**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**

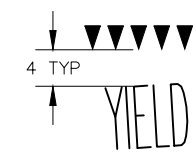
CURVE	RADIUS	CURVE	RADIUS
①	100.00'	⑪	NOT USED
②	120.00'	⑫	110.00'
③	NOT USED	⑬	NOT USED
④	NOT USED	⑭	105.00'
⑤	NOT USED	⑮	15.00'
⑥	80.00'	⑯	50.00'
⑦	NOT USED	⑰	75.00'
⑧	300.00'	⑱	45.00'
⑨	NOT USED	⑲	NOT USED
⑩	315.00'	⑳	NOT USED



**LEGEND**

- TRAFFIC ARROW
- YIELD 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.					
DRAWING FILE	MK_rev2.DWG				
DATE		REVISION		BY	APP'D

REICHHARDT & EBE ENGINEERING, INC.  
 P.O. Box 978  
 Lynden, Washington 98264

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

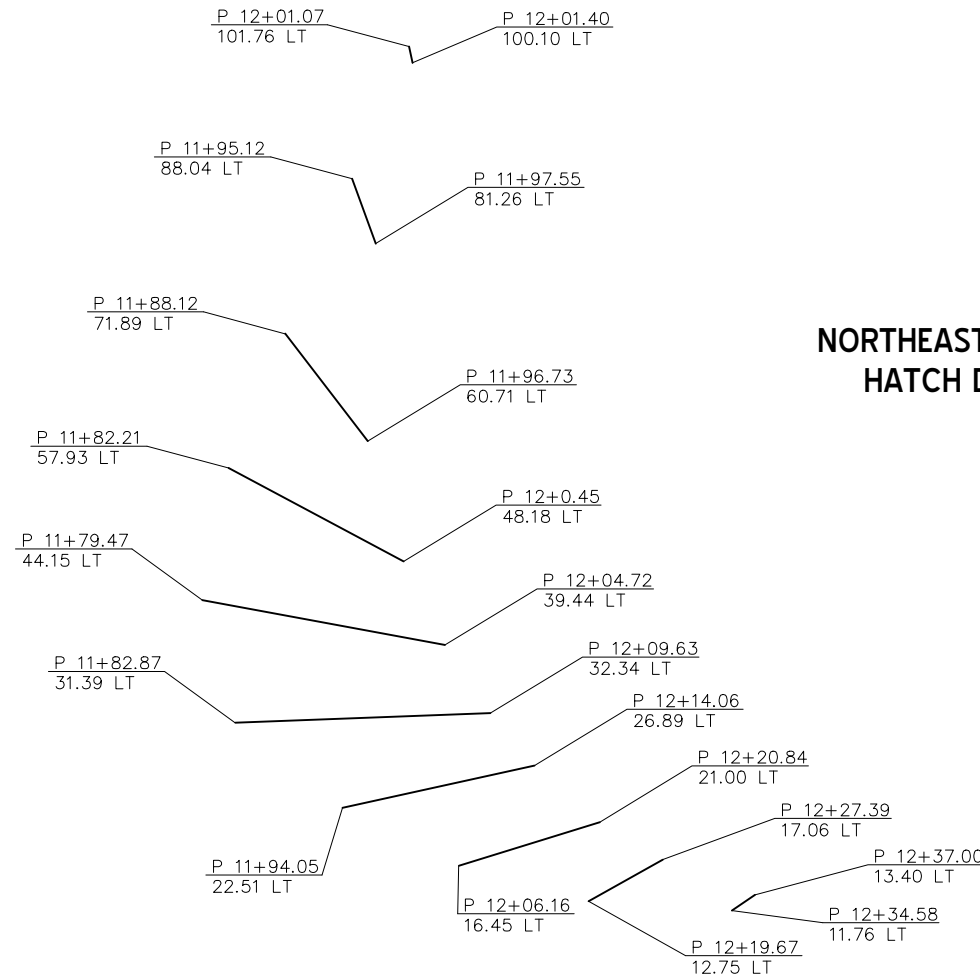


**HTE HERMAN TRAFFIC ENGINEERING**

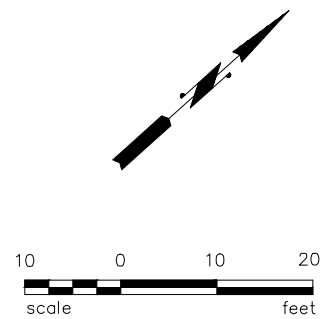
11215 Southeast 220th Place, Kent, Washington 98031  
 253-236-4941 tel. hte@comcast.net

1-5	MP 263.48	MK1
I-5 NB RAMPS/PORTAL WAY		
FERDALE, WHATCOM COUNTY		
MARCH, 2018		
PAVEMENT MARKING PLAN		
		OF SHEETS

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



NORTHEAST CORNER  
HATCH DETAIL



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

DRAWN	RMH			
DESIGNED	RMH			
CHECKED	3/29/18 RMH			
PROJ. ENGR.				
DRAWING FILE	MK_rev2.DWG			
	DATE	REVISION	BY	APP'D

REICHHARDT & EBE ENGINEERING, INC.  
P.O. Box 978  
Lynden, Washington 98264

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



**HTE** HERMAN TRAFFIC ENGINEERING

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253-236-4941 tel. hte@comcast.net

1-5 MP 263.48  
I-5 NB RAMPS/PORTAL WAY  
FERNDALE, WHATCOM COUNTY MARCH, 2018  
PAVEMENT MARKING PLAN

MK2  
SHEET  
OF  
SHEETS

**GENERAL NOTES (GN):**

- 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.

UNLESS OTHERWISE NOTED IN THE SHEETING TYPE COLUMN, ALL OVERHEAD REFLECTIVE SHEETING TYPE SHALL BE AS FOLLOWS:		
TYPE OF SIGN	SHEETING TYPE	
	BACKGROUND	LEGEND / BORDER
GUIDE - LIT	II*	III OR IV
GUIDE - UNLIT	III OR IV*	VIII OR IX
STREET NAME	III OR IV	IV
REGULATORY	IV	N/A
WARNING	*	N/A

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

ABBREVIATIONS LEGEND	
AAH	ADOPT A HIGHWAY
AHD	AHEAD
BR MOUNT	BRIDGE MOUNTED SIGN BRACKET
BTWN	BETWEEN
CANT	CANTILEVER
CL	CENTER LINE
CN	CONSTRUCTION NOTE
CONT	CONTINUED
EX OR EXIST	EXISTING
HAR	HIGHWAY ADVISORY RADIO
I/C	INTERCHANGE
I/S	INTERSECTION
LT	LEFT
LT STD	LIGHT STANDARD
MOD	MODIFIED
MP	MILE POST
MTG HDWR	MOUNTING HARDWARE
N/A	NOT APPLICABLE
NO.	NUMBER
PED	PEDESTRIAN
PERP	PERPENDICULAR
PSST	PERFORATED SQUARE STEEL TUBE
R-	REMOVAL
RT	RIGHT
SIG POLE	SIGNAL POLE
SIGN BR	SIGN BRIDGE
SB	SLIP BASE
SQ	SQUARE
STA	STATION
TYP	TYPICAL
W/	WITH
XING OR X-ING	CROSSING

2 1/2" PERFORATED & 3" SQUARE STEEL TUBE SIGN POST SUPPORTS			
POST SIZE (#)	CALL OUT IN THE POST SIZE COLUMN	SIGN SUPPORT TYPE	GENERAL NOTE
2 1/2"	2.5" SQ (1)	ST-1	D
2 1/2"	2.5" SQ (4)	ST-4	D
2 1/2"	2.5" SQ (SB)	SB-1, SB-2 OR SB-3	D, E
2 1/2"	2.5" SQ (5)	ST-4	E
3"	3" SQ (SB)	SEE NOTE K	K
3"	3" SQ (5)	ST-4	K

SEE STANDARD PLANS G-24.40 AND G-24.50

DRAWN	RMH				
DESIGNED	RMH				
CHECKED	3/29/18 RMH				
PROJ. ENGR.					
DRAWING FILE	SN_rev2.DWG				
	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

1-5	MP 263.48
1-5 NB RAMPS/PORTAL WAY	
FERDALE, WHATCOM COUNTY	MARCH, 2018
SIGN SPECIFICATIONS	

SS1  
 SHEET  
 OF  
 SHEETS

**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. WITH LEFT FISHHOOK ARROW	P 10+45, RT	9.5'	6.5'	II	SEE DETAIL	STEEL	3" SQ (SB)	14'	16'			7'	16'	SEE CN 2
R-3		I-5 NORTH VANCOUVER B.C. WITH LEFT ARROW	P 10+54, RT													REMOVE SIGN AND WOOD POSTS (2)
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):

- EDGE OF SIGN SHALL BE MINIMUM 2' BEHIND BACK OF SIDEWALK.
- EDGE OF SIGN SHALL BE MINIMUM 6' BEHIND EDGE OF PAVEMENT.
- 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				
	DATE	REVISION	BY	APP'D	

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Lynden, Washington 98264

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



**HTE HERMAN TRAFFIC ENGINEERING**

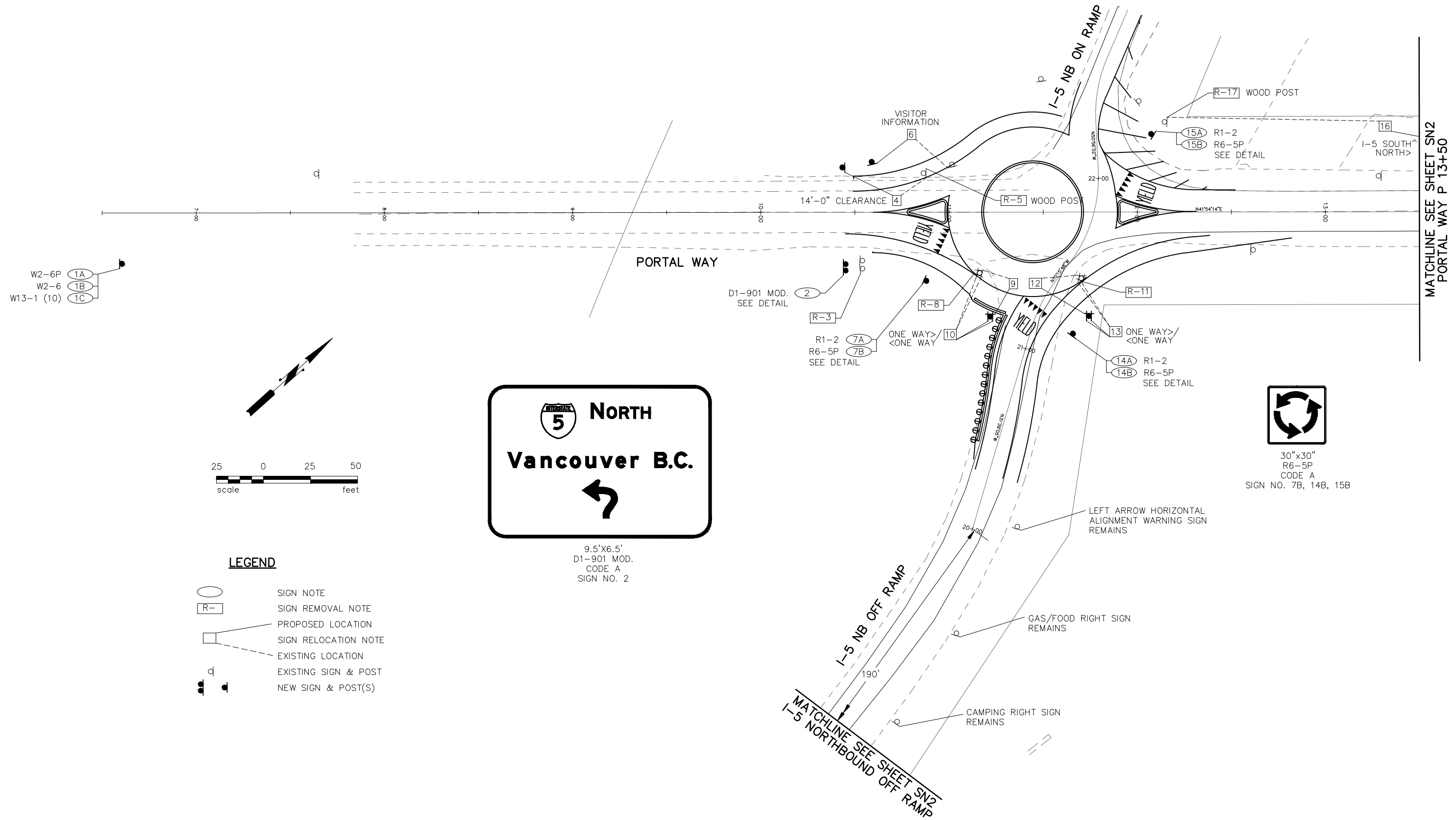
11215 Southeast 220th Place, Kent, Washington 98031  
253-236-4941 tel. hte@comcast.net

1-5	MP 263.48
I-5 NB RAMPS/PORTAL WAY	
FERDALE, WHATCOM COUNTY	MARCH, 2018
SIGN SPECIFICATIONS	

SS2  
SHEET  
OF  
SHEETS



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



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

**LEGEND**

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

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



MATCHLINE SEE SHEET SN2  
PORTAL WAY P 13+50

30"x30"  
R6-5P  
CODE A  
SIGN NO. 7B, 14B, 15B

DRAWN	RMH				
DESIGNED	RMH				
CHECKED	3/29/18 RMH				
PROJ. ENGR.					
DRAWING FILE	SN_rev2.DWG				
DATE	REVISION	BY	APP'D		

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I-5 MP 263.48

I-5 NB RAMPS/PORTAL WAY

FERDALE, WHATCOM COUNTY MARCH, 2018








SIGNING PLAN

SN1  
SHEET  
OF  
SHEETS

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

MATCHLINE SEE SHEET SN1  
I-5 NORTHBOUND OFF RAMP

**LEGEND**

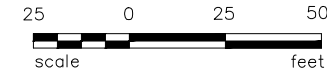
-  SIGN NOTE
-  SIGN REMOVAL NOTE
-  PROPOSED LOCATION
-  SIGN RELOCATION NOTE
-  EXISTING LOCATION
-  EXISTING SIGN & POST
-  NEW SIGN & POST(S)

WRONG WAY SIGN  
REMAINS

R-19

RIGHT ARROW HORIZONTAL  
ALIGNMENT WARNING SIGN  
REMAINS

I-5 NB OFF RAMP



CURVE WARNING SIGN  
35 MPH PLAQUE  
REMAIN

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

PORTAL WAY

EXIT 263 RIGHT SIGN  
REMAINS

MATCHLINE SEE SHEET SN1  
PORTAL WAY P 13+50

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

40'

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

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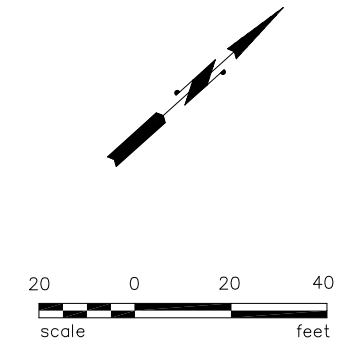
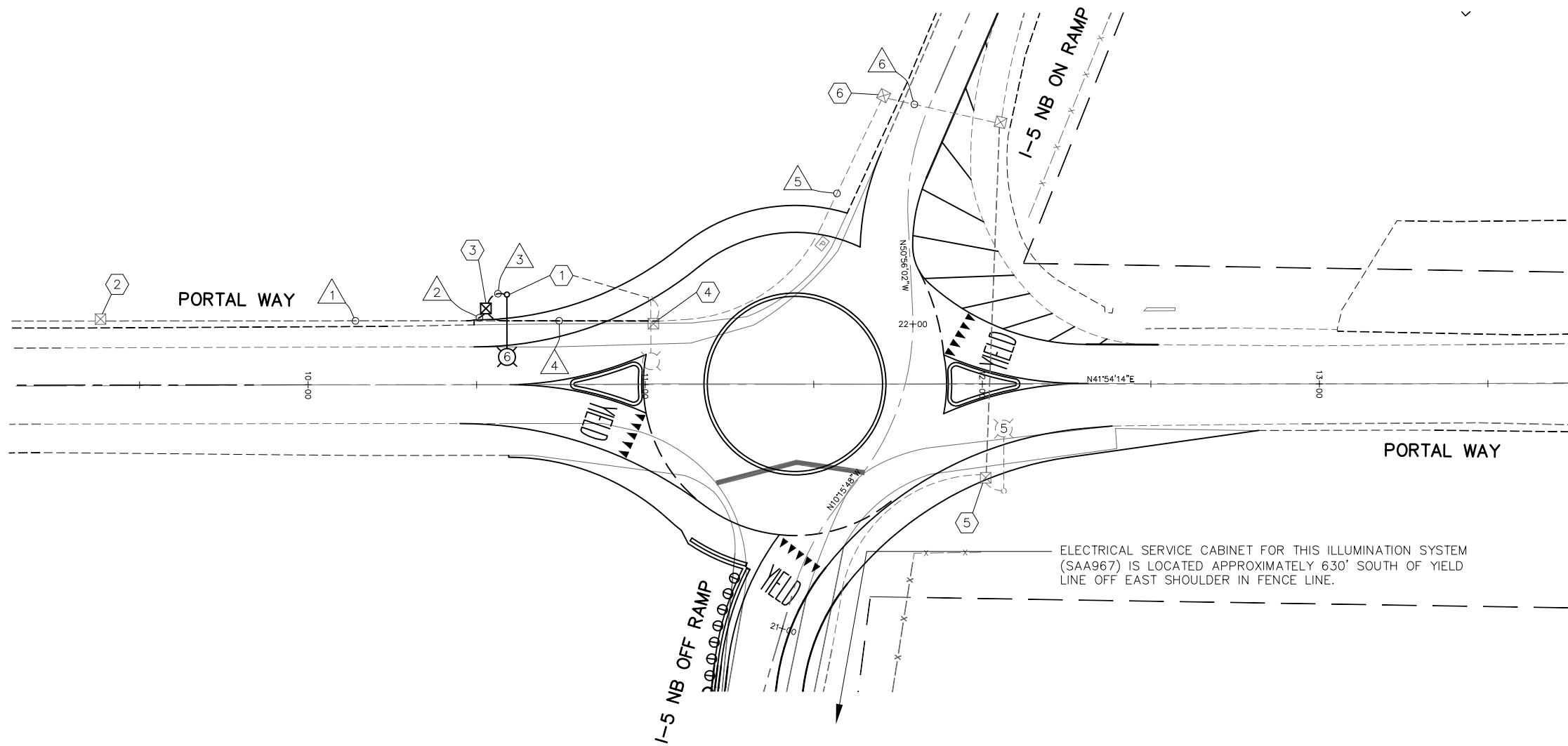
I-5 MP 263.48

1-5 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

ELECTRICAL SERVICE CABINET FOR THIS ILLUMINATION SYSTEM (SAA967) IS LOCATED APPROXIMATELY 630' SOUTH OF YIELD LINE OFF EAST SHOULDER IN FENCE LINE.

**GENERAL NOTES**

- 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).
- WORK SHALL BE STAGED SO NO PORTION OF EXISTING STREET LIGHTING SYSTEM IS INOPERABLE DURING HOURS OF DARKNESS.
- 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**

- 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.
- 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.
- INTERCEPT EXISTING CONDUIT AND SWEEP INTO NEW JUNCTION BOX (WEST RUN ONLY). INSTALL OTHER CONDUIT AND CONDUCTORS PER WIRING SCHEDULE.
- 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.
- ADJUST EXISTING JUNCTION BOX TO GRADE.
- 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.

DRAWN	RMH				
DESIGNED	RMH				
CHECKED	3/29/18 RMH				
PROJ. ENGR.					
DRAWING FILE	IL_rev2.DWG				
DATE		REVISION		BY	APP'D

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Ferndale, Washington 98248



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1-5	MP 263.48	IL1
1-5 NB RAMPS/PORTAL WAY		SHEET
FERDALE, WHATCOM COUNTY		OF
MARCH, 2018		SHEETS
ILLUMINATION PLAN		

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

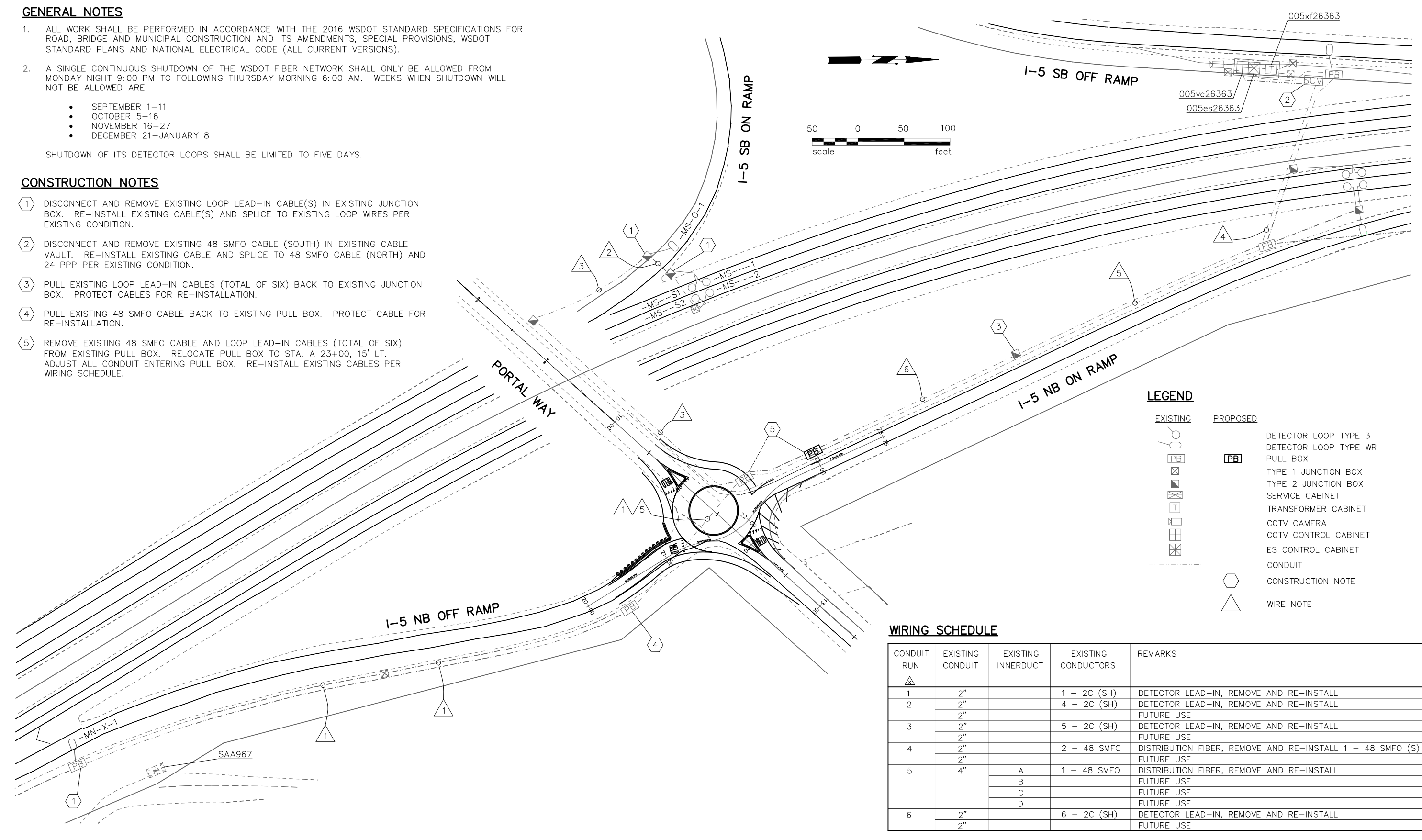
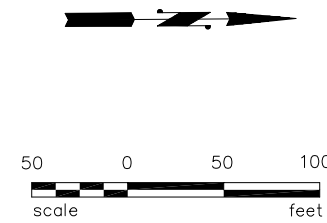
**GENERAL NOTES**

- 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).
- 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**

- 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.
- 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.
- PULL EXISTING LOOP LEAD-IN CABLES (TOTAL OF SIX) BACK TO EXISTING JUNCTION BOX. PROTECT CABLES FOR RE-INSTALLATION.
- PULL EXISTING 48 SMFO CABLE BACK TO EXISTING PULL BOX. PROTECT CABLE FOR RE-INSTALLATION.
- 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.



**LEGEND**

- |                 |                 |                       |
|-----------------|-----------------|-----------------------|
| <b>EXISTING</b> | <b>PROPOSED</b> |                       |
|                 |                 | DETECTOR LOOP TYPE 3  |
|                 |                 | DETECTOR LOOP TYPE WR |
|                 |                 | PULL BOX              |
|                 |                 | TYPE 1 JUNCTION BOX   |
|                 |                 | TYPE 2 JUNCTION BOX   |
|                 |                 | SERVICE CABINET       |
|                 |                 | TRANSFORMER CABINET   |
|                 |                 | CCTV CAMERA           |
|                 |                 | CCTV CONTROL CABINET  |
|                 |                 | ES CONTROL CABINET    |
|                 |                 | CONDUIT               |
|                 |                 | CONSTRUCTION NOTE     |
|                 |                 | WIRE NOTE             |

**WIRING SCHEDULE**

CONDUIT RUN	EXISTING CONDUIT	EXISTING INNERDUCT	EXISTING CONDUCTORS	REMARKS
1	2"		1 - 2C (SH)	DETECTOR LEAD-IN, REMOVE AND RE-INSTALL
2	2"		4 - 2C (SH)	DETECTOR LEAD-IN, REMOVE AND RE-INSTALL
	2"			FUTURE USE
3	2"		5 - 2C (SH)	DETECTOR LEAD-IN, REMOVE AND RE-INSTALL
	2"			FUTURE USE
4	2"		2 - 48 SMFO	DISTRIBUTION FIBER, REMOVE AND RE-INSTALL 1 - 48 SMFO (S)
	2"			FUTURE USE
5	4"	A	1 - 48 SMFO	DISTRIBUTION FIBER, REMOVE AND RE-INSTALL
		B		FUTURE USE
		C		FUTURE USE
		D		FUTURE USE
6	2"		6 - 2C (SH)	DETECTOR LEAD-IN, REMOVE AND RE-INSTALL
	2"			FUTURE USE

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  
 ITS RELOCATION PLAN

IT1  
 SHEET  
 OF  
 SHEETS