

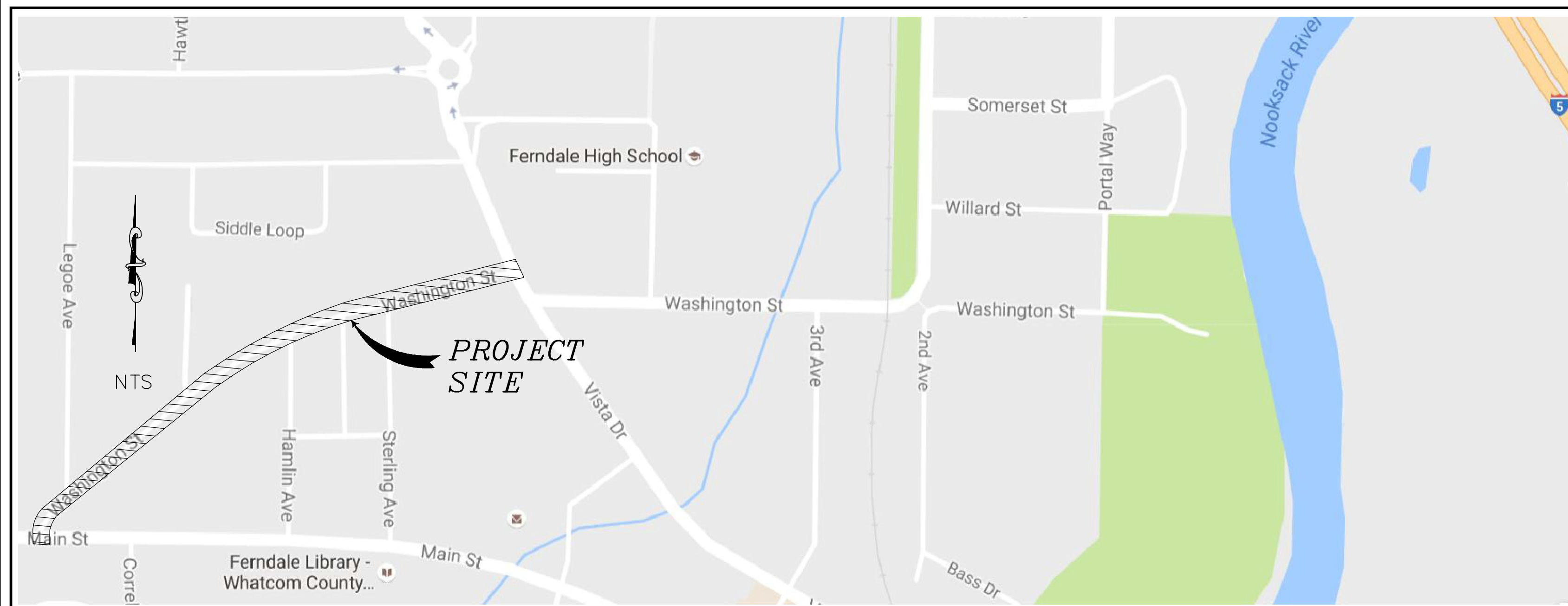
WASHINGTON STREET IMPROVEMENT PROJECT

FERNDALE, WASHINGTON

CITY OF FERNDALE - PROJECT NO. ST2015-08
TIB PROJECT NO. 8-2-985(009)-1

VICINITY MAP

PROJECT LOCATED IN SECTION 19 & 20, TOWNSHIP 39N, RANGE 2E, W.M.



PROJECT LOCATION



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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
COVER

DWG 16026 COVER		DATE	2/13/2018
JOB#	SCALE	H: N/A	V: N/A
16026			
		SHEET	1
			of 38

LEGEND

EXISTING	
--- TB --- TB ---	= EXISTING TOP OF BANK
--- BB --- BB ---	= EXISTING BOTTOM OF BANK
---	= EXISTING DITCH ϵ
---	= EXISTING GRADE BREAK
---95---	= EXISTING MAJOR CONTOUR
---95---	= EXISTING MINOR CONTOUR
□ □ □ □ □	= EXISTING GUARDRAIL
---X---X---X---	= EXISTING FENCE
---	= EXISTING GRAVEL
---	= EXISTING WALL
//////	= EXISTING BUILDING
---	= EXISTING PROPERTY BOUNDARY
---	= EXISTING RIGHT OF WAY
---	= EXISTING RIGHT OF WAY ϵ
---	= EXISTING EASEMENT
---	= EXISTING ROAD ϵ
---	= EXISTING WETLANDS BOUNDARY
---	= EXISTING TRAFFIC STRIPING
---	= EXISTING EDGE OF PAVEMENT
---	= EXISTING FLOWLINE
---	= EXISTING TOP BACK OF CURB
---	= EXISTING SIDEWALK
---UGP---	= 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
---	= EXISTING CULVERT
---	= EXISTING TREE LINE
---	= EXISTING CONCRETE
---	= EXISTING RR TRACKS

PROPOSED	
--- TB --- TB ---	= PROPOSED TOP OF BANK
--- BB --- BB ---	= PROPOSED TOE OF BANK
---	= PROPOSED DITCH ϵ
---	= PROPOSED GRADE BREAK
---95---	= PROPOSED MAJOR CONTOUR
---95---	= PROPOSED MINOR CONTOUR
□ □ □ □ □	= PROPOSED GUARDRAIL
---X---X---X---	= PROPOSED FENCE
---	= PROPOSED GRAVEL
---	= PROPOSED WALL
//////	= PROPOSED BUILDING
---	= PROPOSED PAVEMENT VALLEY
---	= PROPOSED RIGHT OF WAY
---	= PROPOSED RIGHT OF WAY ϵ
---	= PROPOSED AUTOTURN
---	= PROPOSED CONSTRUCTION EASEMENT
---	= PROPOSED ROAD ϵ
---	= PROPOSED SAWCUT
---	= PROPOSED TRAFFIC STRIPE
---	= PROPOSED ROAD EDGE OF PAVEMENT
---	= PROPOSED CURB AND GUTTER
---	= PROPOSED PATH
---	= PROPOSED SIDEWALK
---	= PROPOSED POWER LINE
PR	= PROPOSED ROCK WALL
---	= PROPOSED PARKING STRIPE
TS	= PROPOSED TRAFFIC SIGNAL CONDUCTOR
FO	= PROPOSED FIBER OPTICS
---	= PROPOSED SILT FENCE
C	= PROPOSED CONDUIT
---	= PROPOSED HANDRAIL
IRR	= PROPOSED IRRIGATION LINE
---	= PROPOSED WATER MAIN
---	= PROPOSED SANITARY SEWER FORCE MAIN
---	= PROPOSED SANITARY SEWER
---	= PROPOSED STORM DRAIN
---	= PROPOSED CULVERT
---	= PROPOSED CONC. SIDEWALK/DRIVEWAY
---	= PROPOSED SEEDED LAWN
---	= PROPOSED BARK MULCH
---	= PROPOSED GRIND
---	= PROPOSED DEMOLITION AREA
---	= PROPOSED ASPHALT
---	= PROPOSED CRUSHED SURFACING TOP COURSE

EXISTING	
	= EXISTING SIGNAL POLE
	= EXISTING SIGNAL POLE W/ LUMINAIRE
	= EXISTING STREET LIGHT ASSEMBLY
	= EXISTING YARD LIGHT
	= EXISTING GUY WIRE
	= EXISTING GAS METER
	= EXISTING GAS VALVE
	= EXISTING TRANSFORMER PAD
	= EXISTING POWER VAULT
	= EXISTING J-BOX
	= EXISTING UTILITY POTHOLE LOCATION
	= EXISTING MAIL BOX
	= EXISTING WATER SPIGOT
	= EXISTING WATER BLOW OFF
	= EXISTING WATER METER
	= EXISTING WATER VALVE
	= EXISTING FIRE HYDRANT
	= EXISTING TRAFFIC SIGNAL VAULT
	= EXISTING SEWER MANHOLE
	= 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

PROPOSED	
	= PROPOSED COUPLER
	= PROPOSED WATER METER
	= PROPOSED WATER VALVE
	= PROPOSED STORM DRAIN INLET
	= PROPOSED STORM DRAIN CATCH BASIN TYPE II
	= PROPOSED SANITARY SEWER MANHOLE
	= PROPOSED STORM DRAIN CATCH BASIN TYPE I
	= CONNECT TO EXISTING PIPE
	= PROPOSED HYDRANT
	= PROPOSED UTILITY POLE
	= PROPOSED J-BOX (TYPE I, II, III)
	= PROPOSED MONITORING WELL
	= PROP STORM CLEANOUT
	= PROPOSED SANITARY SEWER CLEAN OUT
	= PROPOSED SIGN
	= FLOW ARROW
	= PROPOSED TREE
	= SECTION MARK
	= POTHOLE EXISTING UTILITY

ABBREVIATIONS

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



2/13/18

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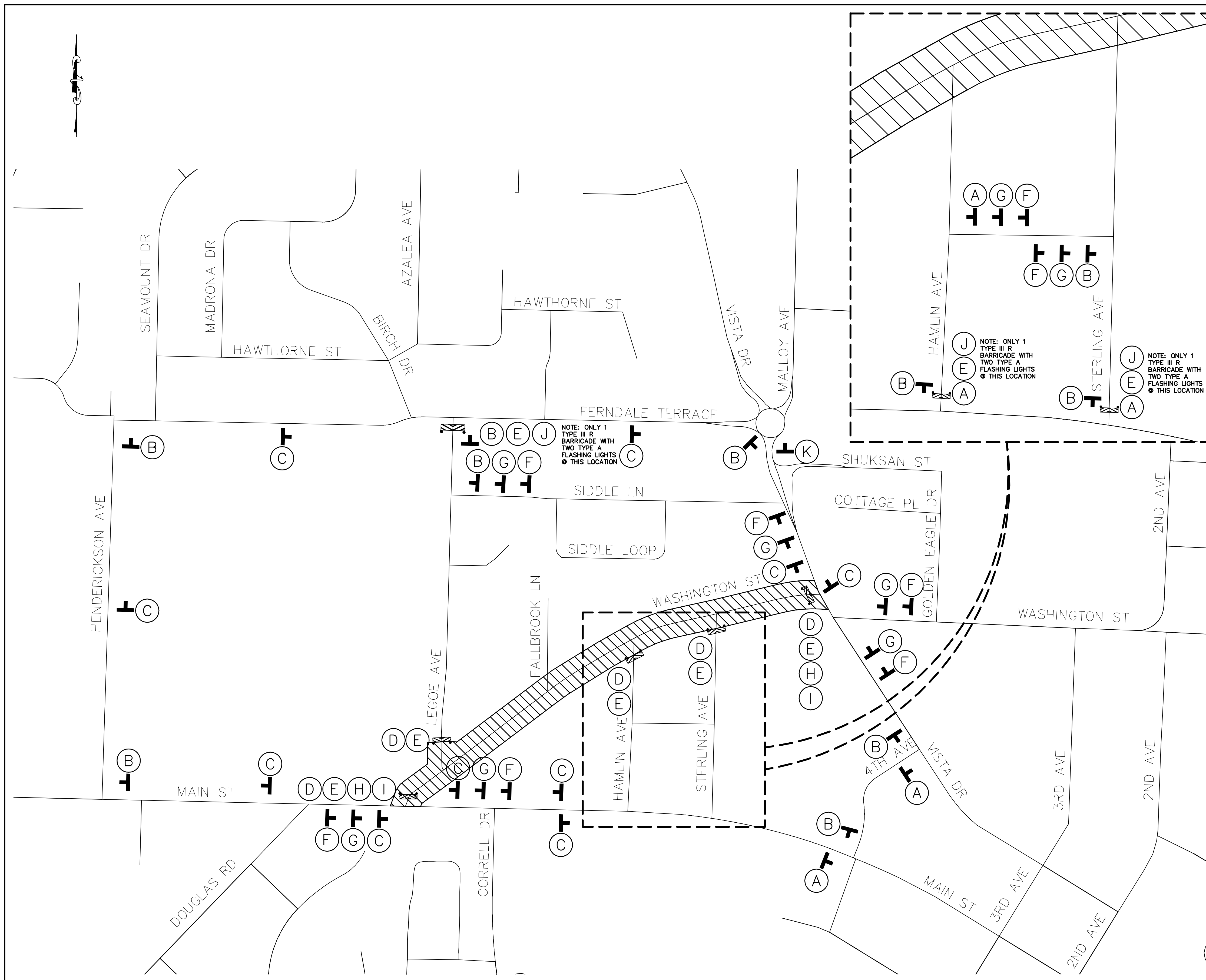
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NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
LEGEND AND ABBREVIATIONS

DWG 16026 COVER		DATE
JOB#	SCALE	2/13/2018
16026	H: N/A V: N/A	SHEET 2 of 38



LEGEND

- = SIGN
- = PROPOSED WORK AREA
- (A) M4-10L
- (B) M4-10R
- (C) M4-9S
- (D) R 11-4 (ON BARRICADE)
- (E) TWO TYPE III R AND TYPE III L, BARRICADE WITH 2 TYPE A FLASHING WARNING LIGHTS
- (F) W 20-3
- (G) W20-2
- (H) M4-8
- (I) M6-4
- (J) R 11-3
- (K)

SIGN SPACING = X (1)

RURAL ROADS	45/55 MPH	500'±
URBAN ARTERIALS & RURAL ROADS	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

ALL SIGNS ARE BLACK ON ORANGE UNLESS DESIGNATED OTHERWISE

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE AT-GRADE INTERSECTIONS AND DRIVEWAYS.
 (2) THIS SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



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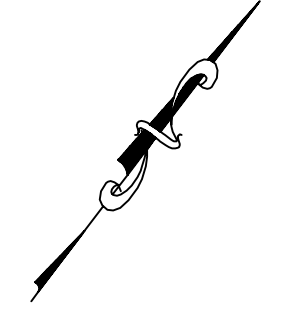
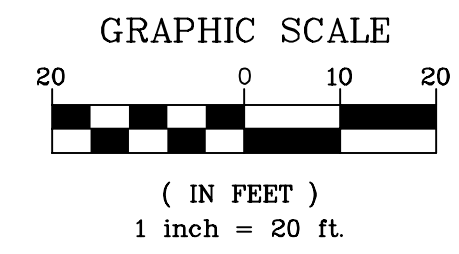
CITY OF FERDALE
 2095 MAIN ST
 FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 DETOUR PLAN

DWG 16026 DETOUR
 JOB# 16026

SCALE
 H: N/A V: N/A

DATE 2/13/2018
 SHEET 3 of 38



EROSION CONTROL LEGEND

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

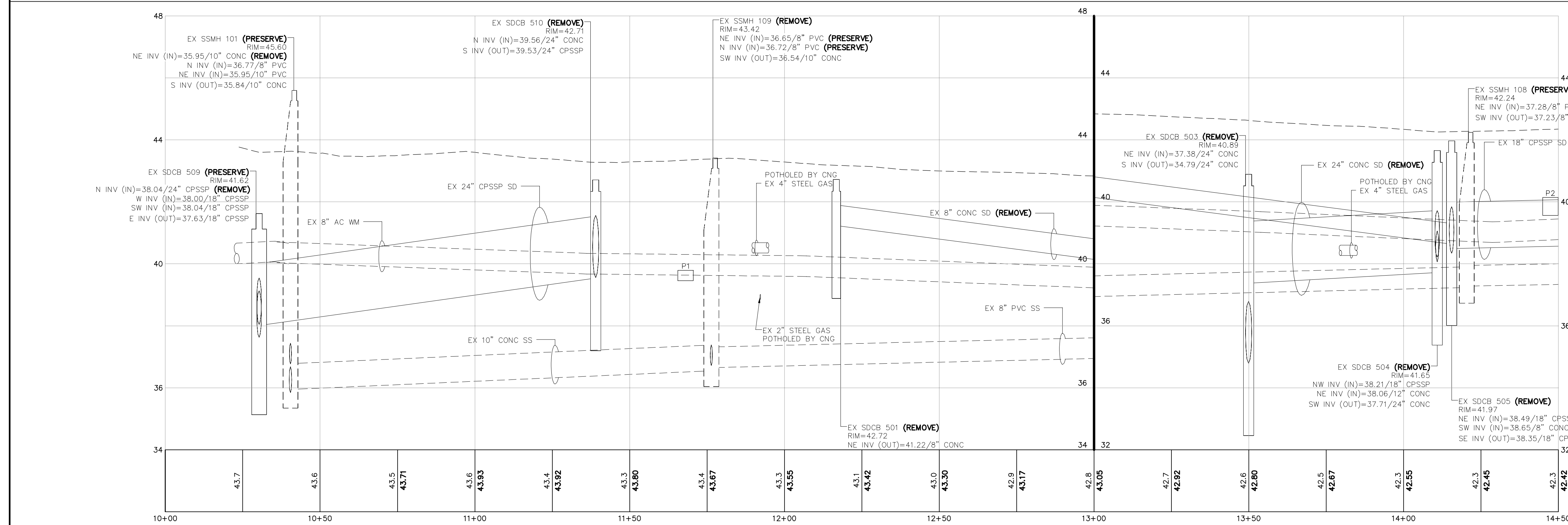
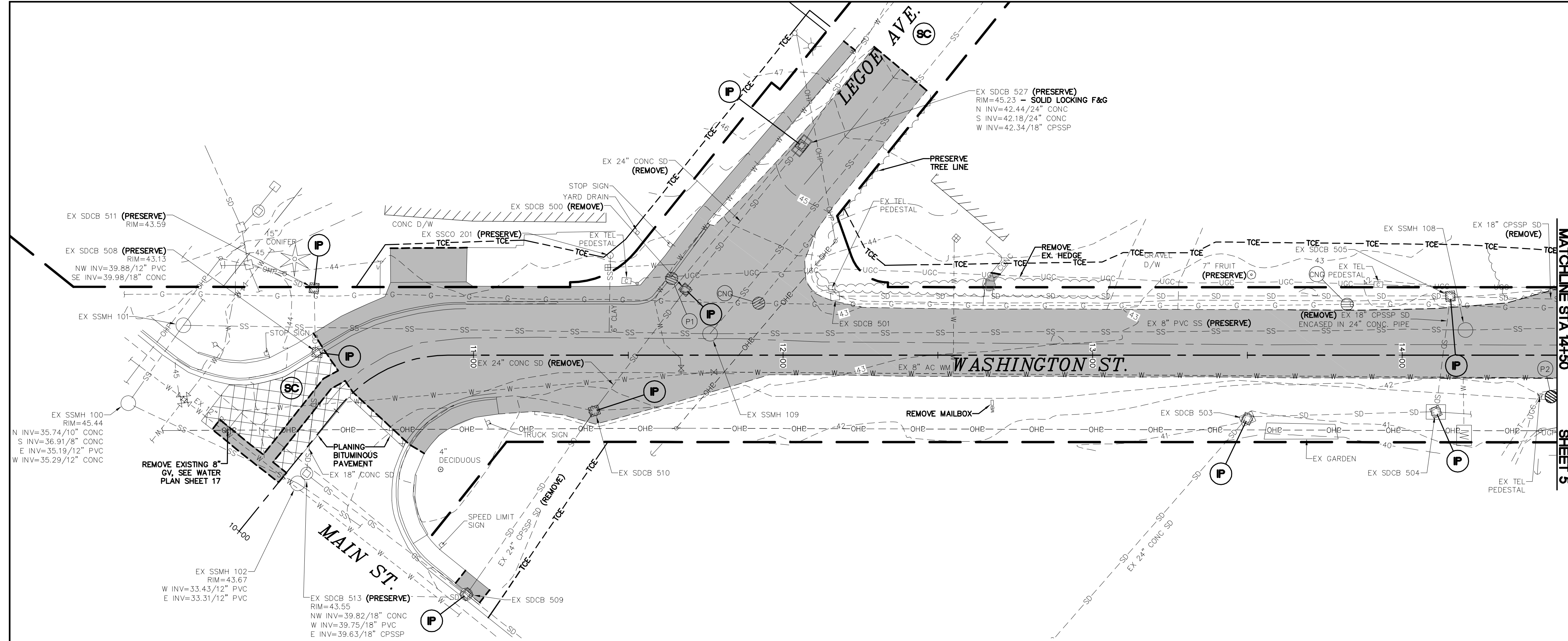
- NOTES:
- BMP C120 (PERMANENT SEEDING) SHOWN IN GRADING PLAN.
 - SEE TESC DETAILS AND TESC GENERAL NOTES, SHEET 8
 - GENERALLY THE HIGH VISIBILITY SILT FENCE AND CLEARING LIMITS FOLLOW THE RIGHT OF WAY OR CONSTRUCTION EASEMENTS UNLESS OTHERWISE DRAWN ON THE PLANS.
 - REMOVE ALL TREES WITHIN THE CLEARING LIMITS. NOT ALL TREES ARE SHOWN WITHIN THE CLEARING LIMITS.

SYMBOL

- BMP C220: INLET PROTECTION - CB INSERT - SEE DETAIL SHEET 8
- BMP C105 AND C140: STREET CLEANING

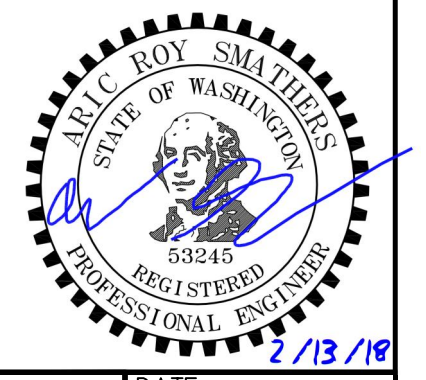
NOTES:
WATER MAIN LOCATION ASSUMED FROM APPROXIMATELY STA 10+25 TO 11+75.

=UTILITY POTHOLED LOCATION



POTHOLES		
#	DESCRIPTION	OWNER
P1 (4)	4" PVC - 3.4'± TO TOP	FTR
P2 (1)	2" PVC - 2.2'± TO TOP	FTR
(1)	1" OB - 1.8'± TO TOP	FTR

NOTE:
POTHOLE DATA IS FOR INFORMATIONAL PURPOSES ONLY. POTHOLE DATA IS FROM FIELD MEASUREMENTS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. ON 5/1/2017 AND ARE NOT SURVEYED. THIS INFORMATION MAY NOT BE ENTIRELY ACCURATE OR COMPLETE.



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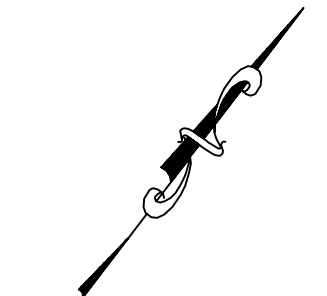
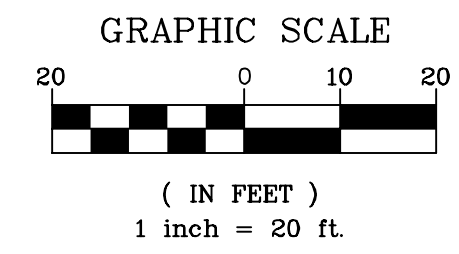
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CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
EX COND, TESC, DEMO, STA 10+00 TO 14+50

DWG 16026 TESC + DEMO		DATE	2/13/2018
JOB#	16026	SCALE	H: 1"=20' v: 1"=2'
SHEET		4 of 38	

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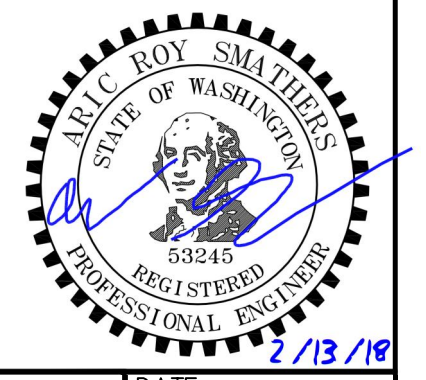
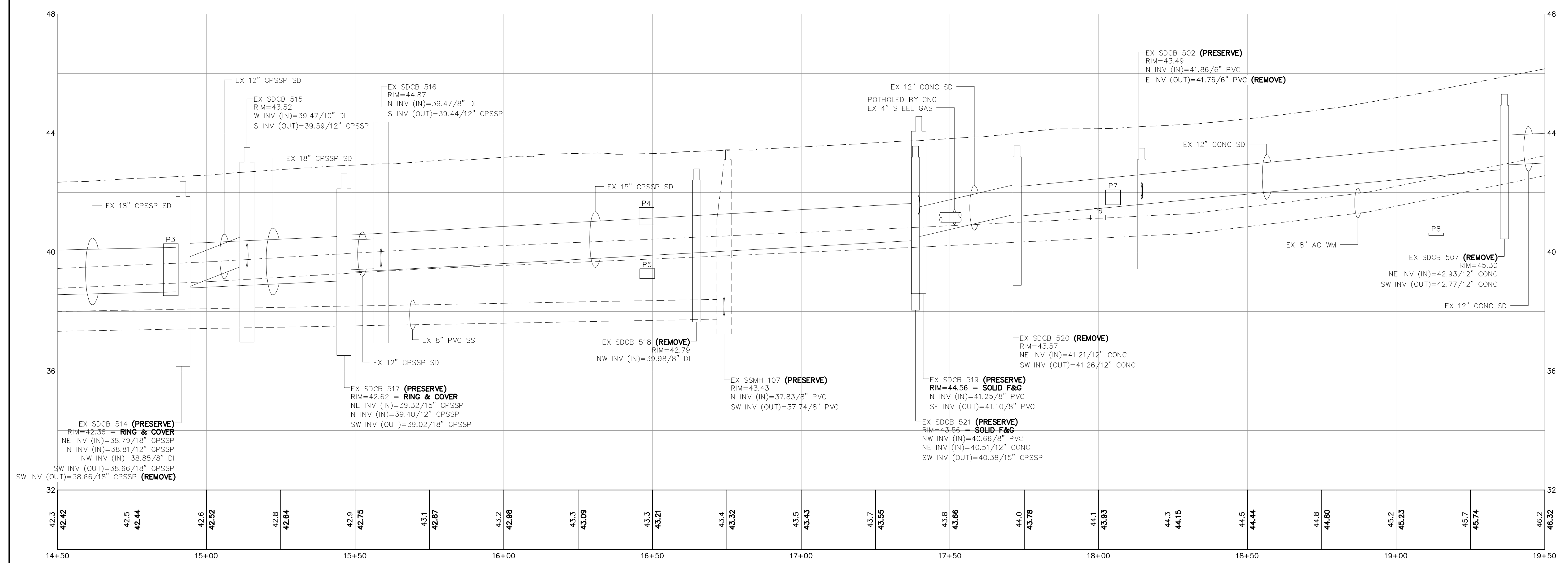
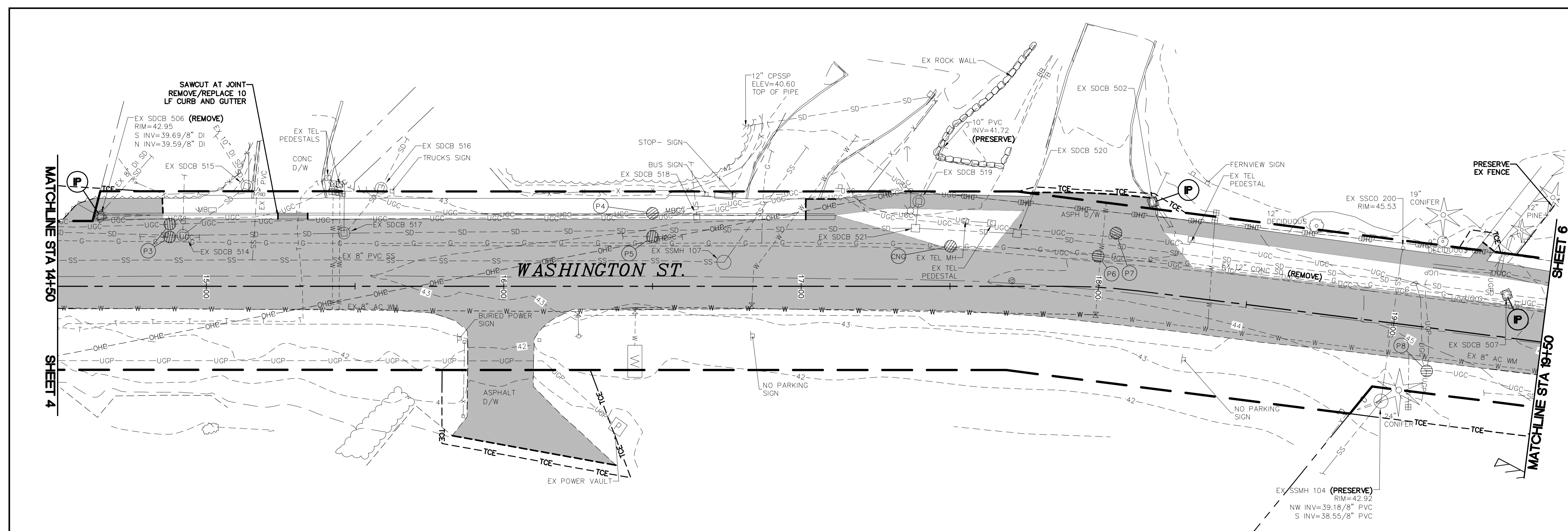


POTHOLES		
#	DESCRIPTION	OWNER
P3	(1) 4" DB - 3.3'± TO TOP (1) 4" PVC - 1.8'± TO TOP	FTR
P4	(1) 4" PVC - 1.8'± TO TOP (1) 2" PVC - 1.8'± TO TOP	FTR
P5	(1) 4" DB - 3.0'± TO TOP	FTR
P6	(1) 2" DB - 2.7'± TO TOP	FTR
P7	(1) 4" PVC - 1.7'± TO TOP (1) 4" PE - 1.8'± TO TOP	FTR
P8	(2) 1" PVC - 4.0'± TO TOP (1) 1" DB - 4.0'± TO TOP	FTR

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⊗ = UTILITY POTHOLED LOCATION

NOTES:
WATER MAIN LOCATION ASSUMED FROM APPROXIMATELY STA 18+00 TO 22+30



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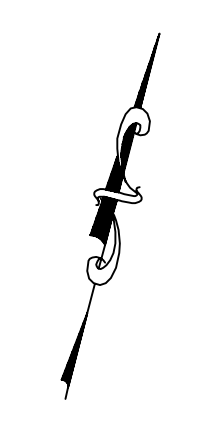
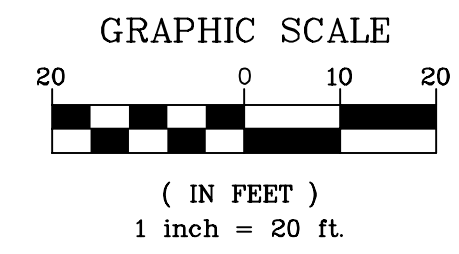
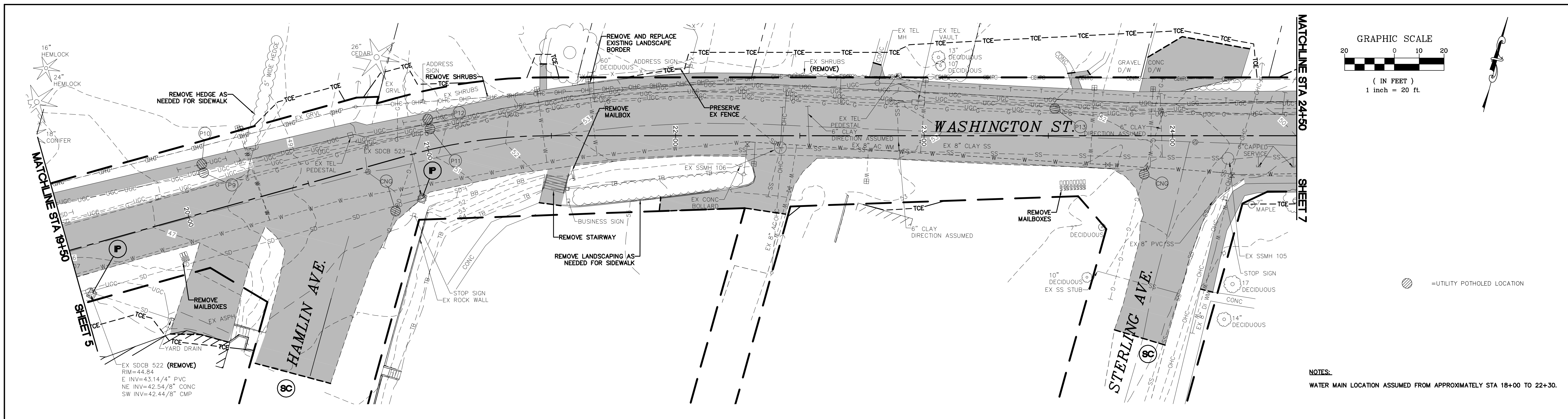
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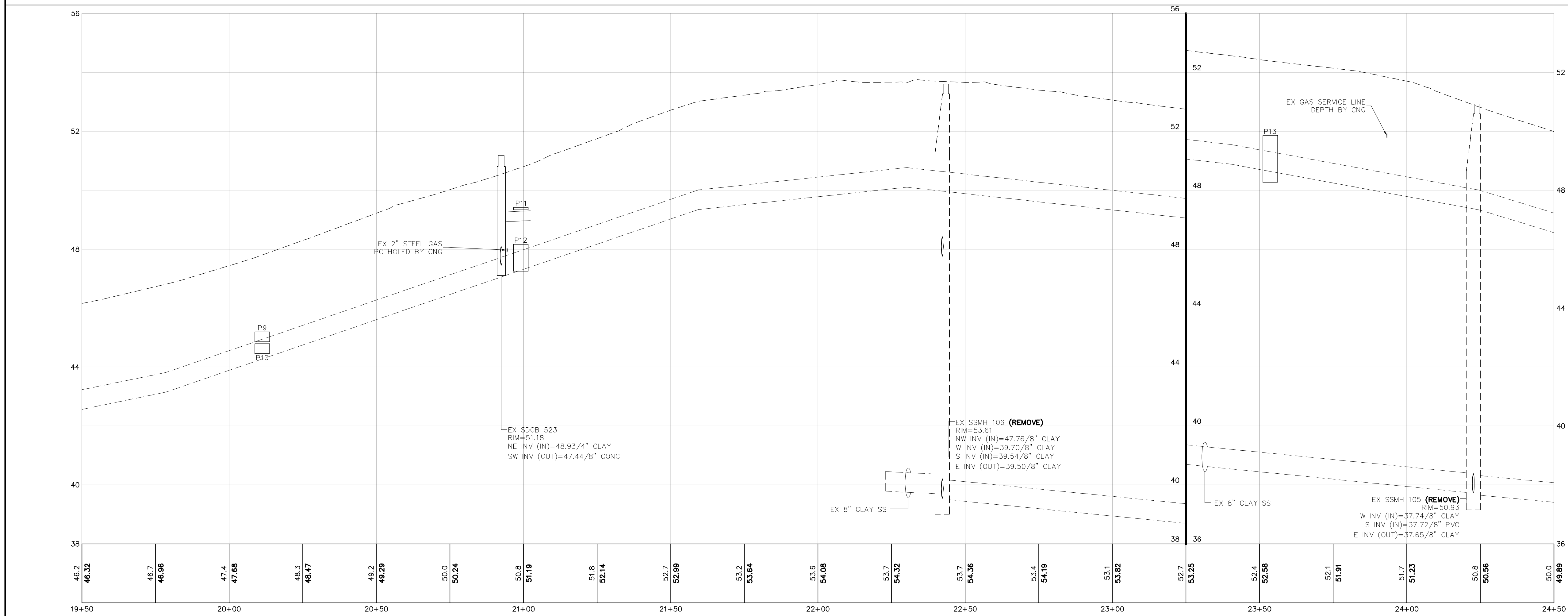
WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
EX COND TESC DEMO STA 14+50 TO 19+50

DWG 16026 TESC + DEMO		DATE	2/13/2018
JOB#	16026	SCALE	H: 1"=20' v: 1"=2'
SHEET		5 of 38	

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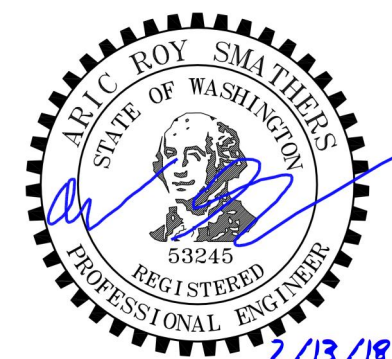


NOTES:
 WATER MAIN LOCATION ASSUMED FROM APPROXIMATELY STA 18+00 TO 22+30.



POTHOLES		
#	DESCRIPTION	OWNER
P9	(1) 4" DB - 2.3'± TO TOP	FTR
P10	(3) 4" PVC - 2.8'± TO TOP	FTR
P11	(1) 0.5" DB - 1.3'± TO TOP	FTR
P12	(4) 4" PVC - 2.5'± TO TOP	FTR
P13	(1) 4" DB - 2.2'± TO TOP	FTR
	(1) 13" CDF DUCT - 2.7'± TO TOP	

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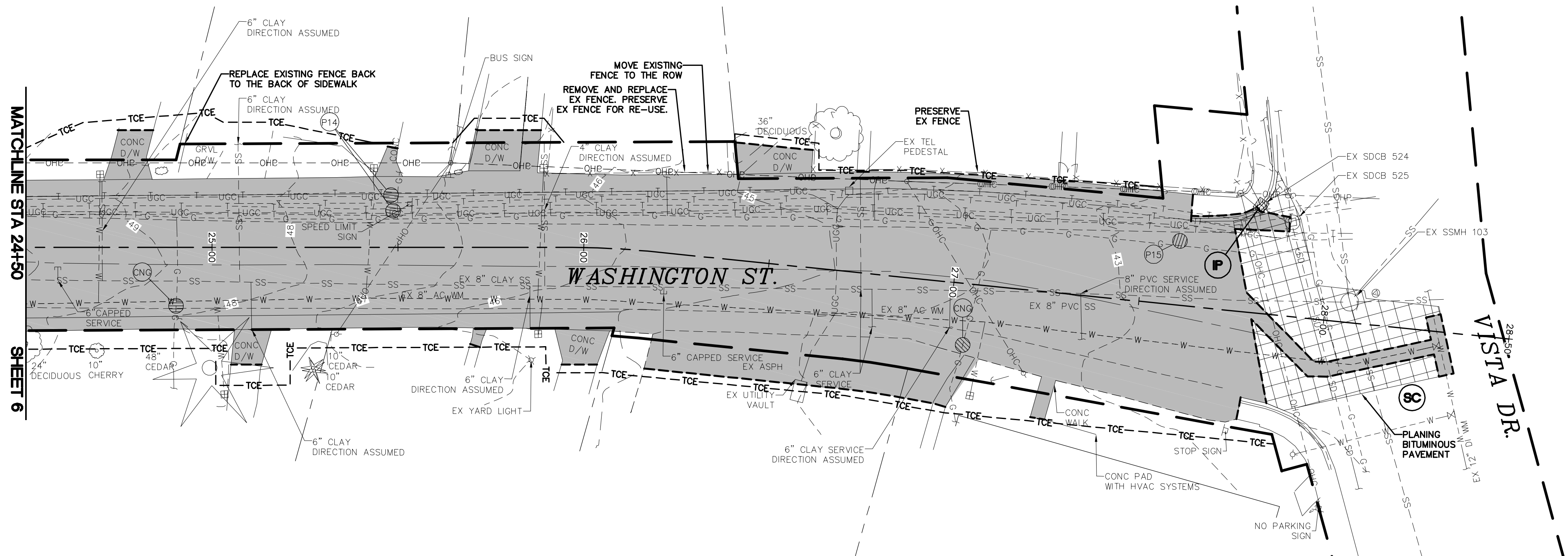
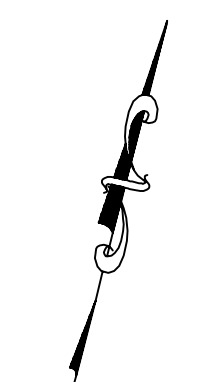
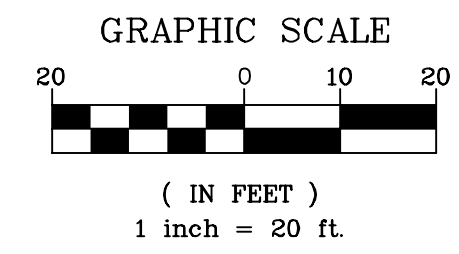
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CITY OF FERDALE
 2095 MAIN ST
 FERDALE, WA 98248

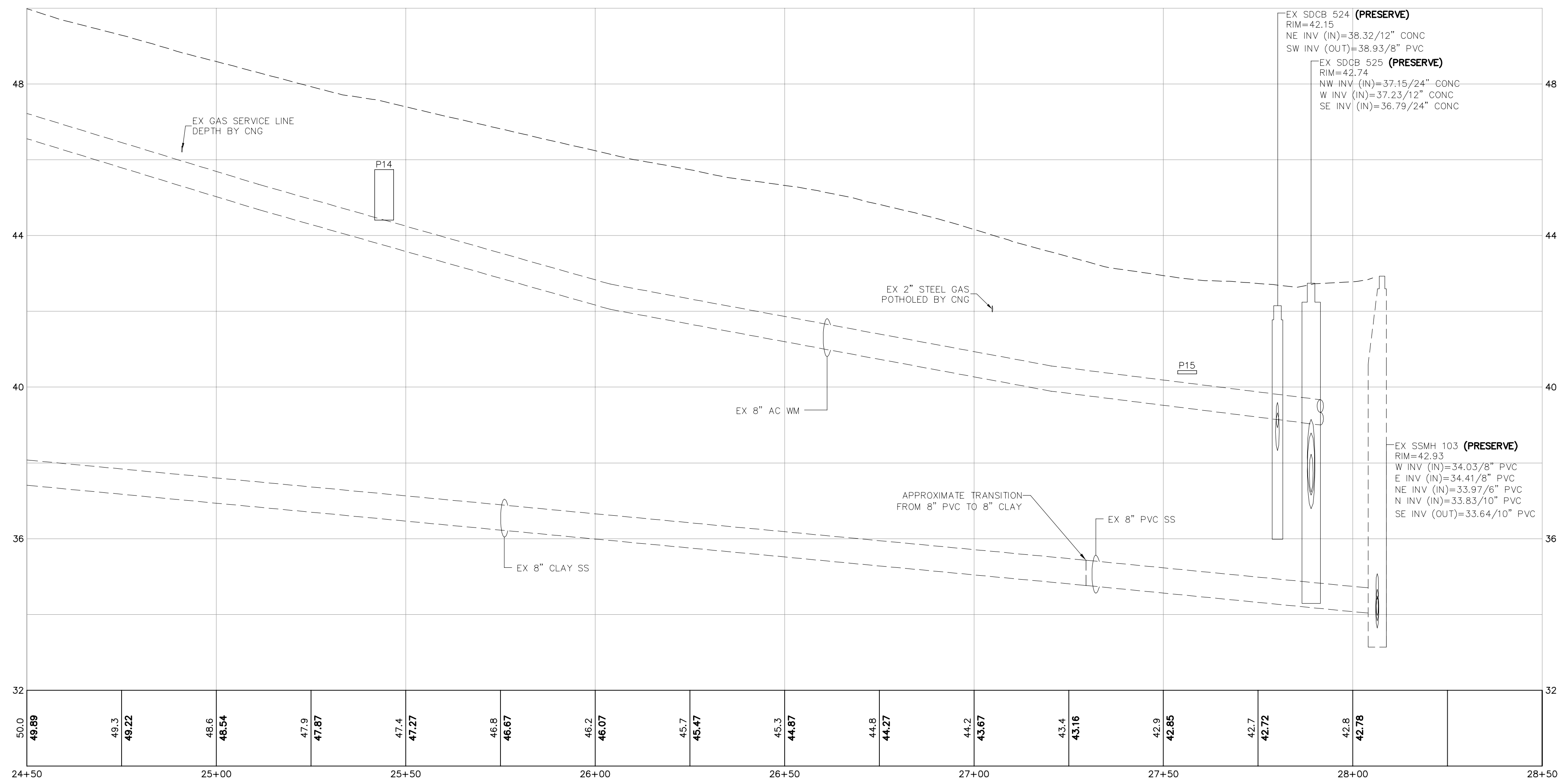
WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 EX COND, TESC, DEMO, STA 19+50 TO 24+50

DWG 16026 TESC + DEMO		DATE	2/13/2018
JOB#	16026	SCALE	H: 1"=20' V: NA
		SHEET	6 of 38



MATCHLINE STA 24+50
SHEET 6

NOTES:
WATER MAIN LOCATION ASSUMED FROM APPROXIMATELY STA 18+00 TO 22+30.



POTHOLES		
#	DESCRIPTION	OWNER
P14	(1) 4" DB - 1.9'± TO TOP (1) 2" DB - 1.7'± TO TOP (5) 1" DB - 1.7'± TO TOP	FTR
P15	(1) 1" PVC - 2.2'± TO TOP	FTR

NOTE:
POTHOLE DATA IS FOR INFORMATIONAL PURPOSES ONLY. POTHOLE DATA IS FROM FIELD MEASUREMENTS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. ON 5/1/2017 AND ARE NOT SURVEYED. THIS INFORMATION MAY NOT BE ENTIRELY ACCURATE OR COMPLETE.



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ARS
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PJC
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LP

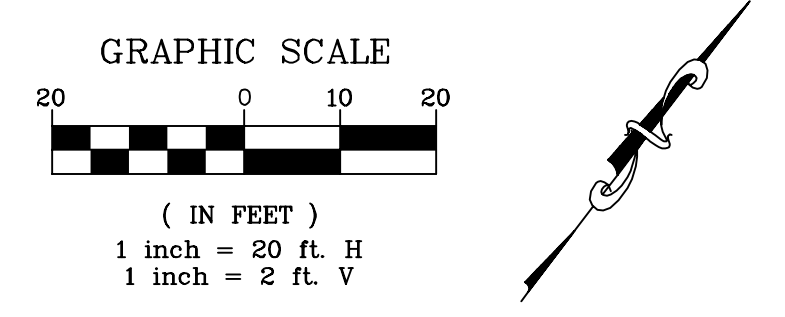
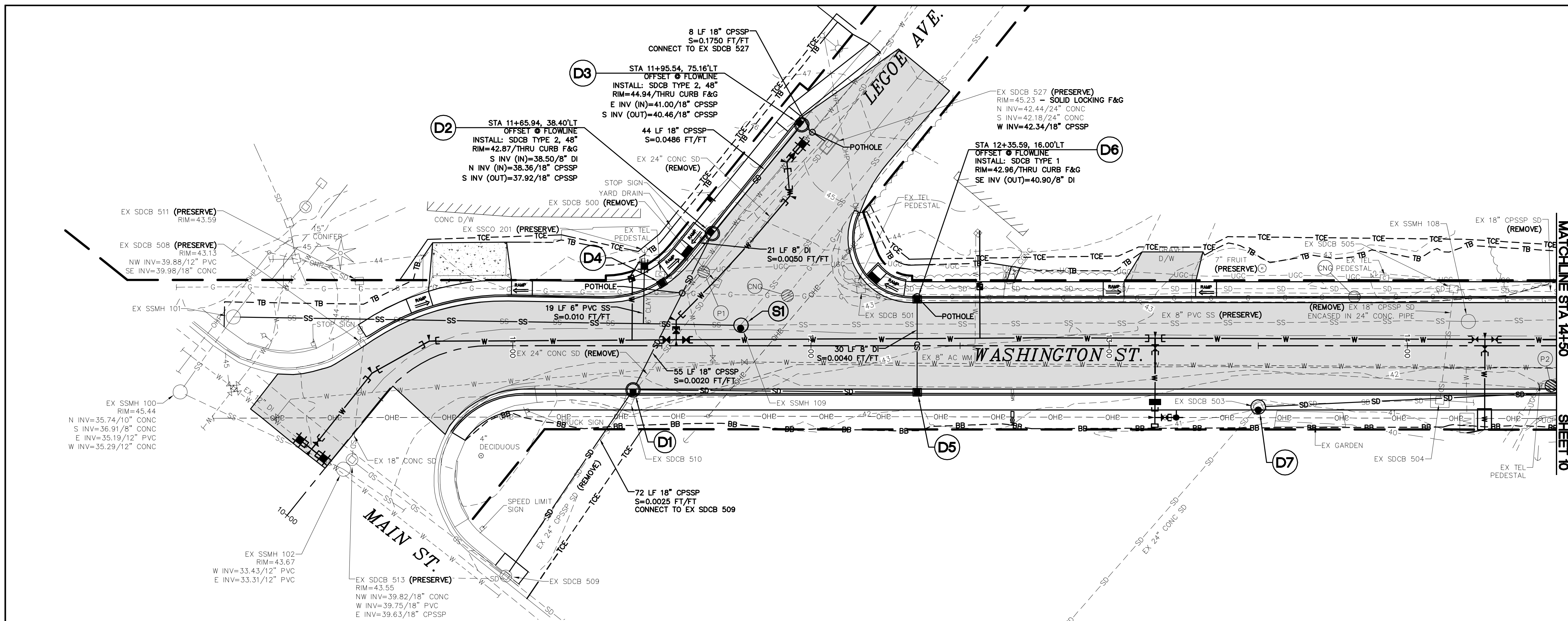
R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
EX COND TESC DEMO STA 24+50 TO 28+50

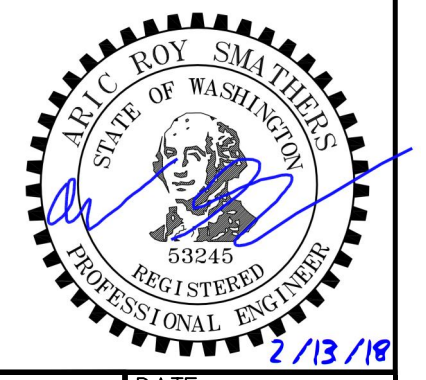
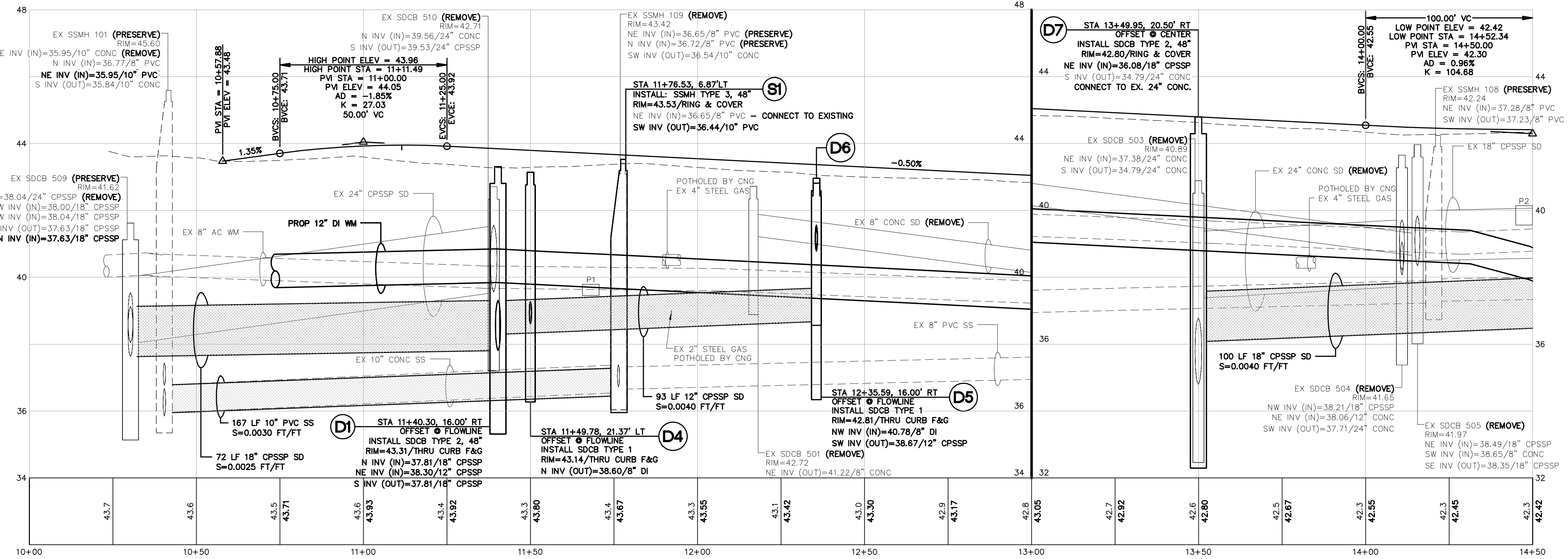
DWG 16026 TESC + DEMO		DATE	2/13/2018
JOB#	16026	SCALE	H: 1"=20' V: NA
SHEET		7 of 38	



POTHOLES		
#	DESCRIPTION	OWNER
P1	(4) 4" PVC - 3.4" TO TOP	FTR
P2	(1) 2" PVC - 2.2" TO TOP	FTR
	(1) 1" DB - 1.8" TO TOP	

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- = UTILITY POTHOLED LOCATION
- = CONNECT TO EXISTING



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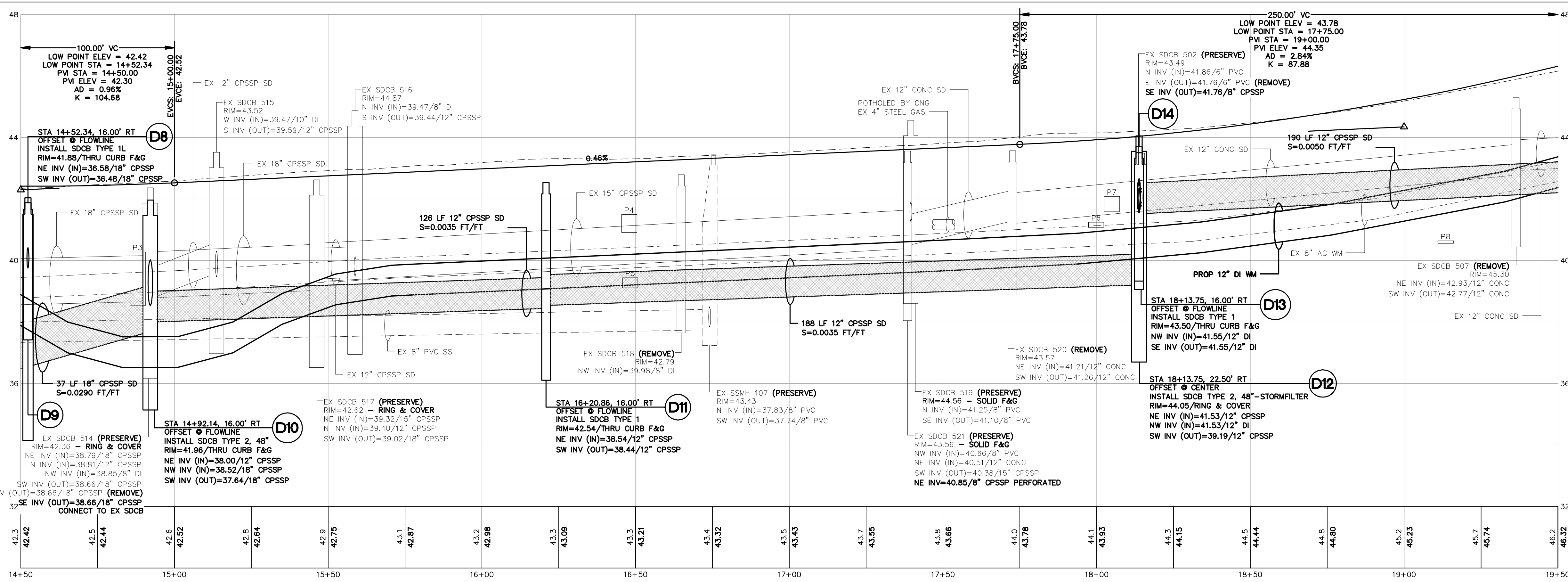
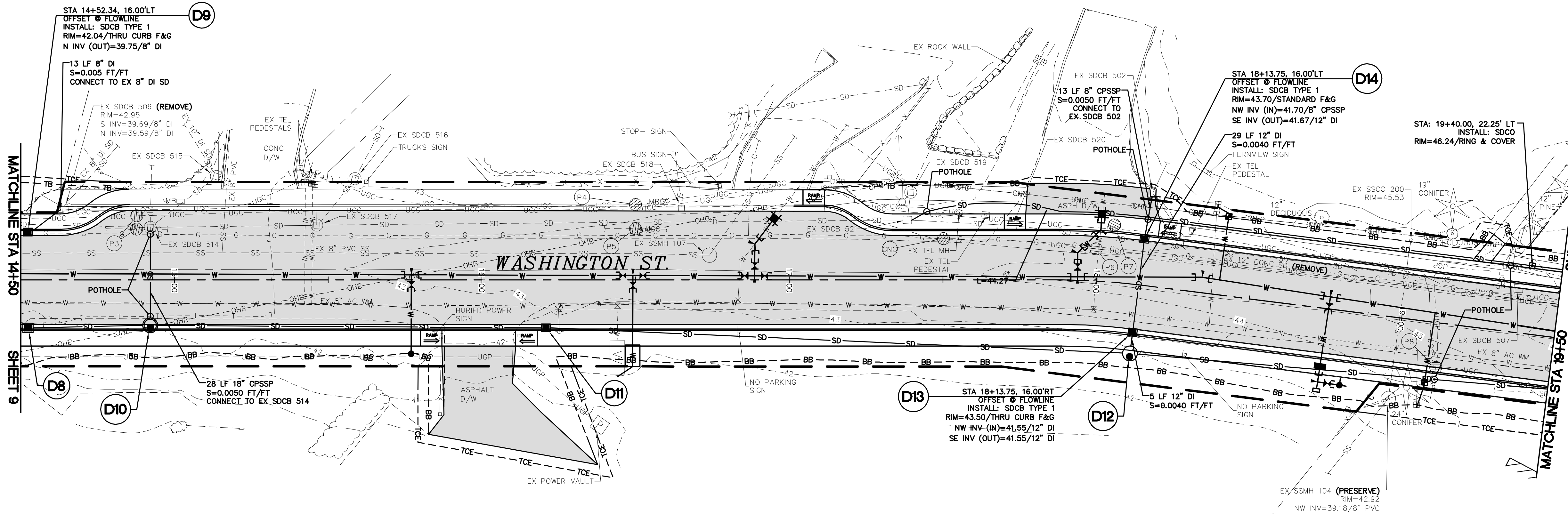
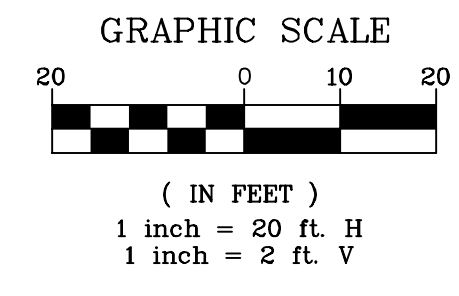
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
STORM AND SEWER P+P STA 10+00 TO 14+50

DWG 16026 SEWER STORM PP		DATE	2/13/2018
JOB#	16026	SHEET	9 of 38
SCALE	H: 1"=20' V: 1"=2'		

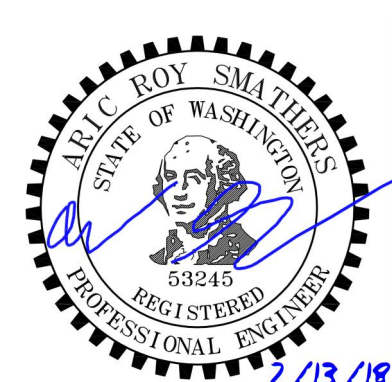
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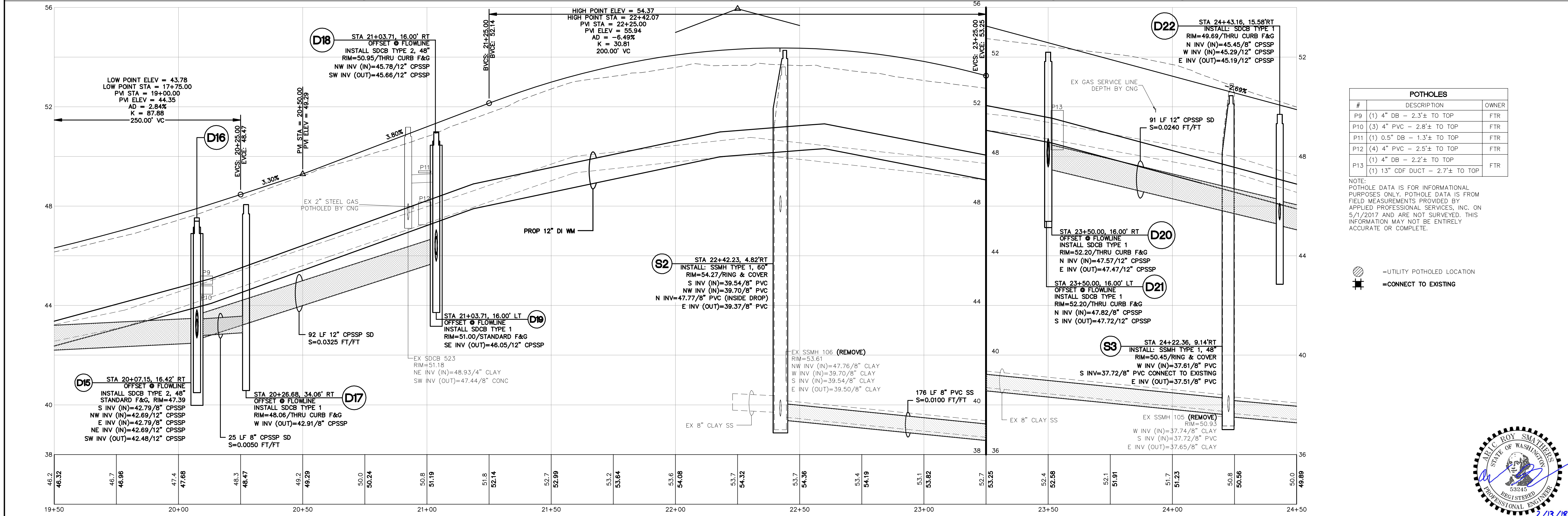
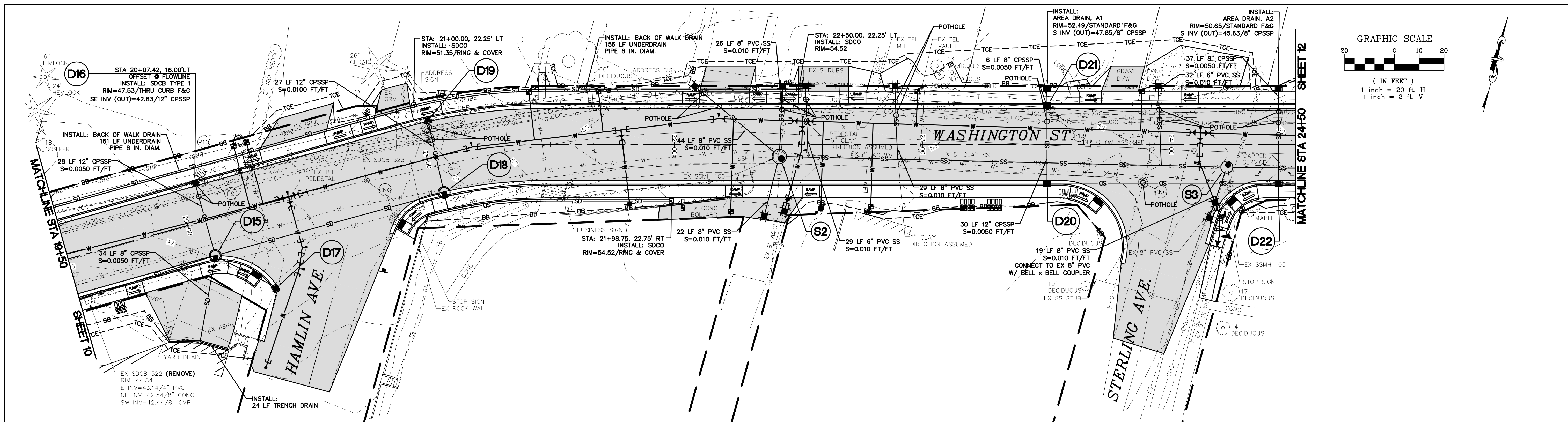
POTHOLES		
#	DESCRIPTION	OWNER
P3	(1) 4" DB - 3.3'± TO TOP	FTR
	(1) 4" PVC - 1.8'± TO TOP	
	(1) 2" PVC - 2.2'± TO TOP	
P4	(1) 4" PVC - 1.8'± TO TOP	FTR
	(1) 2" PVC - 1.8'± TO TOP	
P5	(1) 4" DB - 3.0'± TO TOP	FTR
P6	(1) 2" DB - 2.7'± TO TOP	FTR
P7	(1) 4" PVC - 1.7'± TO TOP	FTR
	(1) 4" PE - 1.8'± TO TOP	
P8	(1) 1" PVC - 4.0'± TO TOP	PSE
	(1) 1" DB - 4.0'± TO TOP	FTR

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- = UTILITY POTHOLED LOCATION
- ⊕ = CONNECT TO EXISTING



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	DRAWN BY PJC						JOB# 16026
CHECKED BY LP							



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PJC
CHECKED BY
LP

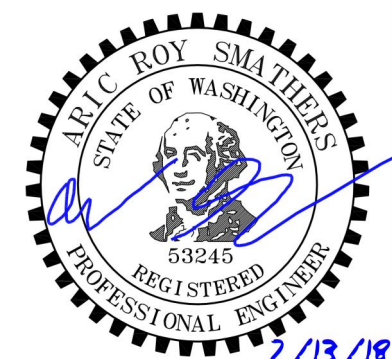
R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalfe Street, Sedro-Woolley, WA 98284 (360) 855-1713

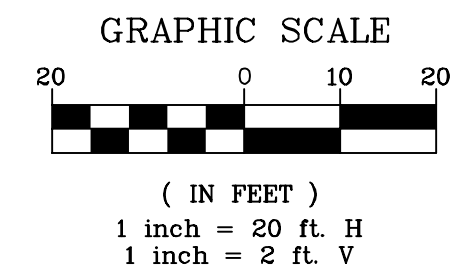
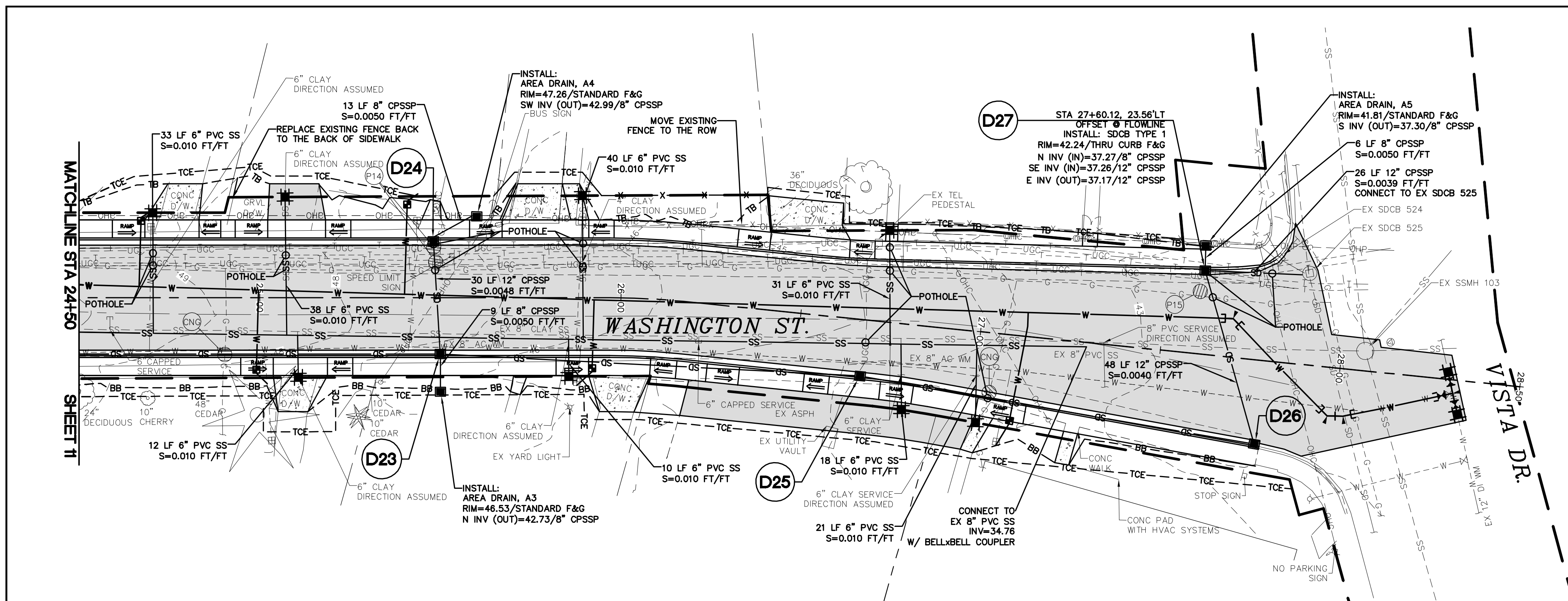
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
STORM AND SEWER P+P STA 19+50 TO 24+50

DWG 16026 SEWER STORM PP
DATE 2/13/2018
JOB# 16026 SCALE H: 1"=20' V: 1"=2'
SHEET 11 of 38

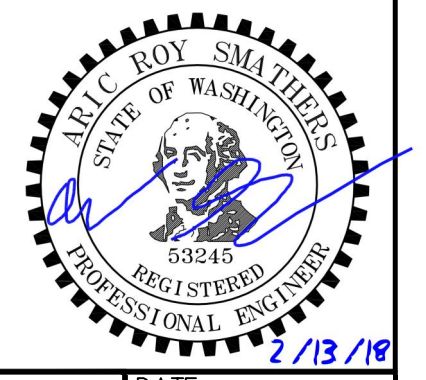
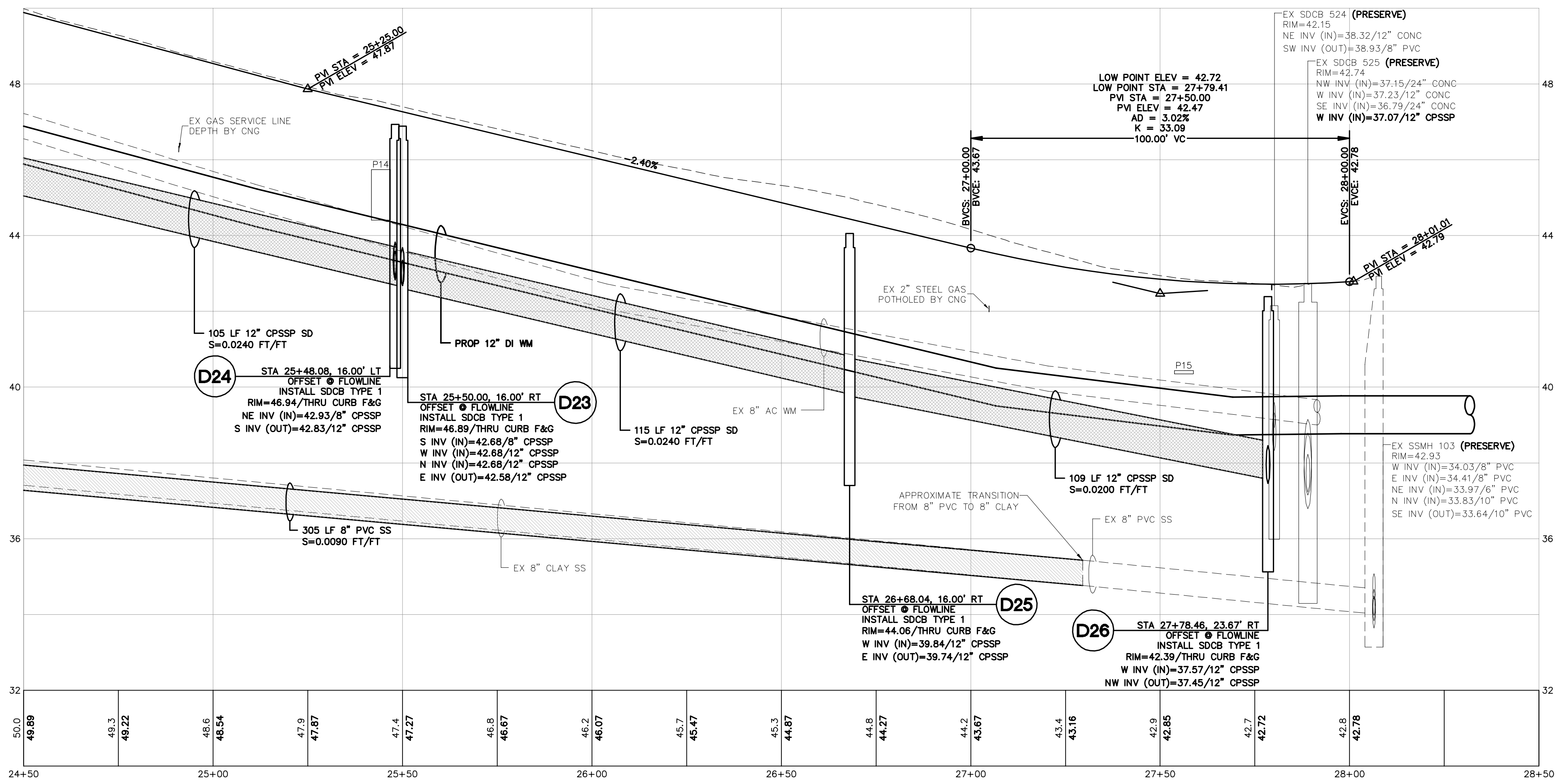




POTHOLES		
#	DESCRIPTION	OWNER
P14	(1) 4" DB - 1.9± TO TOP (1) 2" DB - 1.7± TO TOP (5) 1" DB - 1.7± TO TOP	FTR
P15	(1) 1" PVC - 2.2± TO TOP	FTR

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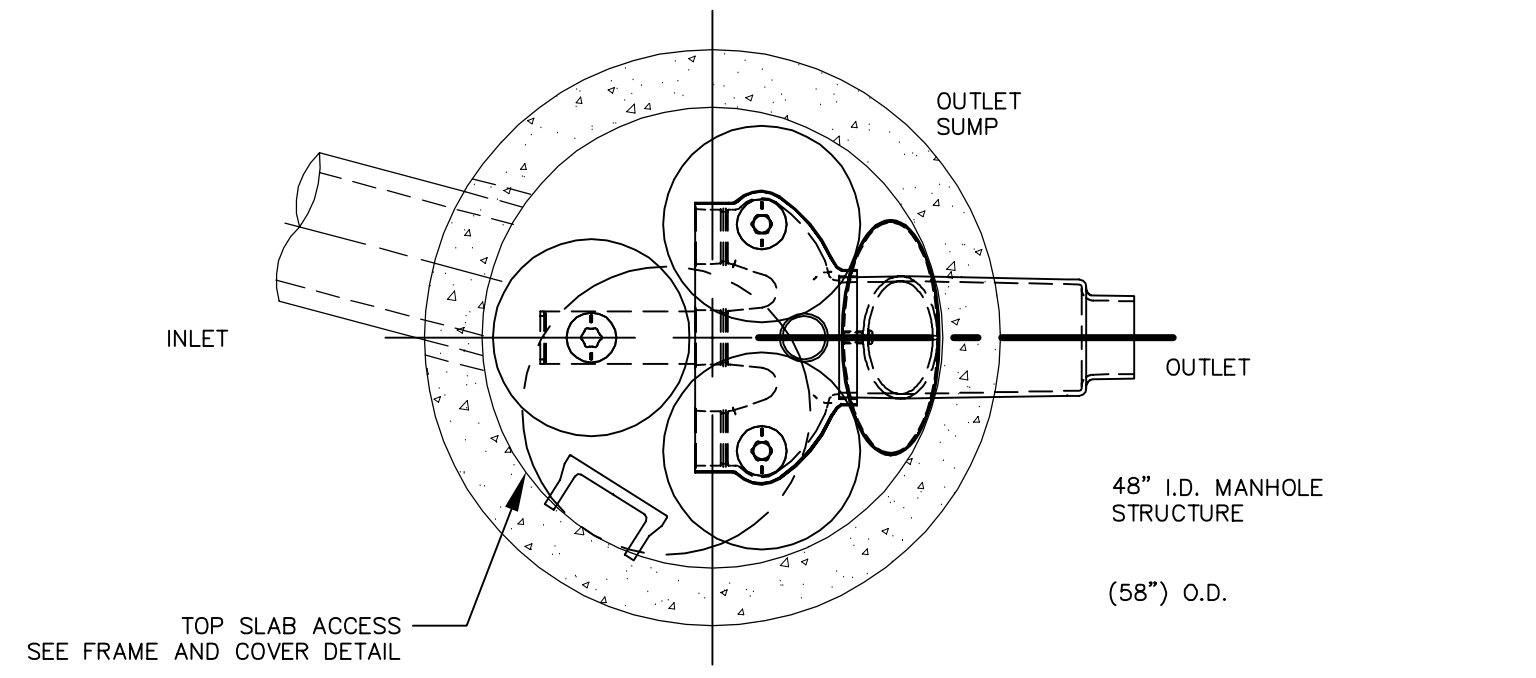
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
STORM AND SEWER P+P STA 24+50 TO 28+50

DWG 16026 SEWER STORM PP		DATE	2/13/2018
JOB#	16026	SHEET	12 of 38
SCALE	H: 1"=20' V: 1"=2'		

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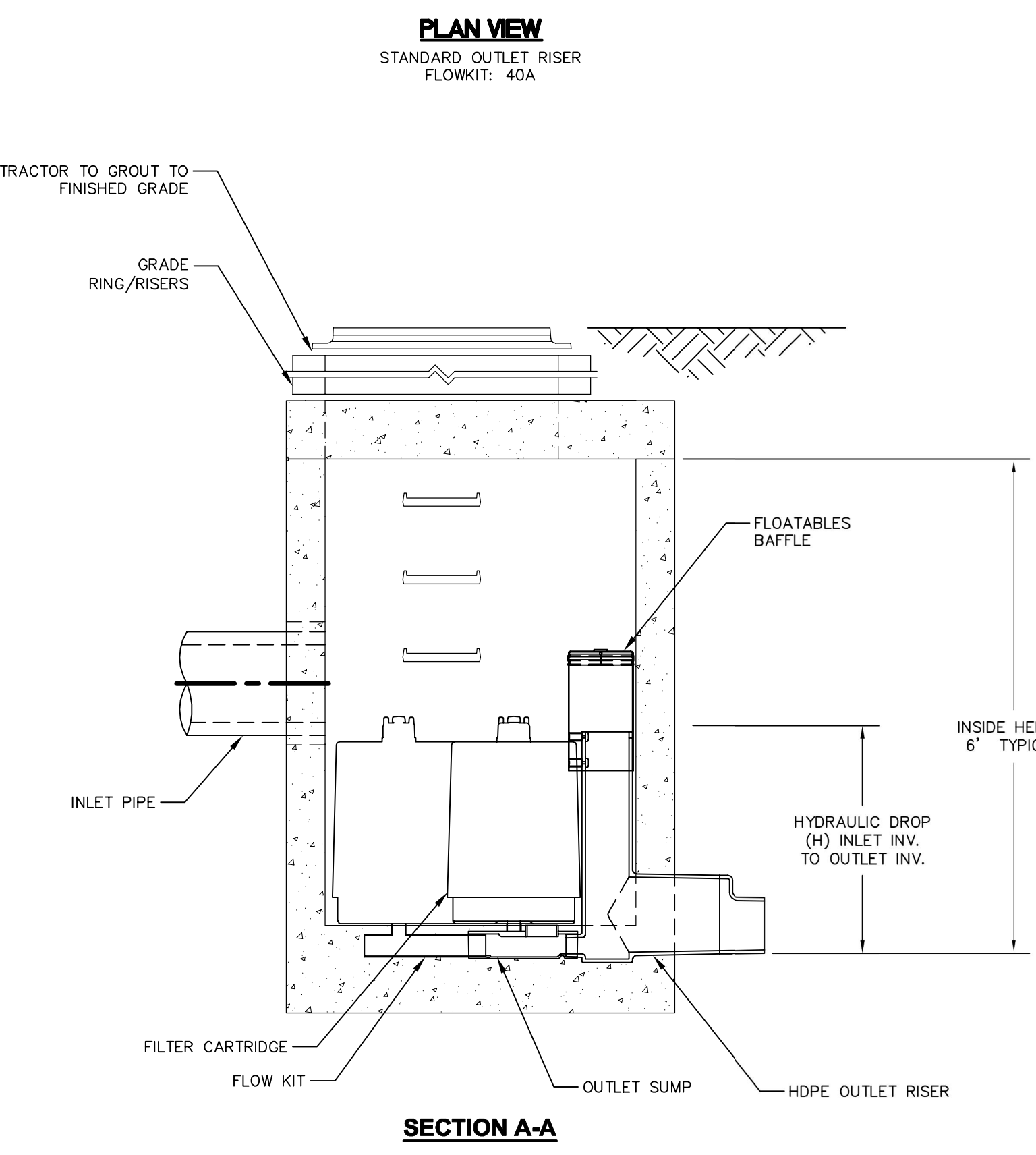


STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (3). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 3 CARTRIDGES.
 Ø48" MANHOLE STORMFILTER PEAK HYDRAULIC CAPACITY IS 1.0 CFS. IF THE SITE CONDITIONS EXCEED 1.0 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION		27"	18"	LOW DROP
CARTRIDGE HEIGHT		27"	18"	1.8"
RECOMMENDED HYDRAULIC DROP (H)		3.05'	2.3'	1.8'
SPECIFIC FLOW RATE (gpm/sf)		2 gpm/sf	1.67* gpm/sf	1 gpm/sf
CARTRIDGE FLOW RATE (gpm)		22.5	18.79	11.25
		15	12.53	7.5
		10	8.35	5

* 1.67 gpm/sf SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB² (PSORB) MEDIA ONLY



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

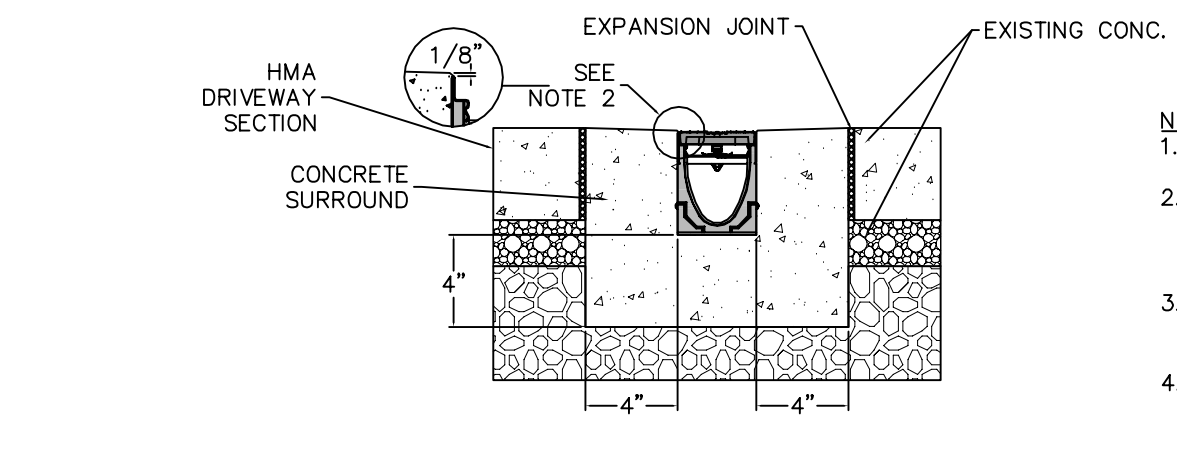
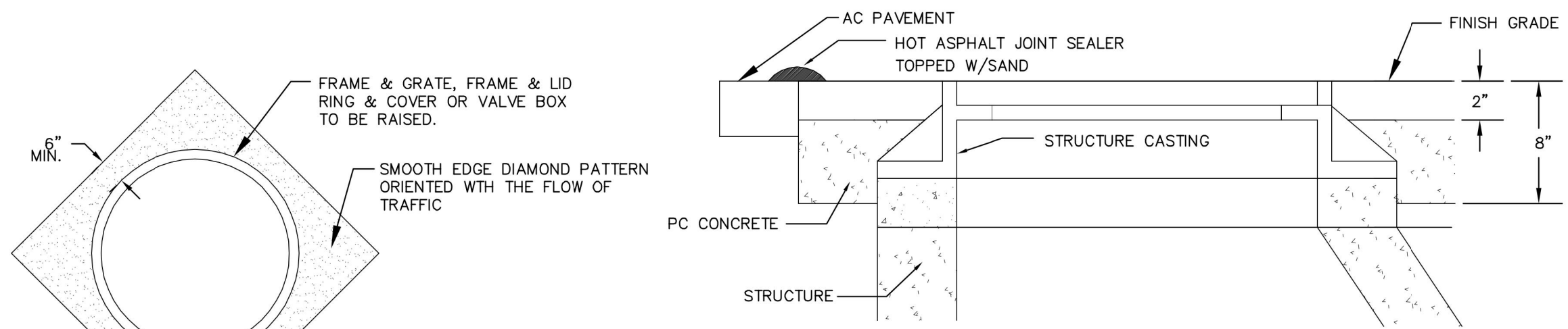
GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M309 AND BE CAST WITH THE CONTECH LOGO.
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).
- STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
- CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOLDED IN CUT LINE. COUPLING BY FERNO OR EQUAL AND PROVIDED BY CONTRACTOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

STORMFILTER STANDARD DETAIL
NTS



SITE SPECIFIC DATA REQUIREMENTS

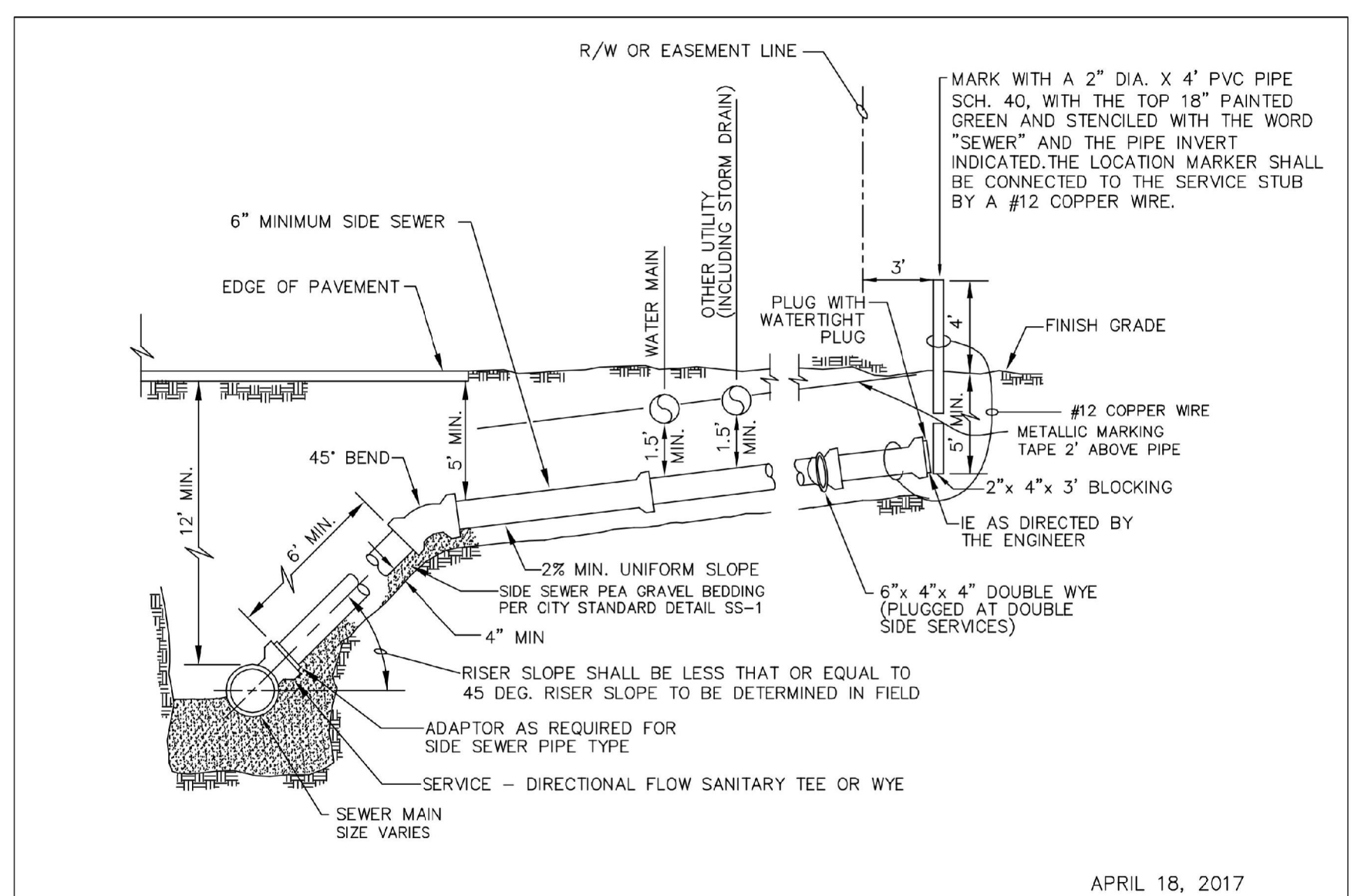
STRUCTURE ID	D12
WATER QUALITY FLOW RATE (cfs)	0.0443
PEAK FLOW RATE (cfs)	0.2699
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE HEIGHT (27", 18", LOW DROP(LD))	18"
NUMBER OF CARTRIDGES REQUIRED	3
CARTRIDGE FLOW RATE (GPM)	7.5
MEDIA TYPE (PERLITE, ZPG, PSORB)	ZPG

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	41.53	DI	12"
INLET PIPE #2	41.53	CPSSP	12"
OUTLET PIPE	39.19	CPSSP	12"

RIM ELEVATION	44.05
---------------	-------

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	0	0

NOTES/SPECIAL REQUIREMENTS:
* PER ENGINEER OF RECORD



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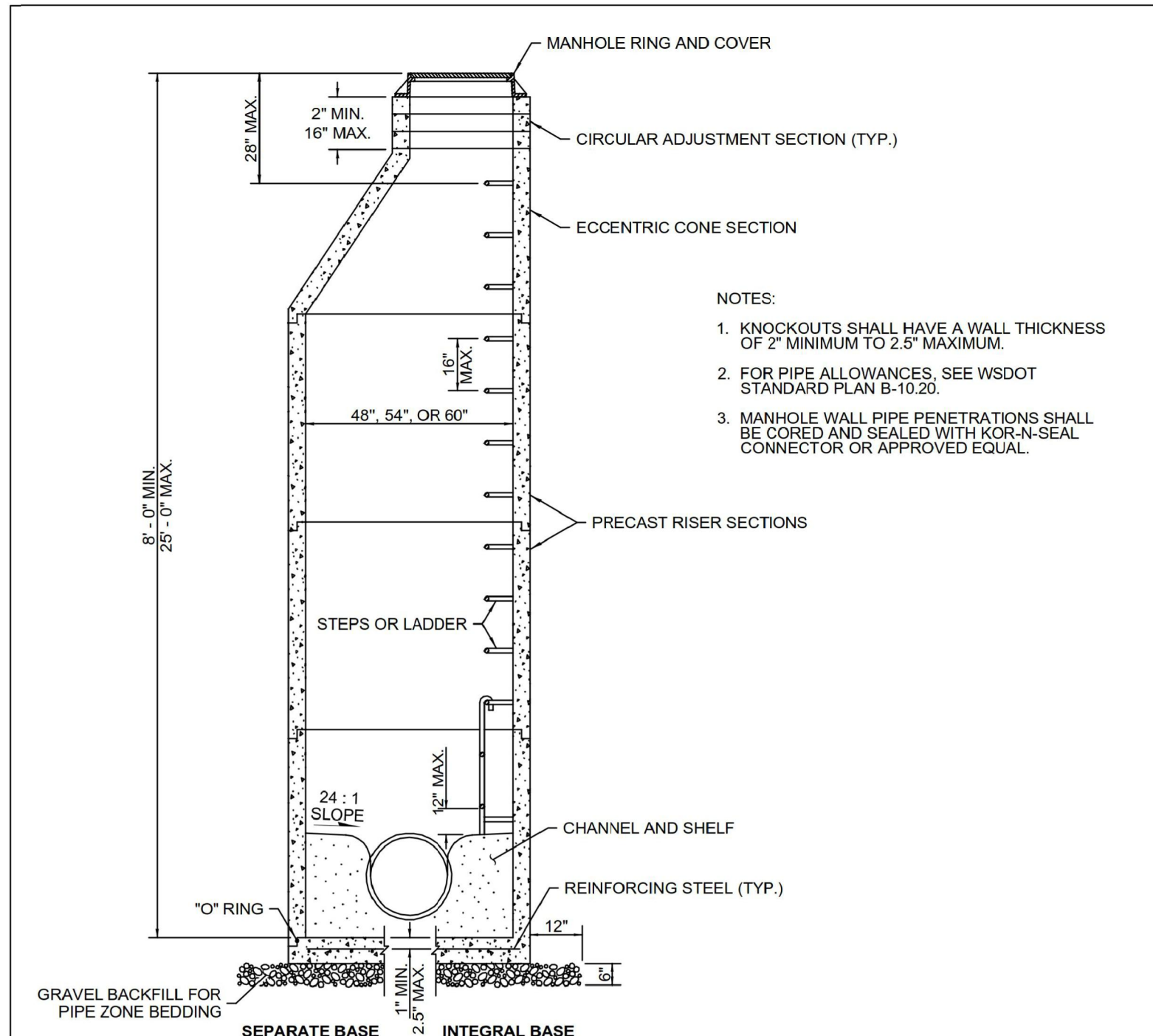
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
SANITARY SEWER DETAILS

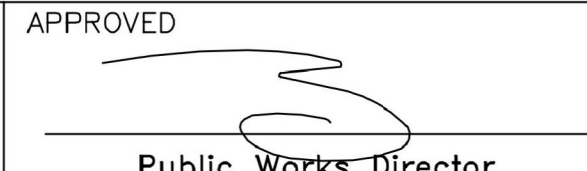
DWG 16026 DETAILS		DATE
JOB# 16026		2/13/2018
SCALE	H: N/A	V: N/A
SHEET 13		of 38





- NOTES:
1. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM.
 2. FOR PIPE ALLOWANCES, SEE WSDOT STANDARD PLAN B-10.20.
 3. MANHOLE WALL PIPE PENETRATIONS SHALL BE CORED AND SEALED WITH KOR-N-SEAL CONNECTOR OR APPROVED EQUAL.

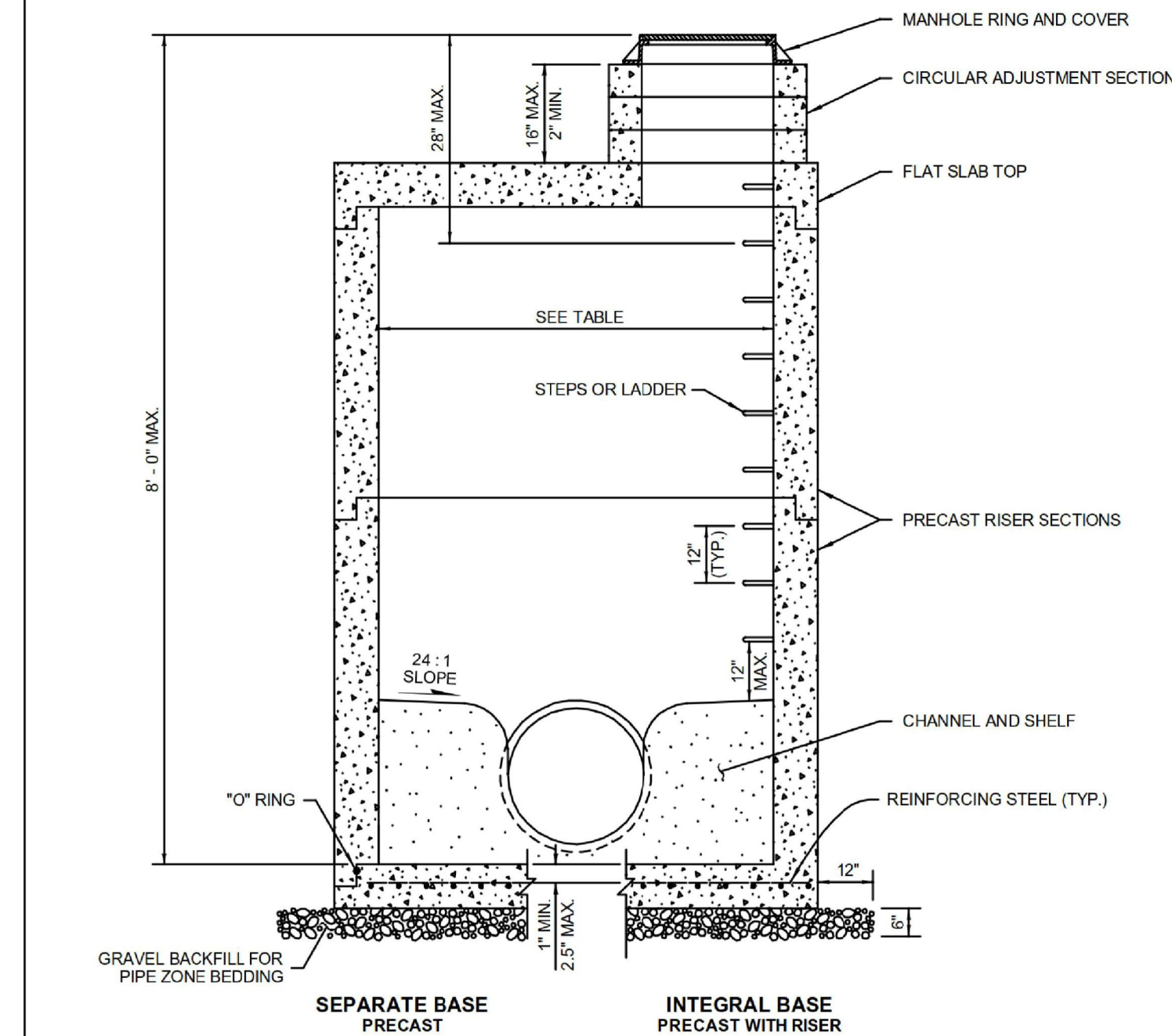
DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS	BASE REINFORCING STEEL SQ IN/FT EACH DIRECTION	
					INTEGRAL BASE	SEPARATE BASE
48"	4"	6"	36"	8"	0.15	0.23
54"	4.5"	8"	42"	8"	0.19	0.19
60"	5"	8"	48"	8"	0.25	0.25

APPROVED  **Public Works Director**

8/11/17 Date

SANITARY SEWER MANHOLE TYPE 1 STANDARD DETAIL SS-3

NOT TO SCALE



- NOTES:
1. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum.
 2. For pipe allowances, see WSDOT Standard Plan B-10.20.
 3. No steps are required when height is 4' or less.
 4. Manhole wall pipe penetrations shall be cored and sealed with Kor-N-Seal connector or approved equal.

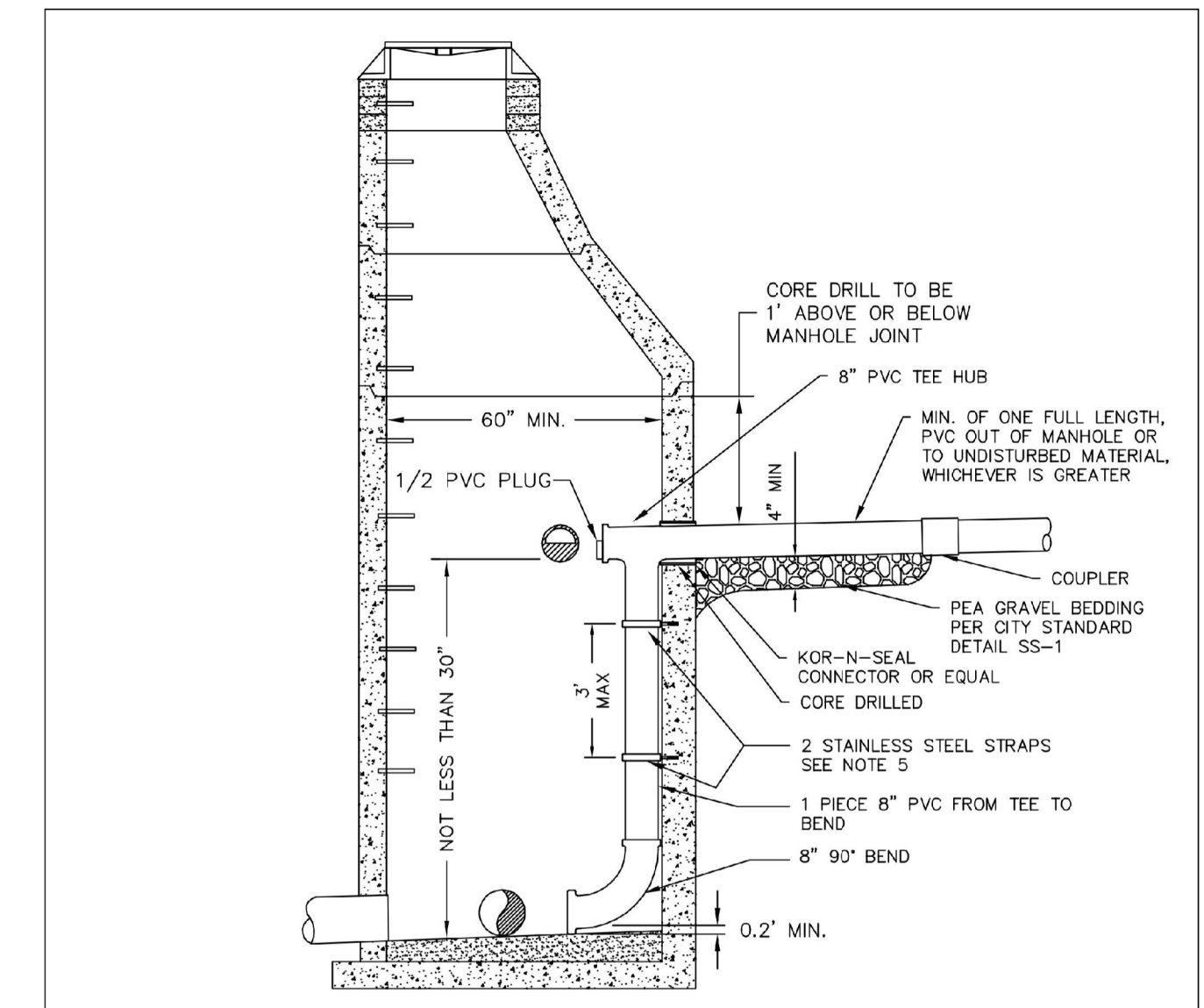
DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	42"	12"
144"	12"	12"	108"	12"

APPROVED  **Public Works Director**

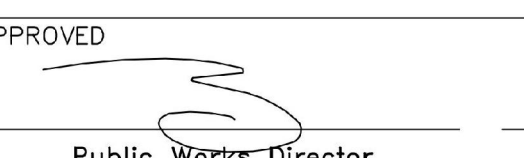
8/11/17 Date

SANITARY SEWER MANHOLE TYPE 3 STANDARD DETAIL SS-4

NOT TO SCALE



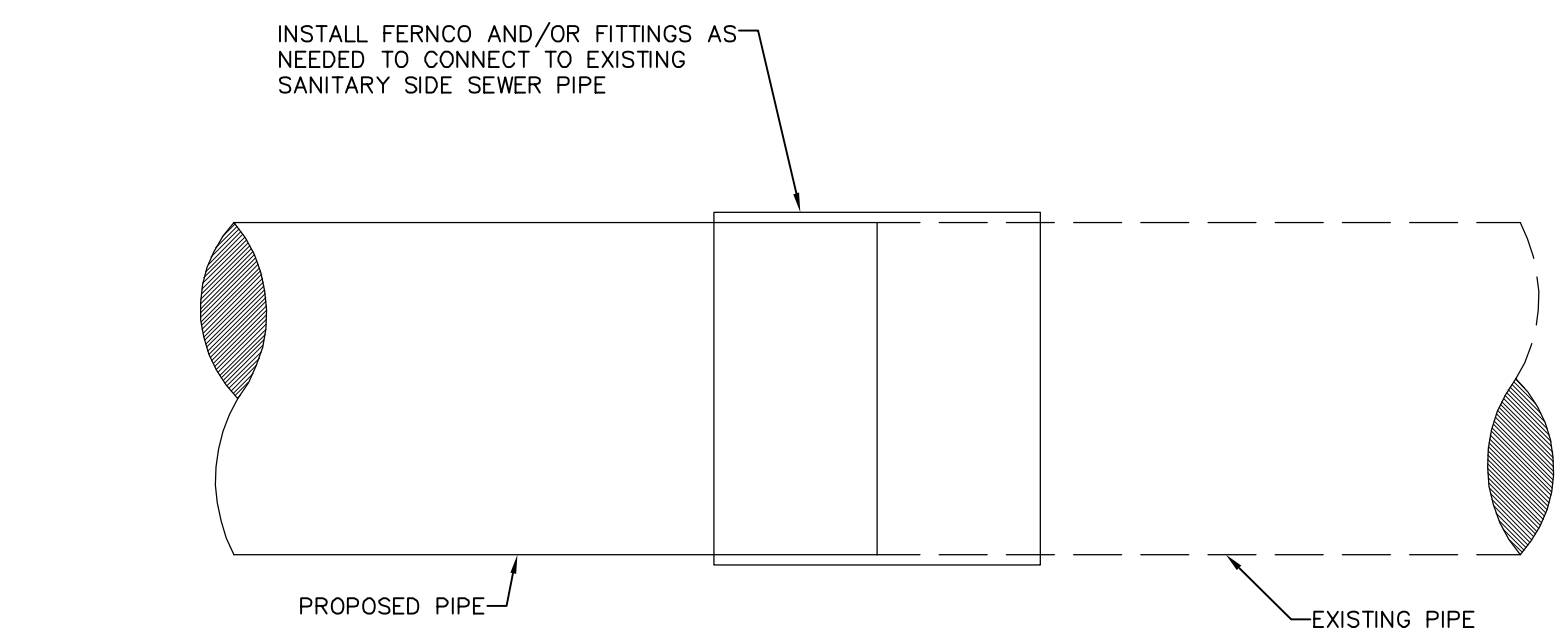
- NOTES:
1. DROP TEE TO BE INSTALLED MINIMUM OF 3' BELOW CONE SECTION.
 2. INSIDE DROP MANHOLE SHALL BE INSTALLED ONLY WHERE APPROVED BY THE PUBLIC WORKS DIRECTOR.
 3. SIZE OF MANHOLE WILL INCREASE WITH LARGER DIAMETER PIPE AND SHALL BE APPROVED BY THE PUBLIC WORKS DIRECTOR.
 4. CHANNEL TO OUTLET.
 5. STAINLESS ADJUSTABLE PIPE BRACKETS AS MANUFACTURED BY RELINER-DURAN INC. OR APPROVED EQUAL ATTACH TO WALL WITH 3/8" SS ANCHOR BOLTS.
 6. INSIDE DROP SEWER MANHOLE CONNECTION FOR EXISTING SANITARY MANHOLE STRUCTURES.

APPROVED  **Public Works Director**

8/11/17 Date

INSIDE DROP SEWER MANHOLE CONNECTION STANDARD DETAIL SS-13

NOT TO SCALE



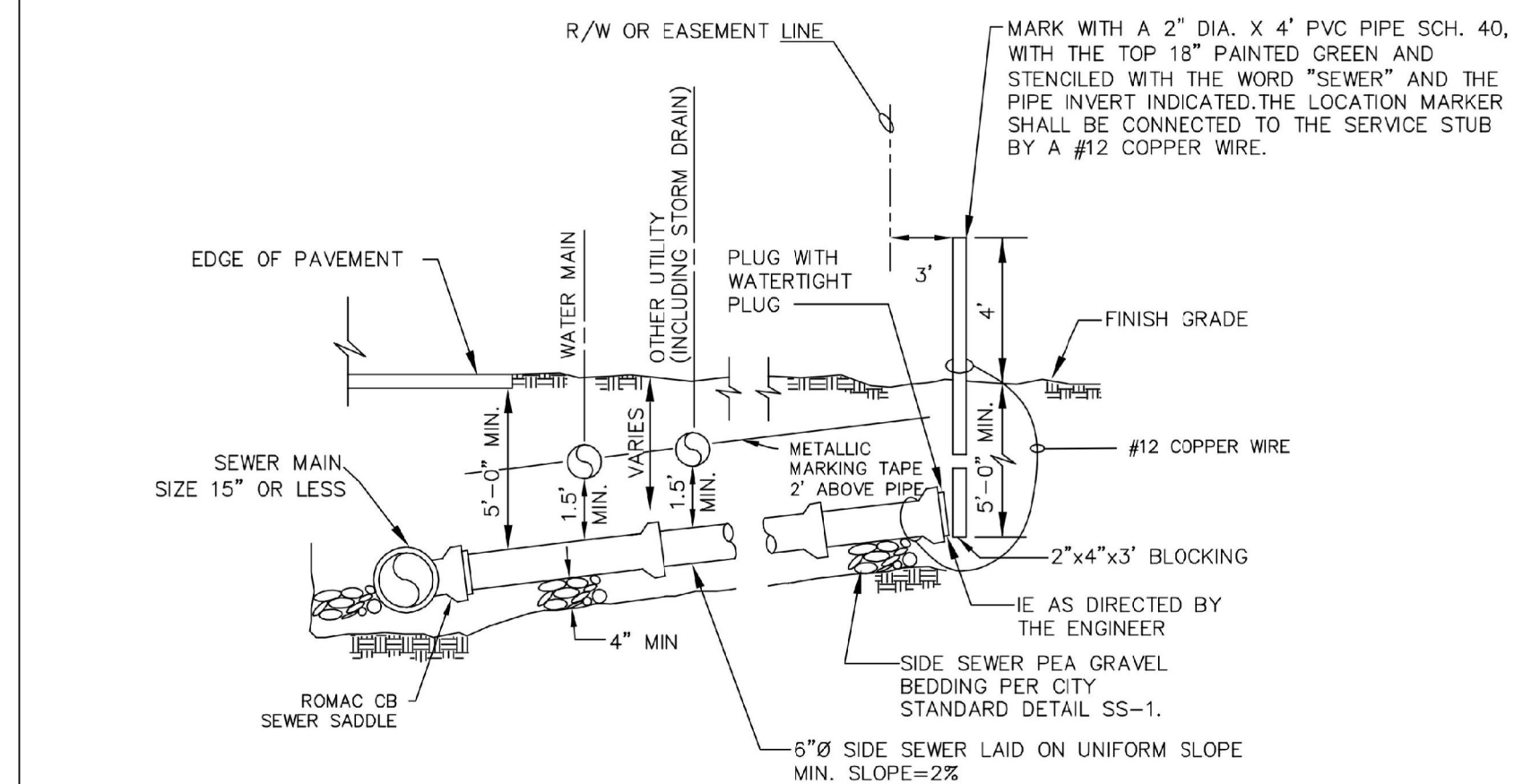
CONNECT TO EXISTING SIDE SEWER PIPE DETAIL

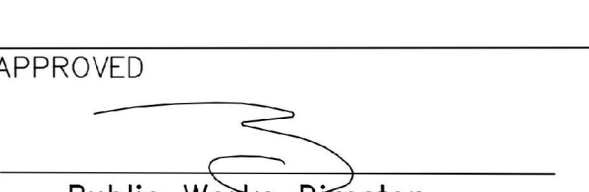
APPROVED  **Public Works Director**

8/11/17 Date

SANITARY SEWER SERVICE CONNECTION 15" OR LESS STANDARD DETAIL SS-6

NOT TO SCALE

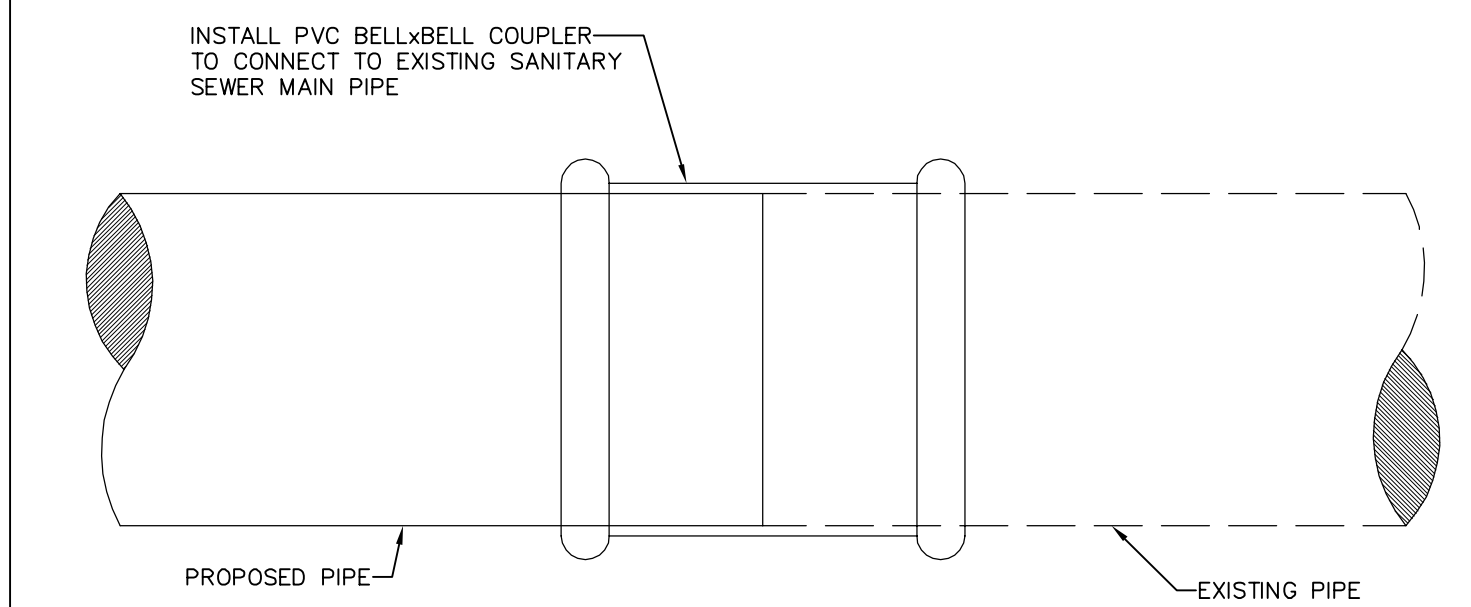


APPROVED  **Public Works Director**

8/11/17 Date

SANITARY SEWER SERVICE CONNECTION 15" OR LESS STANDARD DETAIL SS-6

NOT TO SCALE



CONNECT TO EXISTING SEWER MAIN PIPE DETAIL

APPROVED  **Public Works Director**

8/11/17 Date

SANITARY SEWER SERVICE CONNECTION 15" OR LESS STANDARD DETAIL SS-6

NOT TO SCALE

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DESIGNED BY ARS
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813 Metcalf Street, Sedro-Wooley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

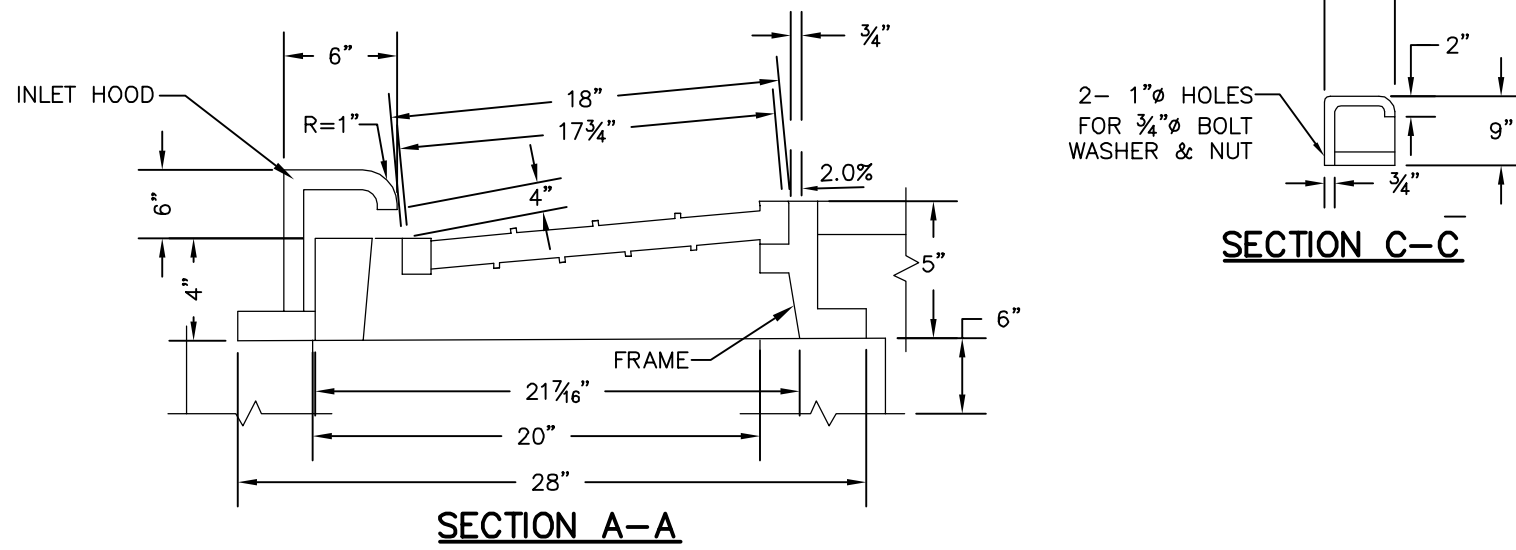
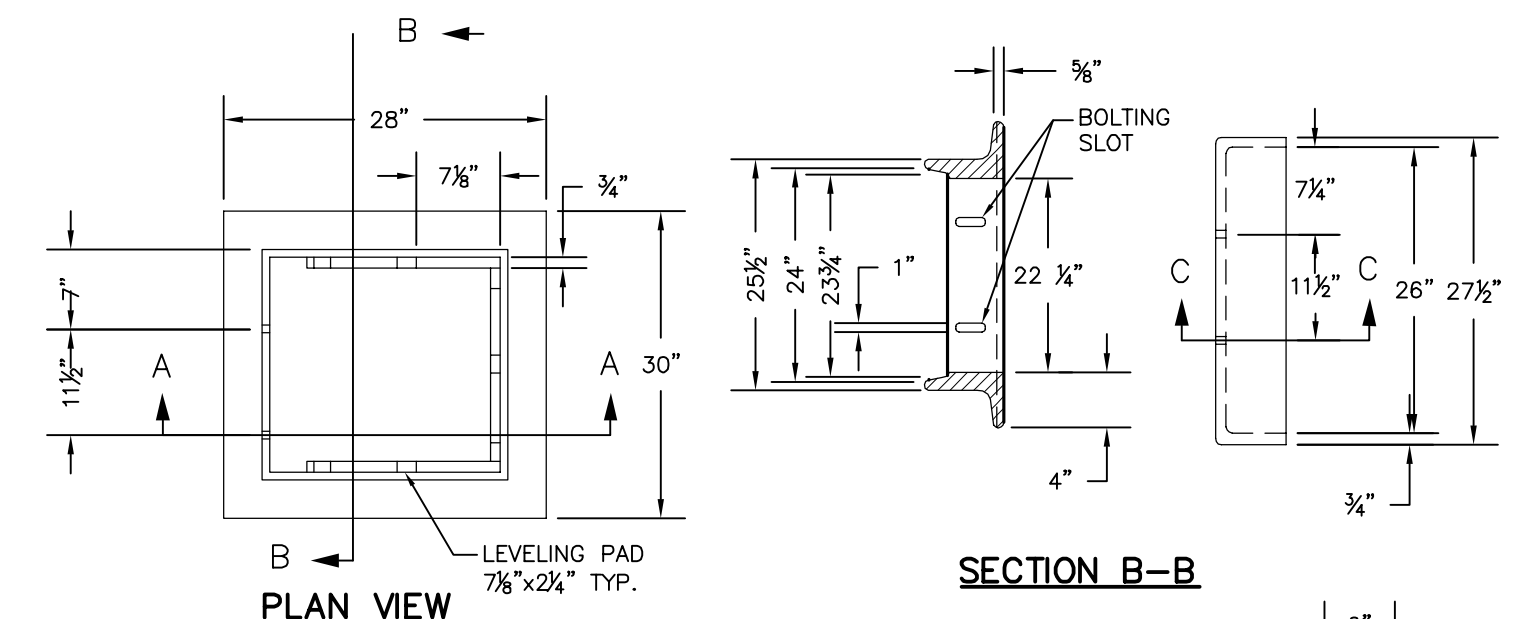
CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
SANITARY SEWER DETAILS

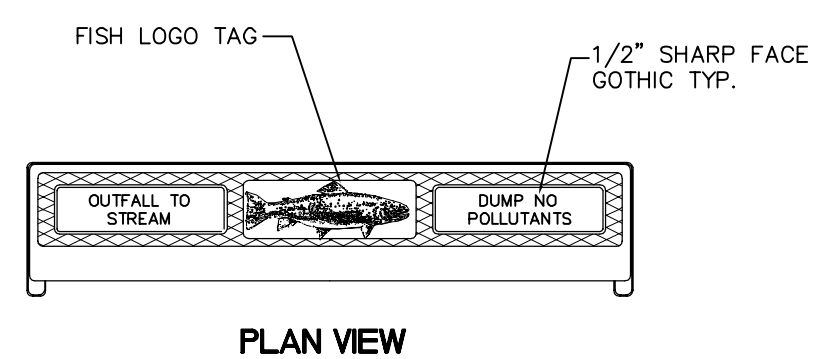
DWG 16026 DETAILS		DATE
JOB#	SCALE	2/13/2018
16026	H: N/A V: N/A	SHEET
		14
		of 38



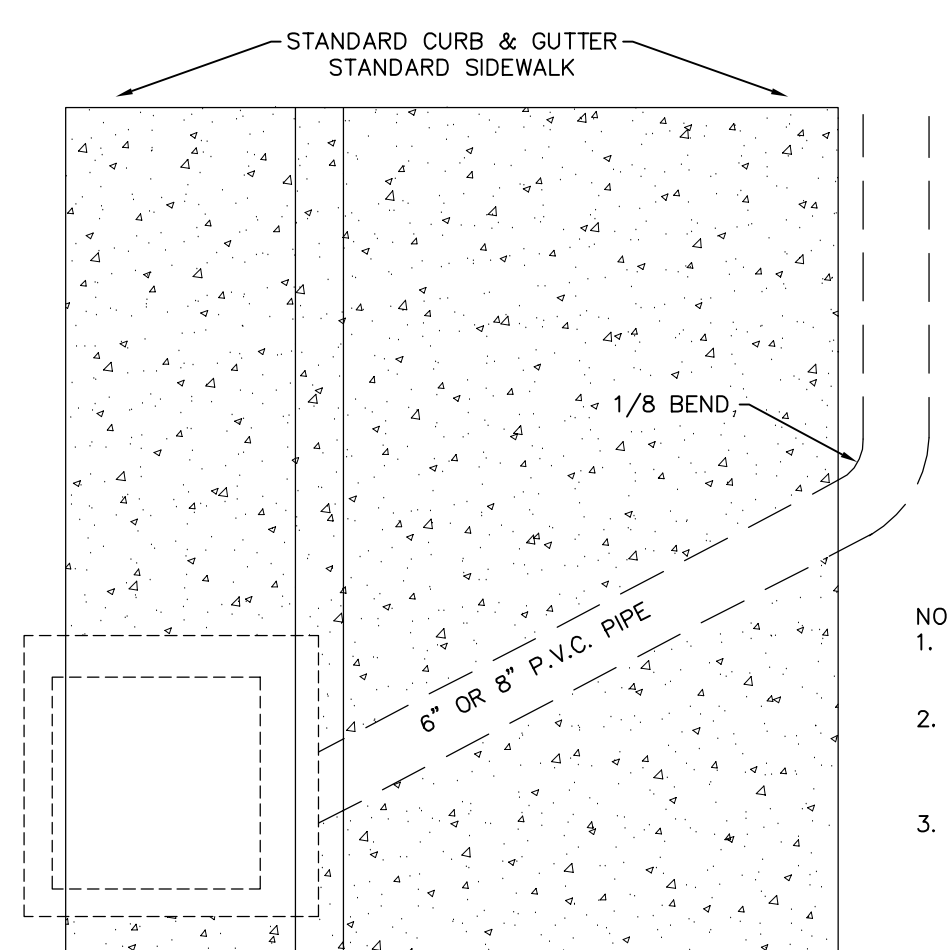
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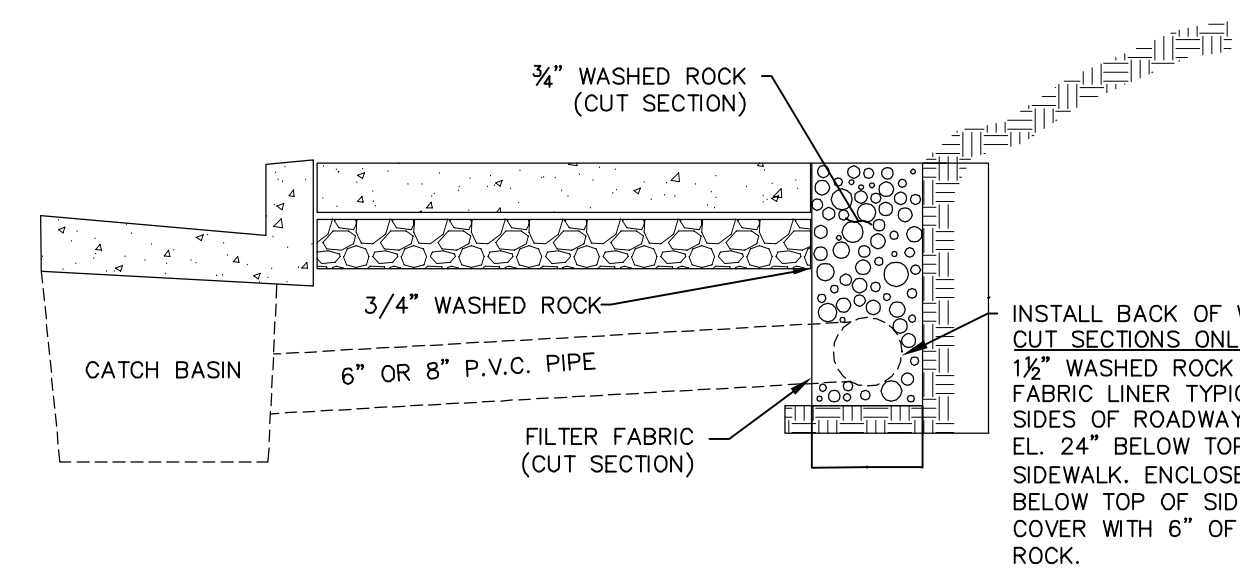
- NOTES:**
- ESTIMATED WT. FRAME 220, HOOD 71.
 - USE DUCTILE IRON GRATE AS SHOWN ON DRAWING



THRU CURB FRAME
NTS

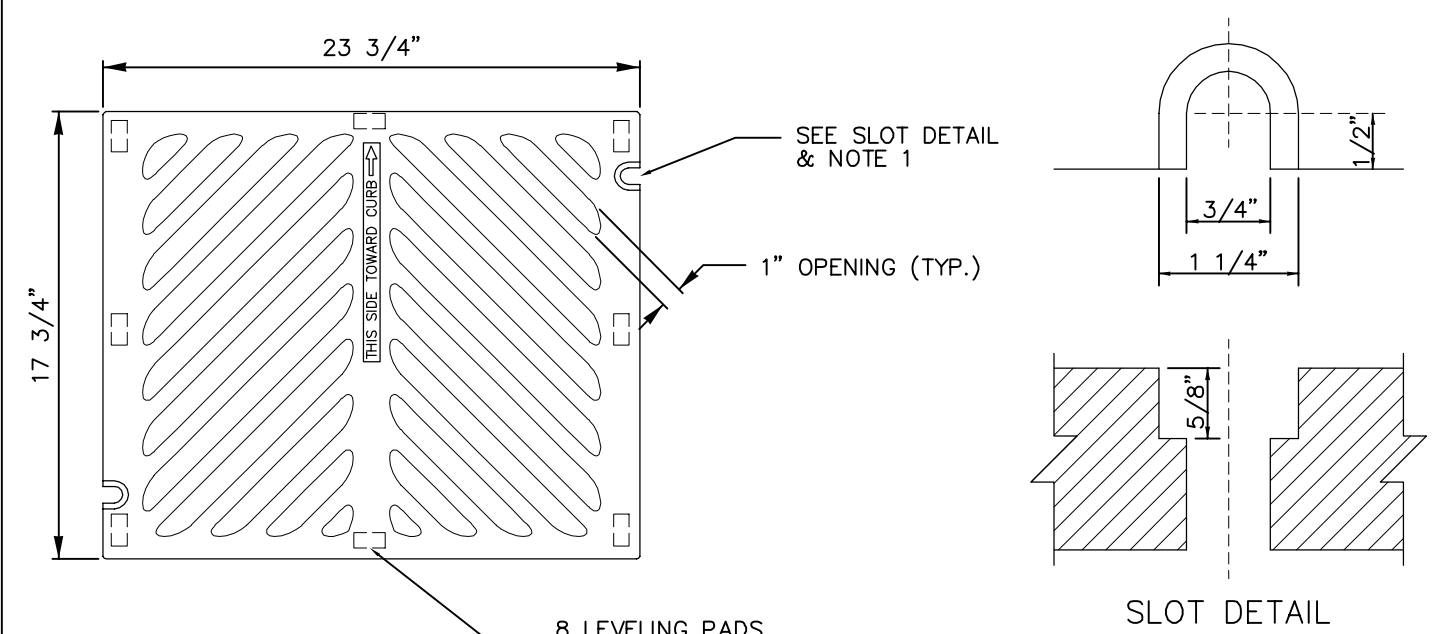


- NOTES:**
- USE PERFORATED PIPE AND FILTER FABRIC IN CUT SECTIONS.
 - FILTER FABRIC TO BE INSTALLED BETWEEN THE SOIL AND THE 3/4" WASHED ROCK.
 - USE NONPERFORATED PIPE WITHOUT FILTER FABRIC WHEN CARRIED THROUGH NON-CUT AREAS.



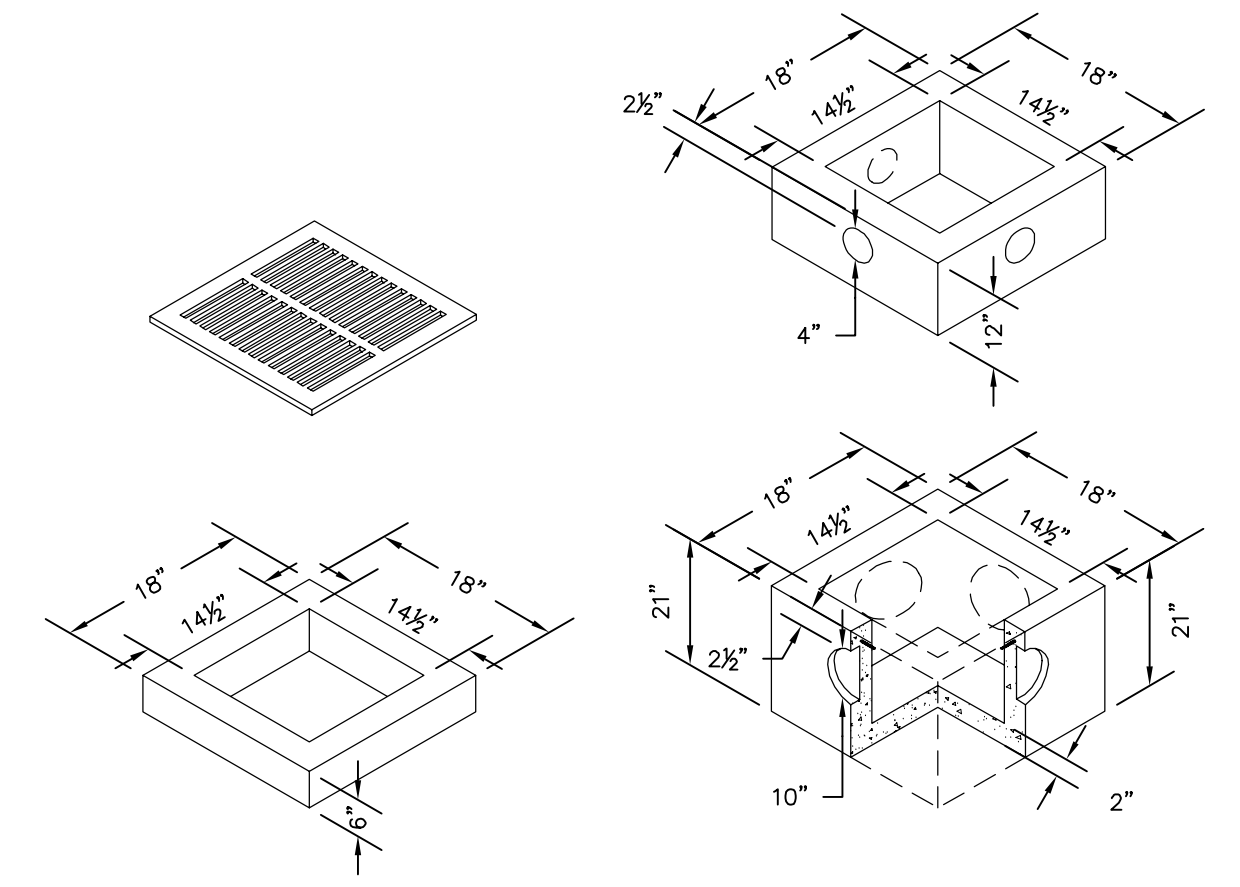
INSTALL BACK OF WALK DRAIN, CUT SECTIONS ONLY ENCLOSE 1/2" WASHED ROCK IN FILTER FABRIC LINER TYPICAL BOTH SIDES OF ROADWAY. PIPE INVERT EL. 24" BELOW TOP OF SIDEWALK. ENCLOSE FABRIC 6" BELOW TOP OF SIDEWALK AND COVER WITH 6" OF WASHED ROCK.

SIDEWALK DRAIN
NTS

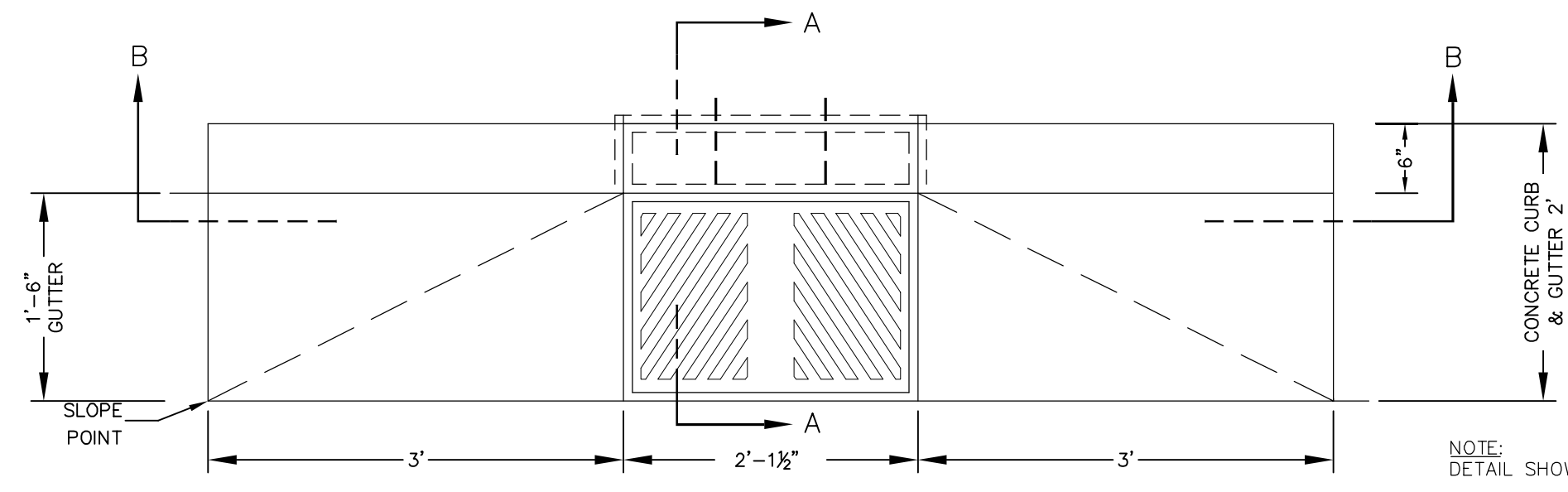
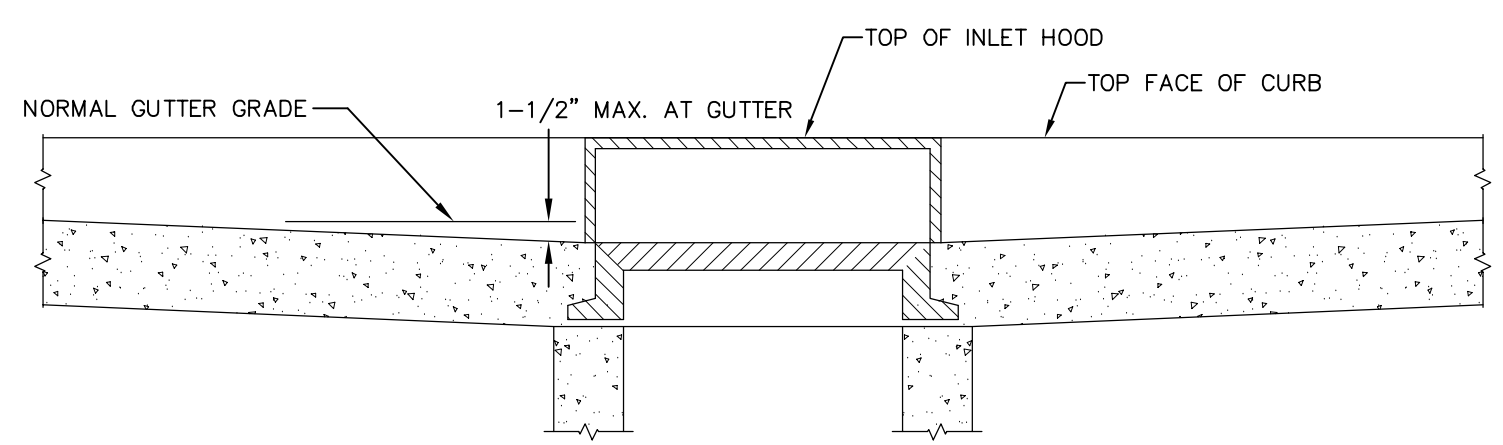
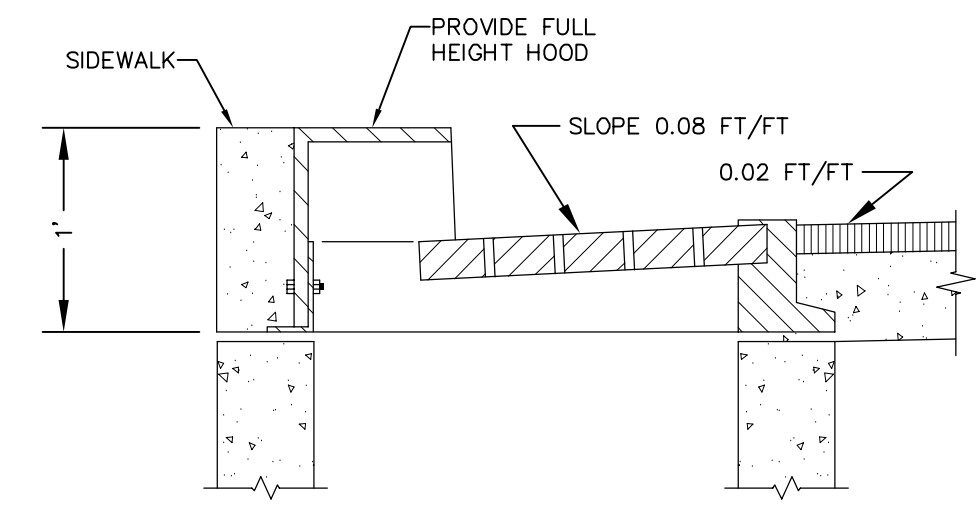


- NOTES:**
- ALL GRATES SHALL BE BOLT DOWN. PROVIDE TWO SLOTS IN THE GRATE THAT ARE VERTICALLY ALIGNED WITH THE HOLES IN THE FRAME. LOCATION OF BOLT DOWN SLOTS VARIES AMONG DIFFERENT MANUFACTURERS.
 - THE THICKNESS OF THE GRATE SHALL NOT EXCEED 1-5/8".

HERRINGBONE GRATE
NTS



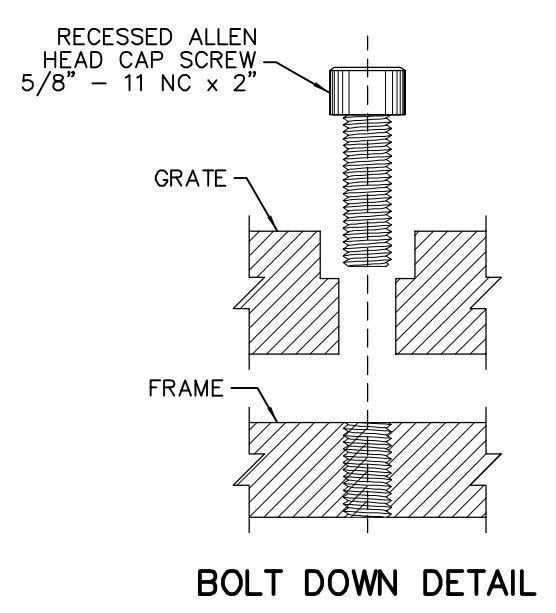
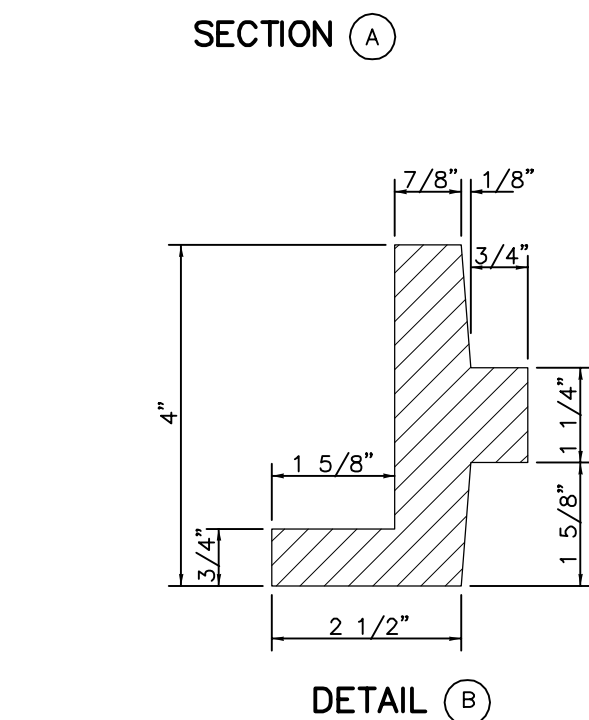
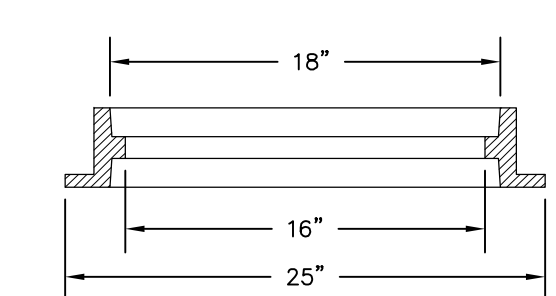
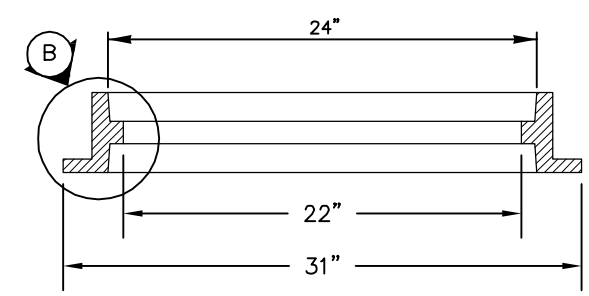
AREA DRAIN
NTS



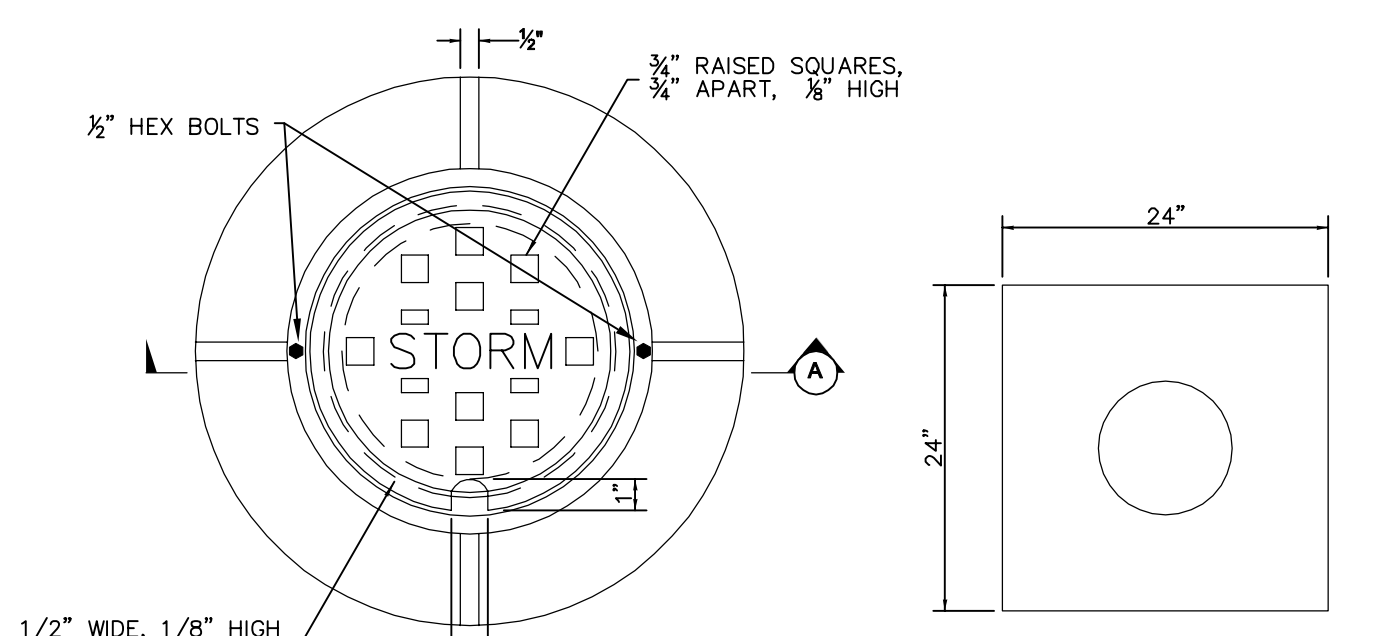
CURB AND GUTTER AT CATCH BASIN
NTS

NOTE: DETAIL SHOWN FOR THRU CURB FRAME AND GRATE.

- NOTES:**
- ALL GRATES SHALL BE BOLT DOWN. PROVIDE TWO HOLES IN THE FRAME THAT ARE VERTICALLY ALIGNED WITH THE GRATE OR COVER SLOTS. TAP EACH HOLE TO ACCEPT A 5/8" x 11 NC x 2" ALLEN HEAD CAP SCREW. LOCATION OF BOLT DOWN HOLES VARIES AMONG DIFFERENT MANUFACTURERS.

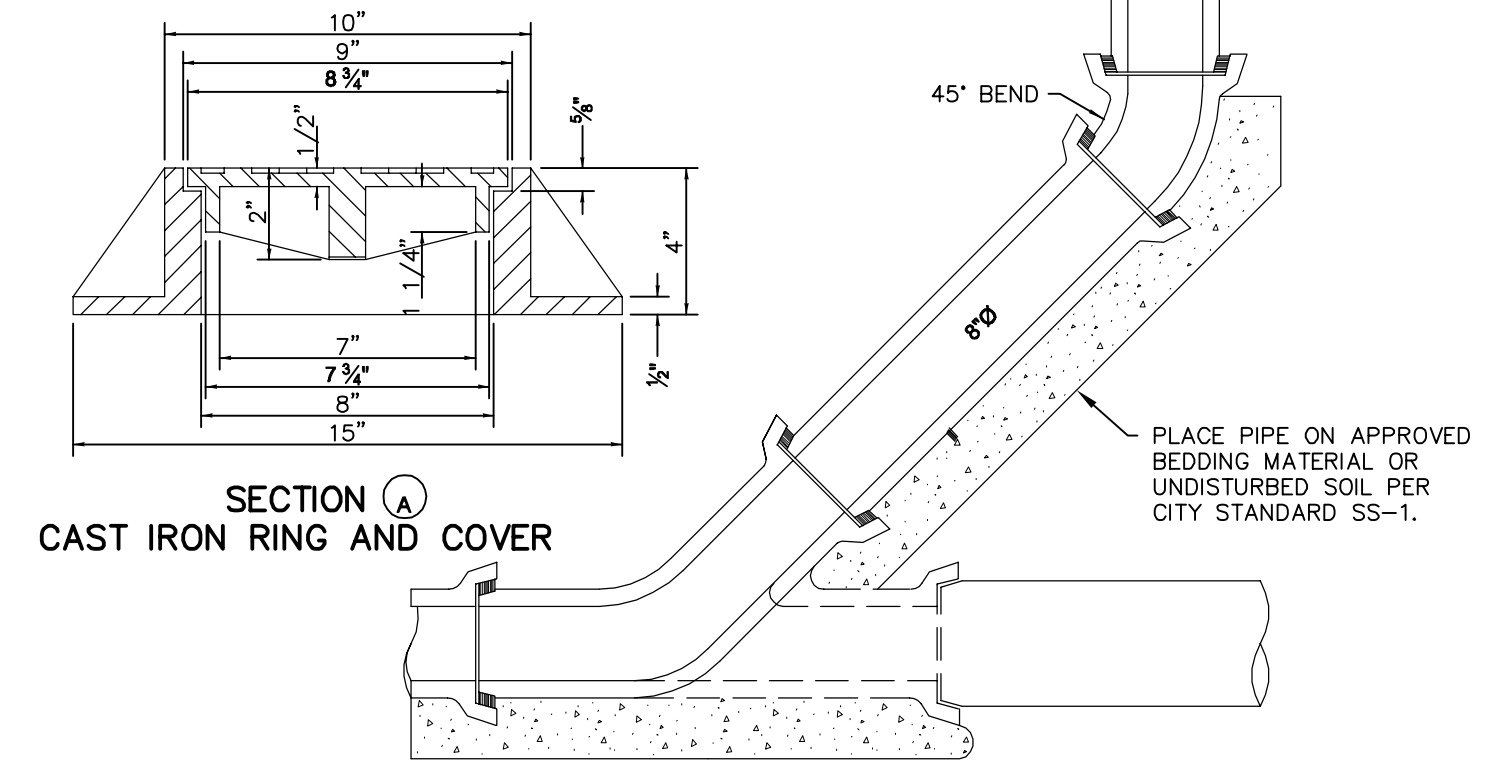


STANDARD FRAME
NTS



2' SQUARE CONCRETE BLOCK TO ENCASE CLEAN-OUT. IF CLEAN-OUT IS IN ASPHALT, THE BLOCK IS TO BE LEFT 2" LOW TO ALLOW FOR AN ASPHALT TOPPING OF LIKE MIXTURE AS THE SURROUNDING AREA. IN ALL CASES THE CONCRETE BLOCK WILL BE 1-FOOT THICK AND FINAL ELEVATION SHALL BE FLUSH WITH THE SURROUNDING SURFACE.

NOT NECESSARY TO BOND COVER PIPE TO RING AT THIS POINT. BUTT TO RING AND ENCASE IN CONCRETE BLOCK.



**STORM DRAIN
8" CLEAN OUT**
NTS



BID SET

DESIGNED BY
ARS
DRAWN BY
PJC
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-Wooley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

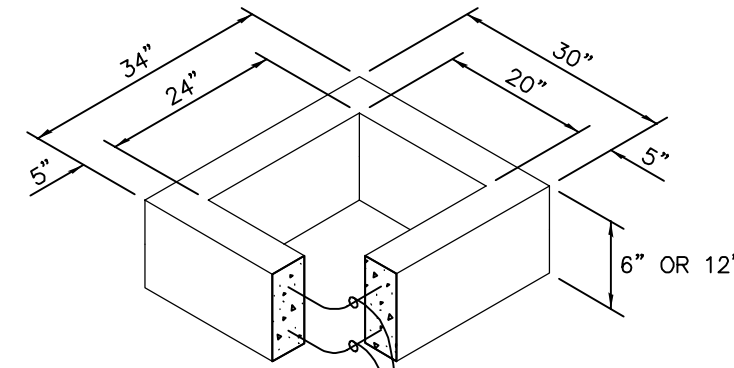
CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
STORM SEWER DETAILS

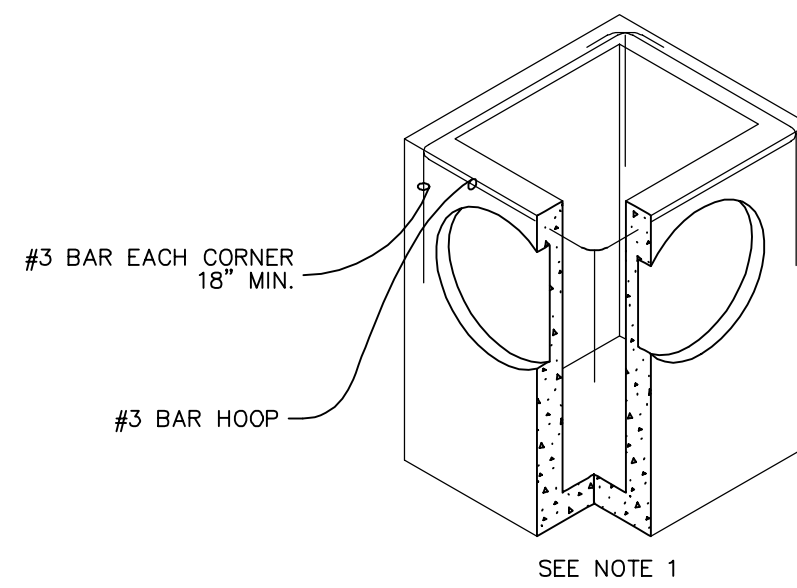
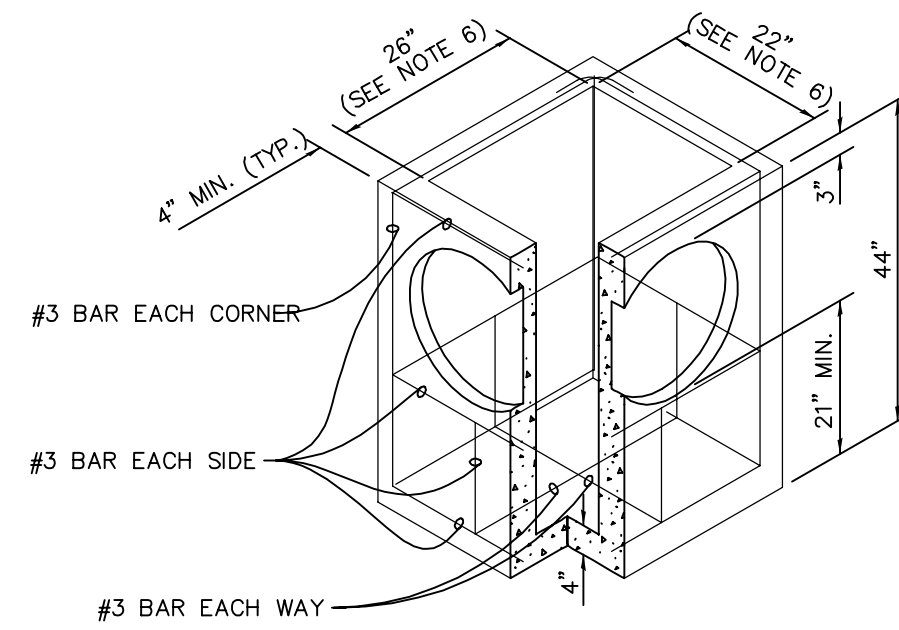
DWG 16026 DETAILS		DATE
2/13/2018		
JOB#	SCALE	SHEET
16026	H: N/A V: N/A	15 of 38

NOTES

- AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
- THE KNOCKOUT DIAMETER SHALL NOT BE GREATER THAN 20". KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.
- THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5".
- THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE UP OR DOWN. THE FRAME MAY BE CAST INTO THE ADJUSTMENT SECTION.
- THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
- THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
- ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.

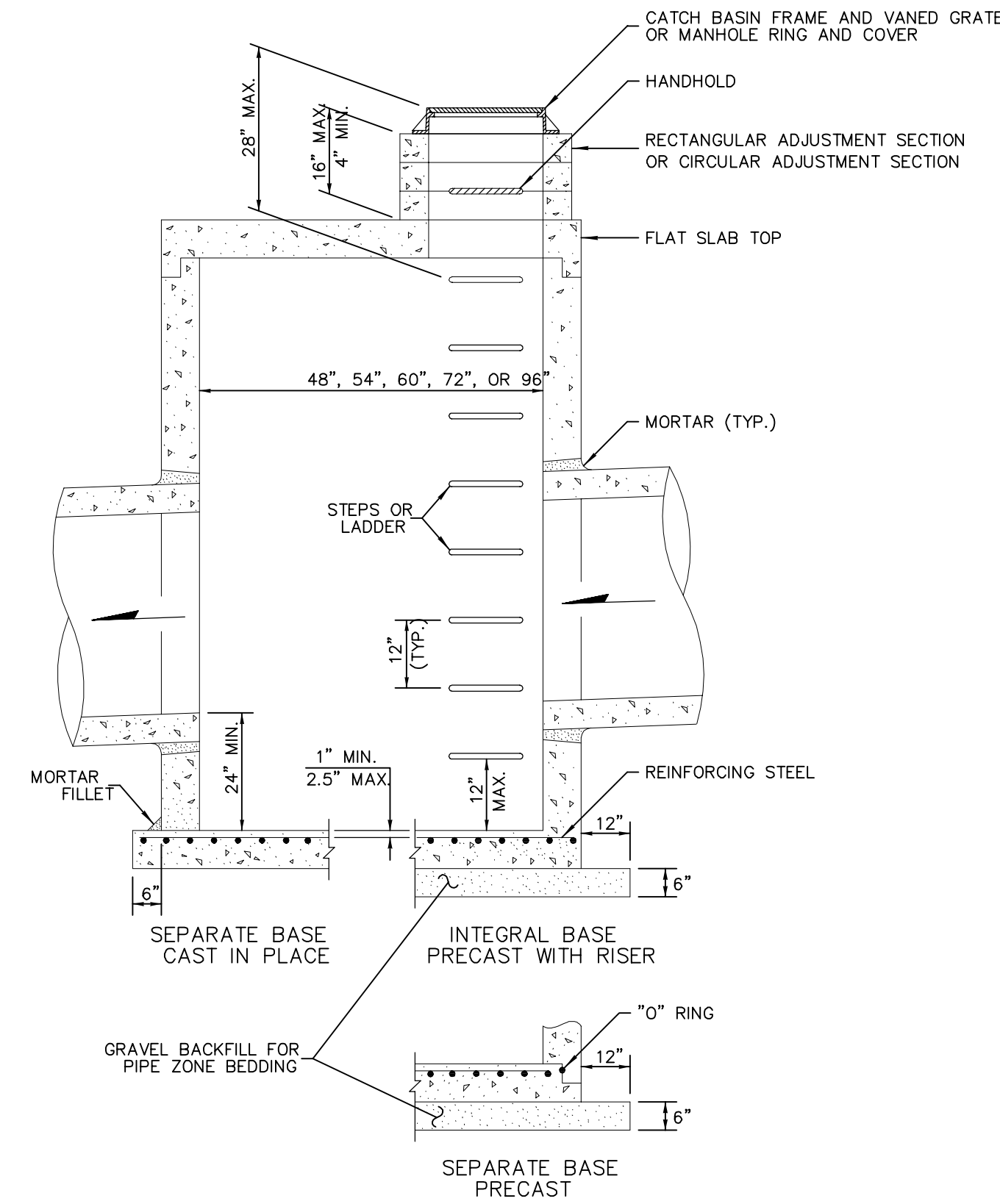


ONE #3 BAR HOOP FOR 6" HEIGHT
TWO #3 BAR M HOOPS FOR 12" HEIGHT



CATCH BASIN TYPE 1

NTS



NOTES

- NO STEPS ARE REQUIRED WHEN HEIGHT IS 4' OR LESS.
- THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE SLOPED TO FACILITATE CLEANING.
- FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO ADJUSTMENT SECTION.
- KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STD. SPEC. 9-04.3.

CATCH BASIN DIMENSIONS						
CATCH BASIN DIAMETER	WALL THICKNESS	BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS	BASE REINFORCING STEEL IN 2'/FT IN EACH DIRECTION	
					INTEGRAL	SEPARATE
48"	4"	6"	36"	8"	0.15	0.23

CATCH BASIN DIAMETER	PIPE ALLOWANCES			
	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER			
	CONCRETE	ALL METAL	CPSSP ①	PROFILE WALL PVC ③
48"	24"	30"	24"	27"

- ① CORRUGATED POLYETHYLENE STORM SEWER PIPE (STD. SPEC. 9-05.20)
② (STD. SPEC. 9-05.12(1))
③ (STD. SPEC. 9-05.12(2))

STORM DRAIN CATCH BASIN, TYPE 2

NTS

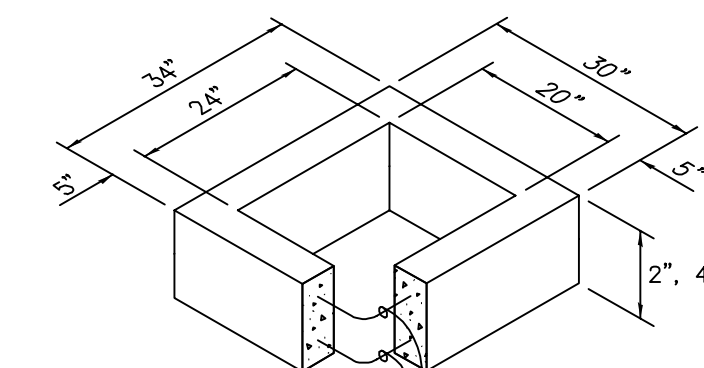
PIPE ALLOWANCES

PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

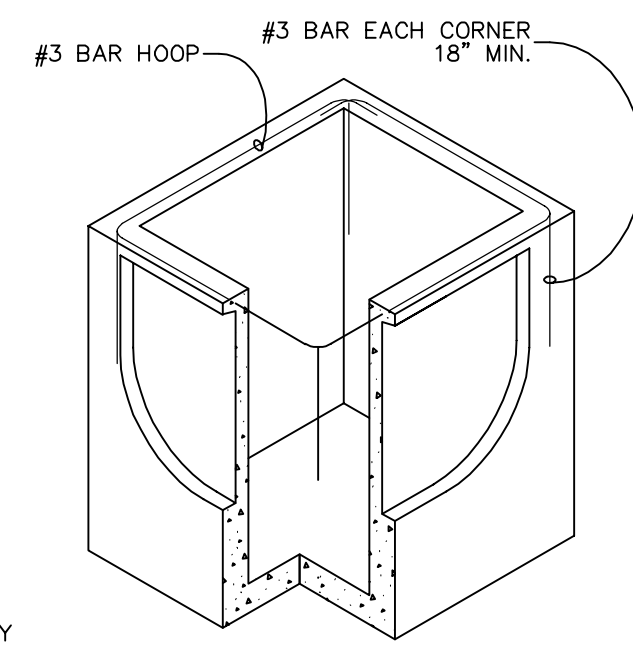
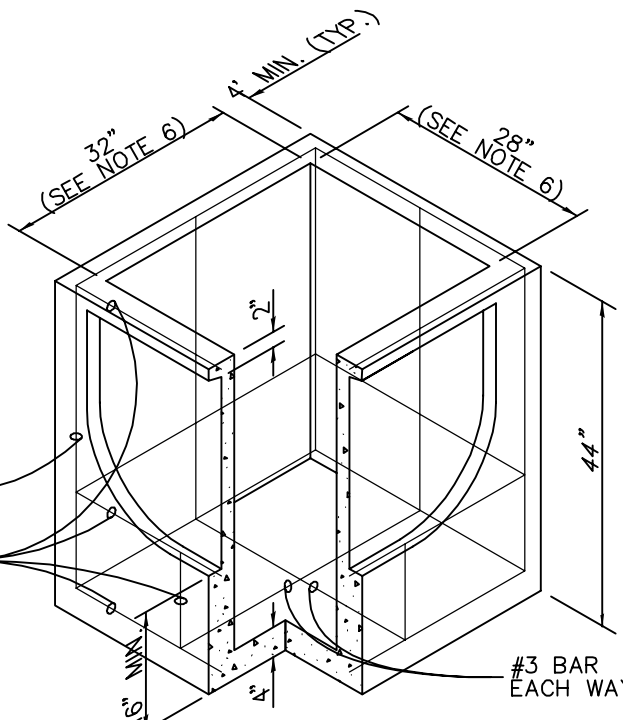
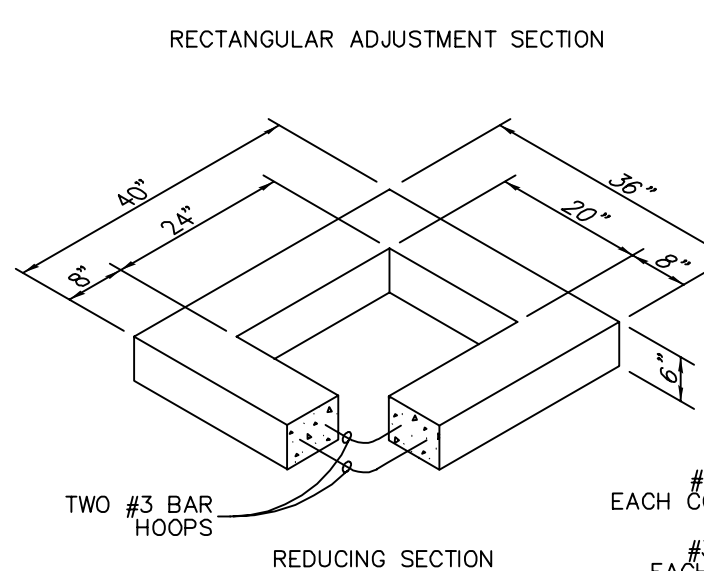
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT, SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
- THE KNOCKOUT SHALL NOT BE GREATER THAN 26", IN ANY DIRECTION. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.
- THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5".
- THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE DOWN OR INTEGRALLY CAST INTO THE ADJUSTMENT SECTION WITH FLANGE UP.
- THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
- THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
- ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.



ONE #3 BAR FOR EACH 6" HEIGHT INCREMENT, SPACED EQUALLY



CATCH BASIN TYPE 1L

NTS

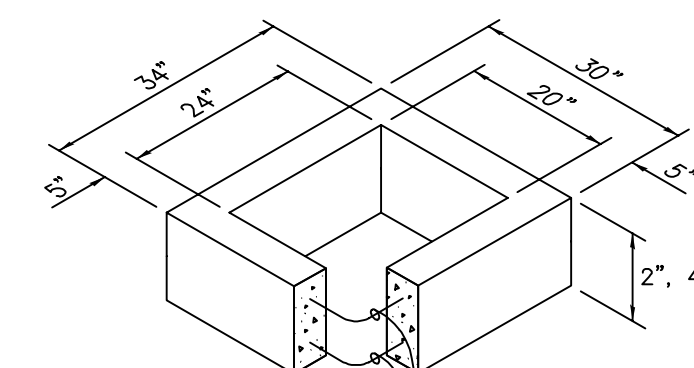
PIPE ALLOWANCES

PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

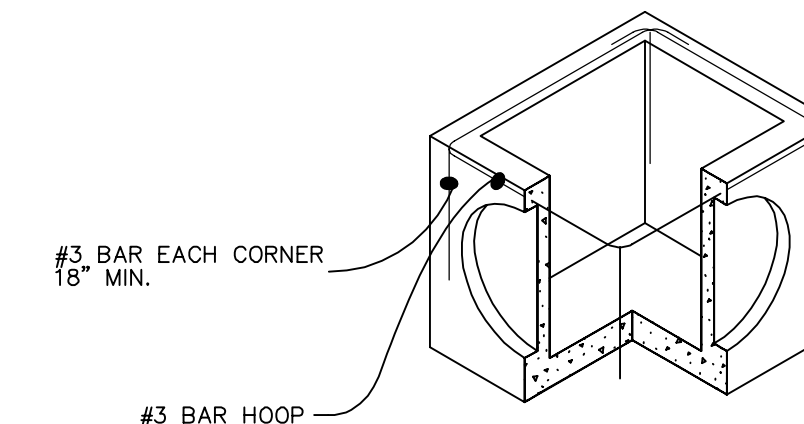
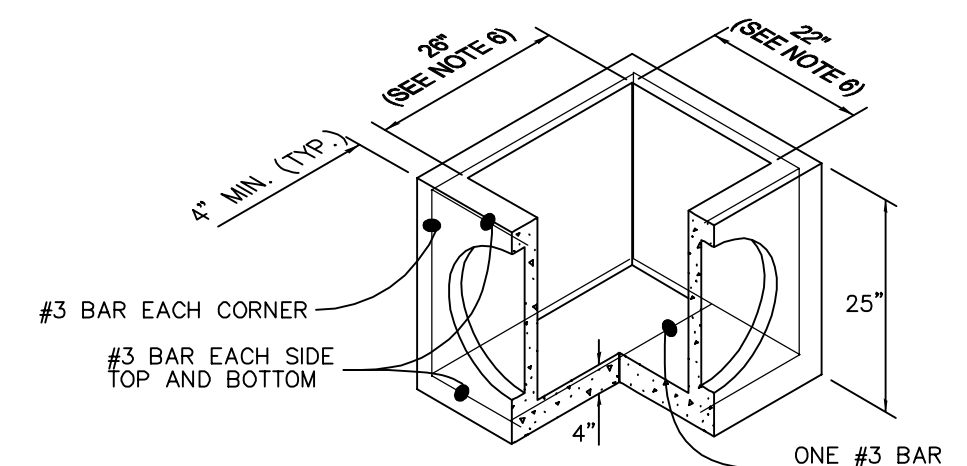
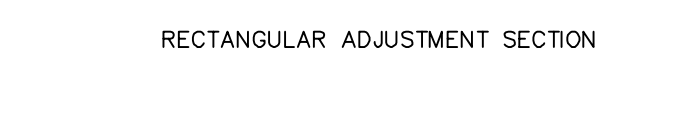
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT, SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
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- THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5".
- THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE DOWN OR INTEGRALLY CAST INTO THE ADJUSTMENT SECTION WITH FLANGE UP.
- THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
- THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
- ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.



ONE #3 BAR FOR EACH 6" HEIGHT INCREMENT, SPACED EQUALLY



CONCRETE INLET

NTS



BID SET

DESIGNED BY
ARS
DRAWN BY
PJC
CHECKED BY
LP

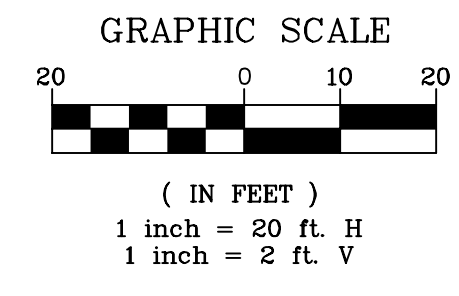
R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

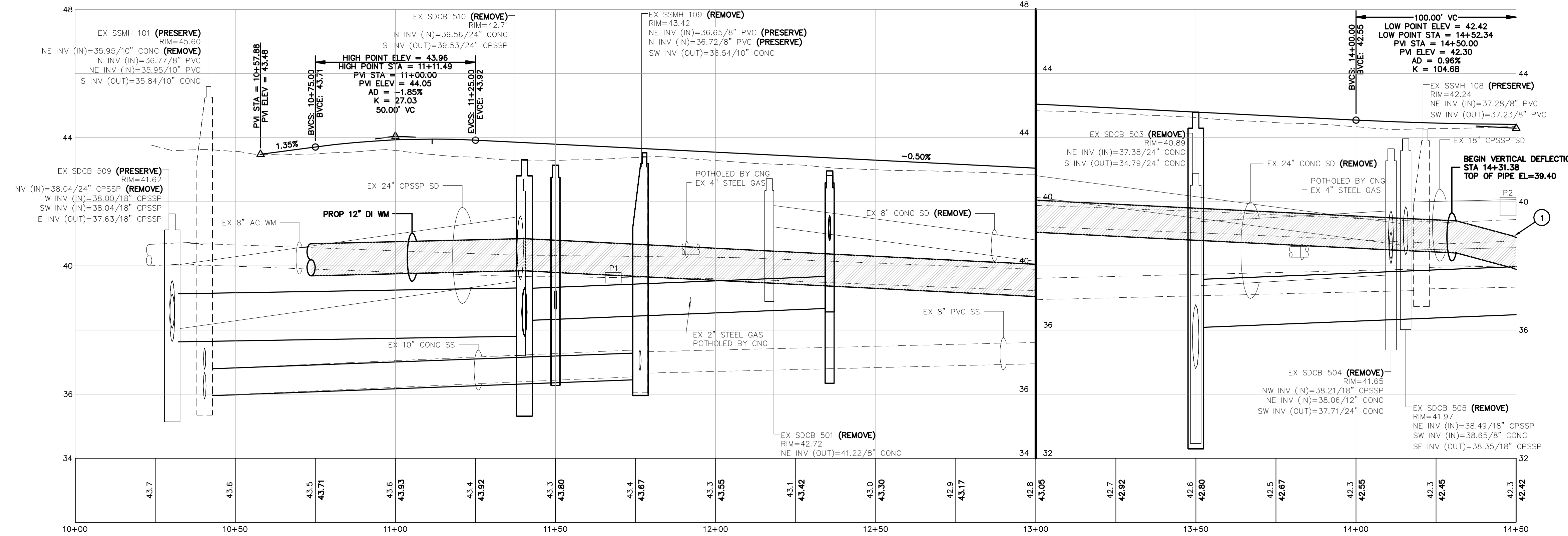
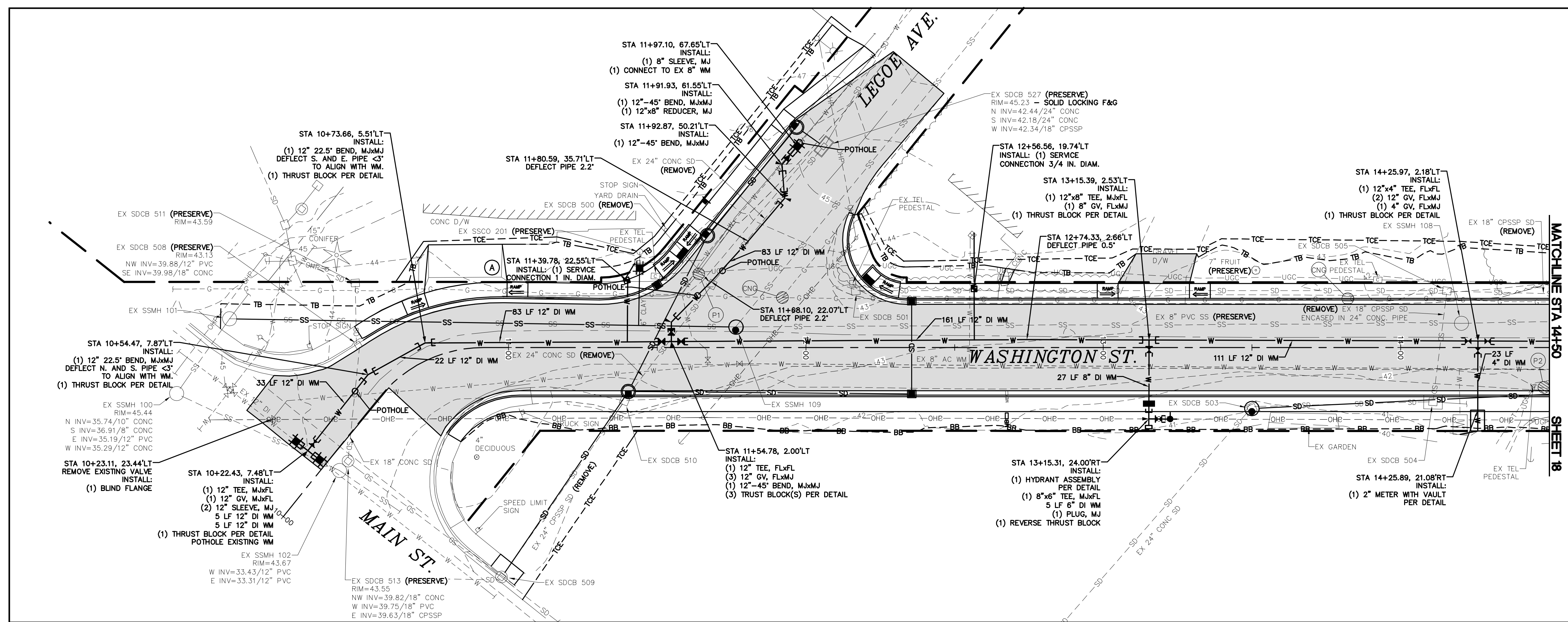
CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
STORM SEWER DETAILS

DWG 16026 DETAILS			DATE
JOB#	SCALE	V: N/A	2/13/2018
16026	H: N/A		
SHEET			16
			of 38



WATER SERVICE CONNECTION NOTES:
 (A) INSTALL 3/4 IN DIAMETER METER SETTER, SEE DETAIL



POTHOLES		
#	DESCRIPTION	OWNER
P1	(4) 4" PVC - 3.4'± TO TOP	FTR
P2	(1) 2" PVC - 2.2'± TO TOP	FTR
	(1) 1" DB - 1.8'± TO TOP	FTR

NOTE: POTHOLE DATA IS FOR INFORMATIONAL PURPOSES ONLY. POTHOLE DATA IS FROM FIELD MEASUREMENTS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. ON 5/1/2017 AND ARE NOT SURVEYED. THIS INFORMATION MAY NOT BE ENTIRELY ACCURATE OR COMPLETE.

VERTICAL DEFLECTION NOTES:
 (1) STATION 14+49.25, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=38.92



BID SET

DESIGNED BY: ARS
 DRAWN BY: PJC
 CHECKED BY: LP

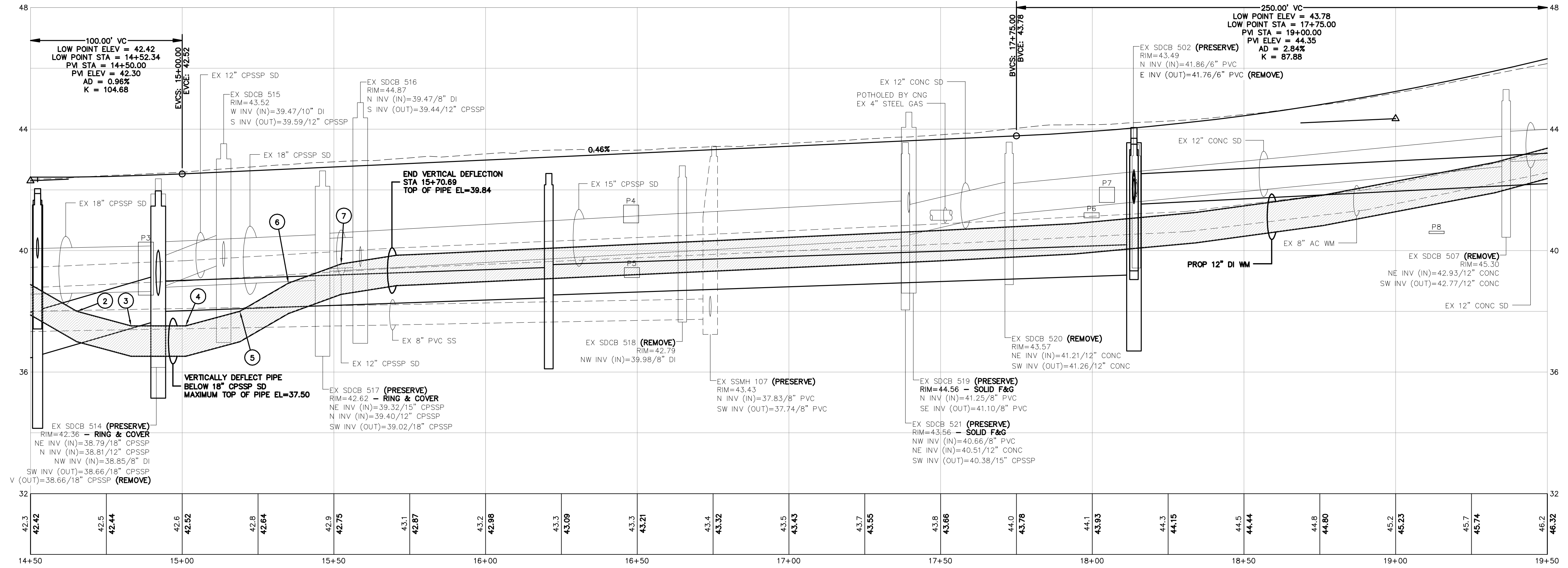
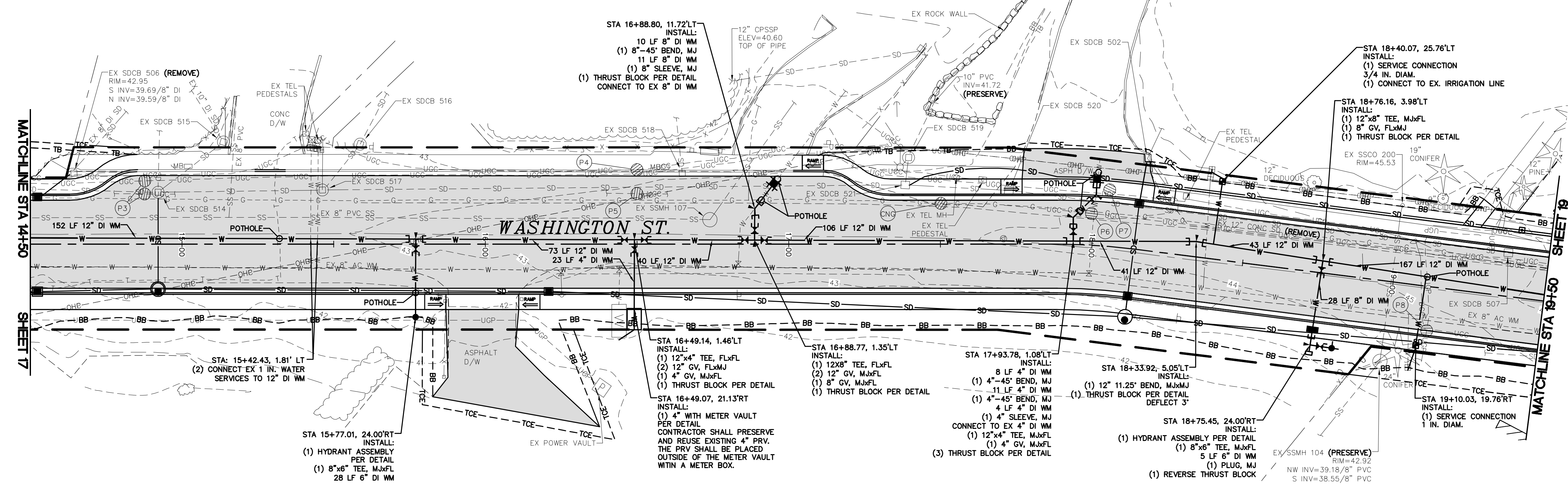
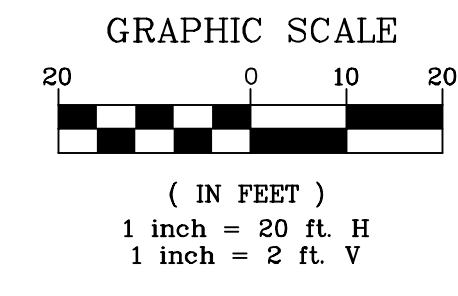
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 813 Metcalf Street, Sedro-Wooley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
 2095 MAIN ST
 FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 WATER P+P - STA 10+00 TO 14+50

DWG 16026 WATER PP		DATE	2/13/2018
JOB#	16026	SHEET	17 of 38
SCALE	H: 1"=20' V: 1"=2'		



VERTICAL DEFLECTION NOTES:

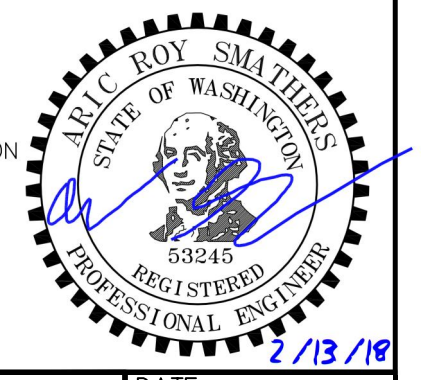
- STATION 14+65.27, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=38.00
- STATION 14+83.14, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=37.52
- STATION 15+01.14, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=37.52
- STATION 15+19.01, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=38.00
- STATION 15+35.03, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=38.92
- STATION 15+52.41, VERTICALLY DEFLECT PIPE TOP OF PIPE EL=39.56

POTHOLES

#	DESCRIPTION	OWNER
P3	(1) 4" DB - 3.3'± TO TOP (1) 4" PVC - 1.8'± TO TOP	FTR
P4	(1) 4" PVC - 1.8'± TO TOP (1) 2" PVC - 1.8'± TO TOP	FTR
P5	(1) 4" DB - 3.0'± TO TOP	FTR
P6	(1) 2" DB - 2.7'± TO TOP	FTR
P7	(1) 4" PVC - 1.7'± TO TOP (1) 4" PE - 1.8'± TO TOP	FTR
P8	(2) 1" PVC - 4.0'± TO TOP (1) 1" DB - 4.0'± TO TOP	PSE

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⊙ = UTILITY POTHOLED LOCATION



BID SET

DESIGNED BY
ARS
DRAWN BY
PJC
CHECKED BY
LP

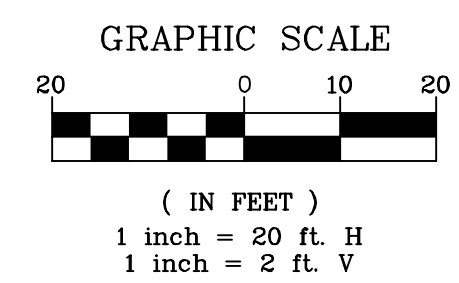
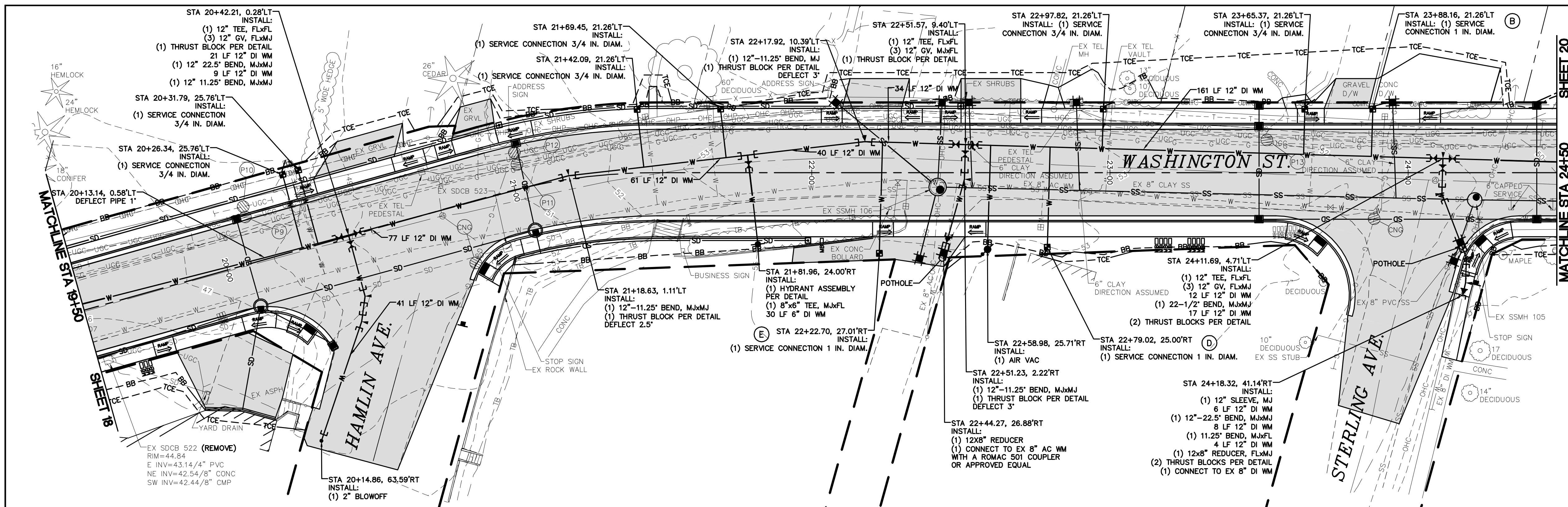
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 813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

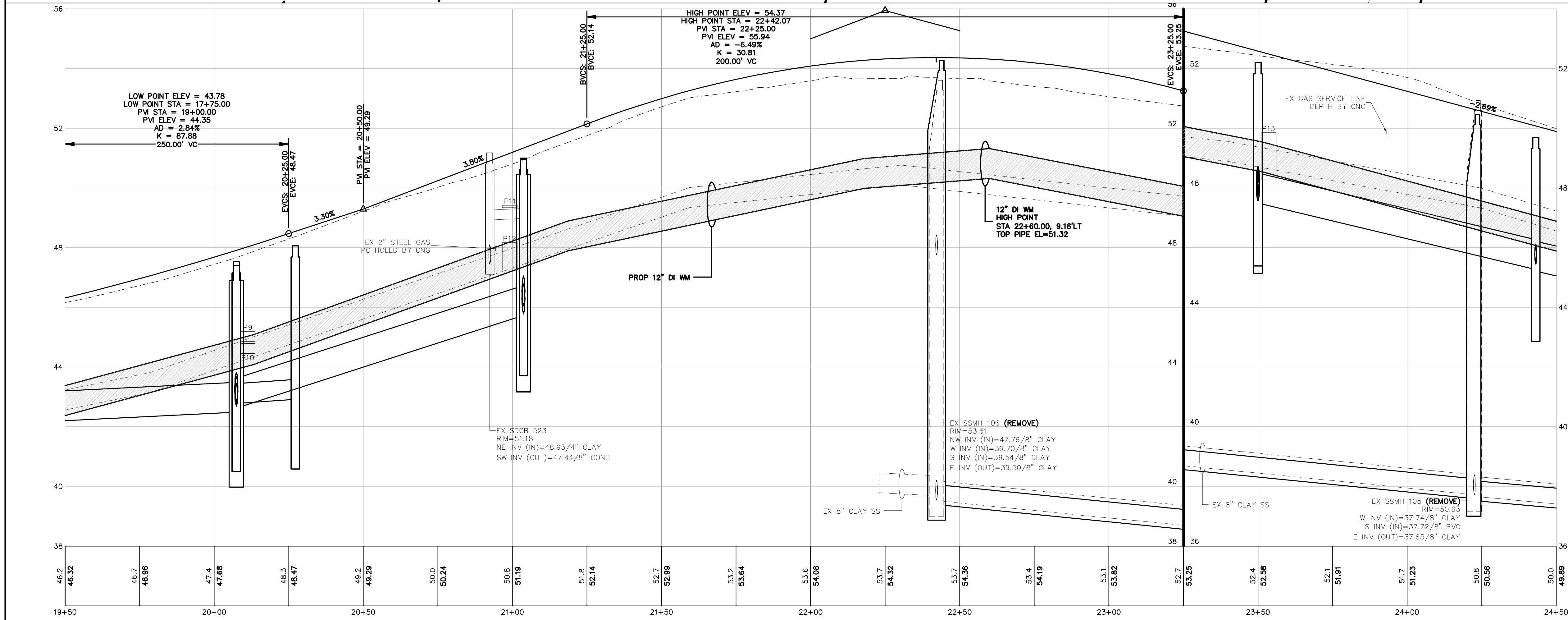
CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 WATER P+P - STA 14+50 TO 19+50

DWG 16026 WATER PP		DATE	2/13/2018
JOB#	16026	SHEET	18 of 38
SCALE	H: 1"=20' V: 1"=2'		



- WATER SERVICE CONNECTION NOTES:**
- (B) INSTALL 3/4 IN DIAMETER METER SETTER, SEE DETAIL
 - (D) INSTALL 3/4 IN DIAMETER METER SETTER, SEE DETAIL
 - (E) INSTALL 3/4 IN DIAMETER METER SETTER, SEE DETAIL



#	DESCRIPTION	OWNER
P9	(1) 4\" DB - 2.3'± TO TOP	FTR
P10	(3) 4\" PVC - 2.8'± TO TOP	FTR
P11	(1) 0.5\" DB - 1.3'± TO TOP	FTR
P12	(4) 4\" PVC - 2.5'± TO TOP	FTR
P13	(1) 4\" DB - 2.2'± TO TOP	FTR
	(1) 13\" CDF DUCT - 2.7'± TO TOP	FTR

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⊗ = UTILITY POTHOLED LOCATION



BID SET

DESIGNED BY
ARS
DRAWN BY
PJC
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-Wooley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

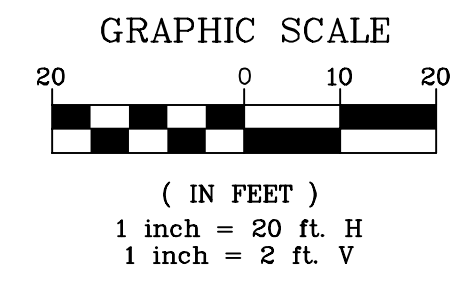
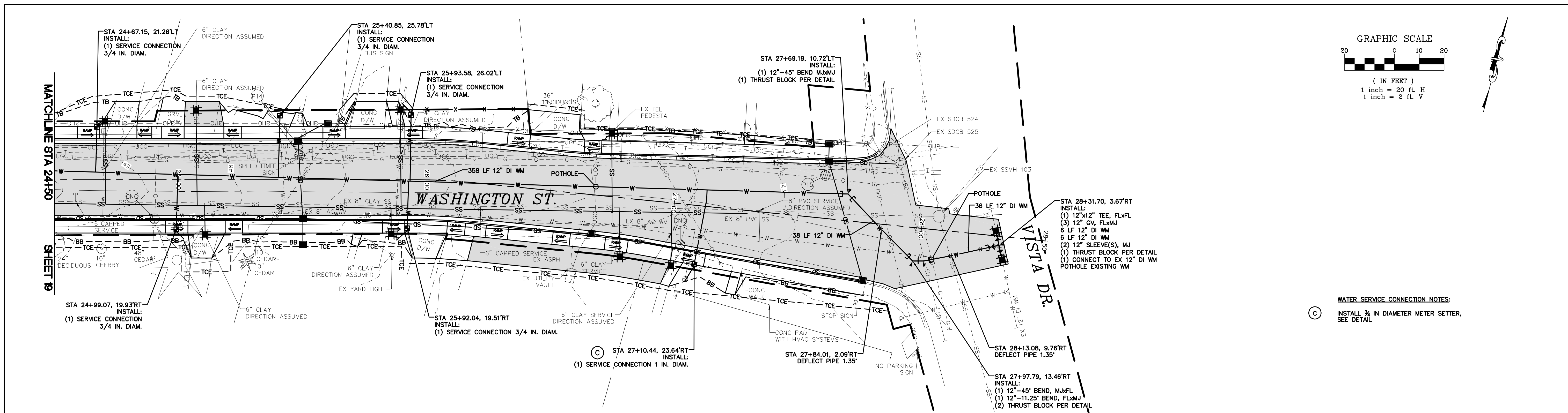
CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
WATER P+P - STA 19+50 TO 24+50

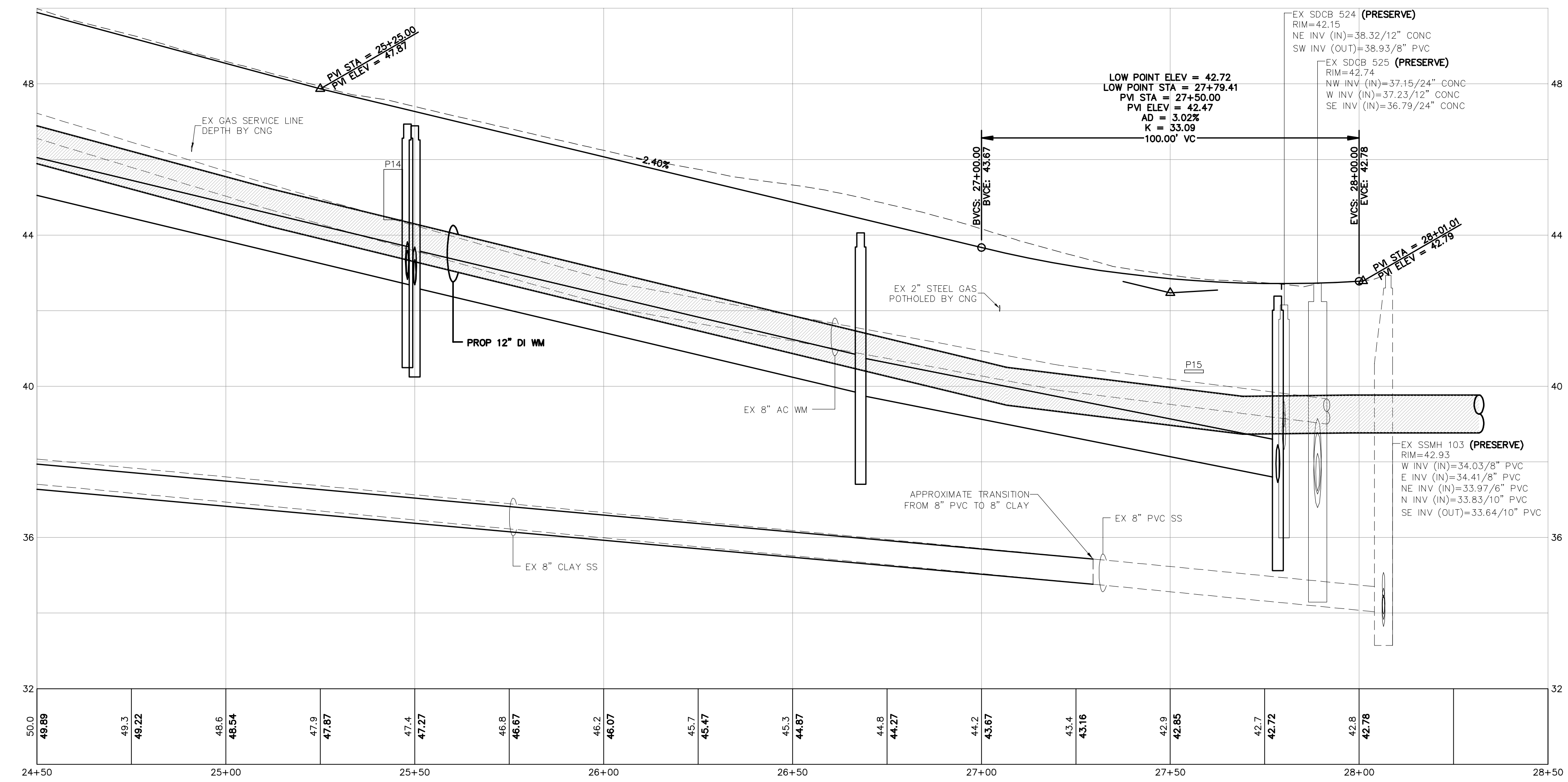
DWG 16026 WATER PP
JOB# 16026
SCALE H: 1"=20' V: 1"=2'

DATE 2/13/2018
SHEET 19 of 38

P:\Project\16026 - City of Ferndale\16026 Water P+P.dwg, 19 WATER P+P - STA 19+50 TO 24+50, 2/13/2018 3:38:21 PM, PDF-XChange Printer 2012



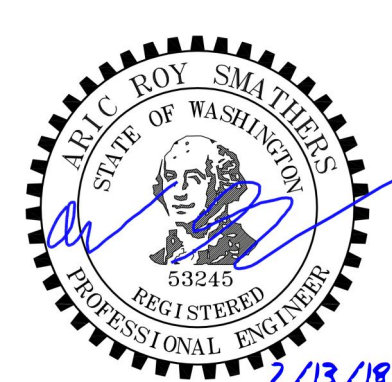
WATER SERVICE CONNECTION NOTES:
 (C) INSTALL 3/4 IN DIAMETER METER SETTER, SEE DETAIL



POTHOLES		
#	DESCRIPTION	OWNER
	(1) 4" DB - 1.9'± TO TOP	
P14	(1) 2" DB - 1.7'± TO TOP	FTR
	(5) 1" DB - 1.7'± TO TOP	
P15	(1) 1" PVC - 2.2'± TO TOP	FTR

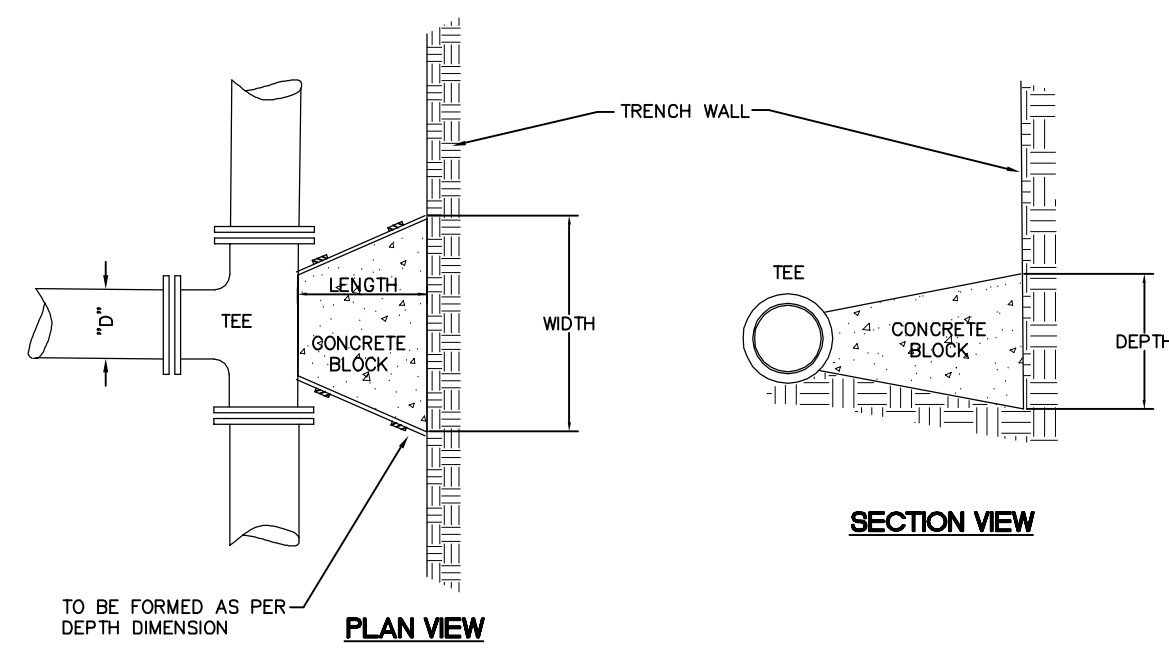
NOTE: POT HOLE DATA IS FOR INFORMATIONAL PURPOSES ONLY. POT HOLE DATA IS FROM FIELD MEASUREMENTS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. ON 5/1/2017 AND ARE NOT SURVEYED. THIS INFORMATION MAY NOT BE ENTIRELY ACCURATE OR COMPLETE.

⊗ = UTILITY POT HOLED LOCATION



BID SET	DESIGNED BY ARS	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 423 Front Street, Lynden, WA 98264 (360) 354-3687 813 Metcalf Street, Sedro-Wooley, WA 98284 (360) 855-1713	NO.	DATE	DESCRIPTION	BY	CITY OF FERDALE 2095 MAIN ST FERDALE, WA 98248	WASHINGTON STREET IMPROVEMENTS MAIN STREET TO VISTA DRIVE WATER P+P - STA 24+50 TO 28+50	DWG 16026 WATER PP		DATE
	DRAWN BY PJC		NO.	DATE	DESCRIPTION	BY			DATE	2/13/2018	
	CHECKED BY LP								JOB#	SCALE	SHEET
									16026	H: 1"=20' V: 1"=2'	20 of 38

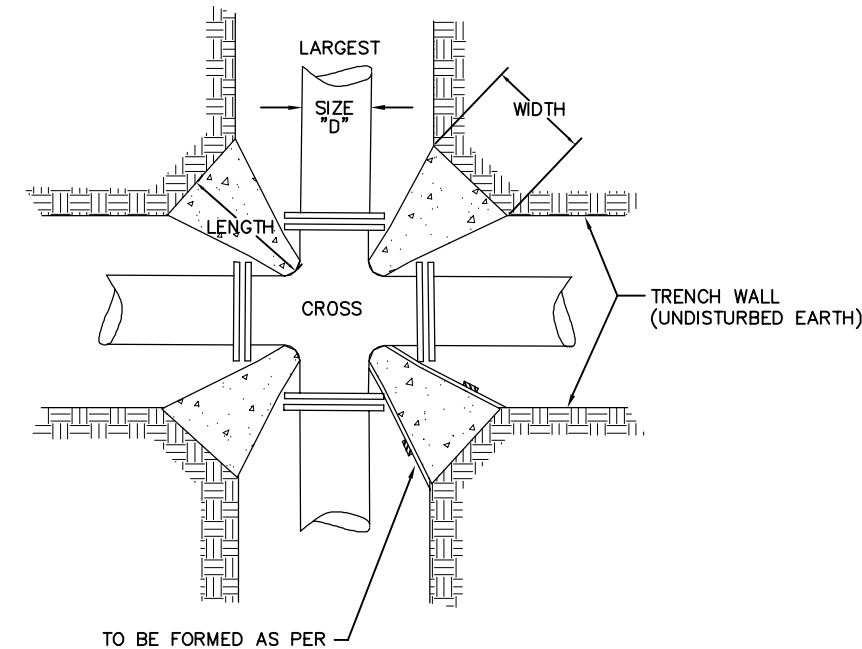
P:\Project\16026\16_Civil\3D 2018\Plan_Sheet\16026 WATER P+P.dwg, 20 WATER P+P - STA 24+50 TO 28+50, 2/13/2018 3:38:58 PM, PDF-XChange Printer 2012



TO BE FORMED AS PER DEPTH DIMENSION

"D"	WIDTH	DEPTH	LENGTH	VOL.
6"	1'-6"	1'-6"	12"	3.0
8"	2'-0"	2'-0"	12"	4.5
10"	2'-6"	2'-6"	12"	7.0
12"	3'-0"	3'-0"	18"	14.0

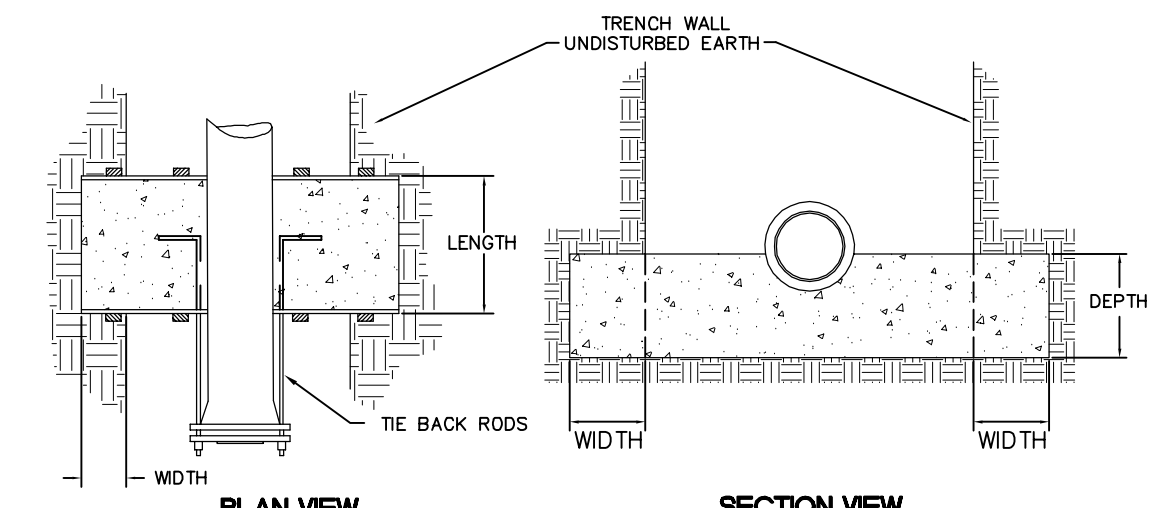
VOL. = Approx. Volume of Blocking Material Required in cu. ft.
 SOIL BEARING CAPACITY 1500 PSF MINIMUM
 100 P.S.I. OPERATING PRESSURE



TO BE FORMED AS PER DEPTH DIMENSION (TYP.)

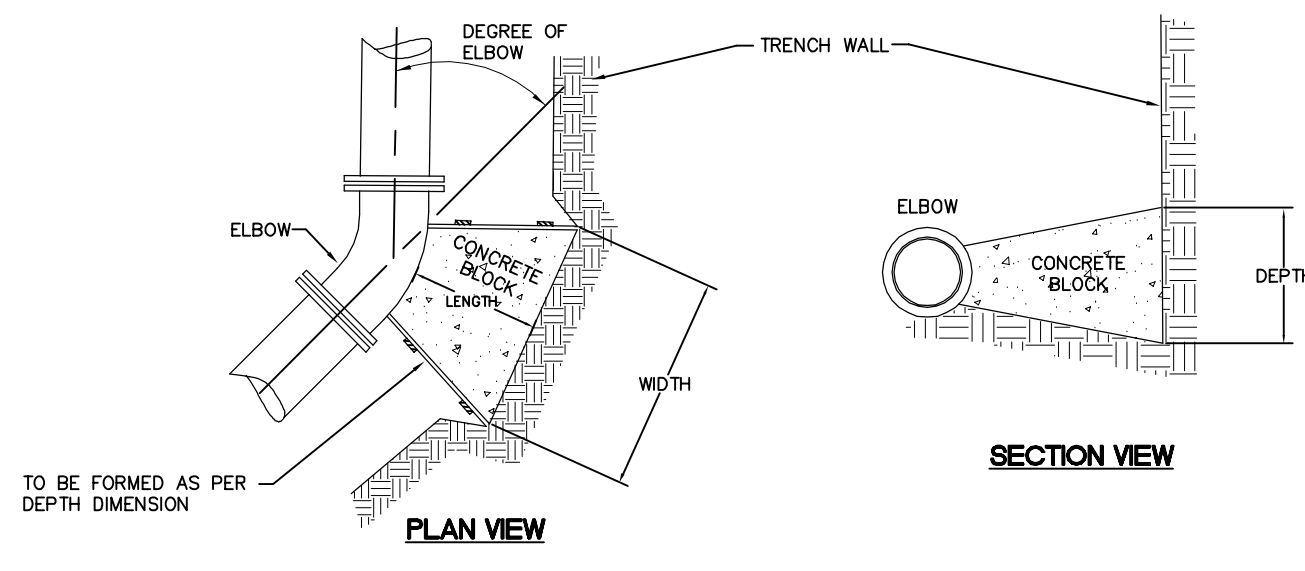
"D"	WIDTH	DEPTH	LENGTH	VOL.	X4 blocks/joint
6"	1'-0"	1'-0"	12"	0.63	2.50 cu ft
8"	1'-3"	1'-3"	12"	1.00	4.01 cu ft
10"	1'-6"	1'-6"	12"	1.63	6.50 cu ft
12"	1'-9"	1'-9"	18"	3.05	12.19 cu ft

VOL. = Approx. Volume of Blocking Material Required in cu. ft.



"D"	WIDTH	DEPTH	LENGTH	*VOL.	# OF RODS	ROD DIA.
6"	1'-6"	1'-6"	12"	7.5	2	1/2"
8"	2'-0"	2'-0"	18"	20.0	2	5/8"
10"	2'-6"	2'-6"	24"	37.5	2	3/4"
12"	2'-9"	2'-9"	24"	44.0	4	3/4"

*VOL. = Approx. Volume of Blocking Material Required in cu. ft.
 RODS: A36 STEEL MINIMUM



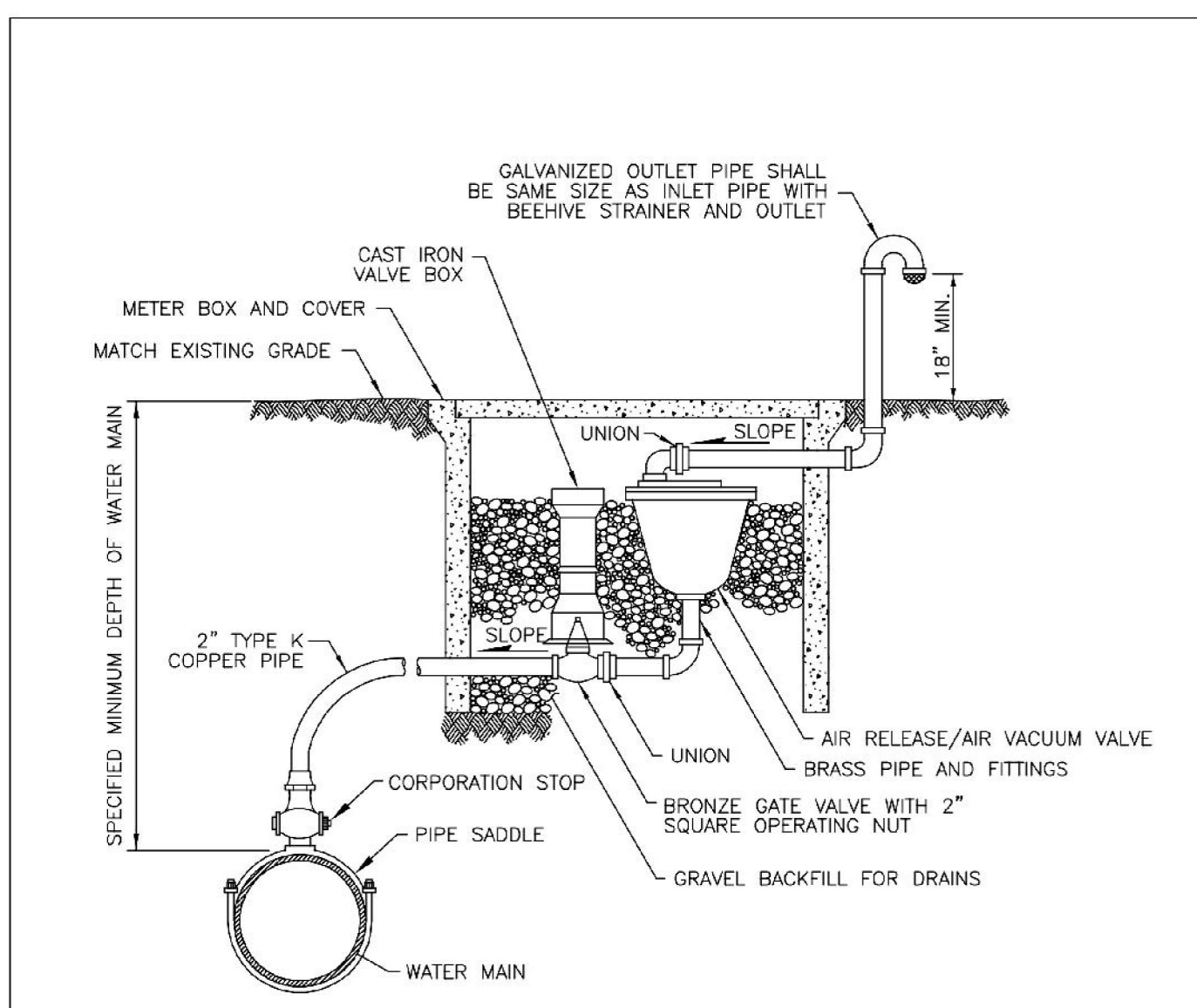
TO BE FORMED AS PER DEPTH DIMENSION

SIZE	LENGTH	11 1/4"		22 1/2"		45"		90"			
"D"	WIDTH	DEPTH	VOL.	WIDTH	DEPTH	VOL.	WIDTH	DEPTH	VOL.		
6"	12"	1'-0"	0.63	1'-0"	0.63	1'-6"	1'-6"	1.25	2'-3"	1'-6"	1.88
8"	12"	1'-3"	1.00	1'-3"	1.00	1'-9"	1'-9"	1.75	3'-0"	2'-0"	3.33
10"	12"	1'-6"	1.72	1'-6"	1.72	2'-3"	2'-3"	2.88	3'-6"	2'-6"	4.86
12"	18"	2'-0"	3.48	2'-0"	3.48	2'-9"	2'-9"	5.98	4'-0"	3'-0"	10.00

VOL. = Approx. Volume of Blocking Material Required in cu. ft.

THRUST BLOCKING

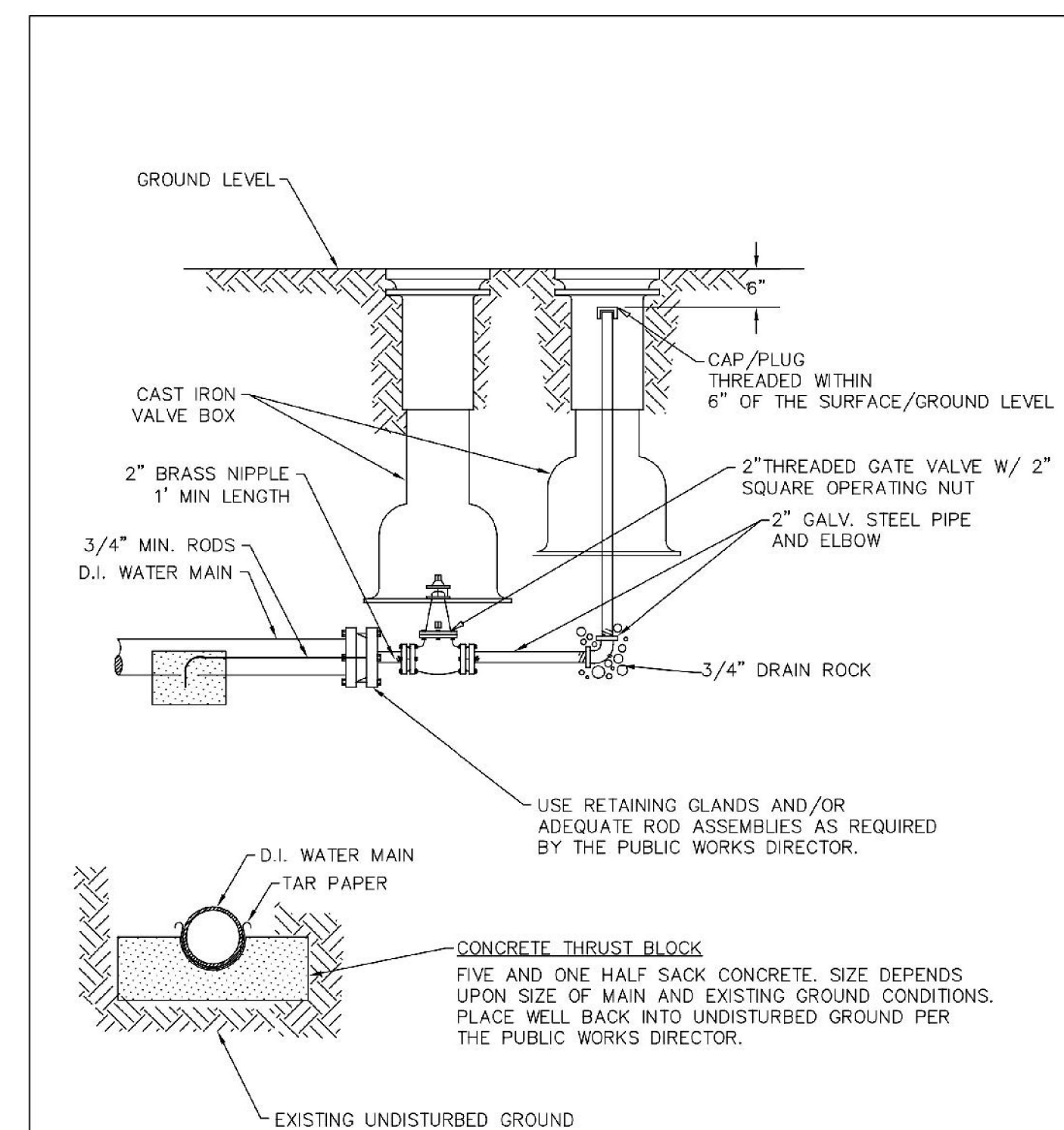
NTS



- NOTES:
- THE SIZE OF THE COMBINATION AIR RELEASE/AIR VACUUM VALVE SHALL BE SPECIFIED IN THE CONTRACT. THE PIPING AND VALVES SHALL BE THE SAME SIZE AS THE COMBINATION AIR RELEASE/AIR VACUUM VALVE.
 - LOCATE AT THE HIGH POINT OF THE MAIN, TAP TOP OF MAIN.

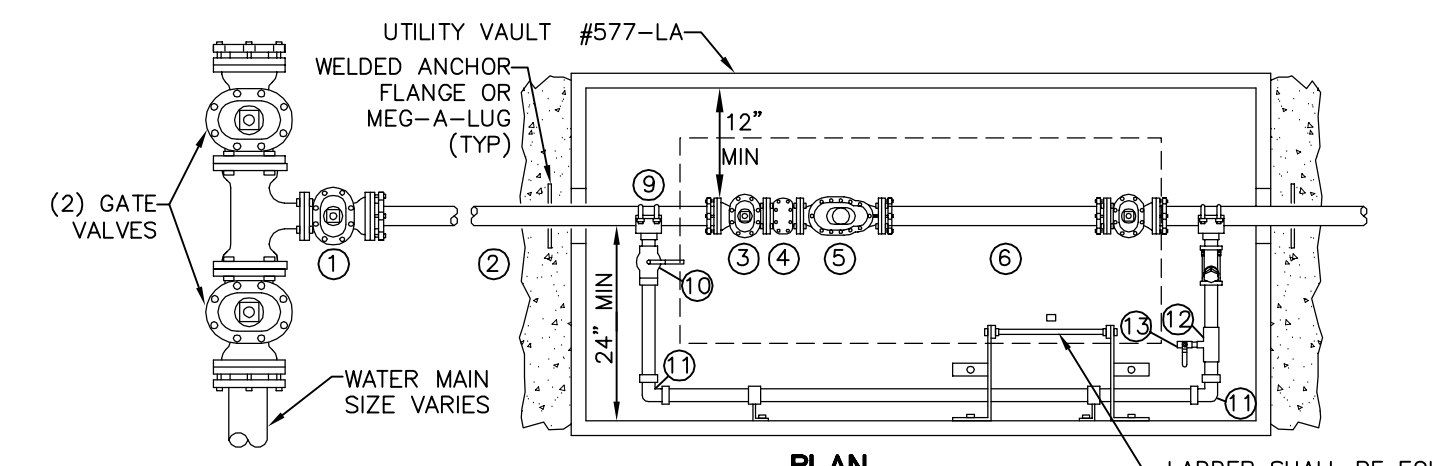
APPROVED: Date: 8/11/17
 Public Works Director

NOVEMBER 23, 2016
COMBINATION AIR RELEASE AIR VACUUM VALVE ASSEMBLY
 STANDARD DETAIL W-13
 NOT TO SCALE

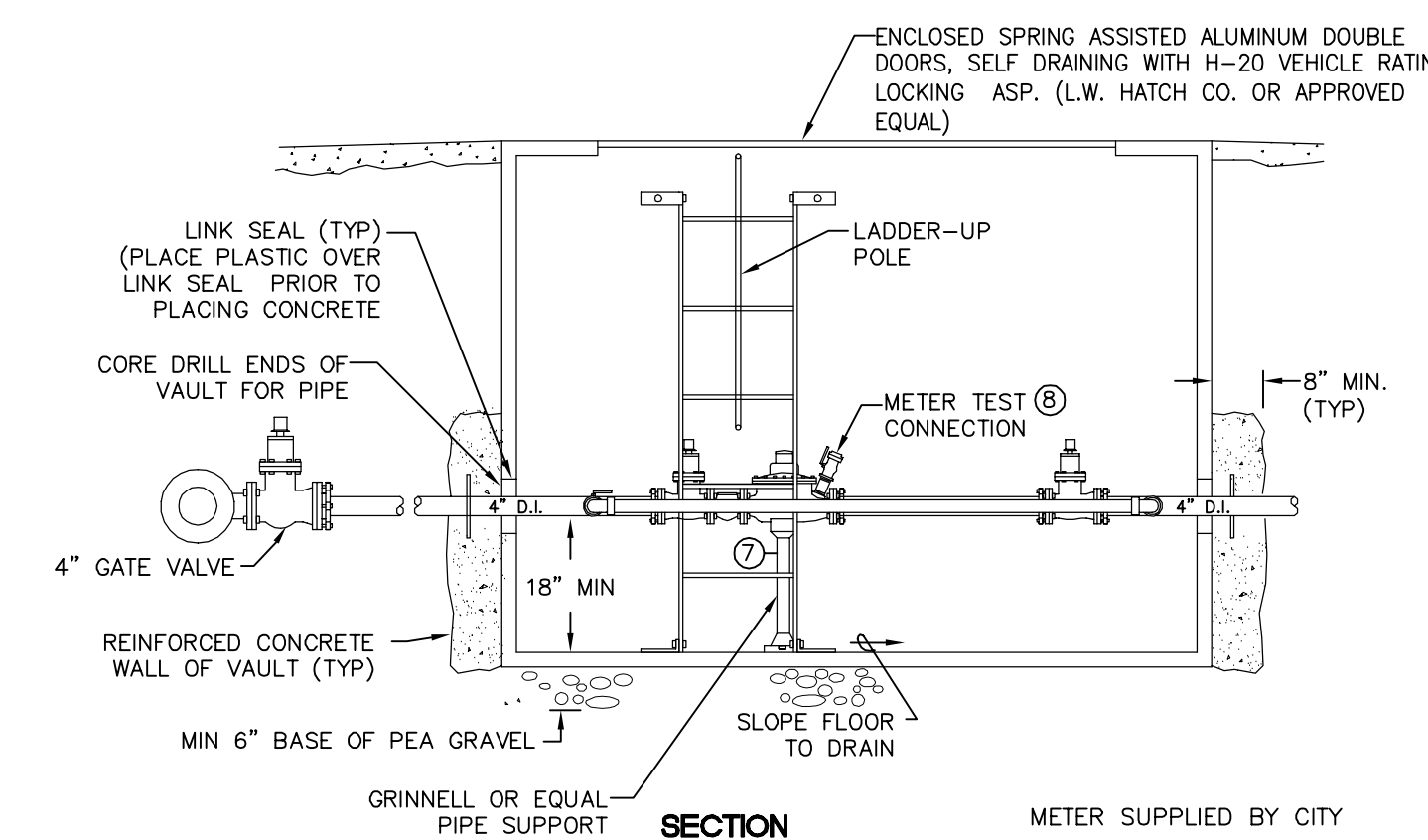


APPROVED: Date: 8/11/17
 Public Works Director

AUGUST 1, 2017
2\"/>



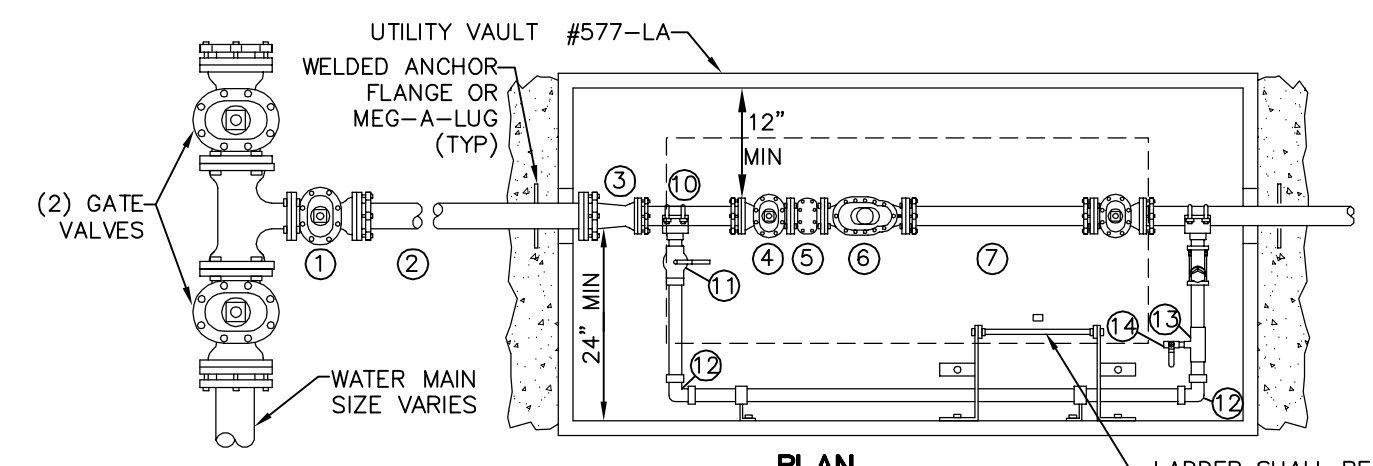
LADDER SHALL BE EQUIPPED WITH BILCO "LADDER-UP" POLE, BOLTED TO SIDE & BOTTOM OF VAULT AND RUNGS TO BE EXTENDED 2" BEYOND EDGE OF OPENING



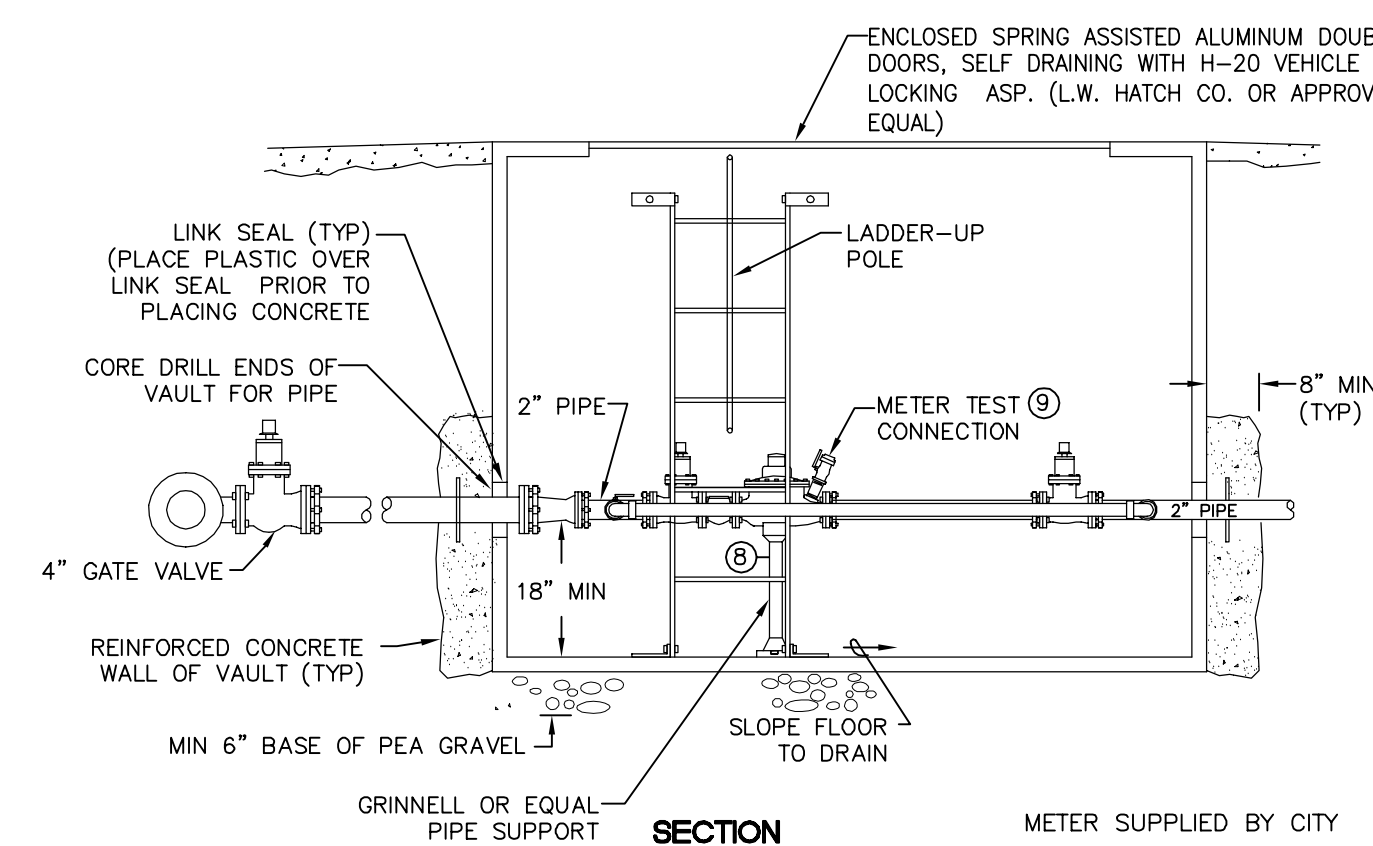
- (1) 4" GATE VALVE (FL)
 - (2) 4" D.I. PIPE, LENGTH AS REQUIRED
 - (3) (2) 4" GATE VALVES (FLxR), WHEEL OPERATED
 - (4) (1) 4" BRONZE BASKET STRAINER (FL)
 - (5) (1) 4" SENSUS TOUCH READ METER (FL) WITH TEST NIPPLE & VALVE
 - (6) (1) 4" UNI-FLANGE SPOOL, LENGTH AS REQ'D
 - (7) (2) ADJUSTABLE PIPE SUPPORTS
 - (8) 2-1/2" NST (FIRE HOSE) METER TEST CONNECTION:
 - (1) BRASS NIPPLE (LENGTH AND SIZE AS NEEDED)
 - (1) BRASS GATE VALVE (SIZED AS NEEDED)
 - (1) IPTx2 1/2" NST ADAPTER (SIZE AS NEEDED)
 - (1) 2 1/2" NST CAP
- 2" BY-PASS ASSEMBLY:
- (2) 2" SADDLES W/ STAINLESS STL DOUBLE STRAPS
 - (2) 2" BALL VALVE (IP)
 - (2) 2" 90° BENDS (IP)
 - (1) 2" X 3/4" TEE (IP)
 - (1) 3/4" BALL VALVE (IP) PIPE (LENGTH AS NEEDED)
- SECURE PIPE TO VAULT WALL
 ALL 2" PIPE & FITTINGS SHALL BE BRASS.

4" METER INSTALLATION

NTS



LADDER SHALL BE EQUIPPED WITH BILCO "LADDER-UP" POLE, BOLTED TO SIDE & BOTTOM OF VAULT AND RUNGS TO BE EXTENDED 2" BEYOND EDGE OF OPENING



- (1) 4" GATE VALVE (FL)
 - (2) 4" D.I. PIPE, LENGTH AS REQUIRED
 - (3) (1) 4"x2" REDUCER (FLxR)
 - (4) (2) 2" GATE VALVES (FLxR), WHEEL OPERATED
 - (5) (1) 2" BRONZE BASKET STRAINER (FL)
 - (6) (1) 2" SENSUS TOUCH READ METER (FL) WITH TEST NIPPLE & VALVE
 - (7) (1) 2" UNI-FLANGE SPOOL, LENGTH AS REQ'D
 - (8) (2) ADJUSTABLE PIPE SUPPORTS
 - (9) 2-1/2" NST (FIRE HOSE) METER TEST CONNECTION:
 - (1) BRASS NIPPLE (LENGTH AND SIZE AS NEEDED)
 - (1) BRASS GATE VALVE (SIZED AS NEEDED)
 - (1) IPTx2 1/2" NST ADAPTER (SIZE AS NEEDED)
 - (1) 2 1/2" NST CAP
- 2" BY-PASS ASSEMBLY:
- (2) 2" SADDLES W/ STAINLESS STL DOUBLE STRAPS
 - (2) 2" BALL VALVE (IP)
 - (2) 2" 90° BENDS (IP)
 - (1) 2" X 3/4" TEE (IP)
 - (1) 3/4" BALL VALVE (IP) PIPE (LENGTH AS NEEDED)
- SECURE PIPE TO VAULT WALL
 ALL 2" PIPE & FITTINGS SHALL BE BRASS.

2" METER INSTALLATION

NTS

BID SET

DESIGNED BY: ARS
 DRAWN BY: PJC
 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-Wooley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
 2095 MAIN ST
 FERDALE, WA 98248

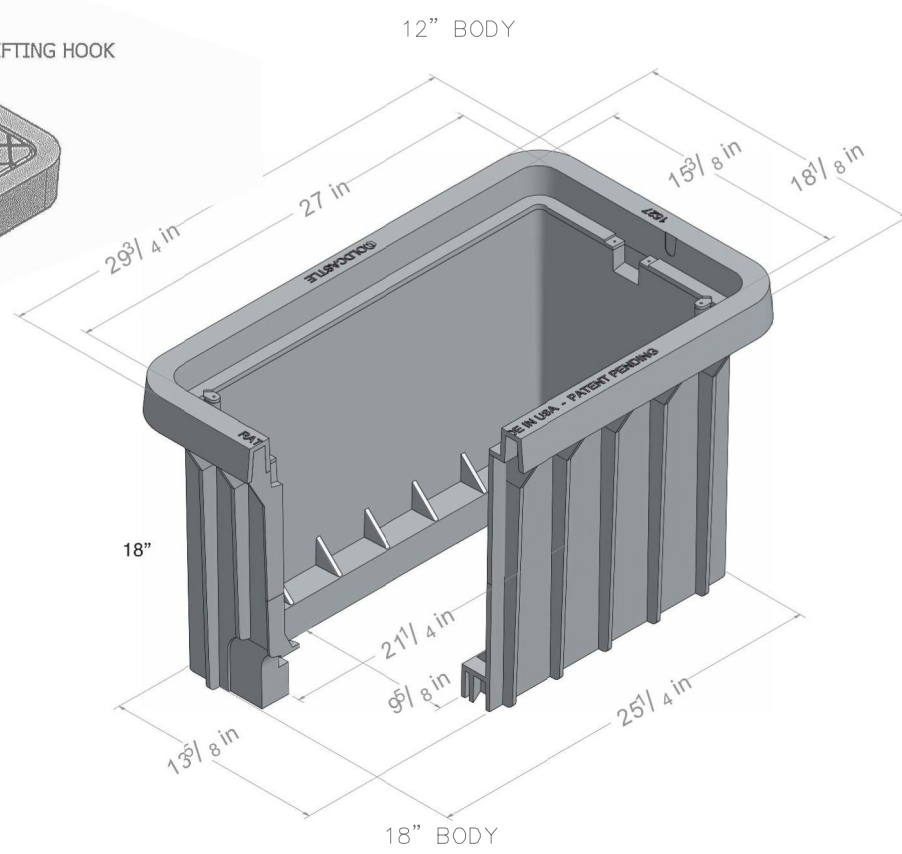
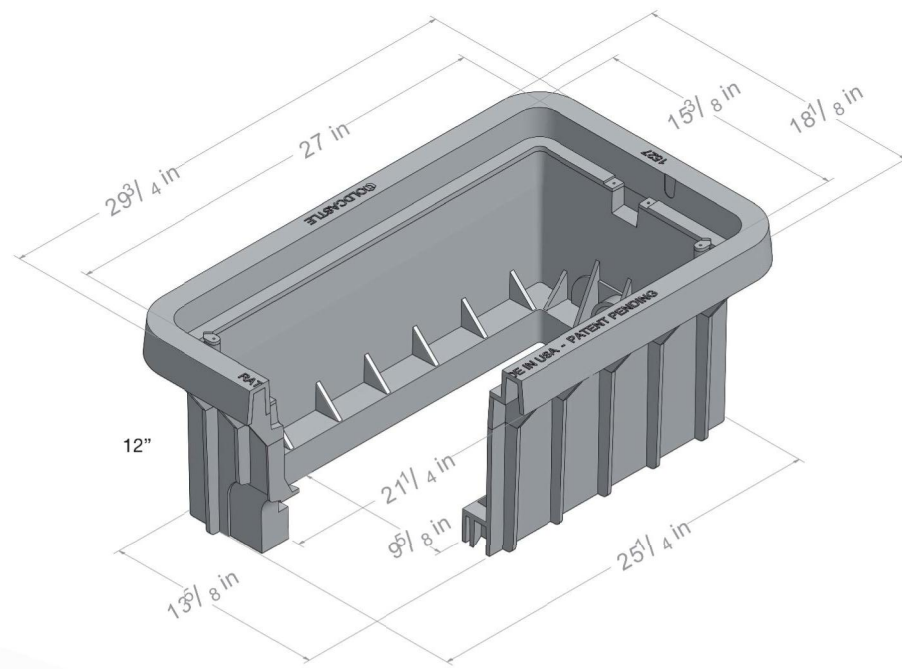
WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 WATER DETAILS

DWG 16026 DETAILS			DATE
JOB#	SCALE	V: N/A	2/13/2018
16026	H: N/A		SHEET 21 of 38



2/13/18

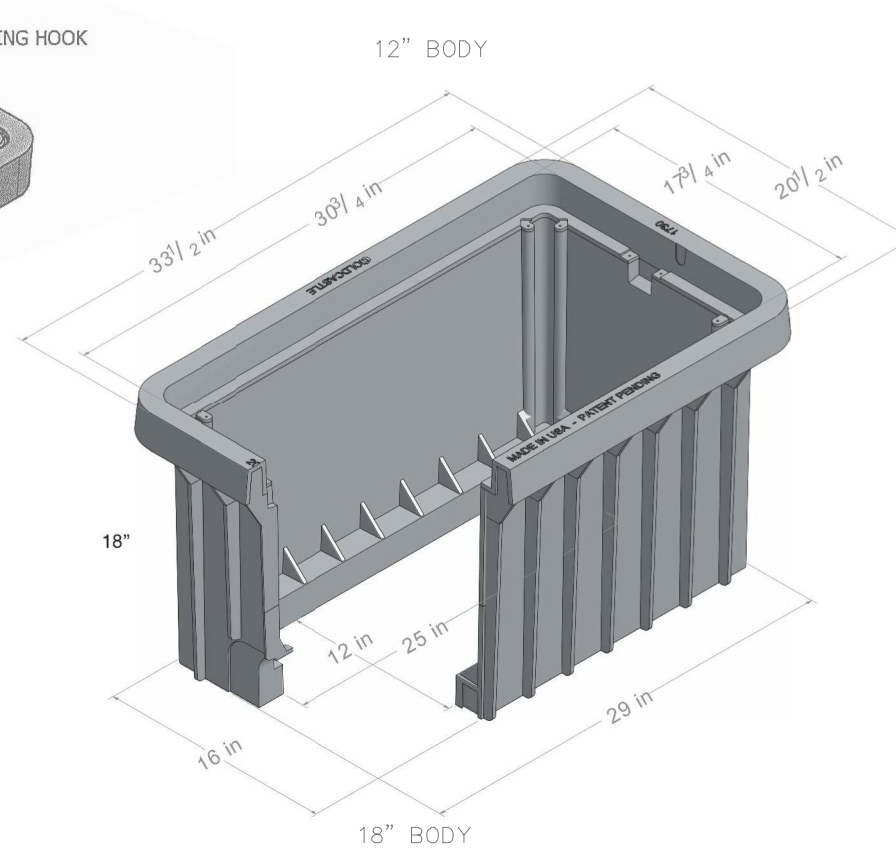
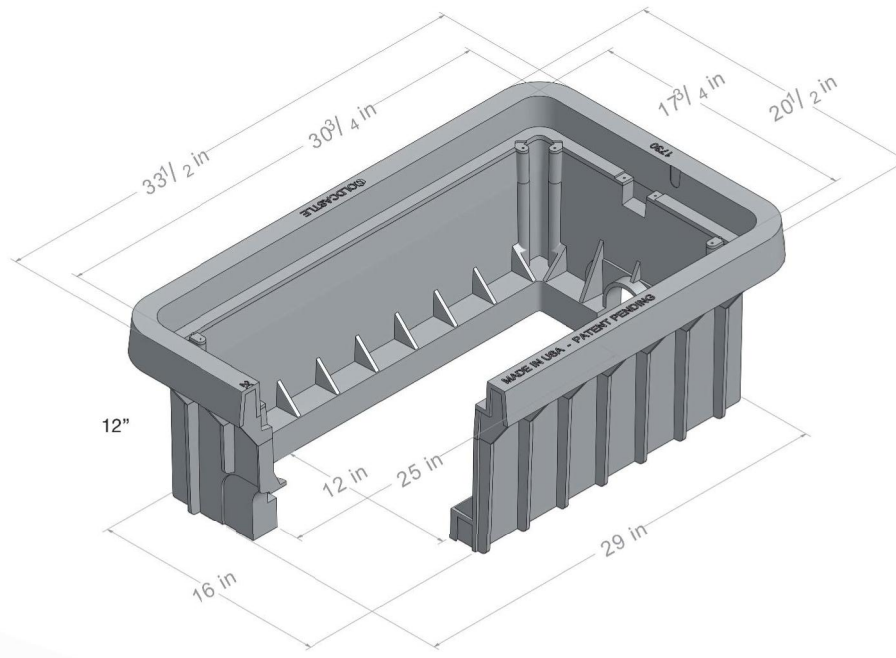
- NOTE:
 1. CARSON HEAVYWALL MODEL 1527BCF OR APPROVED EQUAL WITH DUCTILE LID
 2. METER BOXES LOCATED WITHIN THE SIDEWALK SHALL AT A MINIMUM BE A NON-SKID POLYMER LID, WITH 2" HOLE AS SHOWN BELOW AND SHALL HAVE A COEFFICIENT OF FRICTION OF 0.96 DRY AND 0.88 WET BASED ON TEST METHOD ASTM C-1028



3/4" AND 1" WATER METER BOX

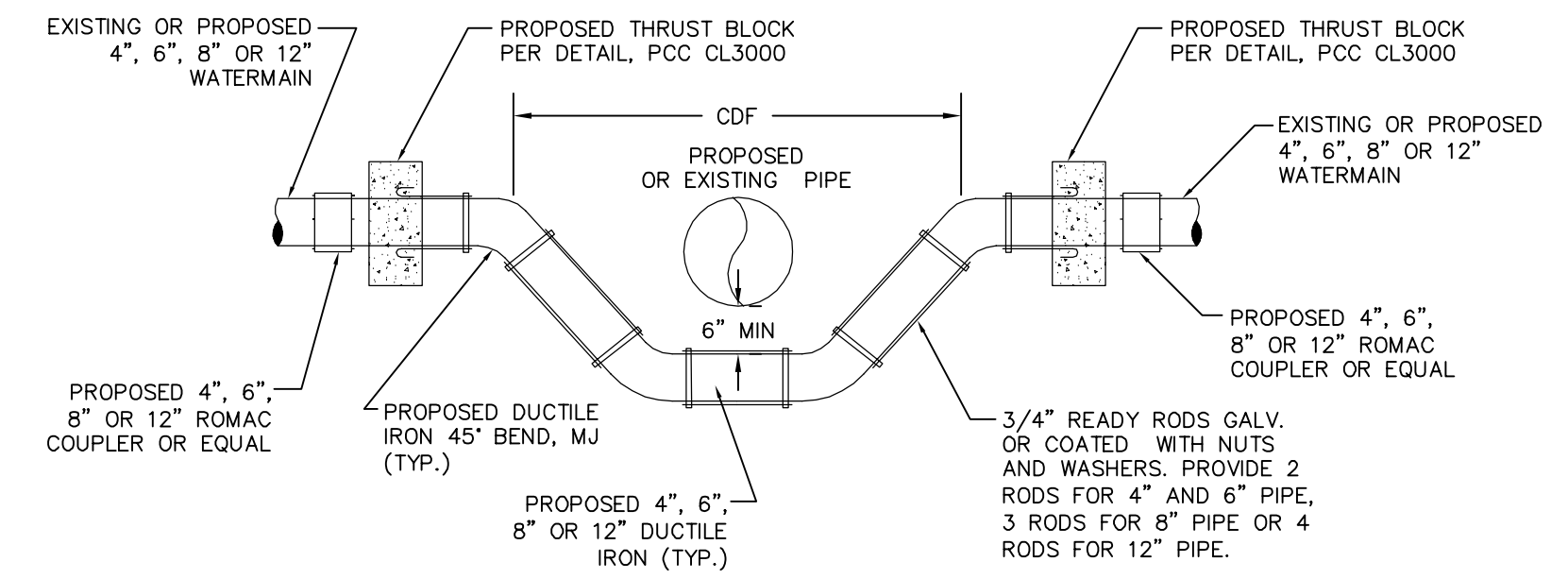
NTS

- NOTE:
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 2. METER BOXES LOCATED WITHIN THE SIDEWALK SHALL AT A MINIMUM BE A NON-SKID POLYMER LID, WITH 2" HOLE AS SHOWN BELOW AND SHALL HAVE A COEFFICIENT OF FRICTION OF 0.96 DRY AND 0.88 WET BASED ON TEST METHOD ASTM C-1028



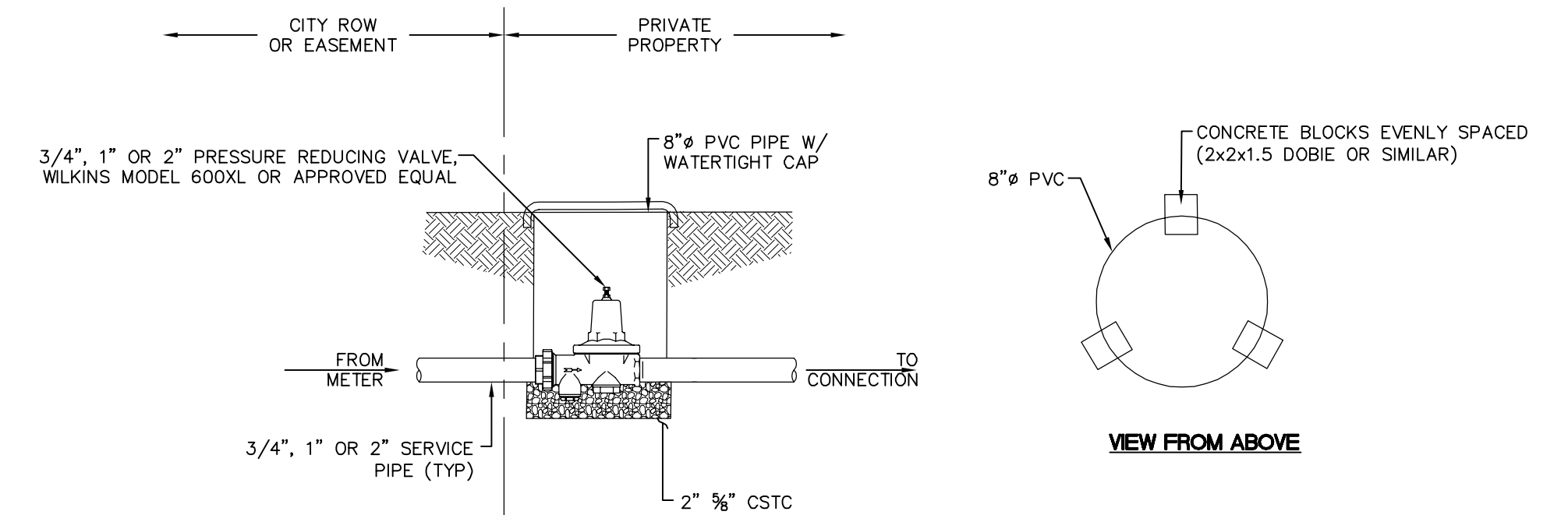
2" WATER METER BOX

NTS



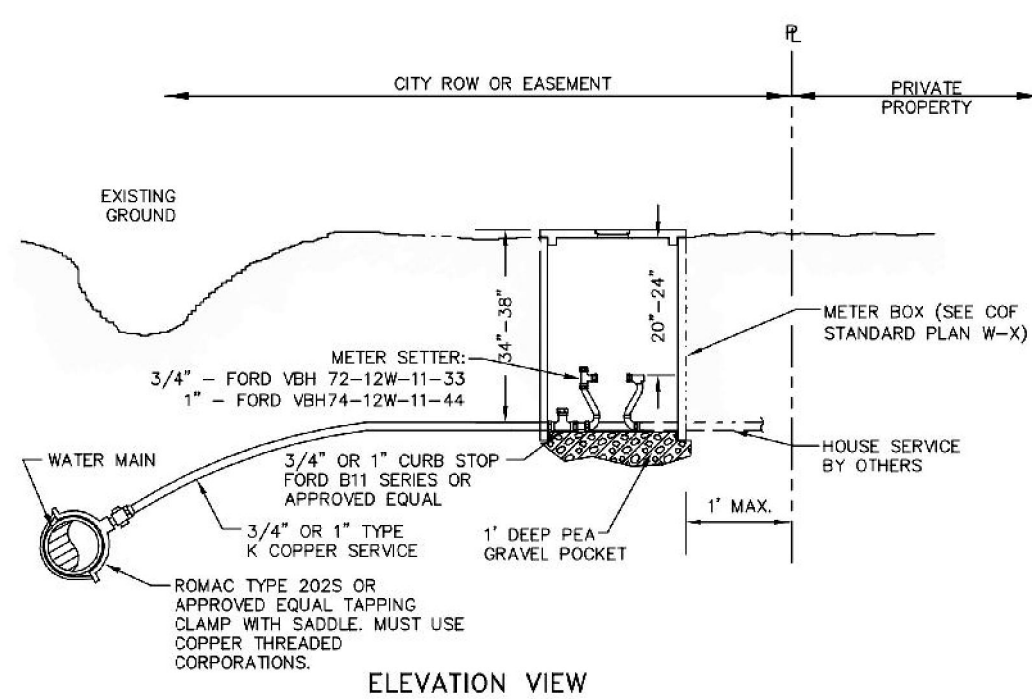
WATERMAIN STOVEPIPE

NTS

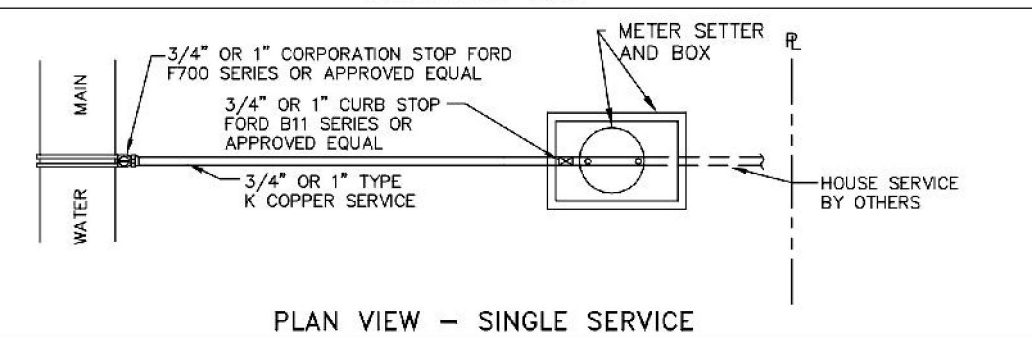


PRESSURE REDUCING VALVE DETAIL

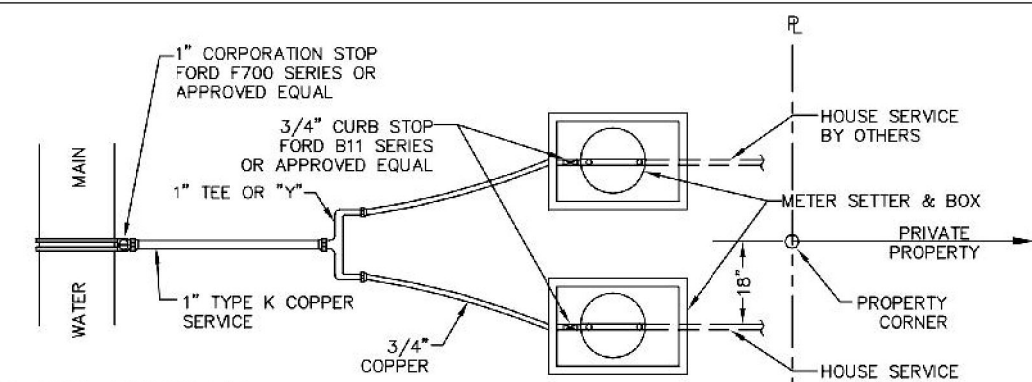
NTS



ELEVATION VIEW

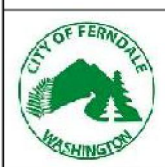


PLAN VIEW - SINGLE SERVICE

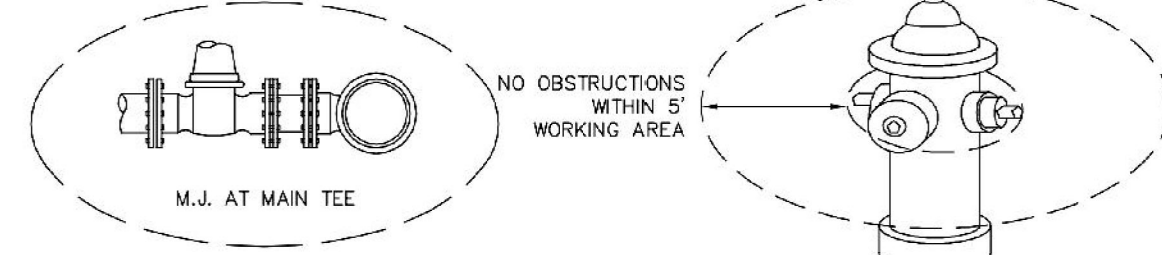
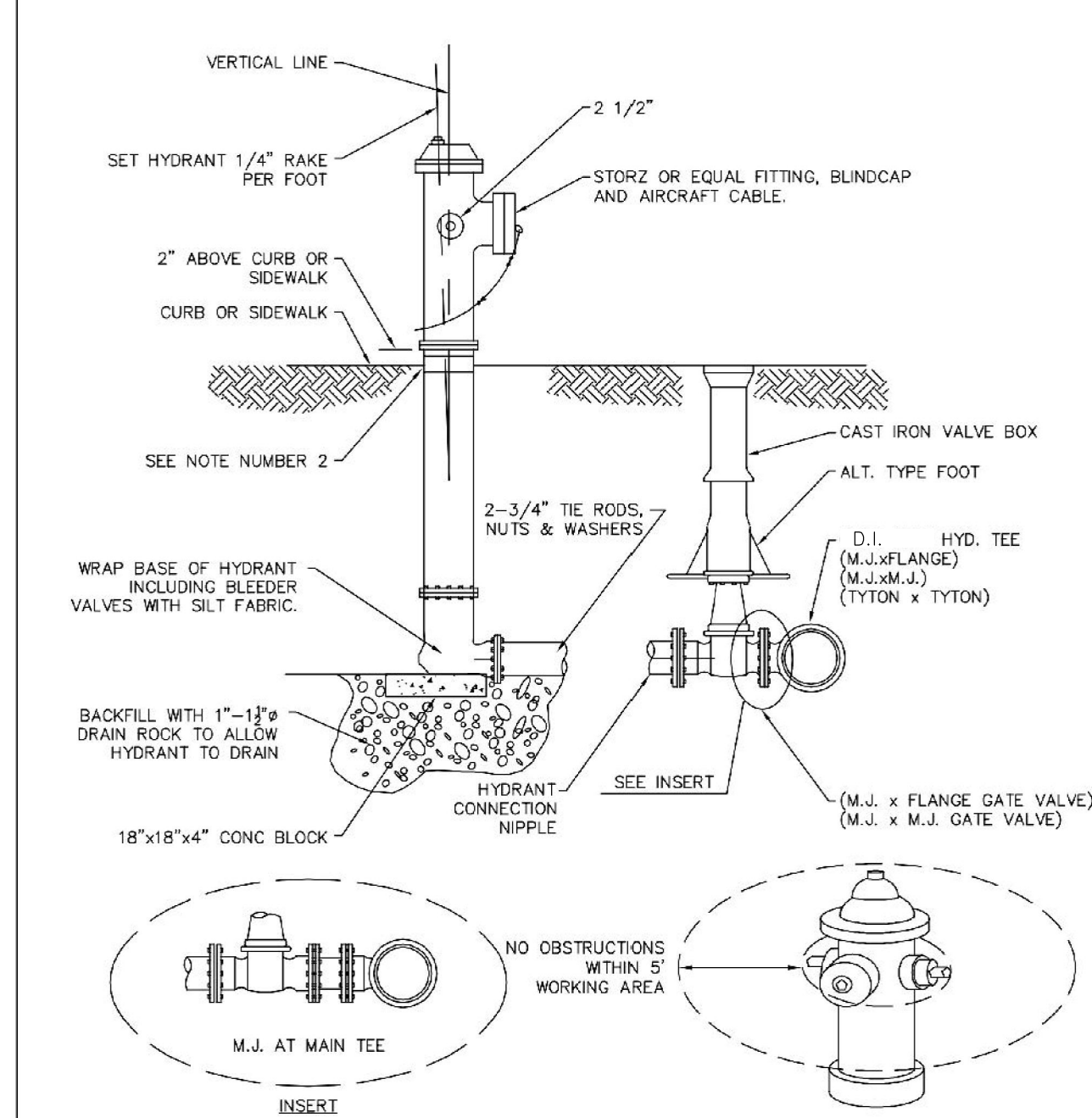


PLAN VIEW - DOUBLE SERVICE

NOVEMBER 23, 2016
 TYPICAL 3/4" AND 1" WATER SERVICE
 STANDARD DETAIL W-5
 NOT TO SCALE

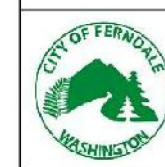


APPROVED
 Public Works Director
 8/11/17
 Date



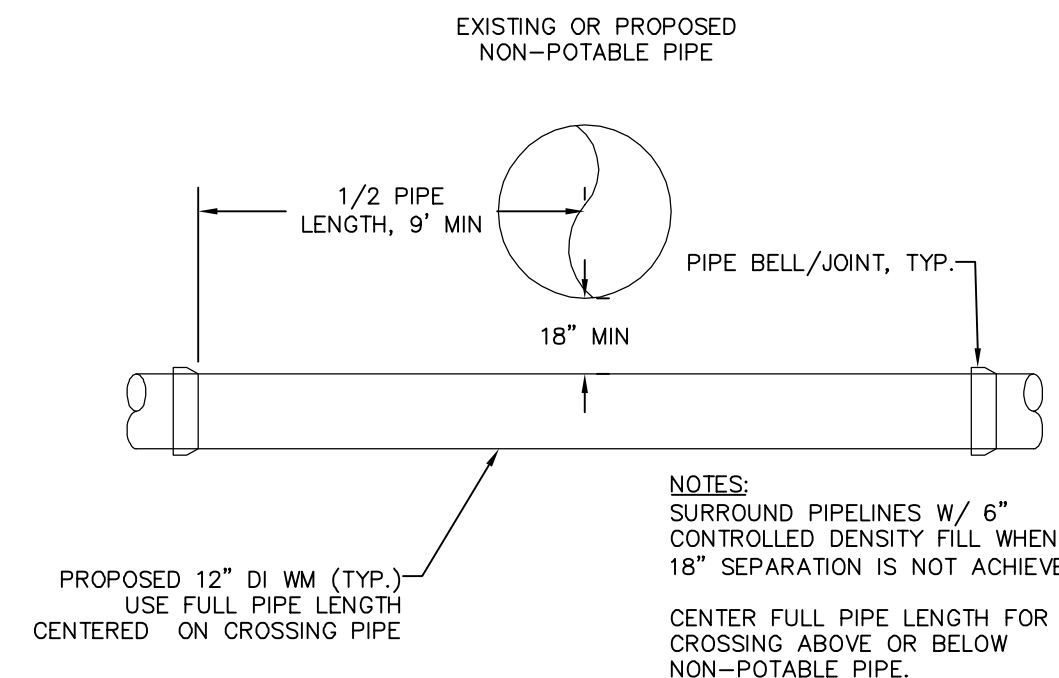
- NOTES:
 1. FOR CLOSE COUPLED HYDRANTS USE ALL FLANGE TYPE CONNECTIONS.
 2. IF HYDRANT RISES THROUGH CONCRETE USE EXPANSION STRIP AROUND HYDRANT BARREL.
 3. ALL HYDRANT ASSEMBLIES WILL BE M&H MODEL 929T.

MODIFIED
 AUGUST 2, 2017



APPROVED
 Public Works Director
 8/11/17
 Date

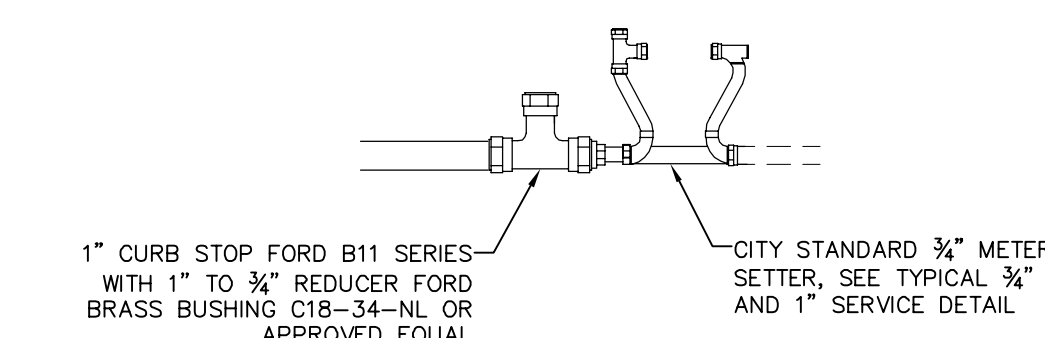
FIRE HYDRANT ASSEMBLY
 STANDARD DETAIL W-1
 NOT TO SCALE



WATERMAIN CROSSING NON-POTABLE PIPE

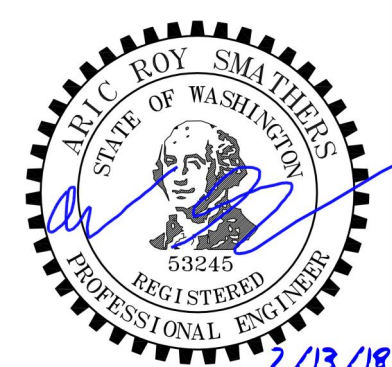
NTS

- NOTES:
 SURROUND PIPELINES W/ 6" CONTROLLED DENSITY FILL WHEN 18" SEPARATION IS NOT ACHIEVED.
 CENTER FULL PIPE LENGTH FOR CROSSING ABOVE OR BELOW NON-POTABLE PIPE.



SERVICE CONNECTION 1 IN. DIAM. WITH 3/4 IN. METER SETTER

NTS



2/13/18

BID SET

DESIGNED BY
 ARS
 DRAWN BY
 PJC
 CHECKED BY
 LP

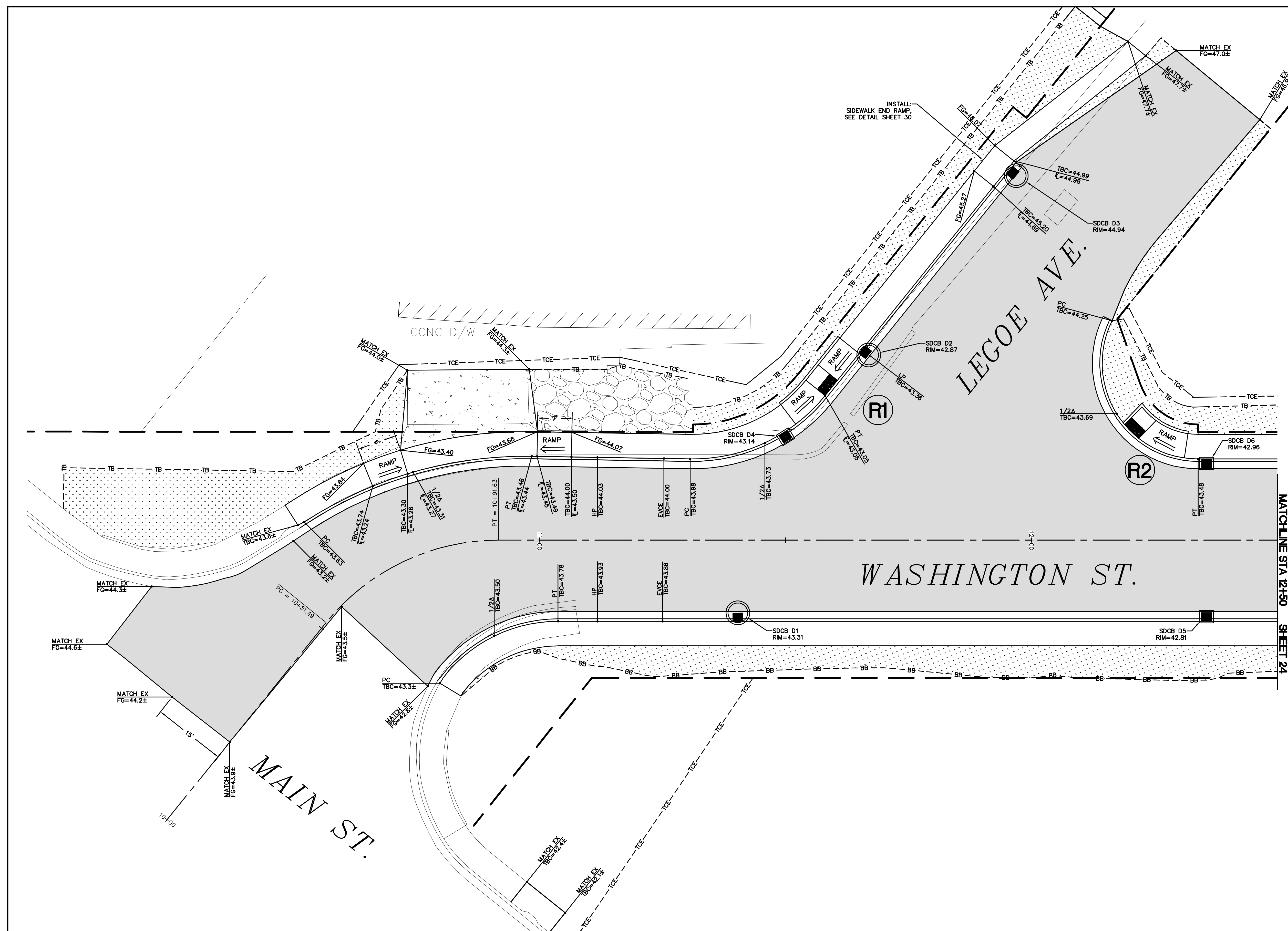
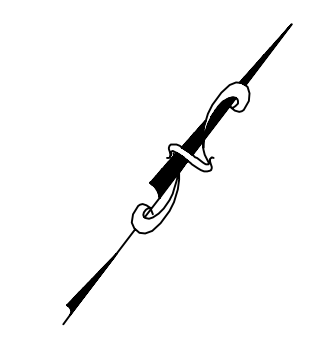
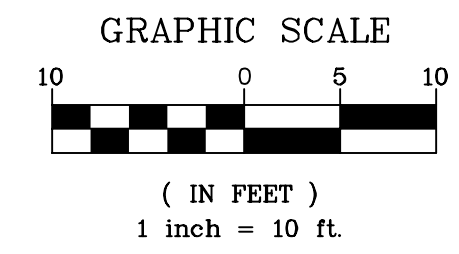
R&E Reichhardt & Ebe ENGINEERING INC
 P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
 813 Metcalf Street, Sedro-Wooley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

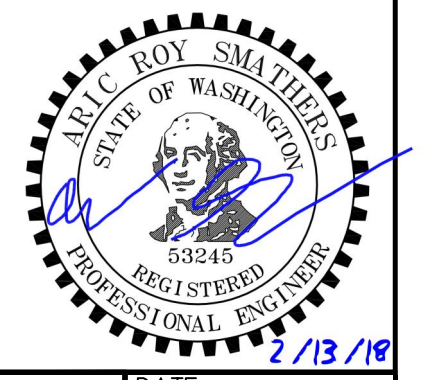
CITY OF FERNDAL
 2095 MAIN ST
 FERNDAL, WA 98248

WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 WATER DETAILS

DWG 16026 DETAILS		DATE
2/13/2018		
JOB#	SCALE	SHEET
16026	H: N/A v: N/A	22 of 38



MATCHLINE STA 12+50
SHEET 24



BID SET

DESIGNED BY
ARS
 DRAWN BY
PJC/LMH
 CHECKED BY
LP

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

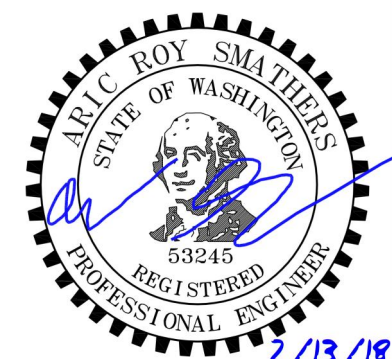
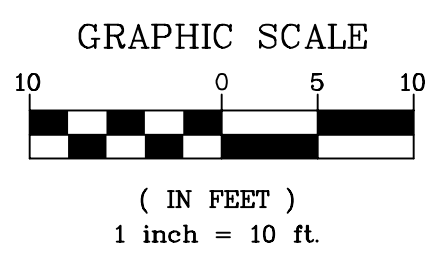
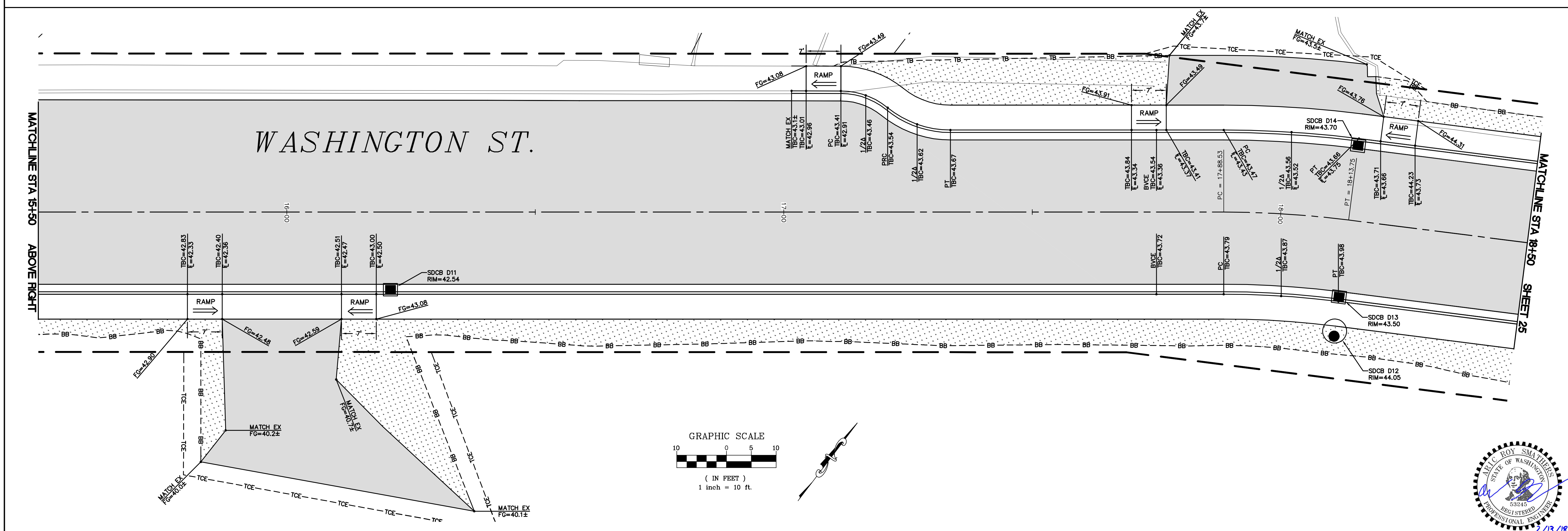
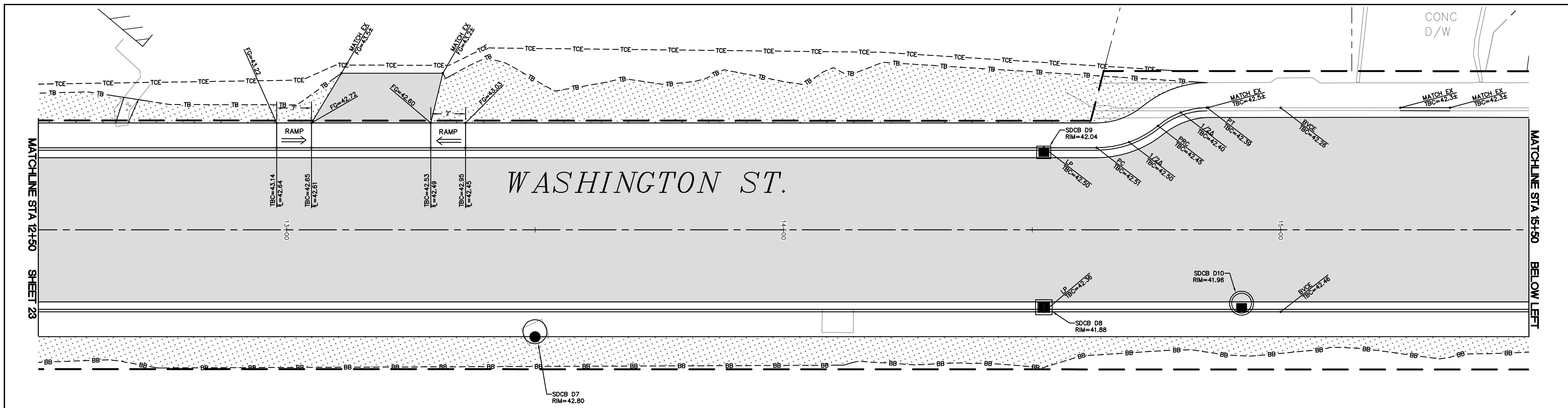
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
 2095 MAIN ST
 FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 GRADING PLAN STA 10+00 TO 12+50

DWG 16026 GRADING		DATE	2/13/2018
JOB#	SCALE	SHEET	23
16026	H: 1"=10' v: N/A	of 38	

P:\Project\16026\16026 GRADING.dwg, 23 GRADING PLAN STA 10+00 TO 12+50, 2/13/2018 3:40:08 PM, PJC\Change Printer 2012



BID SET

DESIGNED BY
ARS
 DRAWN BY
PJC/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

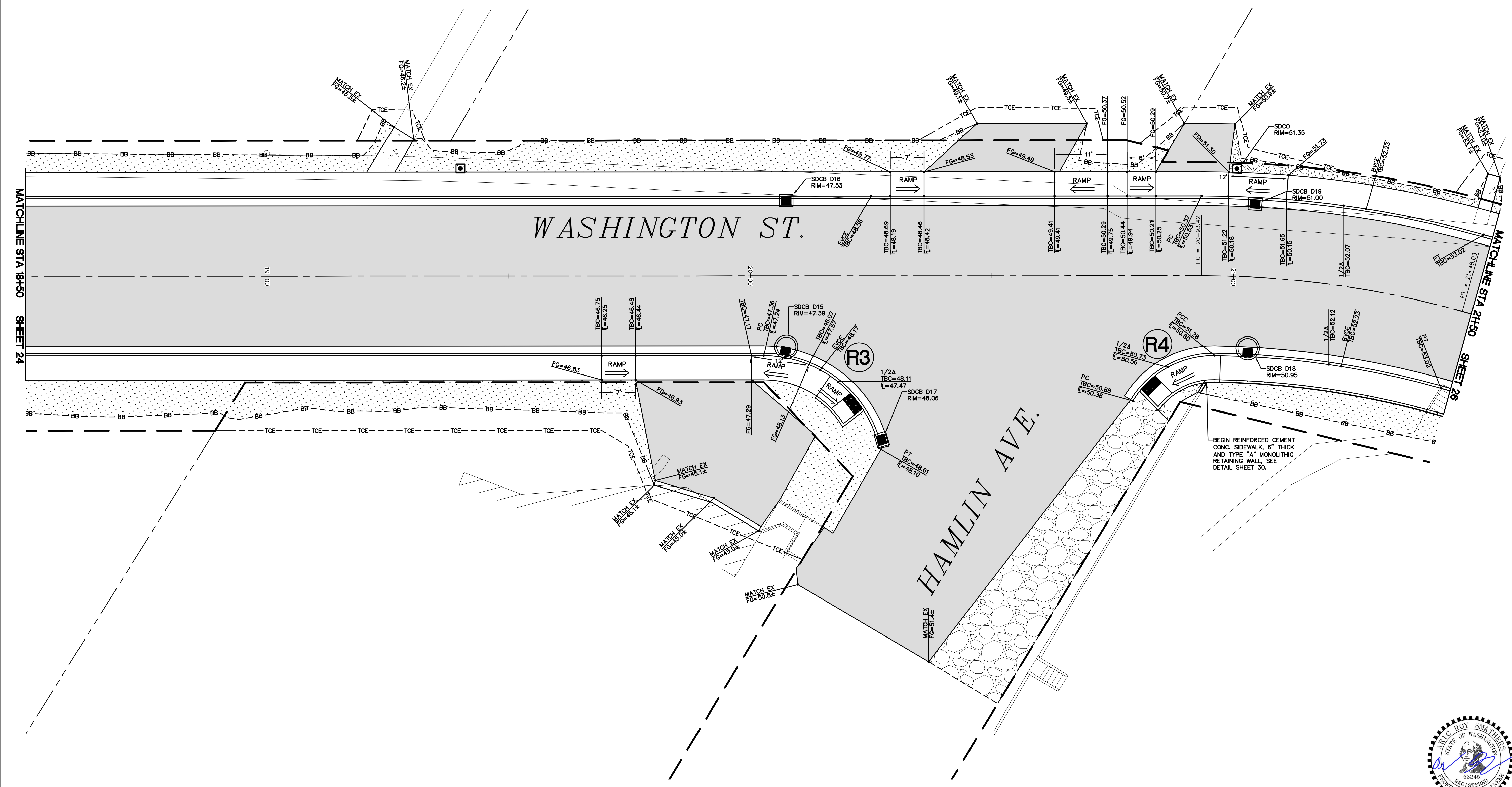
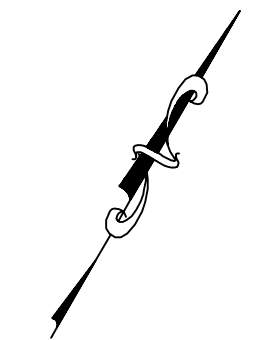
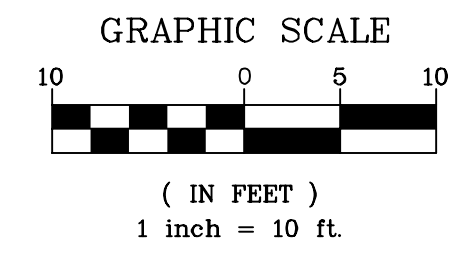
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
 2095 MAIN ST
 FERNDAL, WA 98248

WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 GRADING PLAN STA 12+50 TO 18+50

DWG 16026 GRADING		DATE
JOB#	SCALE	2/13/2018
16026	H: 1"=10' v: N/A	SHEET
		24
		of 38

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MATCHLINE STA 18+50 SHEET 24

MATCHLINE STA 21+50 SHEET 26

BID SET

DESIGNED BY
ARS
DRAWN BY
PJC/LMH
CHECKED BY
LP

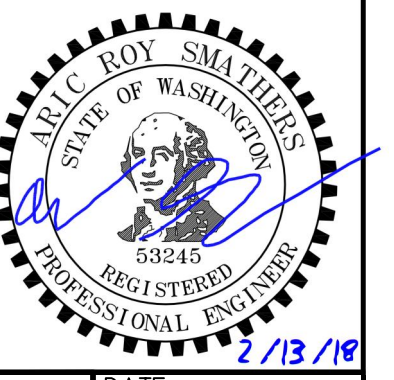
R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
GRADING PLAN STA 18+50 TO 21+50

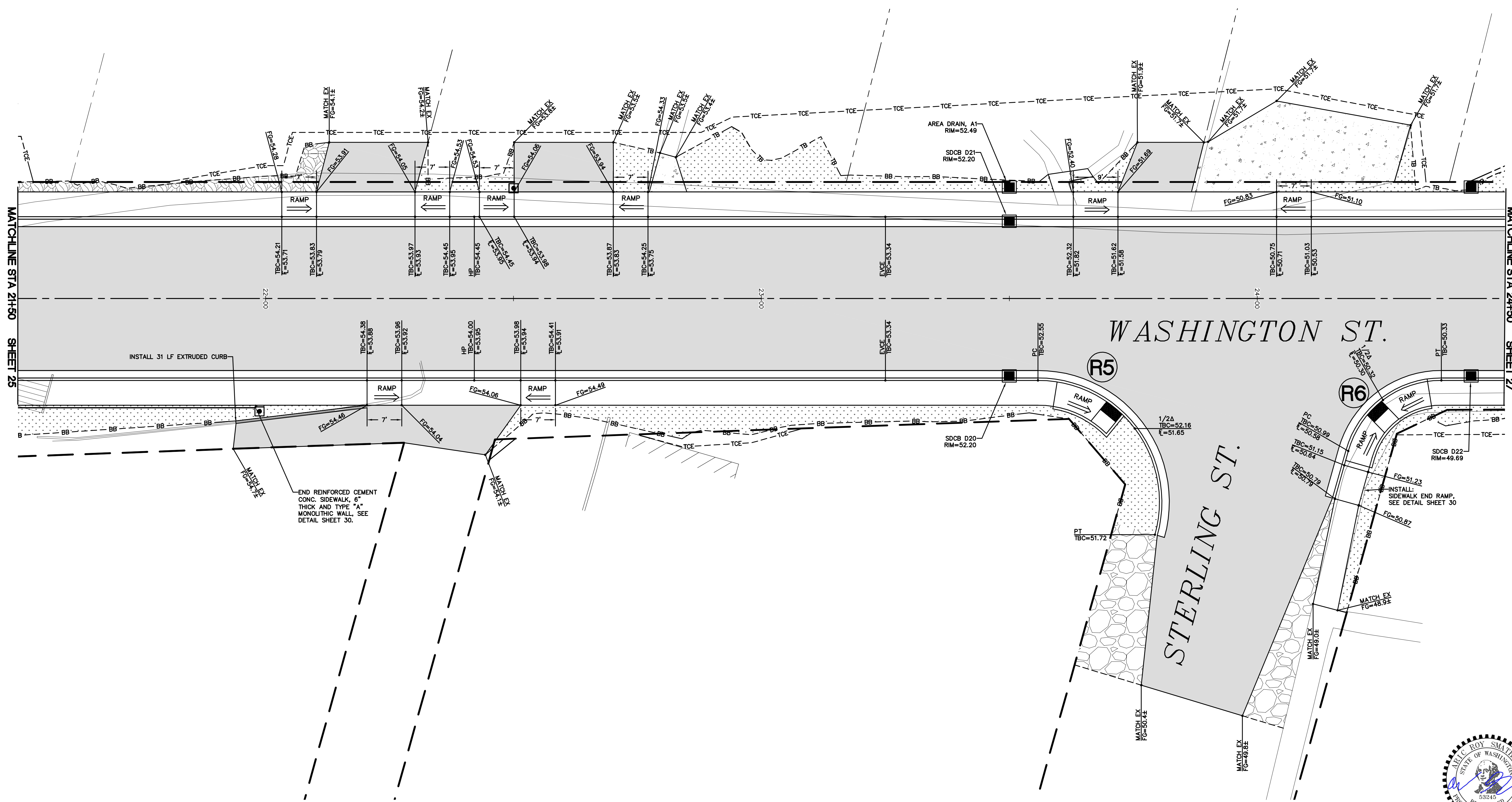
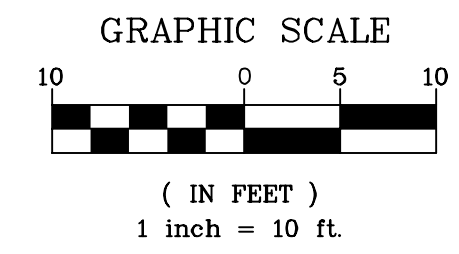
DWG 16026 GRADING
JOB# 16026 SCALE H: 1"=10' V: N/A



2/13/18

DATE 2/13/2018
SHEET 25
of 38

P:\Project\16026\16_Civil\3D_2018P\16026 GRADING.dwg, 25 GRADING PLAN STA 18+50 TO 21+50, 2/13/2018 3:40:24 PM, PJC\Change Printer 2018



MATCHLINE STA 21+50 SHEET 25

MATCHLINE STA 24+50 SHEET 27

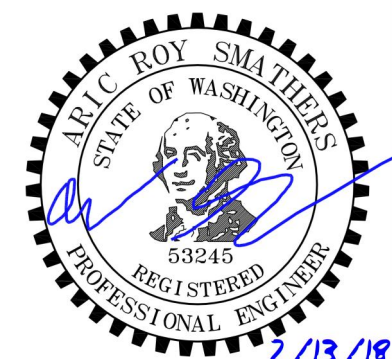
WASHINGTON ST.

STERLING ST.

END REINFORCED CEMENT CONC. SIDEWALK, 6" THICK AND TYPE "A" MONOLITHIC WALL, SEE DETAIL SHEET 30.

INSTALL 31 LF EXTRUDED CURB

INSTALL SIDEWALK END RAMP, SEE DETAIL SHEET 30



2/13/18

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ARS
DRAWN BY
PJC/LMH
CHECKED BY
LP

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

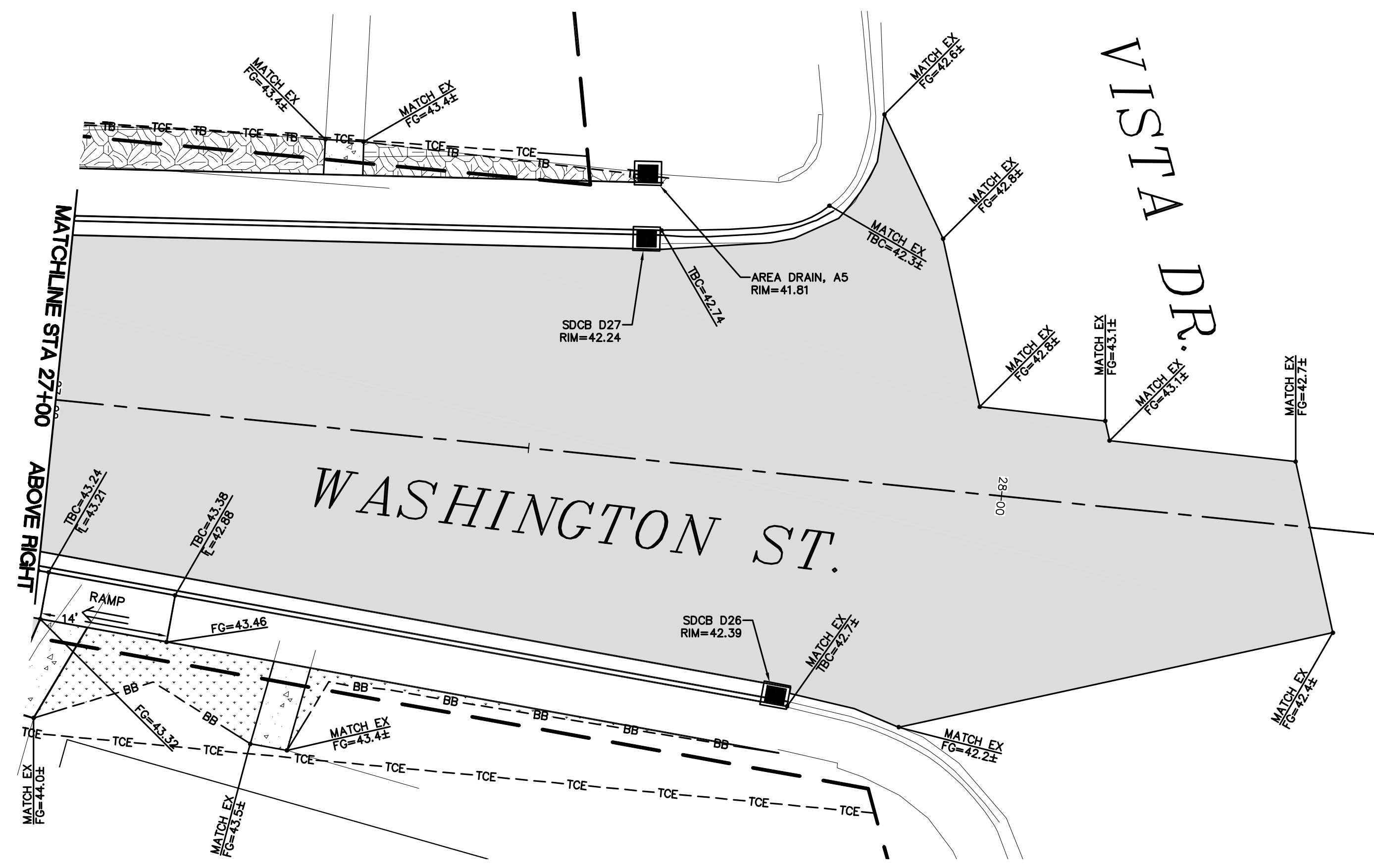
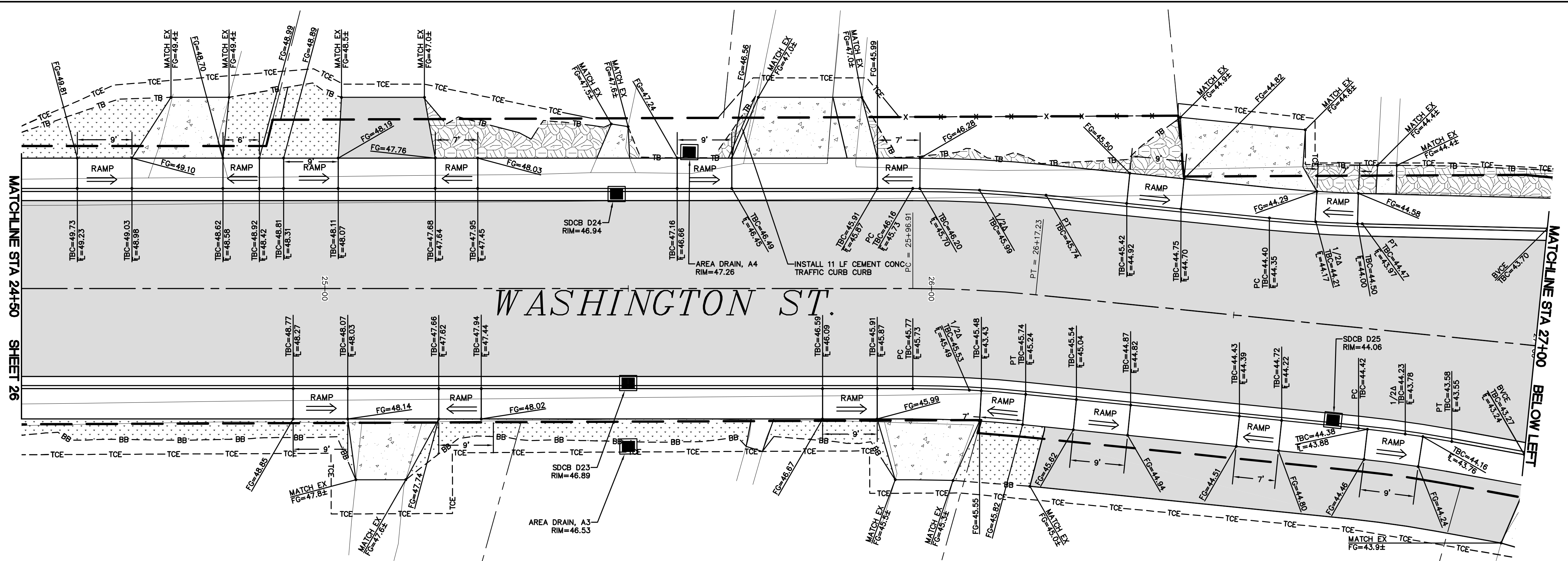
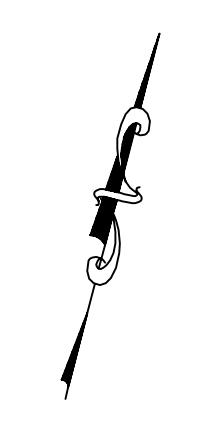
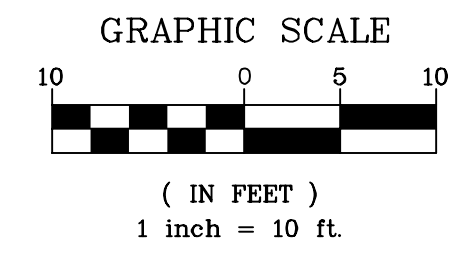
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
GRADING PLAN STA 21+50 TO 24+50

DWG #	16026 GRADING	DATE	2/13/2018
JOB #	16026	SHEET	26
SCALE	H: 1"=10' v: N/A	of	38

P:\Project\16026\16_Civil\2018P\Plan_Sheets\16026 GRADING.dwg, 26 GRADING PLAN STA 21+50 TO 24+50, 2/13/2018 3:40:44 PM, PJC\Change Printer 2018



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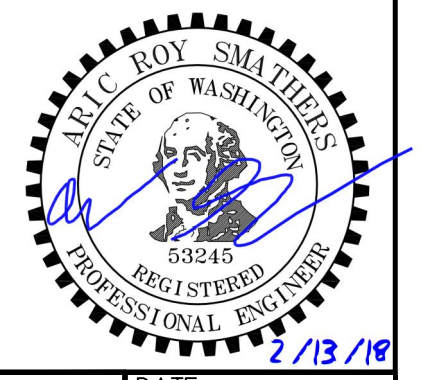
NO.	DATE	DESCRIPTION	BY

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FERDALE, WA 98248

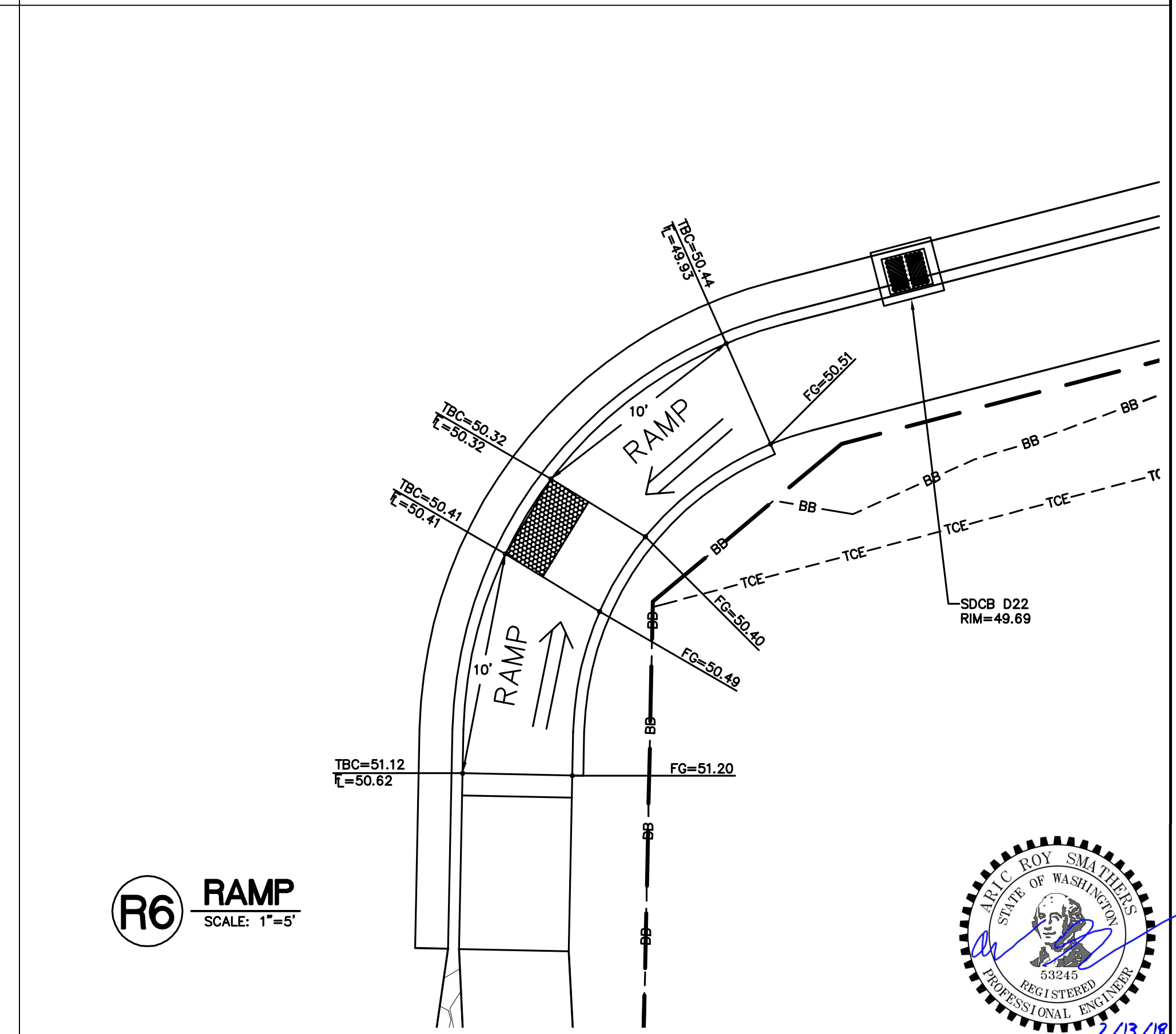
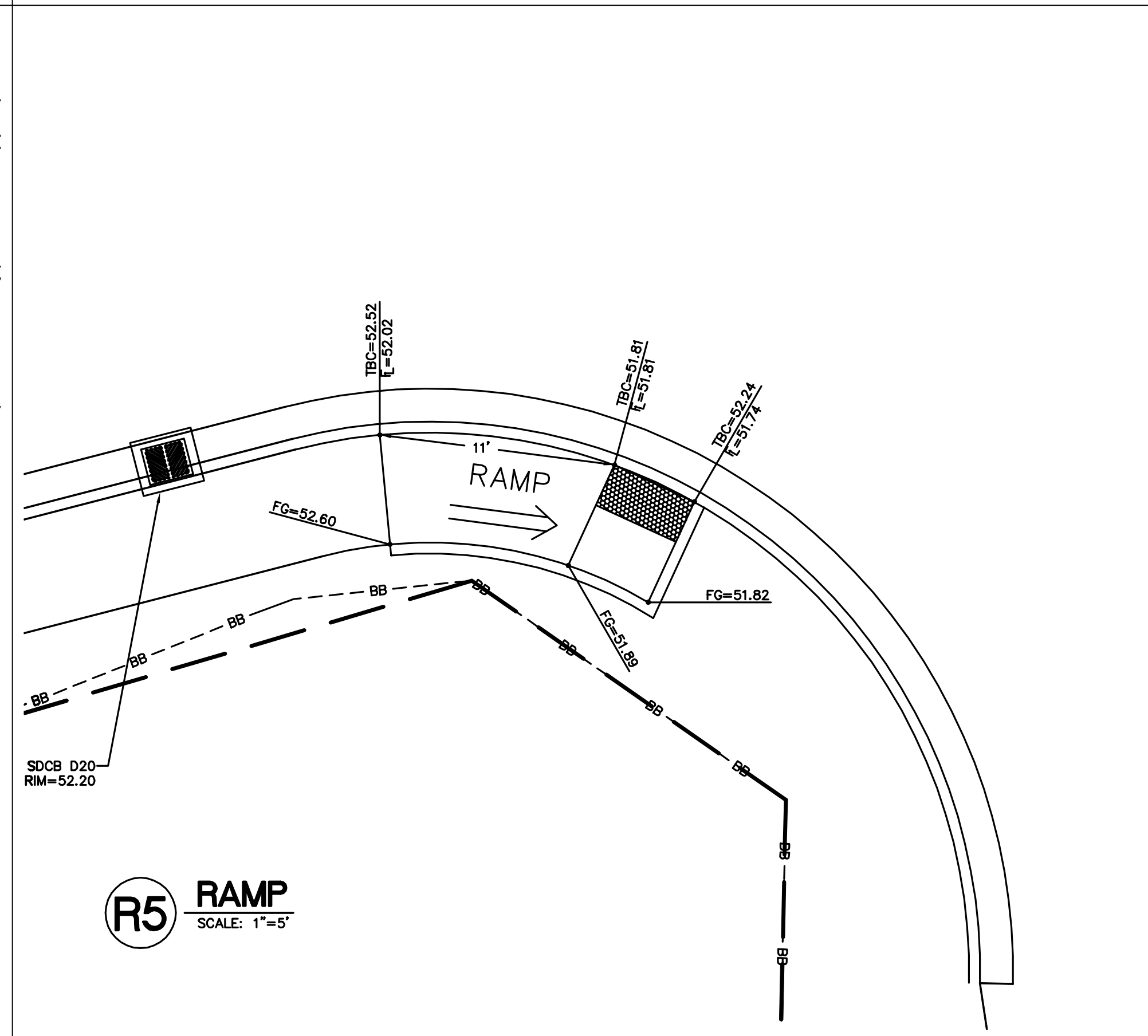
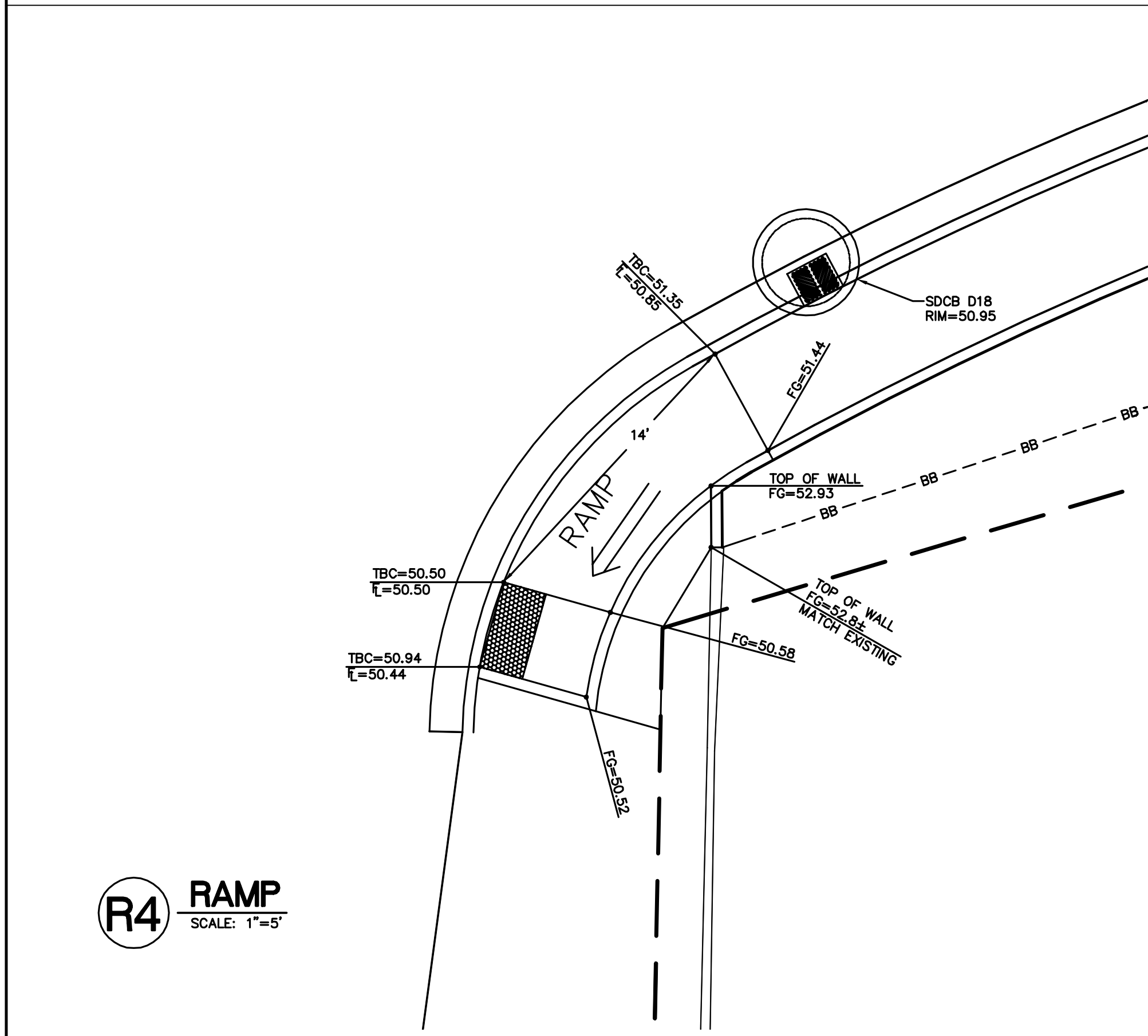
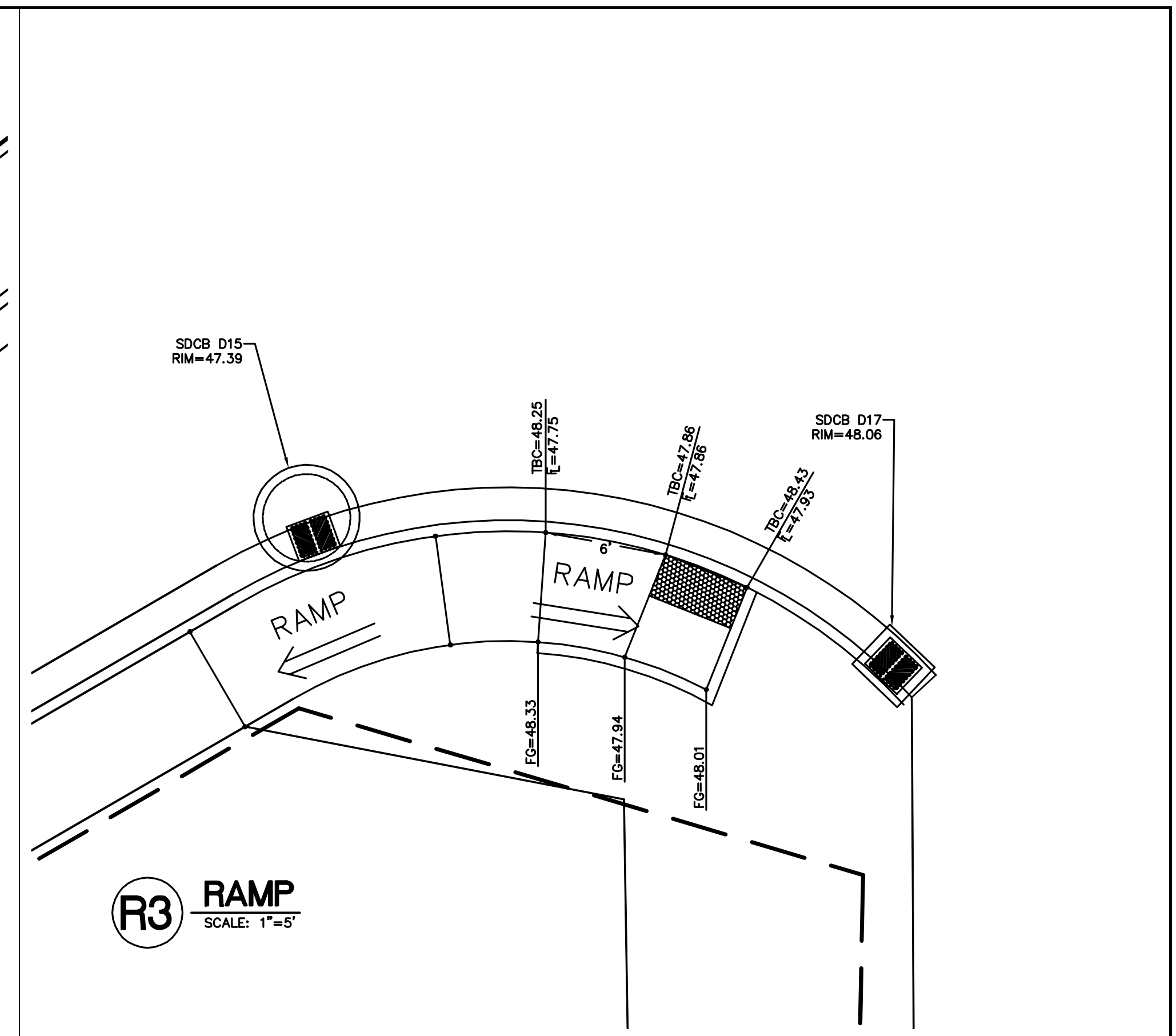
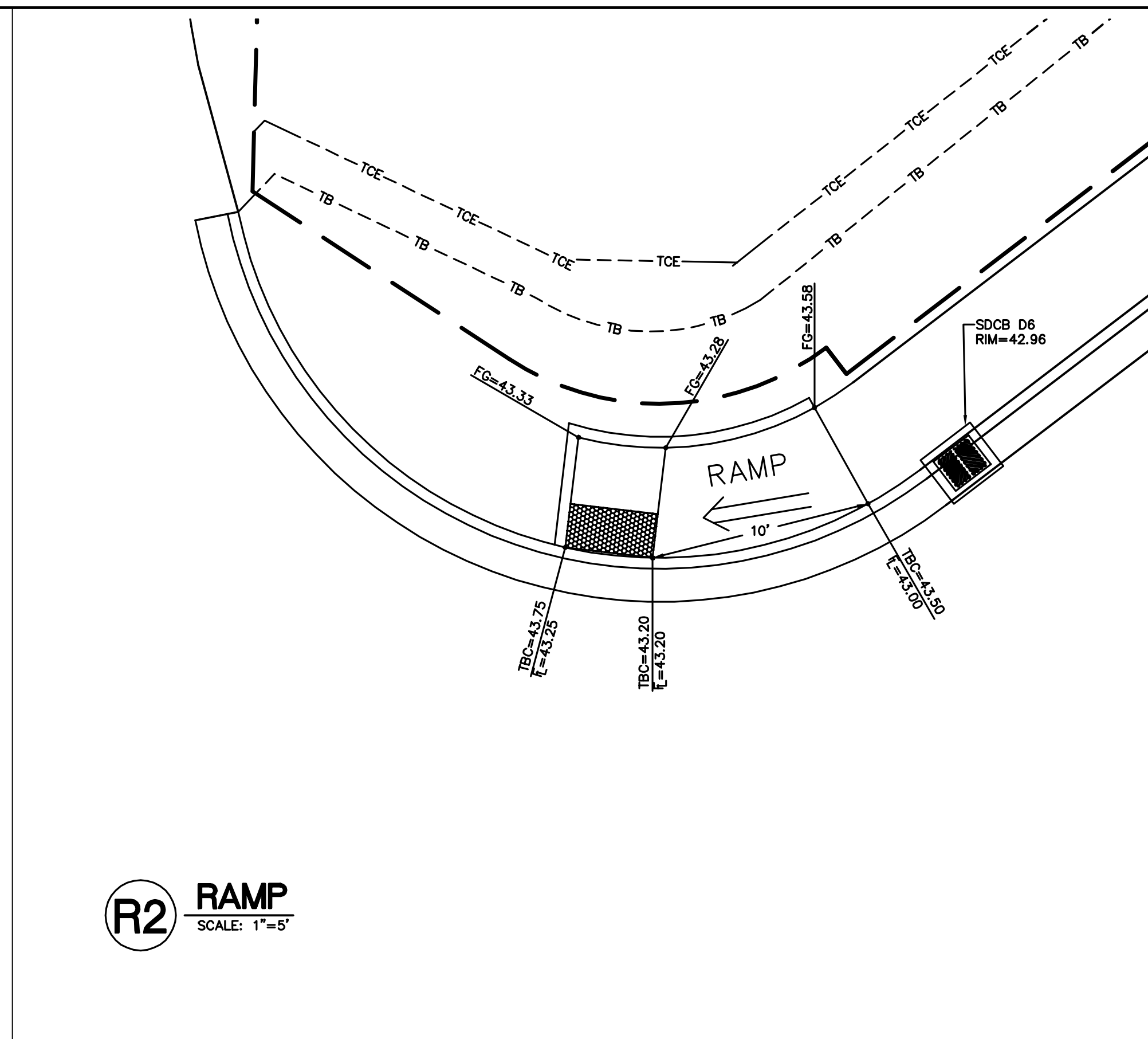
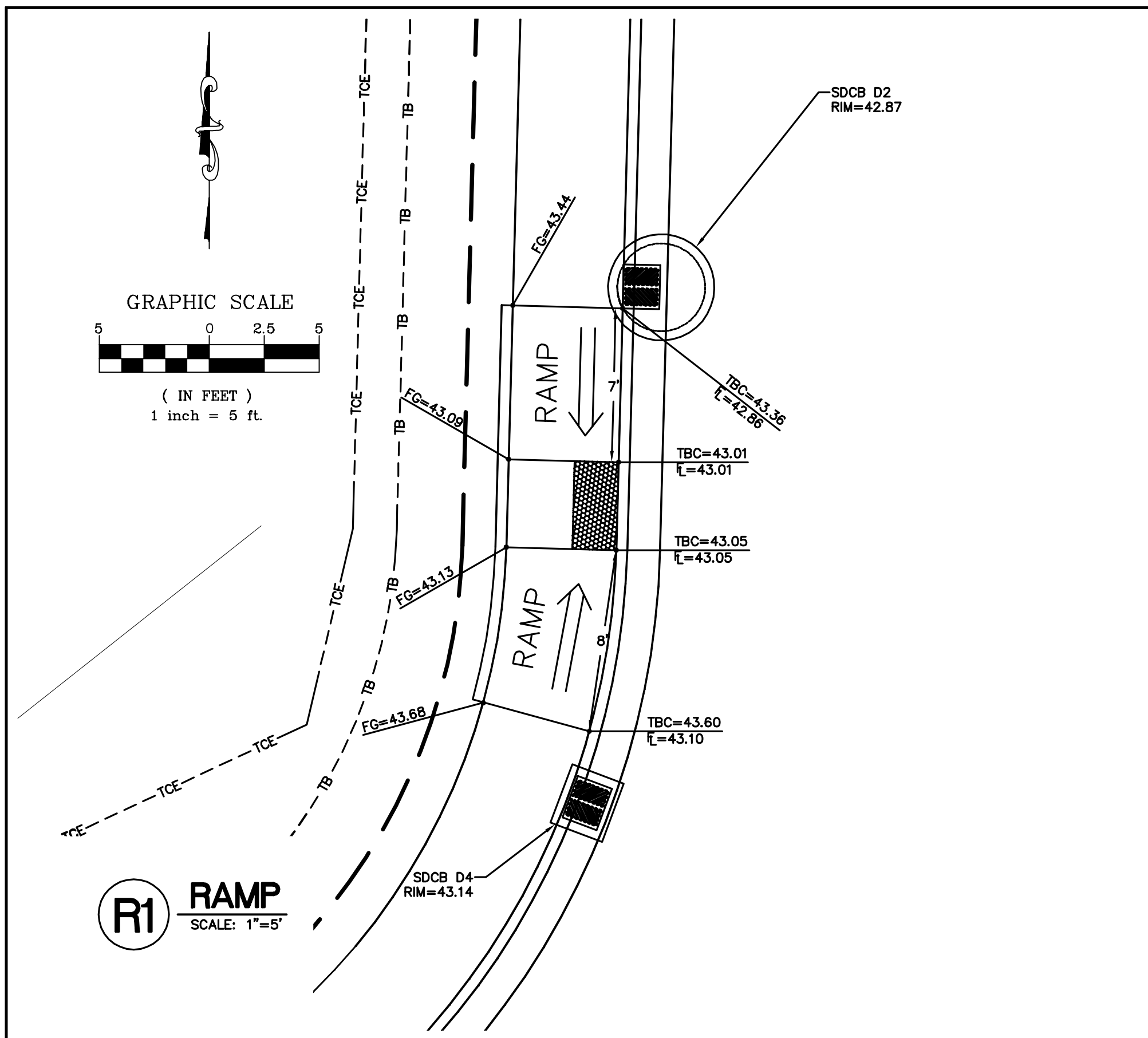
WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
GRADING PLAN STA 24+50 TO 28+00

DWG#	16026 GRADING
JOB#	16026
SCALE	H: 1"=10' v: N/A

DATE	2/13/2018
SHEET	27
of 38	



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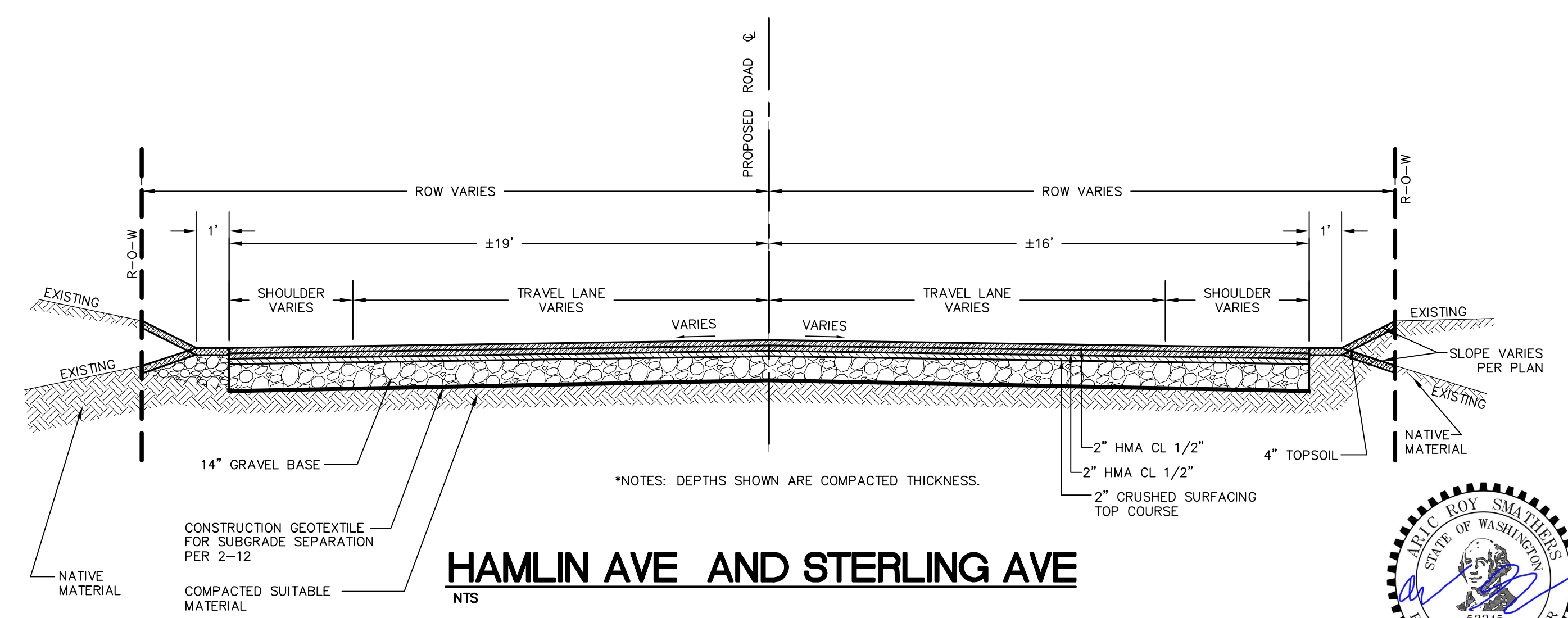
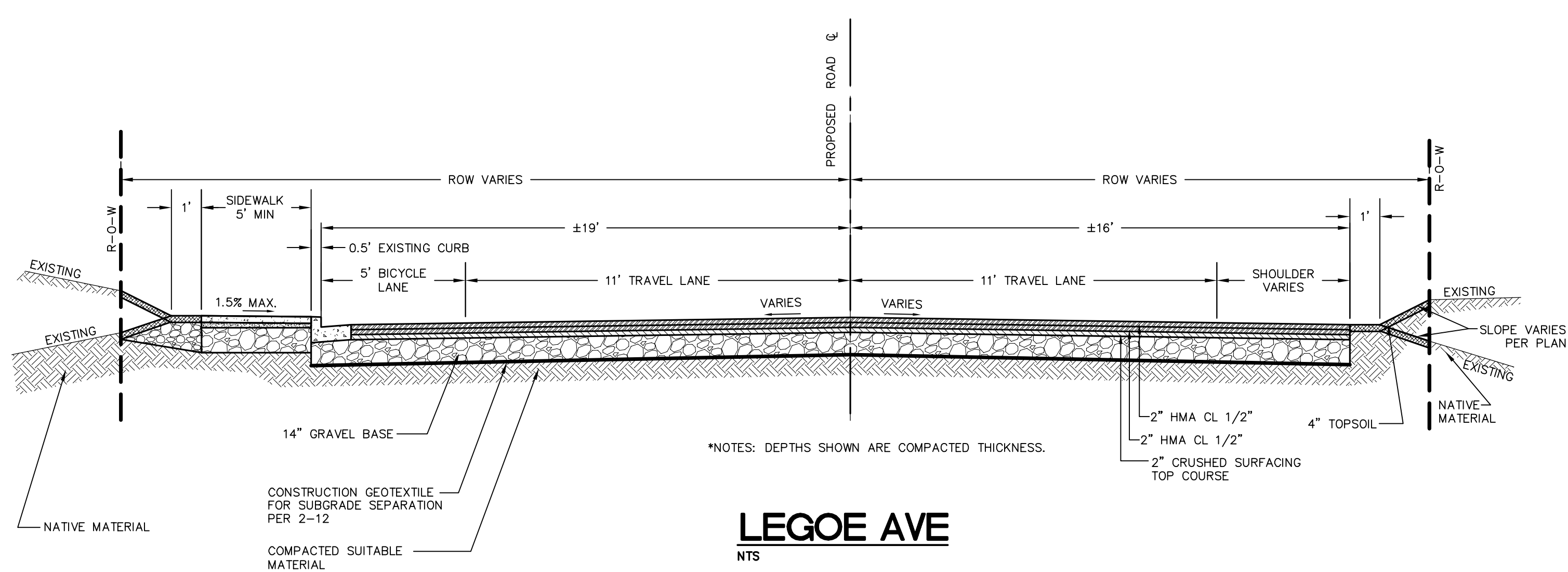
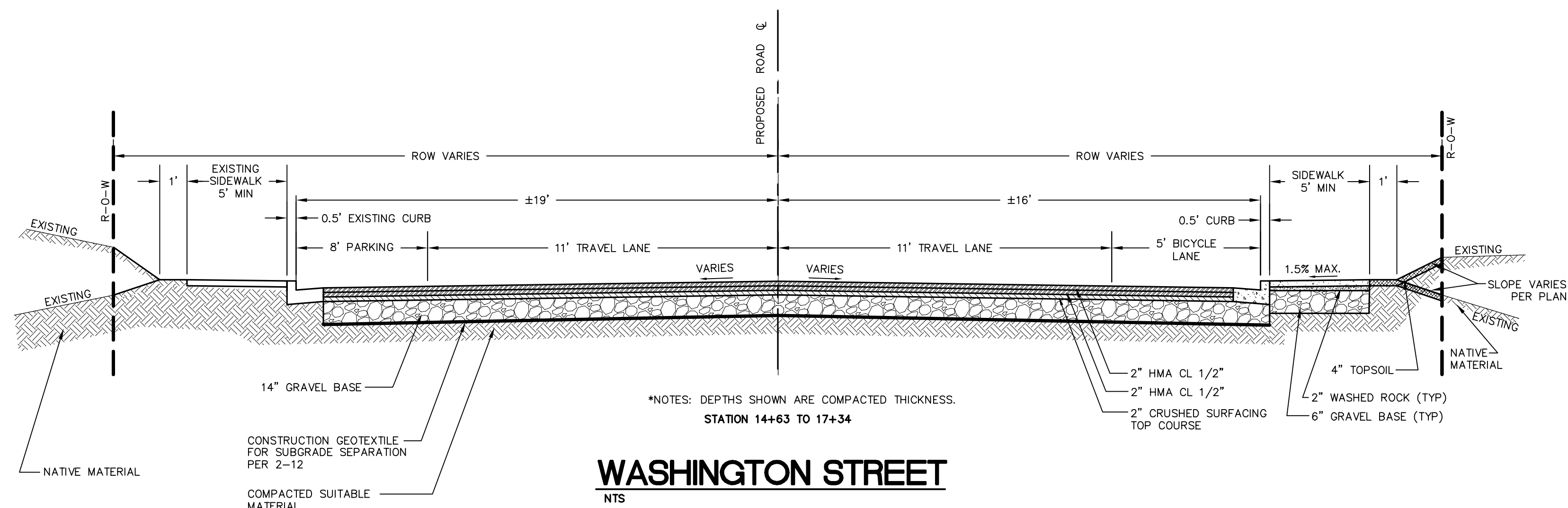
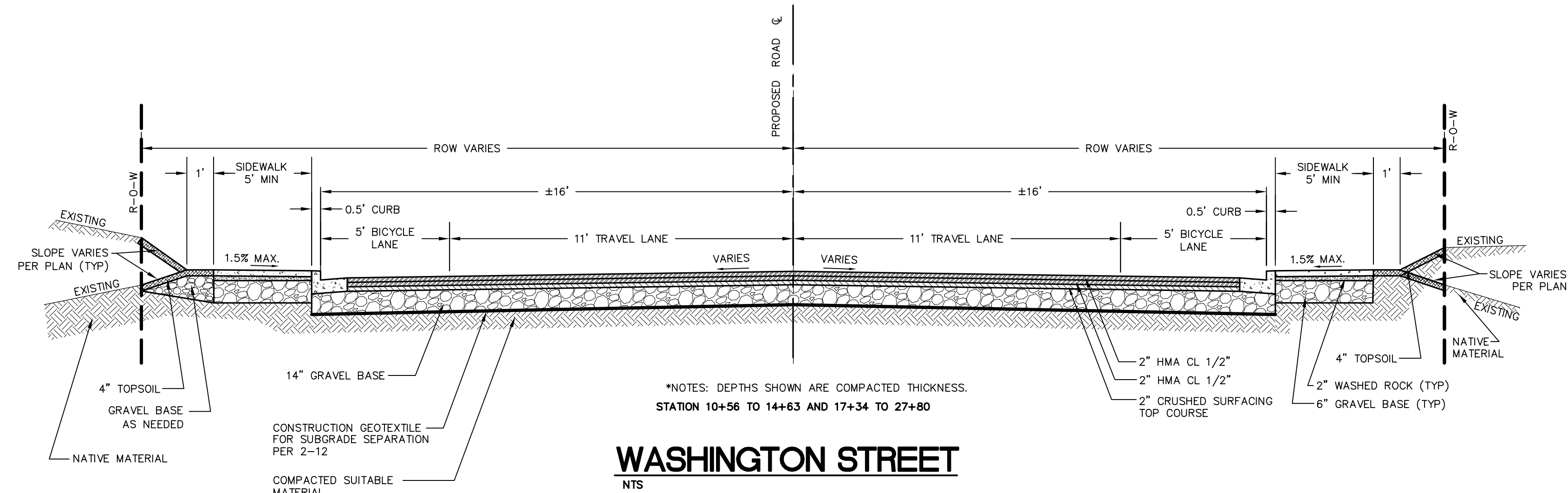
NO.	DATE	DESCRIPTION	BY

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2095 MAIN ST
FERNDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
GRADING PLAN - ADA RAMPS

DWG#	16026	SCALE	H: 1"=20'	V: NA	DATE	2/13/2018
JOB#	16026	SHEET	28	of 38		

P:\Project\16026\16_Civil\2018P\Main_Sheets\16026_Grading.dwg, 28 GRADING PLAN - ADA RAMPS, 2/13/2018 3:41:23 PM, PDF, XChange Print, 2012



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NO.	DATE	DESCRIPTION	BY

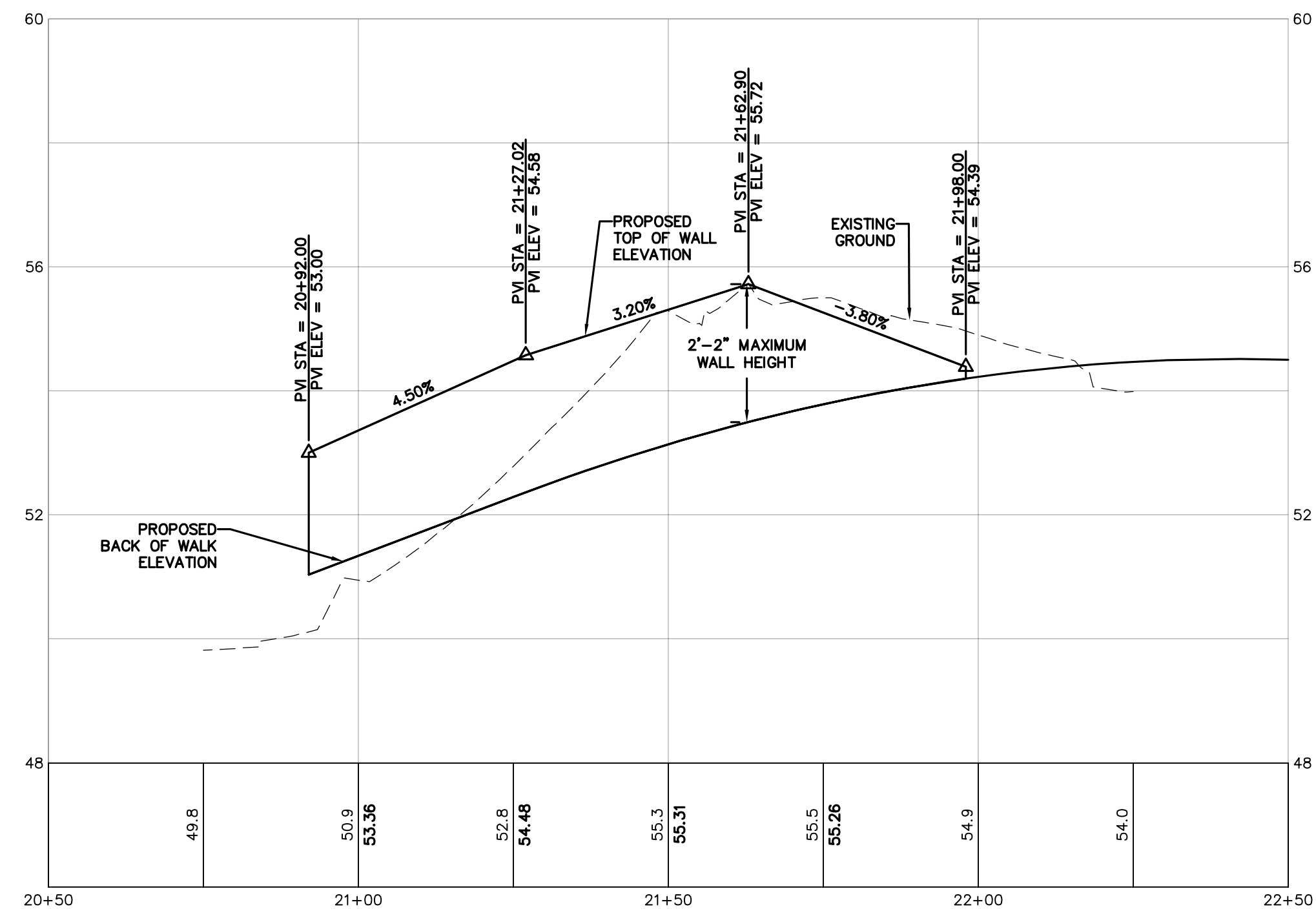
CITY OF FERNDAL
2095 MAIN ST
FERNDAL, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
TYPICAL CROSS SECTIONS

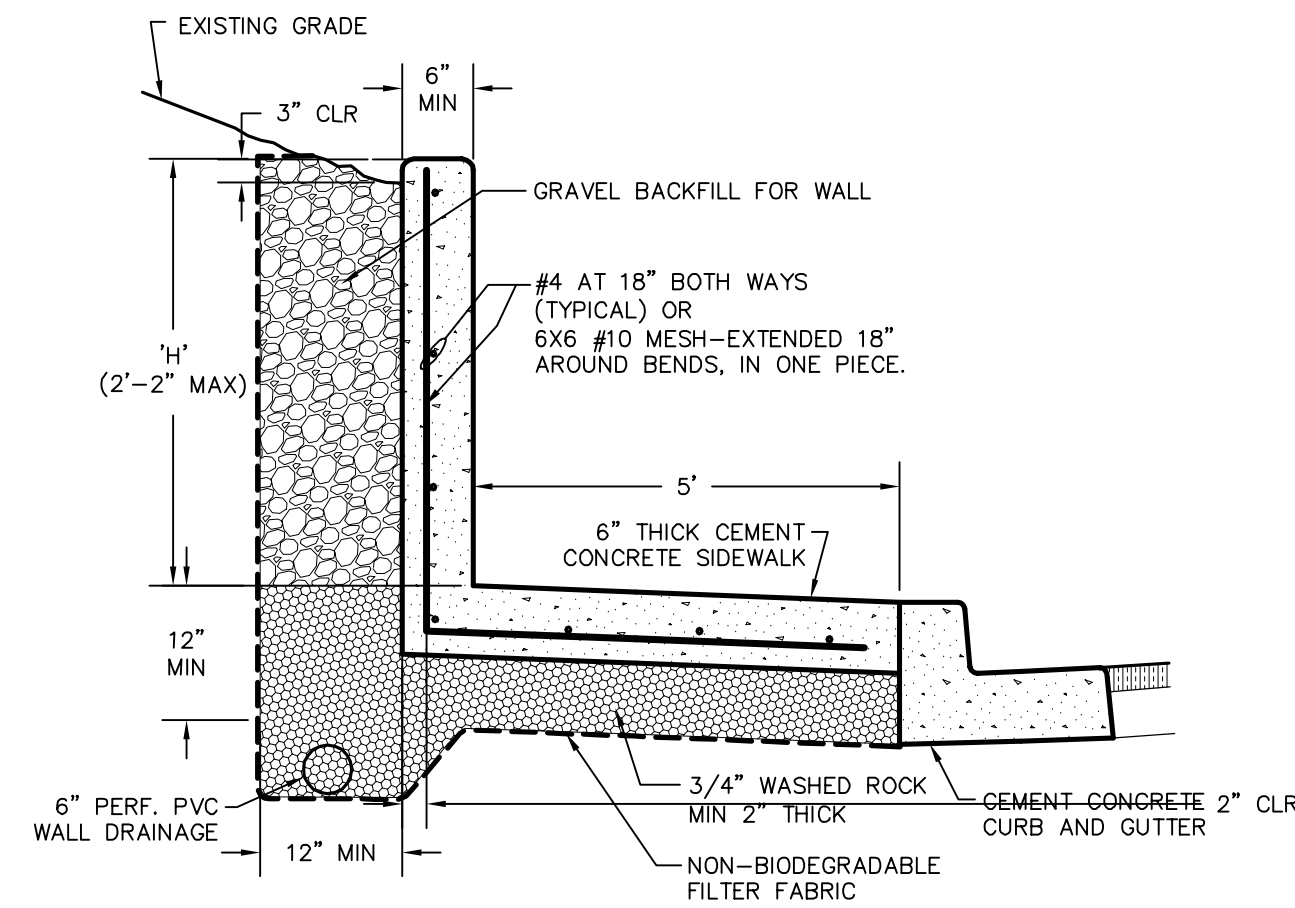
DWG 16026 DETAILS		
JOB#	SCALE	v: N/A
16026	H: N/A	

DATE	2/13/2018
SHEET	29
	of 38

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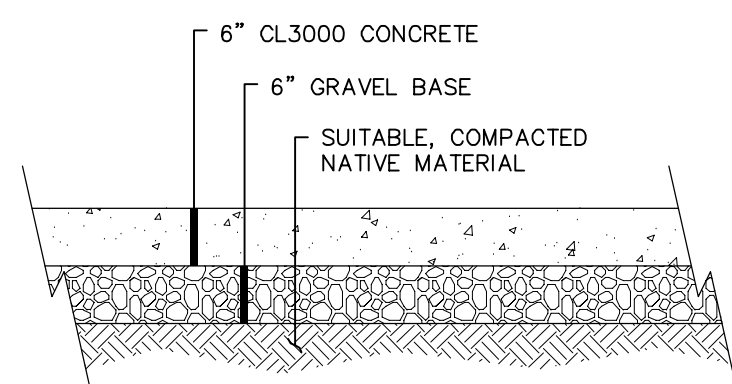
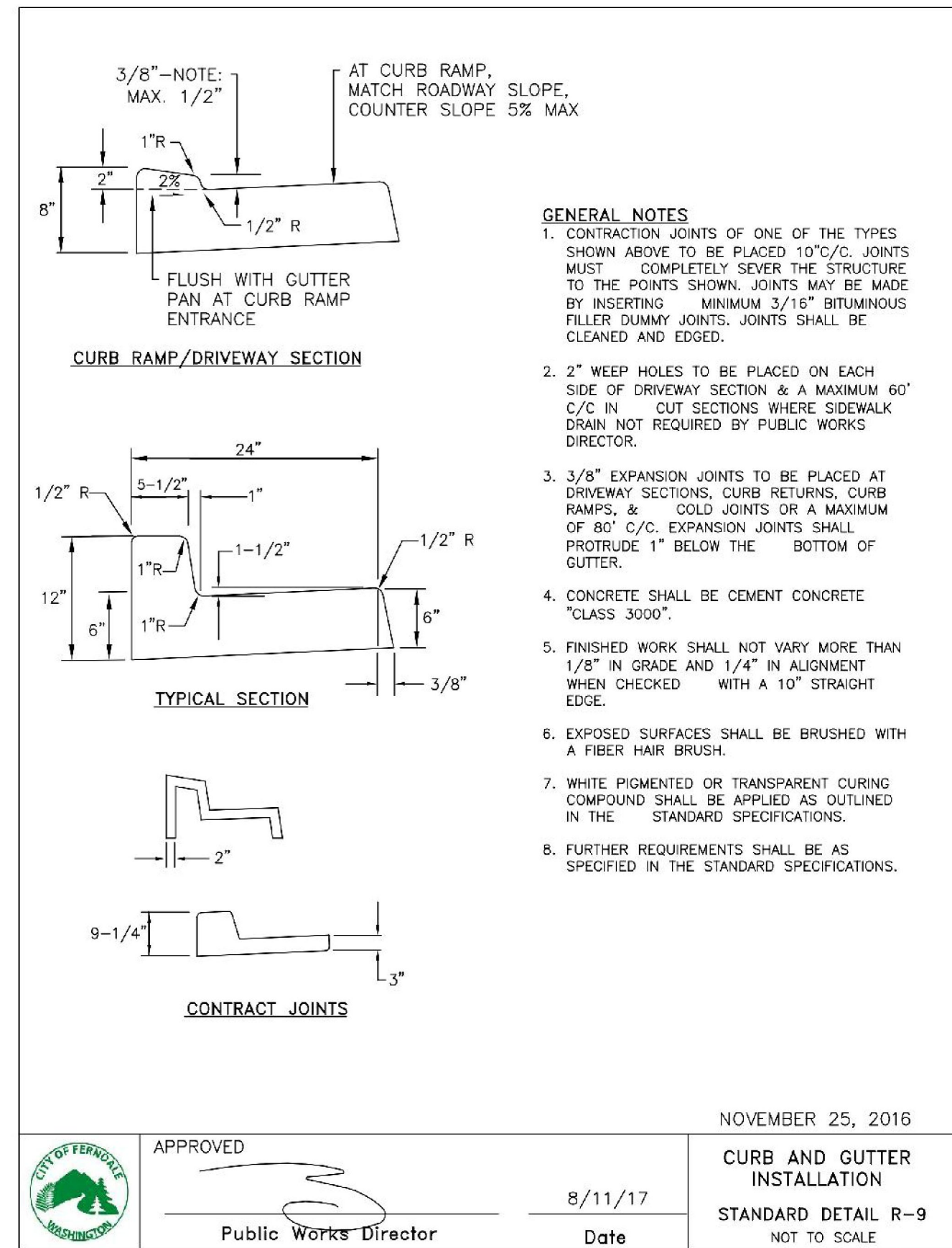


**PROFILE VIEW
TYPE "A" MONOLITHIC RETAINING WALL
AND SIDEWALK**
NTS

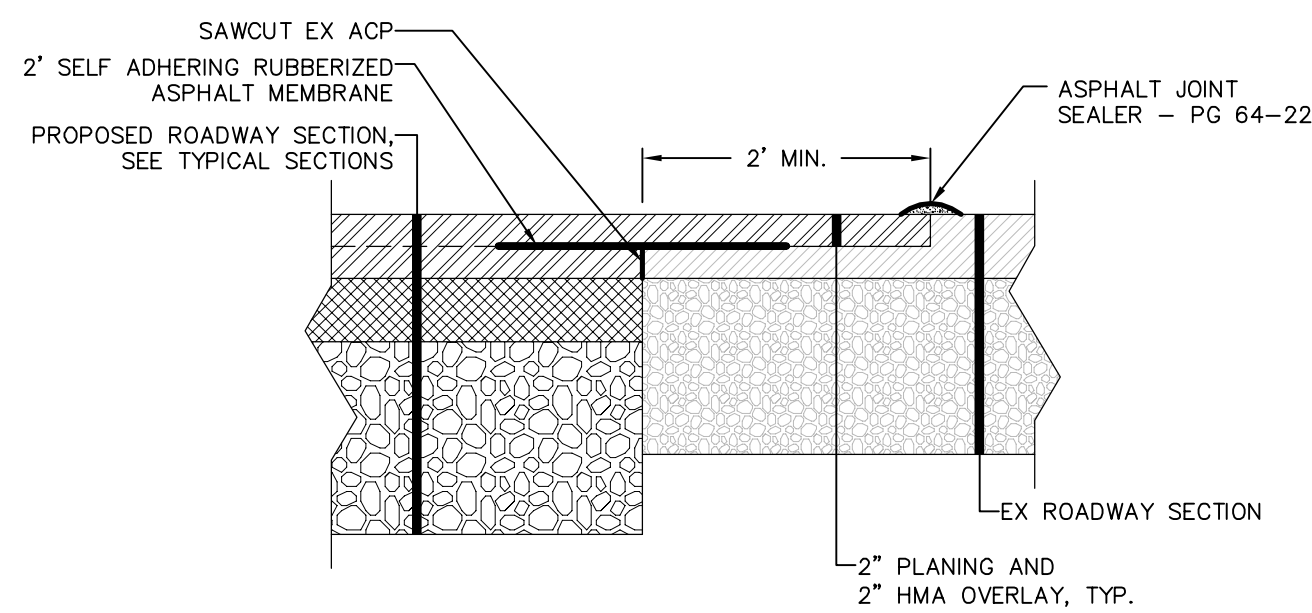


- NOTES:**
1. PLACE JOINTS AS FOR SIDEWALKS OR AS DIRECTED BY THE ENGINEER.
 2. "H" TO BE AS DIRECTED BY ENGINEER. REBAR NOT REQUIRED FOR WALL PLACED ON LIGHT BASES OR WHERE "H" < 14".
 3. 3/4" CHAMFER AT EXPOSED CORNERS.

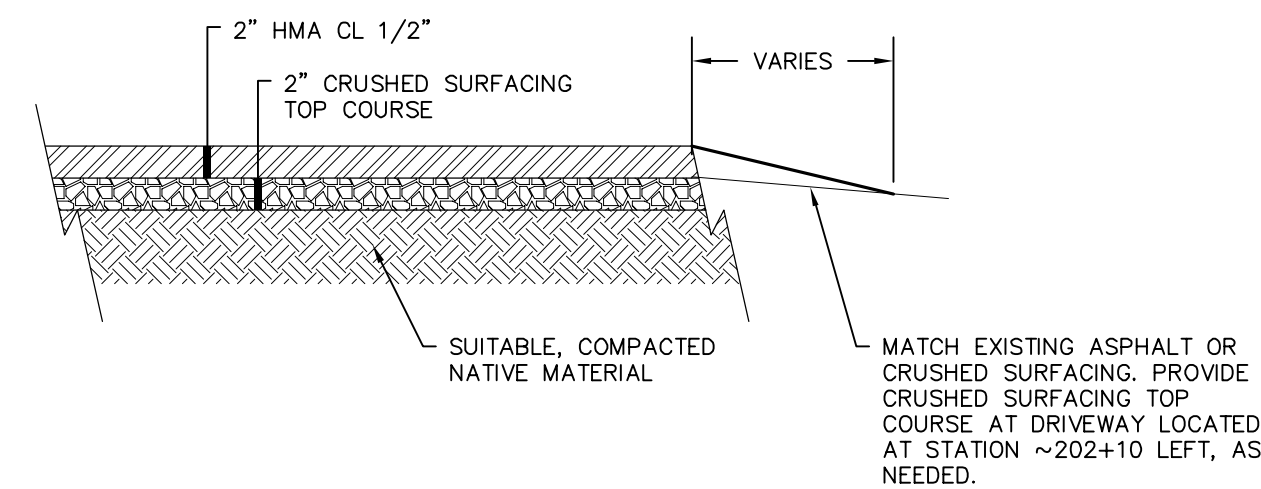
**TYPE "A" MONOLITHIC RETAINING WALL
AND SIDEWALK (TYP)**
NTS



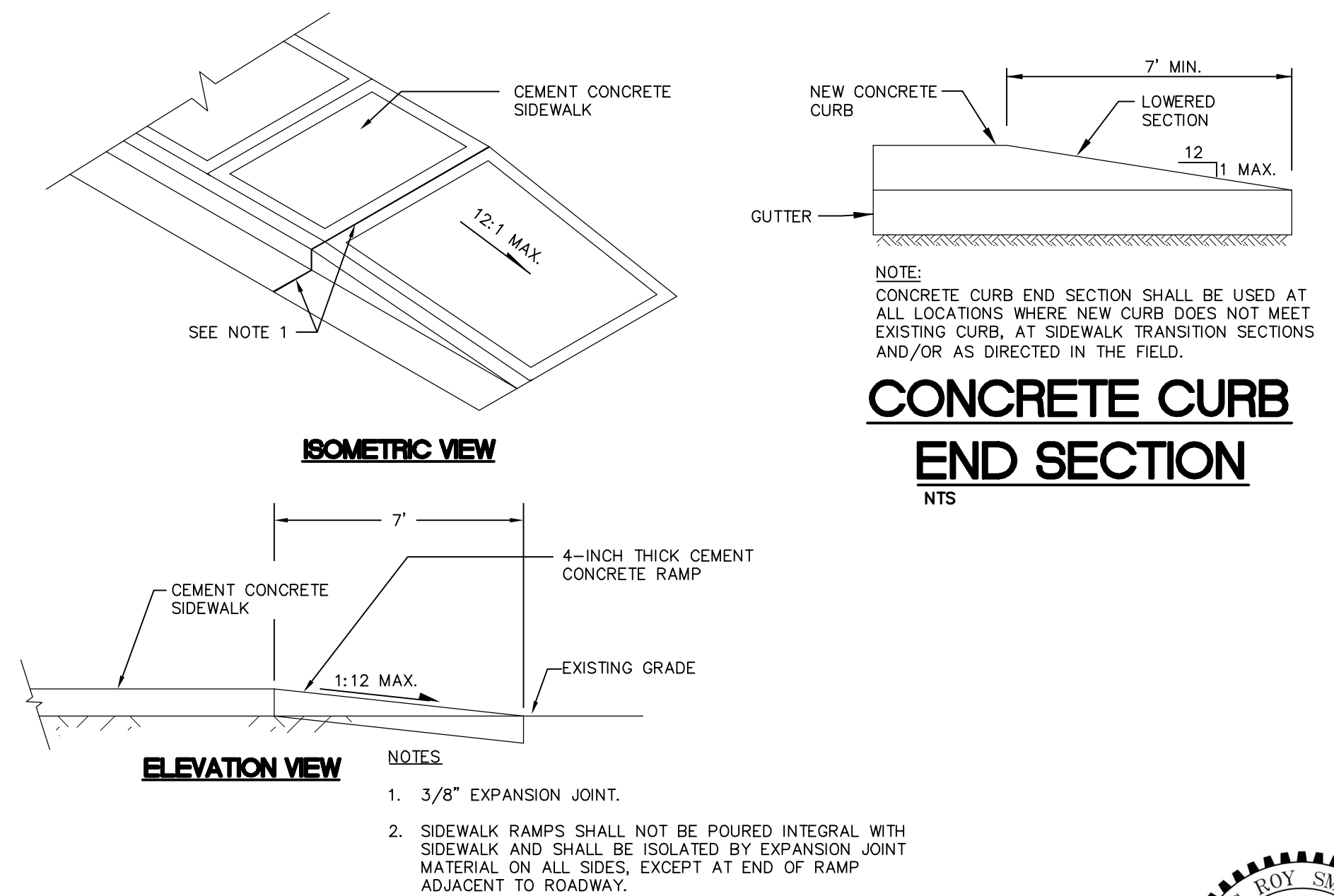
**TYPICAL CONCRETE
DRIVEWAY SECTION**
NTS



**ROADWAY PAVEMENT
MATCH SECTION**
NTS



**HMA MATCH DETAIL AND
HMA DRIVEWAY SECTION**
NTS



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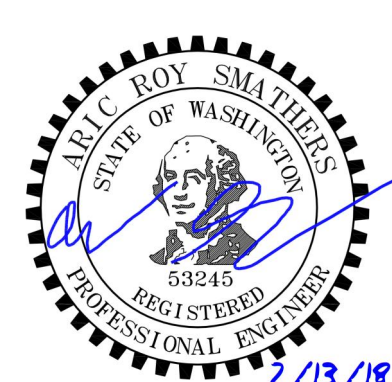
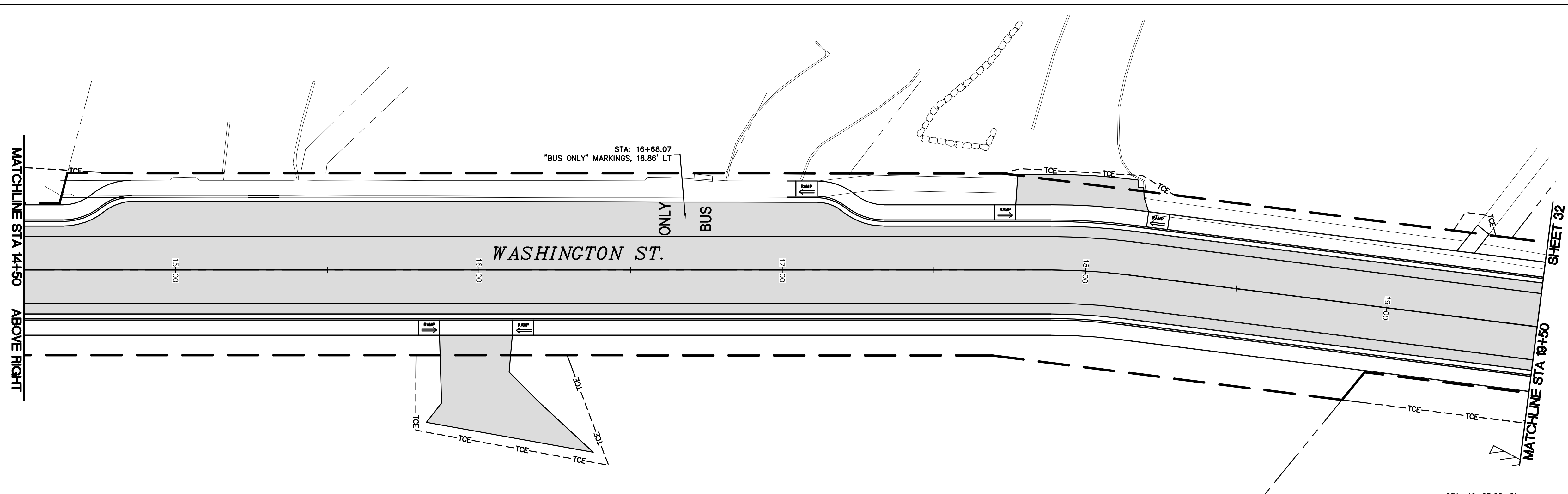
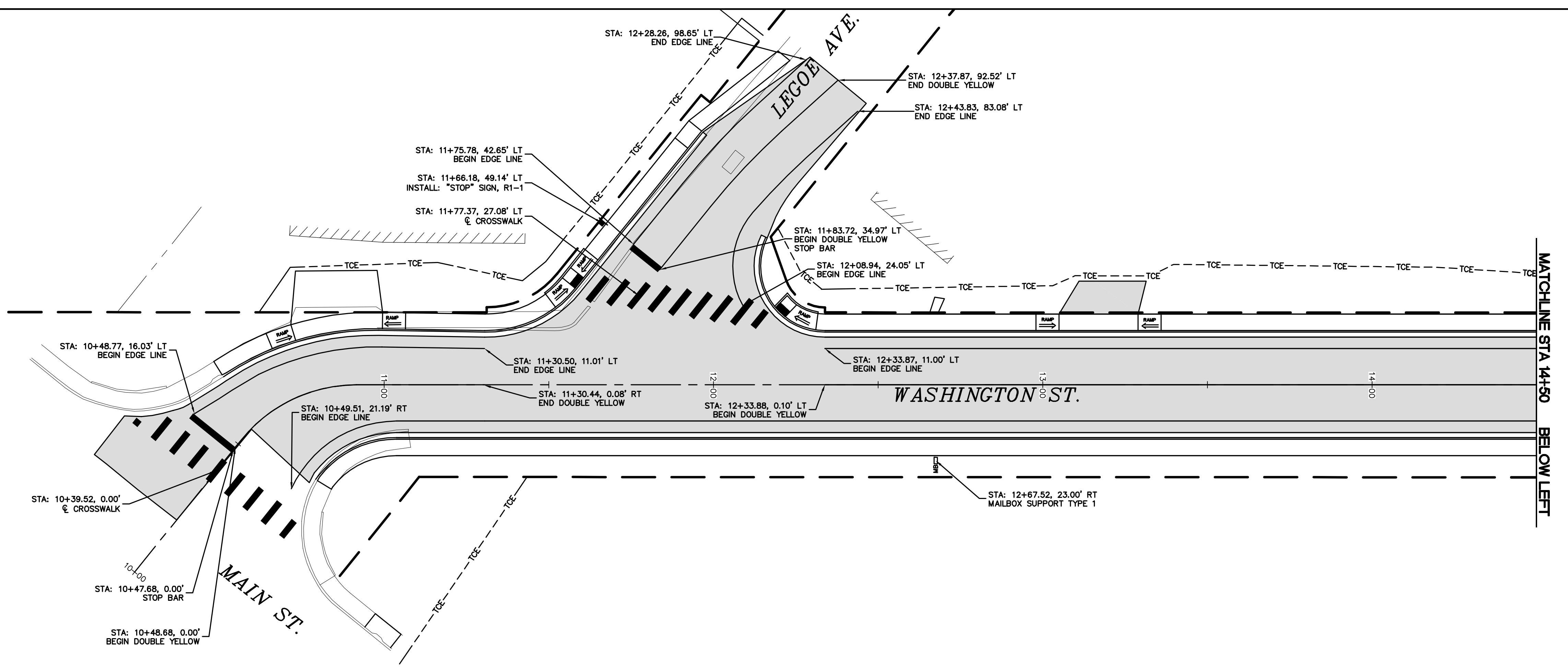
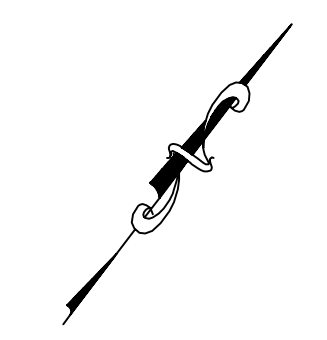
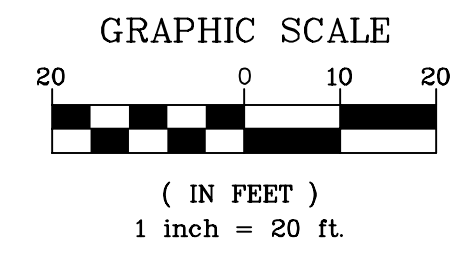
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
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WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
ROADWAY DETAILS

DWG 16026 DETAILS
JOB# 16026
SCALE H: N/A V: N/A

DATE 2/13/2018
SHEET 30
of 38



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NO.	DATE	DESCRIPTION	BY

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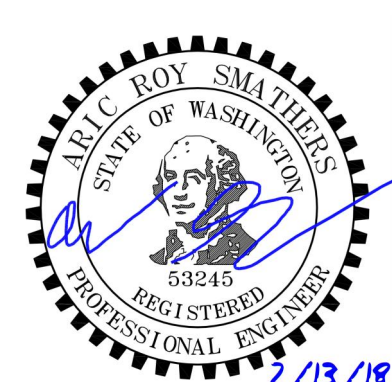
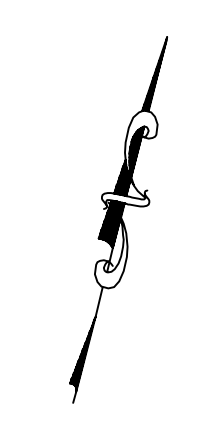
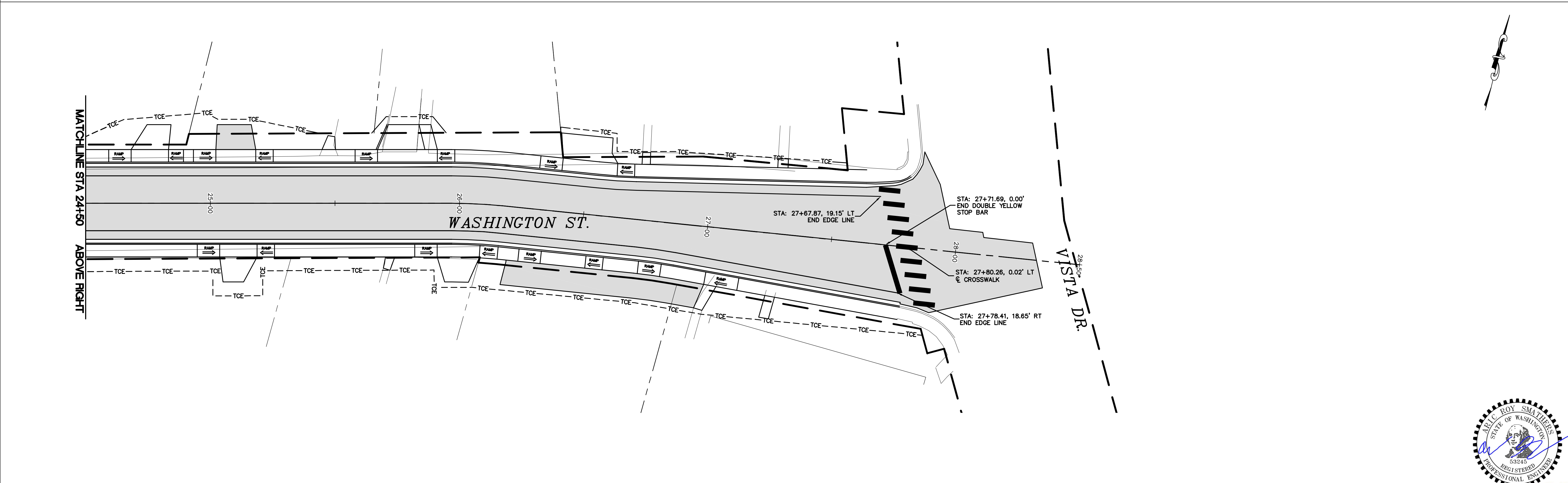
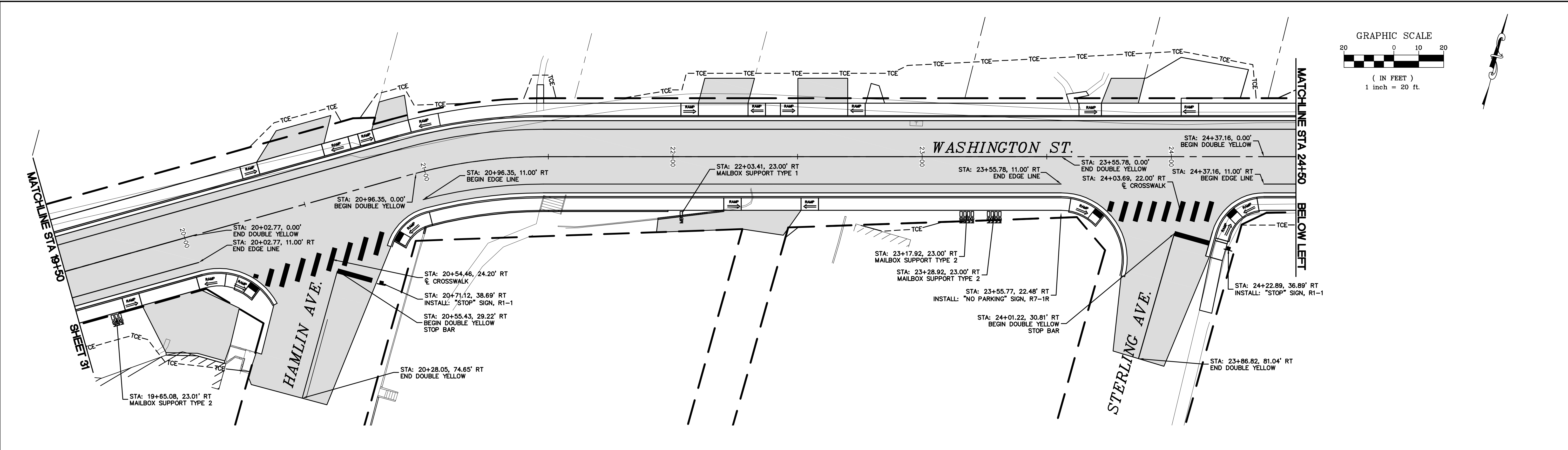
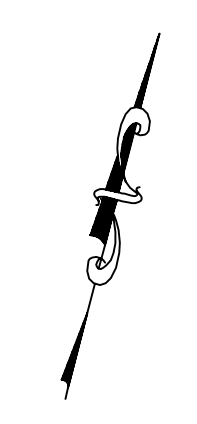
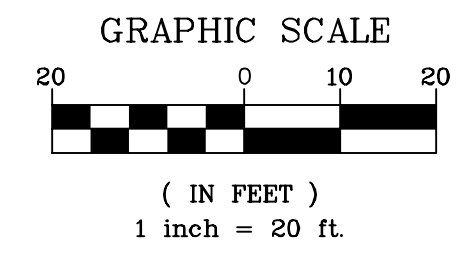
WASHINGTON STREET IMPROVEMENTS
 MAIN STREET TO VISTA DRIVE
 CHANNELIZATION PLAN STA 10+00 TO 19+50

DWG 16026 CHAN
 JOB# 16026

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

DATE
2/13/2018
 SHEET
31
 of 38

P:\Project\16026 CHAN_Sheet\16026 CHAN.dwg, 31 CHANNELIZATION PLAN STA 10+00 TO 19+50, 2/13/2018 9:42:44 PM, PJC\KChange Printer 2012



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NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
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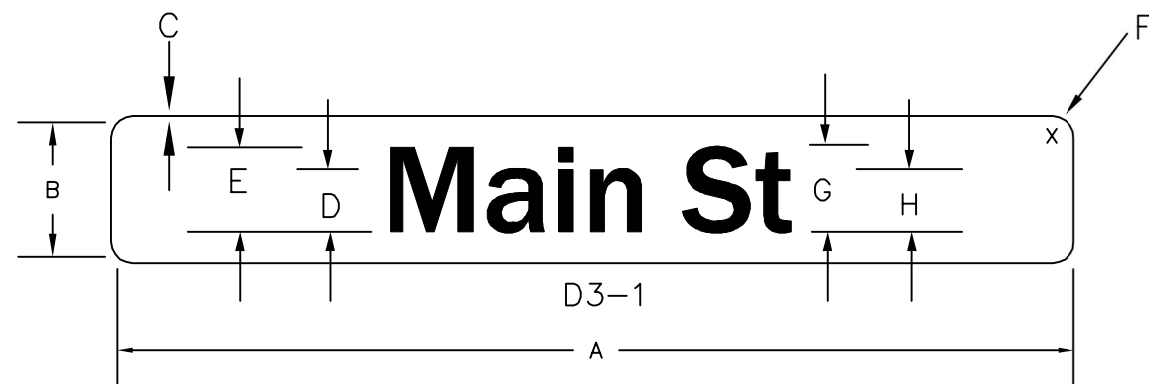
WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
CHANNELIZATION PLAN STA 19+50 TO 28+50

DWG 16026 CHAN
JOB# 16026

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

DATE
2/13/2018
SHEET
32
of 38

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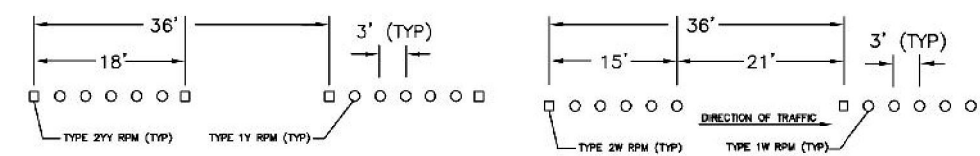
SIGNING DETAILS (TYP)

DIMENSIONS (INCHES)							
	A	B	C	D	E	F	H
VA	6	5/8	3	4	1 1/2	3	2 1/4

COLORS

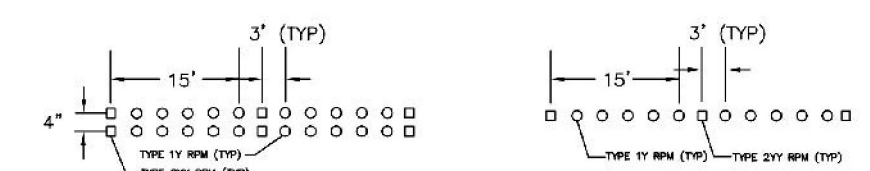
LETTERS - WHITE (REFL)
BACKGROUND - GREEN (REFL)

TYPICAL SIGN DETAIL
NTS



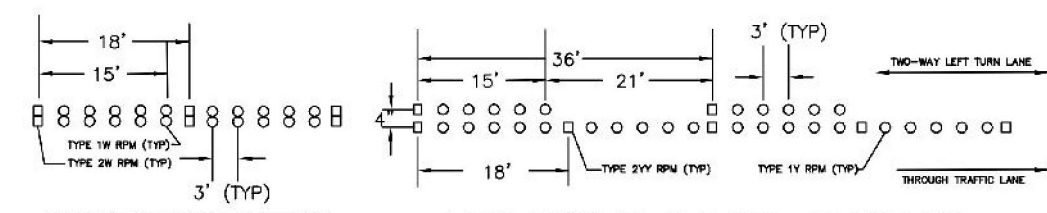
SKIP CENTER STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE

LANE STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE



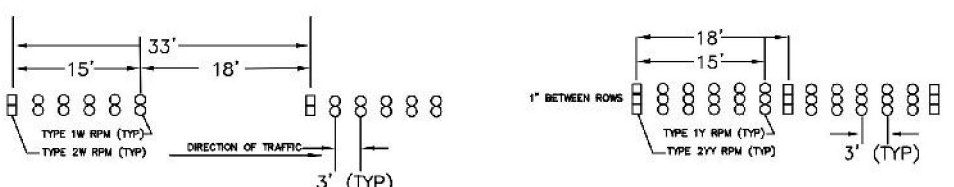
DOUBLE YELLOW STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE

NO PASS STRIPE
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE



GORE STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE

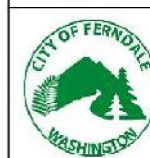
TWO-WAY LEFT TURN STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE



SKIP GORE STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE

BARRIER STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION PER CITY OF FERDALE

NOVEMBER 25, 2016



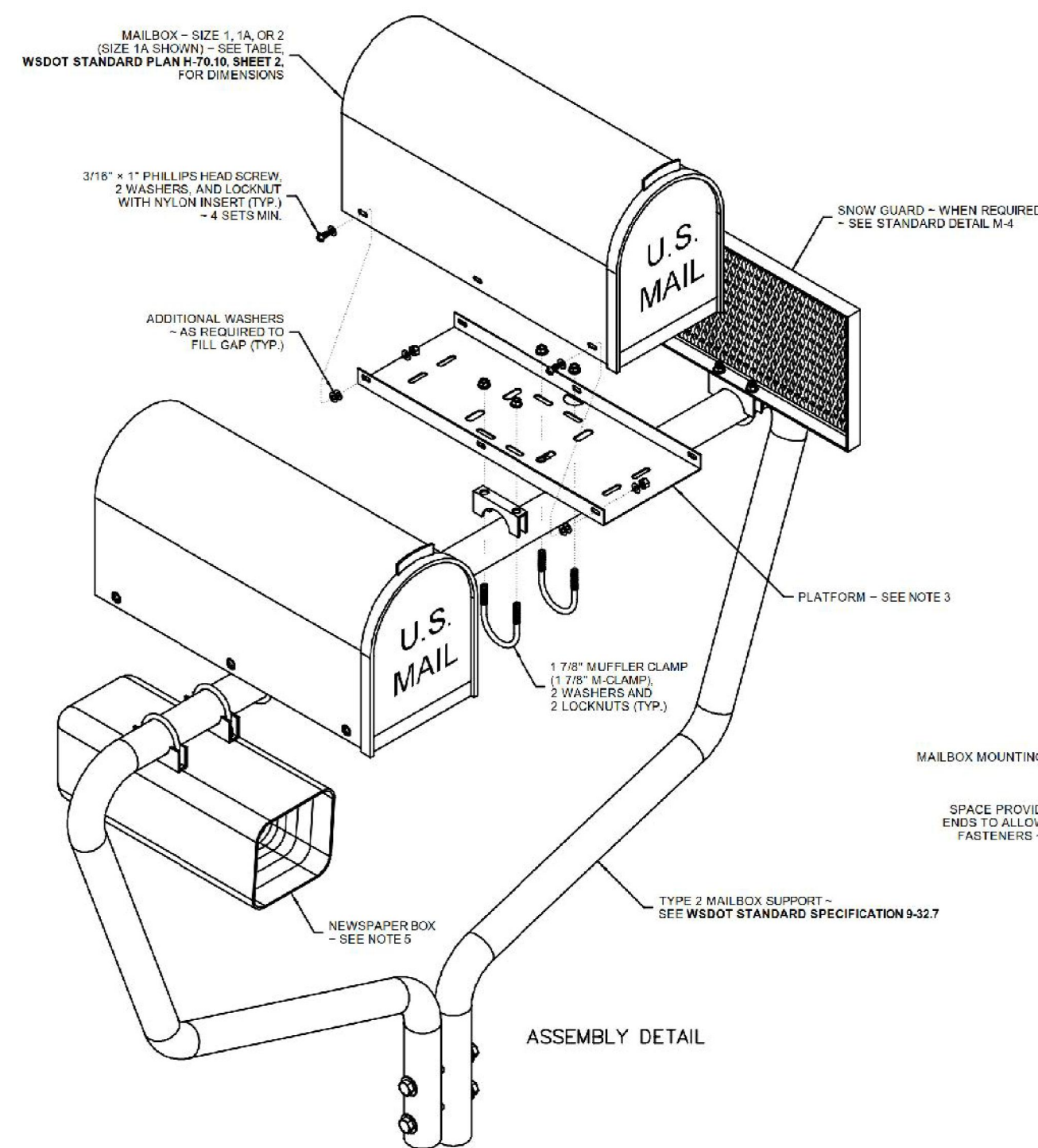
APPROVED

Public Works Director

8/11/17

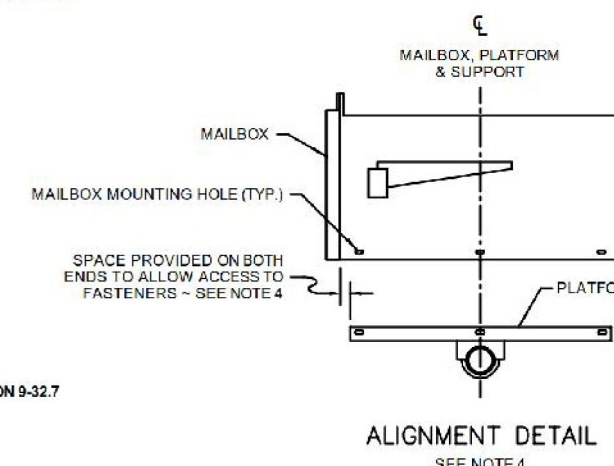
Date

STRIPING
STANDARD DETAIL R-20
NOT TO SCALE



NOTES

- The anchoring system shall meet NCHRP 350 crash test criteria. Use a socket and wedge system or the anchoring system supplied by or recommended by the Type 2 Support manufacturer.
- A maximum of five mailboxes may be installed on a Type 2 Support.
- The Platform design shown in this plan is detailed in the PLATFORM DETAIL, WSDOT Standard Plan H-70.10, Sheet 2. The design features slots that accommodate several types of mailbox supports, only those slots necessary for assembling the type being installed are required. An adjustable platform may be used in lieu of this platform design. Adjustable platforms must fit the 1 7/8" M-Clamp.
- Center the mailbox on the platform to ensure space for the mailbox door to open and to allow space for installing the fasteners (see ALIGNMENT DETAIL). Spacing of mailbox mounting holes varies among manufacturers. Attachment of the mailbox to the platform may require drilling additional holes through the mailbox to fit the platform.
- Attach a newspaper box to a Type 2 Support with two 1 7/8" Muffler Clamps spaced 4" apart. Field drill 7/16" holes in the newspaper box to fit. Newspaper boxes must not extend beyond the front of the mailbox when the mailbox door is closed.



ALIGNMENT DETAIL
SEE NOTE 4

NOVEMBER 25, 2016



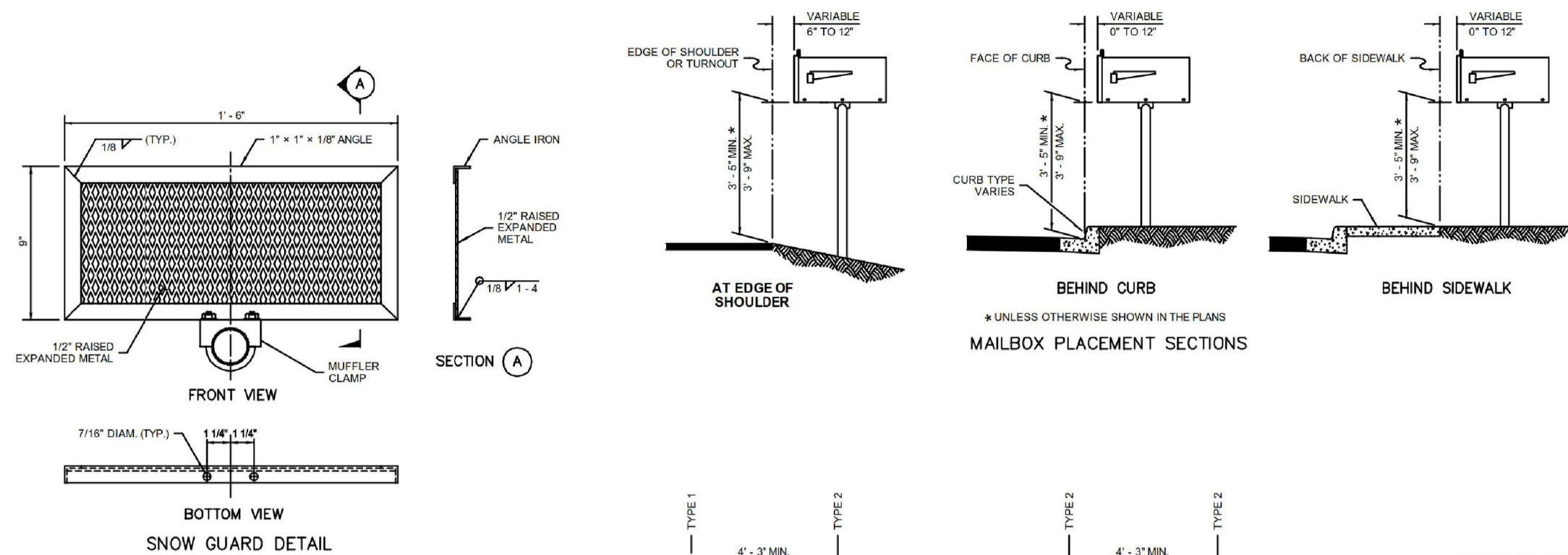
APPROVED

Public Works Director

8/11/17

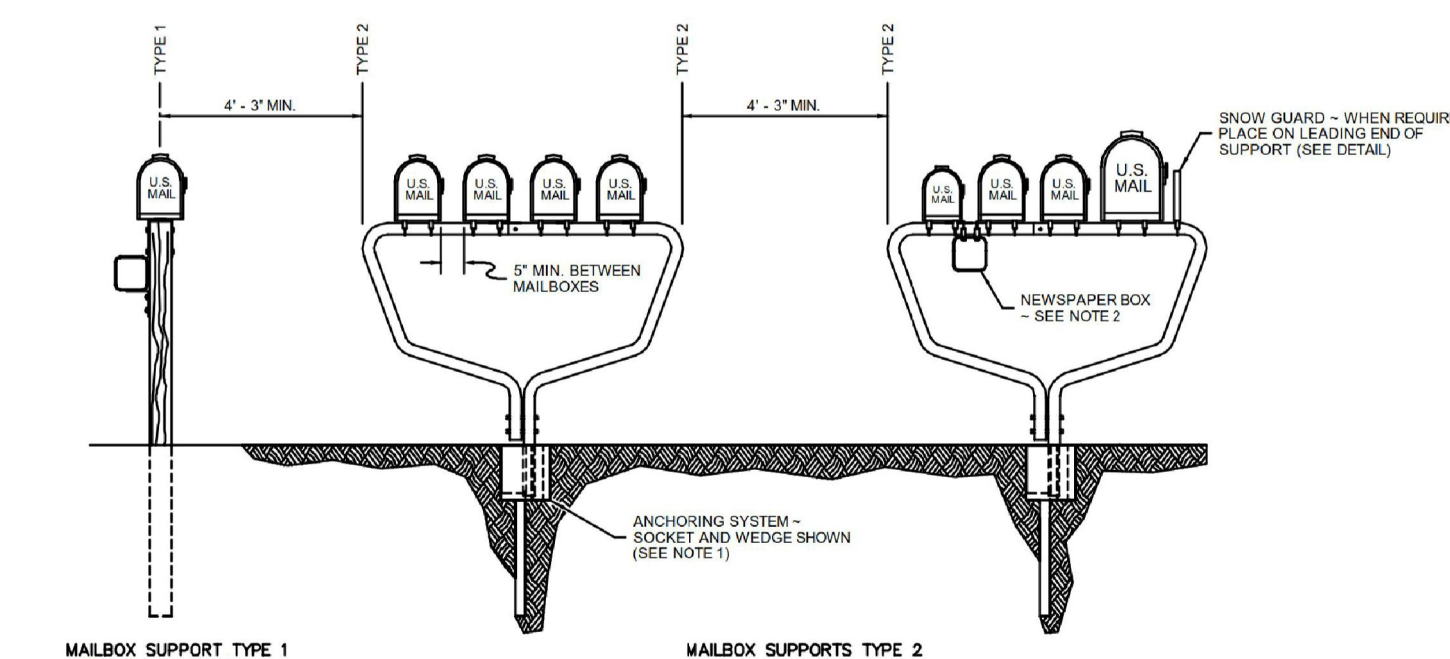
Date

MAILBOX SUPPORT
TYPE 2
STANDARD DETAIL M-3
NOT TO SCALE



NOTES

- The anchoring system shall meet NCHRP 350 crash test criteria. Use a socket and wedge system or the anchoring system supplied by or recommended by the Type 2 Support manufacturer.
- Attach a newspaper box to a Type 2 Support with two 1 7/8" Muffler Clamps spaced 4" apart. Field drill 7/16" holes in the newspaper box to fit. Newspaper boxes must not extend beyond the front of the mailbox when the mailbox door is closed.



SPACING DETAIL

NOVEMBER 25, 2016



APPROVED

Public Works Director

8/11/17

Date

MAILBOX SUPPORT TYPE 2
INSTALLATION
STANDARD DETAIL M-4
NOT TO SCALE



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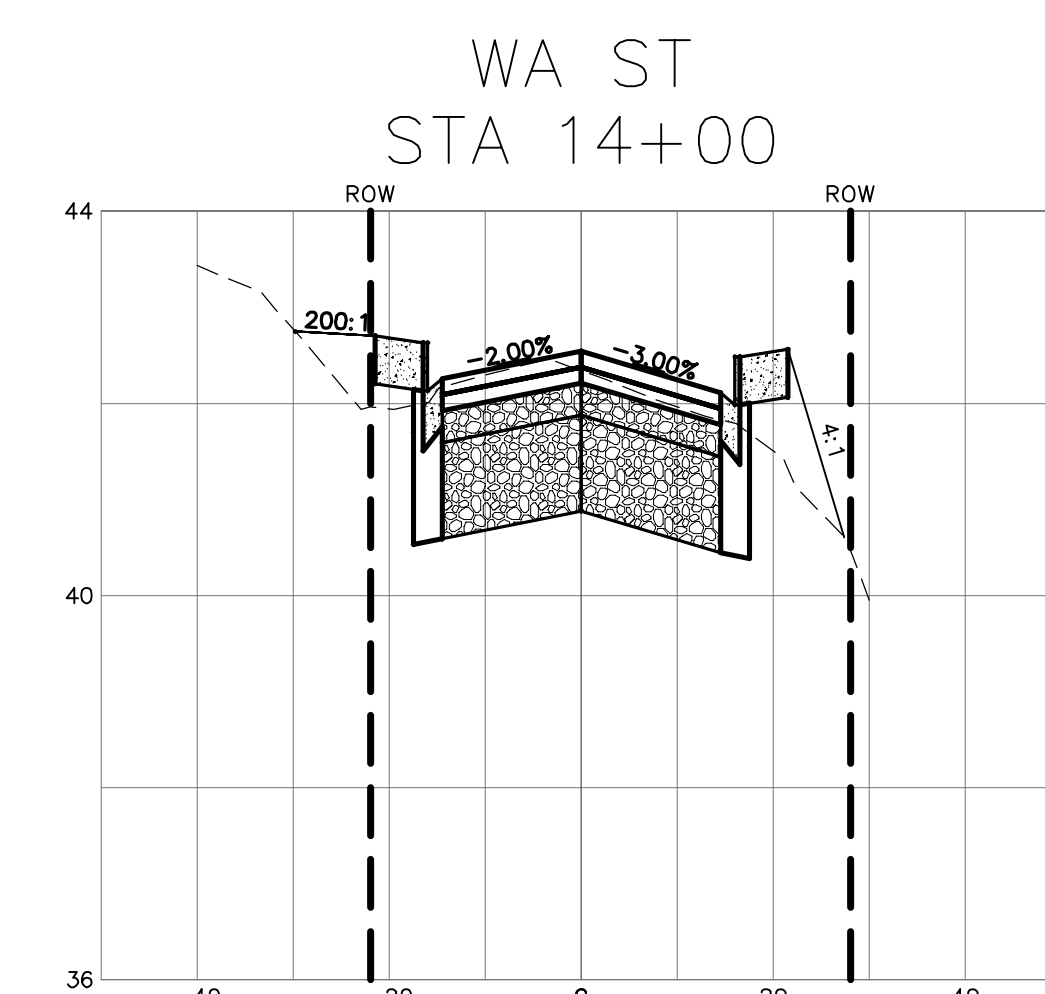
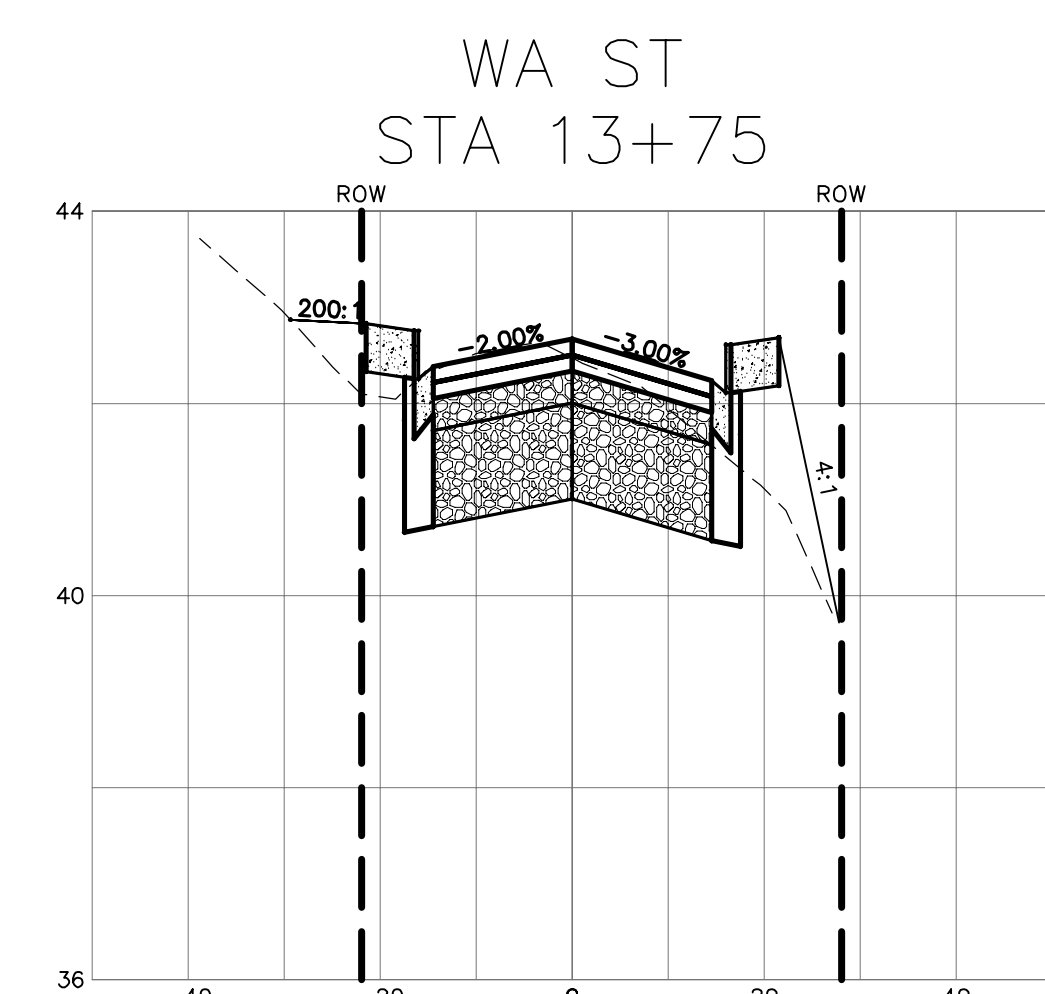
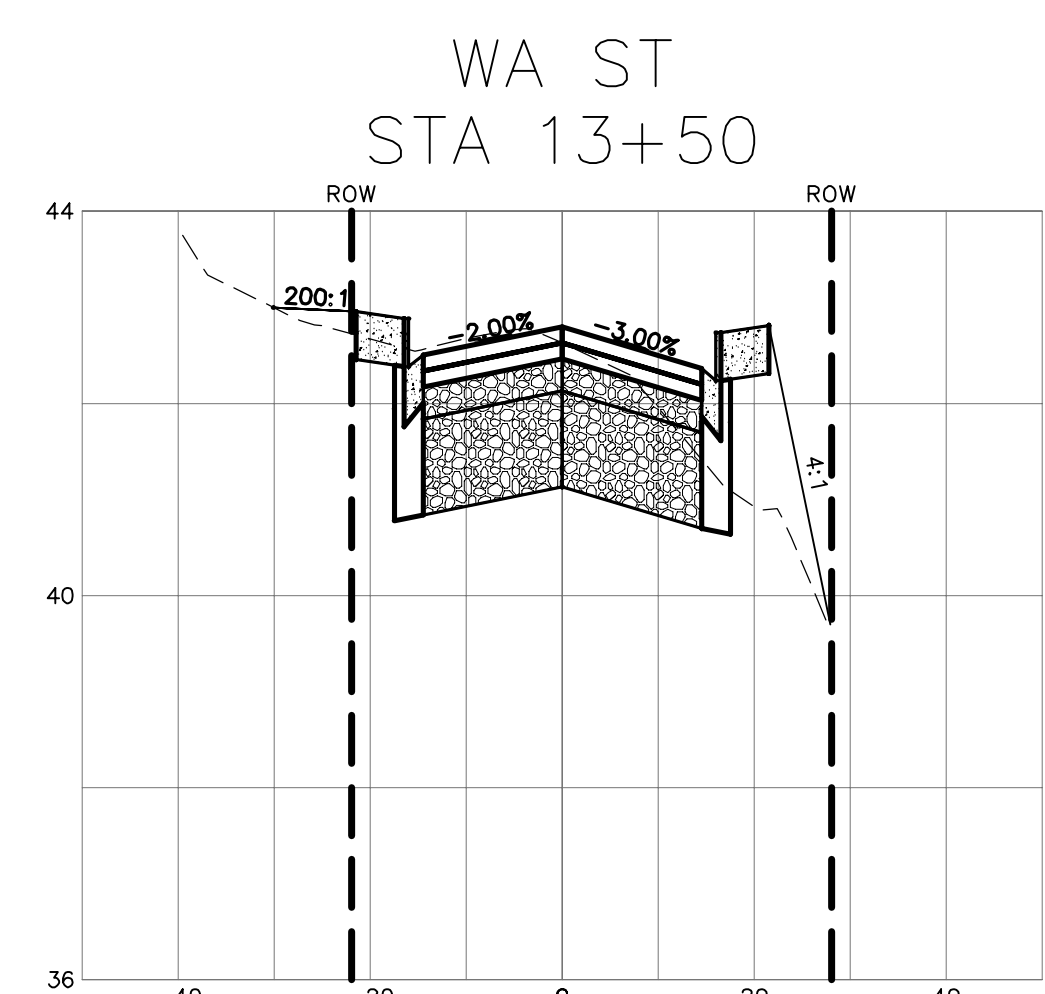
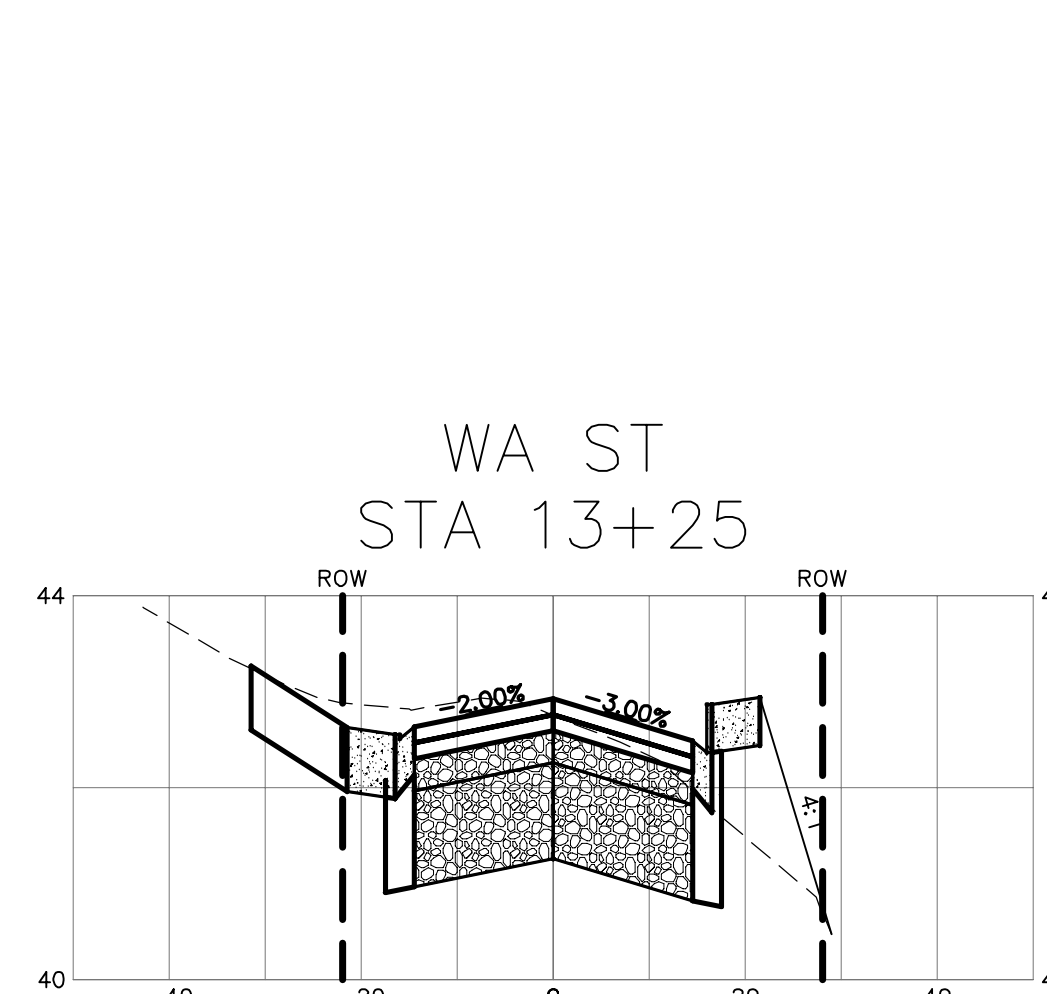
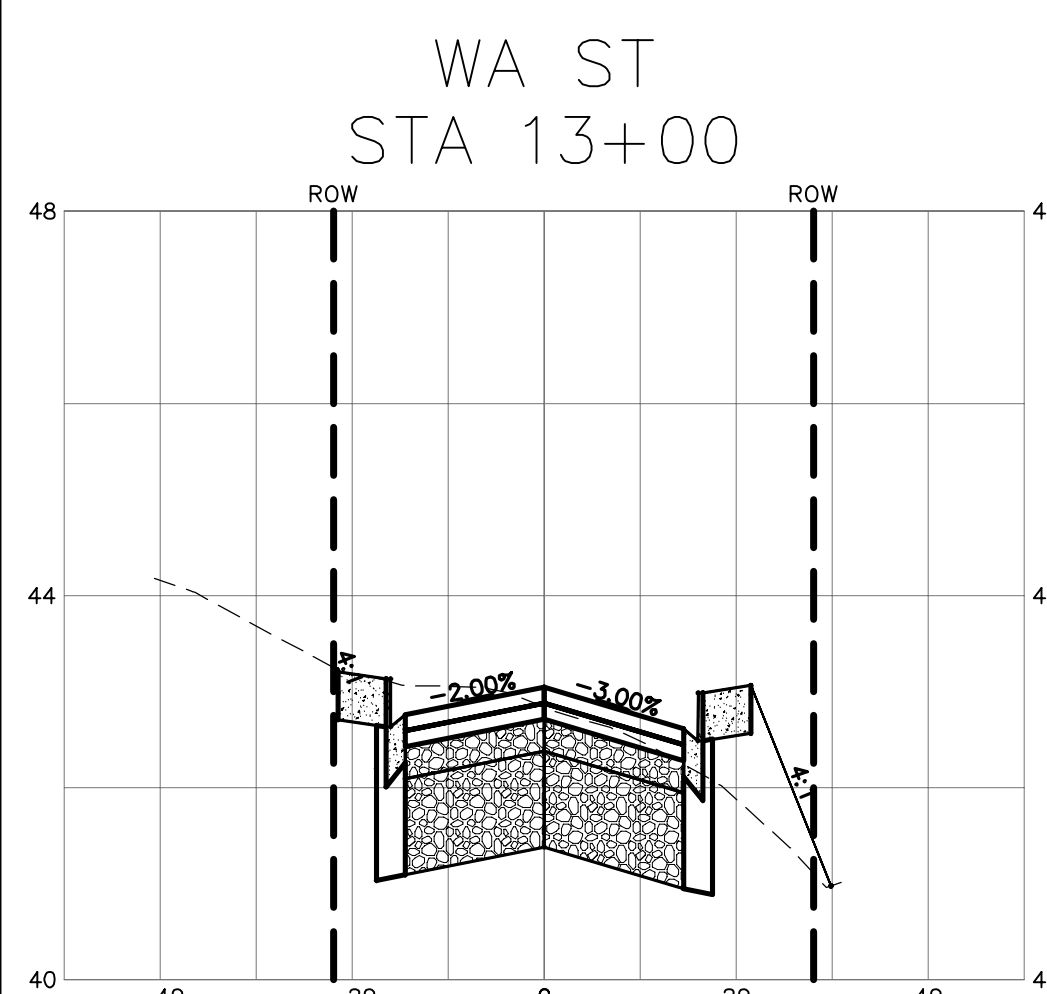
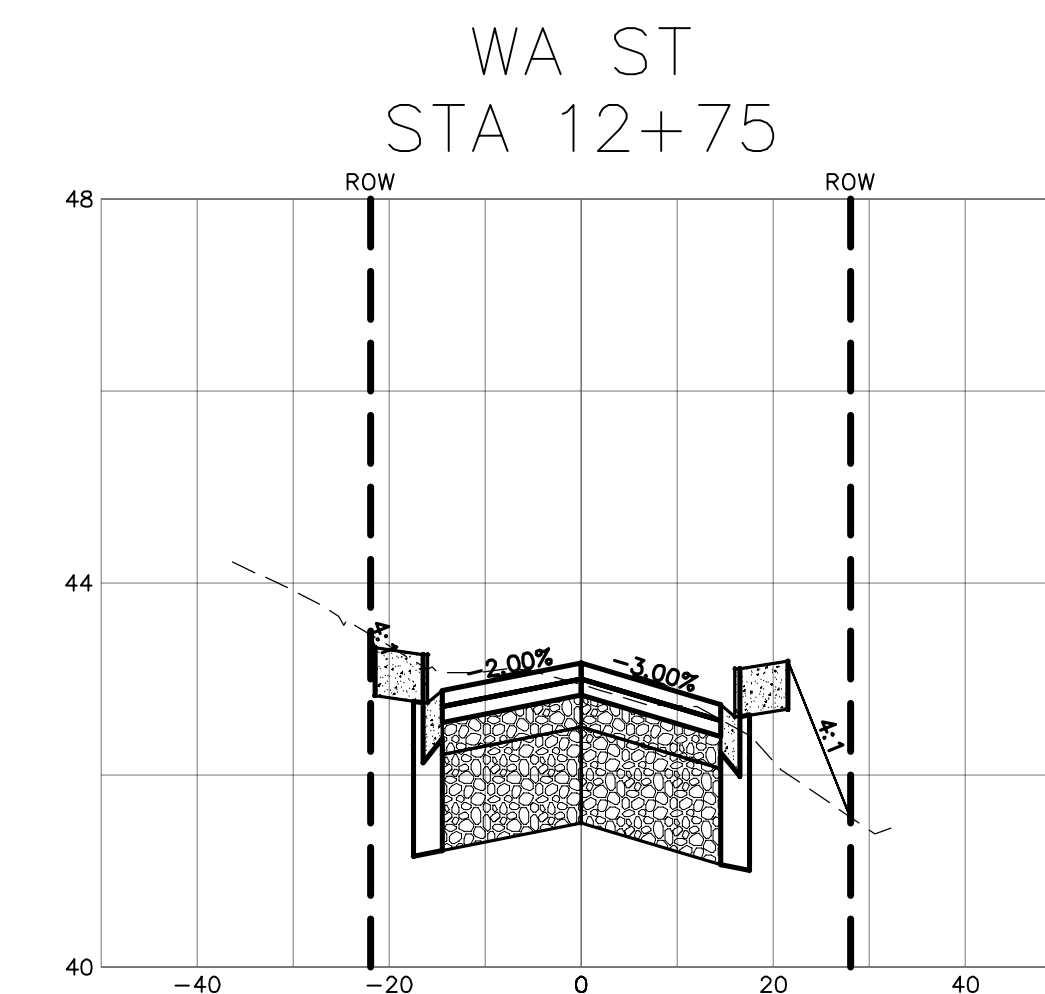
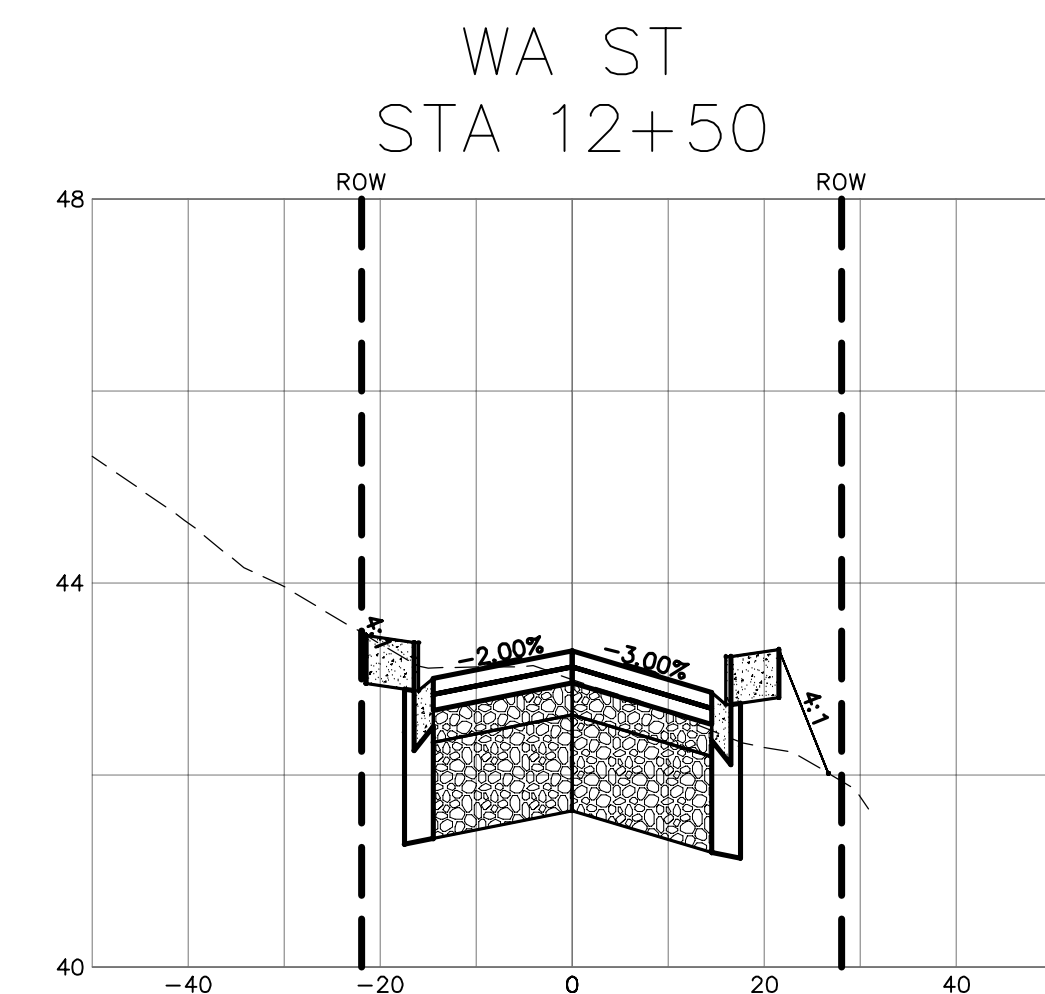
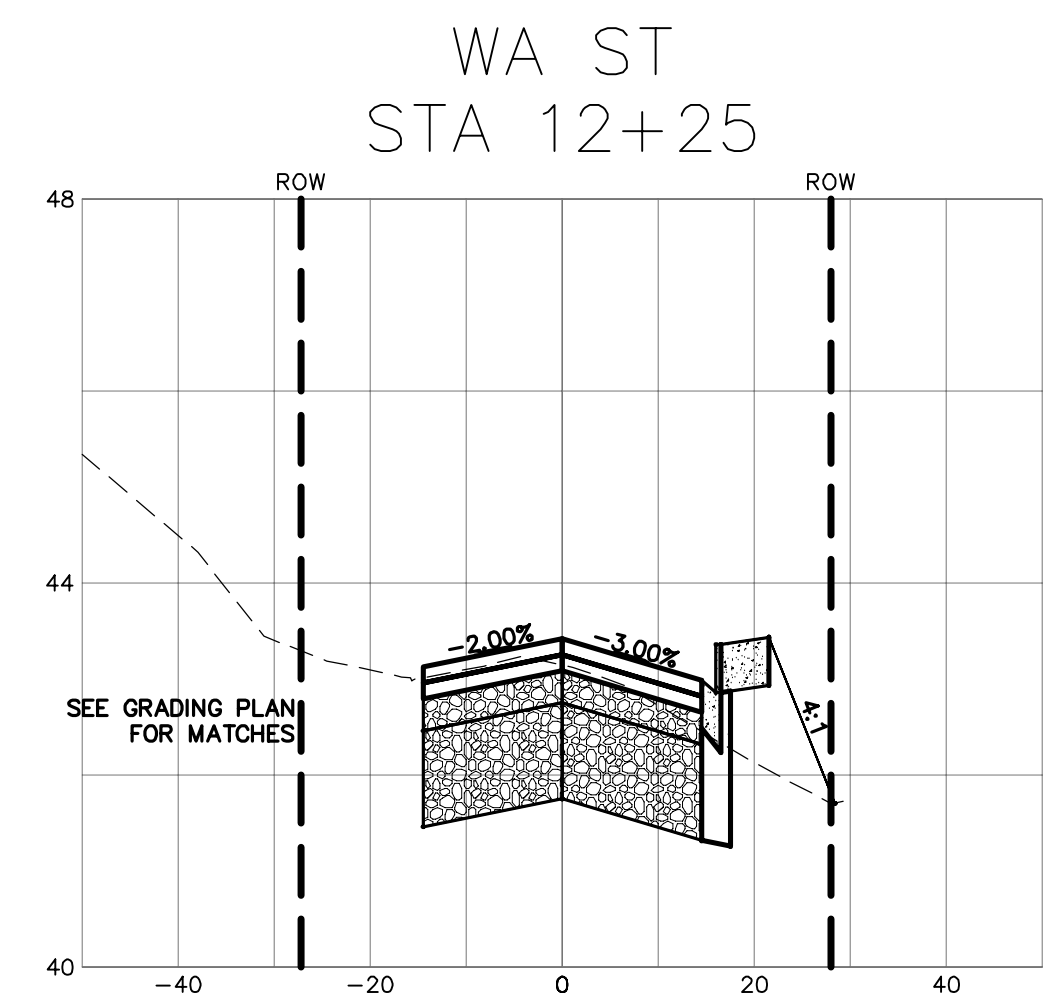
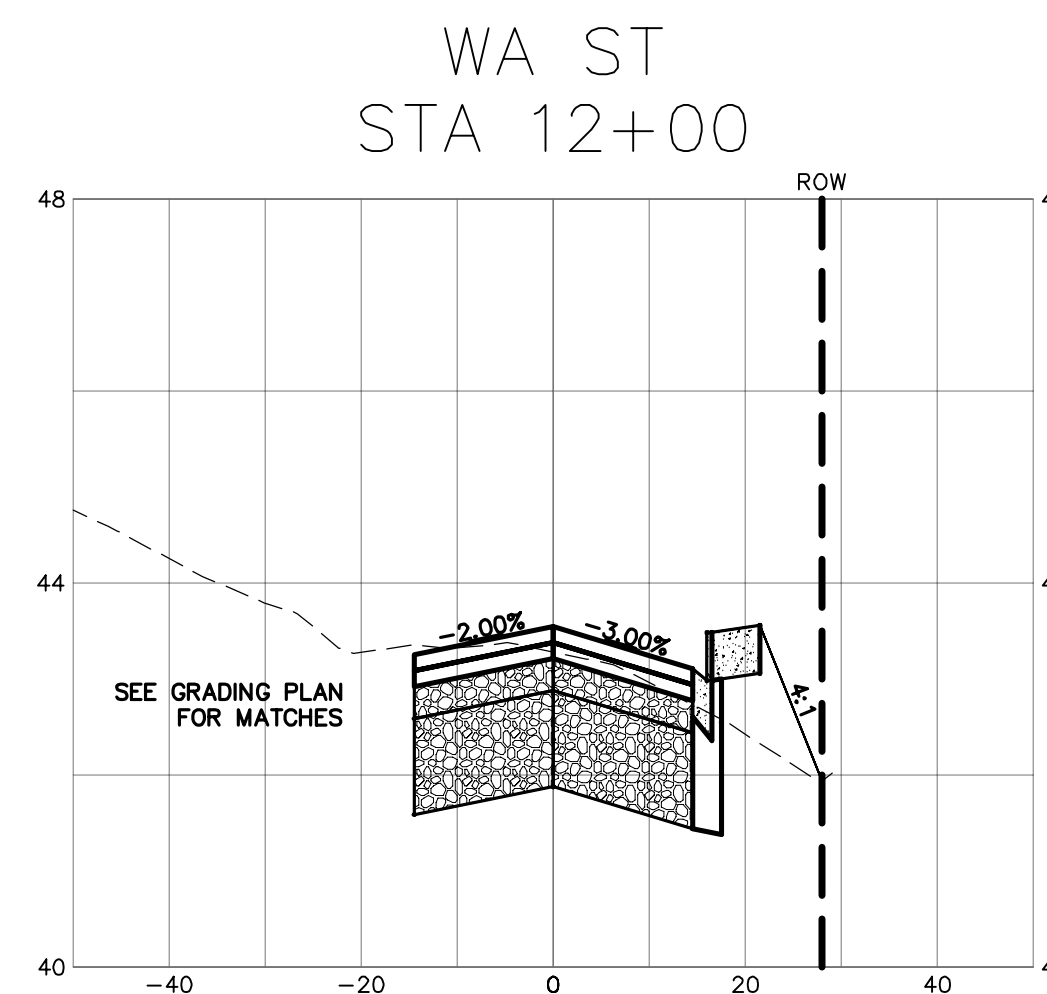
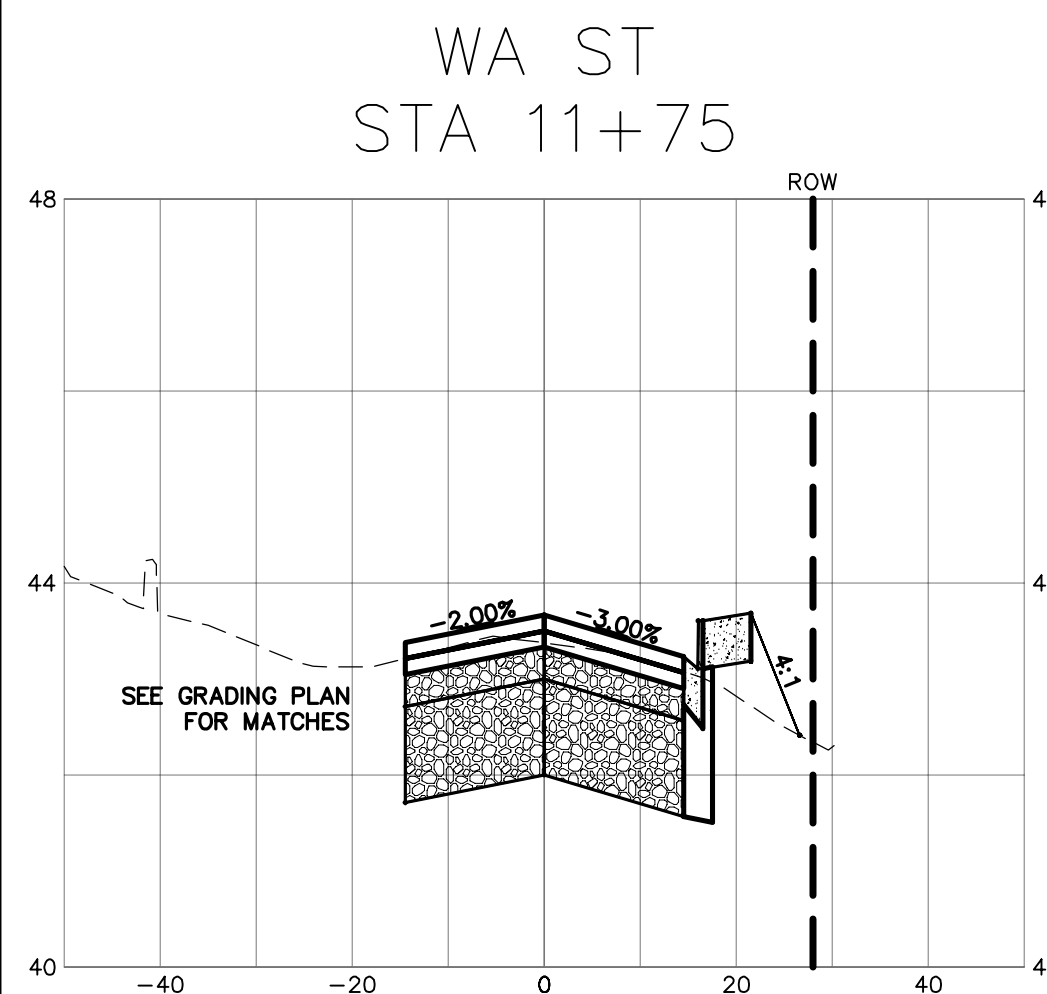
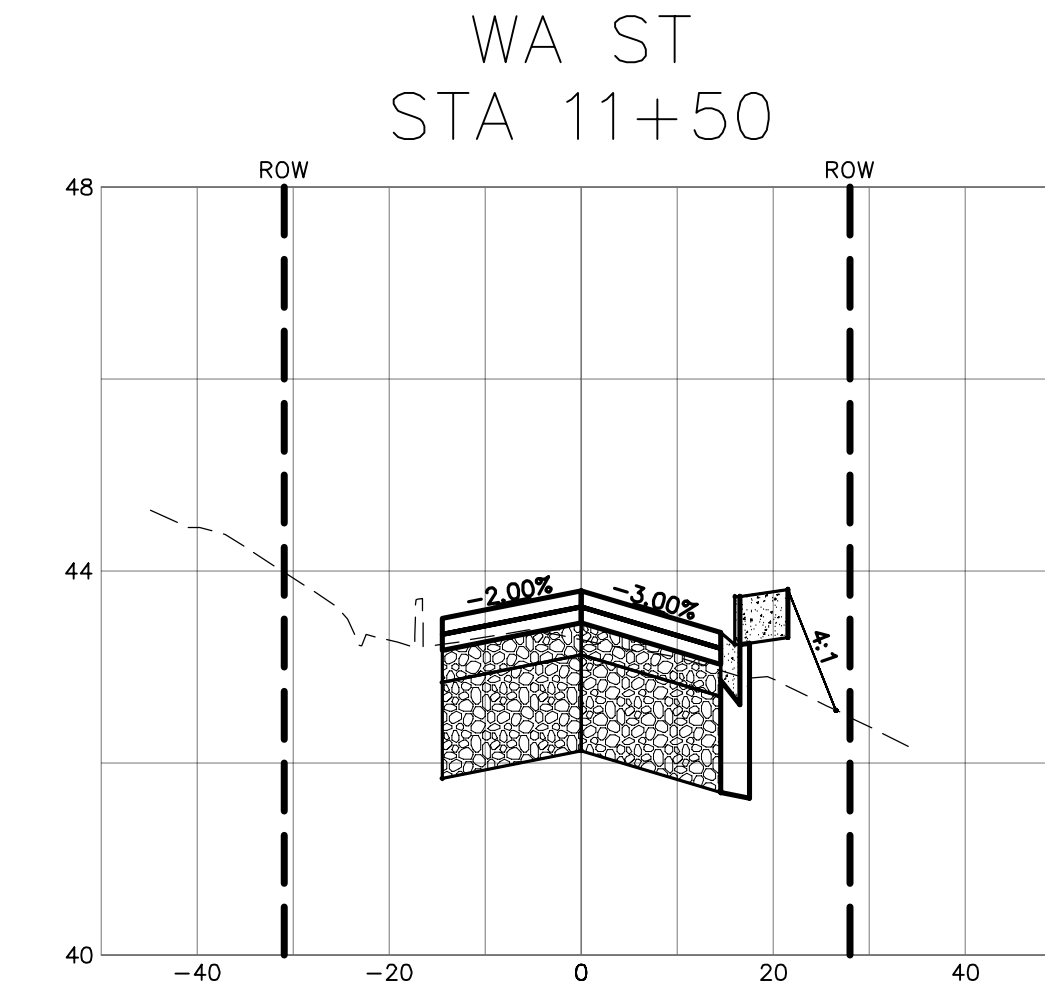
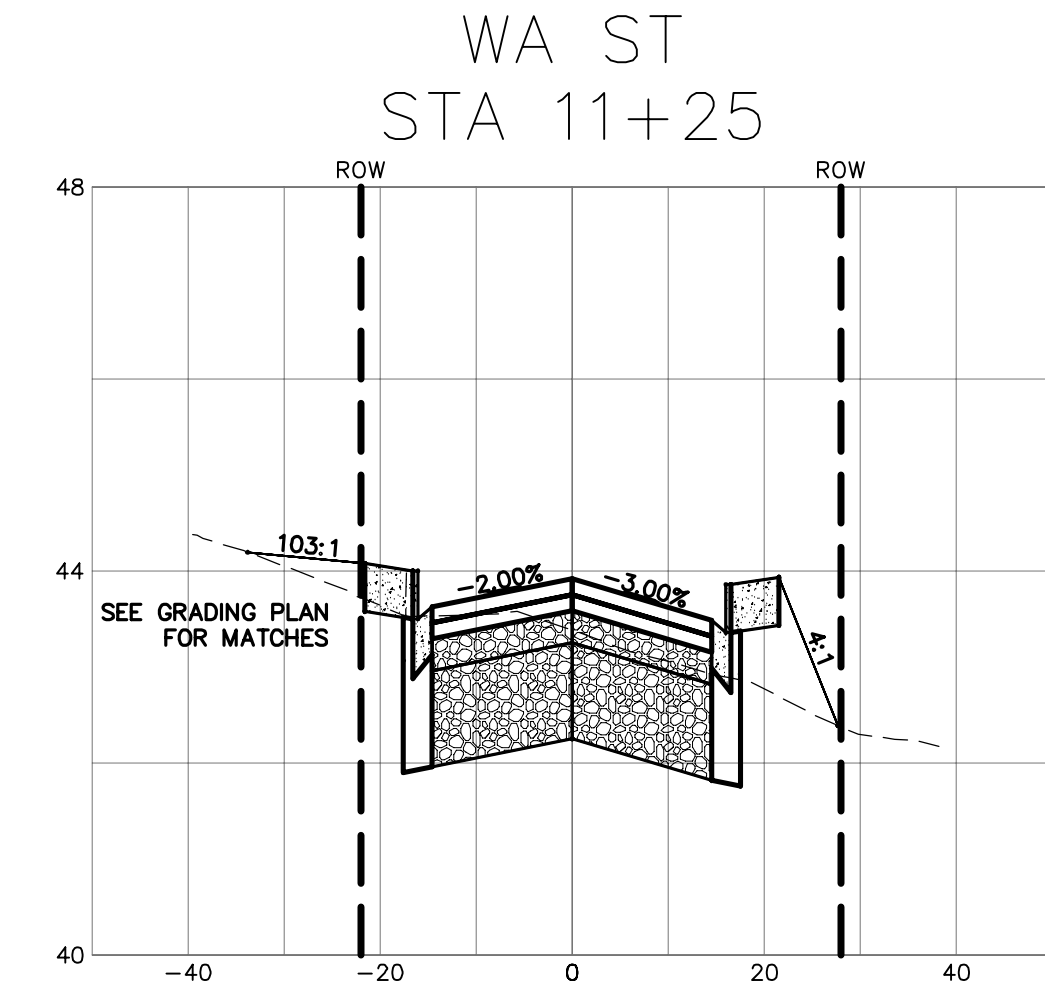
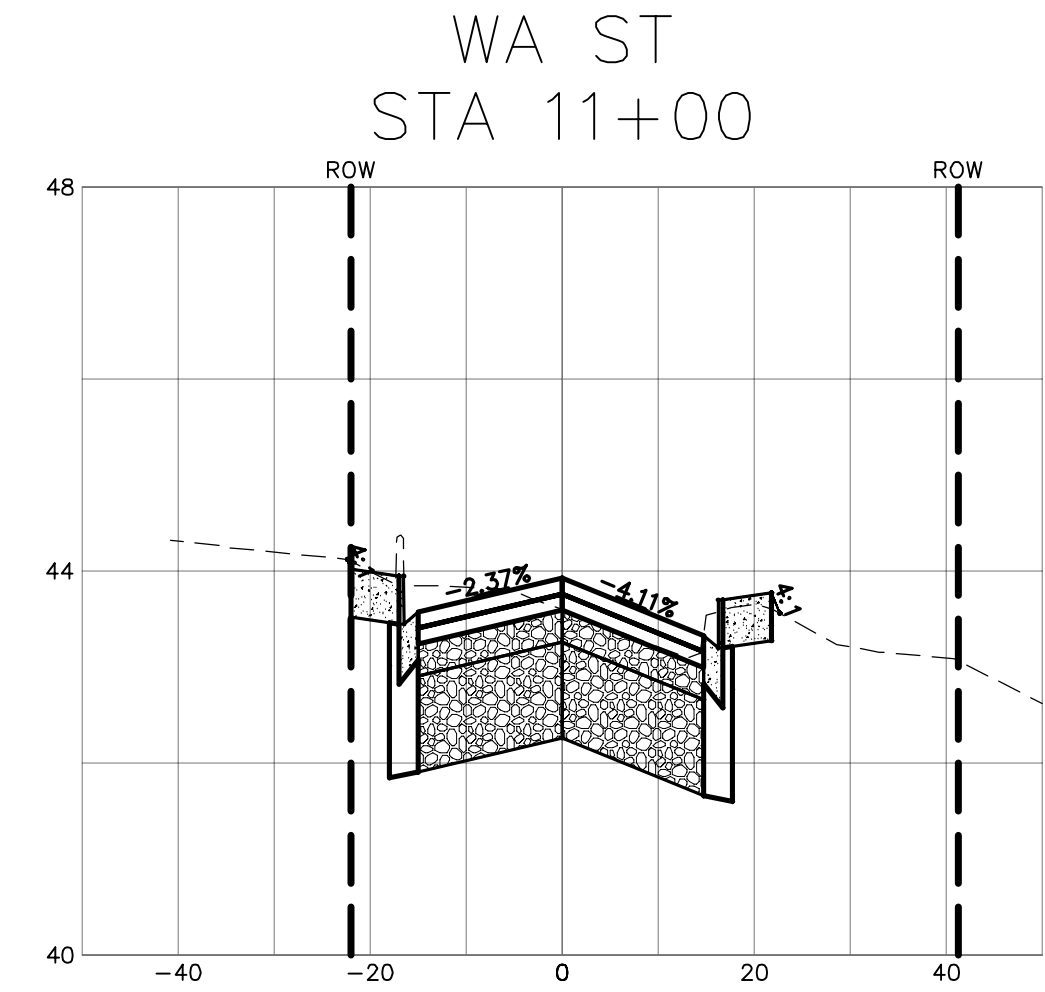
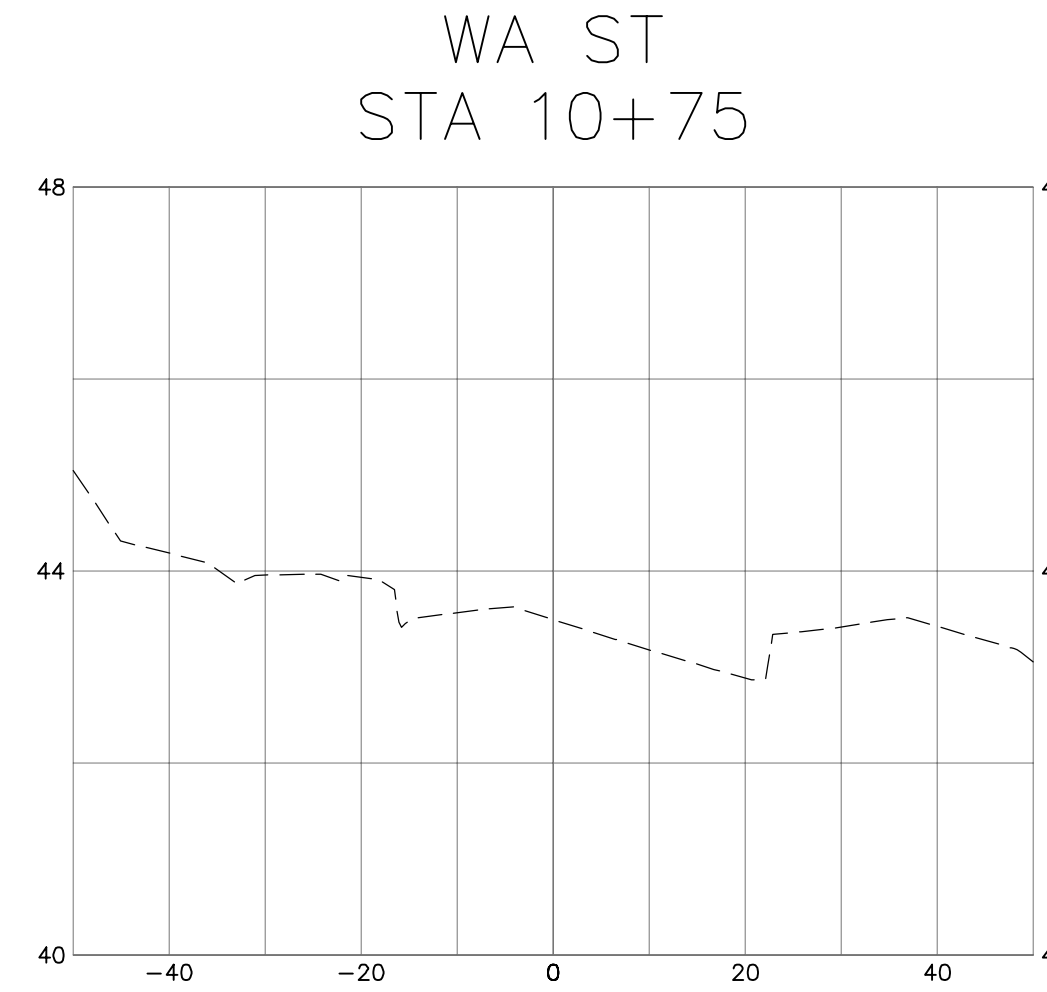
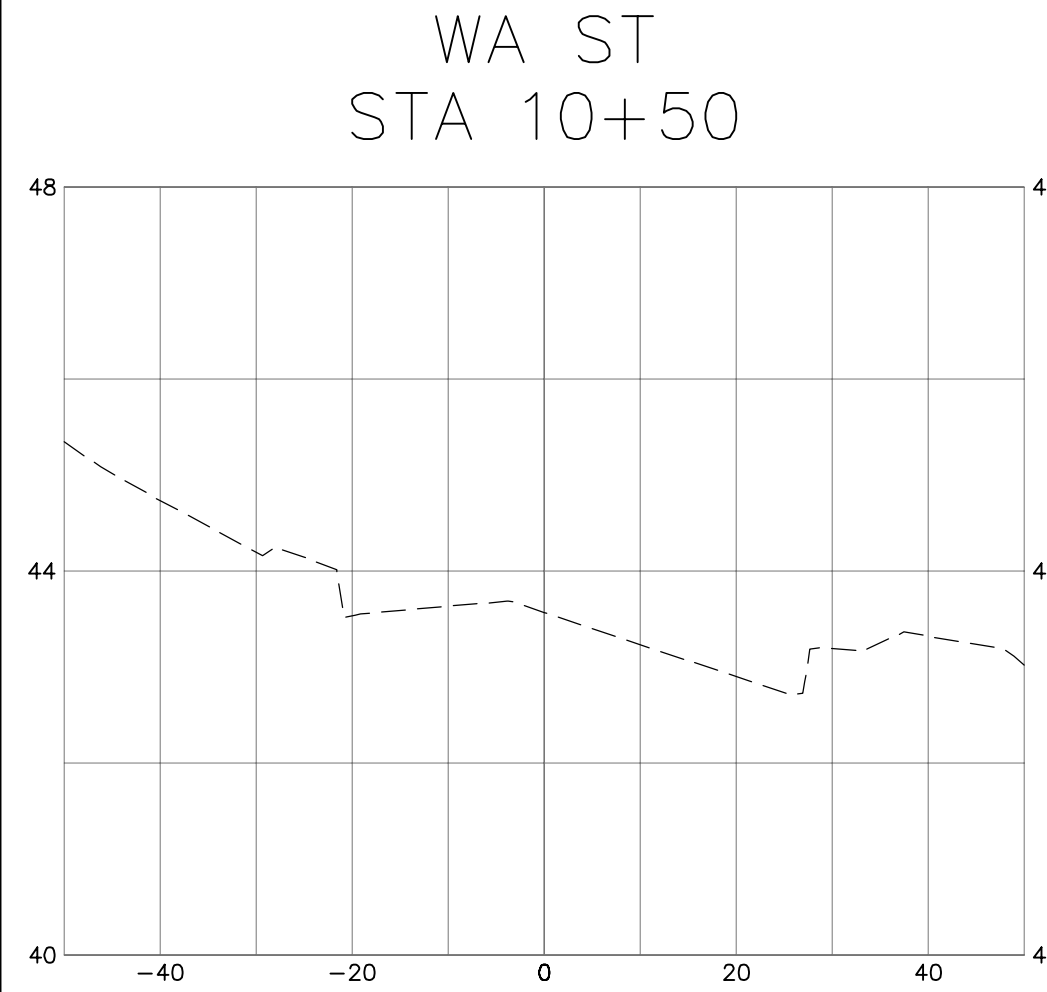
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2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
CHANNELIZATION DETAILS

DWG 16026 DETAILS

JOB#	SCALE	v:
16026	H: N/A v: N/A	N/A

DATE	SHEET
2/13/2018	33 of 38



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NO.	DATE	DESCRIPTION	BY

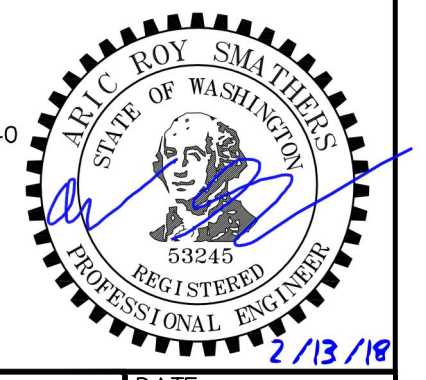
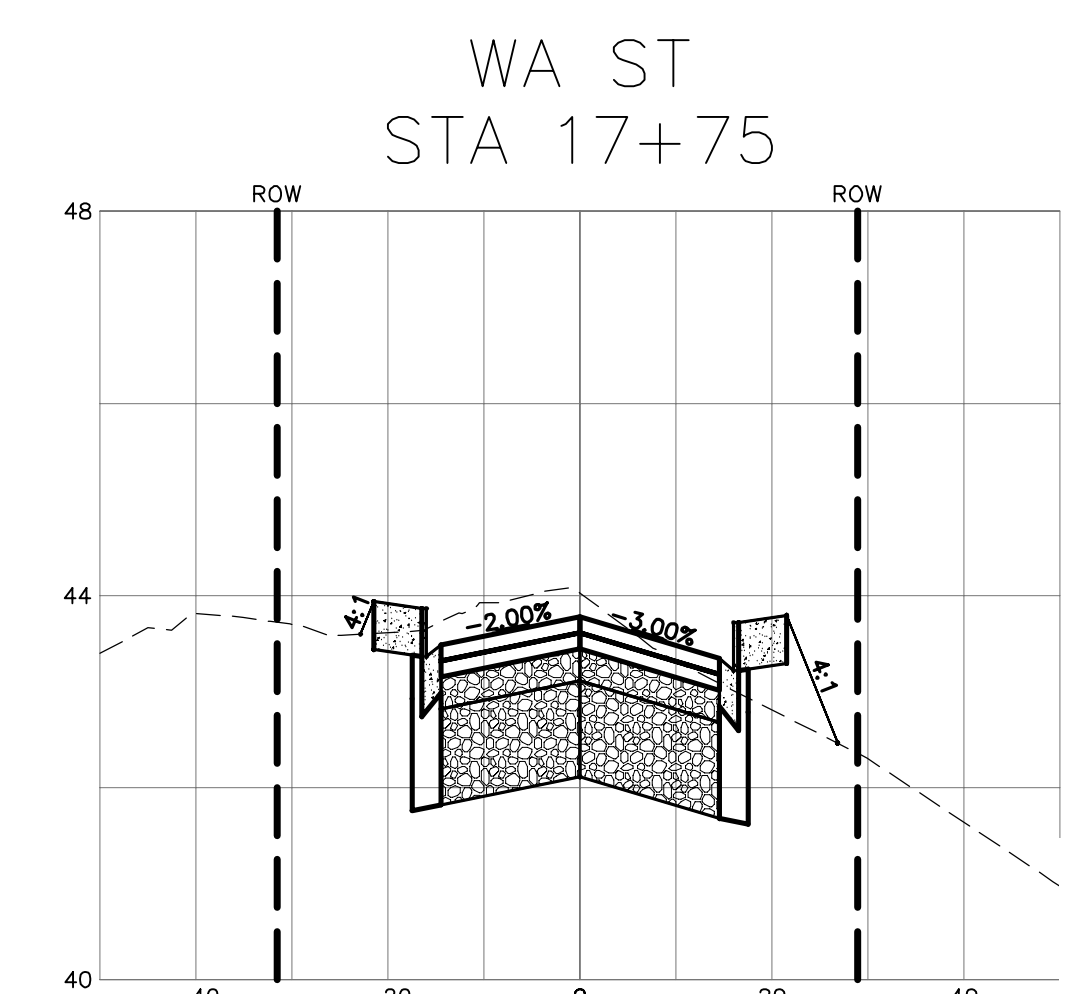
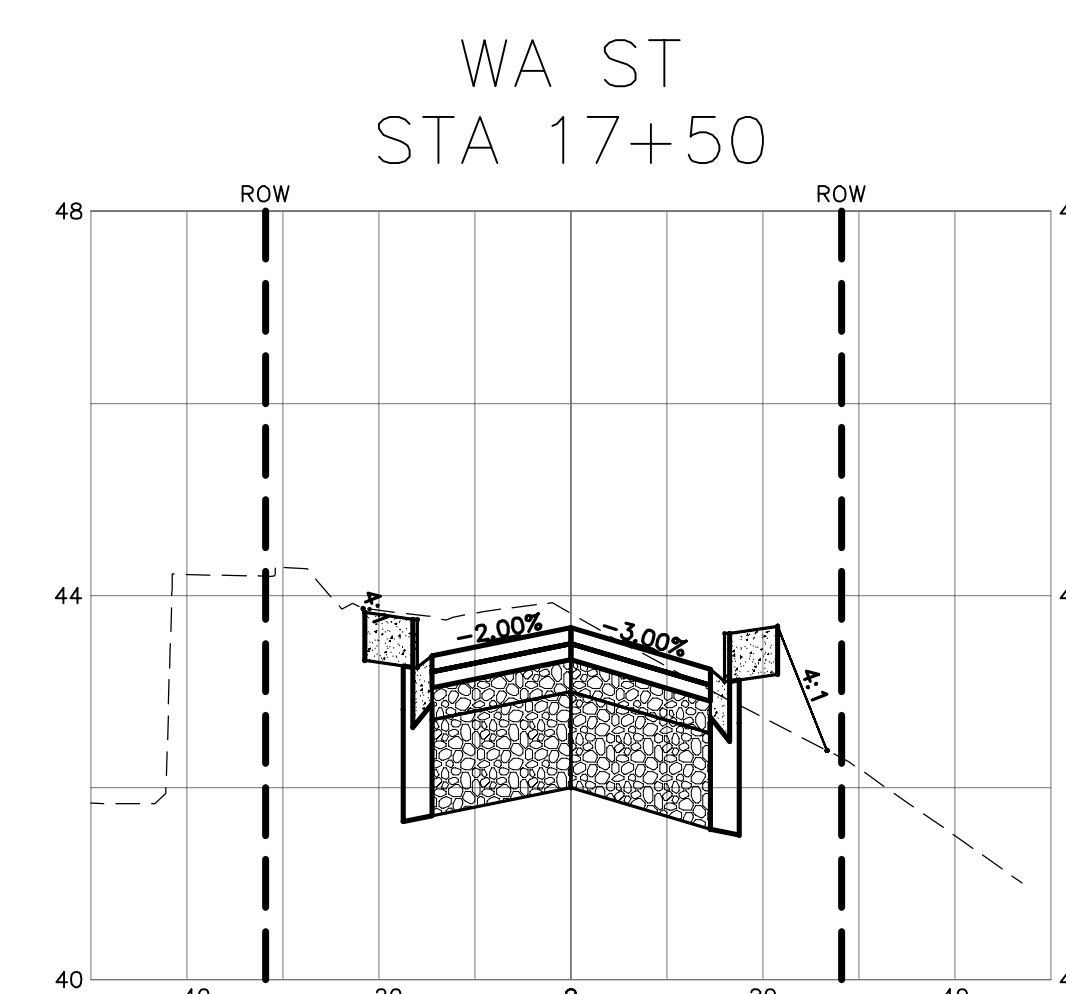
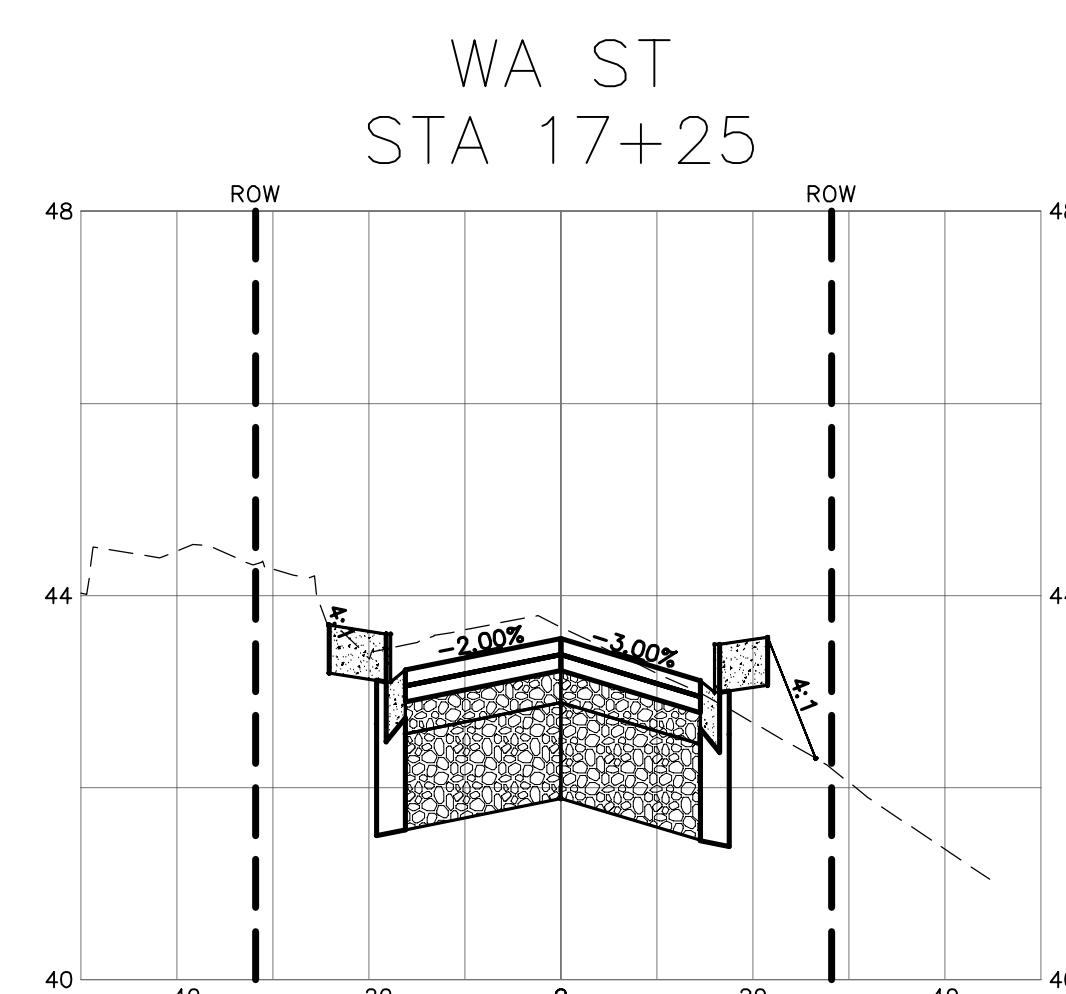
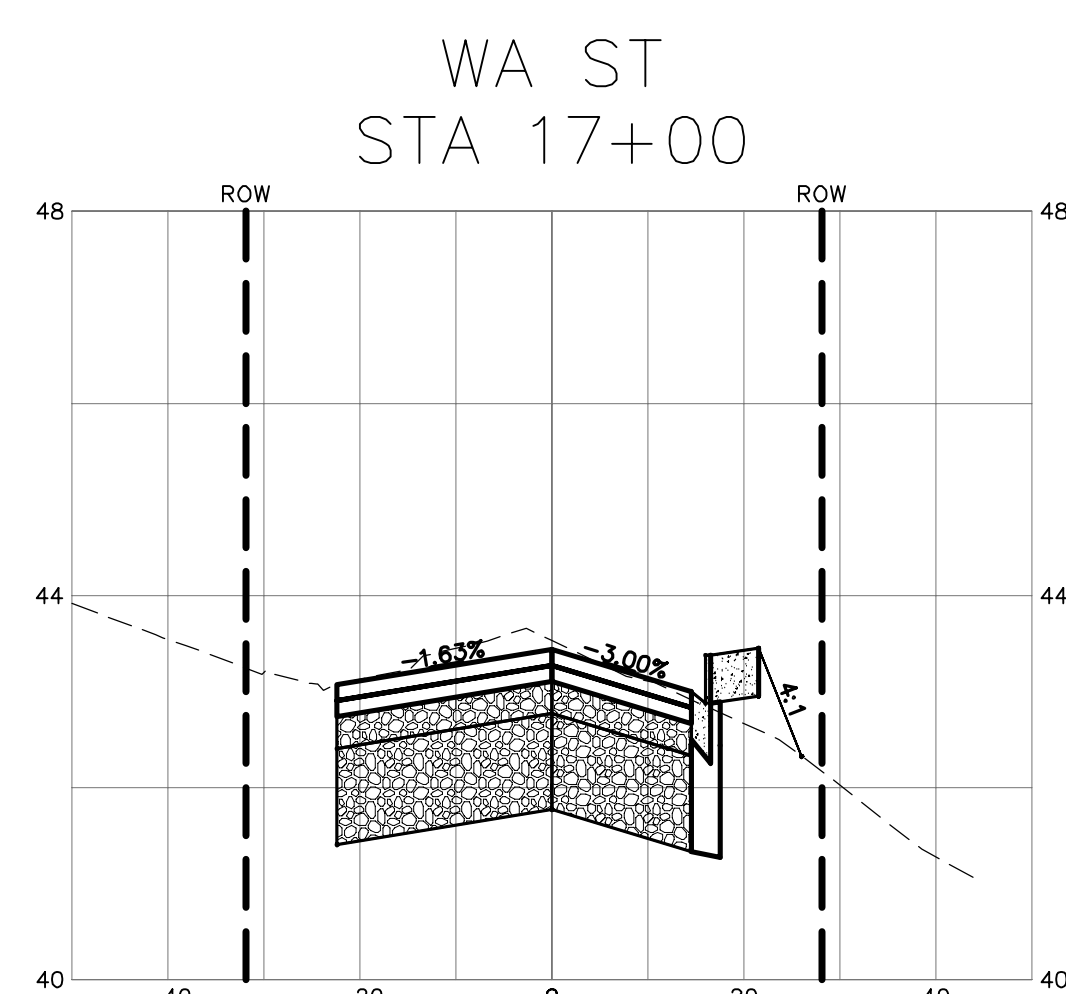
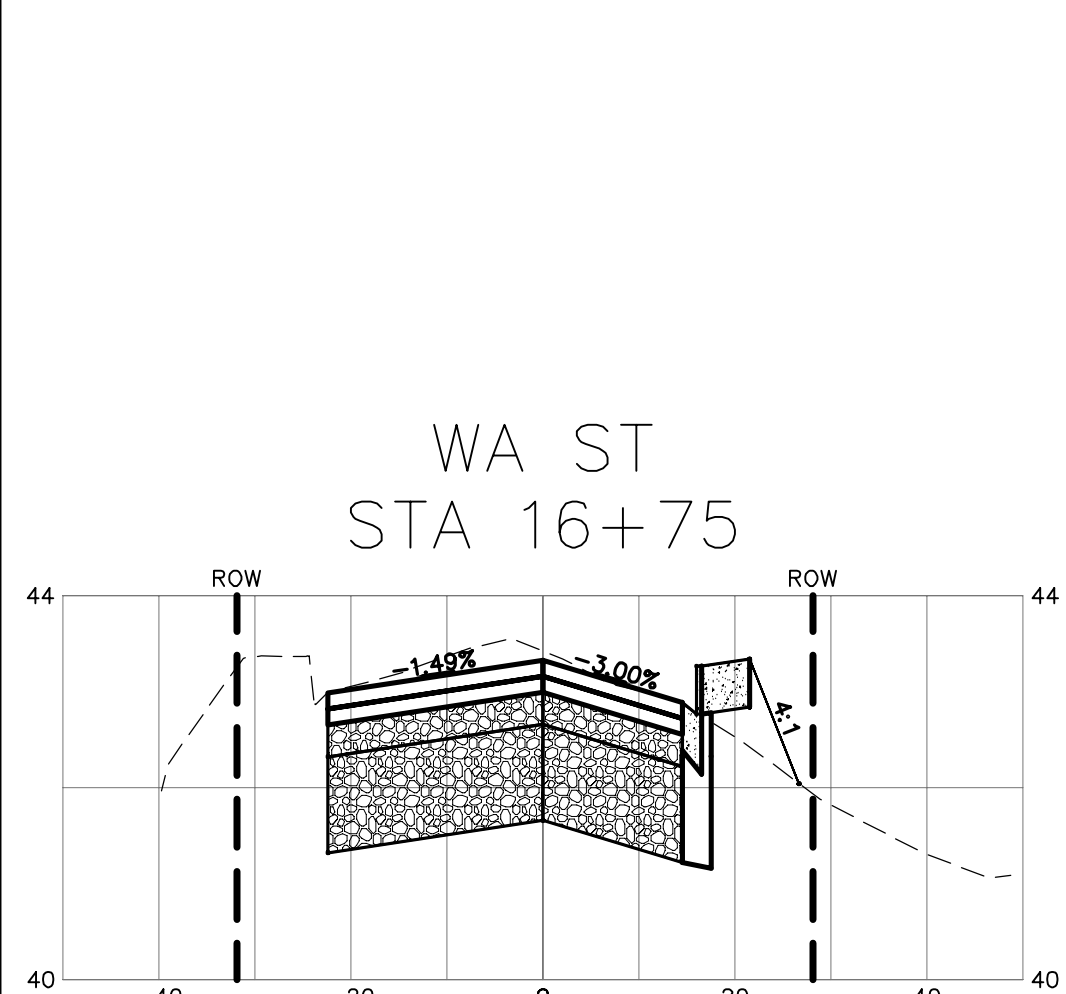
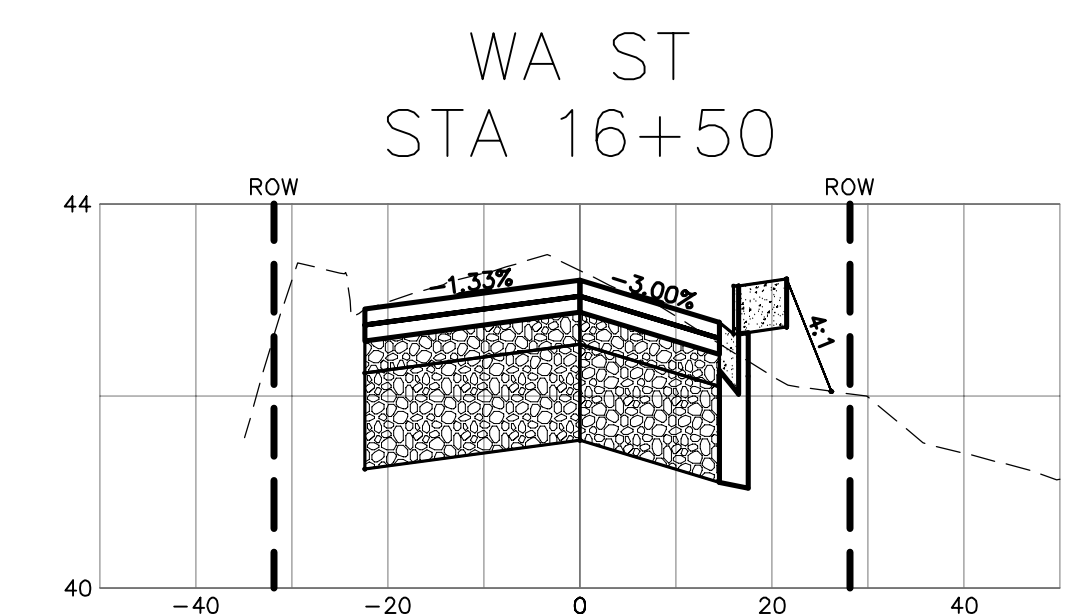
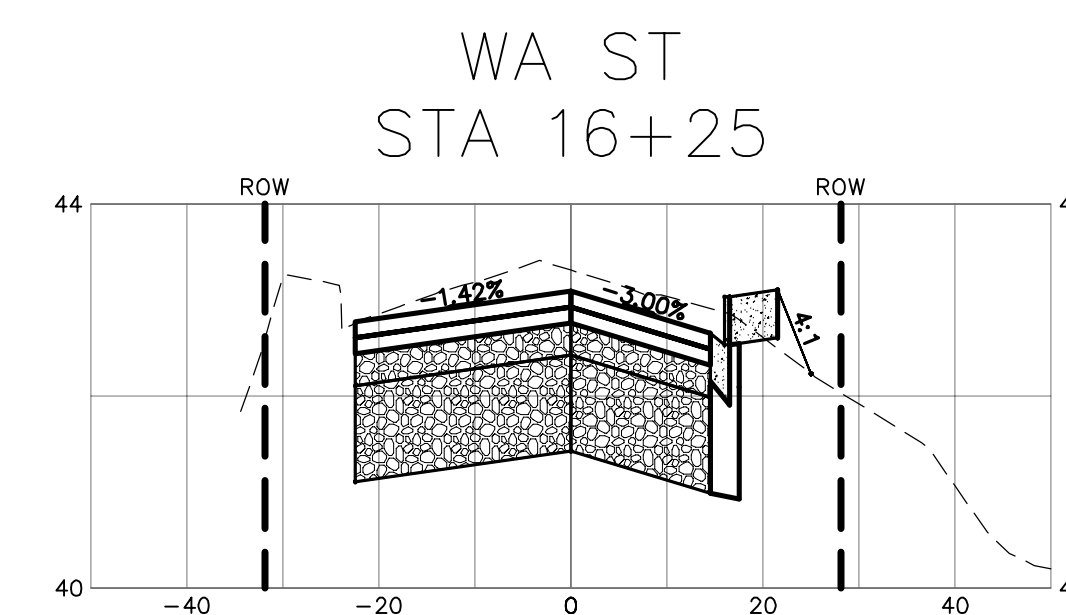
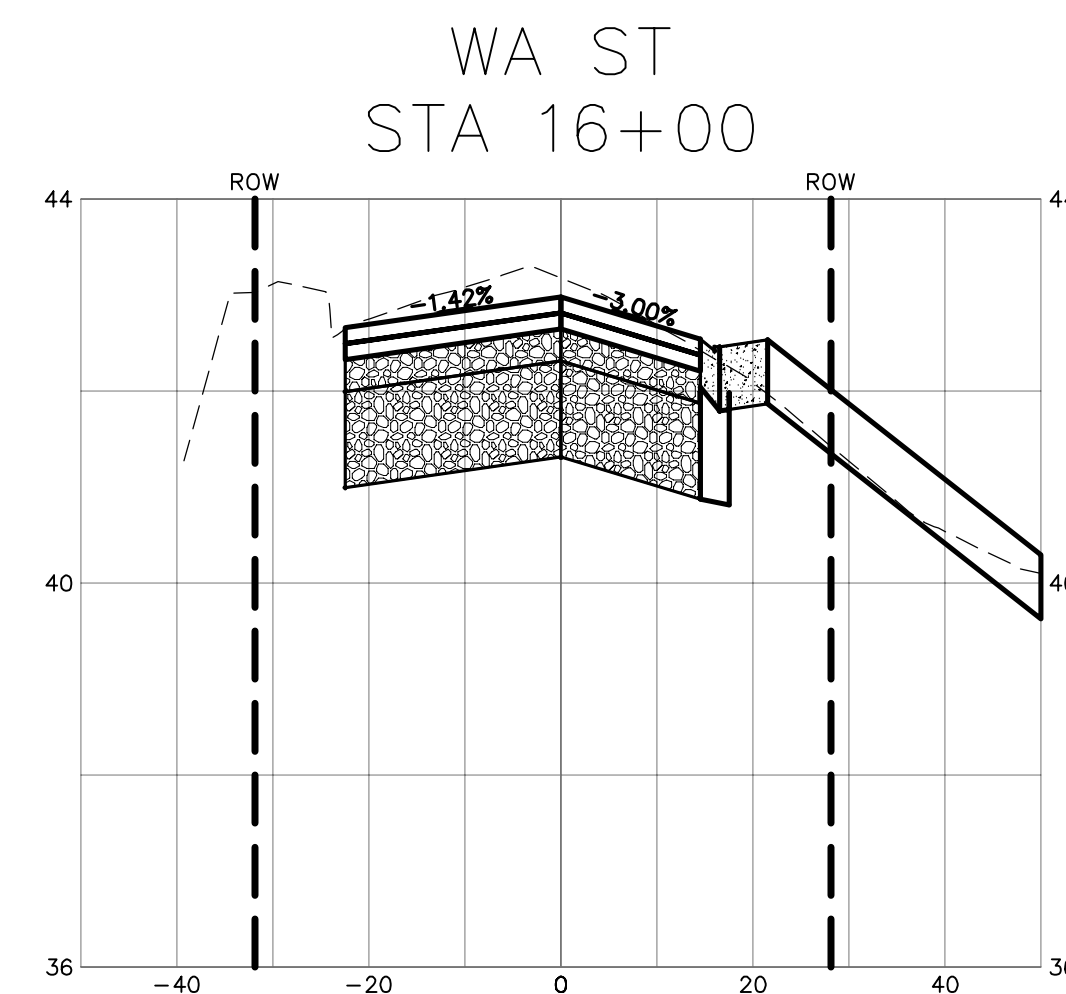
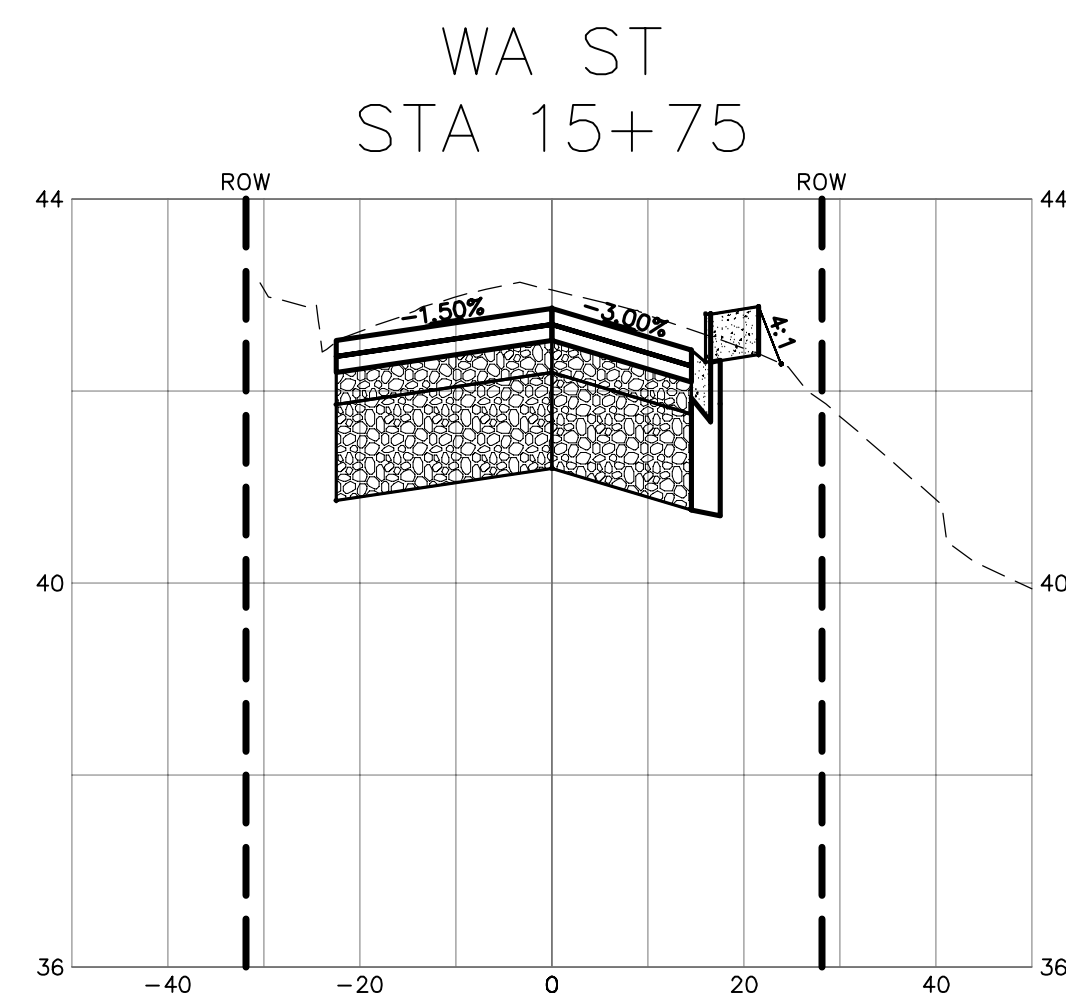
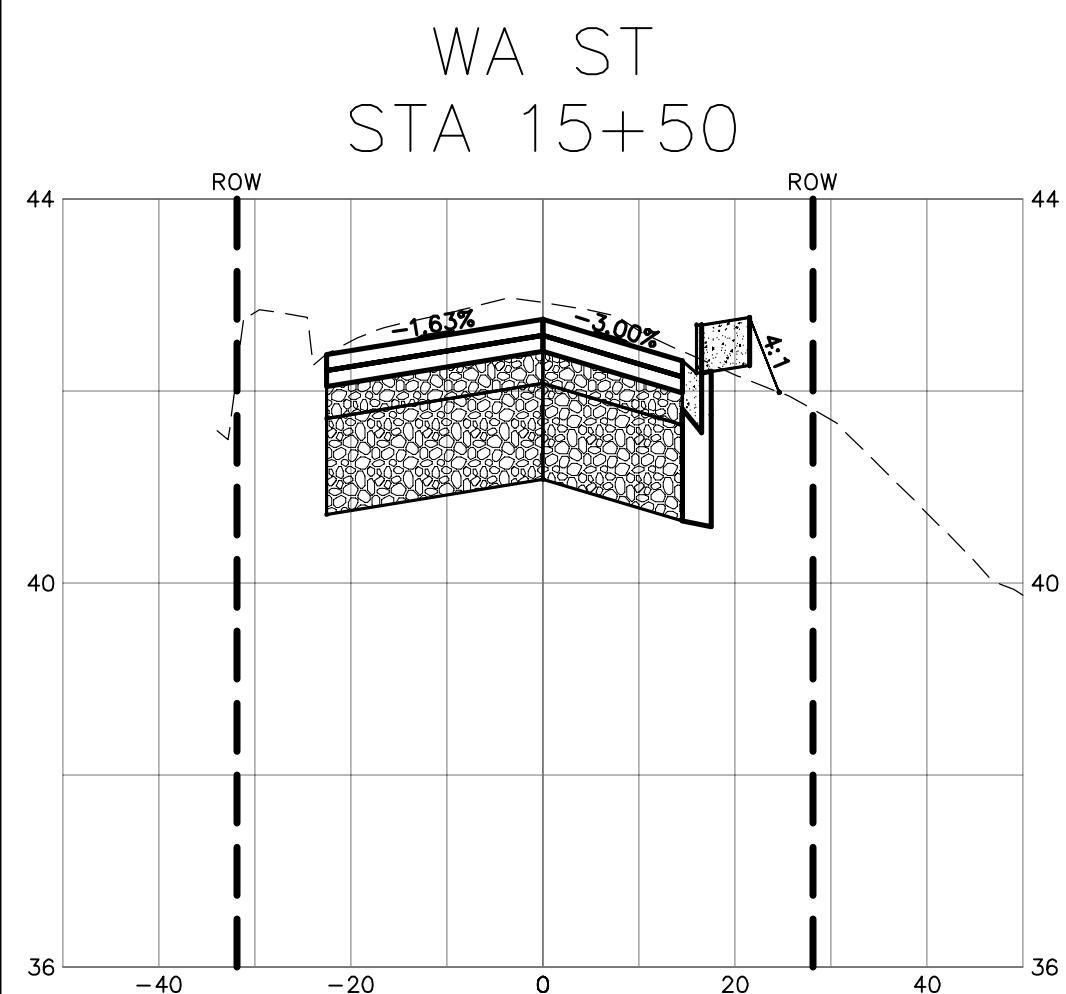
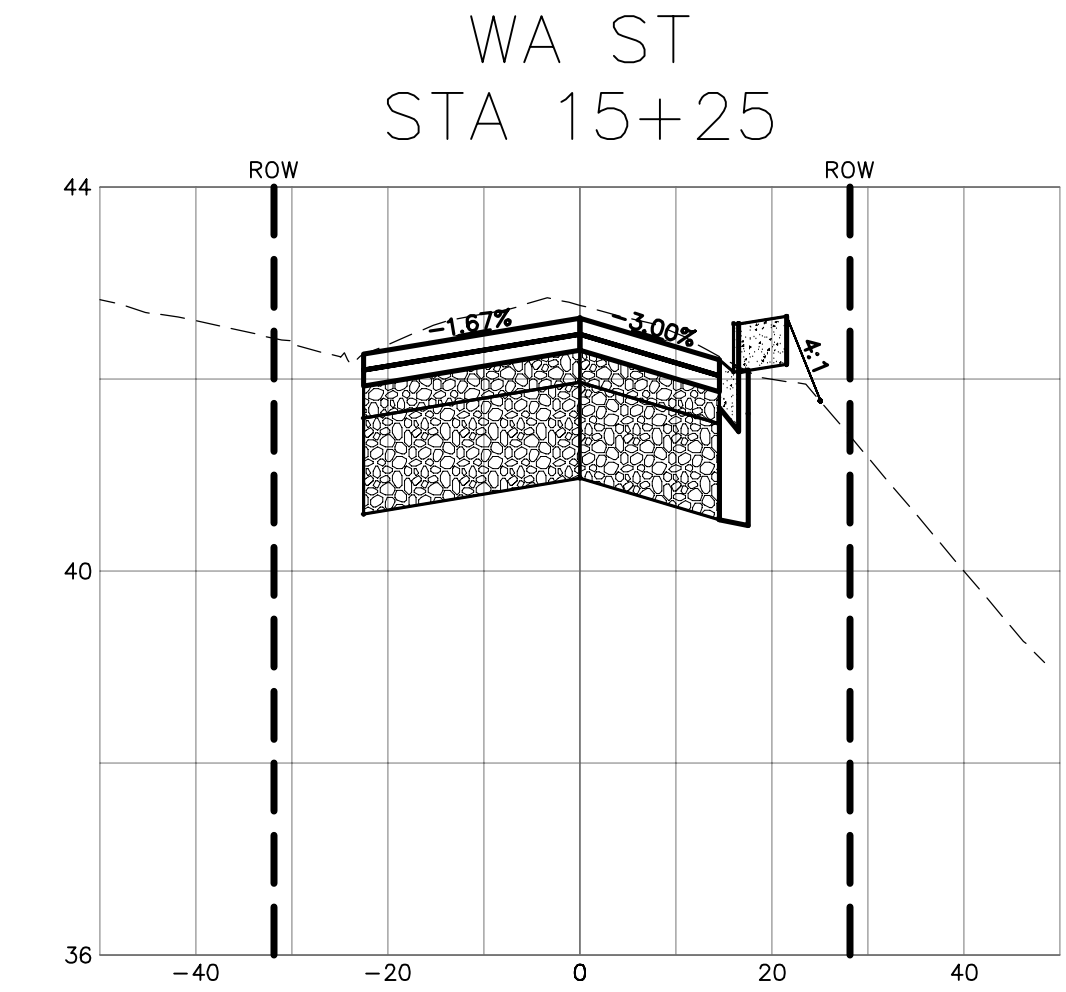
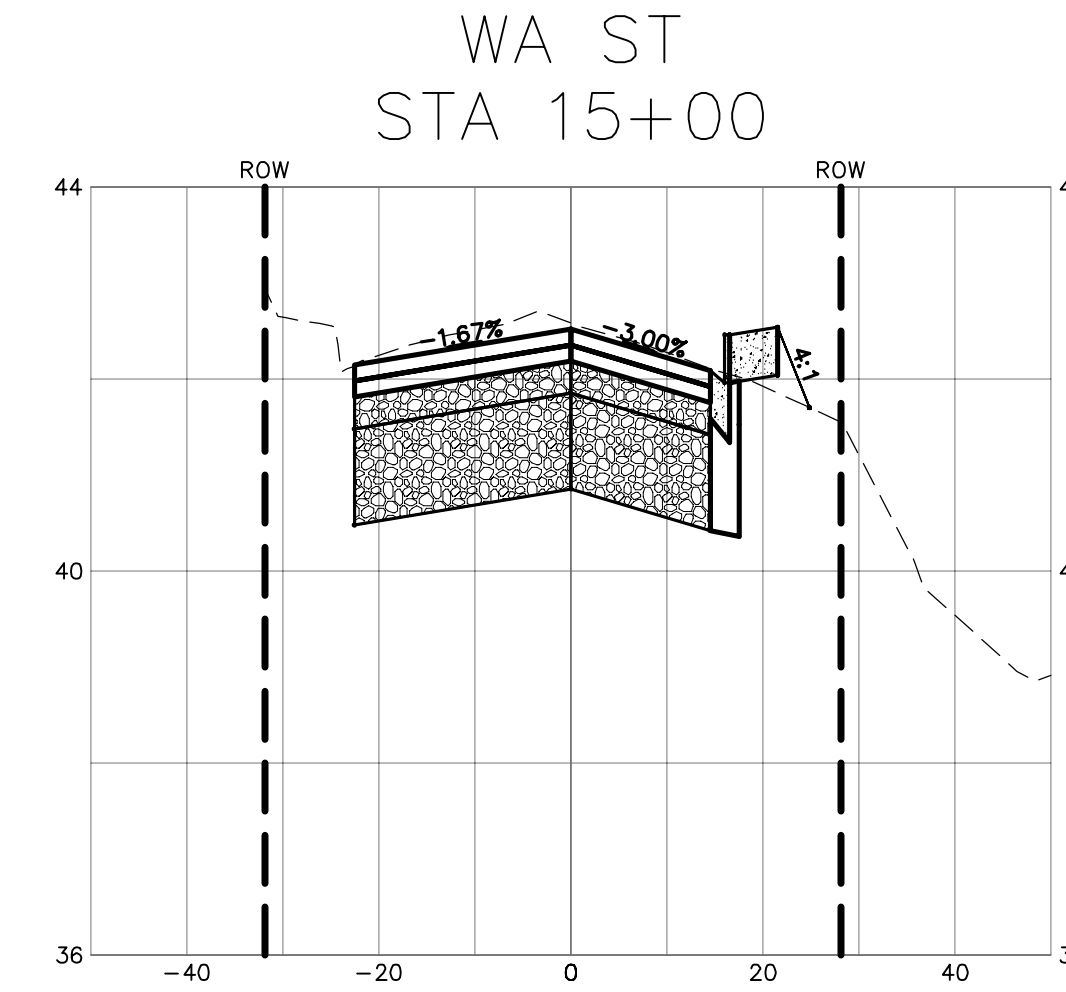
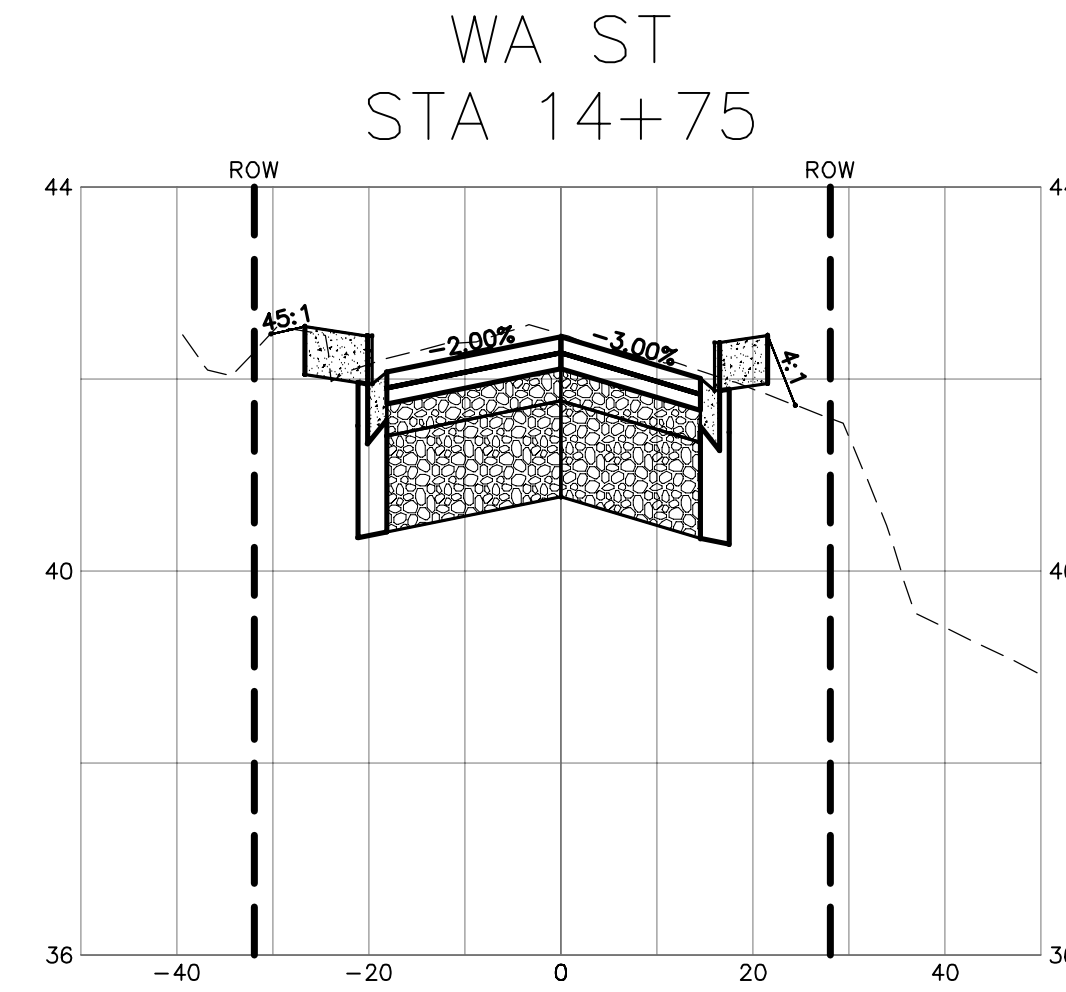
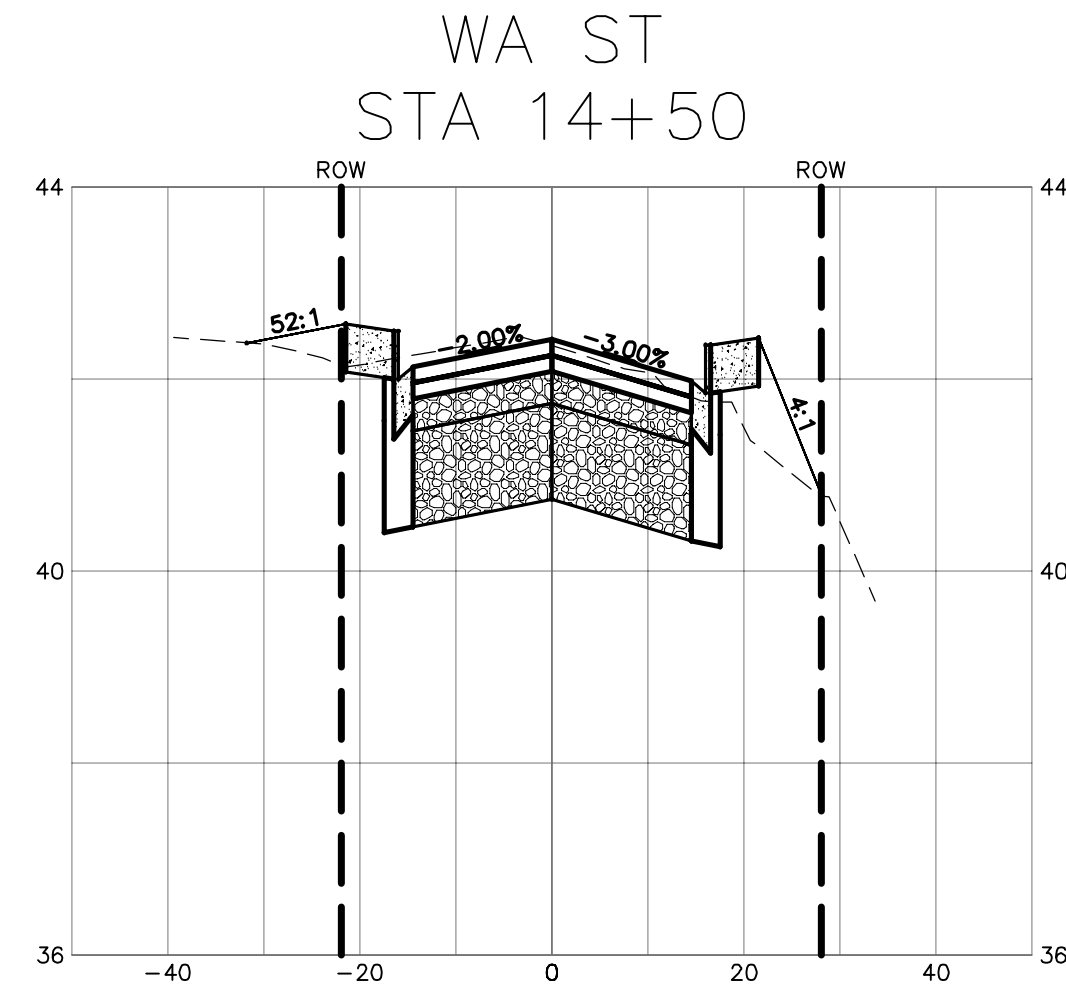
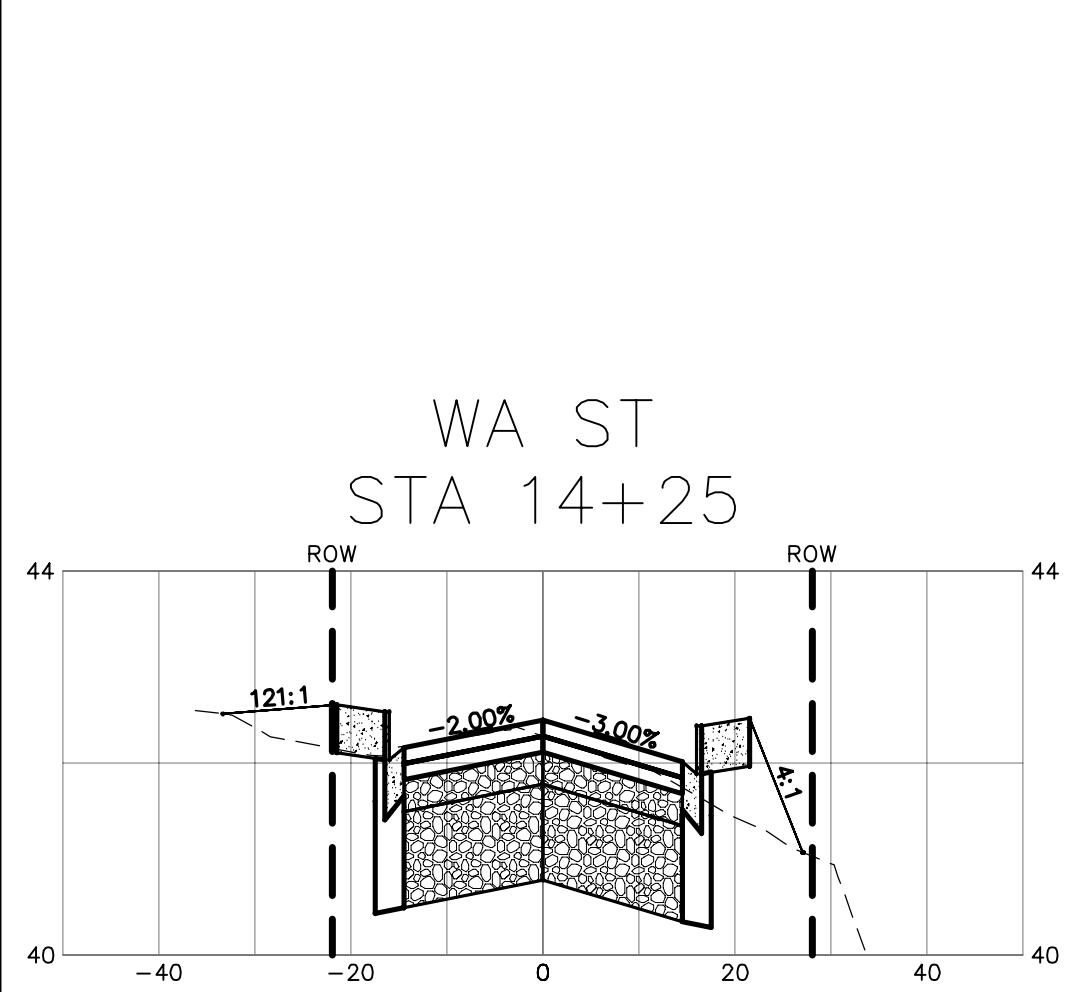
CITY OF FERDALE
2095 MAIN ST
FERDALE, WA 98248

WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
CROSS SECTIONS

DWG 16026 SEWER STORM PP
JOB# 16026
SCALE H: 1"=20' V: 1"=2'

DATE 2/13/2018
SHEET 34 of 38

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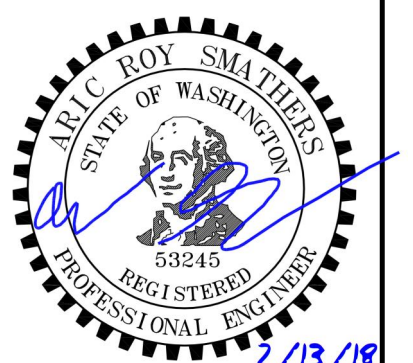
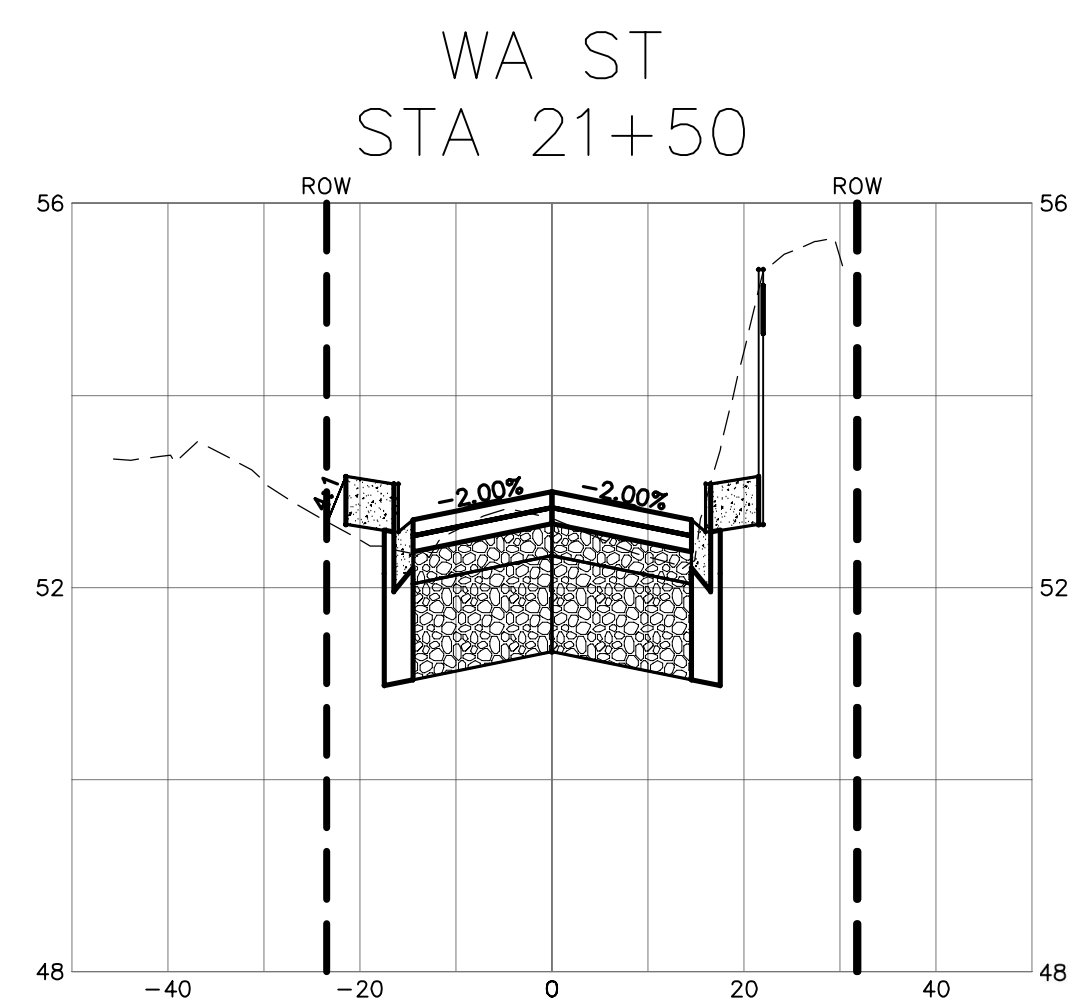
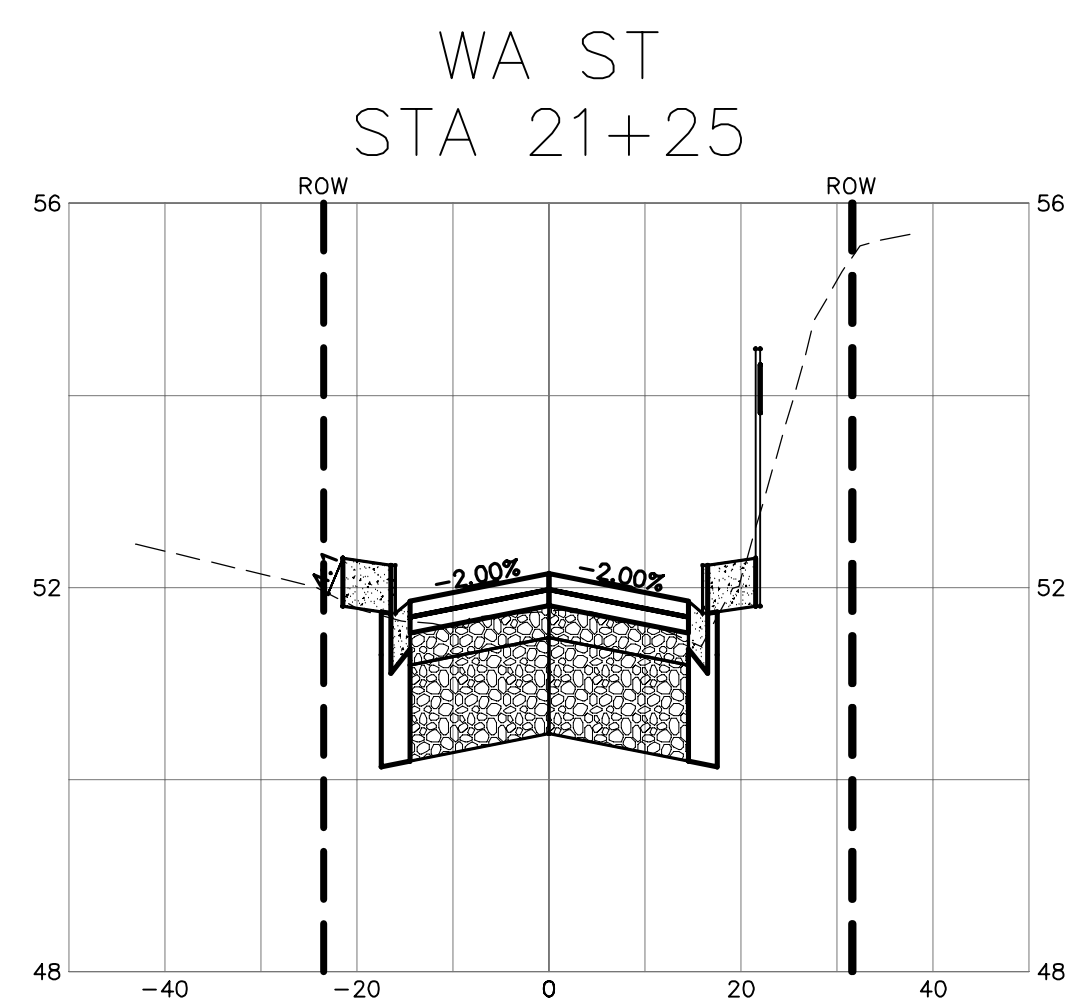
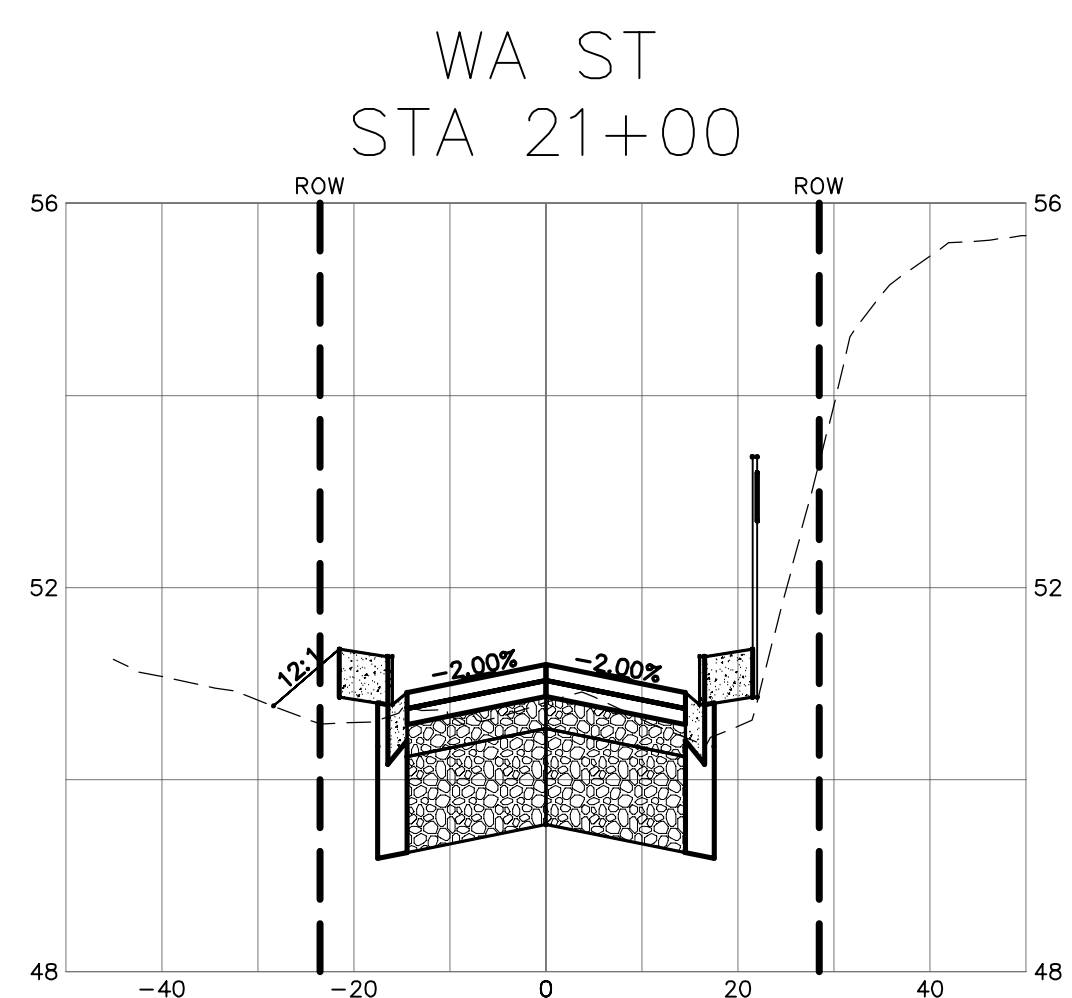
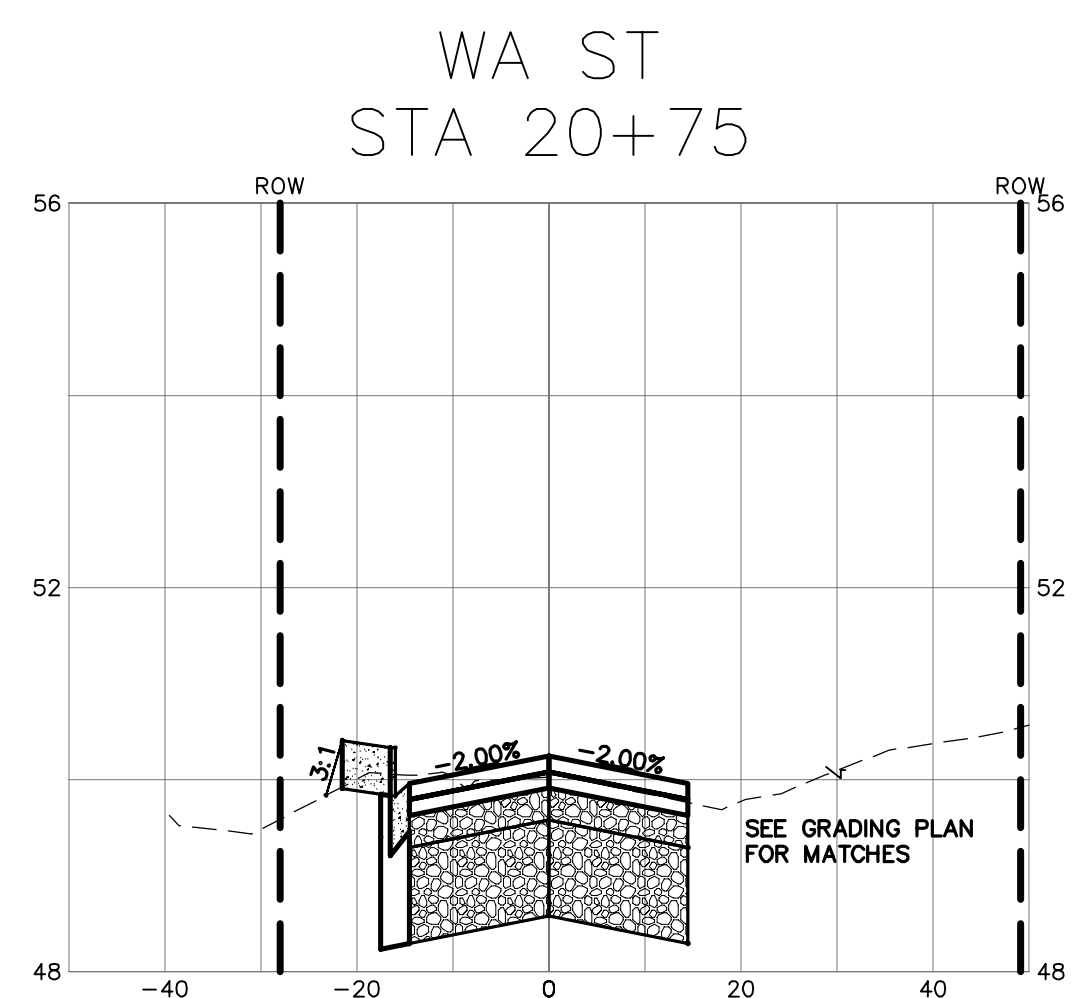
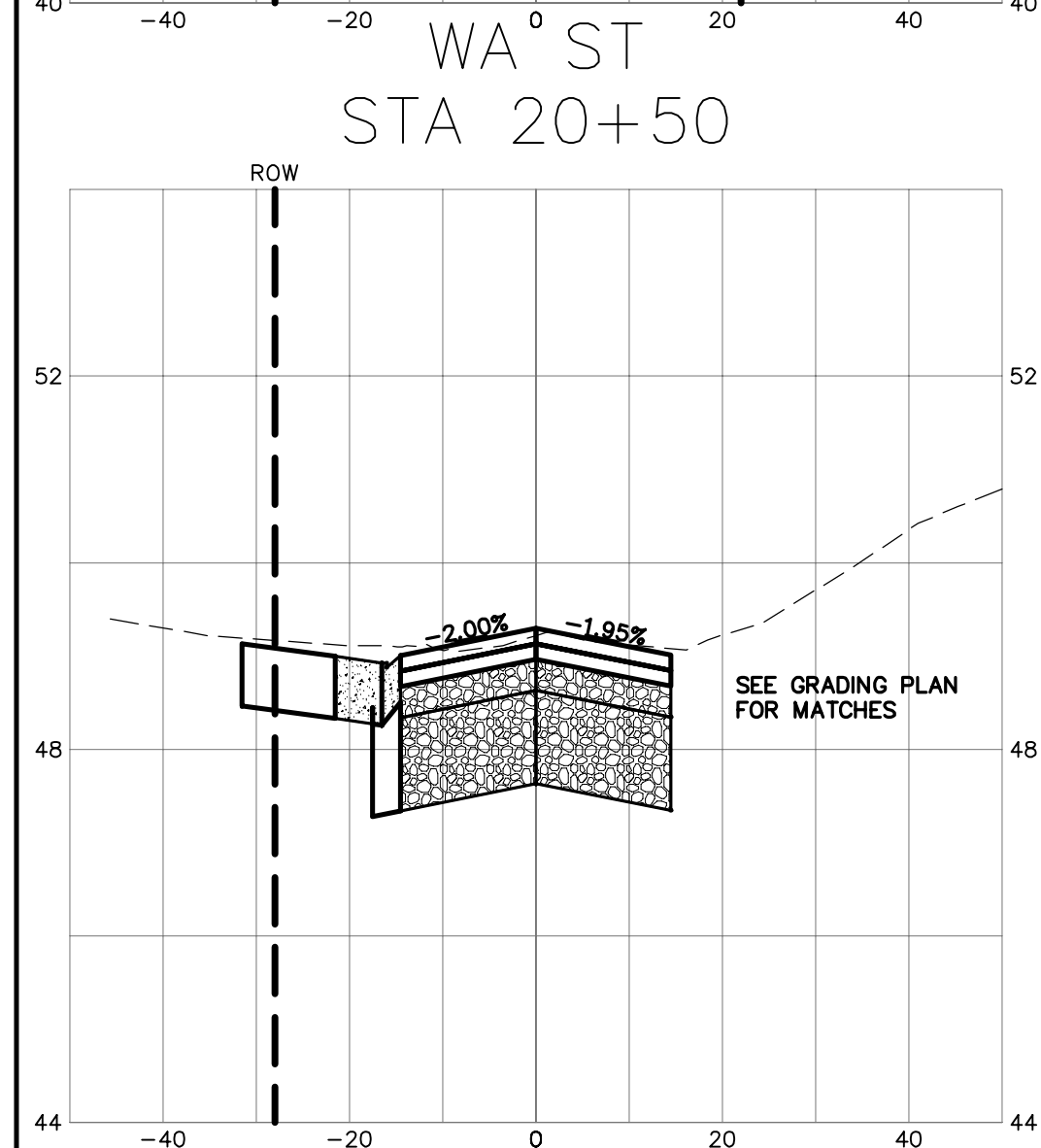
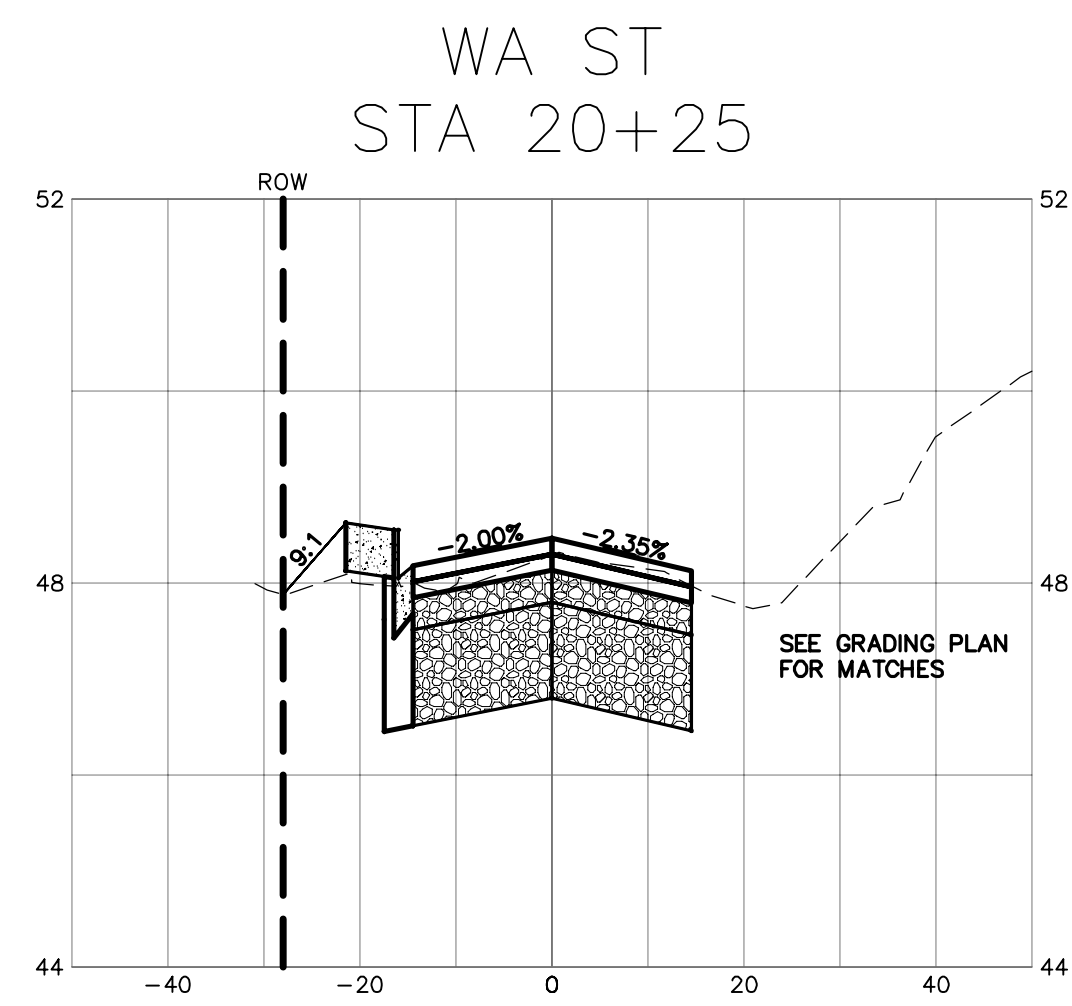
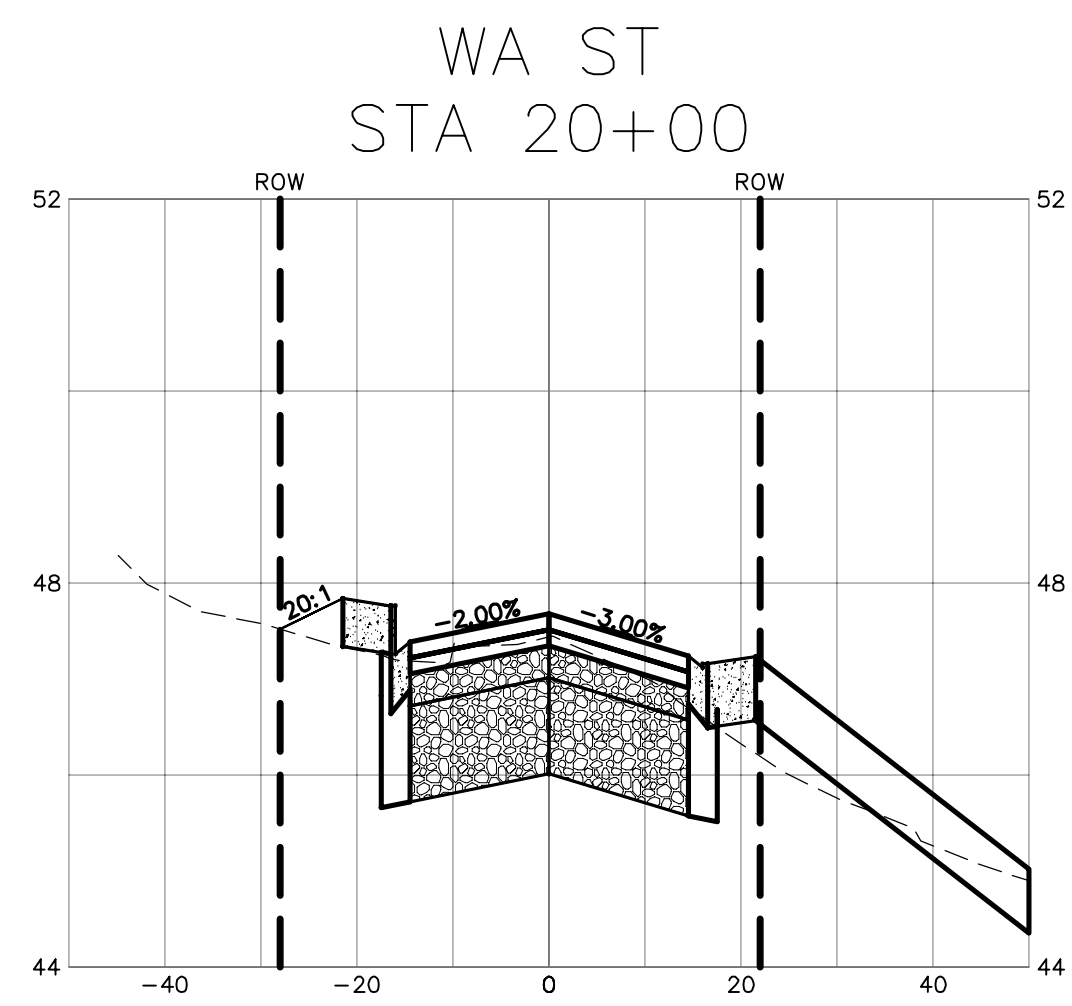
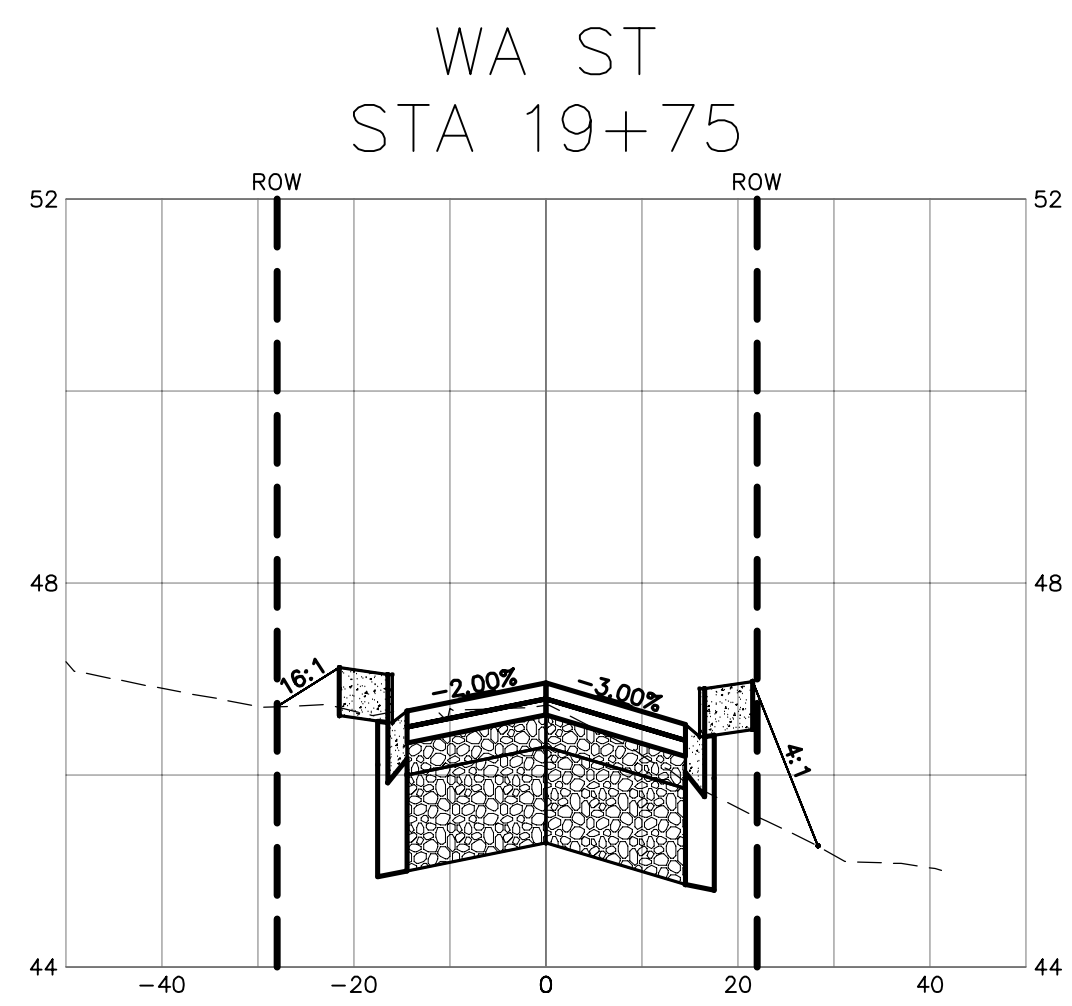
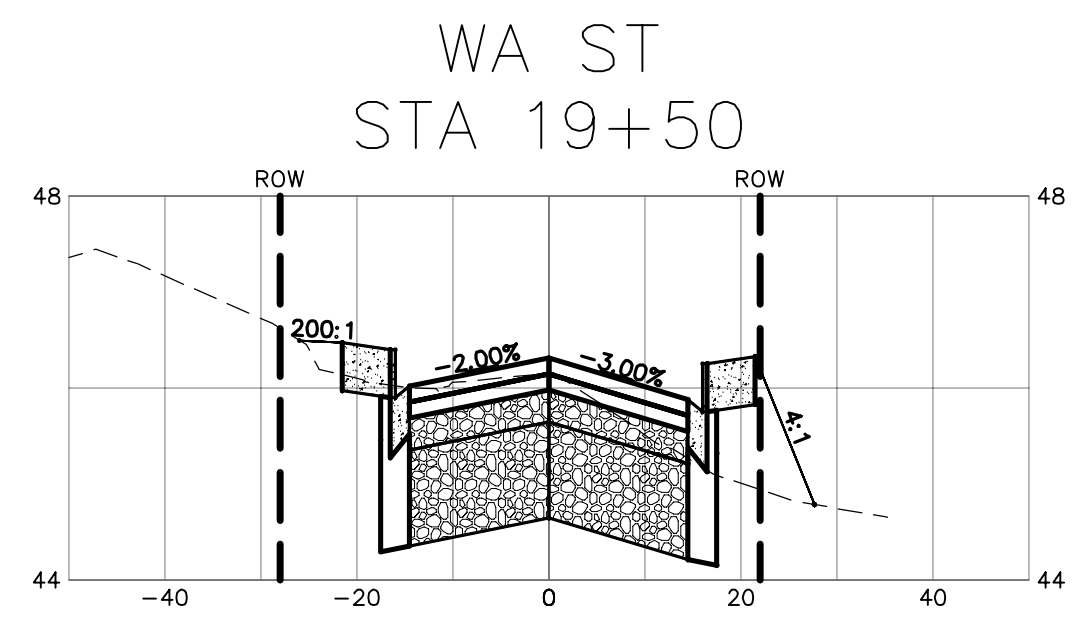
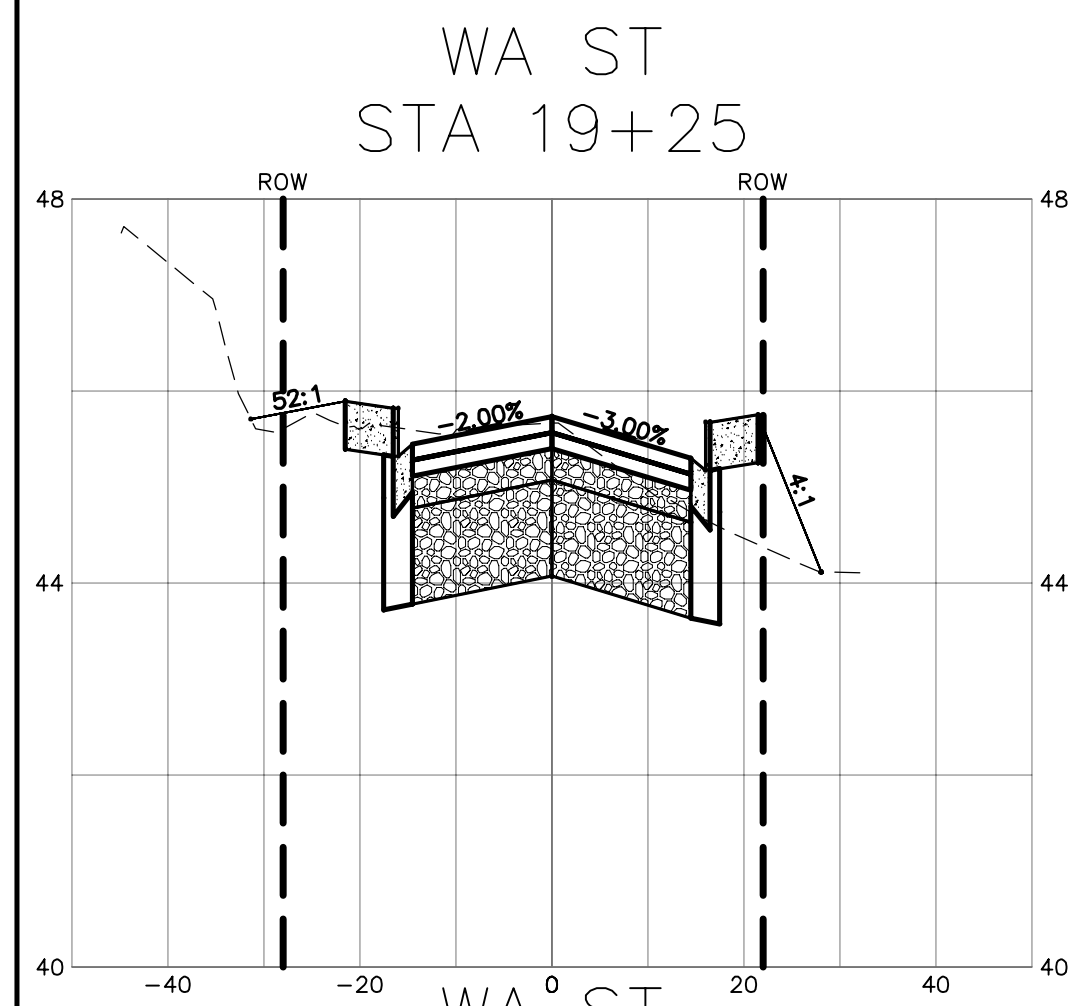
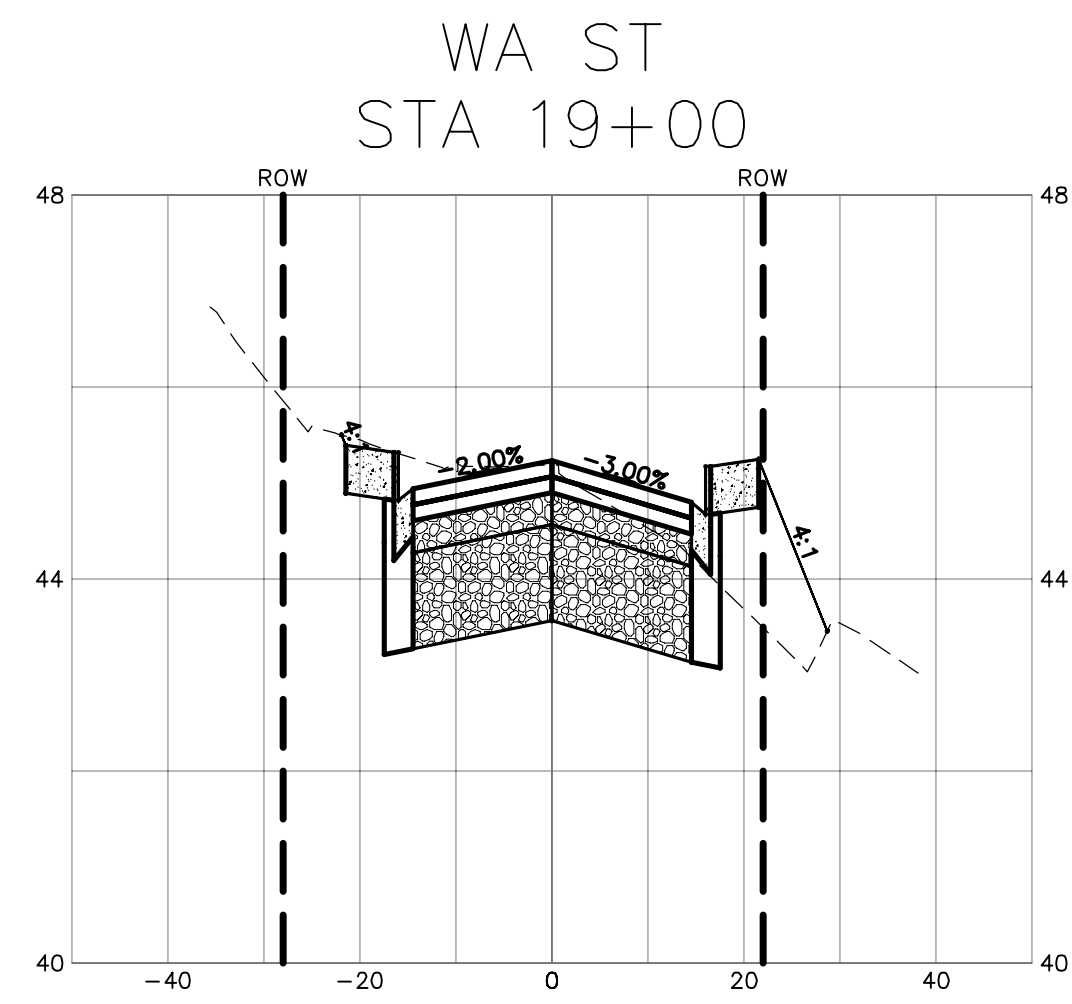
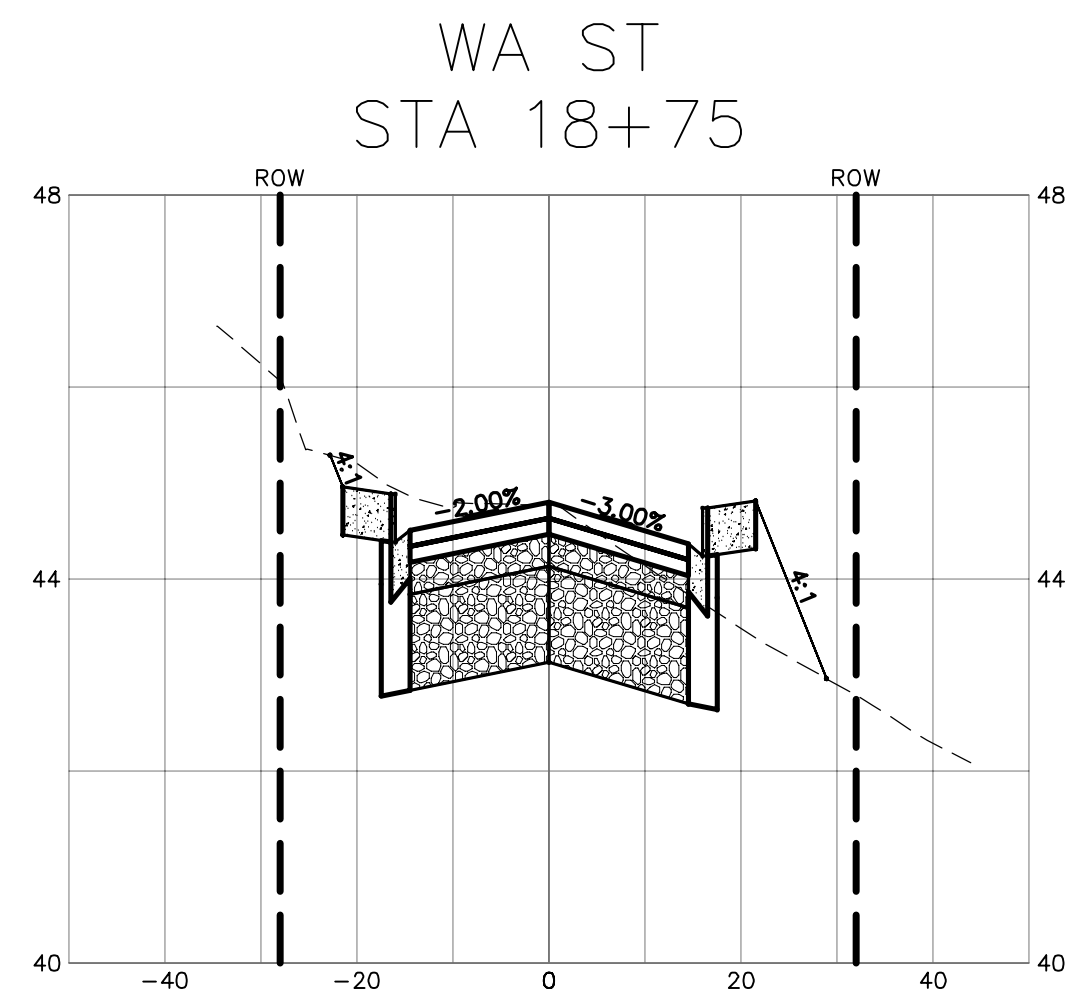
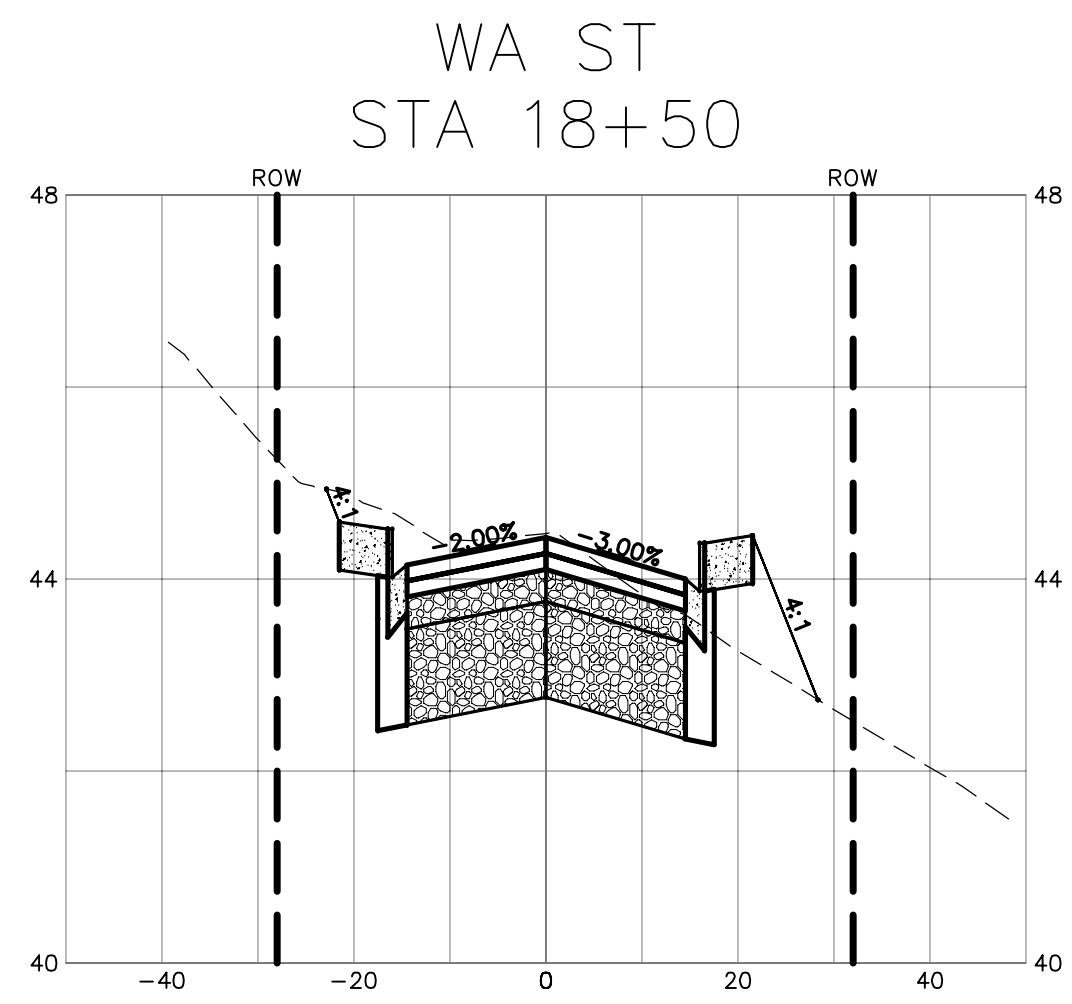
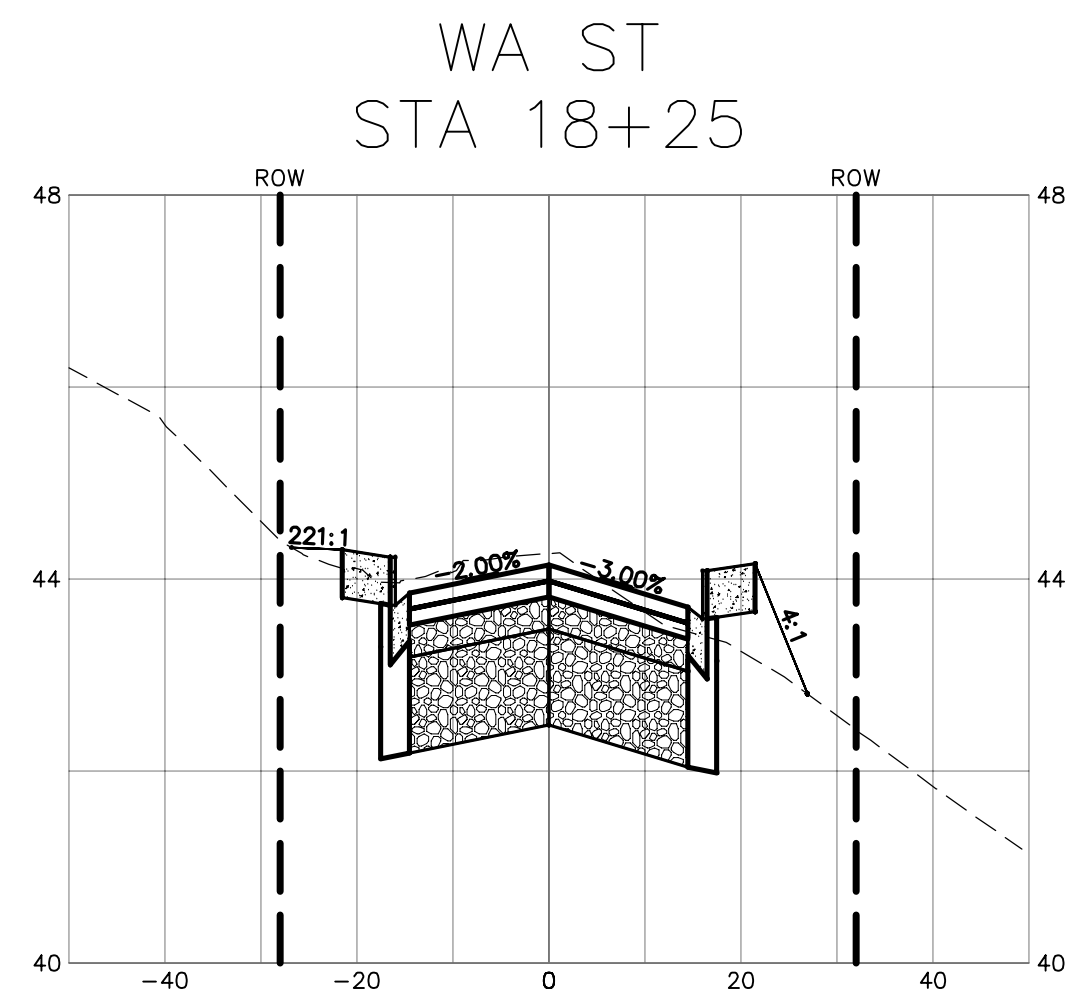
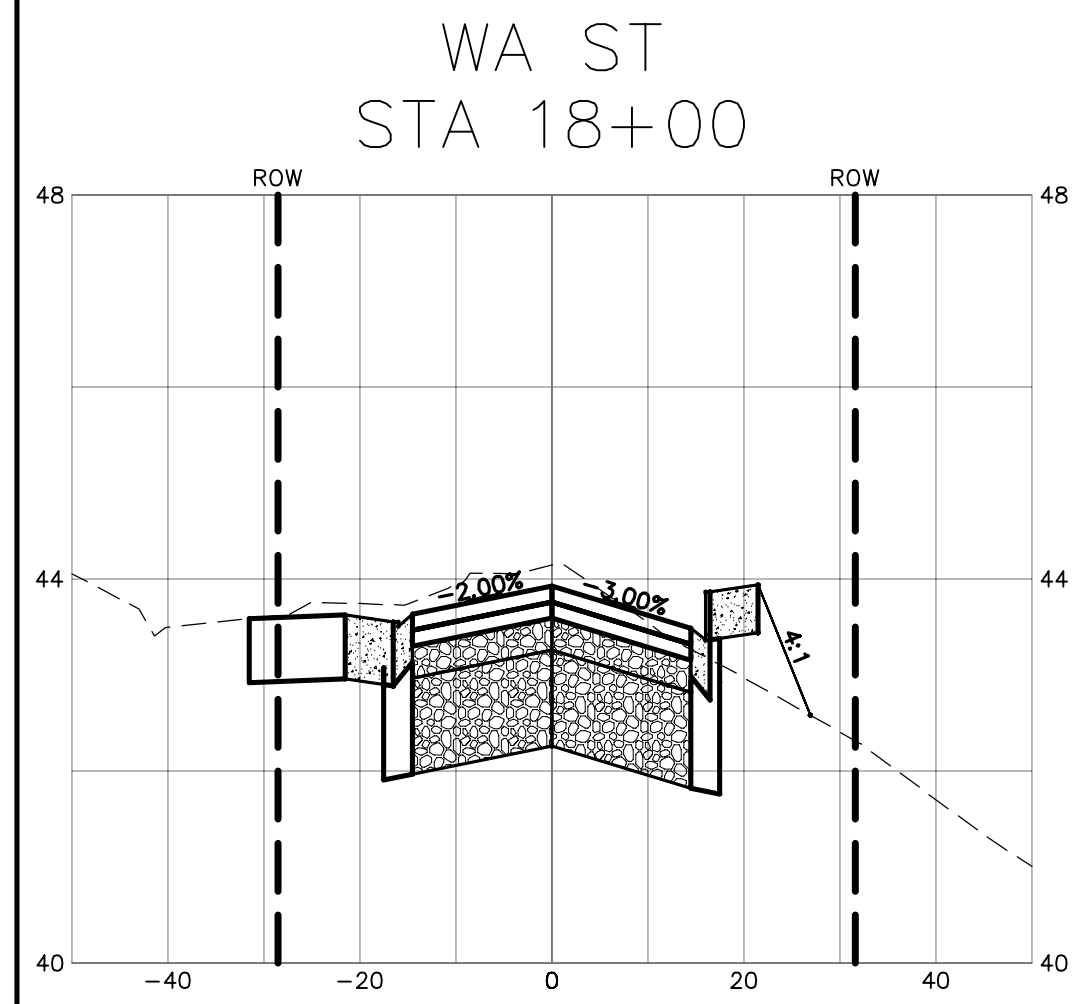
CITY OF FERNDALE
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WASHINGTON STREET IMPROVEMENTS
MAIN STREET TO VISTA DRIVE
CROSS SECTIONS

DWG 16026 SEWER STORM PP
JOB# 16026
SCALE H: 1"=20' V: 1"=2'

DATE 2/13/2018
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of 38

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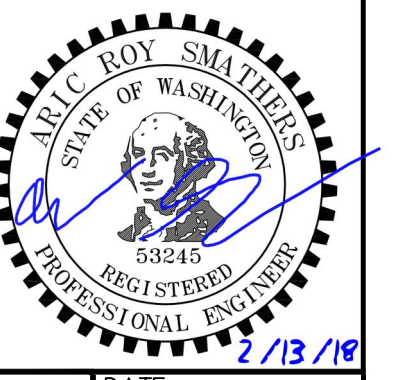
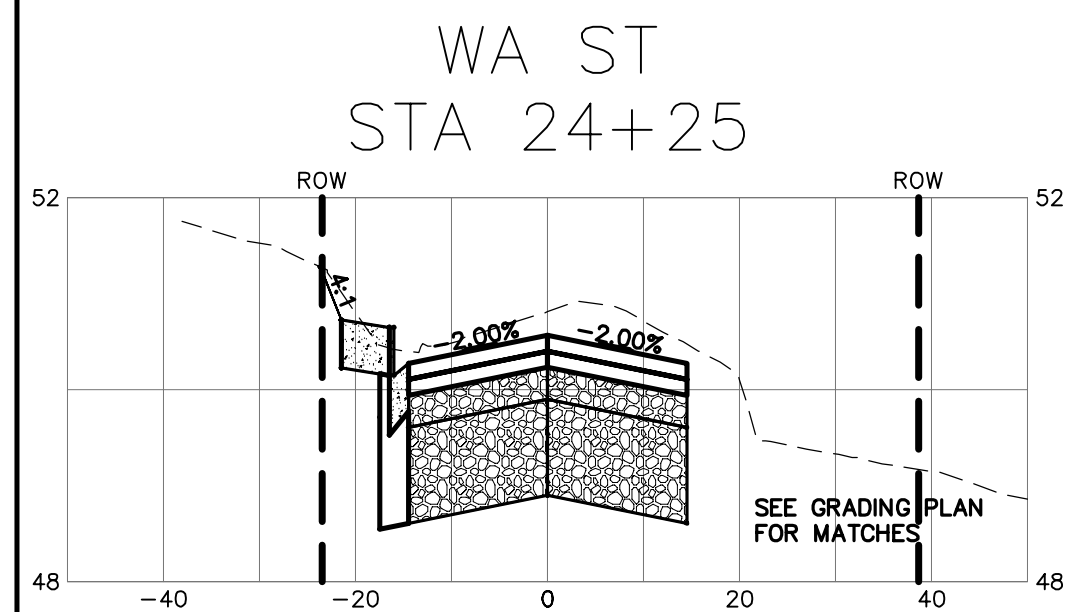
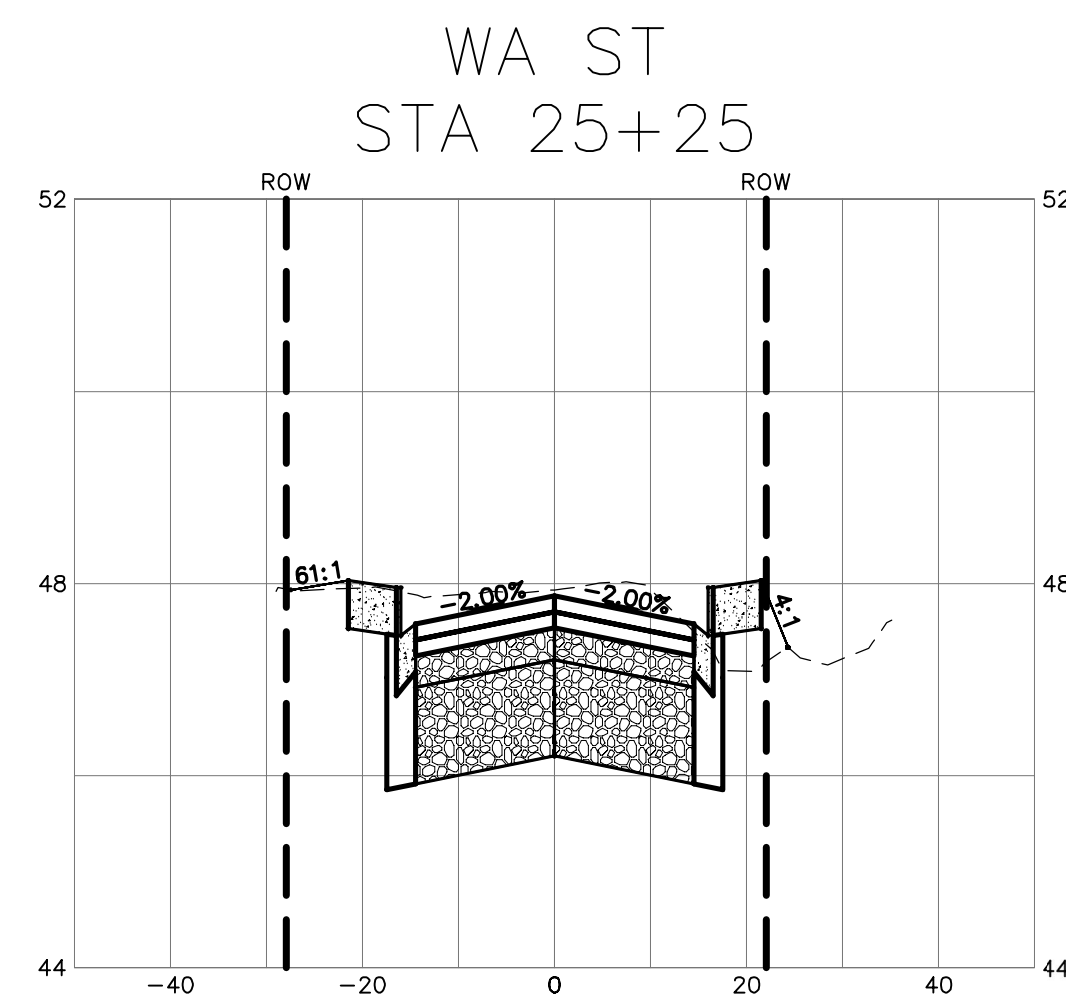
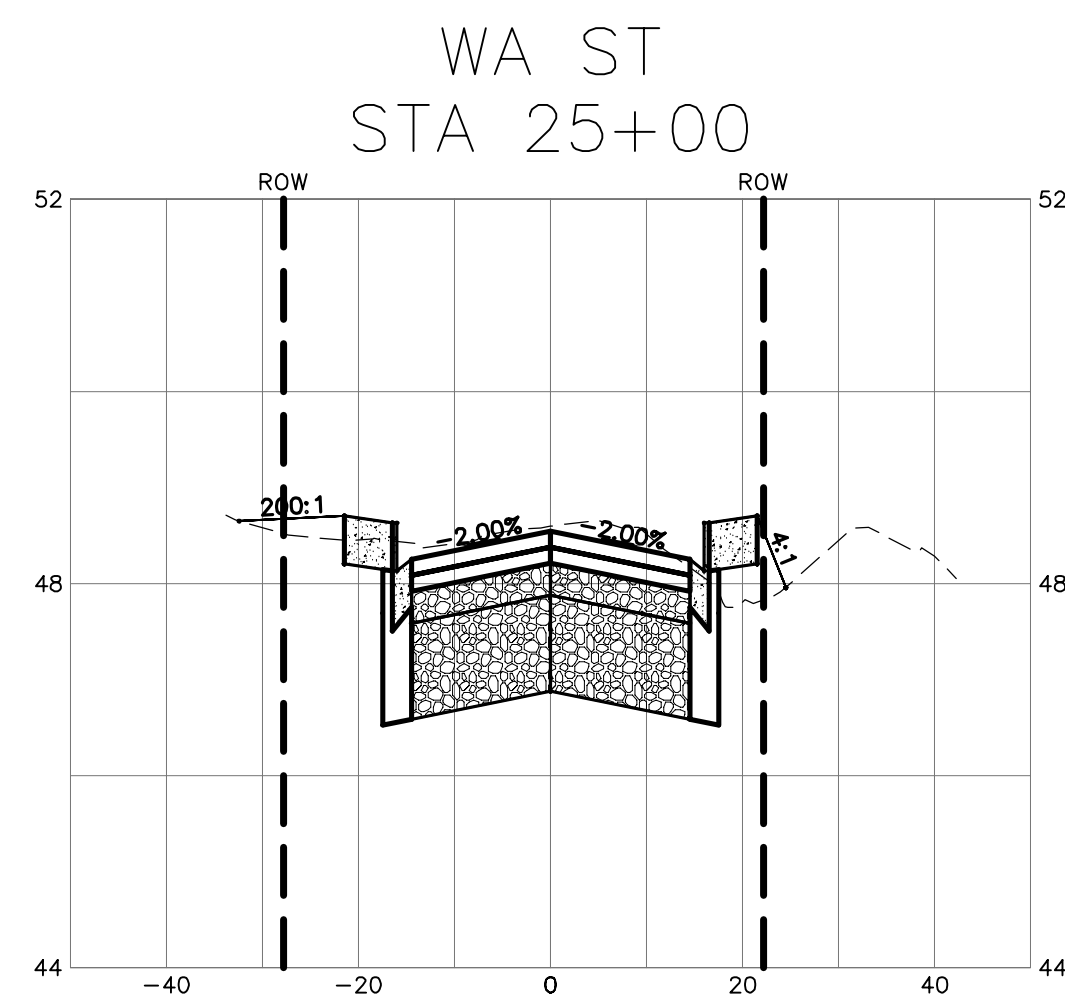
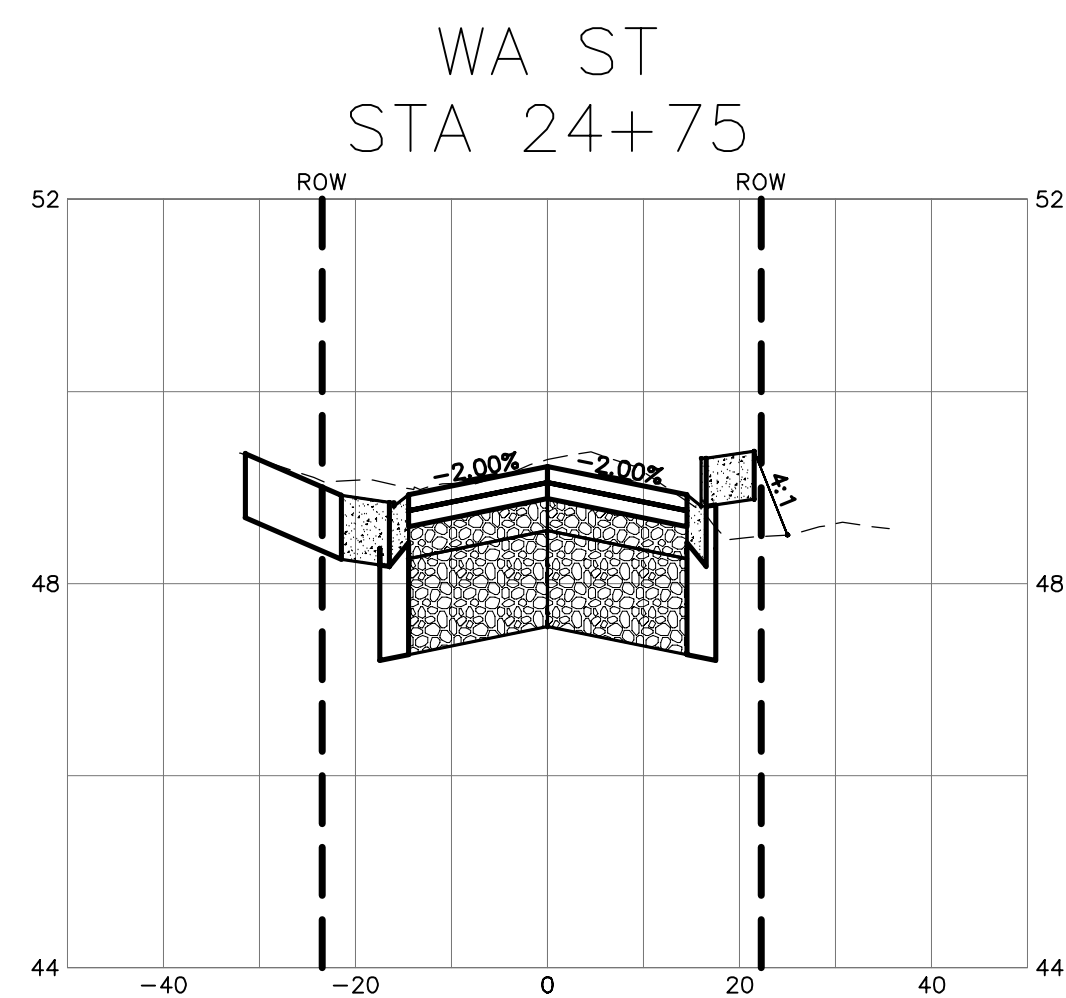
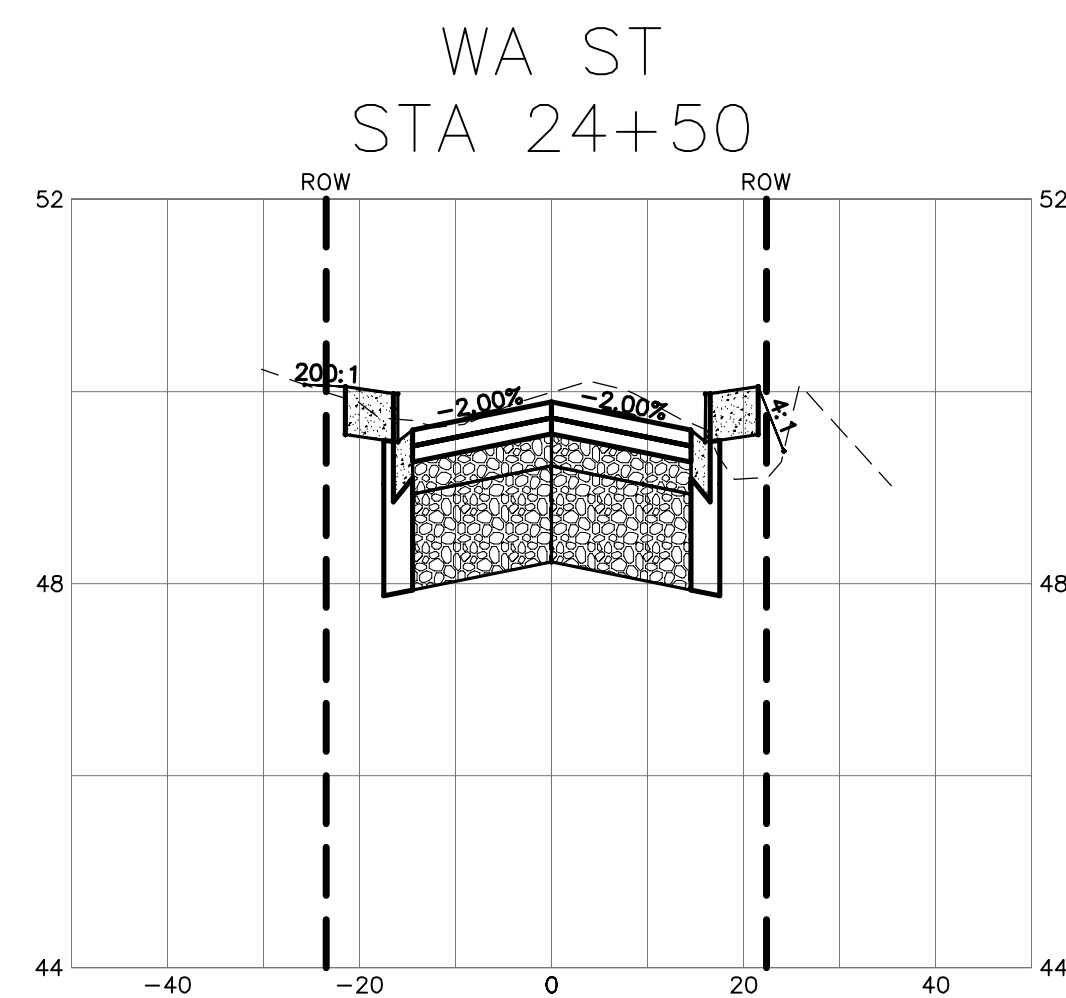
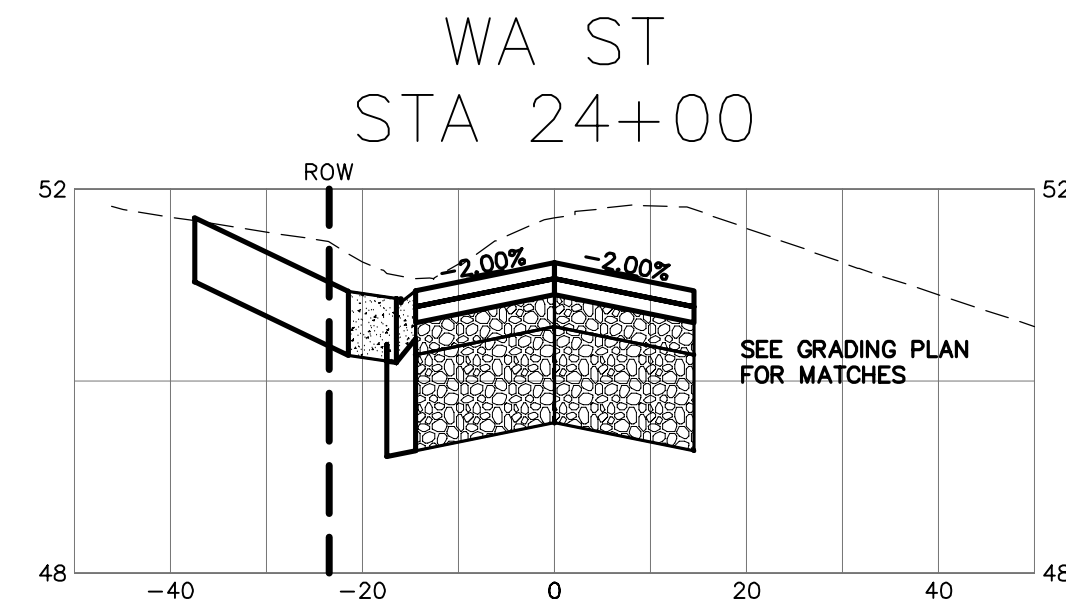
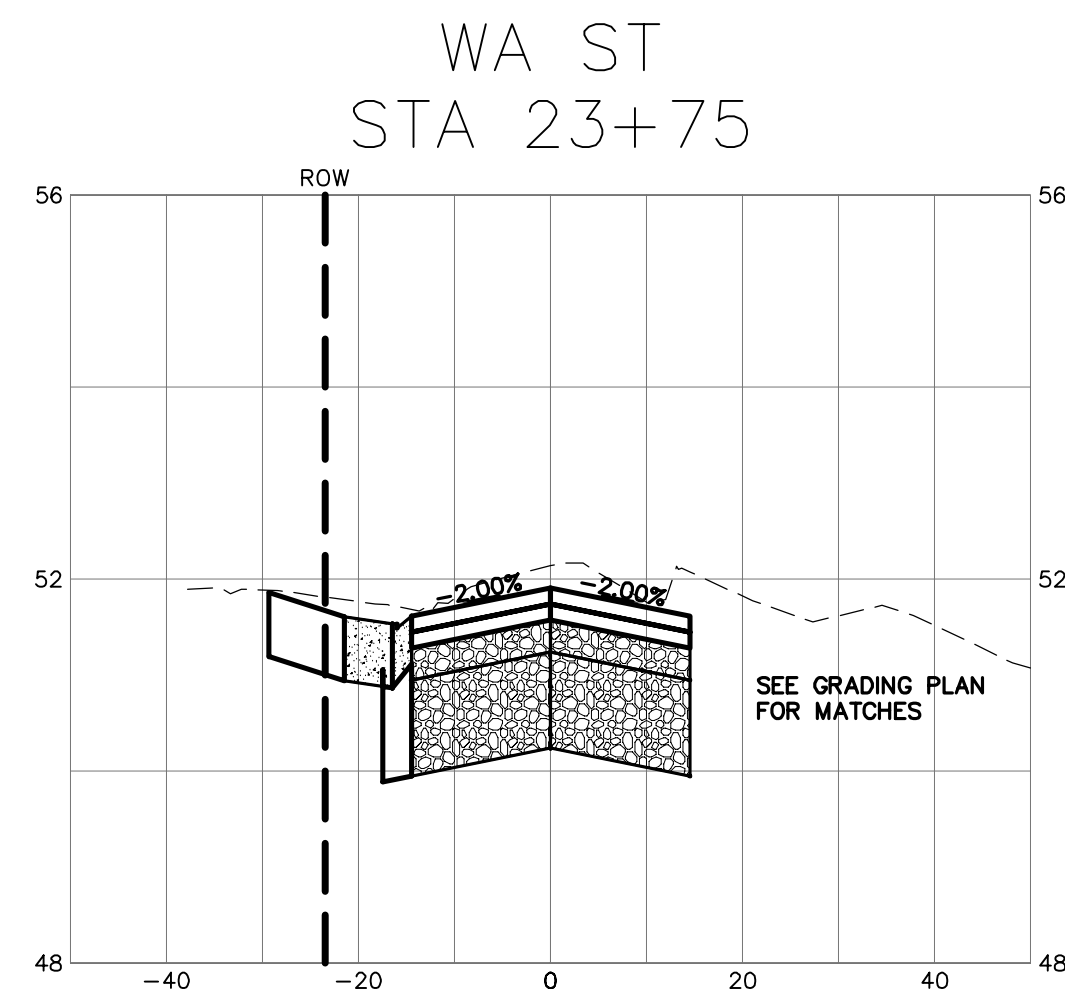
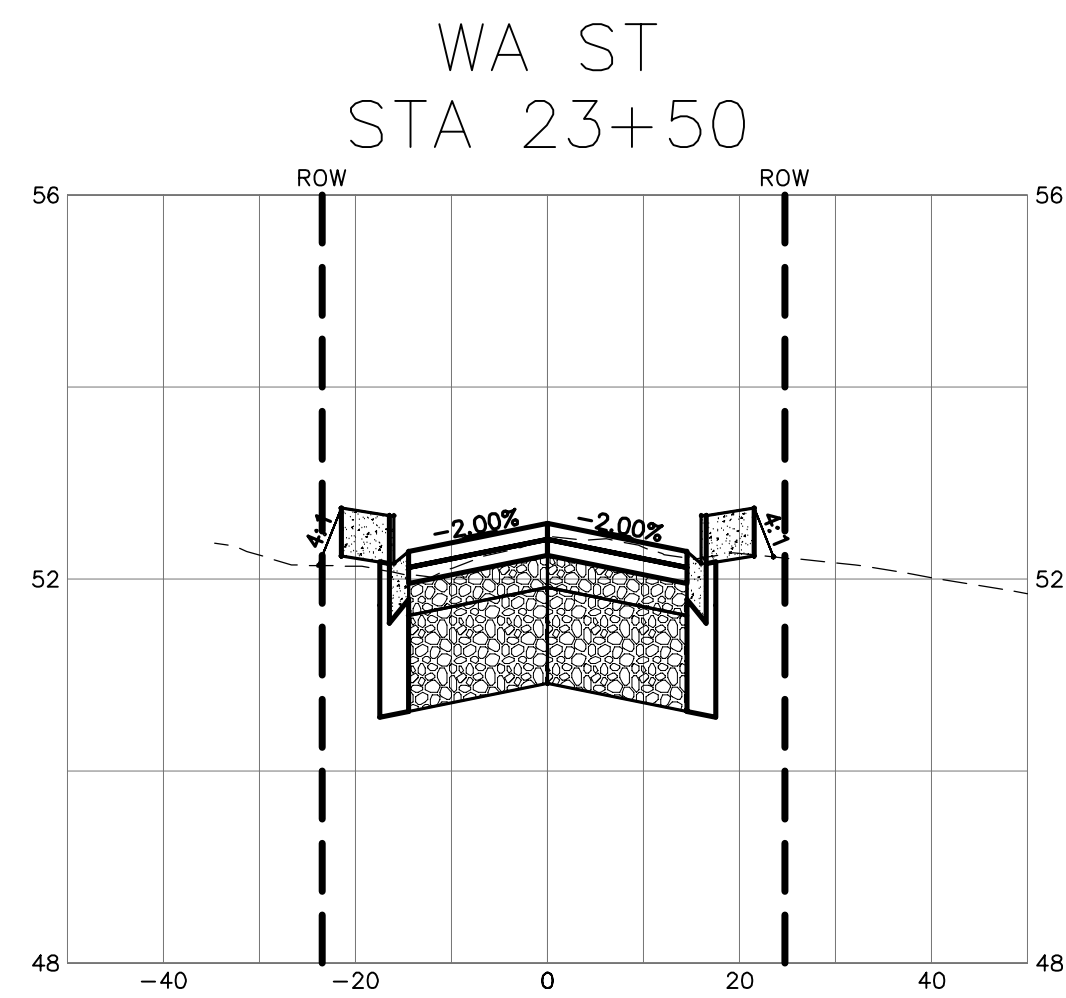
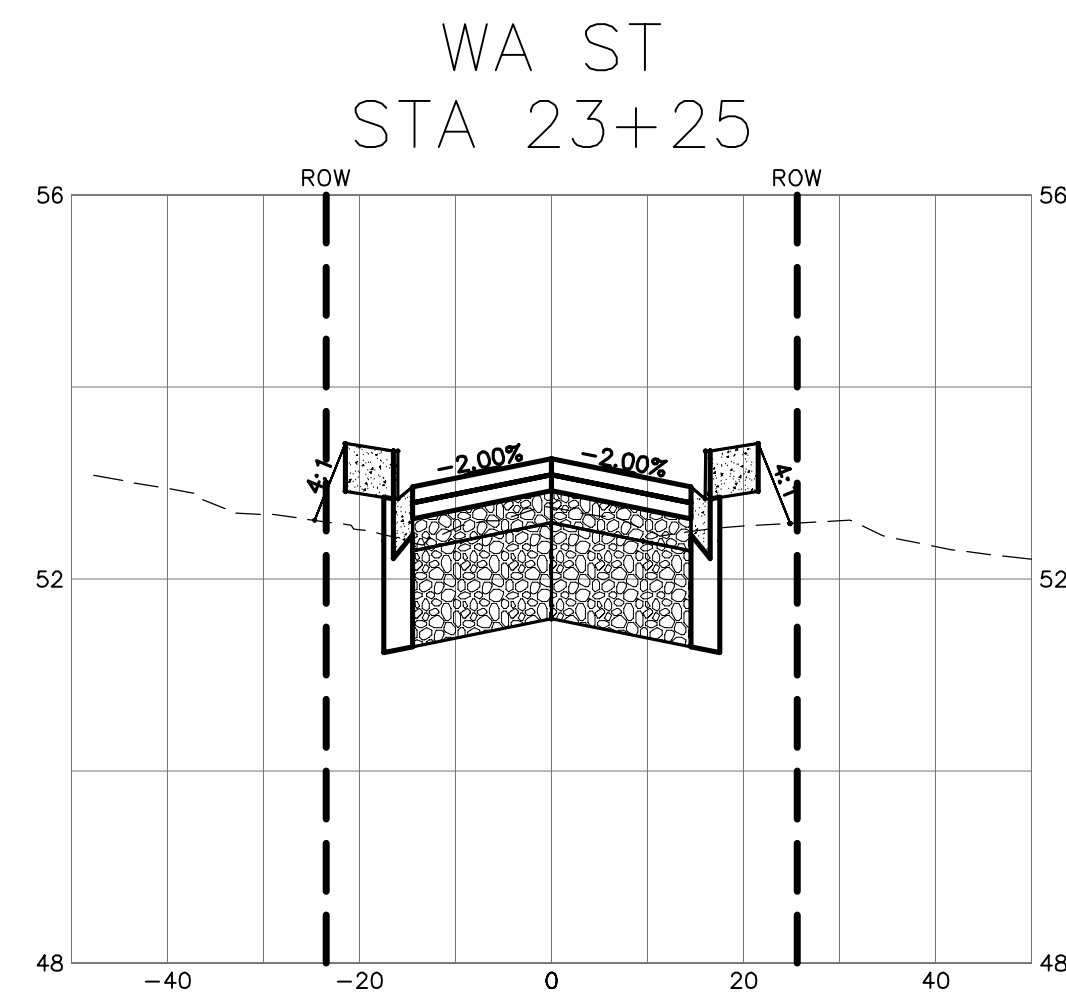
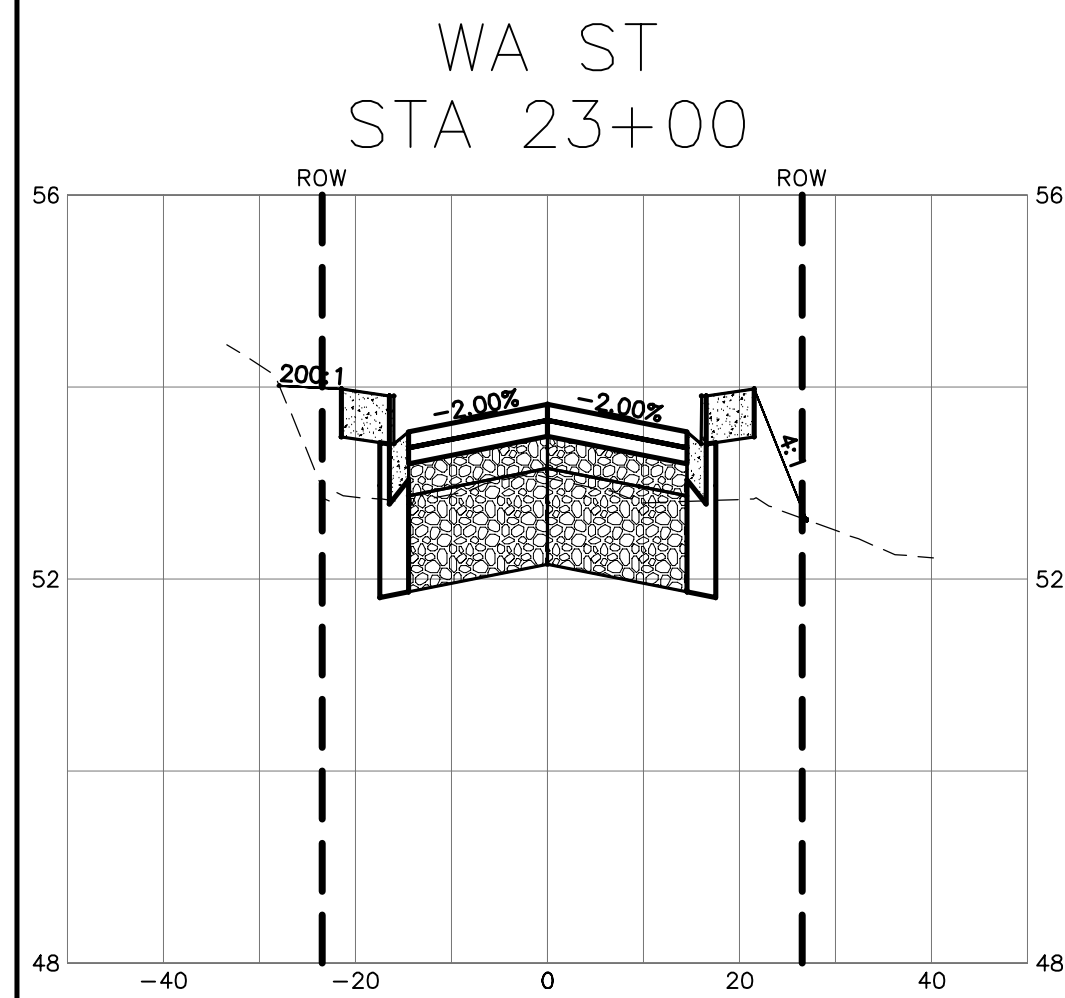
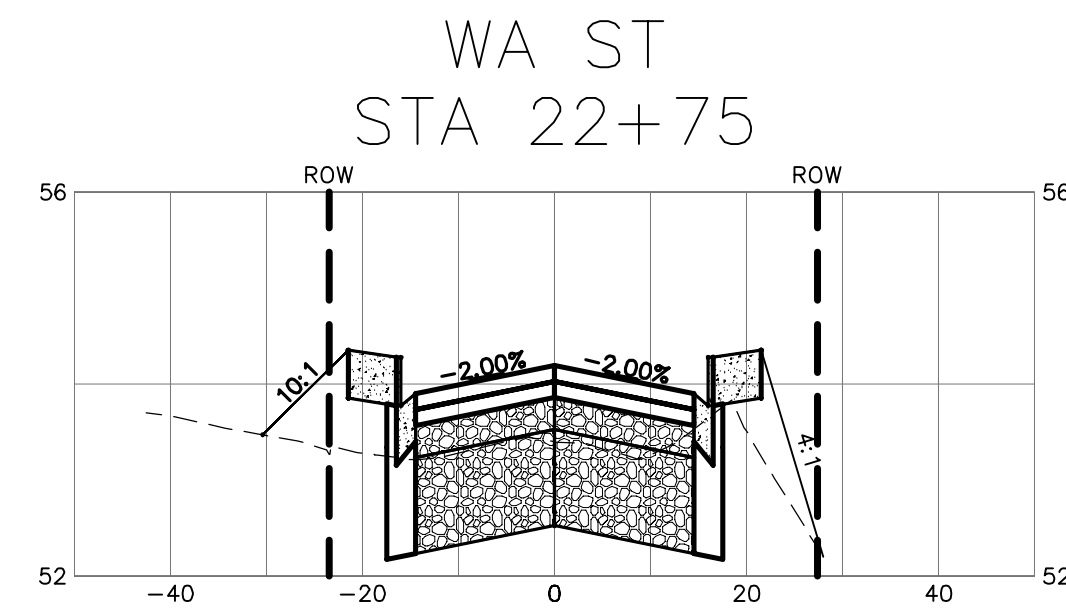
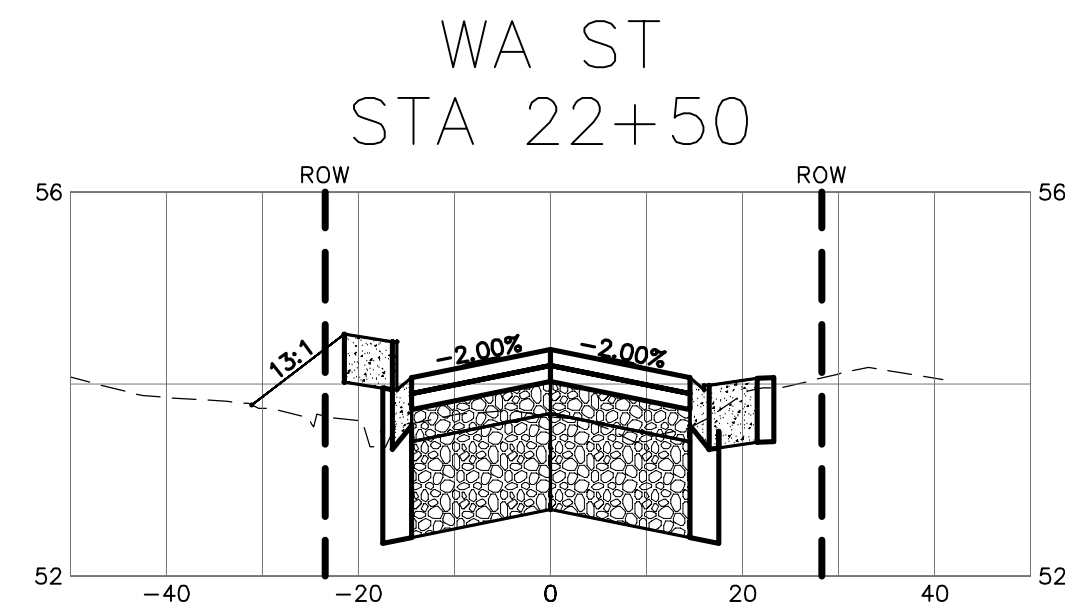
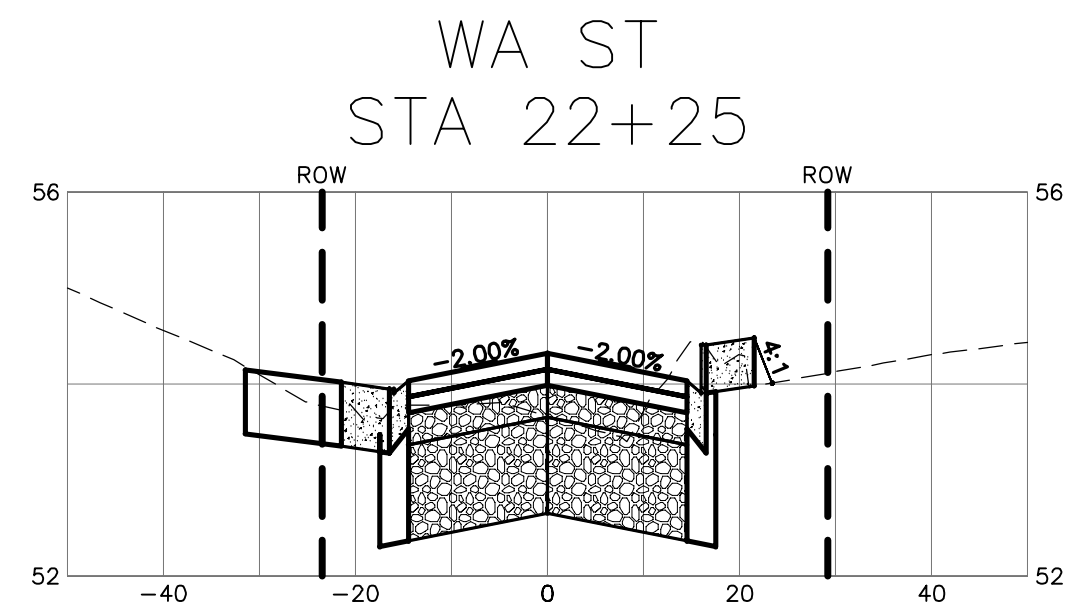
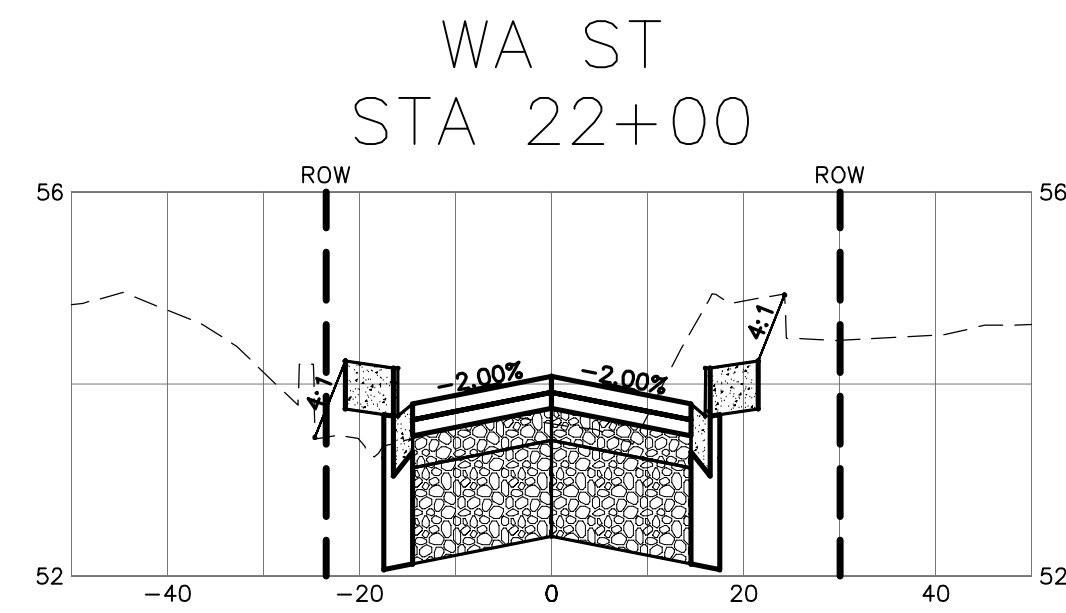
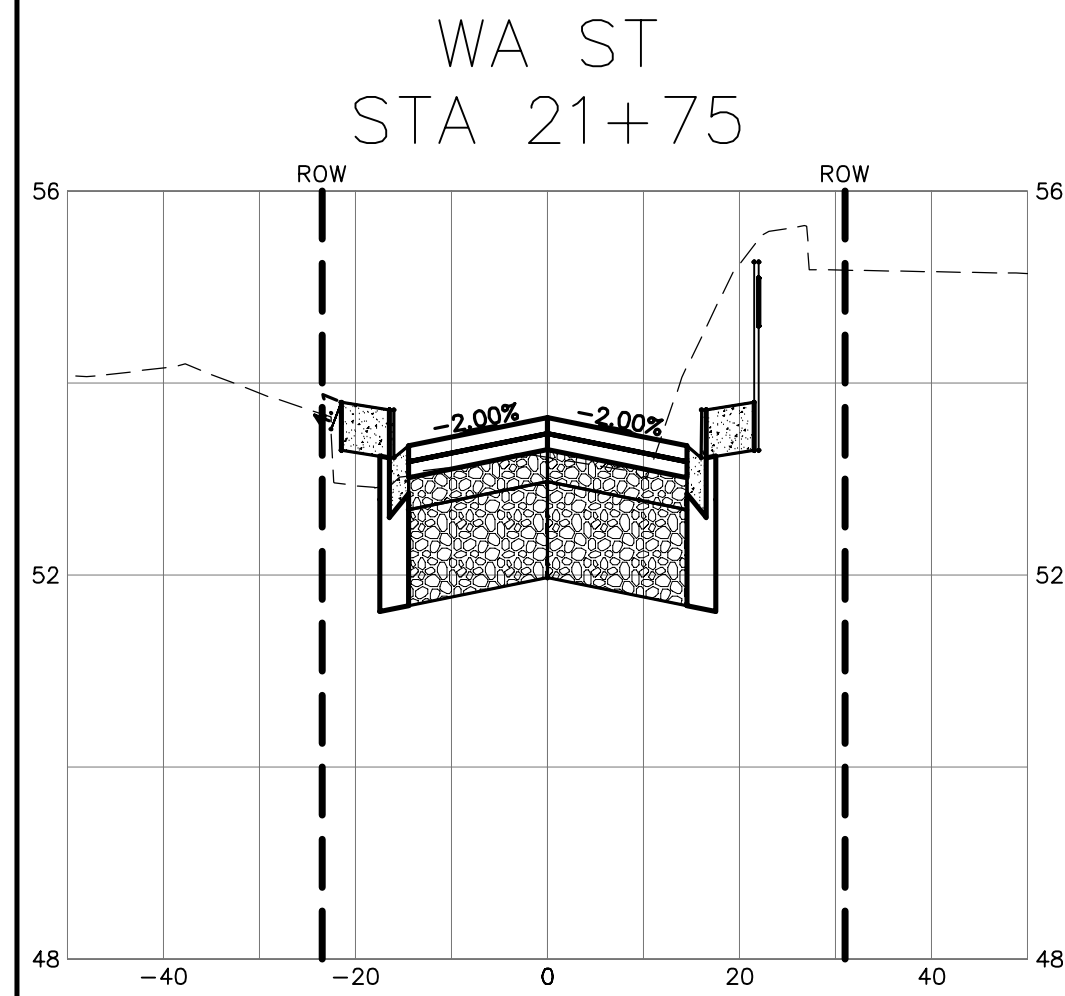
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WASHINGTON STREET IMPROVEMENTS
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DWG 16026 SEWER STORM PP
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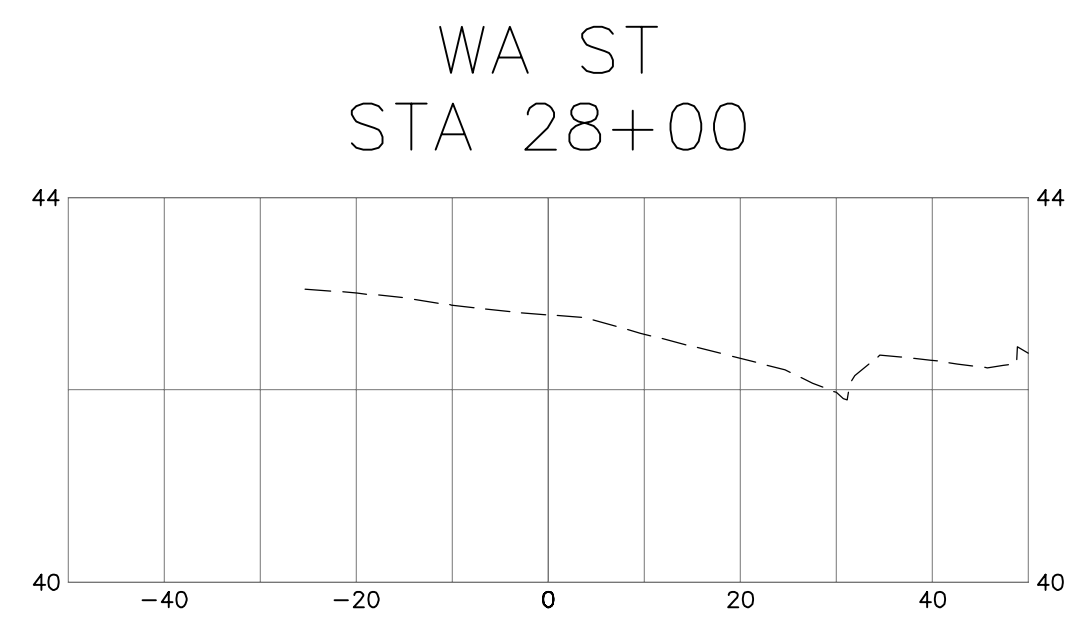
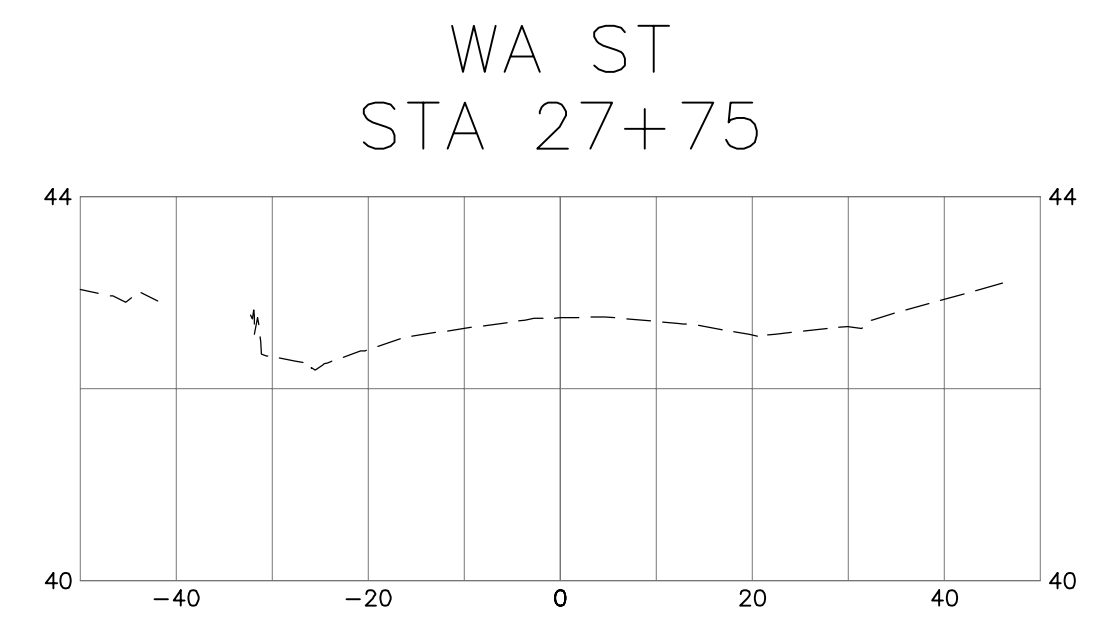
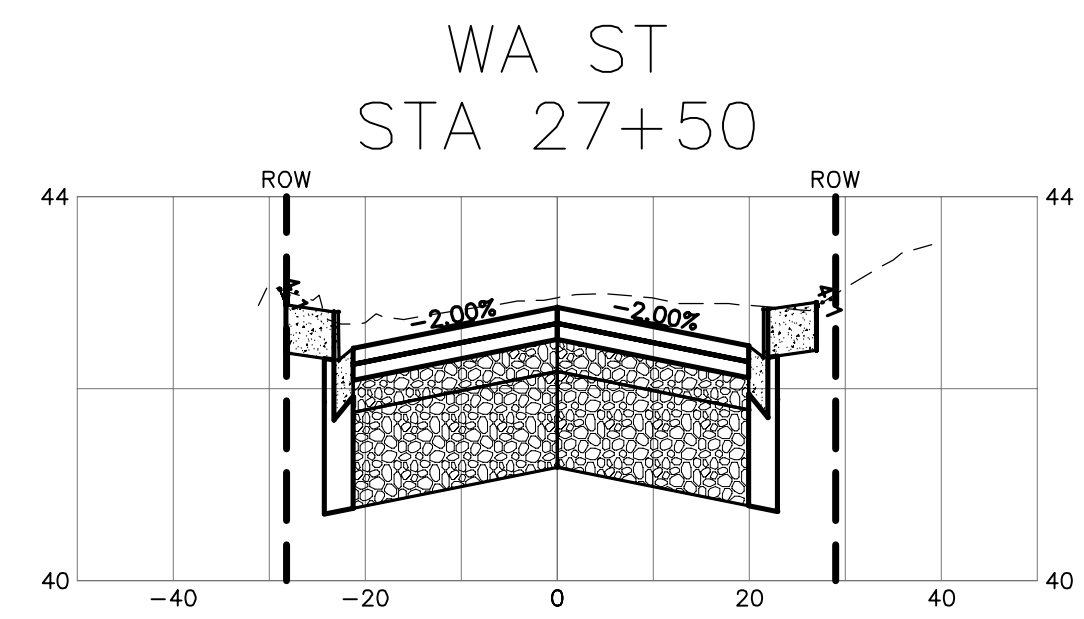
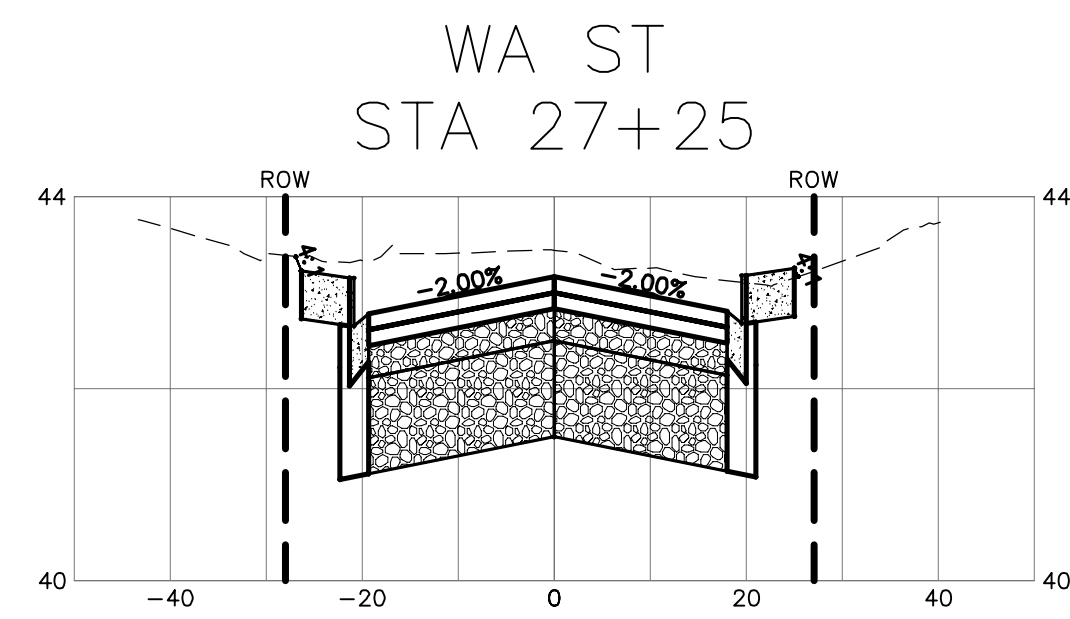
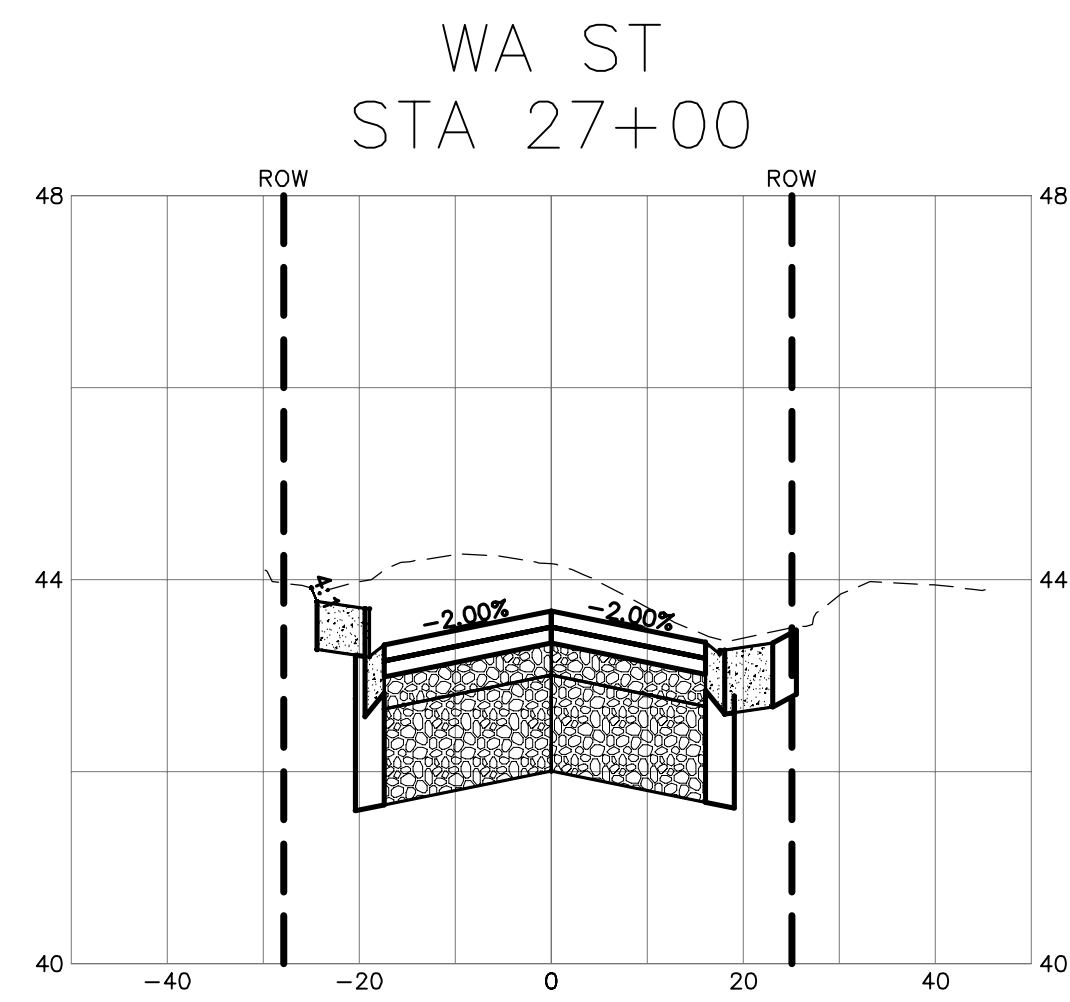
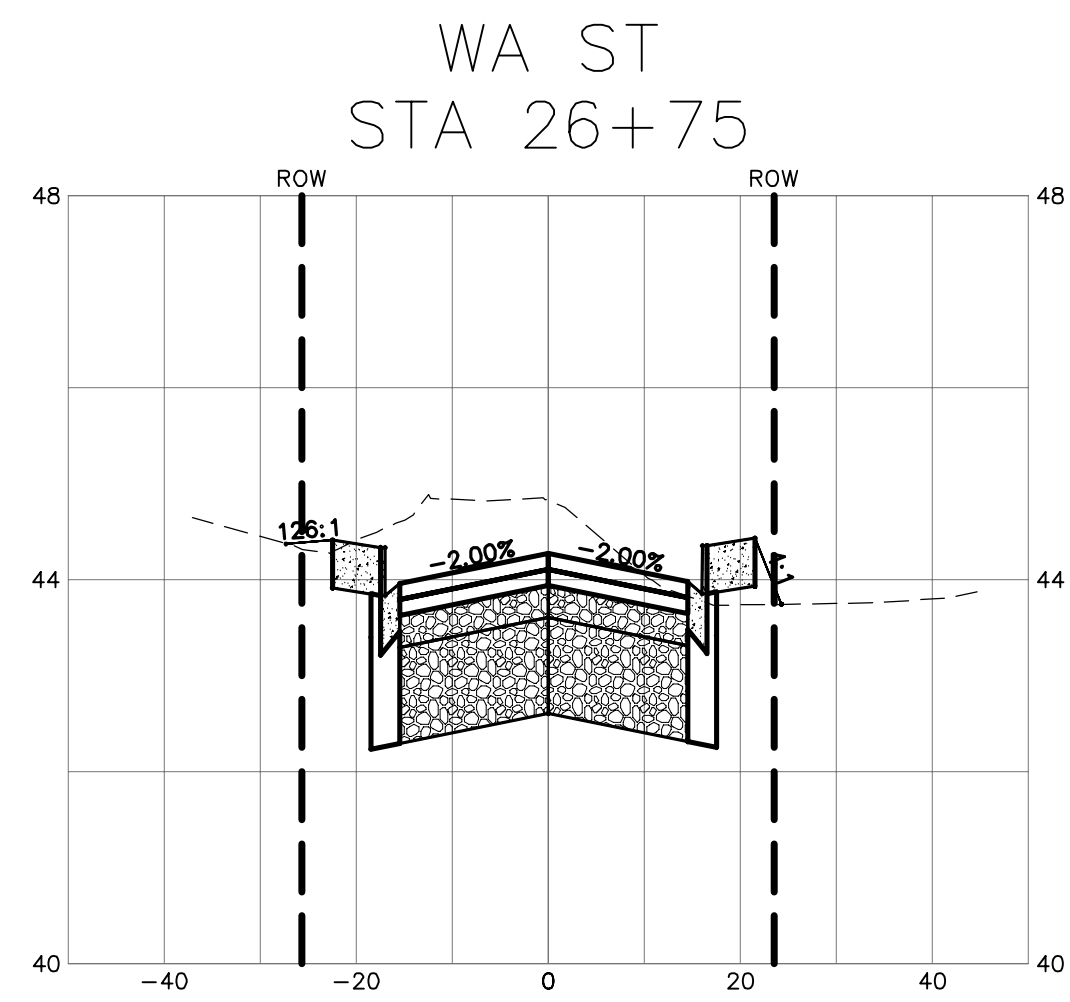
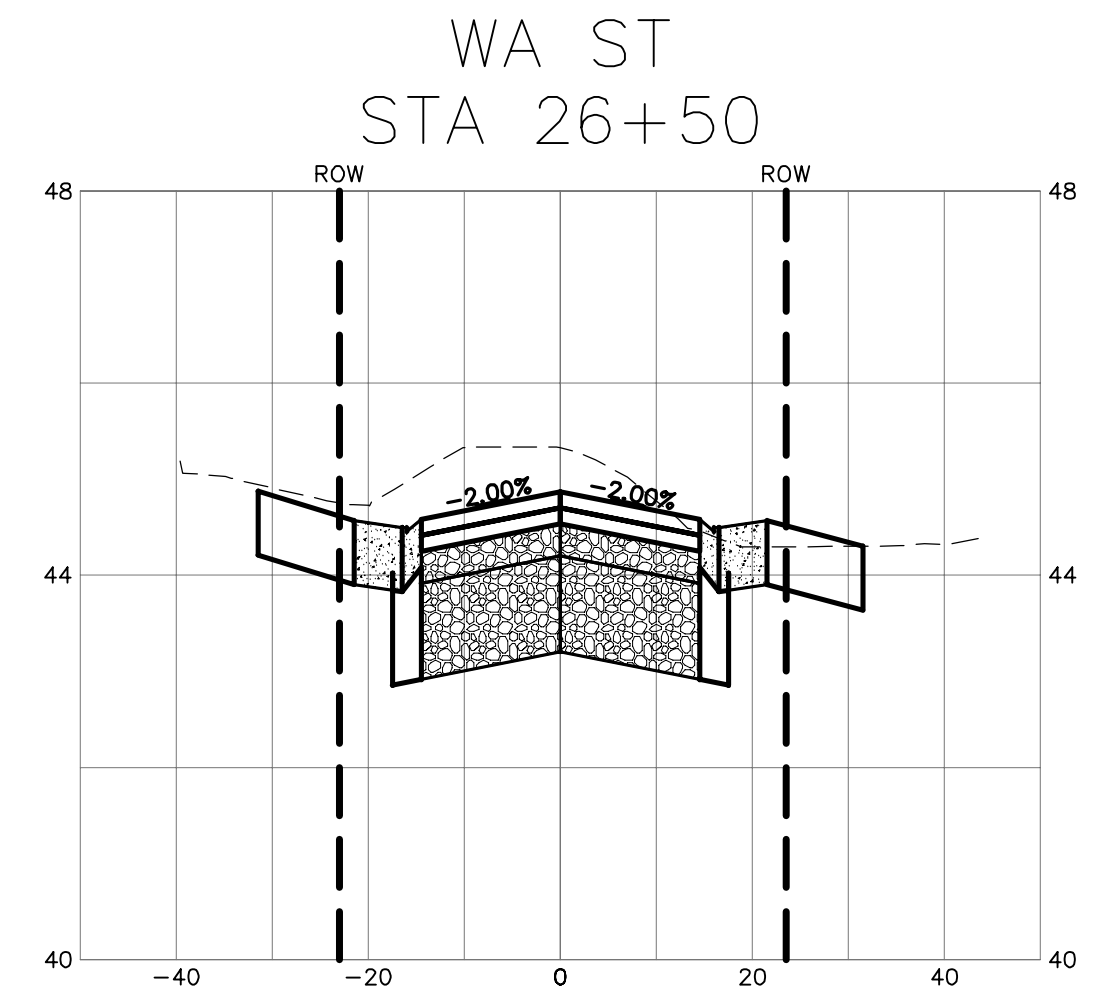
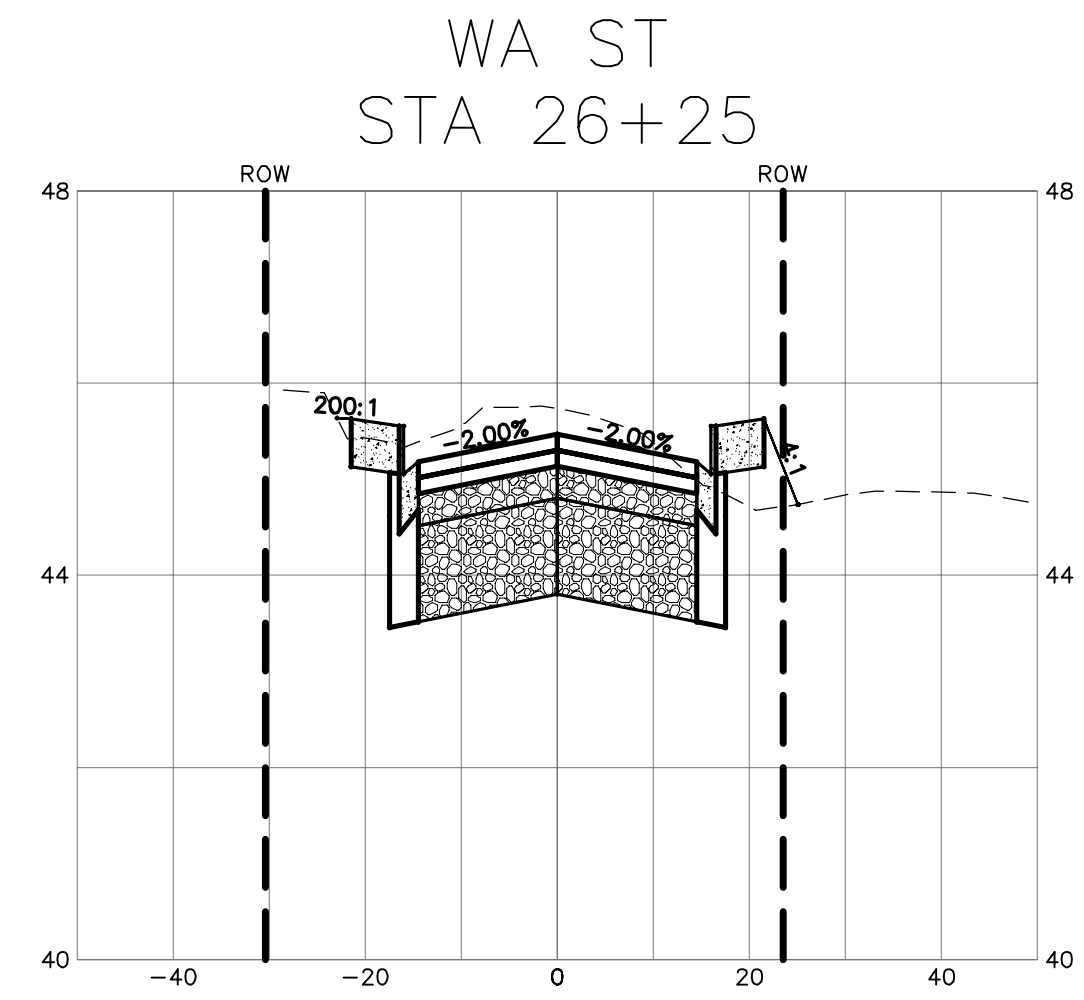
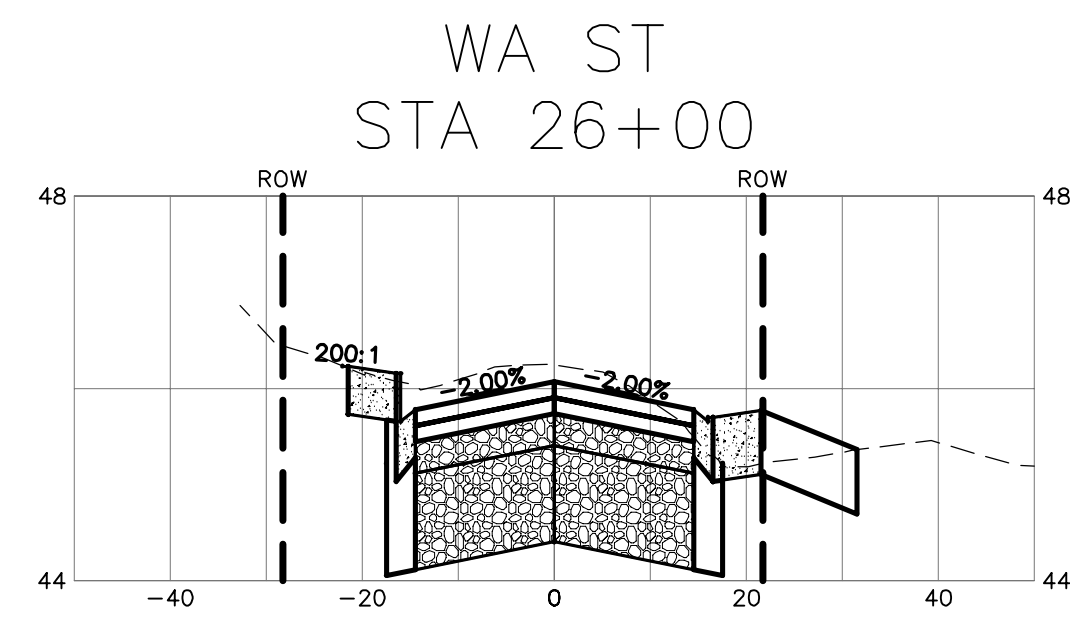
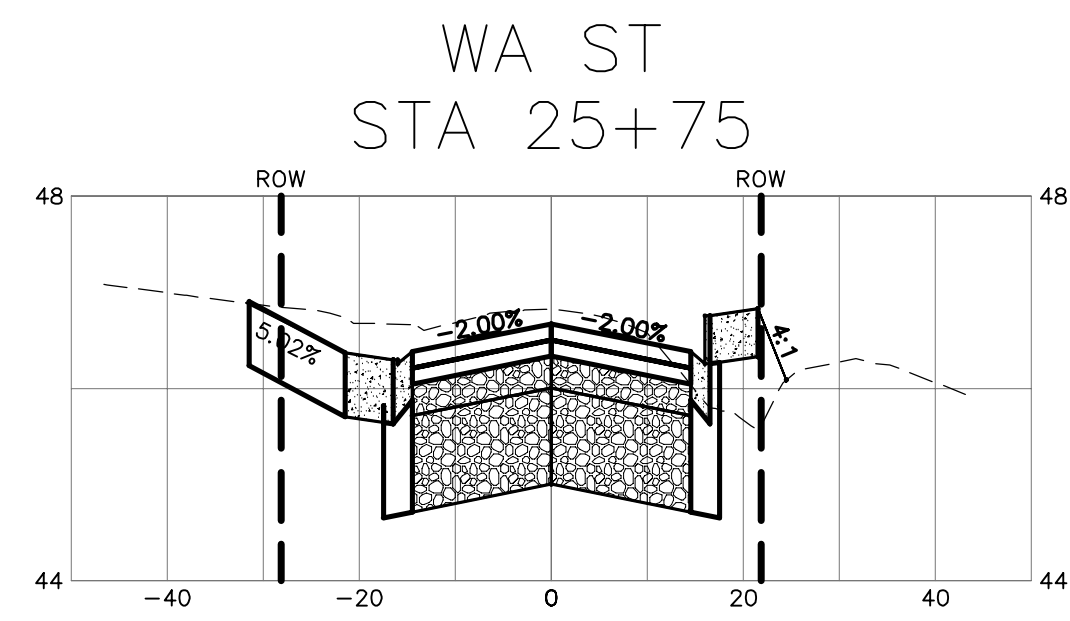
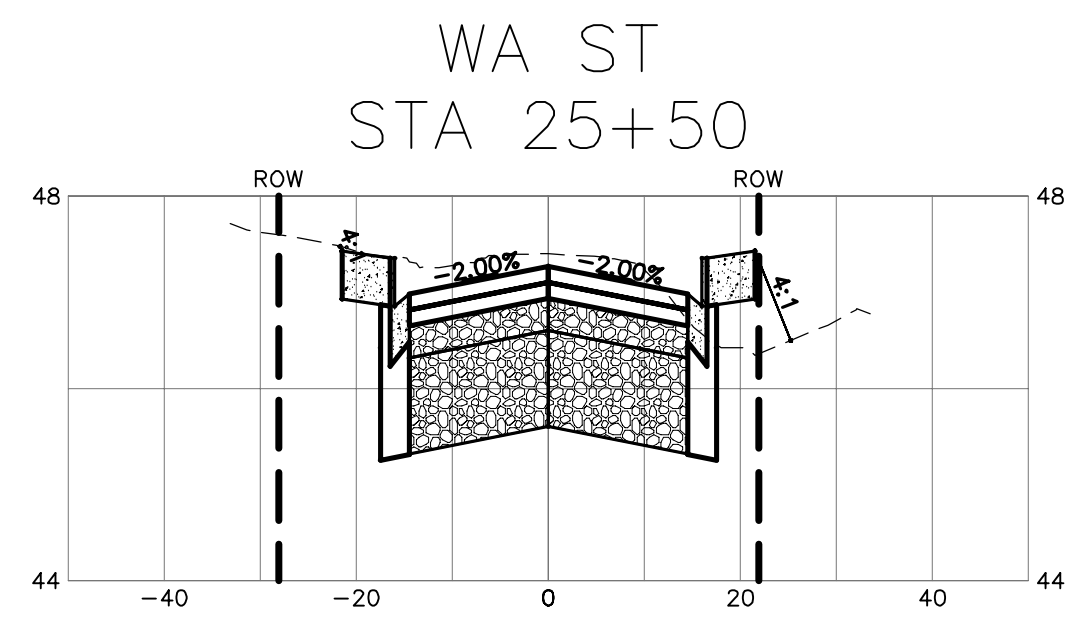
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