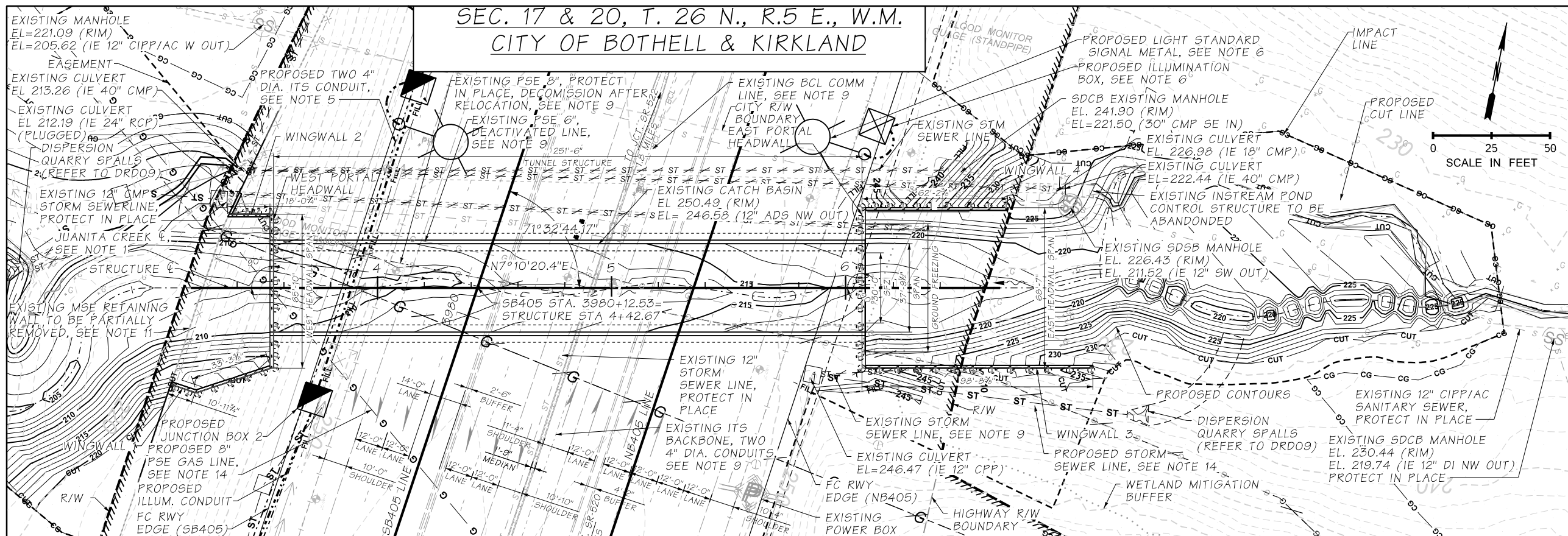


SEC. 17 & 20, T. 26 N., R.5 E., W.M.
CITY OF BOTHELL & KIRKLAND



LEGEND

EXISTING PROPOSED

- CATCH BASIN
- JUNCTION BOX
- LUMINAIRE STANDARD
- GUIDE POST
- MANHOLE
- SAN SEWER MANHOLE

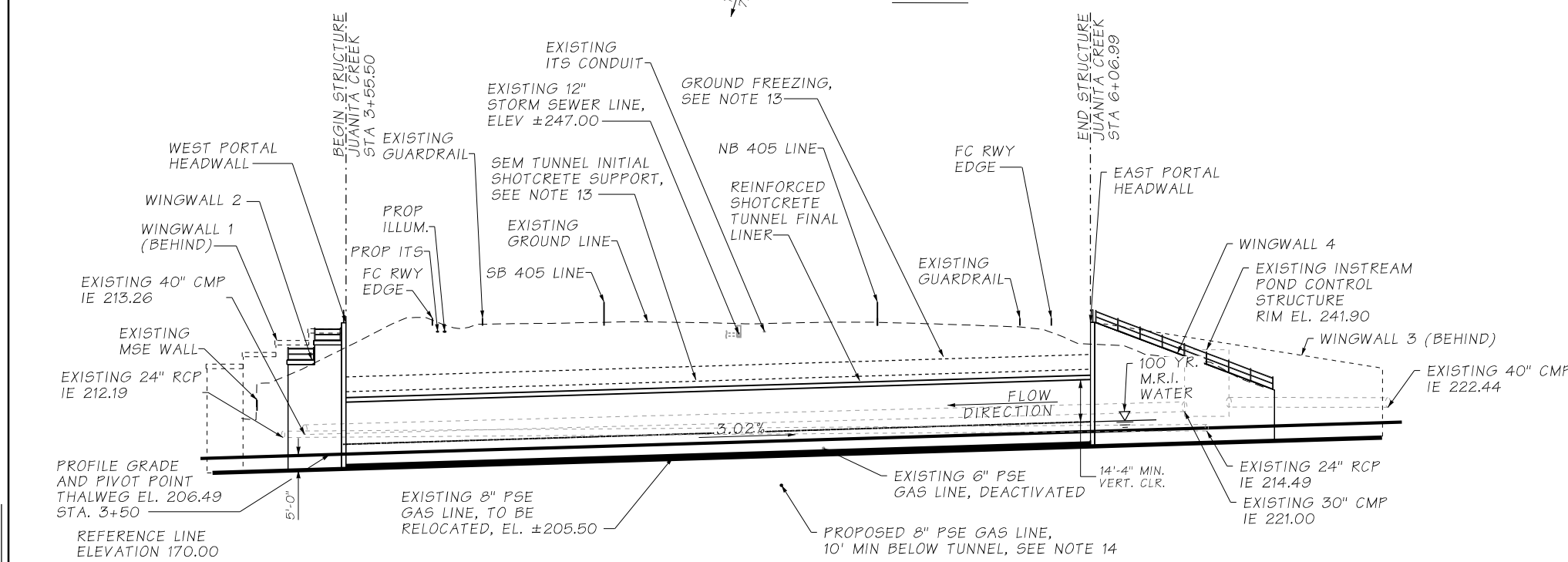
EXISTING

- DITCH DIRECTION
- STORM SEWER LINE
- WETLAND MIT. BUFFER
- CONDUIT AND WIRING
- GUARDRAIL
- FENCE
- RIGHT OF WAY LINE
- BCL BACK OF CURB COMM
- SAN SEWER LINE
- GAS LINE
- CONDUIT AND WIRING
- HIGHWAY R/W BOUNDARY
- CITY R/W BOUNDARY

PROPOSED

- GAS LINE
- CUT LINE
- FILL LINE
- CLEAR GRUB LINE
- CONDUIT, WIRING
- PROPOSED STORM SEWER LINE
- SEWER STORM LINE, TO BE DEACTIVATED
- IMPACT LINE
- FORWARD COMPATIBILITY LINE

PLAN



ELEVATION VIEW

SHOWN LOOKING RIGHT ALONG JUANITA CREEK STRUCTURE LINE
GRADE ELEVATIONS SHOWN ARE FINISHED GRADE AT TOP OF
STREAM BED ON JUANITA CREEK STRUCTURE LINE

NOTES:

- SEE FISH PASSAGE STREAM PLANS FOR STREAM INFORMATION.
- SEE RETAINING WALL PLANS FOR RETAINING WALL INFORMATION.
- SEE ROADWAY PLANS FOR ROADWAY INFORMATION.
- SEE DRAINAGE PLANS FOR STORM DRAINAGE INFORMATION.
- SEE ITS PLANS FOR FIBER OPTIC AND CONDUIT INFORMATION.
- SEE ILLUMINATION PLANS FOR LIGHTING AND ELECTRICAL CONDUITS INFORMATION.
- SEE UTILITY PLANS FOR MORE UTILITIES INFORMATION.
- SFZ= STRUCTURE FREE ZONE.
- FIELD VERIFY UTILITY LOCATION AND DEPTH BEFORE CONSTRUCTION.
- PROTECT EXISTING UTILITIES IN PLACE, UNO.
- INSTALL TEMPORARY SHORING AND REMOVE EXISTING MSE FILL WALL AS REQUIRED TO CONSTRUCT THE FISH PASSAGE AND WEST PORTAL STRUCTURE. REBUILD THE FILL WALL BACK TO JOIN THE PERMANENT SW AND NW WINGWALLS USING MSE, GEOSYNTHETIC SEW W/ CONCRETE FASCIA OR OTHER APPROVED MEANS. SUBMIT WORK PLAN AND SHOP DRAWING FOR REVIEW AND APPROVAL.
- NEW FILL AND CUT WALL FACE TO HAVE ASTHETIC TREATMENT, COPING AND FALL PROTECTION FENCE PER RFP APPENDIX L2 AND MATCH EXISTING.
- SEQUENTIAL EXCAVATION METHOD (SEM) TUNNEL AND GROUND FREEZING SHOWN ARE INDICATIVE AND DESIGNED BY OTHERS.
- THE SCOPE, CONFIGURATION AND LOCATION OF UTILITY WORK DESIGNATED AS BY OTHERS IS INDICATED ON THIS DRAWING IN AN ASSUMED LOCATION THAT MUST BE DETERMINED AND VALIDATED BY THE UTILITY OWNER.

ABBREVIATIONS:

BDM	WSDOT BRIDGE DESIGN MANUAL
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
EL	ELEVATION
FC	FORWARD COMPATIBLE
HEF	HORIZONTAL EACH FACE
HSS	HOLLOW STRUCTURAL SECTION
PGA	PERMANENT GROUND ANCHOR
R/W	RIGHT OF WAY
SDCB	STORM DRAIN CATCH BASIN
SOE	SUPPORT OF EXCAVATION
STA	STATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VEF	VERTICAL EACH FACE



(NAVD) 88

CLASS 2 BURIED STRUCTURE
REINFORCED SHOTCRETE ARCH
LOADING: HL-93

RESERVED FOR
RFC
CERTIFICATION STAMP

FILE NAME	c:\pwworking\uswaldms06730IC9727_DE_FP5_01.dgn		
TIME	08:56:35		
DATE	24/7/2025		
PLOTTED BY	EscribanoRosilloN		
DESIGNED BY	A AVANESSIAN		
ENTERED BY	G PEDRAZA		
CHECKED BY	M WONGKAEW		
PROJ. ENGR.	J SLAVICEK		
REGIONAL ADM.	L HODGSON		
REVISION	DATE	BY	

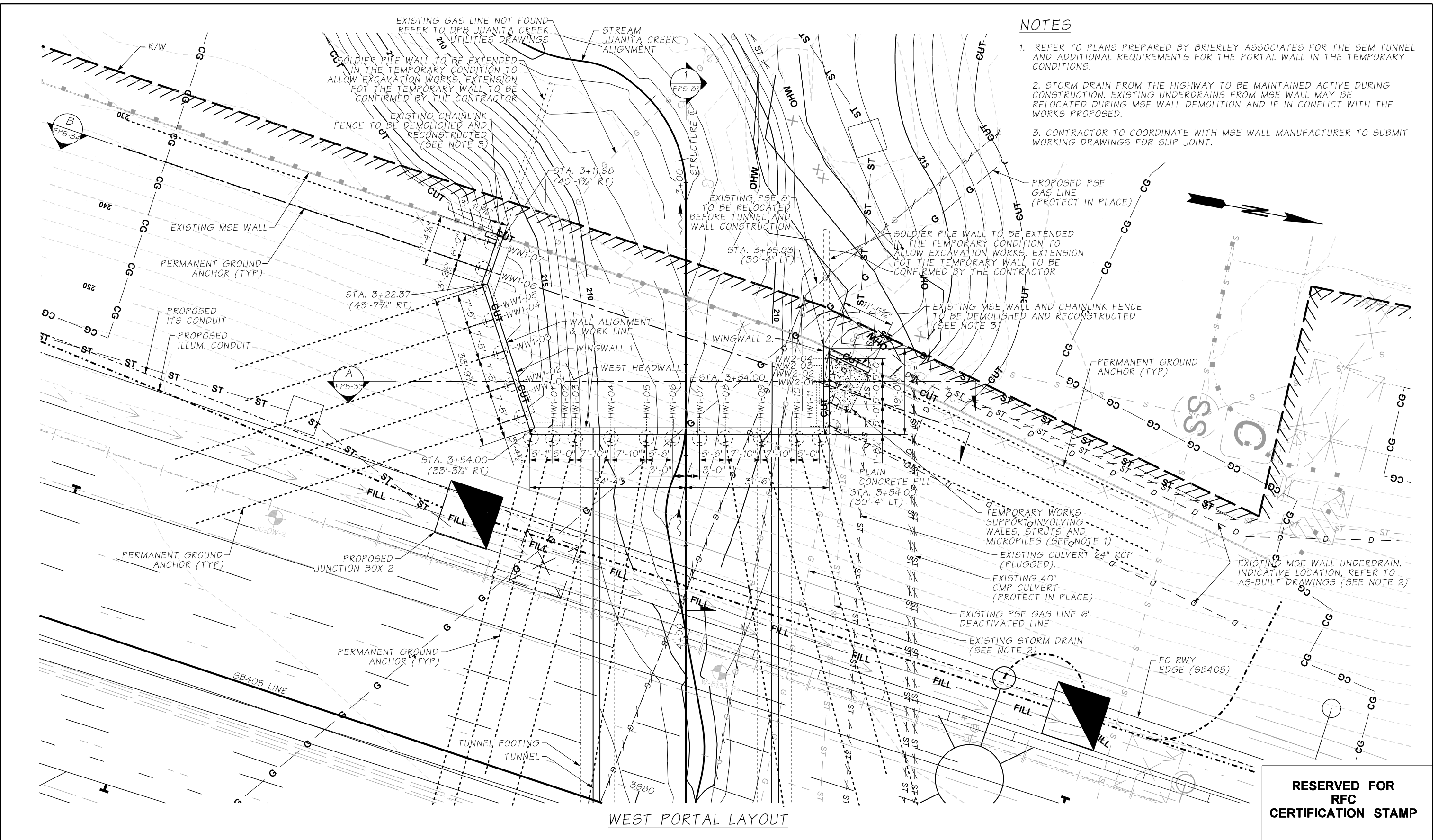
REGION NO.	STATE	FED.AID PROJ.NO.			I-405 BRICKYARD TO SR527 IMPROVEMENT PROJECT	PLAN REF NO
10	WASH					FP5-01
JOB NUMBER	CONTRACT NO.	LOCATION NO.		JUANITA CREEK (MP 21.94) FISH PASSAGE STRUCTURE NO. 405/61 LAYOUT	SHEET	
22AB17	9727	XL5446			XX	
DATE	P.E. STAMP BOX				OF	
					SHEETS	

C9727
 FISH PASSAGE TUNNEL (BURIED STRUCTURE)
 REINFORCED SHOTCRETE ARCH
 SHOTCRETE STRENGTH 4,000 PSI
 SR FILE NO. SHEET

C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61

NOTES

1. REFER TO PLANS PREPARED BY BRIERLEY ASSOCIATES FOR THE SEM TUNNEL AND ADDITIONAL REQUIREMENTS FOR THE PORTAL WALL IN THE TEMPORARY CONDITIONS.
2. STORM DRAIN FROM THE HIGHWAY TO BE MAINTAINED ACTIVE DURING CONSTRUCTION. EXISTING UNDERDRAINS FROM MSE WALL MAY BE RELOCATED DURING MSE WALL DEMOLITION AND IF IN CONFLICT WITH THE WORKS PROPOSED.
3. CONTRACTOR TO COORDINATE WITH MSE WALL MANUFACTURER TO SUBMIT WORKING DRAWINGS FOR SLIP JOINT.



WEST PORTAL LAYOUT

RESERVED FOR
RFC
CERTIFICATION STAMP

FILE NAME c:\pwworking\uswaldms06730\C9727_DE_FP5_25.dgn	TIME 17:02:47	REGION NO. 10	STATE WASH	FED.AID PROJ.NO.				I-405 BRICKYARD TO SR527 IMPROVEMENT PROJECT	PLAN REF NO. FP5-25
	DATE 22/7/2025	DESIGNED BY EscribanoRosilloN	JOB NUMBER 22AB17	CONTRACT NO. 9727					LOCATION NO. XL5446
PLOTTED BY	ENTERED BY	CHECKED BY	PROJ. ENGR.	REGIONAL ADM.	REVISION	DATE	BY	JUANITA CREEK (MP 21.94) FISH PASSAGE STRUCTURE NO. 405/61 WEST PORTAL WALL LAYOUT	

SR FILE NO. SHEET

C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61

PORTAL SOLDIER PILE SCHEDULE

PILE NO.	STA.	OFFSET (FT)	DRILL HOLE SIZE	P.G.A ARANGEMENT TYPE	SOLDIER PILE SECTION	TOP OF SOLDIER PILE ELEVATION (FT) (1)	H (FT)(2)	D (FT)(2)	TOTAL PILE LENGTH (FT)
HW1-01	3+56.32	34.42' Rt.	3'-3"	HW-A	W21X101	246.50	44'-10"	26'-6"	71'-4"
HW1-02	3+56.32	29.33' Rt.	3'-3"	HW-A	W21X101	245.76	44'-2"	26'-6"	70'-8"
HW1-03	3+56.32	24.33' Rt.	3'-3"	HW-B	W21X182	245.01	43'-5"	26'-6"	69'-11"
HW1-04	3+56.32	16.50' Rt.	3'-3"	HW-C	W21X101	243.79	-	-	24'-10" (3)
HW1-05	3+56.32	8.67' Rt.	3'-3"	HW-D	W21X101	242.55	-	-	23'-7" (3)
HW1-06	3+56.32	3.00' Rt.	3'-3"	-	W21X101	241.44	-	-	31'-3" (3)
HW1-07	3+56.32	3.00' Lt.	3'-3"	-	W21X101	240.33	-	-	31'-3" (3)
HW1-08	3+56.32	8.67' Lt.	3'-3"	HW-E	W21X101	239.18	-	-	20'-2" (3)
HW1-09	3+56.32	16.50' Lt.	3'-3"	HW-F	W21X101	237.82	-	-	18'-10" (4)
HW1-10	3+56.32	24.33' Lt.	3'-3"	HW-G	W21X182	236.54	34'-11"	25'-0"	59'-11"
HW1-11	3+56.32	29.33' Lt.	3'-3"	HW-H	W21X182	235.68	34'-1"	25'-0"	59'-1"
WW1-01	3+51.55	36.17' Rt.	3'-3"	A	W21X101	245.32	43'-8"	26'-6"	70'-2"
WW1-02	3+44.50	38.48' Rt.	3'-3"	B	W21X101	242.53	40'-11"	26'-6"	67'-5"
WW1-03	3+37.45	40.80' Rt.	3'-3"	B	W21X101	239.49	37'-10"	26'-6"	65'-4"
WW1-04	3+30.40	43.11' Rt.	3'-3"	C	W21X101	236.40	34'-9"	25'-0"	59'-9"
WW1-05	3+23.35	45.42' Rt.	3'-3"	C	W21X101	232.95	31'-4"	25'-0"	56'-4"
WW1-06	3+19.06	44.63' Rt.	3'-3"	D	W21X182	231.50	29'-10"	25'-0"	54'-10"
WW1-07	3+13.38	42.72' Rt.	3'-3"	D	W21X182	230.05	28'-4"	25'-0"	53'-4"
WW2-01	3+53.42	32.25' Lt.	3'-3"	E	W24X229	235.40	33'-9"	25'-0"	58'-9"
WW2-02	3+48.76	32.25' Lt.	3'-3"	E	W24X229	233.03	31'-5"	25'-0"	56'-5"
WW2-03	3+43.76	32.25' Lt.	3'-3"	E	W24X229	230.95	29'-4"	25'-0"	54'-4"
WW2-04	3+38.76	32.25' Lt.	3'-3"	E	W24X229	229.55	28'-4"	25'-0"	53'-4"

- (1) TOP ELEVATION FOR SOLDIER PILES IN THE PERMANENT WORKS. IN THE TEMPORARY WORKS CONDITION THE PILE TOP MAY BE AT A HIGHER ELEVATION (REFER TO DRAWING FP5-26).
- (2) DIMENSIONS "H" AND "D" REFER TO DESIGN HEIGHT AND EMBEDMENT DEPTH, RESPECTIVELY. REFER TO SHEET FP5-13
- (3) PILE TOE ELEVATION TO BE CUT DURING CONSTRUCTION TO ALLOW FOR THE OTHER WORKS. PILE TO BE CUT AT EL. 228 FT.
- (4) PILE TOE ELEVATION TO BE CUT DURING CONSTRUCTION TO ALLOW FOR THE OTHER WORKS. PILE TO BE CUT AT EL. 227 FT.

TIEBACK ANCHORS SCHEDULE

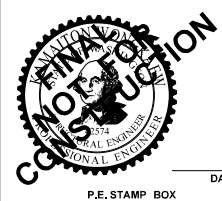
TYPE	NUMBER OF ROWS	ROW ELEVATION	INCLINATION VER. ANGLE (°)	INCLINATION HOR. ANGLE (°)	UNBONDED LENGTH (ft)	BONDED LENGTH (ft) (1)	FACTORED DESIGN LOAD (kips)	NUMBER OF STRANDS (2)	LOCKOFF LOAD (kips)
HW-A	4	241/231/221/208	25/25/30/30	15/15/15/15	61/50/37/24	36/22/27/33	151/186/225/224	4/5/7/7	91/111/150/150
HW-B	3	241/231/221	25/25/30	15/15/15	62/51/38	24/24/39	198/204/331	5/7/10	119/150/200
HW-C	2	241/231	15/15	15/15	74/61	40/38	169/162	5/4	102/97
HW-D	1	241	7	9	78	41	175	5	105
HW-E	1	236.5	7	9	78	39	164	4	98
HW-F	2	236.5/229	15/15	15/15	76/66	38/18	159/152	4/4	95/91
HW-G	3	234.4/229/221	25/25/25	15/15/15	63/57/48	23/22/36	189/186/306	5/6/10	114/120/200
HW-H	3	233.6/227/221	8/40/40	15/15/15	78/48/42	22/22/32	184/183/266	5/6/8	110/120/200
A	4	241/231/221/208	20/20/20/20	-	46/39/32/22	35/25/27/29	126/134/147/159	3/3/4/4	80/85/90/100
B	4	236/231/221/208	20/20/20/20	-	46/39/32/22	35/25/27/29	126/134/147/159	3/3/4/4	80/85/90/100
C	3	231/221/208	20/20/20	-	35/28/21	26/26/35	80/114/190	3/4/4	50/70/120
D	1	218.5	20	-	56	35	173	4	110
E	1	213.5	20	-	49	37	216	6	130

- (1) BONDED LENGTH ARE PRELIMINARY, USING A 6" DIAMETER BOND IN WINGWALLS AND A 7" DIAMETER BOND IN HEADWALL, AND BASED ON AVAILABLE INFORMATION. THE GROUND ANCHORS CONTRACTOR IS TO PROVIDE THE FINAL BONDED LENGTH AND BOND DIAMETER AS PER WSDOT GDM 6-17.3.
- (2) STRANDS OF GRADE 270 KSI, 0.6-INCH DIAMETER.
- (3) TESTING REQUIREMENTS:
 - VERIFICATION TESTING:
 - 1 ANCHOR AT LEVEL AND INCLINATION OF UPPER LEVEL FROM HW-D/HW-E INTO ESU 1B
 - 2 ANCHORS AT LEVEL AND INCLINATION OF LOWER LEVEL FROM A/B/C INTO ESU 6B.
 - PERFORMANCE TESTING:
 - 3 ANCHORS PER HW1 AND WW1 (TOTAL OF 6 TESTED ANCHORS) LOCATED ON ELEVATIONS BETWEEN EL. 241 AND 236 FT.
 - 3 ANCHORS PER HW1 AND WW1 (TOTAL OF 6 TESTED ANCHORS) LOCATED ON ELEVATIONS BETWEEN EL. 231 AND 221 FT.
 - 3 ANCHORS PER WW1 AND WW2 (TOTAL OF 6 TESTED ANCHORS) LOCATED ON ELEVATIONS BETWEEN EL. 214.5 AND 208 FT.
 - REMAINDER OF PRODUCTION ANCHORS TO BE PROOF-TESTED IN ACCORDANCE WITH GDM APPENDIX 15-G.

RESERVED FOR
RFC
CERTIFICATION STAMP

SR FILE NO. SHEET

FILE NAME	c:\pwworking\uswaldms06730\C9727_DE_FP5_28.dgn		
TIME	12:24:44	REGION NO.	STATE
DATE	28/7/2025	10	WASH
PLOTTED BY	EscribanoRosilloN	JOB NUMBER	22AB17
DESIGNED BY	I RIVERO	CONTRACT NO.	9727
ENTERED BY	S SANCHEZ	LOCATION NO.	XL5446
CHECKED BY	M WONGKAEW		
PROJ. ENGR.	J SLAVICEK		
REGIONAL ADM.	L HODGSON	REVISION	DATE BY

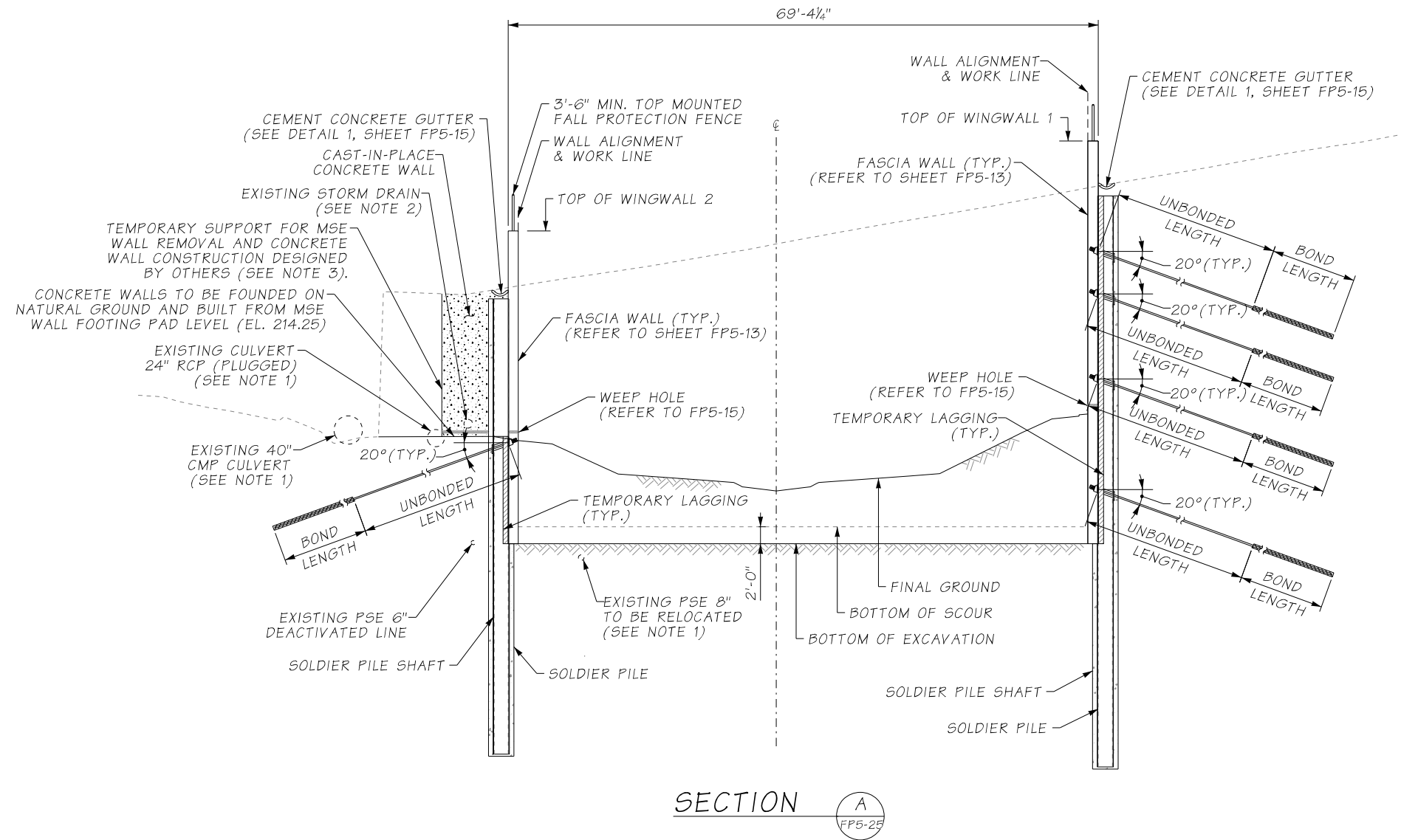


I-405 BRICKYARD TO SR527 IMPROVEMENT PROJECT	PLAN REF NO FP5-28
JUANITA CREEK (MP 21.94) FISH PASSAGE STRUCTURE NO. 405/61 WEST PORTAL WALL PILE SCHEDULE	SHEET XX OF SHEETS

C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61

NOTES

- EXISTING UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE DECOMMISSIONED. THOSE THAT INTERSECT WITH THE WALL SHALL BE REMOVED TO THE BACK OF THE LAGGING AND PLUGGED.
- STORM DRAIN FROM THE HIGHWAY TO BE MAINTAINED ACTIVE DURING CONSTRUCTION. FOR TEMPORARY AND PERMANENT DIVERSION OF THE PIPE THROUGH THE WALLS, REFER TO DRAINAGE DESIGNER DRAWINGS.
- REFER TO PLANS PREPARED BY BRIERLEY ASSOCIATES FOR THE SEM TUNNEL, SOE, AND ADDITIONAL REQUIREMENTS FOR THE TEMPORARY WORKS.

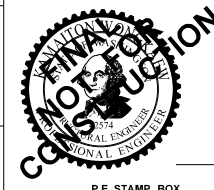


SECTION **A**
FP5-25

RESERVED FOR
RFC
CERTIFICATION STAMP

SR FILE NO. SHEET

FILE NAME	c:\pwworking\uswaldms06730\C9727_DE_FP5_33.dgn		
TIME	12:53:15		
DATE	22/7/2025		
PLOTTED BY	EscribanoRosilloN		
DESIGNED BY	I RIVERO		
ENTERED BY	S SANCHEZ		
CHECKED BY	M WONGKAEW		
PROJ. ENGR.	J SLAVICEK		
REGIONAL ADM.	IL HODGSON	REVISION	DATE BY
REGION NO.	10	STATE	WASH
FED.AID PROJ.NO.			
JOB NUMBER	22AB17		
CONTRACT NO.	9727	LOCATION NO.	XL5446



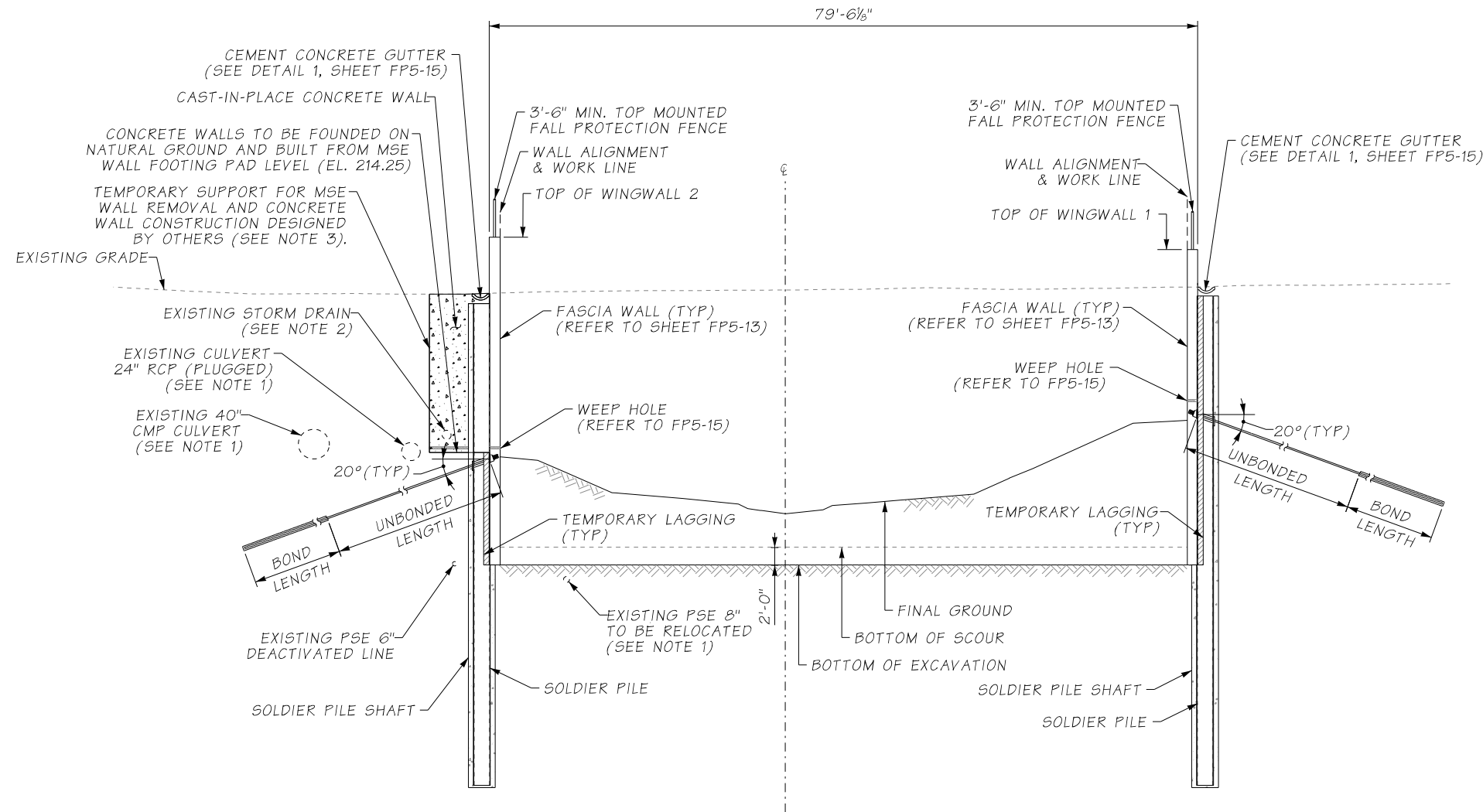
I-405
BRICKYARD TO SR527
IMPROVEMENT PROJECT
JUANITA CREEK (MP 21.94)
FISH PASSAGE STRUCTURE NO. 405/61
WEST PORTAL WALL TYPICAL SECTIONS

PLAN REF NO
FP5-33
SHEET
XX
OF
SHEETS

C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61

NOTES

- EXISTING UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE DECOMMISSIONED. THOSE THAT INTERSECT WITH THE WALL SHALL BE REMOVED TO THE BACK OF THE LAGGING AND PLUGGED.
- STORM DRAIN FROM THE HIGHWAY TO BE MAINTAINED ACTIVE DURING CONSTRUCTION. FOR TEMPORARY AND PERMANENT DIVERSION OF THE PIPE THROUGH THE WALLS, REFER TO DRAINAGE DESIGNER DRAWINGS.
- REFER TO PLANS PREPARED BY BRIERLEY ASSOCIATES FOR THE SEM TUNNEL, SOE, AND ADDITIONAL REQUIREMENTS FOR THE TEMPORARY WORKS.

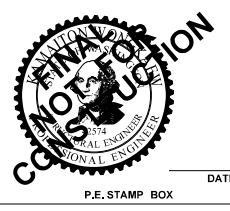


SECTION B
FP5-25

RESERVED FOR
RFC
CERTIFICATION STAMP

SR FILE NO. SHEET

FILE NAME	c:\pwworking\uswaldms06730\C9727_DE_FP5_34.dgn		
TIME	15:45:58		
DATE	22/7/2025		
PLOTTED BY	EscribanoRosilloN		
DESIGNED BY	I RIVERO		
ENTERED BY	S SANCHEZ		
CHECKED BY	M WONGKAEW		
PROJ. ENGR.	J SLAVICEK		
REGIONAL ADM.	IL HODGSON	REVISION	DATE BY
REGION NO.	10	STATE	WASH
FED.AID PROJ.NO.			
JOB NUMBER	22AB17		
CONTRACT NO.	9727	LOCATION NO.	XL5446



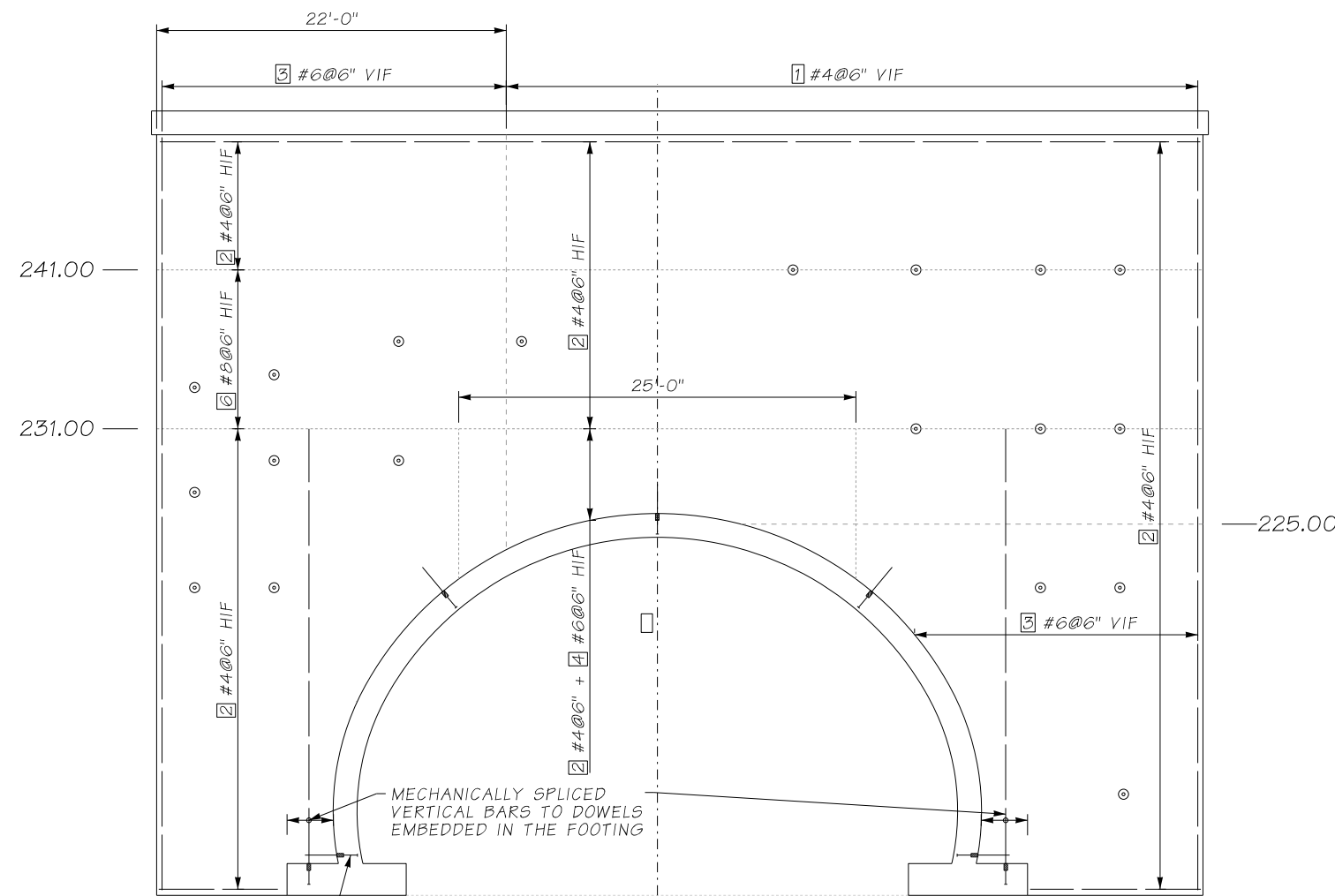
I-405
BRICKYARD TO SR527
IMPROVEMENT PROJECT
JUANITA CREEK (MP 21.94)
FISH PASSAGE STRUCTURE NO. 405/61
WEST PORTAL WALL TYPICAL SECTIONS

PLAN REF NO	FP5-34
SHEET XX OF SHEETS	

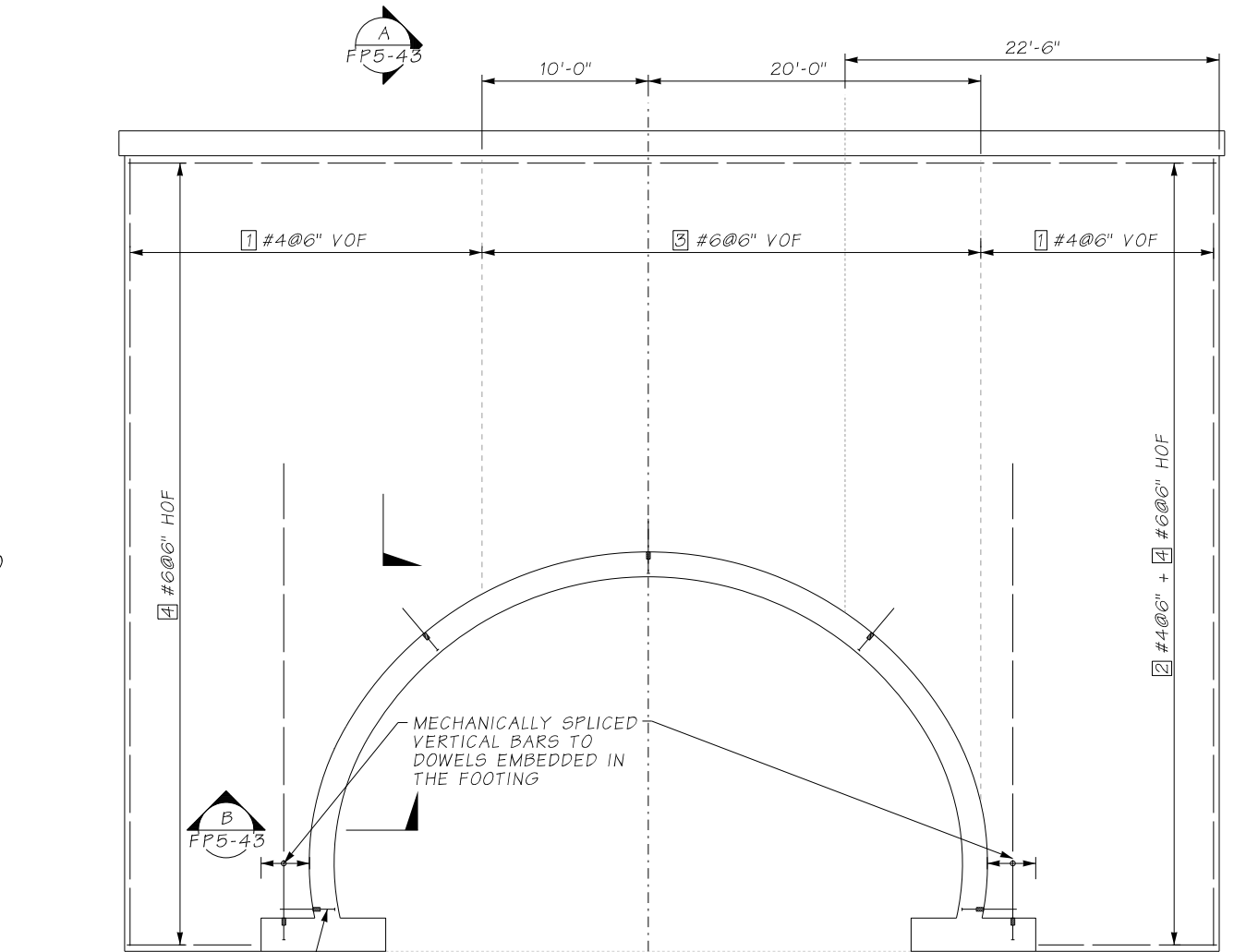
C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61

NOTES

- FOR DETAILS ON REINFORCEMENT BETWEEN EL. 231 ft AND 241 ft REFER TO FP5-40. THE VERTICAL REINFORCEMENT [1] ABOVE AND BELOW EL. 231 ft AND EL. 241 ft IS PLACED AT DIFFERENT STAGES AND REQUIRES COUPLER CONNECTIONS (OR SIMILAR). REFER TO PLANS PREPARED BY BRIERLEY ASSOCIATES FOR THE HEADWALL CONSTRUCTION SEQUENCE.



BACK VIEW OF THE HEADWALL
(INNER FACE)



FRONT VIEW OF THE HEADWALL
(OUTTER FACE)

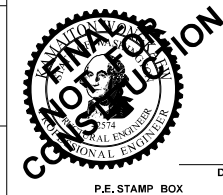
LEGEND

- VERTICAL REINFORCEMENT AREA DIVISION
- HORIZONTAL REINFORCEMENT AREA DIVISION

**RESERVED FOR
RFC
CERTIFICATION STAMP**

SR FILE NO. SHEET

FILE NAME	c:\pwworking\uswaldms06730\C9727_DE_FP5_39.dgn		
TIME	17:26:34		
DATE	24/7/2025		
PLOTTED BY	EscribanoRosilloN		
DESIGNED BY	I RIVERO		
ENTERED BY	S SANCHEZ		
CHECKED BY	M WONGKAEW		
PROJ. ENGR.	J SLAVICEK		
REGIONAL ADM.	L HODGSON		
REVISION	DATE	BY	
REGION NO.	STATE	FED.AID PROJ.NO.	
10	WASH		
JOB NUMBER	22AB17		
CONTRACT NO.	9727		
LOCATION NO.	XL5446		



AECOM



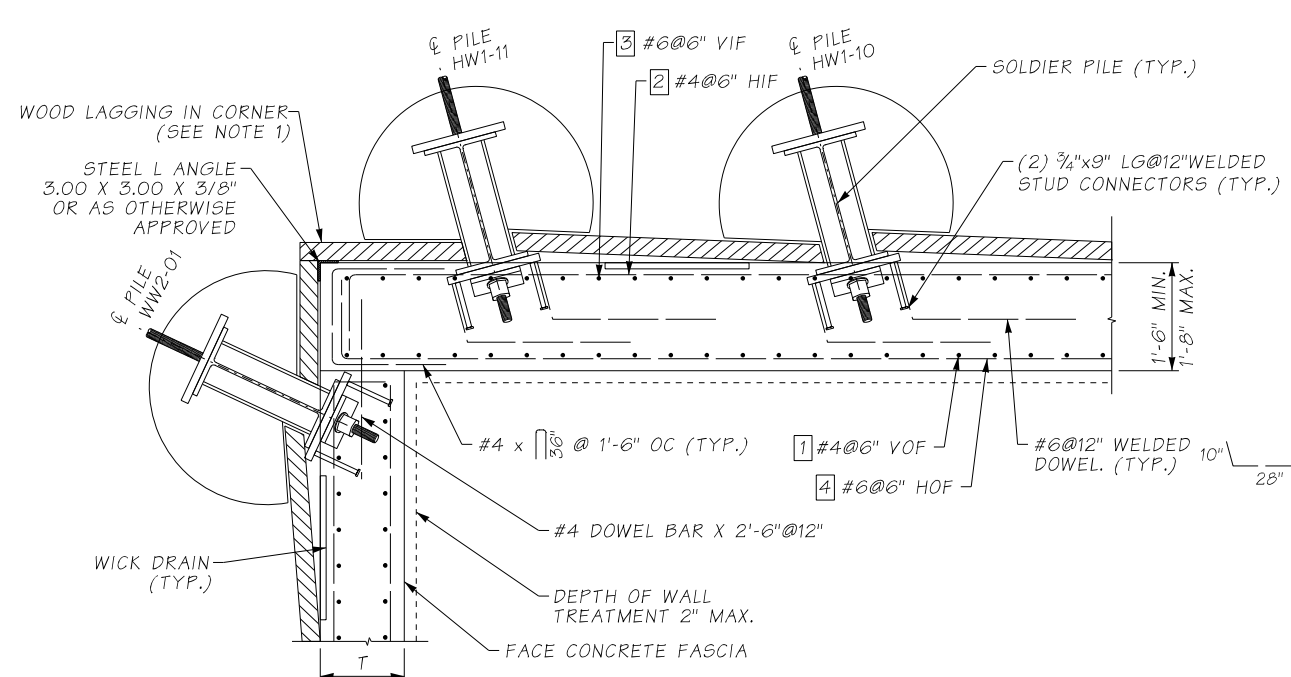
**I-405
BRICKYARD TO SR527
IMPROVEMENT PROJECT**

**JUANITA CREEK (MP 21.94)
FISH PASSAGE STRUCTURE NO. 405/61
WEST HEADWALL REINFORCEMENT**

PLAN REF NO
FP5-39

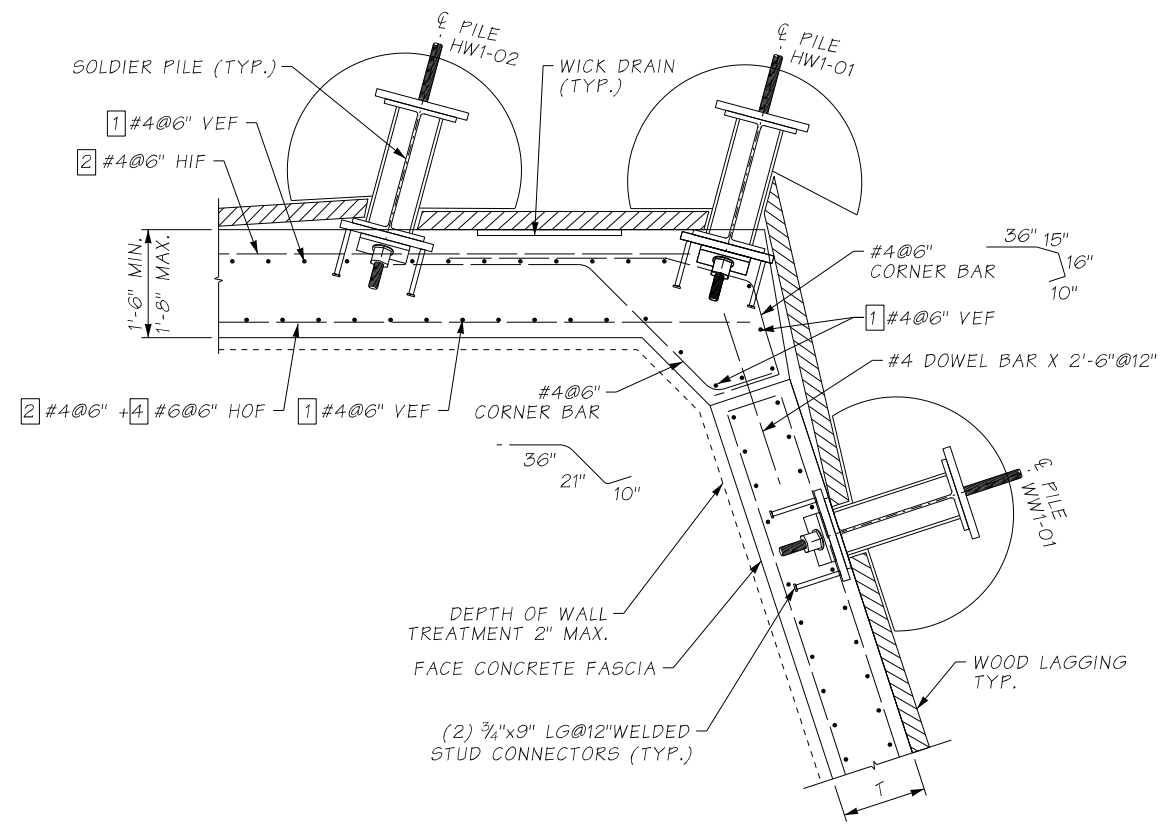
SHEET
XX
OF
SHEETS

C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61

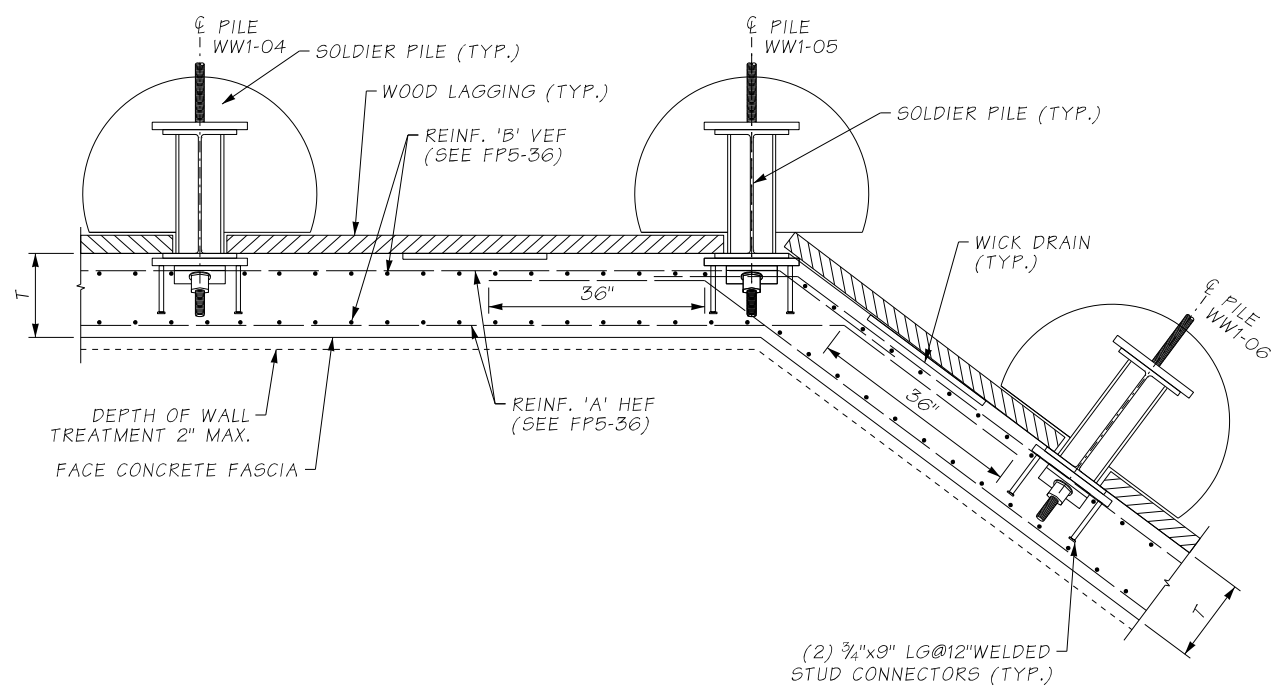


HEADWALL FASCIA (NORTH CORNER) - TYPICAL DETAIL

NOTE: DETAIL APPLICABLE TO FASCIA BETWEEN SOLDIER PILE WALLS. TRANSITION TO CAST-IN-PLACE CONCRETE WALL IS MADE BY AN EXPANSION JOINT. CONNECTOR #6 DOWELS ARE USED ALONG PILES HW1-10 AND HW1-11 BETWEEN EL.231 FT TO EL. 241 FT

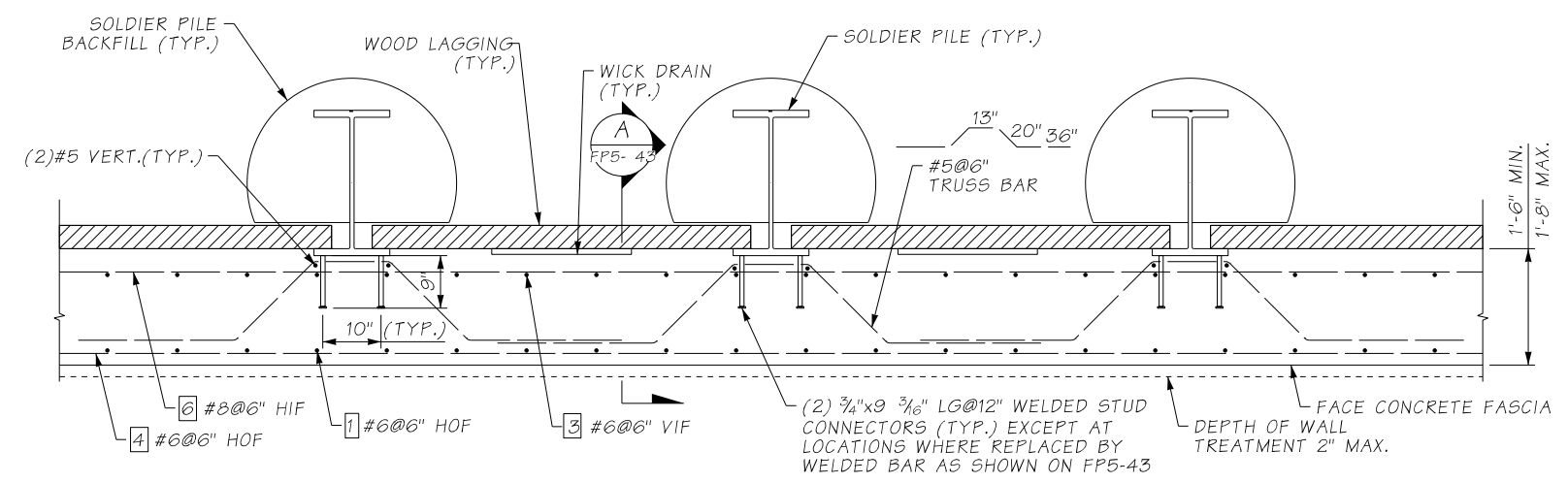


HEADWALL FASCIA (SOUTH CORNER) - TYPICAL DETAIL



WINGWALL 1 CORNER - TYPICAL DETAIL

FOR FASCIA BELOW EL. 219.20 ft



HEADWALL FASCIA TYPICAL DETAIL REINFORCED AREA EL. 231 FT TO 241 FT

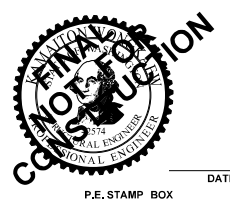
NOTES:

- LAGGING IN THE CORNER IS PLACED BY ALTERNATING THE LAGGING OVERLAP FROM EACH SIDE (LOG CABIN PLACING). WOOD LAG BOLTS TO BE USED THROUGH THE STEEL ANGLE MEMBER TO LOCK THE SYSTEM TOGETHER.
- FOR WINGWALL FASCIA THICKNESS "T" REFER TO FP5-36.

RESERVED FOR RFC CERTIFICATION STAMP

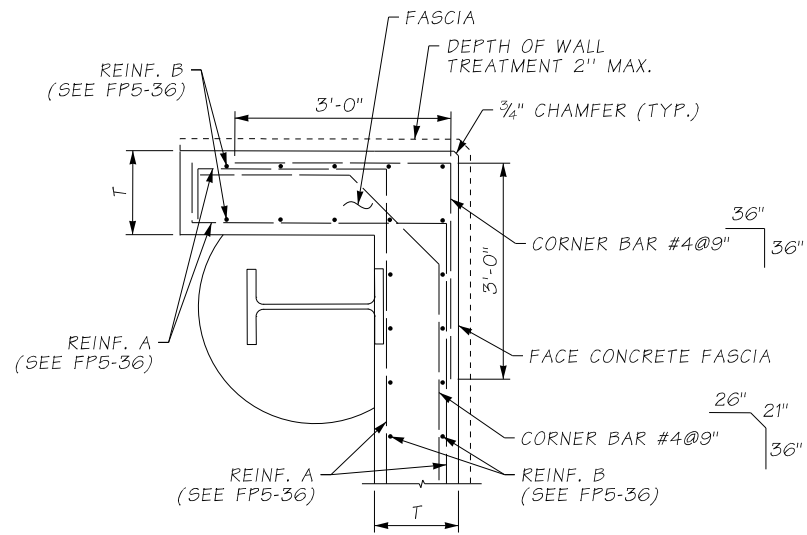
SR FILE NO. SHEET

FILE NAME	c:\pwworking\uswaldms06730\C9727_DE_FP5_42.dgn	REGION NO.	STATE	FED.AID PROJ.NO.
TIME	14:25:39	10	WASH	
DATE	22/7/2025	JOB NUMBER		
PLOTTED BY	EscribanoRosilloN	22AB17		
DESIGNED BY	I RIVERO	CONTRACT NO.	LOCATION NO.	
ENTERED BY	S SANCHEZ	9727	XL5446	
CHECKED BY	M WONGKAEW			
PROJ. ENGR.	J SLAVICEK			
REGIONAL ADM.	L HODGSON	REVISION	DATE	BY



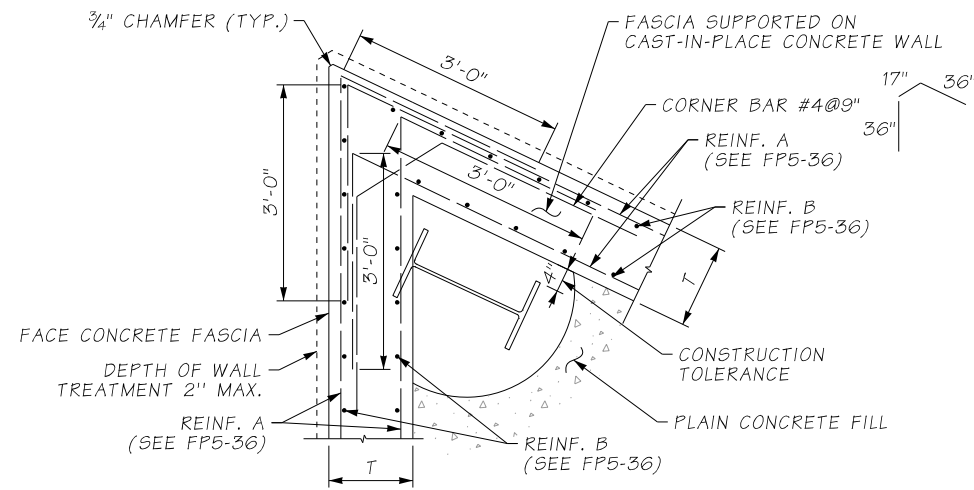
I-405 BRICKYARD TO SR527 IMPROVEMENT PROJECT
JUANITA CREEK (MP 21.94) FISH PASSAGE STRUCTURE NO. 405/61 WEST HEADWALL DETAILS 1 OF 2

PLAN REF NO. FP5-42
 SHEET XX OF SHEETS



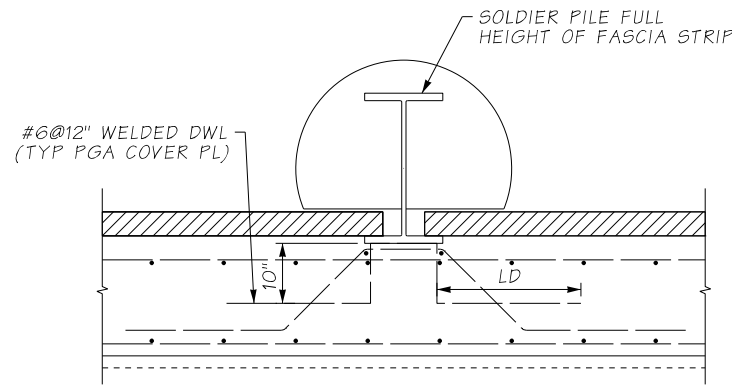
**WINGWALL 1 CORNER
TYPICAL DETAIL**

NOTE: FOR WALL THICKNESS "T" REFER TO F05-36



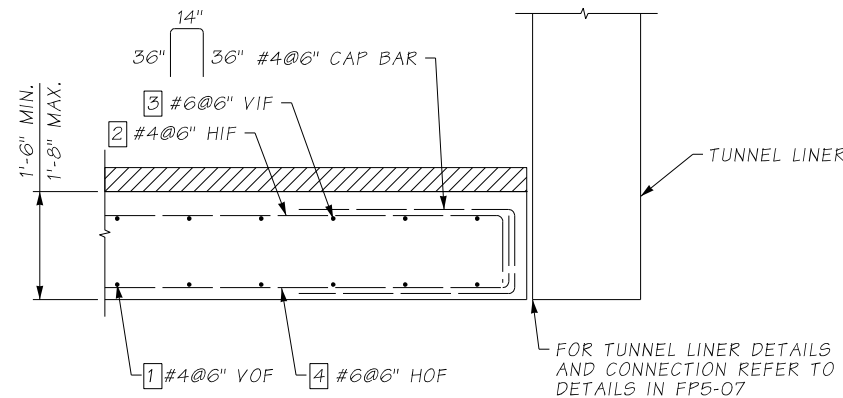
**WINGWALL 2 CORNER ON
TRANSITION TO CAST IN PLACE
CONCRETE WALL- TYPICAL DETAIL**

NOTE: FOR WALL THICKNESS "T" REFER TO F05-36



**SOLDIER PILE
CONNECTION WITH #6@12"**

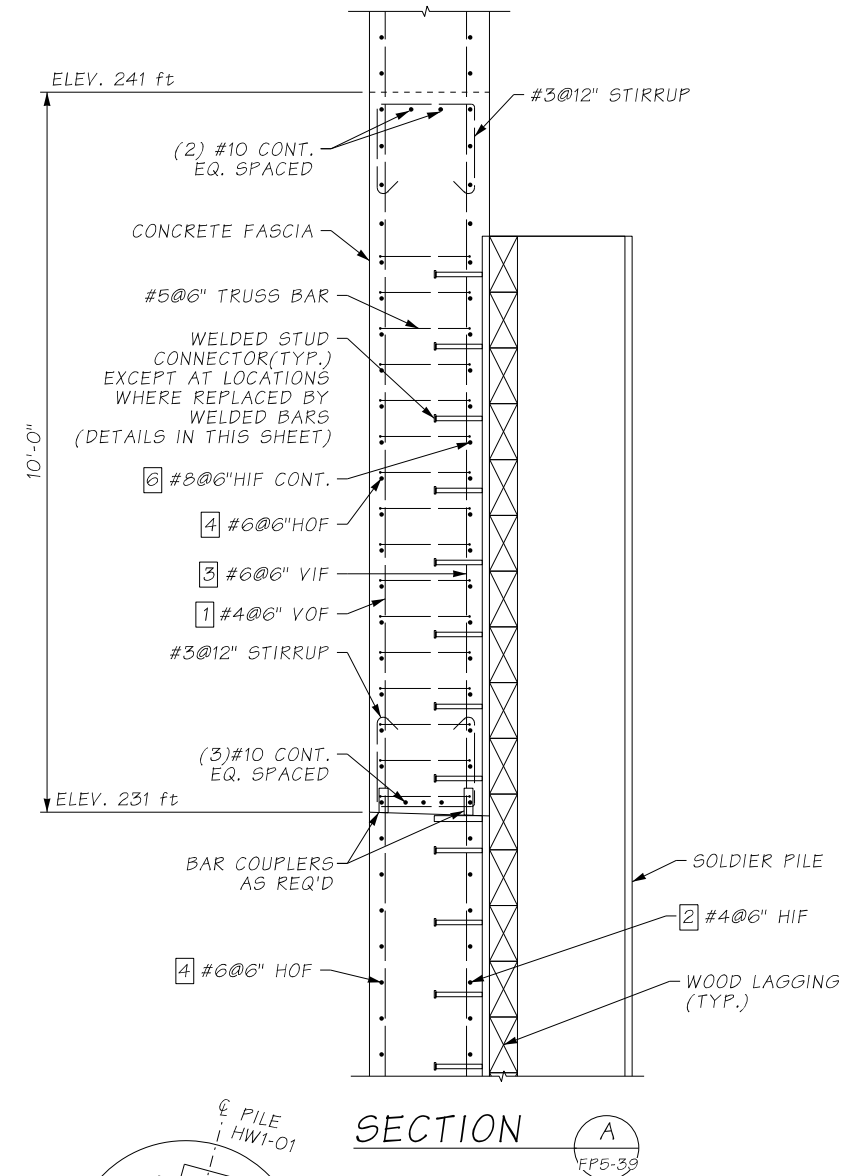
NOTE: CONNECTOR #6 DOWELS ARE USED ALONG PILES HW1-03 AND HW1-08 BETWEEN EL.231 FT TO EL. 241 FT.



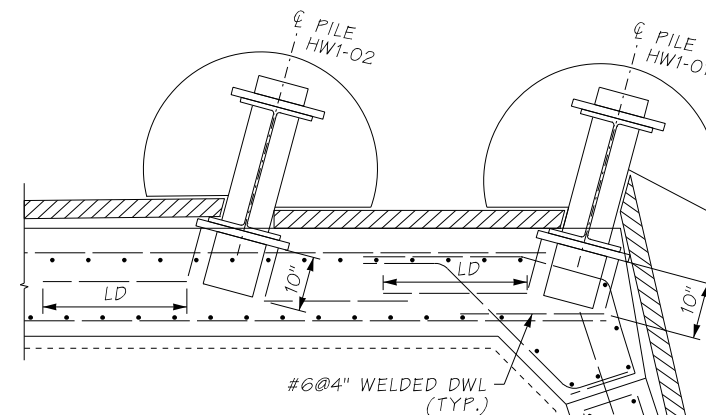
**HEADWALL FASCIA TYPICAL END
DETAIL AT TUNNEL INTERFACE**

SECTION B
FP5-39

FOR TUNNEL LINER DETAILS AND CONNECTION REFER TO DETAILS IN FP5-07



SECTION A
FP5-39



NOTE: FOR PILES HW1-01, HW1-02, HW1-03, AND HW1-04, INSTALL #6 WELDED DOWELS FOR A DISTANCE OF 2'-0" ABOVE AND BELOW CENTERLINE OF THE PGA CENTERLINE, BUT NEED NOT BE INSTALLED BELOW THE BOTTOM OF THE CONCRETE FASCIA STRIP (EL. 231 FT). FOR PILES HW1-09, HW1-10, AND HW1-11 INSTALL #6 WELDED DOWELS AT REQUIRED SPACING BETWEEN EL.231 FT AND EL.241 FT.

SOLDIER PILE CONNECTION WITH #6@4"

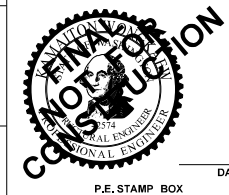
**RESERVED FOR
RFC
CERTIFICATION STAMP**

NOTES:

1. WELDING HEADED STUD AND WELDED DOWEL CONNECTORS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH AWS D1.5 UTILIZING STUD WELDING GUN AND ACCESSORIES.
2. DEVELOPMENT LENGTH, LD FOR #6 DEFORMED BARS, PER BDM APPENDIX 5.1-A4 TABLE, SHALL NOT BE LESS THAN 28".

SR FILE NO. SHEET

FILE NAME	c:\pwworking\uswaldms06730\IC9727_DE_FP5_43.dgn		
TIME	13:05:47		
DATE	23/7/2025		
PLOTTED BY	EscribanoRosilloN		
DESIGNED BY	I RIVERO		
ENTERED BY	S SANCHEZ		
CHECKED BY	M WONGKAEW		
PROJ. ENGR.	J SLAVICEK		
REGIONAL ADM.	L HODGSON		
REVISION	DATE	BY	
REGION NO.	STATE	FED.AID PROJ.NO.	
10	WASH		
JOB NUMBER			
22AB17			
CONTRACT NO.	LOCATION NO.		
9727	XL5446		



AECOM



**I-405
BRICKYARD TO SR527
IMPROVEMENT PROJECT**

**JUANITA CREEK (MP 21.94)
FISH PASSAGE STRUCTURE NO. 405/61
WEST HEADWALL DETAILS 2 OF 2**

PLAN REF NO
FP5-43

SHEET
XX
OF
SHEETS

C.S. 1757 ~ PROJ. NO. 9727 ~ NORTHWEST REGION ~ I-405 MP 21.94 ~ JUANITA CREEK FISH PASSAGE STRUCTURE NO. 405/61