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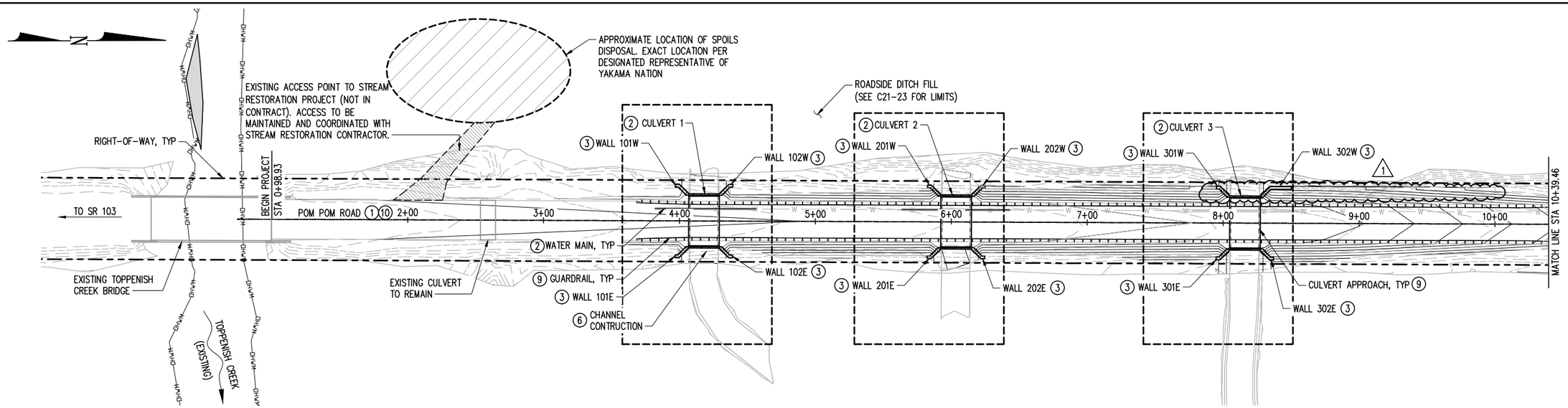
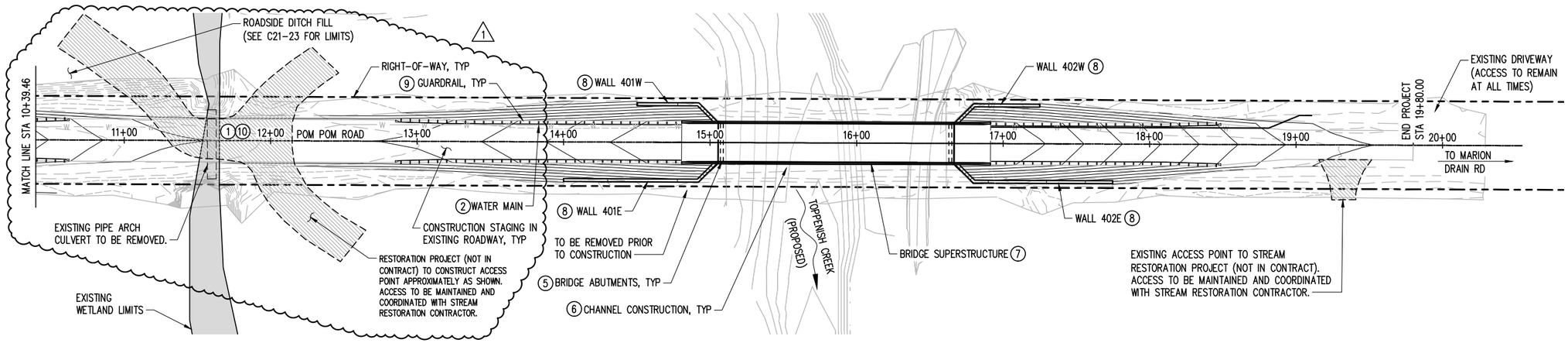
xPPR_BRIDGE
x22059BASE
22059EXTG
PomPomOHW
22059BASE-Surf_Proposed





PROJECT PROPOSED CONSTRUCTION SEQUENCE

1. CLOSE POM POM ROAD. INSTALL TESC, SEE CIVIL SHEETS.
2. CONSTRUCT CULVERTS AND WATER MAIN AT CULVERTS. SEE CULVERT PROPOSED CONSTRUCTION SEQUENCE, THIS SHEET.
3. BACKFILL CULVERTS, GRADE CHANNEL AROUND THE CULVERTS, AND INSTALL SCOUR COUNTERMEASURES, SEE CHANNEL SHEETS.
4. RAISE ROADWAY GRADE AND CONSTRUCT WALLS AROUND THE CULVERTS, SEE CIVIL SHEETS.
5. INSTALL BRIDGE DRILLED SHAFTS AND CONSTRUCT ABUTMENTS, SEE STRUCTURAL SHEETS.
6. GRADE CHANNEL UNDER BRIDGE, SEE CHANNEL SHEETS (CONTRACTOR SHALL BE PREPARED TO WORK IN WET CONDITIONS).
7. INSTALL BRIDGE SUBSTRUCTURE. SEE DWG S03 BRIDGE SUPERSTRUCTURE CONSTRUCTION SEQUENCE. INSTALL WATER MAIN AT BRIDGE, SEE STRUCTURAL SHEETS.
8. RAISE ROADWAY GRADE AND CONSTRUCT WALLS AROUND BRIDGE ABUTMENTS, SEE CIVIL SHEETS.
9. INSTALL GUARDRAIL, SEE CIVIL SHEETS
10. ADJUST ROADWAY GRADE, AS NEEDED, TO ADDRESS SETTLEMENT AT CULVERT AND BRIDGE APPROACHES.
11. OPEN POM POM ROAD.

CULVERT PROPOSED CONSTRUCTION SEQUENCE

1. ASSEMBLE WATER MAIN CARRIER PIPE.
2. OVER EXCAVATE FOR CULVERT.
3. PLACE WATER MAIN CARRIER PIPE AT BASE OF EXCAVATION (CONTRACTOR SHOULD BE PREPARED TO WORK IN WET CONDITIONS).
4. PREPARE CULVERT SUBGRADE.
5. INSTALL WATER MAIN IN CARRIER PIPE.
6. PLACE CULVERT.

THIS SHEET OUTLINES ONE FEASIBLE SEQUENCE TO CONSTRUCT THE PROJECT. THE CONTRACTOR SHALL EITHER ELECT TO USE THIS SEQUENCE OR DEVELOP AN ALTERNATIVE SEQUENCE, BASED ON CONTRACTOR PREFERENCES. IF A DIFFERENT SEQUENCE IS PROPOSED, IT SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION.

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JANNE PARRELLO-STRAFFON — STATE OF WASHINGTON — 40903 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER
12/19/2025

NO.	DATE	BY	REVISION
1	12/9/25	TL	ADDENDUM 1: RESTORATION ACCESS & WALL CORRECTION

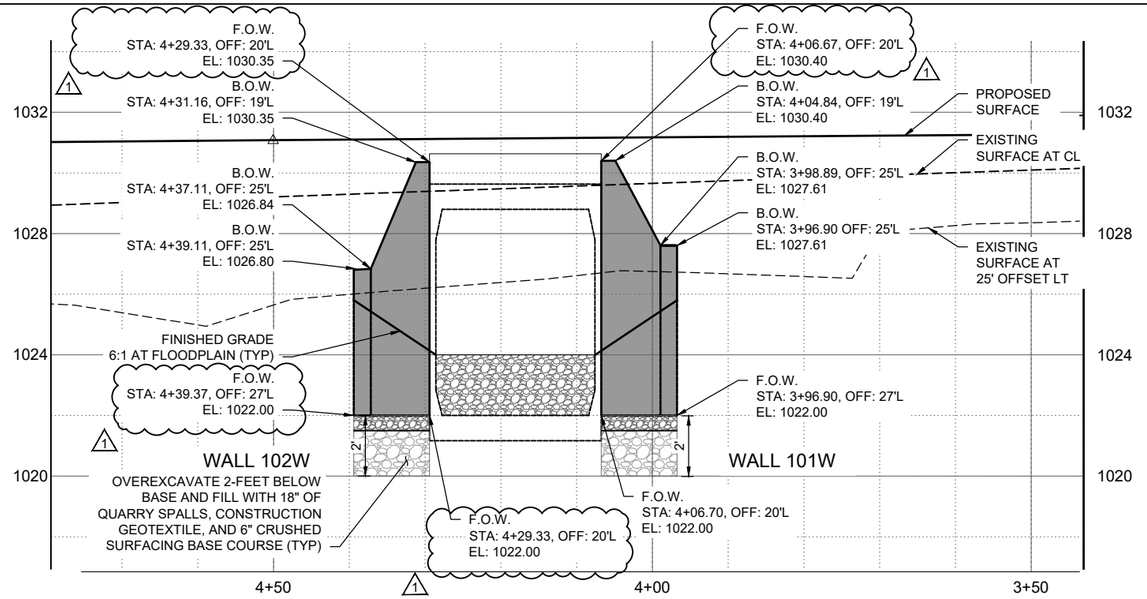
CONFEDERATED TRIBES AND BANDS — YAKAMA NATION — TREATY OF

POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

PROJECT PROPOSED CONSTRUCTION SEQUENCE

DRAWN: HT	PROJECT NO.: 2200093
DESIGN: TL	SCALE: AS SHOWN
CHECKED: JLP	DATE: 11/26/2025
DRAWING NO.	G03
SHEET NO.	3 OF 62

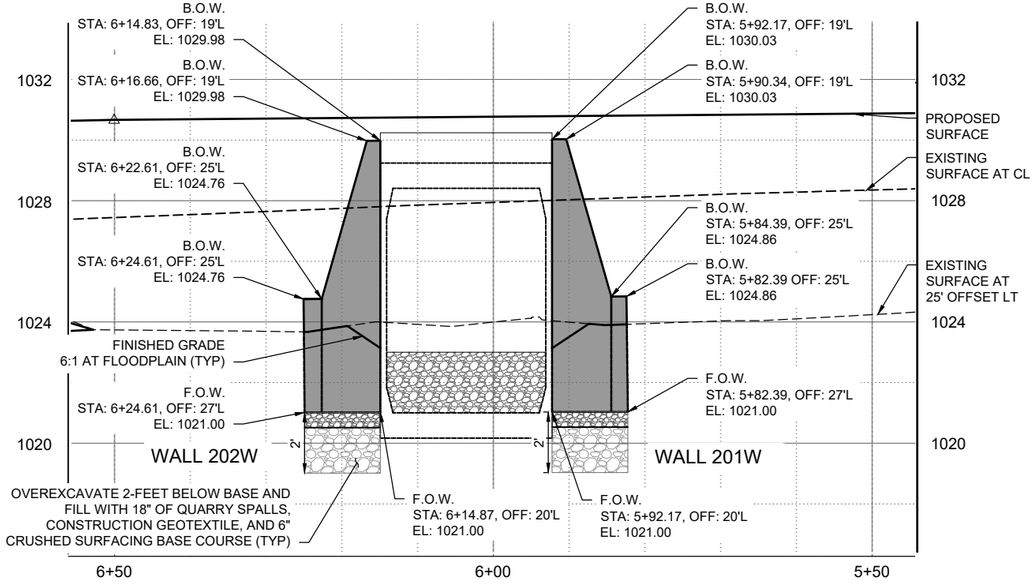
CAD USER: joshp PLOT DATE: Dec 22, 2025 - 04:27pm
PATH: V:\2200093 (Pom Pom Road Bridges)\02_Design (v2022)\PPR-G03-REV-1.dwg



NOTES:
1. THE ROADWAY IS EXPECTED TO SETTLE DURING INSTALLATION OF THE FILL REQUIRED TO RAISE THE ROADWAY. ELEVATIONS LISTED ON THIS SHEET ARE FOR PRE-SETTLEMENT CONDITIONS, UNO.
2. B.O.W. (BACK OF WALL) IS THE POINT WHERE 2:1 ROADWAY SIDESLOPE GRADING MEETS THE WALL, AT A PROPOSED 2' BACK FROM FACE OF WALL AS SHOWN IN PLAN VIEW. NOT TRUE BACK OF STRUCTURAL WALL BACKFILL.
3. F.O.W. (FACE OF WALL) TRUE FACE OF WALL BELOW FINISHED GRADE AS SHOWN IN PLAN VIEW

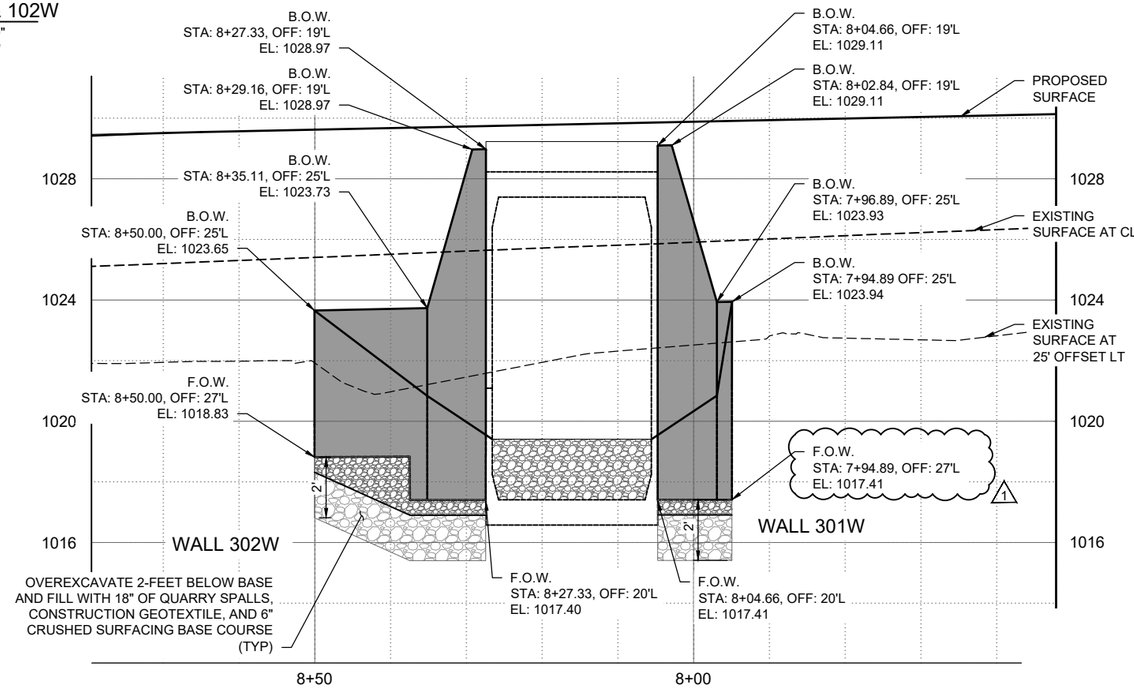
WALL PROFILES
WALLS 101W & 102W

SCALE: HORIZ: 1" = 10"
VERT: 1" = 2.5'



WALL PROFILES
WALLS 201W & 202W

SCALE: HORIZ: 1" = 10"
VERT: 1" = 2.5'



WALL PROFILES
WALLS 301W & 302W

SCALE: HORIZ: 1" = 10"
VERT: 1" = 2.5'

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DAVID K. LUNEKE — STATE OF WASHINGTON — 49176 — REGISTERED PROFESSIONAL ENGINEER
EXP. 6/25/2027

NO.	DATE	BY	REVISION
1	12/23/2025	DN	ADDENDUM 1: WALL CLARIFICATION

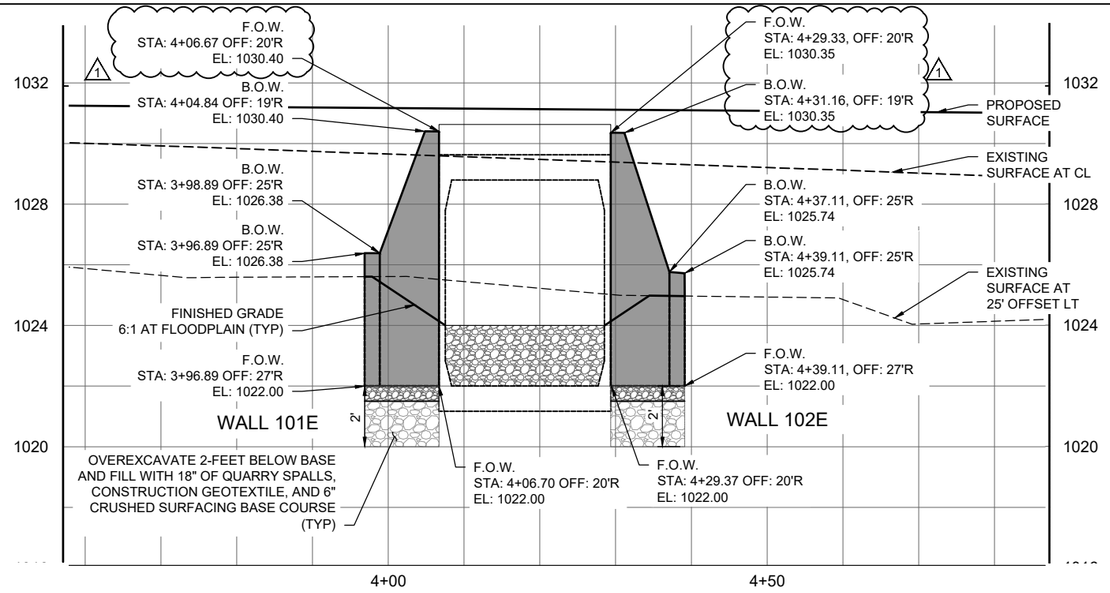
CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION — TREATY OF 1855

POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

WALL PROFILES AT BOX CULVERTS

DRAWN: DAN	PROJECT NO.: 2200093
DESIGN: DAN/DKL	SCALE: AS SHOWN
CHECKED: ARR	DATE: 10/03/2025
DRAWING NO.	C25
SHEET NO.	20 OF 61

Xrefs:
22059EXTG
22059BASE
KPFFB-2234xtb Pom Pom
xPPR_BRIDGE 11-17-2022
Luneke-STAMP-WA



NOTES:
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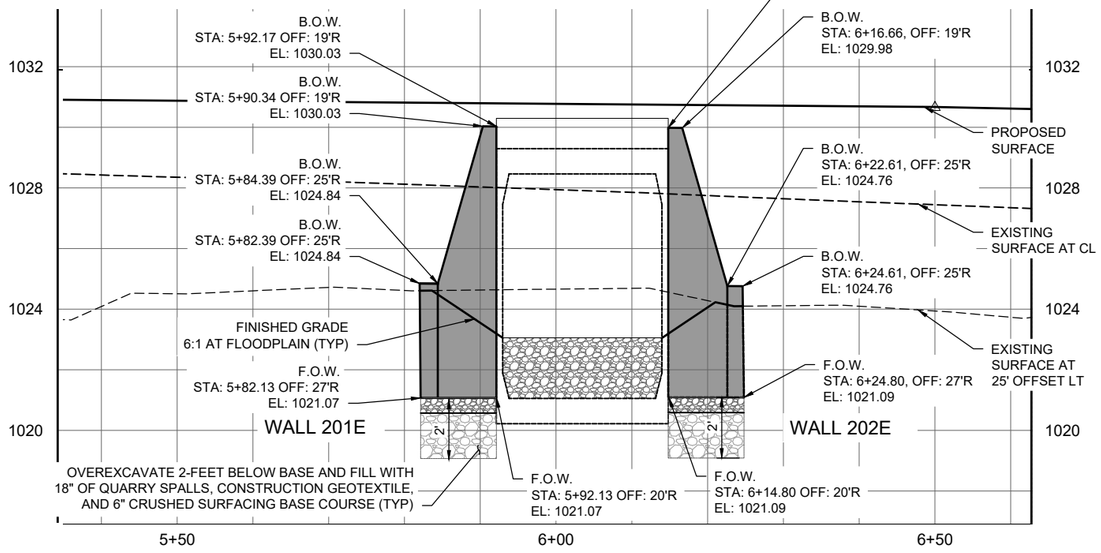
2. B.O.W. (BACK OF WALL) IS THE POINT WHERE 2:1 ROADWAY SIDESLOPE GRADING MEETS THE WALL, AT A PROPOSED 2' BACK FROM FACE OF WALL AS SHOWN IN PLAN VIEW. NOT TRUE BACK OF STRUCTURAL WALL BACKFILL.
3. F.O.W. (FACE OF WALL) TRUE FACE OF WALL BELOW FINISHED GRADE AS SHOWN IN PLAN VIEW

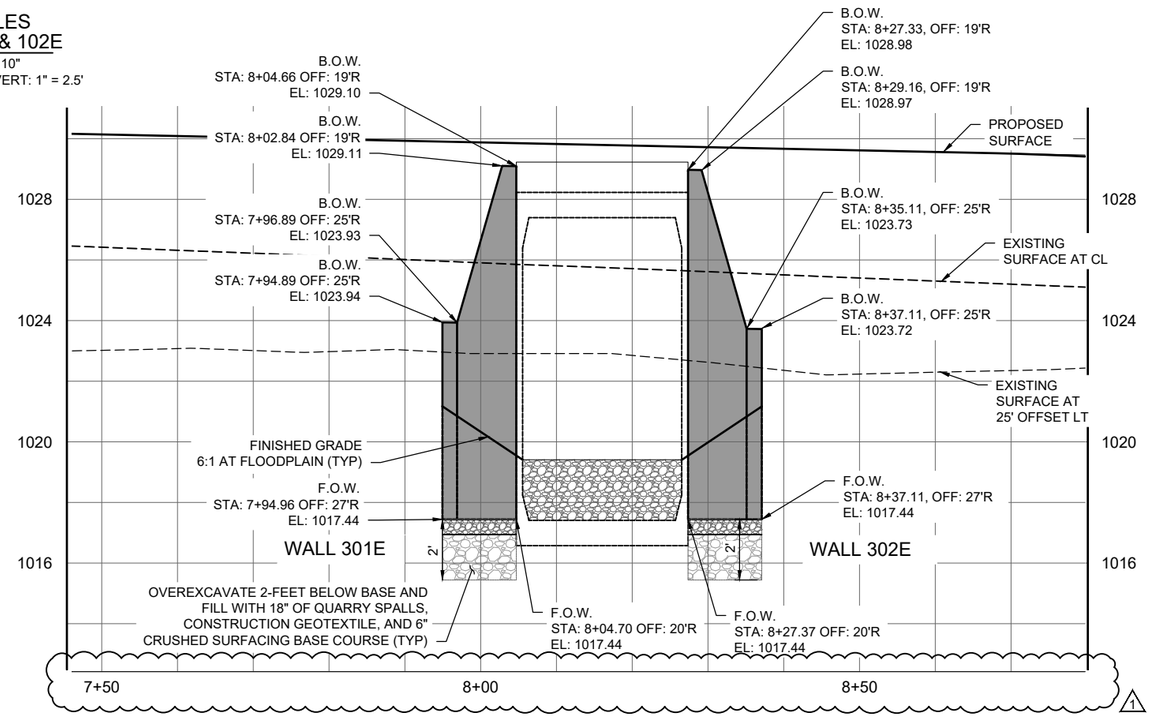
WALL PROFILES
WALLS 101E & 102E

SCALE: HORIZ: 1" = 10"
VERT: 1" = 2.5'



WALL PROFILES
WALLS 201E & 202E

SCALE: HORIZ: 1" = 10"
VERT: 1" = 2.5'



WALL PROFILES
WALLS 301E & 302E

SCALE: HORIZ: 1" = 10"
VERT: 1" = 2.5'

FINAL / RELEASED FOR CONSTRUCTION

CAD USER: Dominic.Nudo PLOT DATE: Dec 23, 2025-10:36am
PATH: P:\PDX PROJECTS\2022\22-059 KPFF Pom Pom Bridge\05_CAD\2-Sheets\Civil\C 26 - BOX CULVERT GRADING DETAILS - EAST.dwg

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DAVID K. LUNEKE — STATE OF WASHINGTON — 49176 — REGISTERED PROFESSIONAL ENGINEER
EXP: 6/25/2027

NO.	DATE	BY	REVISION
1	12/23/2025	DN	ADDENDUM 1: WALL CLARIFICATION

CONFEDERATED TRIBES AND BANDS — YAKAMA NATION — TREATY OF 1855

POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

WALL PROFILES AT BOX CULVERTS II

DRAWN: DAN	PROJECT NO.: 2200093
DESIGN: DAN/DKL	SCALE: AS SHOWN
CHECKED: ARR	DATE: 10/03/2025
DRAWING NO.	C26
SHEET NO.	21 OF 61

NOTES:
1. THE ROADWAY IS EXPECTED TO SETTLE DURING INSTALLATION OF THE FILL REQUIRED TO RAISE THE ROADWAY. ELEVATIONS LISTED ON THIS SHEET ARE FOR PRE-SETTLEMENT CONDITIONS, UNO.
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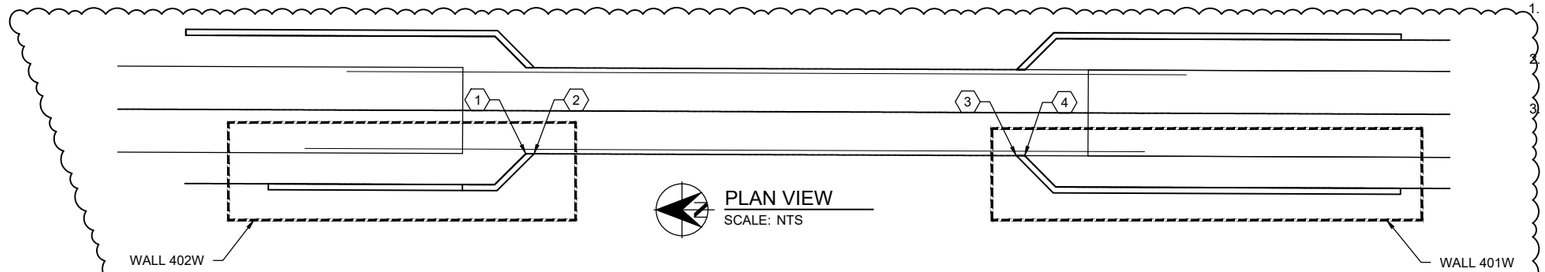
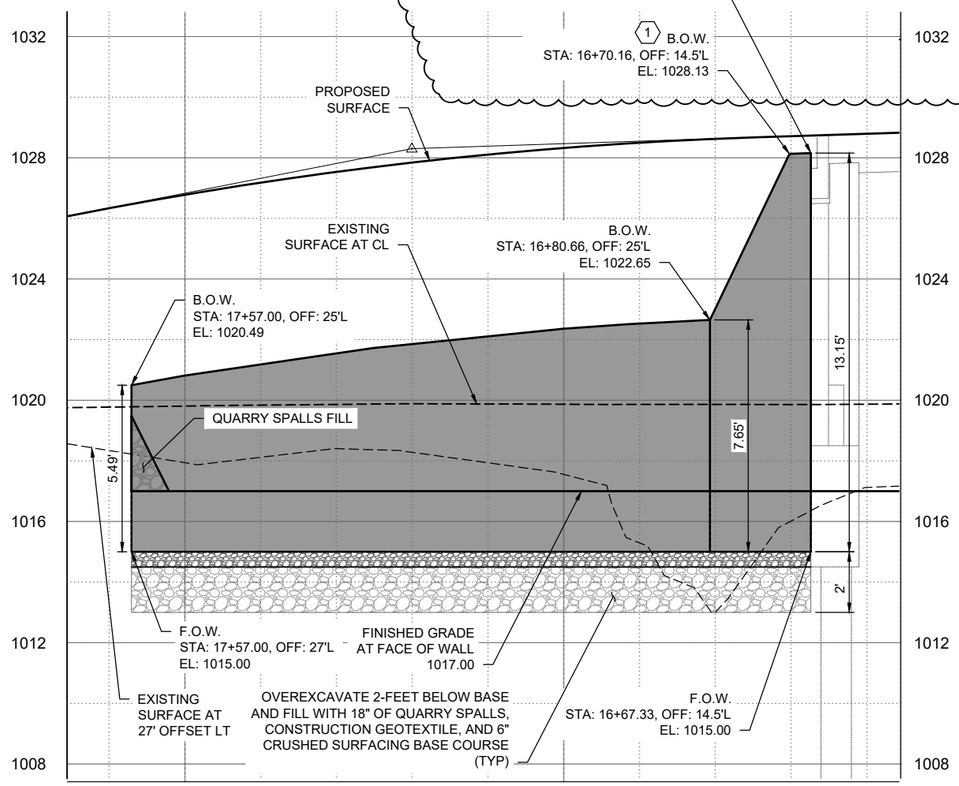
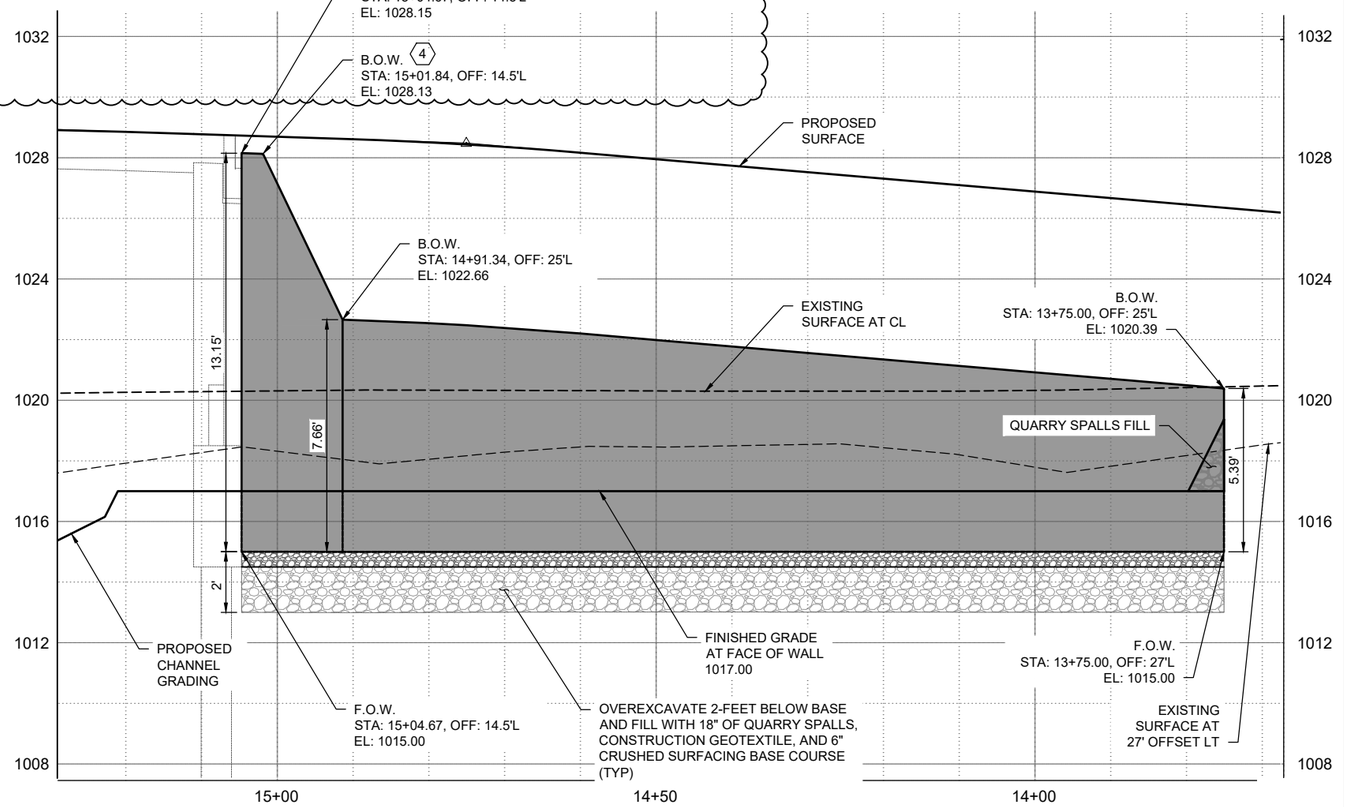


PLAN VIEW
SCALE: NTS



WALL PROFILE
WALL 402W
SCALE: H: 1" = 10"
V: 1" = 2.5'



WALL PROFILE
WALL 401W
SCALE: H: 1" = 10"
V: 1" = 2.5'

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EXP. 6/25/2027

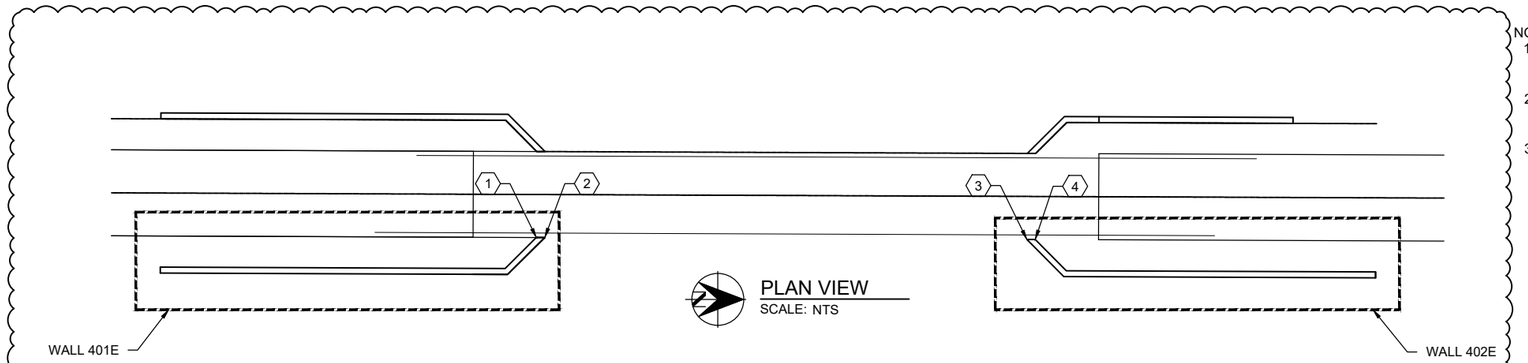
NO.	DATE	BY	REVISION
1	12/23/2025	DN	ADDENDUM 1: WALL CLARIFICATION

CONFEDERATED TRIBES AND BANDS — YAKAMA NATION — TREATY OF 1855

POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

WALL PROFILE
AT BRIDGE ABUTMENTS

DRAWN: DAN	PROJECT NO.: 2200093
DESIGN: DAN/DKL	SCALE: AS SHOWN
CHECKED: ARR	DATE: 10/03/2025
DRAWING NO.	C27
SHEET NO.	22 OF 61



PLAN VIEW
SCALE: NTS

NOTES:
1. THE ROADWAY IS EXPECTED TO SETTLE DURING INSTALLATION OF THE FILL REQUIRED TO RAISE THE ROADWAY. ELEVATIONS LISTED ON THIS SHEET ARE FOR PRE-SETTLEMENT CONDITIONS, UNO.
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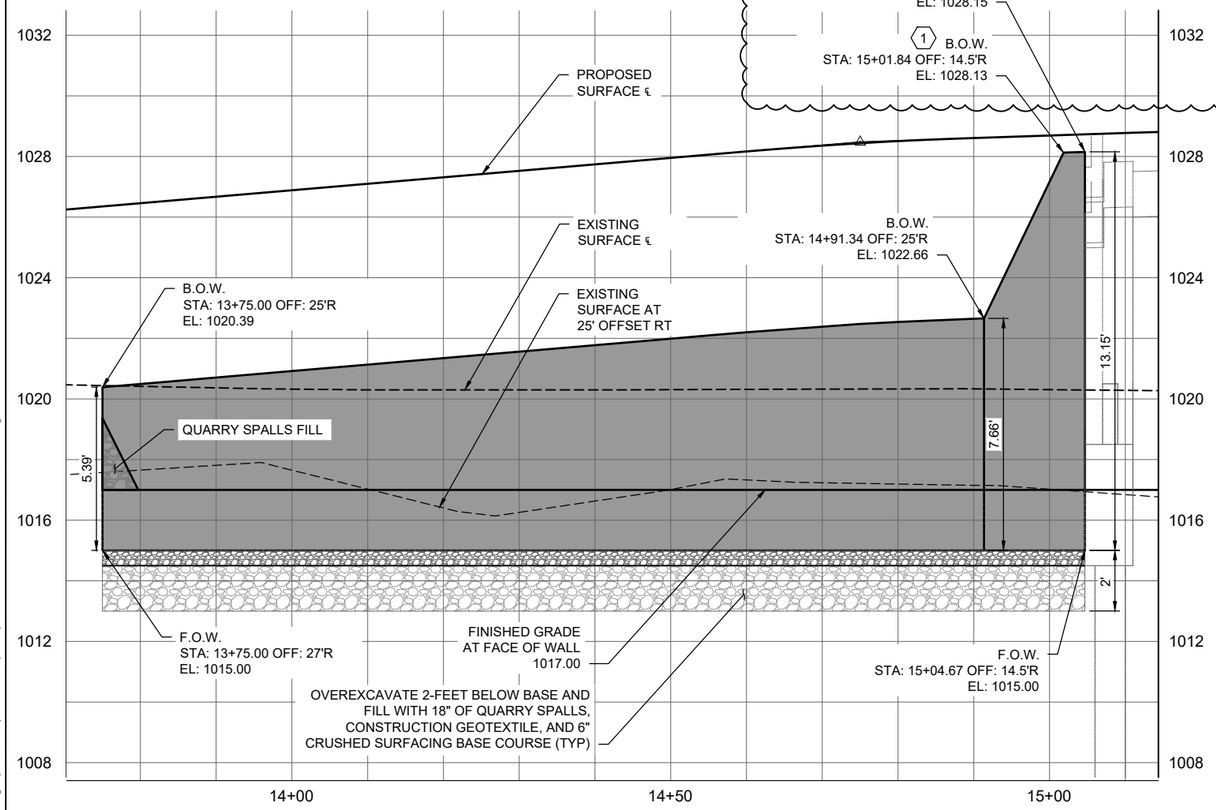
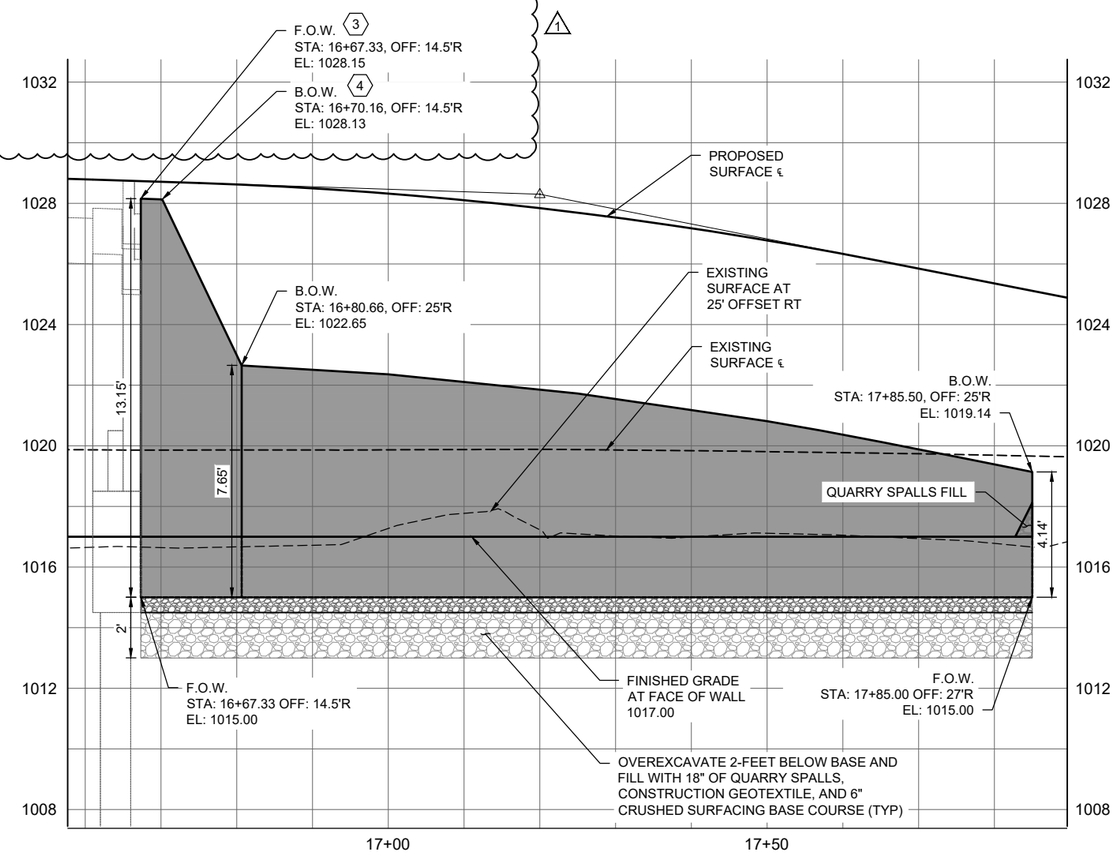
3. F.O.W. (FACE OF WALL) TRUE FACE OF WALL BELOW FINISHED GRADE AS SHOWN IN PLAN VIEW



WALL PROFILE
WALL 401E
SCALE: H: 1" = 10"
V: 1" = 2.5'



WALL PROFILE
WALL 402E
SCALE: H: 1" = 10"
V: 1" = 2.5'

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DAVID K. LUNEKE — STATE OF WASHINGTON — 49176 — REGISTERED PROFESSIONAL ENGINEER
EXP. 6/25/2027

NO.	DATE	BY	REVISION
1	12/23/2025	DN	ADDENDUM 1: WALL CLARIFICATION

CONFEDERATED TRIBES AND BANDS — YAKAMA NATION — TREATY OF

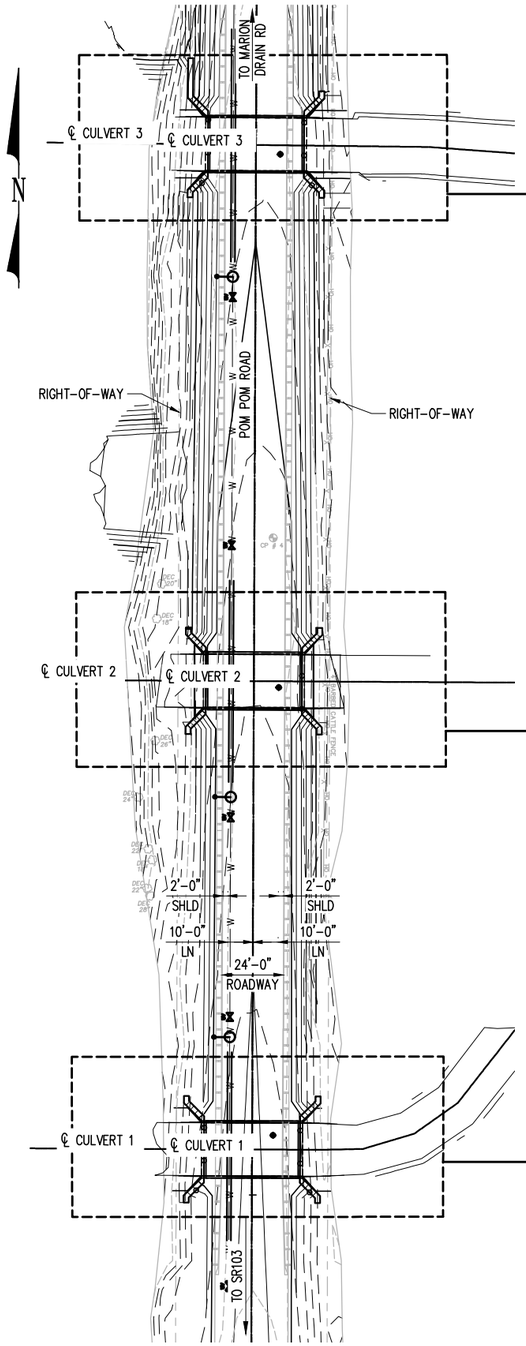
POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

WALL PROFILE
AT BRIDGE ABUTMENTS II

DRAWN: DAN	PROJECT NO.: 2200093
DESIGN: DAN/DKL	SCALE: AS SHOWN
CHECKED: ARR	DATE: 10/03/2025
DRAWING NO.	C28
SHEET NO.	23 OF 61

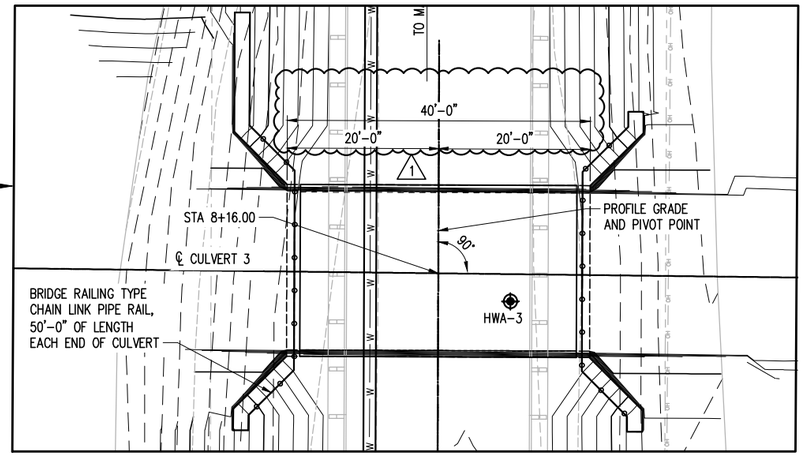
Xrefs:
KPFFB-2234xtb
22059EXTG
22059BASE

SEC. 20 & 21, T.10N., R.17E., W.M.
YAKAMA NATION

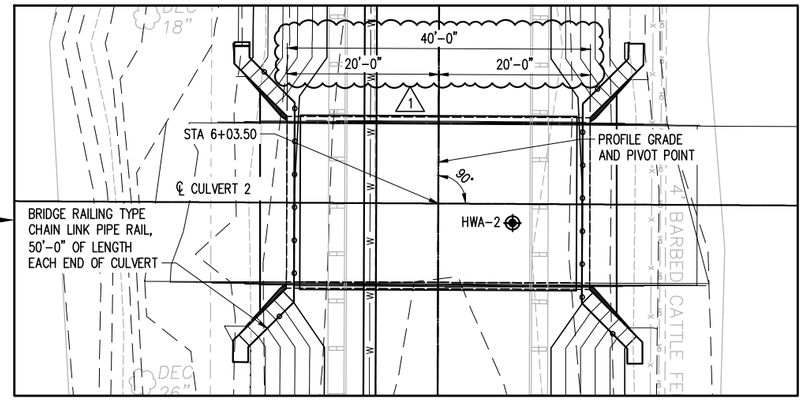


CULVERT LAYOUT

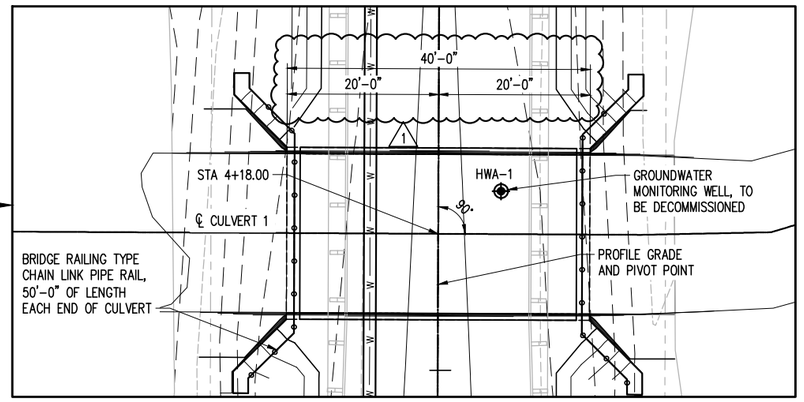
SCALE: 1' = 30'-0"



CONTRACTOR DESIGNED BURIED STRUCTURE NO. 3 SCALE: 1' = 10'-0"



CONTRACTOR DESIGNED BURIED STRUCTURE NO. 2 SCALE: 1' = 10'-0"



SCALE: 1' = 10'-0"

CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1

(3) 21 FT PRECAST REINFORCED CONCRETE SPLIT BOX CULVERT (PRCSBC)
LOADING: HL-93

CAD USER: RickT PLOT DATE: Dec 11, 2025-11:05am
PATH: V:\2200093 (Pom Pom Road Bridges)\02_Design (v2022)\PPR-S30-REV-1.dwg

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ANNA M. ABRELLO, STATE OF WASHINGTON, 40903, REGISTERED PROFESSIONAL ENGINEER, STRUCTURAL ENGINEER
12/19/2025

NO.	DATE	BY	REVISION
1	12/9/25	TL	ADDENDUM 1: CULVERT LENGTH ADJUSTMENT

CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION, TREATY OF

POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

CULVERT LAYOUT

DRAWN: HT	PROJECT NO.: 2200093
DESIGN: TL	SCALE: AS SHOWN
CHECKED: JLP	DATE: 11/26/2025
DRAWING NO.	S30
SHEET NO.	49 OF 62

Xrefs:
KPFFB-2234xtb

CULVERT GENERAL NOTES:

1. ALL MATERIAL AND WORKMANSHIP SHALL BE ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION DATED 2025 AND THE PROJECT SPECIAL PROVISIONS.

2. CULVERTS SHALL BE CONTRACTOR DESIGNED, FOUR-SIDED BURIED STRUCTURES CONSISTENT WITH THE REQUIREMENTS OF STANDARD SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS

3. THIS STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS NINTH EDITION, 2020 – WITH INTERIM REVISIONS.

4. THE STRUCTURE SHALL BE DESIGNED FOR:
   TOTAL SETTLEMENT OF UP TO 2 INCHES WITH DIFFERENTIAL SETTLEMENT OF UP TO 1 INCH.
   DEAD LOAD INCLUDING 35 PSF ADDED WEARING SURFACE
   TRAFFIC BARRIERS AND ATTACHMENTS = TL-3 MINIMUM AND TO BE COMPATIBLE WITH STANDARD PLAN C-20.43-00. (1)

5. FOR THE BASIS OF SEISMIC, SCOUR AND GEOTECHNICAL DESIGN, SEE DRAWING S01 BRIDGE GENERAL NOTES.

6. CONCRETE COVER MEASURED FROM THE FACE OF CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2.0 INCHES AT ALL LOCATIONS OF THE PRECAST BURIED STRUCTURE UNITS, 3.0 INCHES AT BOTTOM OF PRECAST BURIED STRUCTURE UNITS AND 2.0 INCHES AT ALL OTHER LOCATIONS.

7. FORMS USED FOR PRECAST UNITS SHALL BE METAL OR WOOD ONLY. THE PRECAST UNITS SHALL CONFORM WITH TOLERANCES IN ACCORDANCE WITH STD SPEC 6-20.3(3)A.

8. ALL STEEL PLATES AND SHAPES SHALL BE ASTM A36 OR ASTM A572 GRADE 50. ALL BOLTS, NUTS, AND WASHERS SHALL BE ASTM A307 AND SHALL CONFORM TO STD SPEC 9-06.5(3). RESIN BONDED ANCHOR SYSTEMS SHALL CONFORM TO STD SPEC 9-06.4. ALL STEEL PLATES AND SHAPES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER FABRICATION, UNLESS NOTED OTHERWISE. GALVANIZING SHALL BE REMOVED AT ANY FIELD WELDED ZONES. BOLTS AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 OR ASTM F2329 AS APPLICABLE. GALVANIZING REPAIR PAINT SHALL CONFORM TO STD SPEC 9-08.1(2)B.

9. THE CONTRACTOR SHALL IDENTIFY REINFORCEMENT FREE ZONES ON THE STRUCTURE WHEN RESIN BONDED ANCHORS, CONFORMING TO STD. SPEC. 6-02.3(18)A, ARE TO BE INSTALLED IN FIELD DRILLED HOLES.

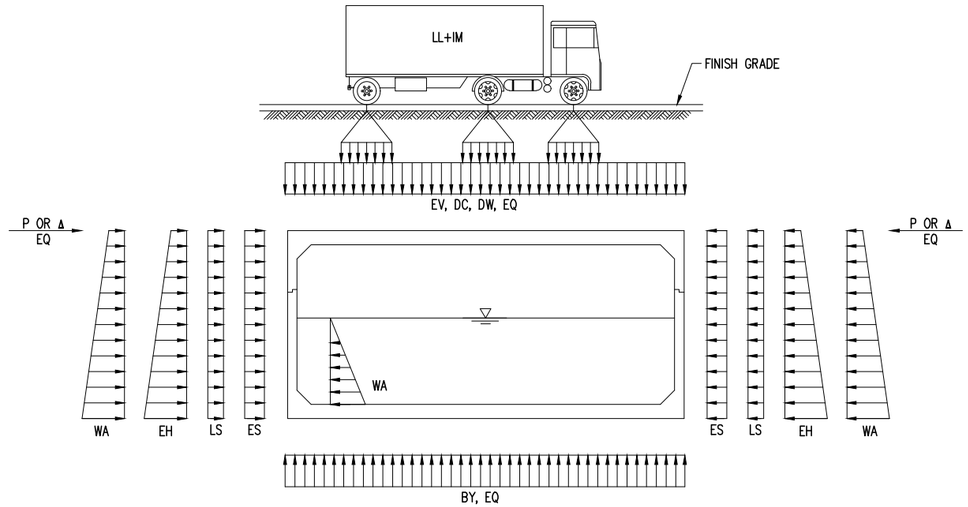
10. THE FABRICATOR SHALL DESIGN FOR THE MEANS OF LIFTING AND TRANSPORTING PRECAST BURIED STRUCTURE UNITS, AND WINGWALLS IN ACCORDANCE WITH WSDOT STD. SPEC. 6-20.3(2)A.

11. ALL JOINTS SHALL BE SEALED WITH BUTYL RUBBER JOINT SEALANT AND WRAPPED WITH EXTERNAL SEALING BAND IN ACCORDANCE WITH STD. SPEC. 6-20.3(8)A.

12. BACKFILL ON BOTH SIDES OF THE BURIED STRUCTURE SHALL BE PLACED IN SEQUENCE AND COMPACTED IN ACCORDANCE WITH STD. SPEC. 2-09.3(1)E. THE MAXIMUM FILL HEIGHT DIFFERENCE MEASURED FROM SIDE TO SIDE SHALL NOT EXCEED 2'-0".

13. THE EXCAVATION LIMITS BELOW THE CULVERTS ARE EXPECTED TO BE BELOW GROUNDWATER LEVELS DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A TYPE 2 WORKING DRAWING CONSISTING OF A DEWATERING PLAN FOR REVIEW PRIOR TO CONSTRUCTION.

14. WELDED WIRE STRUCTURAL EARTH WALL SHALL BE DESIGNED PER 6-13.3(2) AND WITH A NOMINAL BEARING RESISTANCE, q_n = 4.0 KSF.



NOTES:

1. THE BACK OF CULVERT WALL IS VERTICAL.
2. CULVERT SHALL BE DESIGNED USING AT REST EARTH PRESSURES.
3. THE TRAFFIC SURCHARGE (LS) IS BASED ON A VERTICAL PRESSURE OF 250 PSF.
4. EQ LOADING INCLUDES BOTH LATERAL RACKING DEFORMATION AND VERTICAL SEISMIC.

LATERAL EARTH PRESSURES:

SLIDING COEFFICIENT FOR PRECAST CONCRETE, TAN δ = 0.5

BACKFILL AROUND CULVERT ASSUMED TO MEET GRAVEL BORROW (WSDOT STD SPEC 9-03.14(1))

EFFECTIVE FRICTION ANGLE OF GRAVEL BORROW, ϕ = 36 DEGREES

TOTAL UNIT WEIGHT OF GRAVEL BORROW, γ = 135 PCF

BUOYANT UNIT WEIGHT OF GRAVEL BORROW, ' = 72.6 PCF

STATIC AT-REST COEFFICIENT, K_o = 0.38 , $K_o * \gamma$ = 52 PCF

SEISMIC AT-REST COEFFICIENT, K_{oe} = 0.52 , $K_{oe} * \gamma$ = 70 PCF

TRAFFIC SURCHARGE (LS), HORIZONTAL = K_o*250 PSF = 95 PSF

DC = DEAD LOAD OF STRUCTURAL COMPONENTS
DW = DEAD LOAD OF WEARING SURFACE
EH = HORIZONTAL EARTH PRESSURE
ES = EARTH SURCHARGE
EQ = EARTHQUAKE
EV = VERTICAL EARTH PRESSURE
LL + IM = LIVE LOAD PLUS DYNAMIC LOAD ALLOWANCE
LS = LIVE LOAD SURCHARGE
WA = HYDRO-STATIC PRESSURE
BY = BUOYANCY

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ANNE P. BARELLO - STRUCTURAL
STATE OF WASHINGTON
40903
PROFESSIONAL ENGINEER
STRUCTURAL ENGINEER
12/19/2025

NO.	DATE	BY	REVISION
1	12/9/25	TL	ADDENDUM 1: CLARIFY TRAFFIC BARRIER

CONFEDERATED TRIBES AND BANDS
YAKAMA NATION
TREATY OF 1855

POM POM ROAD AT TOPPENISH CREEK
YAKAMA NATION

CULVERT GENERAL NOTES

DRAWN: HT	PROJECT NO.: 2200093
DESIGN: TL	SCALE: AS SHOWN
CHECKED: JLP	DATE: 11/26/2025
DRAWING NO.	S31
SHEET NO.	50 OF 62

CAD USER: RickT PLOT DATE: Dec 11, 2025-08:48am
PATH: V:\2200093 (Pom Pom Road Bridges)\02_Design (v2022)\PPR-S31-REV-1.dwg