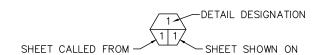
CONSTRUCTION DOCUMENT FOR: **DRAWING INDEX:** 1. Cover Sheet MILL CREEK FISH PASSAGE 2. Legend and Notes 3. Site Plan **SPOKANE to COLVILLE ST** 4. Sections 5. Enlarged Site Plan PROJECT NUMBER 11-1587 6. Concrete Roughness Panel 7. Concrete Roughness Panel Backwater From Plywood Diversion Dam STA 5600 8. Details Extends 440' Upstream 959.4 Trench 9. Ford Details 961.1 Overbank WS Varies 959 to 961 _STA 5600 960.5 Trench 10. Construction Access 11. Channel Repair Location Map 12. Channel Repair (Deficiencies List) 13. Channel Repair (Deficiencies List) 14. Channel Repair Details 6' High Plywood Cofferdam with Block Off Left Water Tight Seal and Bracing. Channel Trench Submittal Required for Approval. to Divert Flow Divider Wall to Right Channel. **DIRECTIONS:** FROM HWY 12 TAKE N 2nd AVE EXIT. GO SE ALONG 2nd AVE TAKE LEFT ONTO E MAIN ST FOLLOW E MAIN TO S COLVILLE ST TAKE RIGHT ON S COLVILLE ST SIGHT IS ON THE LEFT AREA OF WORK **PROJECT** LOCATION Wood Shed 6' x 35' To Be Removed If Required Provide Temporary Crossing For County Maintenance Vehicles Downstream of Divider Wall. Submit Plan for Written Approval. VICINITY MAP Mill Creek Fish Passage CHINOOK ENGINEERING **Cover Sheet** 14

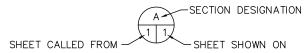
SHEET

Spokane St to Colville St

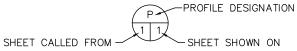
SHEET SYMBOLS



DETAIL CALLOUT



SECTION CALLOUT



PROFILE CALLOUT

References to Right and Left as viewed downstream

Survey Notes

FLOW

L	N	E	T	Y	P	E	S

WATER MAIN	
FENCE	xxxxxxxxx
GAS LINE	OAS OAS OAS
STORM DRAIN	
SAN SEWER	
OVERHEAD POWER	0/P
OVERHEAD TELEPHONE	
ORDINARY HIGH WATER	OHR OHR OHR OHR
UNDERGROUND TELEPHONE	U/T —
UNDERGROUND POWER	U/P U/P U/P U/P
TRACKS	······

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
110	275549.378	2189806.131	968.62	MAG NAIL IN SIDEWALK
111	275311.176	2189984.437	969.93	PK NAIL IN SIDEWALK NE'LY 54.63' OF CL INT
112	275026.639	2189658.749	964.67	MAG NAIL IN WALK E'LY 48.5' OF MON AT CL INT
114	275551.602	2189703.078	968.49	SCX IN SIDEWALK OF BRIDGE
116	275307.581	2189500.054	965.06	SCX IN SIDEWALK OF BRIDGE
117	275407.735	2189574.992	954.62	SCX IN CHANNEL
118	275596.936	2189756.887	957.12	SCX IN CHANNEL
119	275268.076	2189465.510	952.82	SCX IN COVERED CHANNEL UNDER COLVILLE

EXISTING THALWEG

BEARINGS ARE BASED THE CITY OF WALLA WALLA GIS HORIZONTAL DATUM WHICH IS BASED ON THE WASHINGTON COORDINATE SYSTEM SOUTH ZONE.

DISTANCES SHOWN ARE GROUND DISTANCES

THE VERTICAL DATUM IS NAVD 88 ORTHOMETRIC HEIGHTS DETERMINED BY GPS OBSERVATIONS WHILE CONNECTED TO THE WASHINGTON STATE REFERENCE NETWORK SOUTHEAST WASHINGTON.

USKH, INC IS THE SURVEYOR OF RECORD. ALL NOTED COORDINATES ARE BASED ON THIS SURVEY WORK AND SHALL BE REFERENCED AS REFERENCE SURVEY DRAWINGS FOR THIS PURPOSE.

MILL CREEK CHANNEL TOPOGRAPHIC AND RIGHT OF WAY SURVEY LOCATED IN THE SW AND SE 1/4'S OF SECTION 20 T7N R36E WM. CITY OF WALLA WALLA, WA

APPOXIMATE QUANTITIES:

Concrete Removal: 77 CY
Excavation: 225 CY
Crushed Rock Subgrade: 68 CY

Roughness Panels: Owner Supplied Cast in Place ConcreteTotal: 77 CY

10 CY

Concrete Enclosure Curbs: 34 CY
Baffles: 4 CY
Resting Pools: 29 CY

ABBREVIATIONS

- INCHES **MISCELLANEOUS** FEET MPH MILES PER HOUR APPROX. APPROXIMATELY ON CENTER B&B BALLED AND BURLAPPED OUTSIDE DIAMETER O.D. BENCH MARK ORDINARY HIGH WATER OHW CENTERLINE PARKER-KALON CALIPER R.O.W. RIGHT OF WAY CFS CUBIC FEET PER SECOND REQUIRED REQ'D CLR. CLEARANCE SECTION CORRUGATED METAL PIPE SEC. SQUARE FEET CONC. CONCRETE SHT. SHEET DIAMETER SPEC'S. PROJECT SPECIFICATIONS ELEV. **ELEVATION** STA. STATION EQ. EQUAL FTG. - FOOTING SS STAINLESS STEEL TEMP. HIGH DENSITY **TEMPORARY** POLYETHYLENE TYP. **TYPICAL** - HEIGHT WATER SURFACE WS

I.E. - INVERT ELEVATION LBS. - POUNDS

INSIDE DIAMETER

LWD - LARGE WOODY DEBRIS

MAX. - MAXIMUM MFG. - MANUFACTURER'S MHW - MEAN HIGH WATER

GALLON

MHHW — MEAN HIGHER HIGH WATER

MIN. – MINIMUM MISC. – MISCELLANEOUS

GAL.

I.D.

LEGEND

EXISTING CALLOUT

NEW CALLOUT

SURVEY POINT

EXISTING TREES TO REMAIN

10 112....

[]____

UNDISTURBED GRADE

ROCK/GRAVEL

CONCRETE

FILL

WASHINGTON STATE

WATER SURFACE ELEVATION

DEPARTMENT OF

TRANSPORTATION

B−1 **→**

BM1

BORING LOCATIONS

PROJECT BENCH MARK



SANDBAGS



NOTE CALLOUT

STATION CALLOUT



PHOTO CALLOUT



DEMO



ELEVATION MARKER

WETLAND DELINEATION



TREE TO BE REMOVED



TREE TO REMAIN



Mill Creek Fish Passage Spokane St to Colville St



Ford:

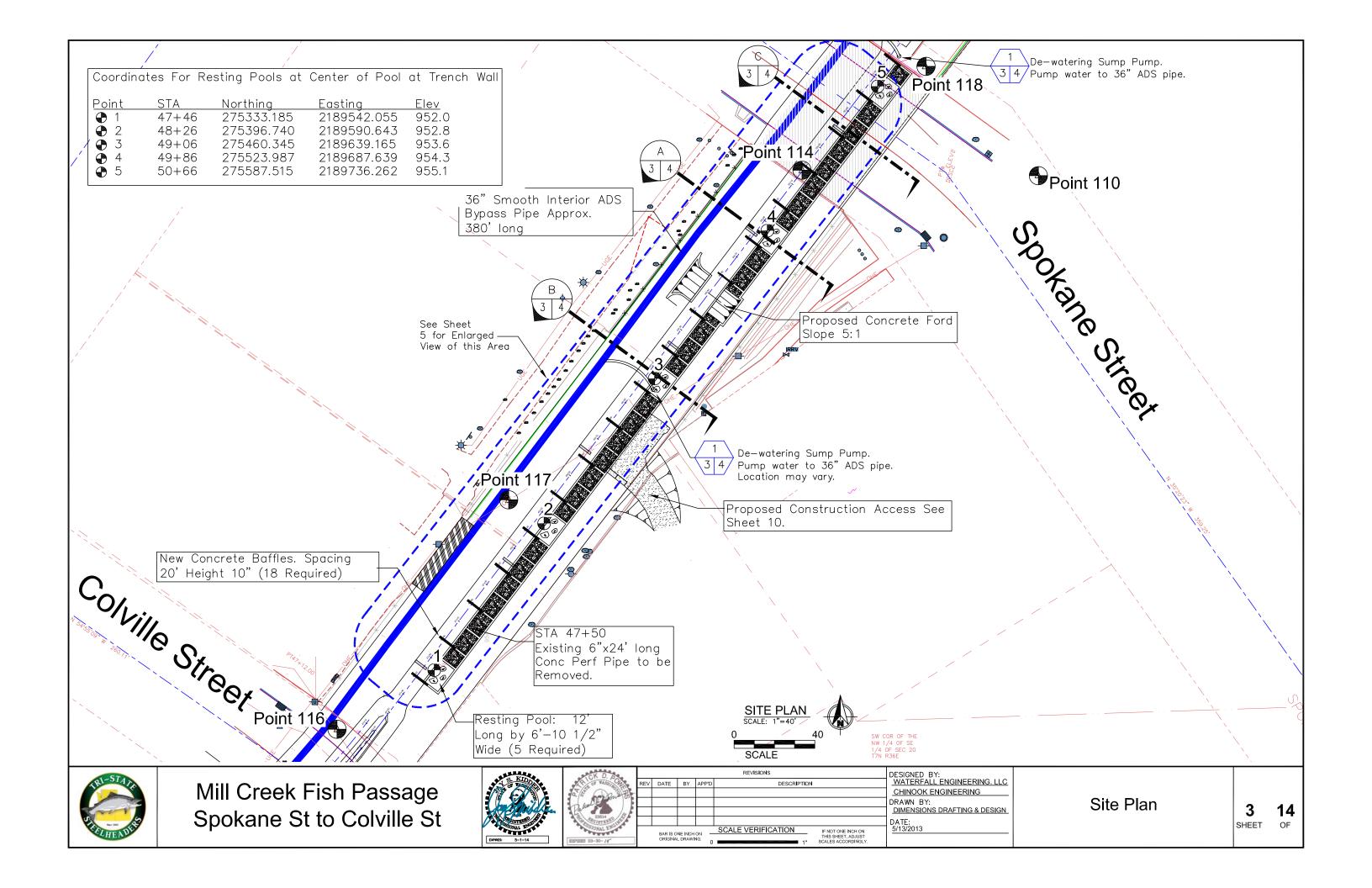
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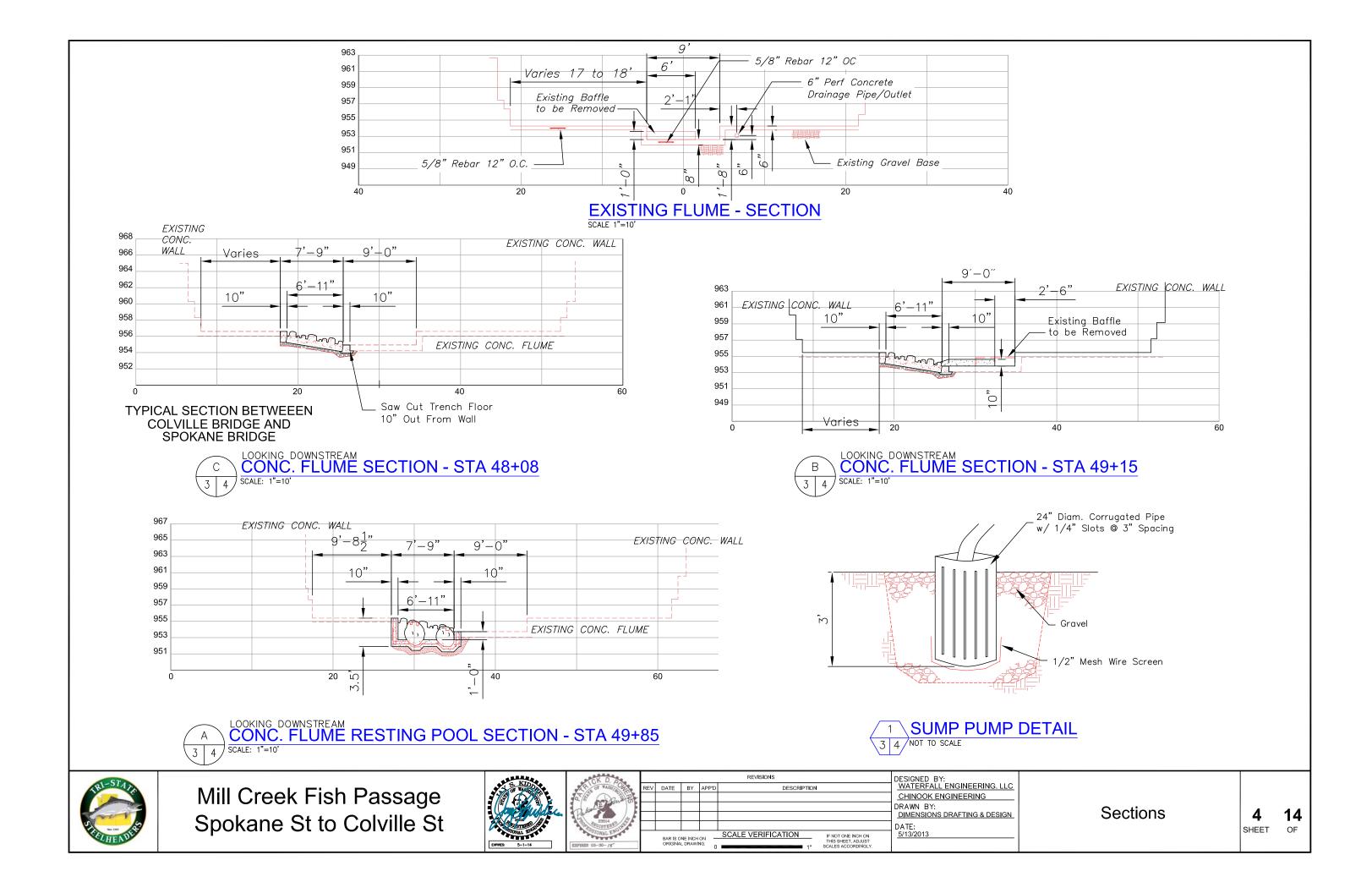
DESIGNED BY: WATERFALL ENGINEERING. LLC CHINOOK ENGINEERING DRAWN BY: DIMENSIONS DRAFTING & DESIGN DATE: 5/13/2013

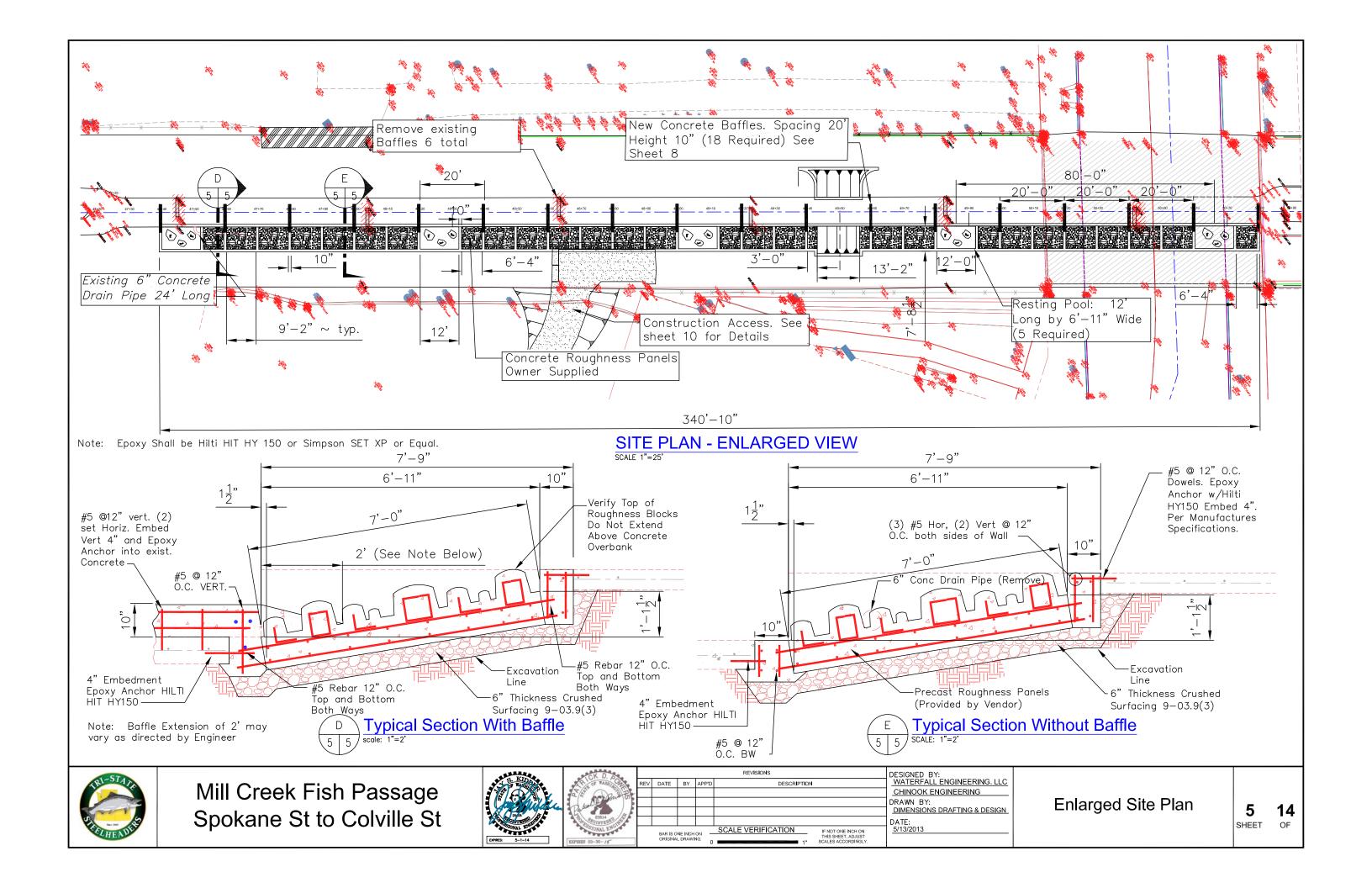
Legend and Notes

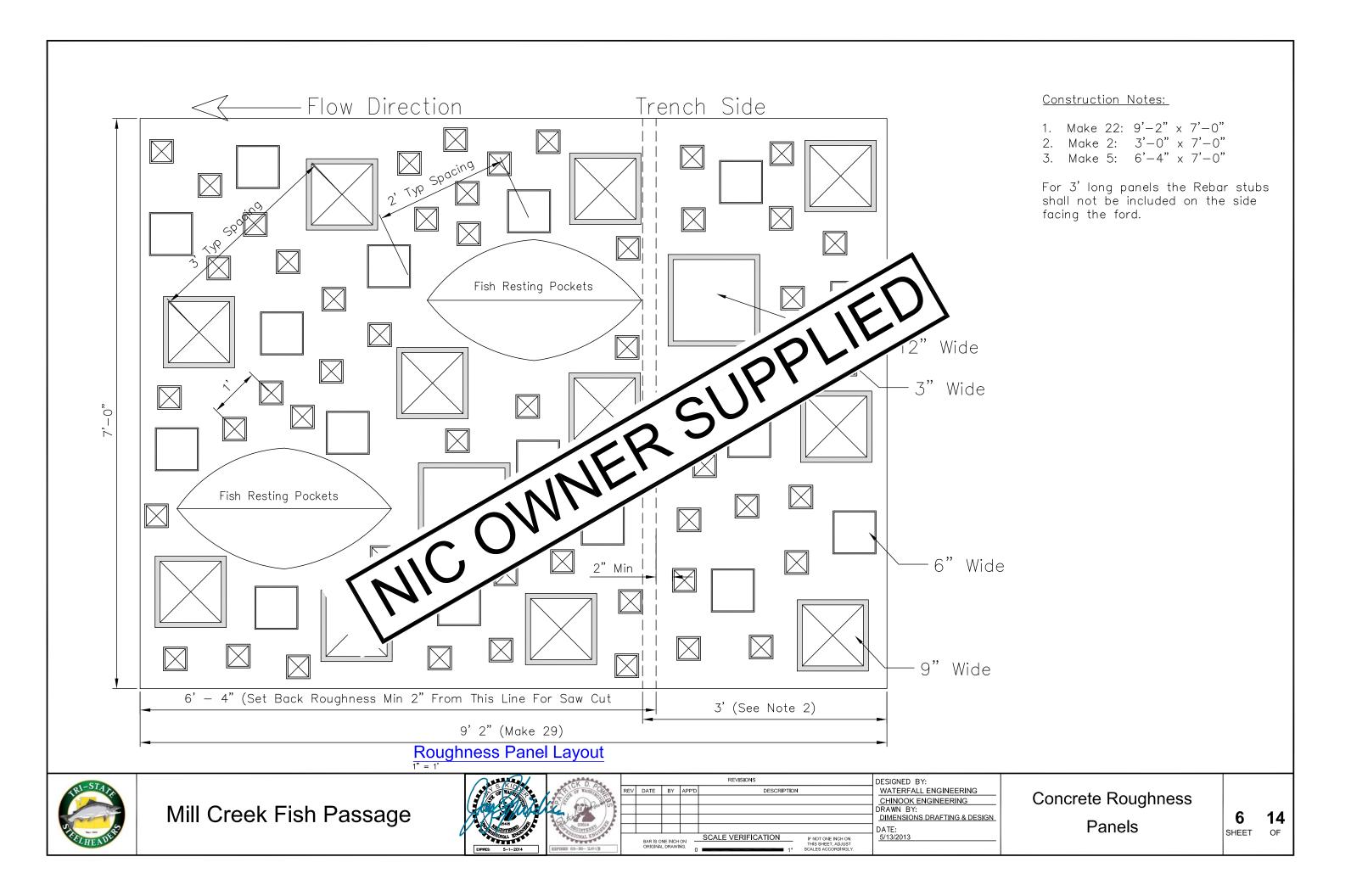
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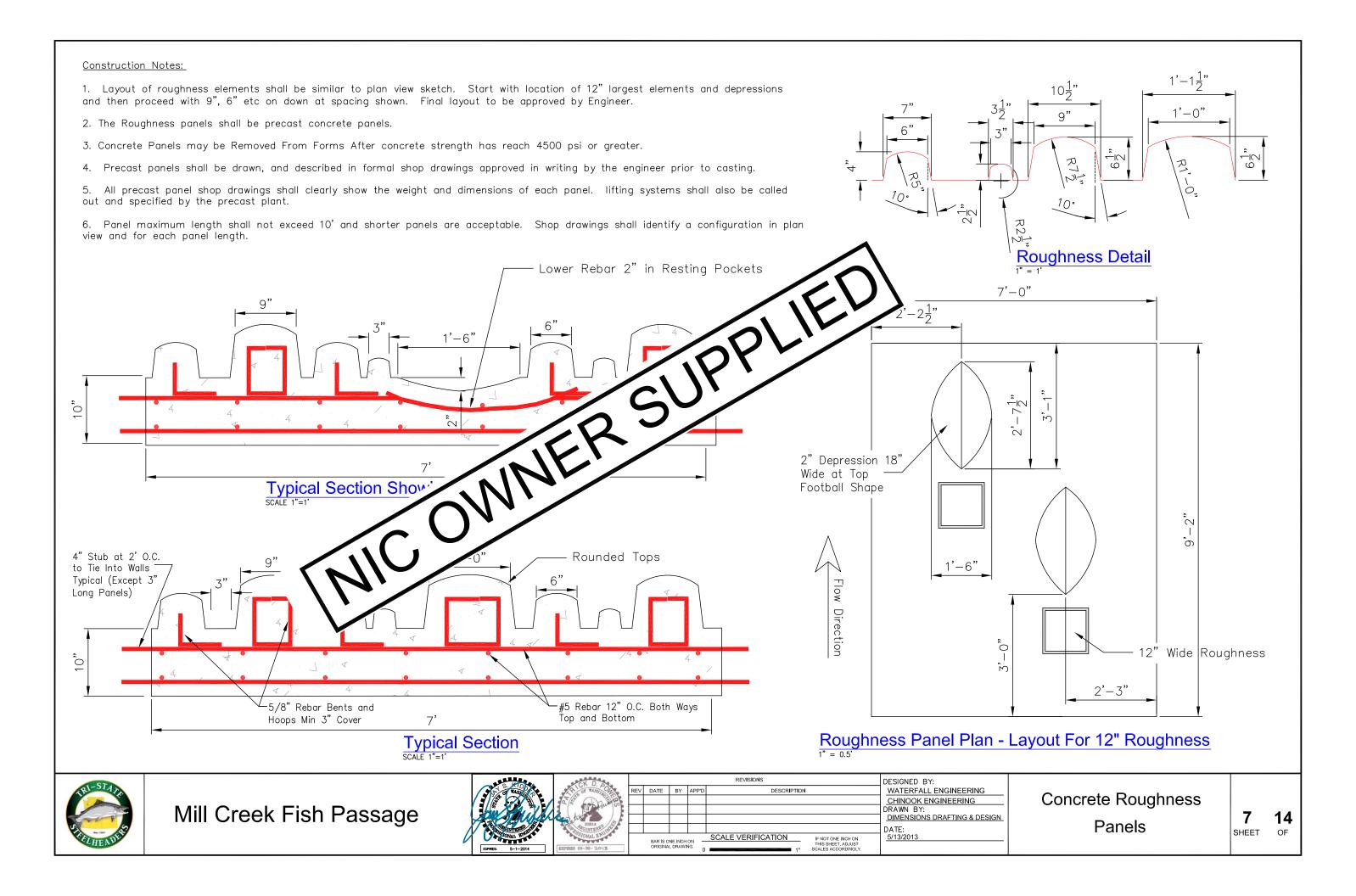
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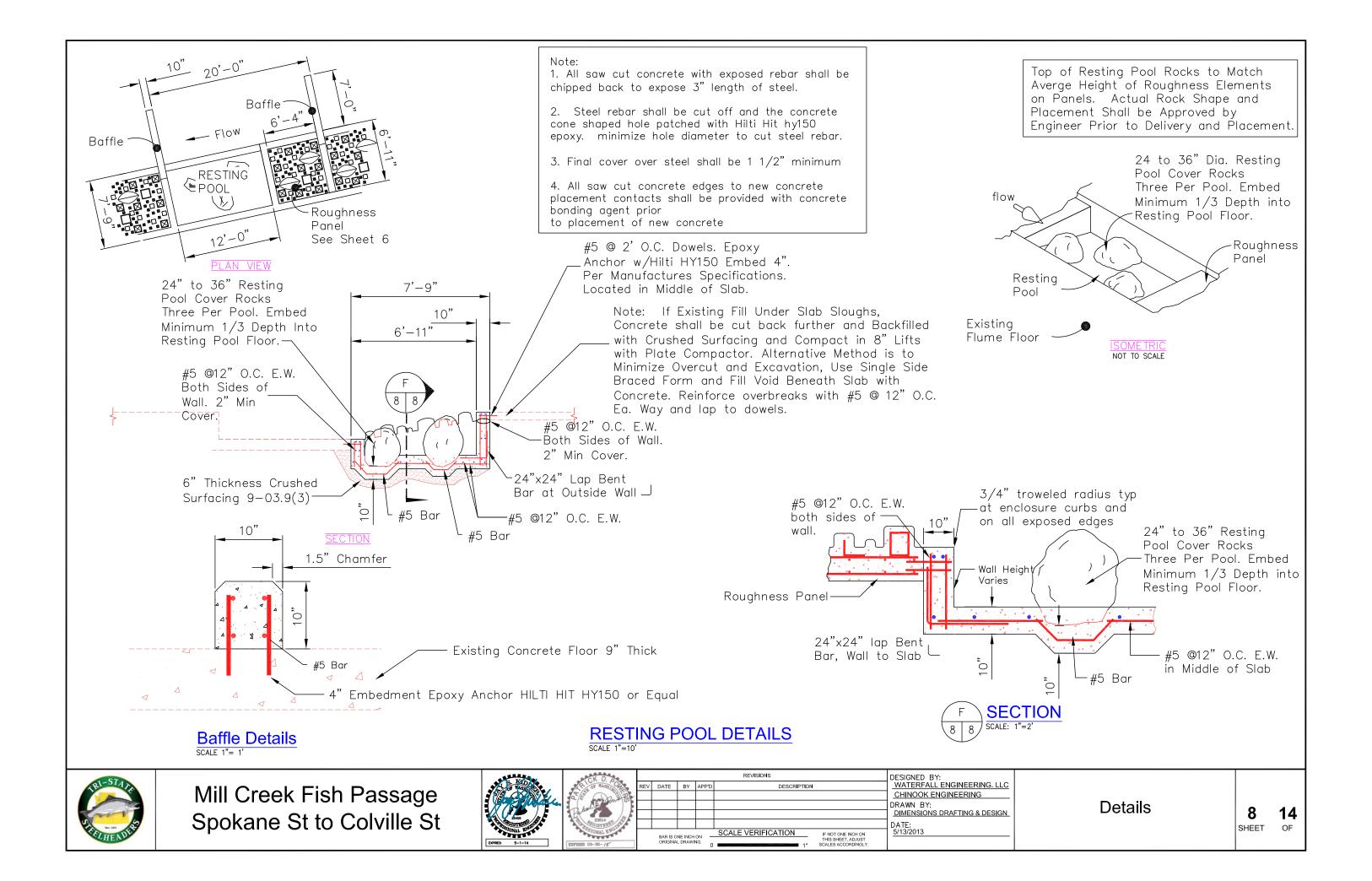


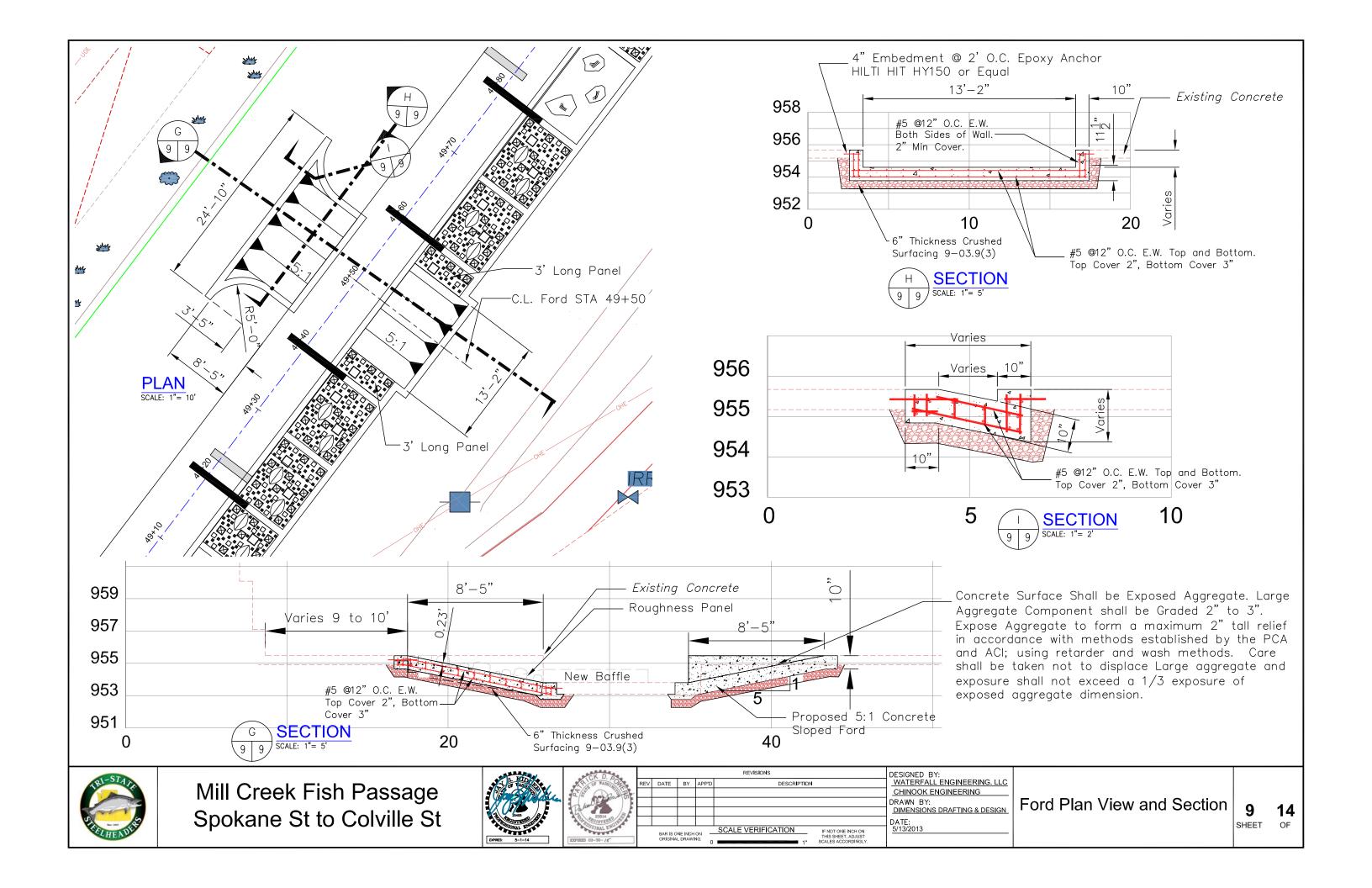


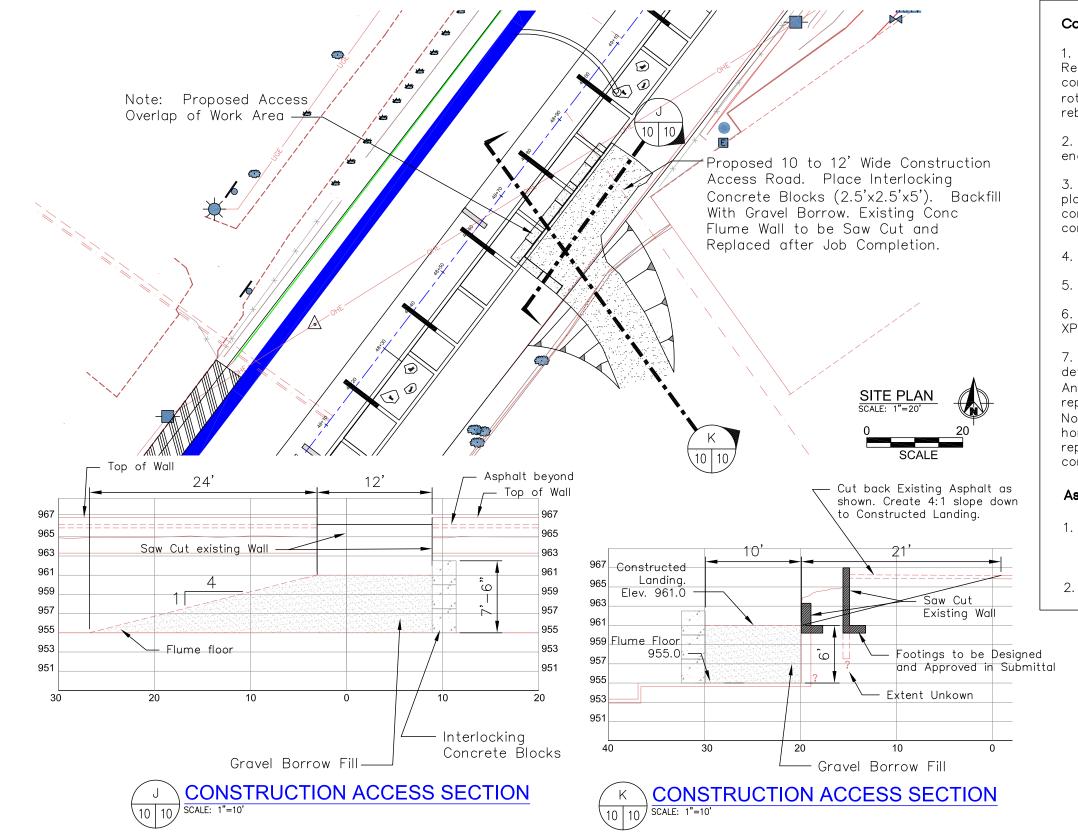












Concrete Wall Replacement Notes:

- 1. Sawcut Existing Concrete wall Remove fill from behind. When replacing if concrete is competent as determined by engineer, rotary drill and epoxy 4" min embedment #5 rebar to tie into new Wall at new rebar locations.
- 2. No drilling shall be allowed until approved by the
- 3. All saw cut concrete edges to new concrete placement contacts shall be provided with concrete bonding agent prior to placement of new concrete.
- 4. All dowels shall be epoxy anchored rebar.
- 5. All rebar shall be #5 bars.
- 6. Epoxy Shall be Hilti HIT HY 150 or Simpson SET XP or Equal.
- 7. Final design of reinforcing steel will be determined upon inspection of existing wall steel. Anticpate a 4' wide x 18" thick footing for each replaced wall will be required and at a minimum of No 6 bar at 6" oc vertical and No. 6 at 12" oc horizontal. Contractor is responsible to submit a replacement plan using an agreed to design completed by the engineer of record, Jay Kidder.

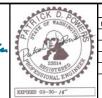
Asphalt Parking Lot Replacement Notes:

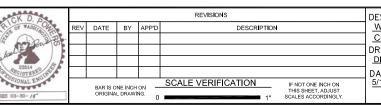
- 1. 9" $\frac{3}{4}$ " minus Compacted to 95% with 3" \(\frac{5}{8} \)" minus compacted to 95% over. Match thickness of existing Asphalt removed.
- 2. Seal all cut edges



Mill Creek Fish Passage Spokane St to Colville St







DESIGNED BY: _WATERFALL ENGINEERING. LLC CHINOOK ENGINEERING DRAWN BY:

DIMENSIONS DRAFTING & DESIGN DATE: 5/13/2013

Proposed Construction Access Details

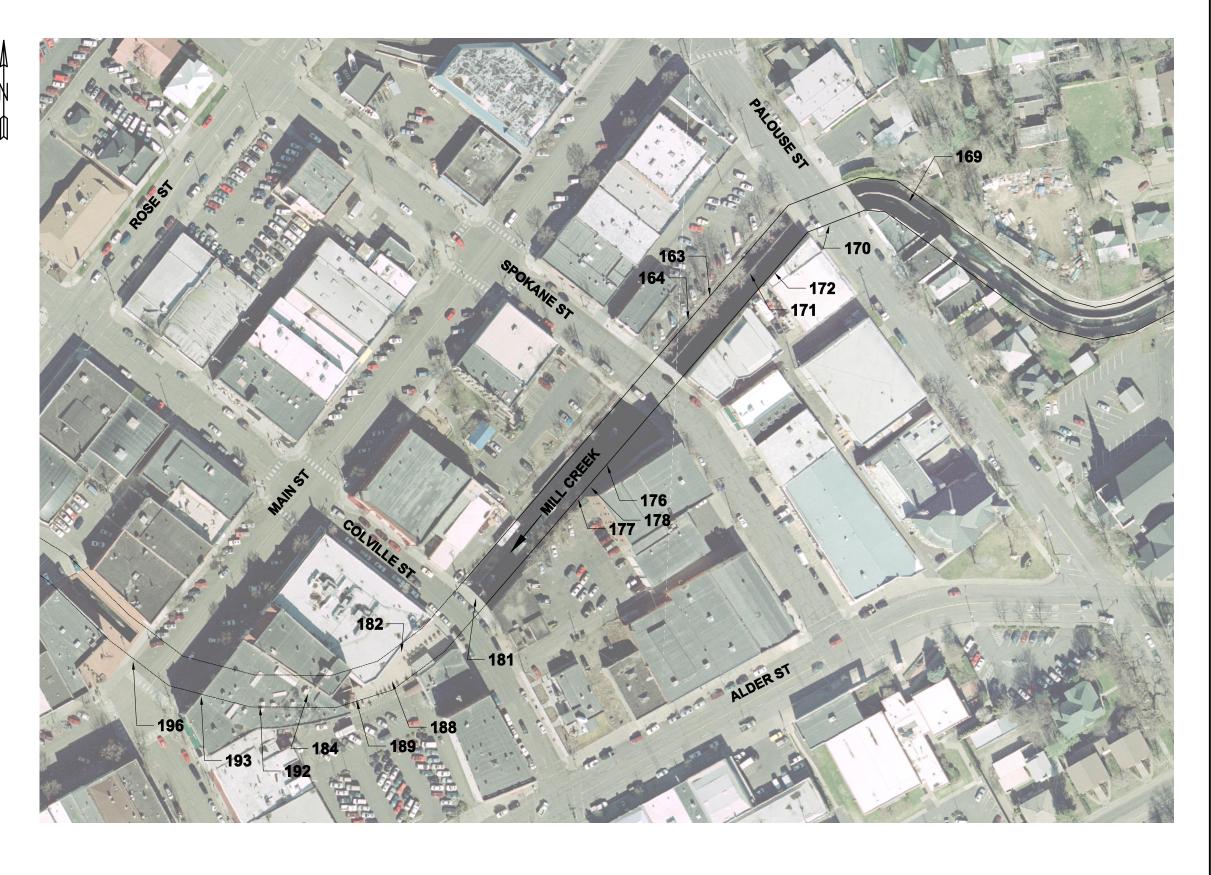
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GENERAL NOTES

- I. THIS PLAN SHEET SHOWS THE GENERAL LOCATION OF THE CHANNEL REPAIR AREAS ALONG WITH A CORRESPONDING IDENTIFICATION NUMBER. SEE SHEETS II AND 12 FOR A DESCRIPTION OF THE DEFICIENCIES.
- 2. REPAIR LOCATIONS 181 THROUGH 196 LOCATED IN THE UNDERGROUND SECTION OF THE MILL CREEK CHANNEL.

LEGEND

REPAIR LOCATION NUMBER - 199





Mill Creek Fish Passage Spokane St to Colville St



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CHANNEL REPAIR Location Map

11 14 SHEET OF

DEFICIENCIES LIST

REPAIR

LOCATION NUMBER	DEFICIENCY DESCRIPTION
163	SPALLED CONCRETE ON RIGHT BANK CHANNEL SLAB
164	HORIZONTAL CRACK/VOIDS IN RIGHT BANK FLOODWALL
169	MULTIPLE HOLES / VOIDS AT BASE OF CENTER CONCRETE WALL
170	UNGROUTED PIPE PENETRATIONS ON LEFT BANK FLOODWALL
171	MULTIPLE HOLES / VOIDS AT BASE OF CENTER WALL
172	HORIZONTAL CRACK/VOID5 IN RIGHT BANK FLOODWALL
176	HORIZONTAL CRACK/VOID5 IN LEFT BANK FLOODWALL
177	HORIZONTAL CRACK/VOIDS IN LEFT BANK FLOODWALL
178	CRACKED/SPALLING CONCRETE ADJACENT TO DRAIN PIPE ON LEFT BANK FLOODWALL
181	CRACKS/VOIDS IN FLOODWALLS AND CENTER WALL
182	SPALLED CONCRETE ON RIGHT BANK CHANNEL SLAB
184	MISSING CONCRETE ON CENTER WALL
188	MISSING CONCRETE ON LEFT BANK FLOODWALL
189	MISSING/DETERIORATED MORTAR BETWEEN STONES ON LEFT BANK FLOODWALL
192	EXPOSED REBAR IN LEFT BANK FLOODWALL
193	HOLE/MISSING CONCRETE IN LEFT BANK CHANNEL SLAB
196	MISSING/DETERIORATED MORTAR BETWEEN STONES ON LEFT BANK FLOODWALL

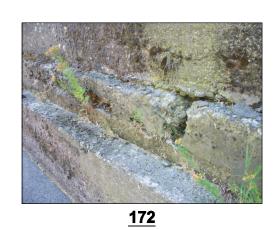
















176 & 177 <u>178</u>



Mill Creek Fish Passage Spokane St to Colville St



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CHANNEL REPAIR Deficiencies List

12 14 SHEET OF

DEFICIENCIES LIST

REPAIR LOCATION

LOCATION NUMBER	DEFICIENCY DESCRIPTION
163	SPALLED CONCRETE ON RIGHT BANK CHANNEL SLAB
164	HORIZONTAL CRACK/VOIDS IN RIGHT BANK FLOODWALL
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172	HORIZONTAL CRACK/VOID5 IN RIGHT BANK FLOODWALL
176	HORIZONTAL CRACK/VOID5 IN LEFT BANK FLOODWALL
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192	EXPOSED REBAR IN LEFT BANK FLOODWALL
193	HOLE/MISSING CONCRETE IN LEFT BANK CHANNEL SLAB
196	MISSING/DETERIORATED MORTAR BETWEEN STONES ON LEFT BANK FLOODWALL



<u>181</u>



<u>182</u>



<u>184</u>



<u>188</u>







<u>192</u>



07/14/2

<u>193</u> <u>196</u>



Mill Creek Fish Passage Spokane St to Colville St



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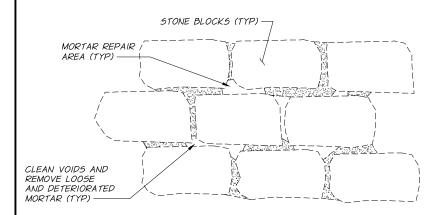
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& associates, inc.
engineding surveying natural resources
WALLA WALLA, WA. LA GRANDE, OR.

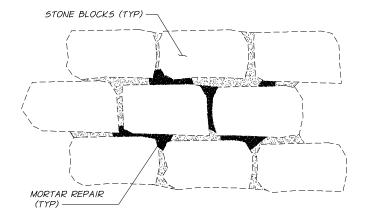
CHANNEL REPAIR

Deficiencies List

13 14 SHEET OF



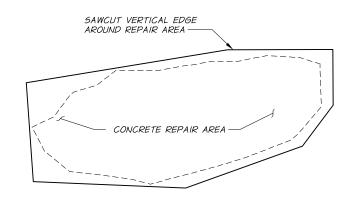
MORTAR REPAIR AREA PREPARATION



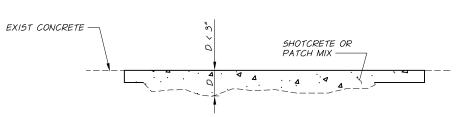
MORTAR REPAIR

MORTAR REPAIR NOTES

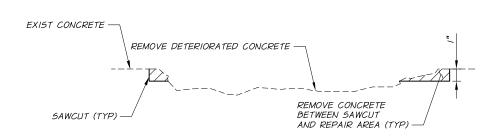
- I. THE CONTRACTOR MAY USE ANY PRACTICAL METHOD FOR REMOVAL OF DETERIORATED MORTAR BETWEEN THE BLOCKS PROVIDED IT DOES NOT HAVE AN ADVERSE IMPACT ON BLOCKS.
- 2. ALL JOINTS TO BE MORTARED SHALL BE HYDROBLASTED PRIOR TO INSTALLATION OF MORTAR.
- 3. MORTAR SHALL BE INSTALLED USING A PRESSURIZED METHOD SUCH THAT COMPLETE CONTACT BETWEEN THE BLOCKS AND MORTAR IS ACHIEVED WITH NO AIR GAPS OR VOIDS BETWEEN THE MORTAR AND BLOCKS.
- 4. MORTARED JOINTS SHALL BE FINISHED FLUSH WITH THE ADJACENT BLOCK SURFACE.
- 5. THE ENGINEER WILL DETERMINE THE LIMITS OF THE REPAIR WORK AT THE VARIOUS IDENTIFIED LOCATIONS.



CONCRETE REPAIR AREA PLAN / ELEVATION



CONCRETE REPAIR- SHALLOW



CONCRETE REPAIR AREA PREPARATION

WWF 4X4-W4.0 X W4.0 #4 @ 2'-0" OC EACH WAY DRILL AND EPOXY IN PLACE

CONCRETE REPAIRS - DEEP

GENERAL CONSTRUCTION NOTES

- I. THESE PLANS SPECIFICATIONS AND REFERENCED DOCUMENTS SHALL BE USED TO CONSTRUCT THE IMPROVEMENTS SHOWN. REFERENCED DOCUMENTS INCLUDE THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (2012 EDITION)
- 2. EXISTING UTILITIES ARE NOT SHOWN ON THE PLANS AND ARE NOT EXPECTED TO BE IMPACTED BY THE WORK ON THIS PROJECT. HOWEVER, THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING PUBLIC AND PRIVATE UTILITIES IN AND AROUND THE WORK AREAS.
- 3. THE CONTRACTOR SHALL KEEP THE WORK AREA CLEAN AND MAINTAIN DUST CONTROL AT ALL TIMES.
- 4. NO EQUIPMENT OR DEBRIS SHALL BE PERMITTED TO ENTER THE ACTIVE WATERWAY.
- 5. APPROPRIATE TEMPORARY FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED TO CAPTURE ALL WASTE GENERATED FROM CONSTRUCTION OPERATIONS AND PREVENT IT FROM ENTERING THE ACTIVE WATERWAY.
- 6. ALL EQUIPMENT OPERATING WITHIN THE CONFINES OF THE CONCRETE CHANNEL SHALL BE IN GOOD REPAIR AND SHALL BE FREE OF LEAKING PETROLEUM PRODUCTS.
- 7. ONLY RUBBER TIRED OR RUBBER TRACKED EQUIPMENT WILL BE ALLOWED TO OPERATE IN THE CONCRETE CHANNEL. ANY DAMAGE TO THE EXISTING CONCRETE CHANNEL RESULTING FROM THE CONTRACTORS OPERATIONS SHALL BE REPAIRED AT THE CONTRACTORS SOLE EXPENSE.

CONCRETE REPAIR NOTES

- . REPAIR DETAILS SHOWN APPLY FOR BOTH HORIZONTAL AND VERTICAL SURFACES.
- 2. THE CONTRACTOR MAY USE ANY PRACTICAL METHOD FOR REMOVAL OF CONCRETE BETWEEN THE SAWCUT AND REPAIR AREA PROVIDED IT DOES NOT HAVE AN ADVERSE IMPACT ON THE CONCRETE TO REMAIN IN PLACE.
- 3. ALL REPAIR AREAS SHALL BE HYDROBLASTED OR SHOT BLASTED PRIOR TO APPLICATION OF REPAIR MATERIAL
- 4. ALL REPAIR AREA SURFACES SHALL BE THOROUGHLY CLEANED OF ALL DEBRIS AND DUST PRIOR TO APPLICATION OF REPAIR MATERIAL.
- 5. THE ENGINEER WILL DETERMINE THE LIMITS OF THE REPAIR WORK AT THE VARIOUS IDENTIFIED LOCATIONS.



Mill Creek Fish Passage Spokane St to Colville St



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CHANNEL REPAIR

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