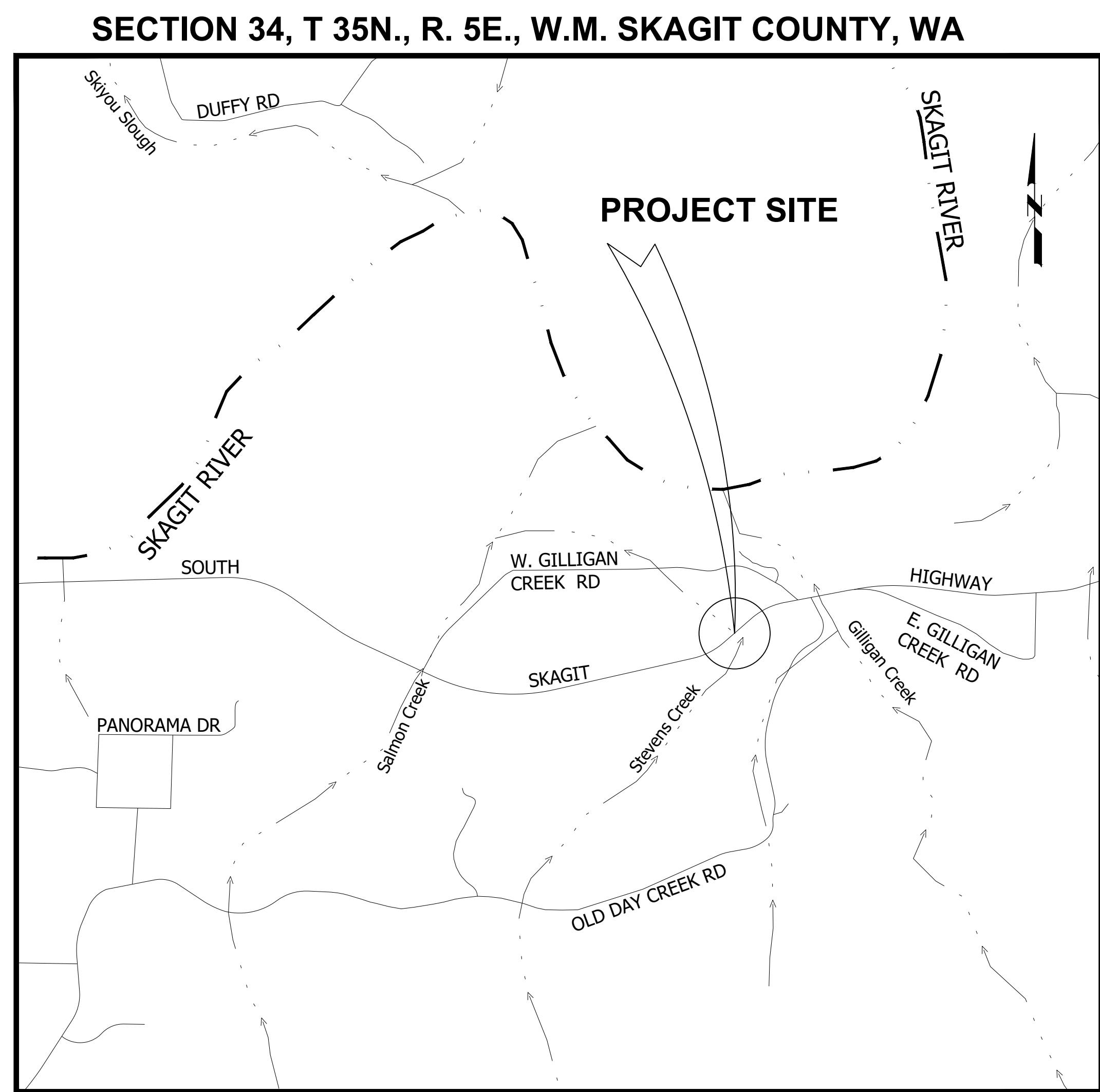
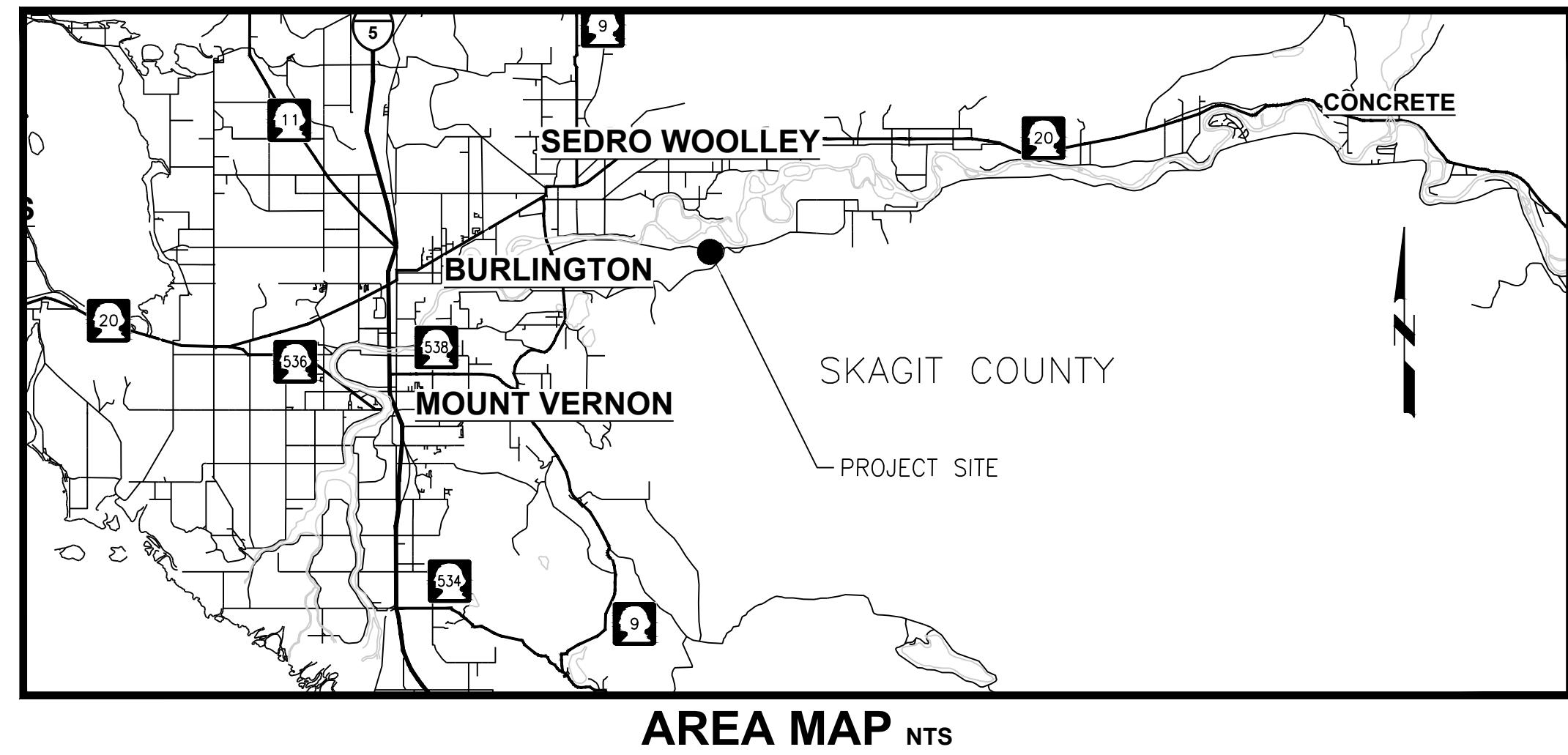


STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT

ES07000-15



SKAGIT COUNTY OFFICIALS

BOARD OF COMMISSIONERS

- LISA JANICKI, CHAIR
- RON WESEN, COMMISSIONER
- PETER BROWNING, COMMISSIONER

PUBLIC WORKS

- MICHAEL SEE, DIRECTOR

APPROVED FOR CONSTRUCTION

12/30/2025
DATE

THOMAS M. WELLER, P.E., COUNTY ENGINEER

PLAN SHEET INDEX

SHEET	TITLE
01	COVER SHEET
02	GENERAL NOTES
03	SYMBOLS AND ABBREVIATIONS
04	DETOUR PLAN
05	DETOUR PLAN
06	EXISTING CONDITIONS TOPOGRAPHIC SURVEY
07	CONSTRUCTION SWPP ELEMENTS
08	SITE PREPARATION PLAN AND TESC PLAN
09	ROADWAY PLAN AND PROFILE
10	TYPICAL ROADWAY SECTIONS
11	STREAM PLAN AND PROFILE
12	STREAM DETAILS
13	CULVERT PLAN
14	CULVERT SECTIONS
15	WING WALL DETAILS (SHEET 1 OF 3)
16	WING WALL DETAILS (SHEET 2 OF 3)
17	WING WALL DETAILS (SHEET 3 OF 3)
18	RESTORATION PLANTING PLAN
19	PLANTING MATERIAL LIST
20	PLANTING DETAILS

DESIGN TEAM

EXELTECH, A BOWMAN COMPANY: LEAD, STRUCTURAL, CIVIL, WATER RESOURCES ENGINEERING, & LANDSCAPE ARCHITECTURE
HARMSEN: SURVEY
ASPECT CONSULTING LLC: GEOTECHNICAL ENGINEERING
CONFLUENCE ENVIRONMENTAL COMPANY: CRITICAL AREA DELINEATION & ENVIRONMENTAL PERMITTING
AQUA TERRA CULTURAL RESOURCE CONSULTANTS: CULTURAL RESOURCES

SKAGIT COUNTY PUBLIC WORKS	
1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273-5625 (360) 416-1400	
NO.	REVISI ONS
DATE	



12/11/2025

PROJECT NO.: ES07000-15	FED AID NO.: NA
DRAWN BY: BL	CHECKED BY: LS
APPROVED BY: SJW	PROJECT LOCATED NEAR:
SEDRO-WOOLEY, WA	
SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.	

STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	CV01ES07000-15 COVER SHEET
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY	
SURVEY NOTES:	
HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE NORTH ZONE	
VERTICAL DATUM: NAVD88	

01 OF 20



ex el tech
a Bowman company
8729 Commerce Pl. Dr. NE
(360) 357-8289
www.xtech.com

GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND SKAGIT COUNTY ROAD STANDARDS.
- IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND THE EXISTING SITE CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- ALL DIMENSIONS SHOWN ARE HORIZONTAL AND SHOULD BE ADJUSTED FOR GRADE AND SLOPE WHERE APPROPRIATE. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- DRAWING SCALES ARE FOR REFERENCE ONLY, THE DRAWINGS SHALL NOT BE SCALED TO FURNISH DIMENSIONAL INFORMATION NOT SHOWN. VERIFY ANY DISTANCE OR MEASUREMENT NOT SHOWN WITH THE ENGINEER.
- UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN THE AREA OF CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ANY AND ALL UTILITIES IN THE AREA AND FIELD VERIFY THESE LOCATIONS PRIOR TO CONSTRUCTION. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS: 811. ADDITIONALLY, THERE ARE KNOWN PRIVATE UTILITIES IN THE AREA OF WORK. SEE SPECIAL PROVISIONS 1-07.17 FOR CONTACT INFORMATION. CONTRACTOR TO COORDINATE WITH OWNER TO LOCATE AND PROTECT PRIVATE UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT.
- A COPY OF THE APPROVED PLANS AND SPECIFICATIONS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- THE TEMPORARY EROSION/SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED PRIOR TO STARTING ANY WORK.
- SKAGIT COUNTY SHALL BE NOTIFIED 72 HOURS BEFORE CONSTRUCTION IS STARTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION CONFERENCE WITH THE COUNTY. OTHER JURISDICTIONS, PROJECT ENGINEER, UTILITY COMPANIES, SUBCONTRACTORS AND OTHER NECESSARY PARTIES TO THE PROJECT SHALL BE PRESENT AT THE PRE-CONSTRUCTION CONFERENCE.
- WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE CONTRACTOR SHALL SAWCUT/PLANE THE EXISTING ASPHALT TO PROVIDE A NEAT VERTICAL EDGE. EXISTING PAVED SURFACES AND JOINTS SHALL BE PREPARED/SEALED IN ACCORDANCE WITH SECTION 5-04 OF THE SPECIAL PROVISIONS.
- ALL UTILITY WORK WITHIN EXISTING PAVEMENT REQUIRES A MINIMUM ROADWAY RECONSTRUCTION FROM THE CENTERLINE, TO INCLUDE GRINDING THE EXISTING PAVEMENT AND REPLACING IT WITH A MINIMUM 0.33' PAVEMENT.

GENERAL STRUCTURAL NOTES:

- THIS STRUCTURE TO BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS NINTH EDITION AND THE WSDOT BRIDGE DESIGN MANUAL (BDM) 2023. ALL STRUCTURAL ELEMENTS TO BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS FOR LOAD AND RESISTANCE FACTOR DESIGN. LIVE LOADING IS U-80.
- DESIGN LOADS:
DEAD LOAD:
 CONCRETE - 155 PCF
LIVE LOAD:
 VEHICLE - AASHTO U-80 W/IMPACT & HL-93 W IMPACT WHICHEVER IS GREATER
 SURCHARGE - 250 PSF
EARTH PRESSURE:
 LATERAL 31 PCF EQUIVALENT ACTIVE FLUID PRESSURE
 50 PCF EQUIVALENT AT-REST FLUID PRESSURE
 546 PCF EQUIVALENT PASSIVE FLUID PRESSURE
- PRECAST CONCRETE ELEMENTS SHALL BE CLASS 7000. CAST-IN-PLACE CONCRETE ELEMENTS SHALL BE CLASS 4000.
- UNLESS OTHERWISE SHOWN IN THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 3 INCHES WHEN AGAINST THE GROUND, AND 2 INCHES AT ALL OTHER LOCATIONS. ALL EXPOSED EDGES SHALL HAVE A $\frac{3}{4}$ INCH CHAMFER.
- ALL STEEL REINFORCING BARS SHALL BE ASTM A706, GRADE 60 AND EPOXY COATED PER ASTM A775 WHERE NOTED.



SKAGIT COUNTY	
PUBLIC WORKS	
1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273-5625 (360) 416-1400	
REVISIONS DATE	
NO.	
PROJECT NO.: ES07000-15	
FED AID NO.: NA	
DRAWN BY: BL	
DESIGNED BY: RSBL	
CHECKED BY: HCL	
APPROVED BY: SJK	
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.	
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	
GN01ES07000-15 GENERAL NOTES	
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY	
SHEET 02 OF 20	

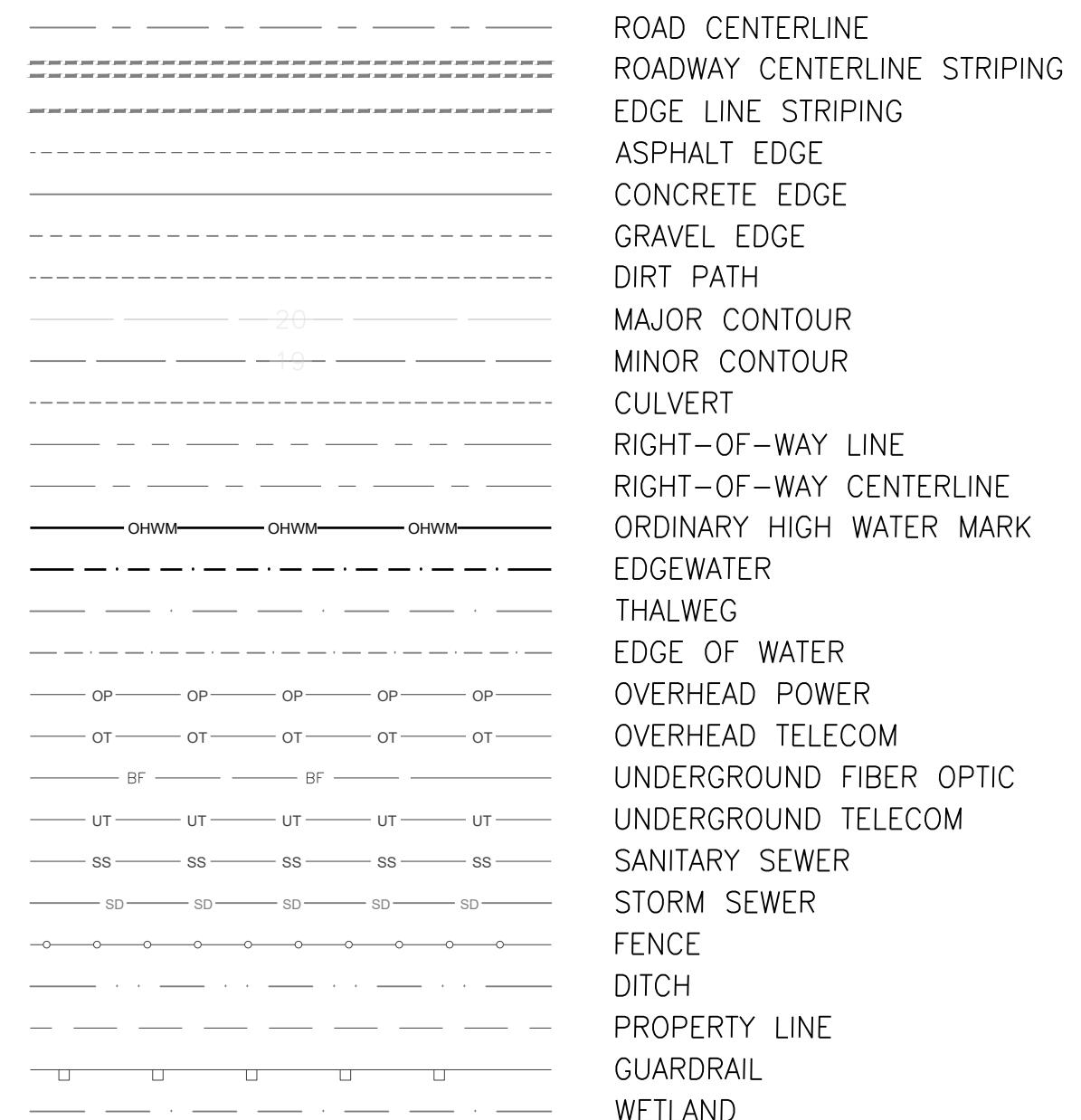


ABBREVIATIONS:

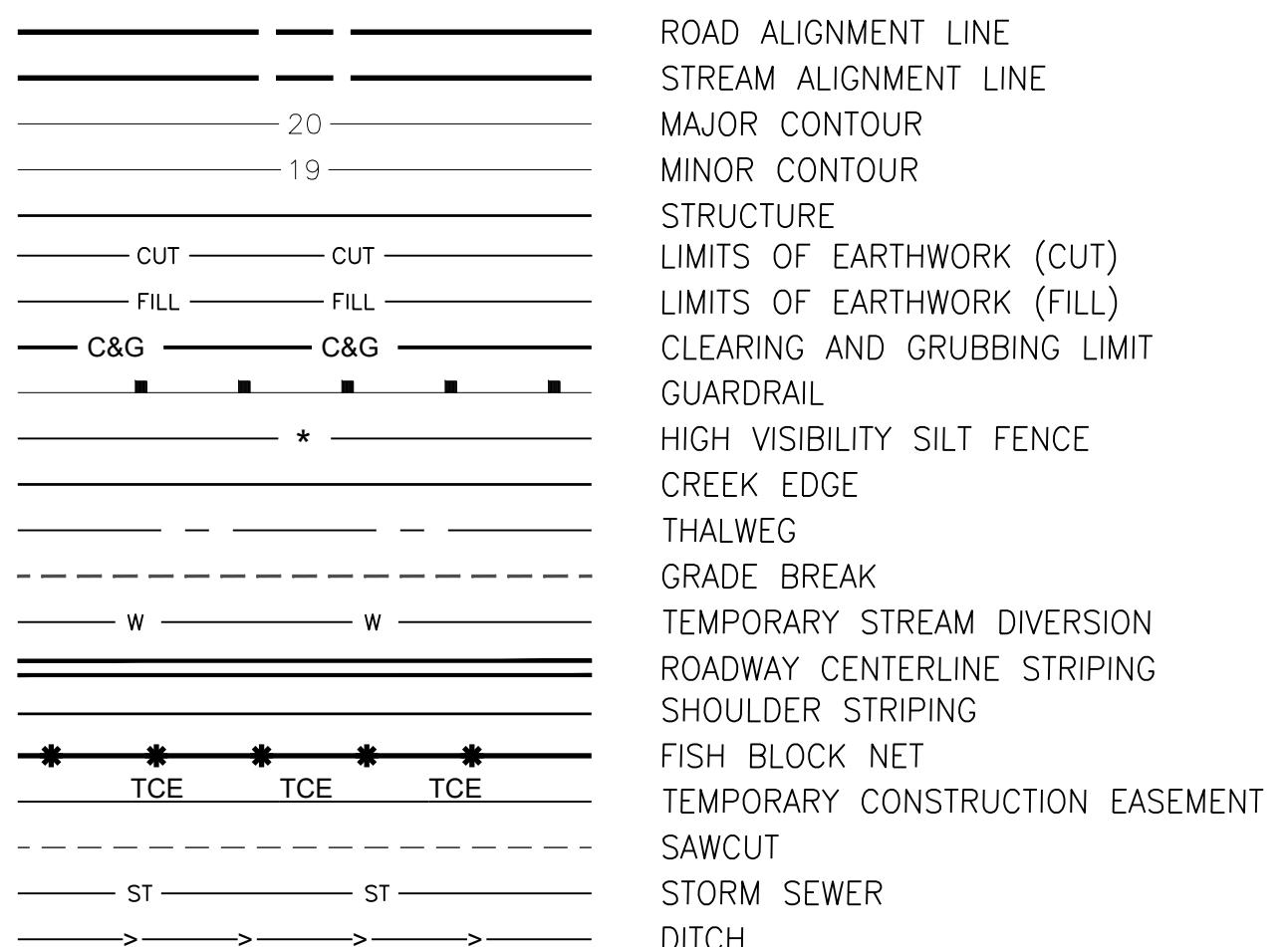
AC	ACRE	EL & ELEV	ELEVATION	PERF	PERFORATED PIPE
AP	ANGLE POINT	EOP	EDGE OF PAVEMENT	PC	POINT OF CURVATURE
ASPH	ASPHALT	EST	ESTIMATED	PI	POINT OF INTERSECTION
AVE	AVENUE	EVC	END VERTICAL CURVE	PT	POINT OF TANGENCY
BLDG	BUILDING	FT & '	FEET	R	RADIUS
BLVD	BOULEVARD	GALV	GALVANIZED	RD	ROAD
BVC	BEGIN VERTICAL CURVE	GND	GROUND	RGE	RANGE
CALC	CALCULATED	HMA	HOT MIX ASPHALT	R/W & ROW	RIGHT OF WAY
CAT	CATEGORY	HR	HOUR	RT	RIGHT
CB	CATCH BASIN	IN & "	INCHES	S	SOUTH
CIP	CAST IRON PIPE	INV	INVERT	SEC	SECTION
CFS	CUBIC FEET PER SECOND	K	CURVE COEFFICIENT	SF	SQUARE FOOT
CL & C	CENTERLINE	L	LENGTH OF CURVE	SHLD	SHOULDER
CP	CONTROL POINT	LF	LINEAR FOOT	SPEC	SPECIFICATIONS
CPCP	CORRUGATED POLYETHYLENE	LS	LUMP SUM	ST	STREET
CULVERT PIPE	LT	LEFT		STA	STATION
CPSSP	CORRUGATED POLYETHYLENE	MAX	MAXIMUM	SY	SQUARE YARD
STORM SEWER PIPE	MIN	MINIMUM	SYMM	SYMMETRICAL	
CONT'D	CONTINUED	MIC	MONUMENT IN CASE	TWN	TOWNSHIP
CSBC	CRUSHED SURFACING BASE COURSE	MON	MONUMENT	TYP	TYPICAL
CULV	CULVERT	MUTCD	MANUAL OF UNIFORM TRAFFIC	UG	UNDERGROUND
CY	CUBIC YARD		CONTROL DEVICES	VCL	VERTICAL CURVE LENGTH
DEG	DEGREE	N	NORTH/NORTHING	VPI	VERTICAL POINT INTERSECTION
DIA	DIAMETER	NTS	NOT TO SCALE	W	WEST
DWG	DRAWING	OD	OUTSIDE DIAMETER	W.M.	WILLAMETTE MERIDIAN
E	EAST/EASTING	OHWM	ORDINARY HIGH WATER MARK	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

LINETYPES:

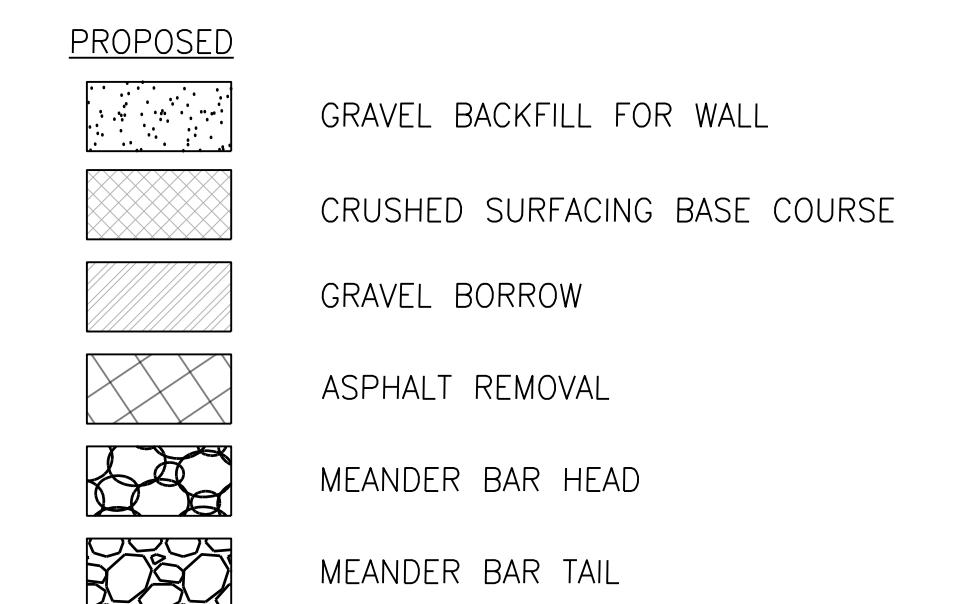
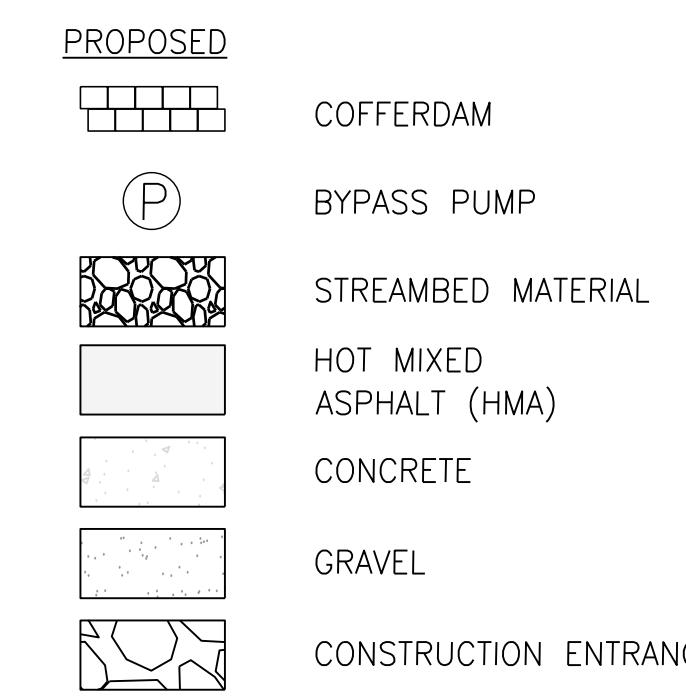
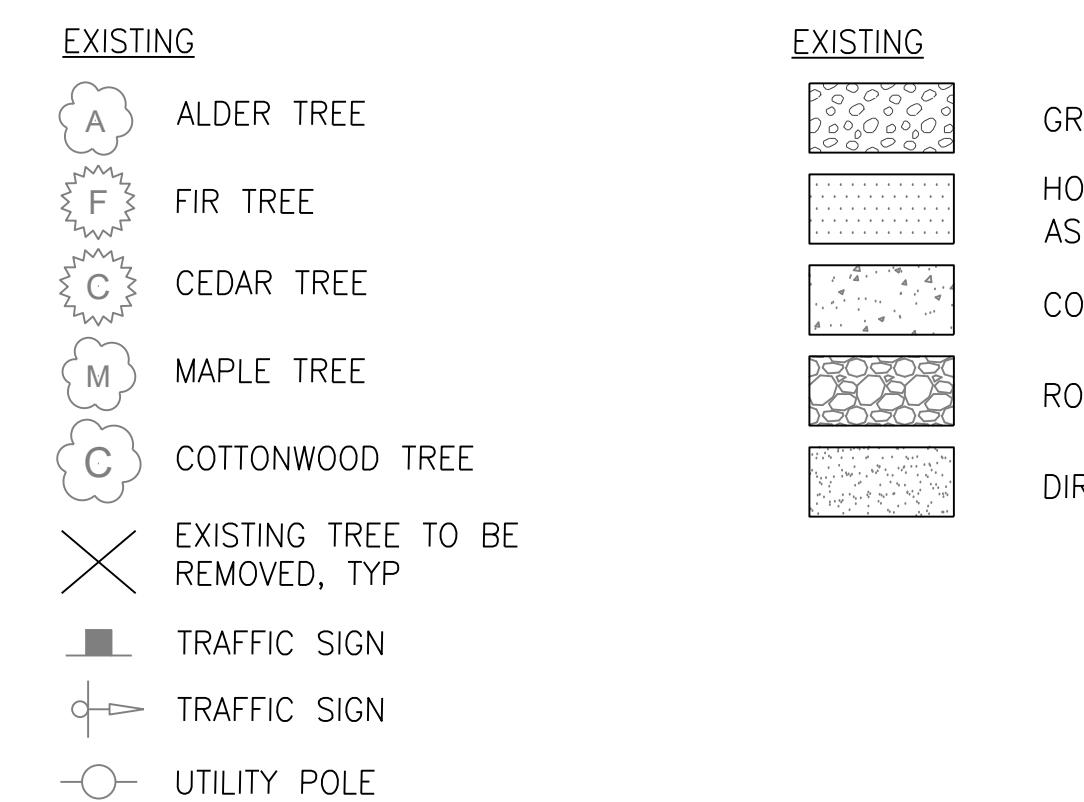
EXISTING FEATURES:



PROPOSED FEATURES:



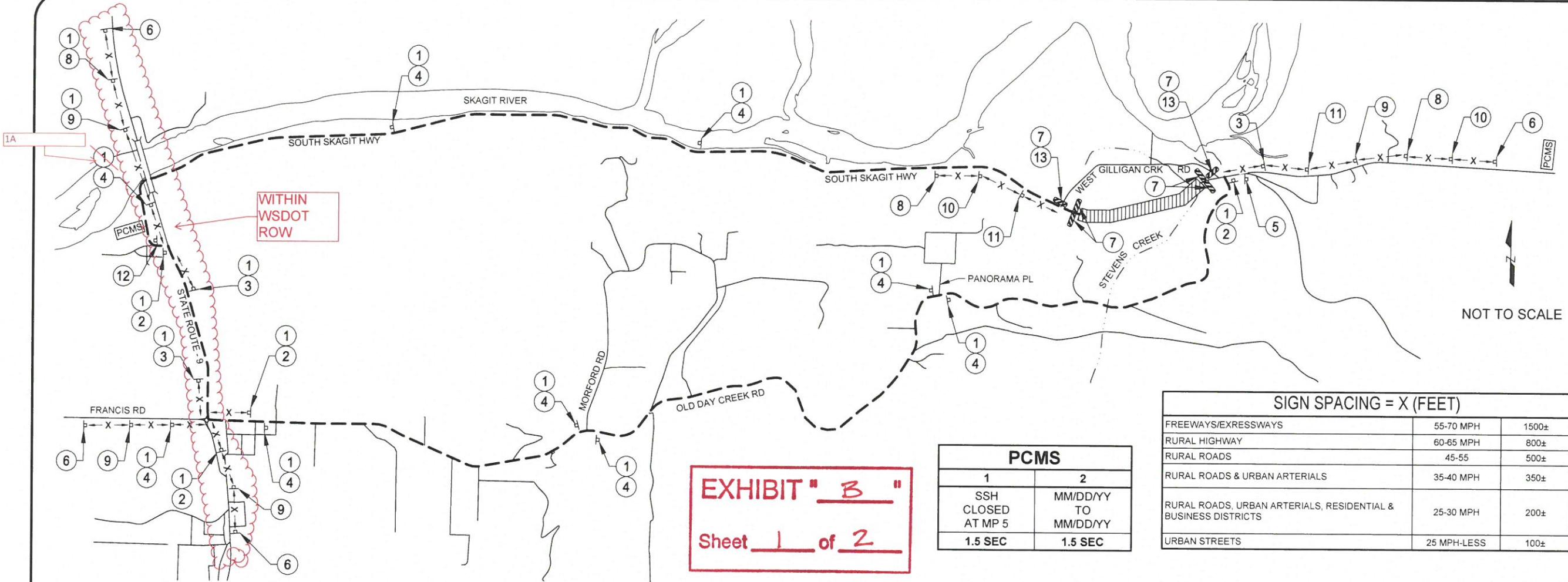
LEGEND:



811
Know what's **below**
Call before you dig.
Determina lo que está **bajo tierra**
Llama antes de excavar.

exeltech
a Bowman company
8729 Commerce Pl. Dr. NE
(360) 357-8289
www.xtech.com

SKAGIT COUNTY PUBLIC WORKS		1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273-5625 (360) 416-1400
PROJECT NO.: ES07000-15	FED AID NO.: NA	DRAWN BY: BL
DESIGNED BY: BL	CHECKED BY: LS	APPROVED BY: SJK
PROJECT LOCATED NEAR: SEDRO-WOOLLEY, WA		SECTION 35, TOWNSHIP 35 N, RANGE 56 W.
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)		
LA01ES07000-15 SYMBOLS AND ABBREVIATIONS		
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY		
SHEET 03 OF 20		



SIGN SPACING = X (FEET)		
FREEWAYS/EXPRESSWAYS	55-70 MPH	1500±
RURAL HIGHWAY	60-65 MPH	800±
RURAL ROADS	45-55	500±
RURAL ROADS & URBAN ARTERIALS	35-40 MPH	350±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25-30 MPH	200±
URBAN STREETS	25 MPH-LESS	100±

PCMS	
1	2
SSH CLOSED AT MP 5	MM/DD/YY TO MM/DD/YY
1.5 SEC	1.5 SEC

CONSTRUCTION SIGNS CLASS 'A' SCHEDULE											
LEADER NO.	SIGN DESIGNATION	QTY	SIZE	LEADER NO.	SIGN DESIGNATION	QTY	SIZE	LEADER NO.	SIGN DESIGNATION	QTY	SIZE
1		16	36" X 12" (4.5 SF)	5		1	30" X 24" (5.0 SF)	9		4	*SEE NOTE 9
1A	S. SKAGIT HWY East from WEST GILLIGAN CRK RD										
2		4	30" X 24" (5.0 SF)	6		4	48" X 60" (20.0 SF)	10		2	*SEE NOTE 9
3		3	30" X 24" (5.0 SF)					11		2	*SEE NOTE 9
4		9	30" X 24" (5.0 SF)	7		6	8'-0"	12		1	48" X 24" (8.0 SF)
				8		3	*SEE NOTE 9	13		2	30" X 18" (3.75 SF)

CONSTRUCTION SIGNS CLASS 'A' NOTES: WSDOT Notes on Sheet 5 of 20

1. SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MUTCD ADOPTED BY WAC 468-95 AND ITS MODIFICATIONS.
2. SIGNS SHALL CONFORM TO THE CURRENT EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.
3. SIGNS SHALL NOT BE LOCATED WHERE THEY MAY CAUSE SIGHT DISTANCE OBSTRUCTIONS.
4. CONTRACTOR SHALL FURNISH AND INSTALL ALL SIGNS.
5. SIGNS SHALL BE MOUNTED ON 4X4 TIMBER POSTS.
6. ALL SIGN SPACING MAY BE ADJUSTED TO ACCOMMODATE AT-GRADE INTERSECTIONS AND DRIVEWAYS.
7. CONTRACTOR SHALL VERIFY UNDERGROUND UTILITY CONFLICTS PRIOR TO SIGN INSTALLATION.
8. SIGNS SHALL BE COVERED UNLESS CONDITIONS ARE PRESENT.
9. DIAMOND SHAPED SIGNS WITHIN WSDOT ROW MUST BE 48" X 48". DIAMOND SHAPED SIGNS OUTSIDE OF WSDOT ROW MAY BE 36" X 36".

LEGEND

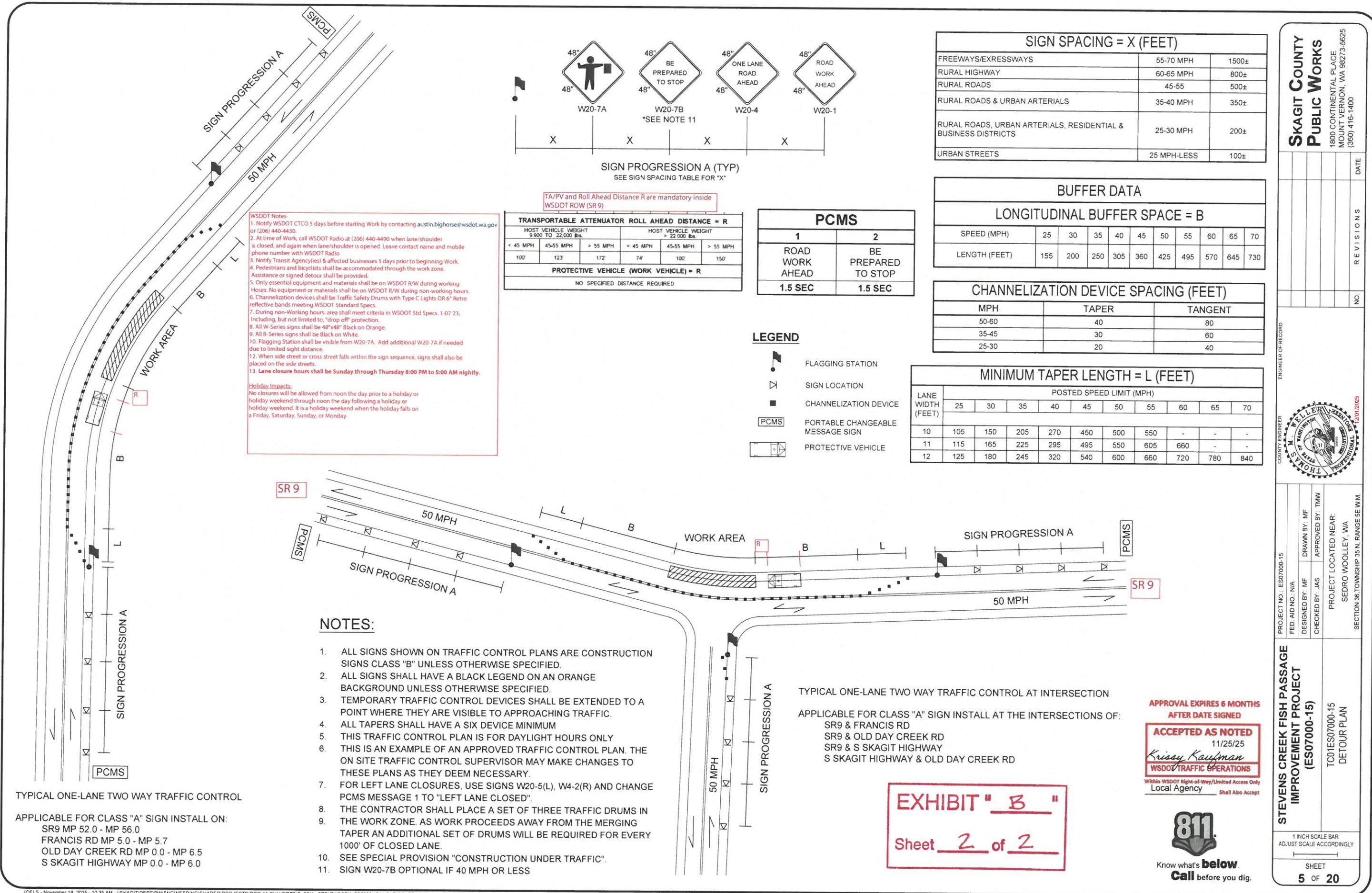
- ROAD CLOSURE AREA
- DETOUR ROUTE
- SIGN (SINGLE POST)
- TYPE III BARRICADE
- BRIDGE
- PORTABLE CHANGEABLE MESSAGE SIGN

APPROVAL EXPIRES 6 MONTHS AFTER DATE SIGNED

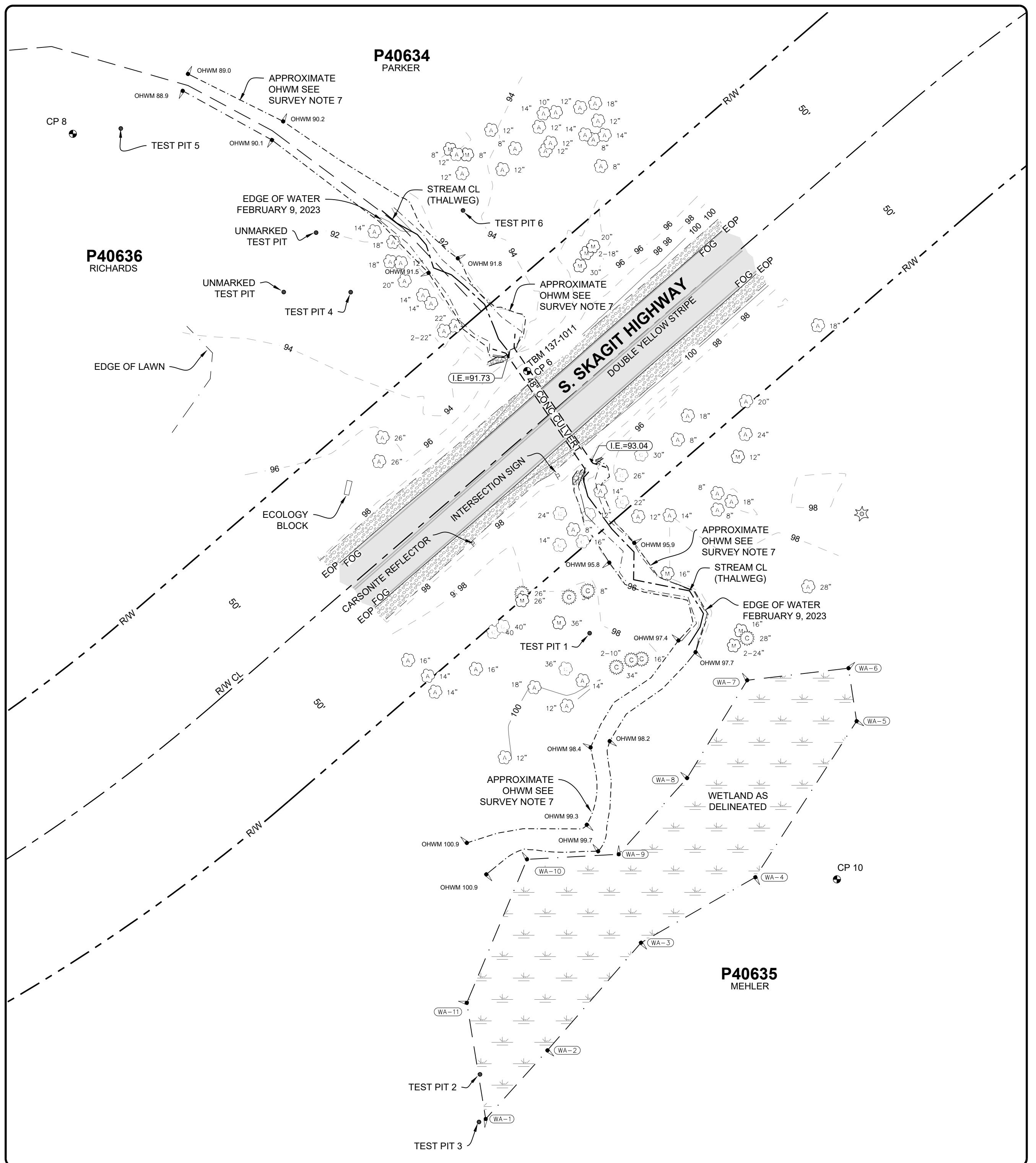
ACCEPTED AS NOTED
11/25/25
Krissey Kaufman
WSDOT TRAFFIC OPERATIONS
Within WSDOT Right-of-Way/Limited Access Only
Local Agency Shall Also Accept

COUNTY ENGINEER		PROJECT NO.: ES07000-15	
FED. AID NO.: N/A		DESIGNED BY: MF	DRAWN BY: MF
CHECKED BY: JAS		APPROVED BY: TMW	PROJECT LOCATED NEAR:
			SEDRO WOOLLEY, WA
			SECTION 36, TOWNSHIP 35N, RANGE 5E, W.M.
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)			
TC01ES0700-15 DETOUR PLAN			
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY			
SHEET 4 OF 20			





**TOPOGRAPHIC SURVEY IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 35 NORTH, RANGE 5 EAST, W.M.
SKAGIT COUNTY, WASHINGTON**



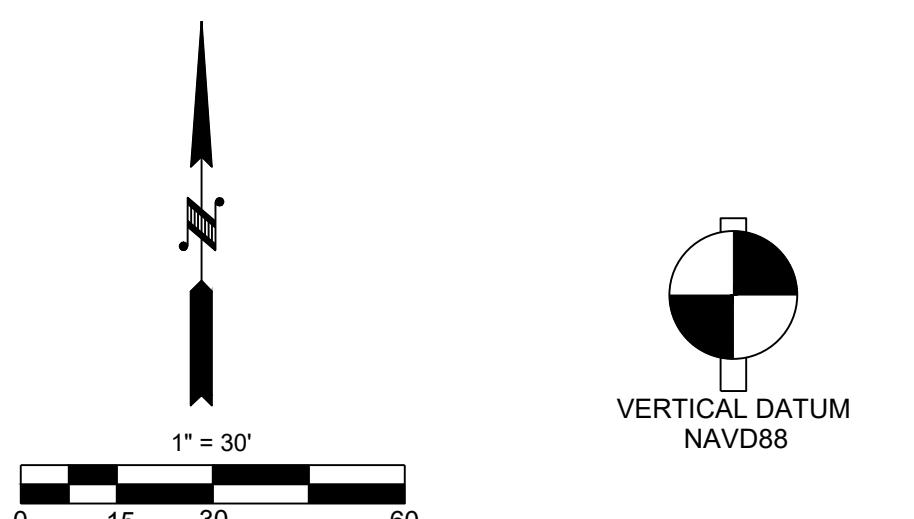
SURVEY NOTES

1. HORIZONTAL DATUM: GRID NORTH, WASHINGTON COORDINATE SYSTEM NORTH ZONE NAD 83/2011, US SURVEY FOOT, BY GLOBAL NAVIGATION SATELLITE SYSTEM OBSERVATIONS (GNSS).
2. VERTICAL DATUM: NAVD88 DERIVED FROM GNSS OBSERVATIONS.
3. THIS SURVEY WAS ACCOMPLISHED BY FIELD TRAVERSE WITH A 3-SECOND ELECTRONIC DIGITAL TOTAL STATION AND REAL-TIME KINEMATIC GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) DATA CORRECTED WITH THE WASHINGTON STATE REFERENCE NETWORK.
4. ALL DISTANCES ARE IN US SURVEY FEET AND DECIMALS THEREOF.
5. UNDERGROUND UTILITIES WERE NOT FOUND WITHIN THE PROJECT AREA BY AN UNDERGROUND UTILITY LOCATING SERVICE UTILIZING CONVENTIONAL LOCATING METHODS AT THE TIME OF SURVEY. IT IS ADVISABLE TO INDEPENDENTLY VERIFY PRIOR TO CONSTRUCTION.
6. THE RIGHT-OF-WAY SHOWN HEREON IS SHOWN FROM SHORT PLAT 128-79 RECORDED UNDER AUDITOR'S FILE NUMBERS 7911210039, RECORDS OF SKAGIT COUNTY, WASHINGTON.
7. THE ORDINARY HIGH WATER MARK (OHWM) WAS FLAGGED IN THE FIELD AND FLAG LOCATIONS WERE SURVEYED. OHWM FLAG LOCATIONS WERE TIED TOGETHER BASED ON SURVEYED ELEVATIONS WITHIN THE SURVEYED PROJECT LIMITS. THE OHWM DEPICTED OUTSIDE OF THE PROJECT LIMITS IS A GRAPHIC INTERPOLATION BETWEEN THE LOCATED FLAGS AND IS NOT BASED ON AN ACTUAL SURVEYED STREAM LOCATION.

TEMPORARY VERTICAL BENCHMARK

TBM 137-1011 TOP OF 1/2" REBAR WITH PLASTIC CAP MARKED "HARMSEN CONTROL" SET AT CULVERT CROSSING ± 4 FEET NORTHWEST OF EDGE OF GRAVEL SHOULDER. ELEVATION = 99.27' (NAVD88)

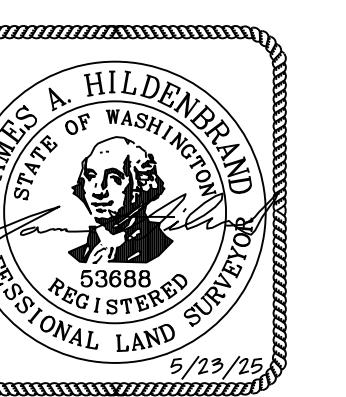
CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
6	544165.49'	1323788.93'	99.27'	1/2" REBAR WITH CAP
8	544262.41'	1323603.31'	92.06'	WOOD HUB & MAGNETIC NAIL
10	543957.82'	1323915.48'	114.86'	WOOD HUB & MAGNETIC NAIL



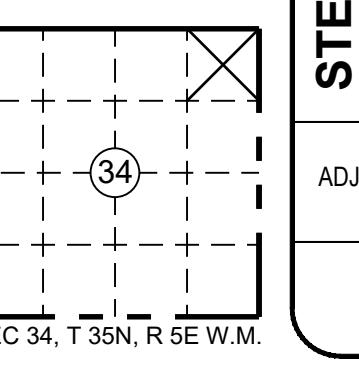
LEGEND AND ABBREVIATIONS

- ▲ CALCULATED POSITION
- BENCHMARK/ CONTROL POINT
- FOUND REBAR WITH CAP AS NOTED
- PAINT MARK
- MAILBOX
- TRAFFIC SIGN
- ↔ SIGN POST
- Ⓐ ALDER TREE
- Ⓕ FIR TREE
- Ⓒ CEDAR TREE
- Ⓜ MAPLE TREE
- Ⓒ COTTONWOOD TREE
- Ⓗ HEMLOCK TREE
- CONIFER TREE AS NOTED
- WETLAND FLAG
- CENTERLINE
- OVERHEAD POWER LINE

AFN - AUDITOR'S FILE NUMBER
APN - ASSESSOR'S PARCEL NUMBER
CL - CENTERLINE
CONC - CONCRETE
CMP - CORRUGATED METAL PIPE
CP - CONTROL POINT
CPP - CORRUGATED PLASTIC PIPE
DIA - DIAMETER
FT - FOOT
GE - GRATE ELEVATION
IE - INVERT ELEVATION
MON - MONUMENT
MPH - MILES PER HOUR
OP - OVERHEAD POWER
PVC - POLYVINYL CHLORIDE
SD - STORM DRAIN
TBM - TEMPORARY VERTICAL BENCHMARK
W - WATER



S SURVEY WAS
RFORMED IN FEBRUARY,
3 AND REFLECTS
ESTING CONDITIONS AT
AT TIME.



STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)		PROJECT NO.: ES07000-15	COUNTY ENGINEER	ENGINEER OF RECORD	5/25/25	SURVEY CONTROL TABLE ADDED
		FED. AID NO.: N/A			5/25/25	SURVEY NOTE 5 EDITED
		DESIGNED BY: NA	DRAWN BY: JTF			
		CHECKED BY: JAH	APPROVED BY: JAH			
		PROJECT LOCATED NEAR: SEDRO-WOOLLEY, WA		1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273-5625 (360) 416-1400		
EXISTING CONDITIONS TOPOGRAPHIC SURVEY		SECTION 34, TOWNSHIP 35N, RANGE 5E, W.M.		NO.	REVISIONS	DATE

CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPPP) ELEMENTS:

ELEMENT 1 - PRESERVE VEGETATION/MARK CLEARING LIMITS

- a. BEFORE BEGINNING LAND-DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRADING, CLEARLY MARK ALL CLEARING LIMITS, SENSITIVE AREAS AND THEIR BUFFERS, AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA.
- b. RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.

ELEMENT 2 - ESTABLISH CONSTRUCTION ACCESS

- a. LIMIT CONSTRUCTION VEHICLE ACCESS AND EXIT TO ONE ROUTE, IF POSSIBLE.
- b. STABILIZE ACCESS POINTS WITH A PAD OF QUARRY SPALLS, CRUSHED ROCK, OR OTHER EQUIVALENT BMPS, TO MINIMIZE TRACKING SEDIMENT ONTO PUBLIC ROADS.
- c. LOCATE WHEEL WASH OR TIRE BATHS ON SITE, IF THE STABILIZED CONSTRUCTION ENTRANCE IS NOT EFFECTIVE IN PREVENTING TRACKING SEDIMENT ONTO PUBLIC ROADS.
- d. IF SEDIMENT IS TRACKED OFF SITE, CLEAN THE AFFECTED ROADWAY THOROUGHLY AT THE END OF EACH DAY, OR MORE FREQUENTLY AS NECESSARY (FOR EXAMPLE, DURING WET WEATHER). REMOVE SEDIMENT FROM ROADS BY SHOVELING, SWEEPING, OR PICKUP AND TRANSPORT OF THE SEDIMENT TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- e. CONDUCT STREET WASHING ONLY AFTER SEDIMENT REMOVAL IN ACCORDANCE WITH 2.d ABOVE.
- f. CONTROL STREET WASH WASTEWATER BY PUMPING BACK ON SITE OR OTHERWISE PREVENTING IT FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.

ELEMENT 3 - CONTROL FLOW RATES

- a. PROTECT PROPERTIES AND WATERWAYS DOWNSTREAM OF DEVELOPMENT SITES FROM EROSION AND THE ASSOCIATED DISCHARGE OF TURBID WATERS DUE TO INCREASES IN THE VELOCITY AND PEAK VOLUMETRIC FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE, AS REQUIRED BY LOCAL PLAN APPROVAL AUTHORITY.
- b. WHERE NECESSARY TO COMPLY WITH 3.a (ABOVE), CONSTRUCT STORMWATER INFILTRATION OR DETENTION BMPS AS ONE OF THE FIRST STEPS IN GRADING. ASSURE THAT DETENTION BMPs FUNCTION PROPERLY BEFORE CONSTRUCTING SITE IMPROVEMENTS (E.G., IMPERVIOUS SURFACES).
- c. IF PERMANENT INFILTRATION PONDS ARE USED FOR FLOW CONTROL DURING CONSTRUCTION, PROTECT THESE FACILITIES FROM SILTATION DURING THE CONSTRUCTION PHASE.

ELEMENT 4 - INSTALL SEDIMENT CONTROLS

- a. THE PERMITTEE MUST DESIGN, INSTALL, AND MAINTAIN EFFECTIVE EROSION CONTROLS AND SEDIMENT CONTROLS TO MINIMIZE THE DISCHARGE OF POLLUTANTS. AT A MINIMUM, THE PERMITTEE MUST DESIGN, INSTALL, AND MAINTAIN SUCH CONTROLS TO:
- b. CONSTRUCT SEDIMENT CONTROL BMPS (SEDIMENT PONDS, TRAPS, FILTERS, INFILTRATION FACILITIES, ETC.) AS ONE OF THE FIRST STEPS IN GRADING. THESE BMPS MUST BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
- c. MINIMIZE SEDIMENT DISCHARGES FROM THE SITE. THE DESIGN, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS MUST ADDRESS FACTORS SUCH AS THE AMOUNT, FREQUENCY, INTENSITY AND DURATION OF PRECIPITATION, THE NATURE OF RESULTING STORMWATER RUNOFF, AND SOIL CHARACTERISTICS, INCLUDING THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT ON THE SITE.
- d. DIRECT STORMWATER RUNOFF FROM DISTURBED AREAS THROUGH A SEDIMENT POND OR OTHER APPROPRIATE SEDIMENT REMOVAL BMP BEFORE THE RUNOFF LEAVES A CONSTRUCTION SITE OR BEFORE DISCHARGE TO AN INFILTRATION FACILITY. RUNOFF FROM FULLY STABILIZED AREAS MAY BE DISCHARGED WITHOUT A SEDIMENT REMOVAL BMP BUT MUST CONTROL FLOW RATES PER ELEMENT 3: CONTROL FLOW RATES.
- e. LOCATE BMPs INTENDED TO TRAP SEDIMENT ON SITE IN A MANNER TO AVOID INTERFERENCE WITH THE MOVEMENT OF JUVENILE SALMONIDS ATTEMPTING TO ENTER OFF-CHANNEL AREAS OR DRAINAGES.
- f. PROVIDE AND MAINTAIN NATURAL BUFFERS AROUND SURFACE WATERS, DIRECT STORMWATER TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION, UNLESS INFEASIBLE.
- g. WHERE FEASIBLE, DESIGN OUTLET STRUCTURES THAT WITHDRAW IMPOUNDED STORMWATER FROM THE SURFACE TO AVOID DISCHARGING SEDIMENT THAT IS STILL SUSPENDED LOWER IN THE WATER COLUMN.

ELEMENT 5 - STABILIZE SOILS

- a. THE PERMITTEE MUST STABILIZE EXPOSED AND UNWORKED SOILS BY APPLICATION OF EFFECTIVE BMPS THAT PREVENT EROSION. APPLICABLE BMPS INCLUDE BUT ARE NOT LIMITED TO: TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, SOIL APPLICATION OF POLYACRYLAMIDE (PAM), THE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED, AND DUST CONTROL.
- b. THE PERMITTEE MUST CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION.
- c. THE PERMITTEE MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND TO MINIMIZE DOWNSTREAM CHANNEL AND STREAM BANK EROSION.
- d. DEPENDING ON THE GEOGRAPHIC LOCATION OF THE PROJECT, THE PERMITTEE MUST NOT ALLOW SOILS TO REMAIN EXPOSED AND UNWORKED FOR MORE THAN THE TIME PERIODS SET FORTH BELOW TO PREVENT EROSION:

WEST OF THE CASCADE MOUNTAINS CREST
DURING THE DRY SEASON (MAY 1 - SEPTEMBER 30): 7 DAYS DURING THE WET SEASON
(OCTOBER 1 - APRIL 30): 2 DAYS

EAST OF THE CASCADE MOUNTAINS CREST, EXCEPT FOR CENTRAL BASIN* DURING THE DRY SEASON JULY 1 - SEPTEMBER 30: 10 DAYS
DURING THE WET SEASON (OCTOBER 1 - JUNE 30): 5 DAYS

THE CENTRAL BASIN*, EAST OF THE CASCADE MOUNTAINS CREST DURING THE DRY SEASON (JULY 1 - SEPTEMBER 30): 30 DAYS DURING THE WET SEASON (OCTOBER 1 - JUNE 30): 15 DAYS
NOTE THE CENTRAL BASIN IS DEFINED AS THE PORTIONS OF EASTERN WASHINGTON WITH MEAN ANNUAL PRECIPITATION OF FEWER THAN 12 INCHES.

- e. THE PERMITTEE MUST STABILIZE SOILS AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
- f. THE PERMITTEE MUST STABILIZE SOIL STOCKPILES FROM EROSION, PROTECTED WITH SEDIMENT TRAPPING MEASURES, AND WHERE POSSIBLE, BE LOCATED AWAY FROM STORM DRAIN INLETS, WATERWAYS, AND DRAINAGE CHANNELS.
- g. THE PERMITTEE MUST MINIMIZE THE AMOUNT OF SOIL EXPOSED DURING CONSTRUCTION ACTIVITY.
- h. THE PERMITTEE MUST MINIMIZE THE DISTURBANCE OF STEEP SLOPES.
- i. THE PERMITTEE MUST MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

ELEMENT 6 - PROTECT SLOPES

- a. THE PERMITTEE MUST DESIGN AND CONSTRUCT CUT-AND-FILL SLOPES IN A MANNER TO MINIMIZE EROSION. APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, REDUCING CONTINUOUS LENGTH OF SLOPE WITH TERRACING AND DIVERSIONS, REDUCING SLOPE STEEPNESS, AND ROUGHENING SLOPE SURFACES (FOR EXAMPLE, TRACK WALKING).
- b. THE PERMITTEE MUST DIVERT OFF-SITE STORMWATER (RUN-ON) OR GROUNDWATER AWAY FROM SLOPES AND DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES, AND/OR SWALES. OFF-SITE STORMWATER SHOULD BE MANAGED SEPARATELY FROM STORMWATER GENERATED ON THE SITE.
- c. AT THE TOP OF SLOPES, COLLECT DRAINAGE IN PIPE SLOPE DRAINS OR PROTECTED CHANNELS TO PREVENT EROSION.
- i. WEST OF THE CASCADE MOUNTAINS CREST: TEMPORARY PIPE SLOPE DRAINS MUST HANDLE THE PEAK 10-MINUTE FLOW RATE FROM A TYPE 1A, 10-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR, 1-HOUR FLOW RATE PREDICTED BY AN APPROVED CONTINUOUS RUNOFF MODEL, INCREASED BY A FACTOR OF 1.6, MAY BE USED. THE HYDROLOGIC ANALYSIS MUST USE THE EXISTING LAND COVER CONDITION FOR PREDICTING FLOW RATES FROM TRIBUTARY AREAS OUTSIDE THE PROJECT LIMITS. FOR TRIBUTARY AREAS ON THE PROJECT SITE, THE ANALYSIS MUST USE THE TEMPORARY OR PERMANENT PROJECT LAND COVER CONDITION, WHICHEVER WILL PRODUCE THE HIGHEST FLOW RATES, IF USING THE WESTERN WASHINGTON HYDROLOGY MODEL (WWHM) TO PREDICT FLOWS, BARE SOIL AREAS SHOULD BE MODELED AS "LANDSCAPED AREA".
- ii. EAST OF THE CASCADE MOUNTAINS CREST: TEMPORARY PIPE SLOPE DRAINS MUST HANDLE THE EXPECTED PEAK FLOW RATE FROM A 6-MONTH, 3-HOUR STORM FOR THE DEVELOPED CONDITION, REFERRED TO AS THE SHORT DURATION STORM.
- d. PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS.
- e. PLACE CHECK DAMS AT REGULAR INTERVALS WITHIN CONSTRUCTED CHANNELS THAT ARE CUT DOWN A SLOPE.

ELEMENT 7 - PROTECT DRAIN INLETS

- a. PROTECT ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT.
- b. CLEAN OR REMOVE AND REPLACE INLET PROTECTION DEVICES WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE (UNLESS A DIFFERENT STANDARD IS SPECIFIED BY THE PRODUCT MANUFACTURER).

ELEMENT 8 - STABILIZE CHANNELS AND OUTLETS

- a. DESIGN, CONSTRUCT, AND STABILIZE ALL ON-SITE CONVEYANCE CHANNELS TO PREVENT EROSION FROM THE FOLLOWING EXPECTED PEAK FLOWS:
- i. WEST OF THE CASCADE MOUNTAINS CREST: CHANNELS MUST HANDLE THE PEAK 10-MINUTE FLOW RATE FROM A TYPE 1A, 10-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR, 1-HOUR FLOW RATE PREDICTED BY AN APPROVED CONTINUOUS RUNOFF MODEL, INCREASED BY A FACTOR OF 1.6, MAY BE USED. THE HYDROLOGIC ANALYSIS MUST USE THE EXISTING LAND COVER CONDITION FOR PREDICTING FLOW RATES FROM TRIBUTARY AREAS OUTSIDE THE PROJECT LIMITS. FOR TRIBUTARY AREAS ON THE PROJECT SITE, THE ANALYSIS MUST USE THE TEMPORARY OR PERMANENT PROJECT LAND COVER CONDITION, WHICHEVER WILL PRODUCE THE HIGHEST FLOW RATES, IF USING THE WWHM TO PREDICT FLOWS, BARE SOIL AREAS SHOULD BE MODELED AS "LANDSCAPED AREA".
- ii. EAST OF THE CASCADE MOUNTAINS CREST: CHANNELS MUST HANDLE THE EXPECTED PEAK FLOW RATE FROM A 6-MONTH, 3-HOUR STORM FOR THE DEVELOPED CONDITION, REFERRED TO AS THE SHORT DURATION STORM.
- b. PROVIDE STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAM BANKS, SLOPES, AND DOWNSTREAM REACHES AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.

ELEMENT 9 - CONTROL POLLUTANTS

- a. DESIGN, INSTALL, IMPLEMENT, AND MAINTAIN EFFECTIVE POLLUTION PREVENTION MEASURES TO MINIMIZE THE DISCHARGE OF POLLUTANTS. THE PERMITTEE MUST:
- b. HANDLE AND DISPOSE OF ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS THAT OCCUR ON SITE IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
- c. PROVIDE COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH OR THE ENVIRONMENT. ON-SITE FUELING TANKS MUST INCLUDE SECONDARY CONTAINMENT. SECONDARY CONTAINMENT MEANS PLACING TANKS OR CONTAINERS WITHIN AN IMPERVIOUS STRUCTURE CAPABLE OF CONTAINING 110% OF THE VOLUME CONTAINED IN THE LARGEST TANK WITHIN THE CONTAINMENT STRUCTURE. DOUBLE-WALLED TANKS DO NOT REQUIRE ADDITIONAL SECONDARY CONTAINMENT.
- d. CONDUCT MAINTENANCE, FUELING, AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES TO SPILL PREVENTION AND CONTROL MEASURES. CLEAN CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY SPILL INCIDENT.
- e. DISCHARGE WHEEL WASH OR TIRE BATH WASTEWATER TO A SEPARATE ON-SITE TREATMENT SYSTEM THAT PREVENTS DISCHARGE TO SURFACE WATER, SUCH AS CLOSED-LOOP RECIRCULATION OR UPLAND LAND APPLICATION, OR TO THE SANITARY SEWER WITH LOCAL SEWER DISTRICT APPROVAL.
- f. APPLY FERTILIZERS AND PESTICIDES IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICAL TO STORMWATER RUNOFF. FOLLOW MANUFACTURERS' LABEL REQUIREMENTS FOR APPLICATION RATES AND PROCEDURES.
- g. USE BMPS TO PREVENT CONTAMINATION OF STORMWATER RUNOFF BY pH-MODIFYING SOURCES. THE SOURCES FOR THIS CONTAMINATION INCLUDE, BUT ARE NOT LIMITED TO: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHING AND CURING WATERS, RECYCLED CONCRETE STOCKPILES, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, DEWATERING CONCRETE VAULTS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS.
- h. ADJUST THE pH OF STORMWATER OR AUTHORIZED NON-STORMWATER IF NECESSARY TO PREVENT AN EXCEDENCE OF GROUNDWATER AND/OR SURFACE WATER QUALITY STANDARDS.
- i. ASSURE THAT WASHOUT OF CONCRETE TRUCKS IS PERFORMED OFF-SITE OR IN DESIGNATED CONCRETE WASHOUT AREAS ONLY. DO NOT WASH OUT CONCRETE TRUCK DRUMS OR CONCRETE HANDLING EQUIPMENT ONTO THE GROUND, OR INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS. WASHOUT OF CONCRETE HANDLING EQUIPMENT MAY BE DISPOSED OF IN A DESIGNATED CONCRETE WASHOUT AREA OR IN A FORMED AREA AWAITING CONCRETE WHERE IT WILL NOT CONTAMINATE SURFACE OR GROUNDWATER. DO NOT DUMP EXCESS CONCRETE ON SITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS. CONCRETE SPILLAGE OR CONCRETE DISCHARGE DIRECTLY TO GROUNDWATER OR SURFACE WATERS OF THE STATE IS PROHIBITED. DO NOT WASH OUT TO FORMED AREAS AWAITING LID FACILITIES.
- j. OBTAIN WRITTEN APPROVAL FROM ECOLOGY BEFORE USING ANY CHEMICAL TREATMENT, EXCEPT FOR CO₂, DRY ICE, OR FOOD GRADE VINEGAR TO ADJUST pH.
- k. UNCONTAMINATED WATER FROM WATER-ONLY BASED SHAFT DRILLING FOR CONSTRUCTION OF BUILDING, ROAD, AND RIDGE FOUNDATIONS MAY BE INFILTRATED PROVIDED THE WASTEWATER IS MANAGED IN A WAY THAT PROHIBITS DISCHARGE TO SURFACE WATERS. PRIOR TO INFILTRATION, WATER FROM WATER-ONLY BASED SHAFT DRILLING THAT COMES INTO CONTACT WITH CURING CONCRETE MUST BE NEUTRALIZED UNTIL pH IS IN THE RANGE OF 6.5 TO 8.5 (SU).

ELEMENT 10 - CONTROL DEWATERING

- a. PERMITTEES MUST DISCHARGE FOUNDATION, VAULT, AND TRENCH DEWATERING WATER, WHICH HAVE CHARACTERISTICS SIMILAR TO STORMWATER RUNOFF AT THE SITE, INTO A CONTROLLED CONVEYANCE SYSTEM BEFORE DISCHARGE TO A SEDIMENT TRAP OR SEDIMENT POND.
- b. PERMITTEES MAY DISCHARGE CLEAN, NON-TURBID DEWATERING WATER, SUCH AS WELL-POINT GROUNDWATER, TO SYSTEMS TRIBUTARY TO, OR DIRECTLY INTO SURFACE WATERS OF THE STATE, AS SPECIFIED IN ELEMENT 8: STABILIZE CHANNELS AND OUTLETS, PROVIDED THE DEWATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. DO NOT ROUTE CLEAN DEWATERING WATER THROUGH STORMWATER SEDIMENT PONDS. NOTE THAT "SURFACE WATERS OF THE STATE" MAY EXIST ON A CONSTRUCTION SITE AS WELL AS OFF SITE; FOR EXAMPLE, A CREEK RUNNING THROUGH A SITE.
- c. OTHER DEWATERING TREATMENT OR DISPOSAL OPTIONS MAY INCLUDE:
- i. INFILTRATION
- ii. TRANSPORT OFF SITE IN A VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS.
- iii. ECOLOGY-APPROVED ON-SITE CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES.
- iv. SANITARY OR COMBINED SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, IF THERE IS NO OTHER OPTION
- v. USE OF A SEDIMENTATION BAG WITH DISCHARGE TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DEWATERING.
- vi. PERMITTEES MUST HANDLE HIGHLY TURBID OR CONTAMINATED DEWATERING WATER SEPARATELY FROM STORMWATER.

ELEMENT 11 - MAINTAIN BMPS

- a. PERMITTEES MUST MAINTAIN AND REPAIR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION IN ACCORDANCE WITH BMP SPECIFICATIONS.
- b. PERMITTEES MUST REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS WITHIN 30 DAYS AFTER ACHIEVING FINAL SITE STABILIZATION OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED.

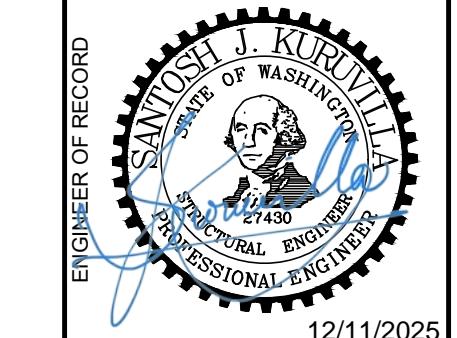
ELEMENT 12 - MANAGE THE PROJECT

- a. PHASE DEVELOPMENT PROJECTS TO THE MAXIMUM DEGREE PRACTICABLE AND TAKE INTO ACCOUNT SEASONAL WORK LIMITATIONS.
- b. INSPECTION AND MONITORING - INSPECT, MAINTAIN AND REPAIR ALL BMPS AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. PROJECTS REGULATED UNDER THE CONSTRUCTION STORMWATER GENERAL PERMIT (CSWP) MUST CONDUCT SITE INSPECTIONS AND MONITORING IN ACCORDANCE WITH SPECIAL CONDITION S4 OF THE CSWP.
- c. MAINTAINING AN UPDATED CONSTRUCTION SWPPP.

ELEMENT 13 - PROTECT LOW IMPACT DEVELOPMENT (LID) BMPS

- a. THE PRIMARY PURPOSE OF LID BMPS/ON-SITE LID STORMWATER MANAGEMENT BMPS IS TO REDUCE THE DISRUPTION OF THE NATURAL SITE HYDROLOGY. LID BMPS ARE PERMANENT FACILITIES.
- b. PERMITTEES MUST PROTECT ALL BIORETENTION AND RAIN GARDEN FACILITIES FROM SEDIMENTATION THROUGH INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMPS ON PORTIONS OF THE SITE THAT DRAIN INTO THE BIORETENTION AND/OR RAIN GARDEN FACILITIES. RESTORE THE FACILITIES TO THEIR FULLY FUNCTIONING CONDITION IF THEY ACCUMULATE SEDIMENT DURING CONSTRUCTION. RESTORING THE FACILITY MUST INCLUDE REMOVAL OF SEDIMENT AND ANY SEDIMENT-LADEN BIORETENTION/RAIN GARDEN SOILS, AND REPLACING THE REMOVED SOILS WITH SOILS MEETING THE DESIGN SPECIFICATION.
- c. PERMITTEES MUST MAINTAIN THE INFILTRATION CAPABILITIES OF BIORETENTION AND RAIN GARDEN FACILITIES BY PROTECTING AGAINST COMPACTION BY CONSTRUCTION EQUIPMENT AND FOOT TRAFFIC. PROTECT COMPLETE LAWN AND LANDSCAPED AREAS FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT.
- d. PERMITTEES MUST CONTROL EROSION AND AVOID INTRODUCING SEDIMENT FROM SURROUNDING LAND USES ONTO PERMEABLE PAVEMENTS. DO NOT ALLOW MUDDY CONSTRUCTION EQUIPMENT ON THE BASE MATERIAL OR PAVEMENT. DO NOT ALLOW SEDIMENT-LADEN RUNOFF ONTO PERMEABLE PAVEMENTS.
- e. PERMITTEES MUST CLEAN PERMEABLE PAVEMENTS FOULLED WITH SEDIMENTS OR NO LONGER PASSING AN INITIAL INFILTRATION TEST USING LOCAL STORMWATER MANUAL METHODOLOGY OR THE MANUFACTURER'S PROCEDURES.
- f. PERMITTEES MUST KEEP ALL HEAVY EQUIPMENT OFF EXISTING SOILS UNDER LID FACILITIES THAT HAVE BEEN EXCAVATED TO FINAL GRADE TO RETAIN THE INFILTRATION RATE OF THE SOILS.

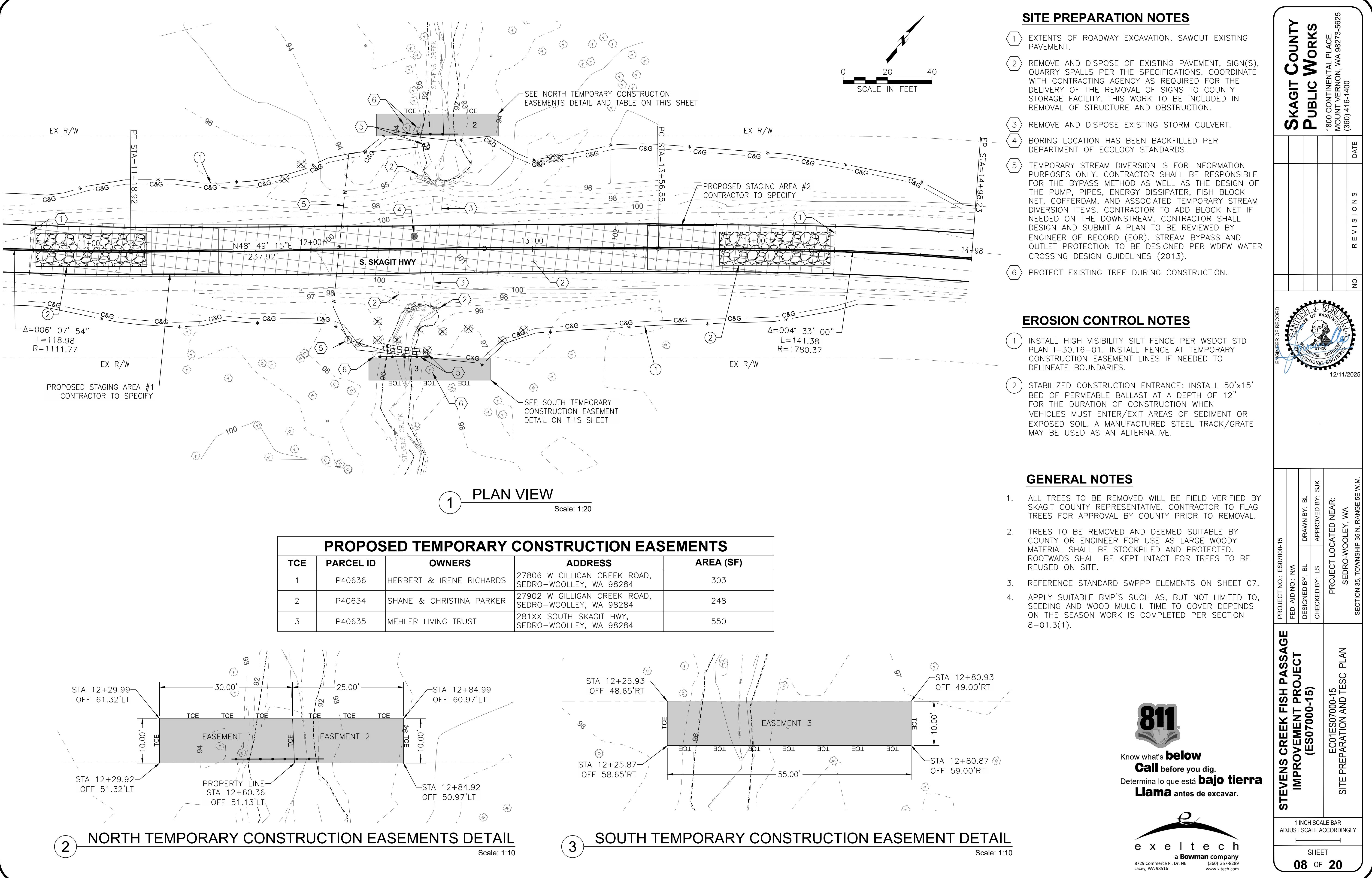
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REVISIONS	DATE



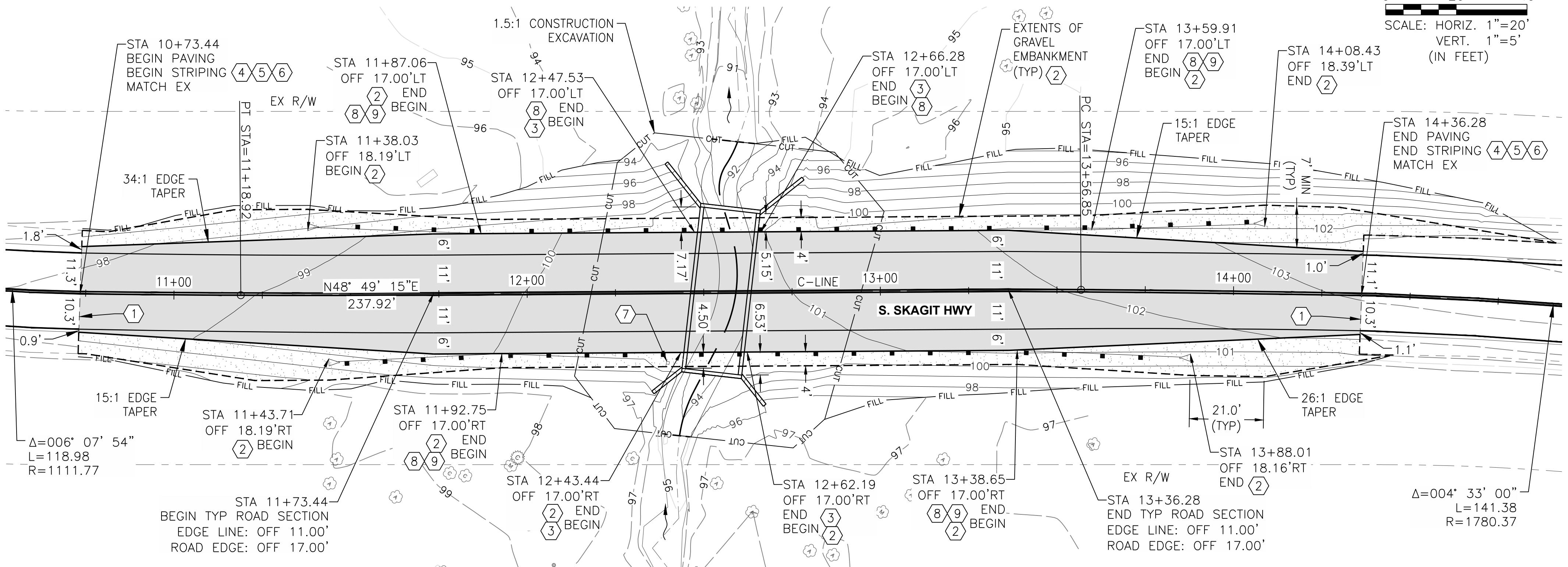
PROJECT NO.: ES07000-15	FED AID NO.: NA
	DRAWN BY: BL
	CHECKED BY: LS
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 5 E W.M.	APPROVED BY: SUK

1 INCH SCALE BAR
ADJUST SCALE ACCORDINGLY
811
STEVENS CREEK FISH PASSAGE
(ES07000-15)
CONSTRUCTION SWPPP ELEMENTS
a Bowman company
8729 Commerce Pl. Dr. NE
(360) 357-8289
Lacey, WA 98516
www.xtech.com

Know what's below
Call before you dig.
Determina lo que está bajo tierra
Llama antes de excavar.

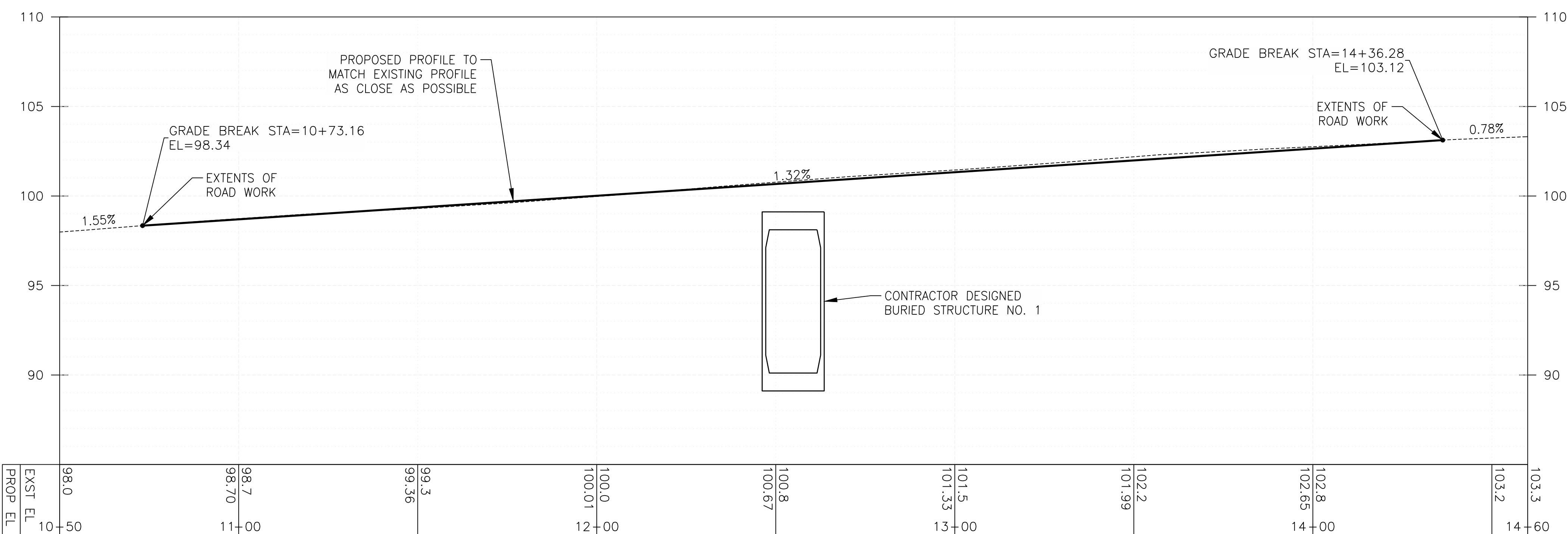


**SECTION 34, T. 35 N., R. 5E., W.M.
SKAGIT COUNTY, WA**



PLAN VIEW

Scale: 1:20

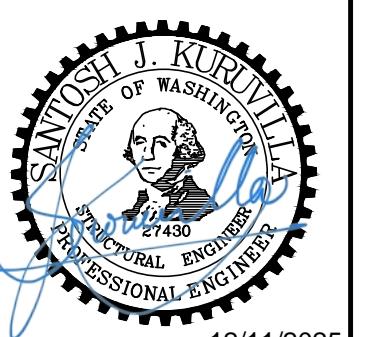


PROFILE VIEW

Scale: 1:20

CONSTRUCTION NOTES

- 1 TRANSITION TO EXISTING PAVEMENT GRADES PER DETAIL SHEET 09. SEE THIS SHEET FOR TRANSITION LOCATIONS.
- 2 FURNISH AND INSTALL BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL AND GRAVEL EMBANKMENT PER WSDOT STD PLAN C-22.40-10.
- 3 FURNISH AND INSTALL BOX CULVERT EMBEDDED ANCHOR GUARDRAIL STEEL POST - TYPE 31 PER WSDOT STD PLAN C-20.41-05.
- 4 4" PAINTED EDGE LINE PER WSDOT STD PLAN M-20.10-04.
- 5 DOUBLE YELLOW PAINTED CENTERLINE PER WSDOT STD PLAN M-20.10-04. DISTANCE BETWEEN DOUBLE CENTERLINE SHALL BE 4".
- 6 FURNISH AND INSTALL RAISED PAVEMENT MARKERS TYPE 2YY PER WSDOT STD PLAN M-20.30-04.
- 7 REPLACE SIGN ON NEW POST PER WSDOT STD PLAN G-24.50-05.
- 8 FURNISH AND INSTALL BEAM GUARDRAIL TYPE 31 PER WSDOT STD PLAN C-20.10-09.
- 9 4'-WIDE GRAVEL EMBANKMENT FOR GUARDRAIL.



GENERAL NOTES

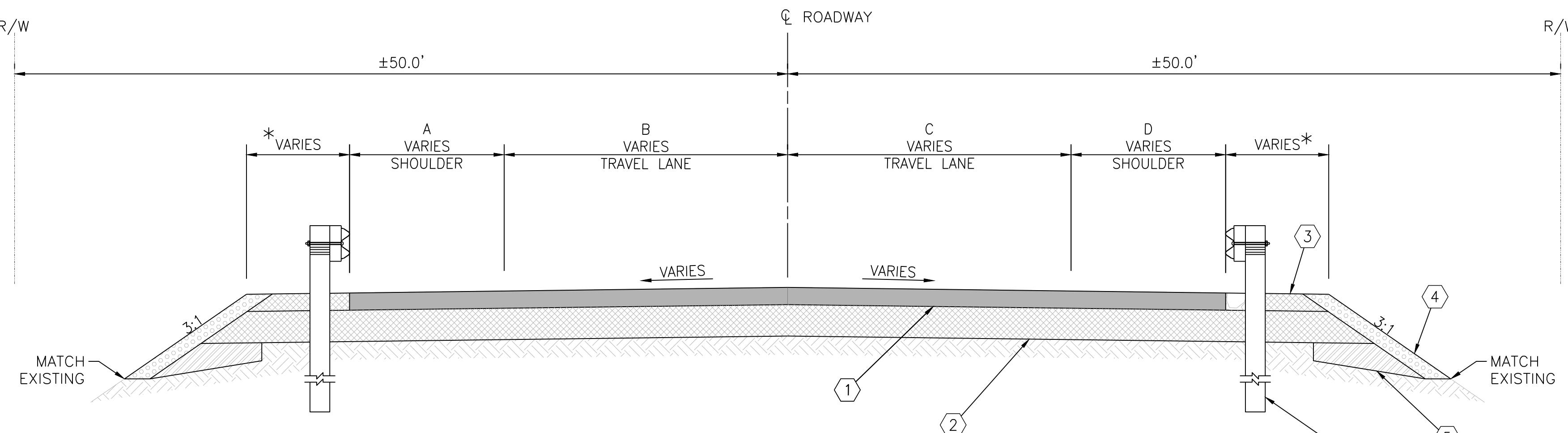
1. ALL SIGN TYPES, COLORS, AND DIMENSIONS SHALL BE STANDARD PER THE MUTCD, UNLESS OTHERWISE INDICATED.
2. SIGNS SHALL BE CONSTRUCTED ENTIRELY OF TYPE III OR TYPE IV REFLECTIVE SHEETING PER WSDOT STANDARD SPECIFICATIONS SECTION 9-28.12.
3. FURNISH AND INSTALL TEMPORARY PAVEMENT MARKINGS IMMEDIATELY FOLLOWING PAVING.
4. PROPOSED CONTOURS REPRESENT THE FINISHED GRADE FOR SURFACE MATERIALS. BACKFILL ELEVATIONS IN THE LANDSCAPING AREAS WILL BE PER SHEET 18 SOIL PREPARATION DETAILS AT A DEPTH BELOW THE PROPOSED CONTOURS.
5. SEE SHEETS 11 AND 12 FOR STREAM DESIGN AND DETAILS.
6. SEE SHEETS 13, 14, 15, 16, AND 17 FOR CULVERT AND WINGWALL DESIGN AND DETAILS.
7. SEE SHEET 10 FOR SUPERELEVATION INFORMATION



now what's **below**
Call before you dig.
determina lo que está **bajo tierra**
Llama antes de excavar.



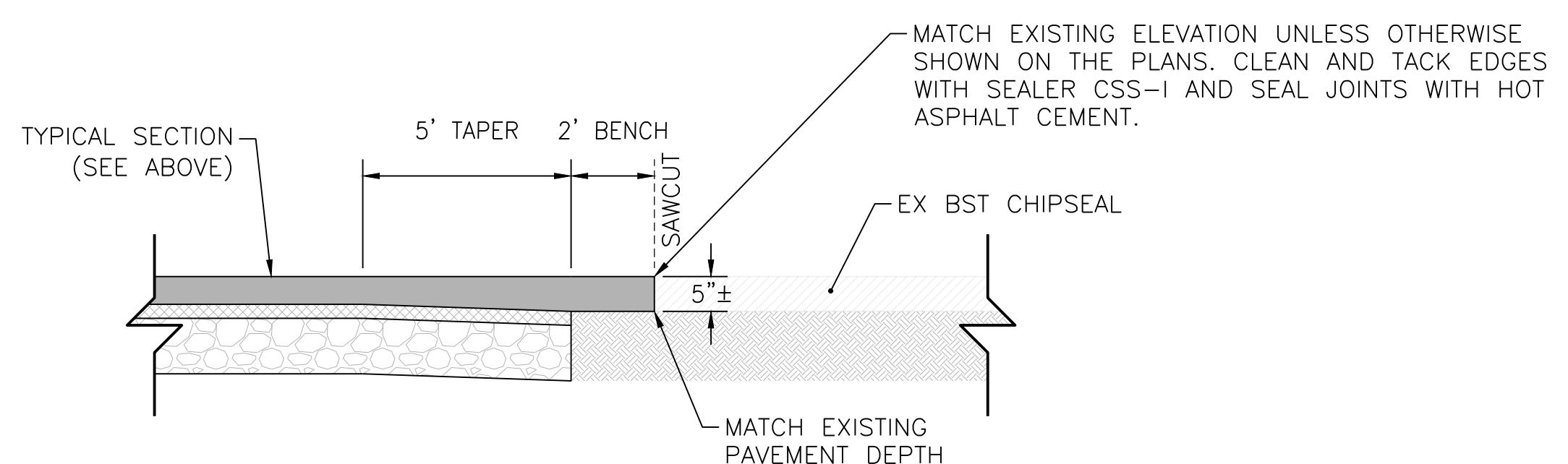
EVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)



1 TYPICAL SECTION

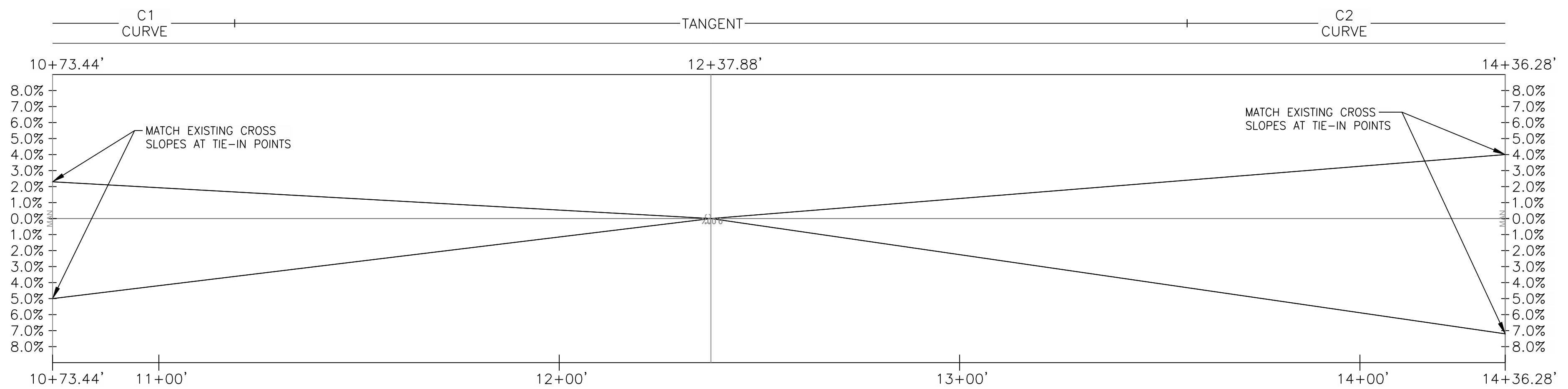
NTS

*SEE SHEET 09 FOR GUARDRAIL GRAVEL EMBANKMENT LIMITS
**SEE SHEET 09 FOR GUARDRAIL LIMITS



2 PAVEMENT TRANSITION

NTS



3 SUPERELEVATION DIAGRAM

1" = 20'

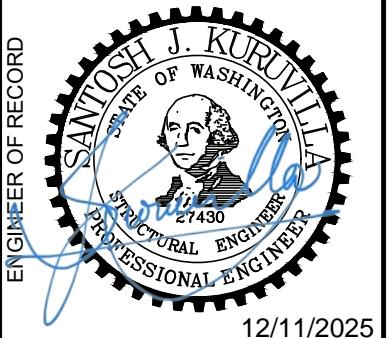
LEGEND:

- (1) 4" HMA PG CL. 1/2" PG 64H-22
- (2) 12" CSBC
- (3) 4" CSBC
- (4) 6" TOPSOIL TYPE A
- (5) GRAVEL BORROW AS NEEDED TO EXPAND THE ROADWAY EMBANKMENT
- (6) BEAM GUARDRAIL TYPE 31 PER WSDOT STD PLAN C-20.10-08. BEAM GUARDRAIL BLOCKS AND POSTS SHALL PER WSDOT STD PLAN C-1b. GUARDRAIL POST OVER THE BOX CULVERT SHALL USE BOX CULVERT EMBEDDED ANCHOR GUARDRAIL STEEL POST PER WSDOT STD PLAN C-20.41-05.

GENERAL NOTES:

1. ALL SURFACING AND PAVING DEPTHS ARE COMPAKTED DEPTHS.
2. SEE PLAN AND PROFILE SHEETS FOR ROADWAY ELEVATIONS.
3. SEE SHEET 19 FOR TOPSOIL PREPARATION DETAILS.

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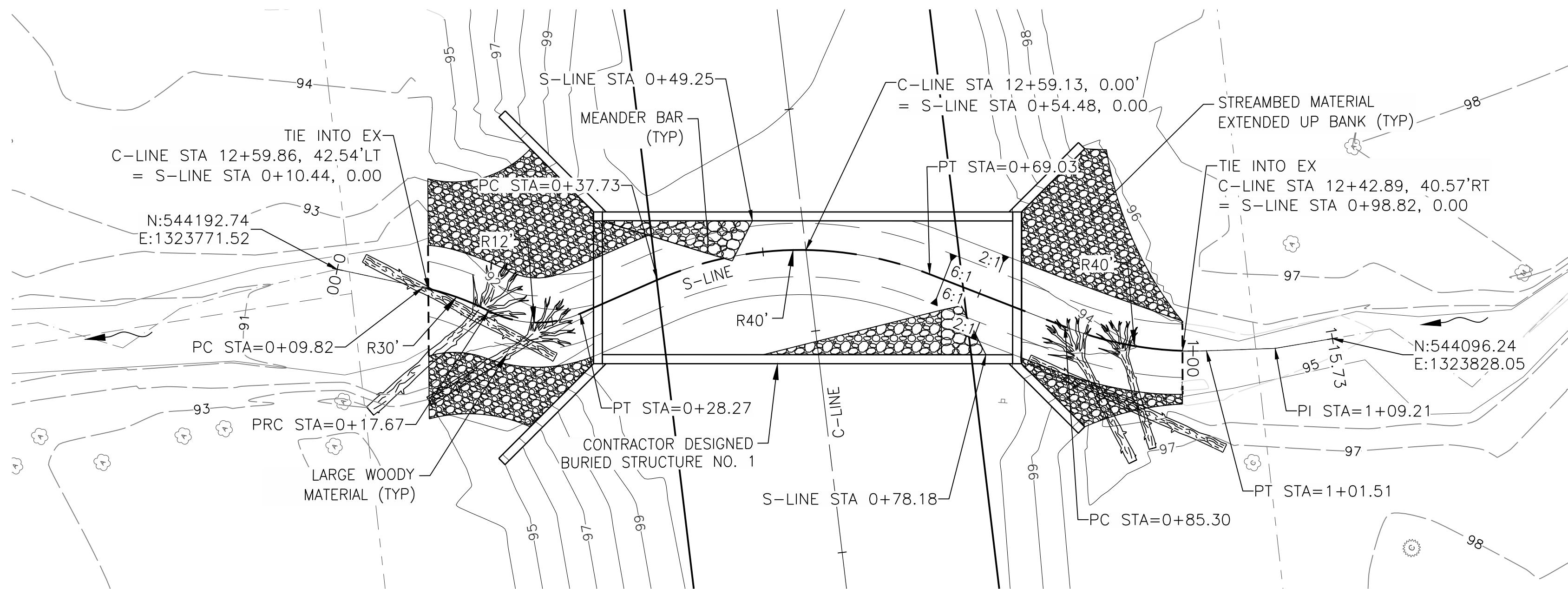
ROAD SECTIONS					
BEGIN STATION	END STATION	"A" WIDTH	"B" WIDTH	"C" WIDTH	"D" WIDTH
10+73.44	11+73.44	1.8'-6.0'	11.3'-11.0'	10.3'-11.0'	0.9'-6.0'
11+73.44	13+36.28	6.0'	11.0'	11.0'	6.0'
13+36.28	14+36.28	6.0'-1.0'	11.0'-11.1'	11.0'-10.3'	6.0'-1.1'

STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	
PROJECT NO.: ES07000-15	
FED AID NO.: NA	DRAWN BY: BL
DESIGNED BY: BL	CHECKED BY: LS
CHECKED BY: LS	APPROVED BY: SJK
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA	
SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.	



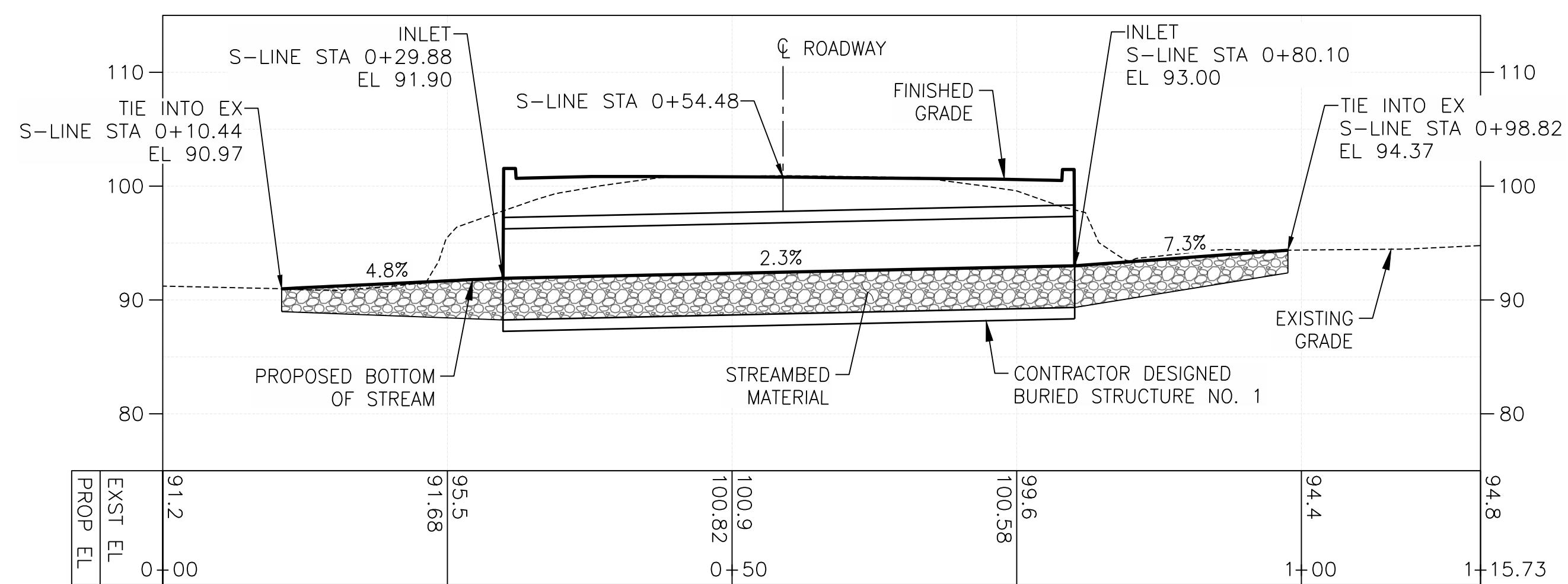
1 INCH SCALE BAR
ADJUST SCALE ACCORDINGLY
SHEET
10 OF 20

SECTION 34, T. 35 N., R. 5E., W.M.
SKAGIT COUNTY, WA



1 PLAN VIEW

Scale: 1:10



2 STREAM (S-LINE) PROFILE VIEW

Scale: 1:10

0 10 20
SCALE: HORIZ. 1"=10'
VERT. 1"=10'
(IN FEET)

GENERAL NOTES

1. REFERENCE SHEET 12 FOR STREAM DETAILS.
2. REFERENCE SHEETS 13 THROUGH 17 FOR PRECAST CONCRETE REINFORCED SPLIT BOX CULVERT AND WINGWALLS DESIGN AND DETAILS.
3. LWM WILL BE FIELD-FITTED AS DIRECTED BY THE ENGINEER. IF CONIFEROUS TREES ARE NOT AVAILABLE ON SITE, THEY WILL BE IMPORTED.
4. LWM WILL BE ANCHORED INTO THE BANKS OF THE STREAM CHANNEL. APPROXIMATELY 2/3 OF THE LWM WILL BE BURIED WITH 1/3 PROJECTING INTO THE CHANNEL FOR INTERACTION WITH LOW AND HIGH FLOWS. LWM WILL HAVE A MINIMUM DIAMETER AT BREAST HEIGHT OF 8" AND MAXIMUM OF 24".
5. STREAMBED MATERIAL WILL BE PLACED IN LIFTS NO THICKER THAN 12 INCHES. MATERIAL PLACEMENT SHALL ENSURE STREAM FLOW RATE IS CONVEYED ABOVE EACH LAYER. A MIXTURE OF WATER AND SAND WILL BE ADDED TO EACH LAYER TO FILL THE INTERSTITIAL Voids OF THE STREAMBED MATERIAL. THIS PROCESS SHALL BE REPEATED UNTIL THE STREAM DOES NOT GO SUBSURFACE AND THERE IS NO PERCEIVABLE DIFFERENCE IN FLOW RATE FROM UPSTREAM OF THE PROJECT LIMITS TO THE DOWNSTREAM LIMITS.
6. STREAMBED MATERIAL USED FOR THE STREAM, BANKS, AND FLOODPLAIN SHALL HAVE STREAMBED ORGANIC MATERIAL INCORPORATED INTO THE TOP LIFT. PRIOR TO ADDING STREAMBED ORGANIC MATERIAL ENSURE THAT THE WATER FLOW DOES NOT GO SUBSURFACE. SEE SPECIFICATIONS.

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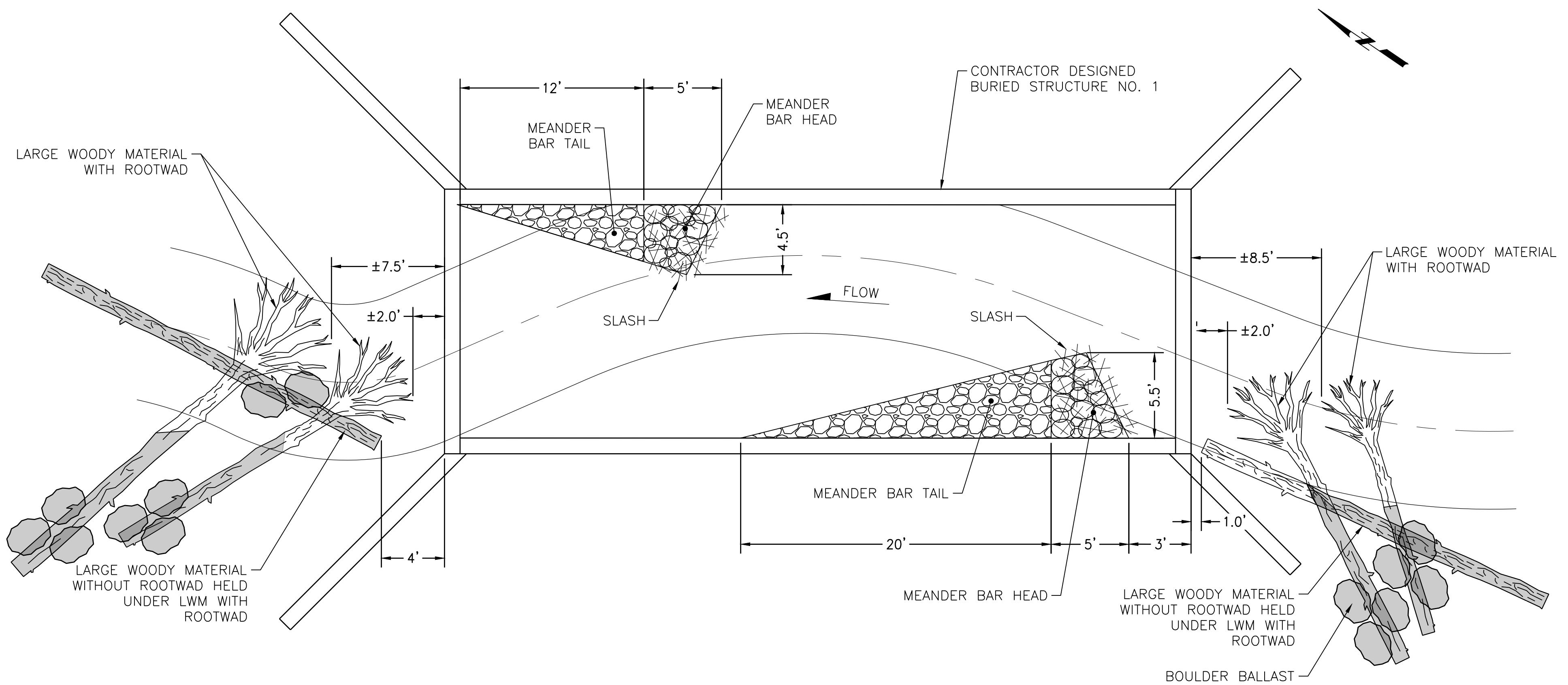
[Signature]
SANTOSH J. KURUMI
P.E. #27430
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
12/11/2025

PROJECT NO.: ES07000-15	
FED. AID NO.: NA	DRAWN BY: BL
DESIGNED BY: BL	CHECKED BY: LS
APPROVED BY: SJK	
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA	
SECTION 35, TOWNSHIP 35 N, RANGE 5E W.M.	

STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	
PP01ES07000-15 STREAM PLAN AND PROFILE	
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY	
SHEET 11 OF 20	

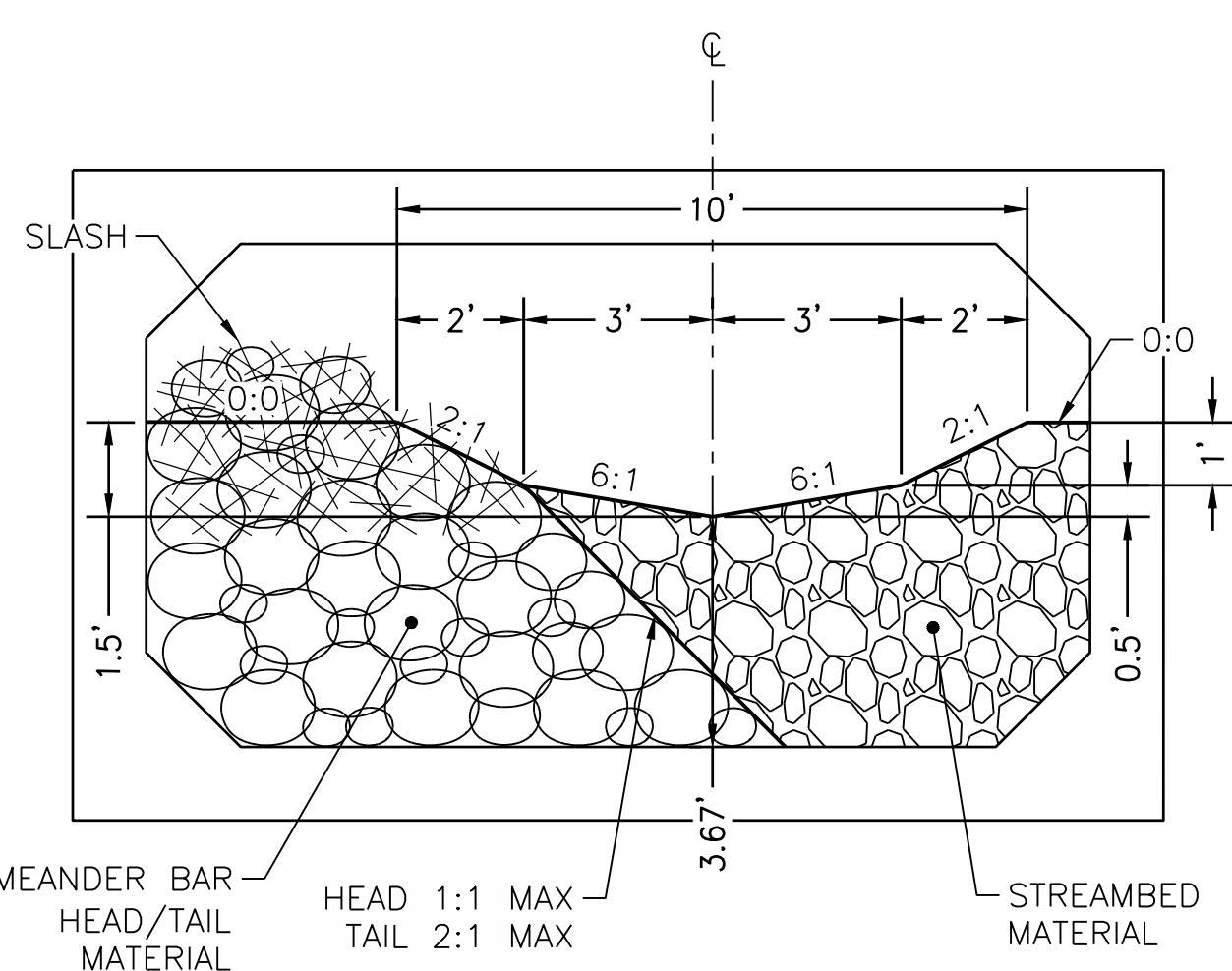
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1 STREAM FEATURES DETAIL

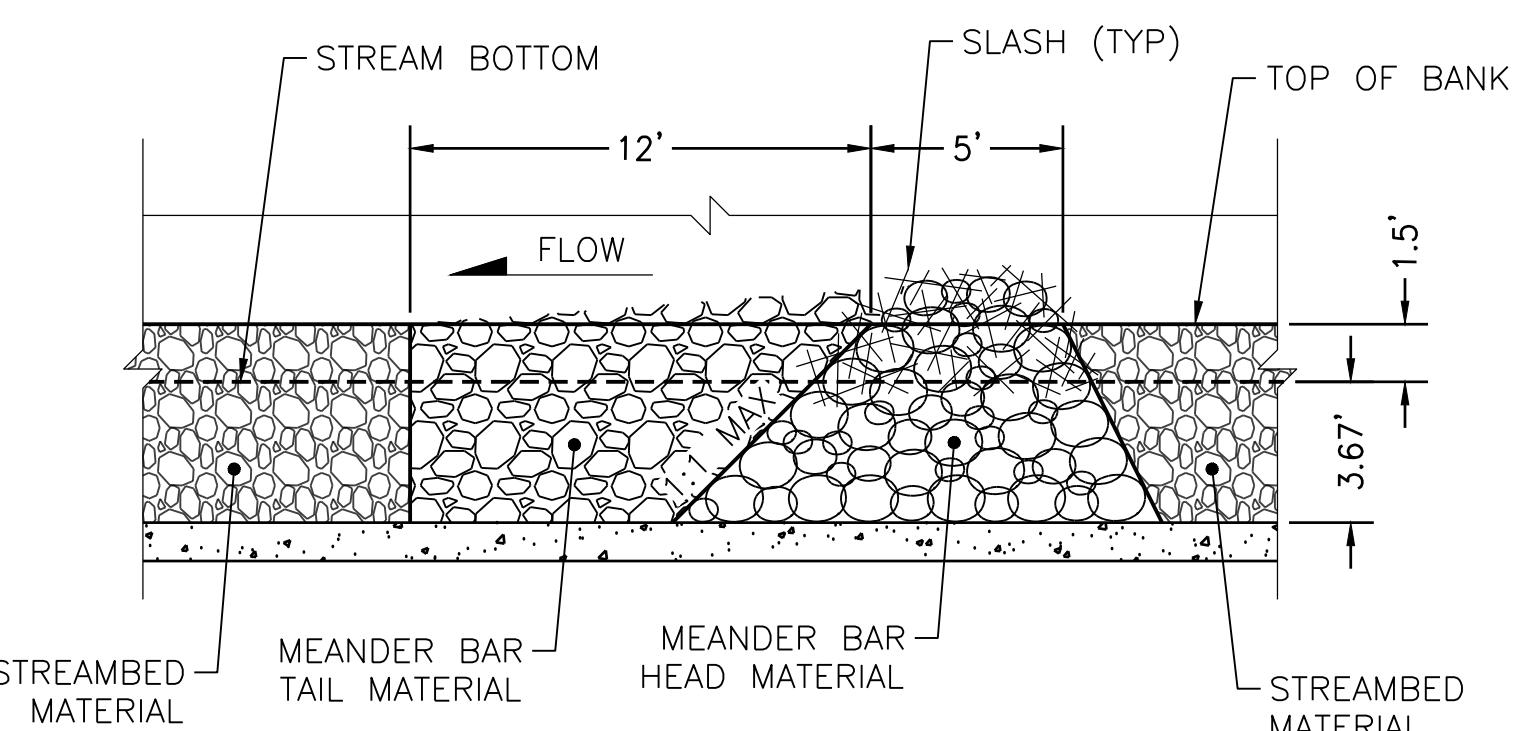
Scale: 1:5



2 TYPICAL STREAM CROSS-SECTION

Scale: 1:3

NOTE: THE WIDTHS SHOWN REPRESENT THE STANDARD STREAM SECTION. ACTUAL WIDTHS WILL VARY BASED ON STREAM ALIGNMENT LOCATION.



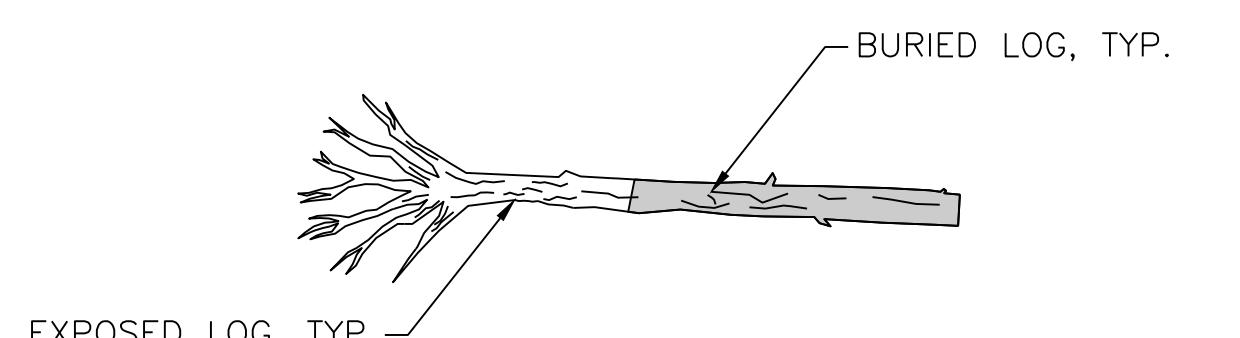
3 TYPICAL STREAM LONGITUDINAL SECTION

Scale: 1:5

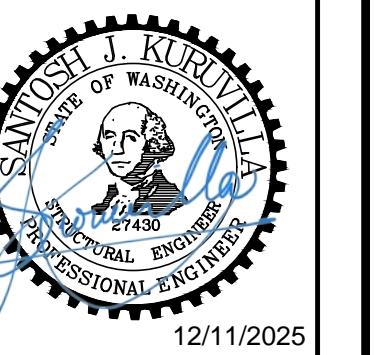
MATERIAL NOTES

- STREAMBED MATERIAL SHALL BE A MIX OF THE FOLLOWING AGGREGATES WITH ASSOCIATED RATIOS:
 - STREAMBED SEDIMENT = 67%, BY VOLUME
 - STREAMBED COBBLES 6 IN. = 33%, BY VOLUME
- MEANDER BAR HEAD MATERIAL SHALL BE A MIX OF THE FOLLOWING AGGREGATES WITH THE ASSOCIATED RATIOS:
 - STREAMBED BOULDERS TYPE TWO = 100%, BY VOLUME
- MEANDER BAR TAIL MATERIAL SHALL BE A MIX OF THE FOLLOWING AGGREGATES WITH THE ASSOCIATED RATIOS:
 - STREAMBED SEDIMENT = 50%, BY VOLUME
 - STREAMBED COBBLES 8 IN. = 50%, BY VOLUME
- SLASH SHALL BE INTERWOVEN BETWEEN THE BOULDERS FORMING THE MEANDER BAR HEAD AND SHOULD ALSO WRAP AROUND THE FLOW-WARD SIDES TO ENGAGE WITH FLOW AND SCOUR POOL. SLASH SHOULD BE INCORPORATED INTO THE MEANDER BARS 2' BELOW FINISHED GRADE.
- LWM WILL BE BURIED INTO THE BANKS OF THE STREAM CHANNEL AT A MINIMUM DEPTH OF 2 FEET. APPROXIMATELY 2/3 OF THE LWM WILL BE BURIED WITH 1/3 PROJECTING INTO THE CHANNEL FOR INTERACTION WITH LOW AND HIGH FLOWS. EACH LWM STRUCTURE WILL INCLUDE A COMBINATION OF MATERIALS CLOSELY MATCHING THE PLAN. ANY DISCREPANCIES WILL BE BROUGHT TO THE ATTENTION OF THE ENGINEER
- LWM SPECIES SHALL BE DOUGLAS FIR OR WESTERN RED CEDAR. LOGS MUST BE GREEN (NOT STOCKPILED). DIAMETER AT BREAST HEIGHT (DBH) SHALL BE A MINIMUM OF 18 INCHES AND A MAXIMUM OF 24 INCHES.
- LOGS WITHOUT ROOTWAD SHALL HAVE A MINIMUM LENGTH OF 24 FEET.
- LOGS WITH ROOTWADS SHALL HAVE A MINIMUM LENGTH OF 24 FEET MEASURED FROM BASE OF ROOTWAD.
- LWM USED IN STREAM RESTORATION PROJECTS, WITH OR WITHOUT THE ROOTWAD, MUST BE FREE OF SOIL, ROCKS, BEFORE INSTALLATION IN THE STREAM CHANNEL OR BANK.
- BOULDER BALLASTS USED TO ANCHOR LOGS SHALL BE STREAMBED BOULDERS TYPE THREE.

LWM LEGEND



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NO.	REVISI ONS	DATE
12/11/2025		



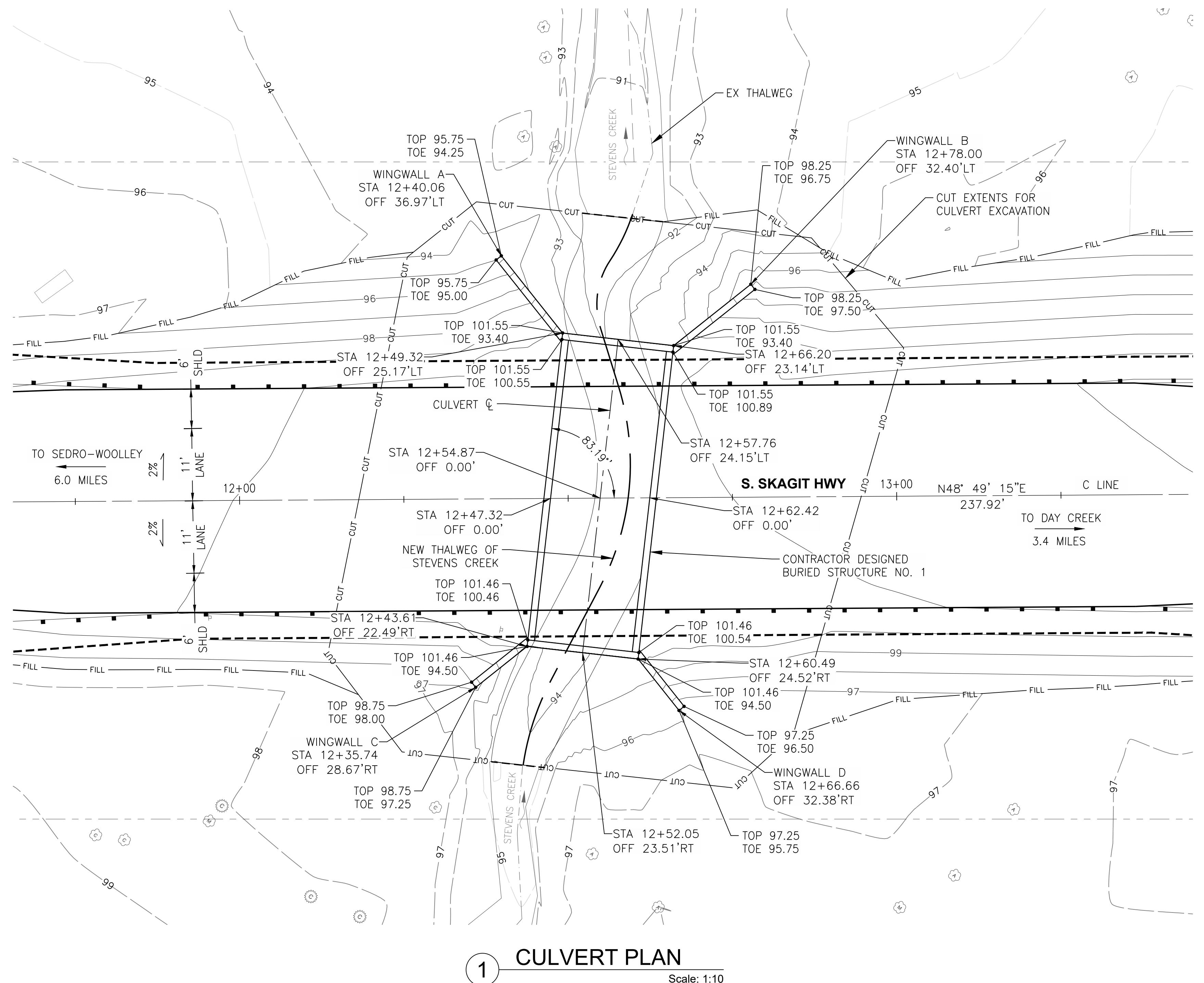
PROJECT NO.: ES07000-15		
FED AID NO.: NA	DRAWN BY: BL	APPROVED BY: SJK
DESIGNED BY: BL	CHECKED BY: LS	
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.		

STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)		
DT01ES07000-15 STREAM DETAILS	1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY	SHEET 12 OF 20



SECTION 34, T. 35 N., R. 5E., W.M.
SKAGIT COUNTY, WA

0 10 20
SCALE IN FEET



NOTES:

1. TOE ELEVATIONS ARE THE FINISHED GRADES AT FACE OF WALLS.

CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1:
PRECAST CONCRETE REINFORCED SPLIT BOX CULVERT

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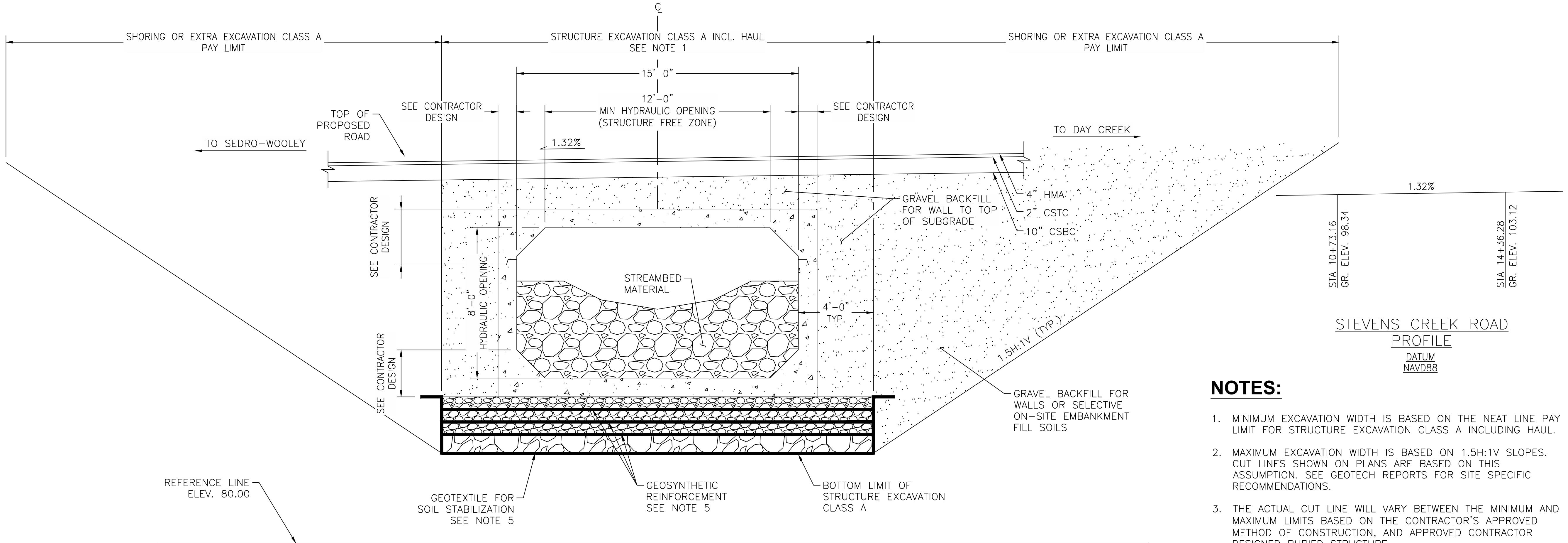
Skagit County	
PUBLIC WORKS	
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NO.	REVISI ONS
DATE	

RONALD L. SMITH
PROJECT ENGINEER
S. Skagit Hwy
12/1/2025

PROJECT NO.: ES07000-15	FED AID NO.: NA	DRAWN BY: MH
DESIGNED BY: RS	CHECKED BY: HC	APPROVED BY: SJK
PROJECT LOCATED NEAR: SEDRO-WOOLLEY, WA		
SECTION 35, TOWNSHIP 35 N, RANGE 5E W.M.		

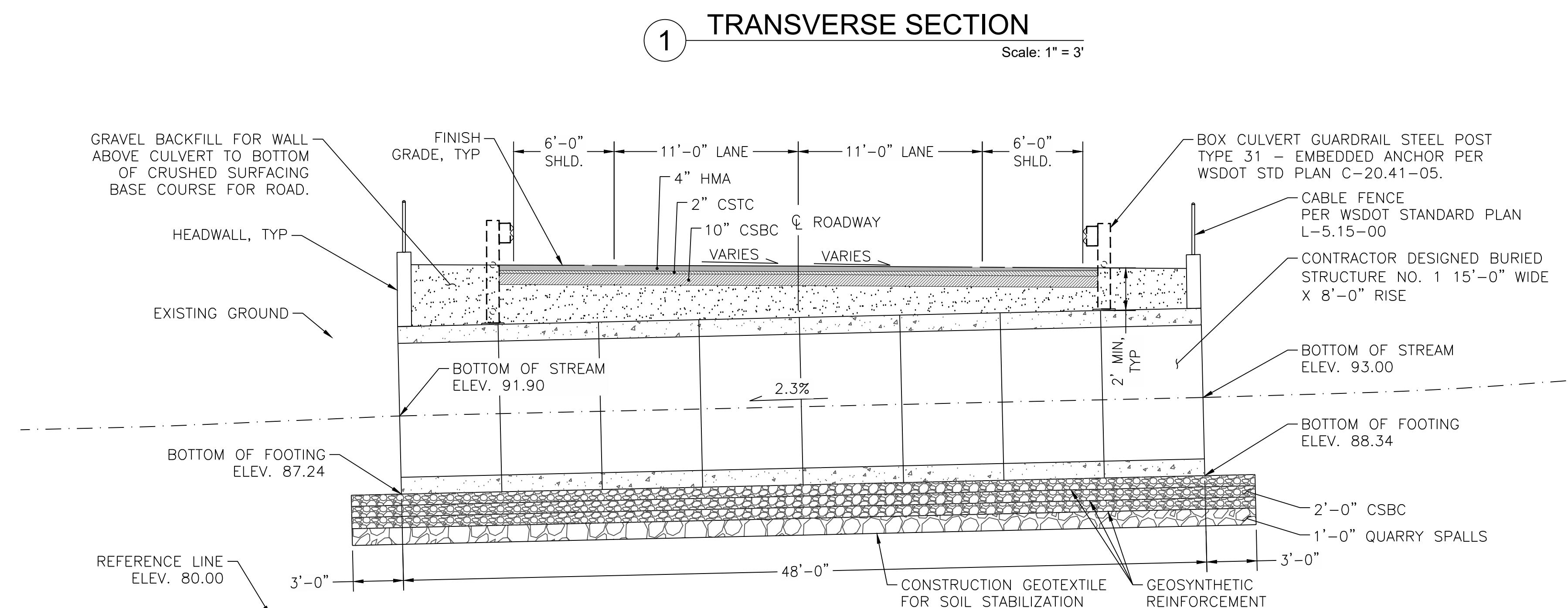
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	CU01ES07000-15 CULVERT PLAN
---	--------------------------------

1 INCH SCALE BAR
ADJUST SCALE ACCORDINGLY
SHEET
13 OF 20



NOTES:

- MINIMUM EXCAVATION WIDTH IS BASED ON THE NEAT LINE PAY LIMIT FOR STRUCTURE EXCAVATION CLASS A INCLUDING HAUL.
- MAXIMUM EXCAVATION WIDTH IS BASED ON 1.5H:1V SLOPES. CUT LINES SHOWN ON PLANS ARE BASED ON THIS ASSUMPTION. SEE GEOTECH REPORTS FOR SITE SPECIFIC RECOMMENDATIONS.
- THE ACTUAL CUT LINE WILL VARY BETWEEN THE MINIMUM AND MAXIMUM LIMITS BASED ON THE CONTRACTOR'S APPROVED METHOD OF CONSTRUCTION, AND APPROVED CONTRACTOR DESIGNED BURIED STRUCTURE.
- STRUCTURE EXCAVATION CLASS A, SHORING AND EXTRA EXCAVATION CLASS A, GRAVEL BACKFILL FOR WALLS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- PLACE AND COMPACT AT LEAST 12 INCHES OF ANGULAR QUARRY SPALLS ATOP THE GEOTEXTILE IN 6-INCH LIFTS WITH EXCAVATOR BUCKET (TAMPING). PLACE AND COMPACT A TOTAL OF 2 FEET OF CRUSHED SURFACING BASE COURSE (CSBC) WITH INTERBEDDED HORIZONTAL GEOSYNTHETIC REINFORCEMENT ATOP THE QUARRY SPALLS. AT LEAST THREE LAYERS OF INTERBEDDED GEOSYNTHETIC REINFORCEMENT CONSISTING OF A TRIAXIAL-PATTERN GEOSYNTHETIC GRID, SUCH AS H-SERIES H.5.5 GEORIGRID BY TENSAR, OR EQUIVALENT SHOULD BE PLACED; ONE AT THE QUARRY SPALLS-CSBC INTERFACE; A SECOND 8 INCHES ABOVE THE INTERFACE, AND THE THIRD 16 INCHES ABOVE THE INTERFACE. CSBC AND REINFORCEMENT SHOULD BE PLACED IN RELATIVELY DRY CONDITIONS. CSBC SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY.
- BACKFILL MATERIAL SHALL CONSIST OF GRAVEL BACKFILL FOR WALLS OR SELECTIVE ON-SITE EXCAVATION FILL SOILS, THE SELECTIVE ON-SITE EXCAVATION FILL SOILS ARE SAND AND GRAVEL WITH VARYING AMOUNTS OF FINES THAT ARE LOCATED IN THE EMBANKMENT FILL EXTENDING TO 10 FEET BELOW GROUND SURFACE. SEE DETAIL 2 ON SHEET 17 FOR LIMITS OF GRAVEL BACKFILL FOR WALLS.
- FOR WING WALL DETAILS SEE SHEET 15 AND 16.
- REFERENCE SHEETS 11 AND 12 FOR STREAM DESIGN AND DETAILS.



LONGITUDINAL SECTION

Scale: 1" = 5'

(WING WALLS NOT SHOWN FOR CLARITY)

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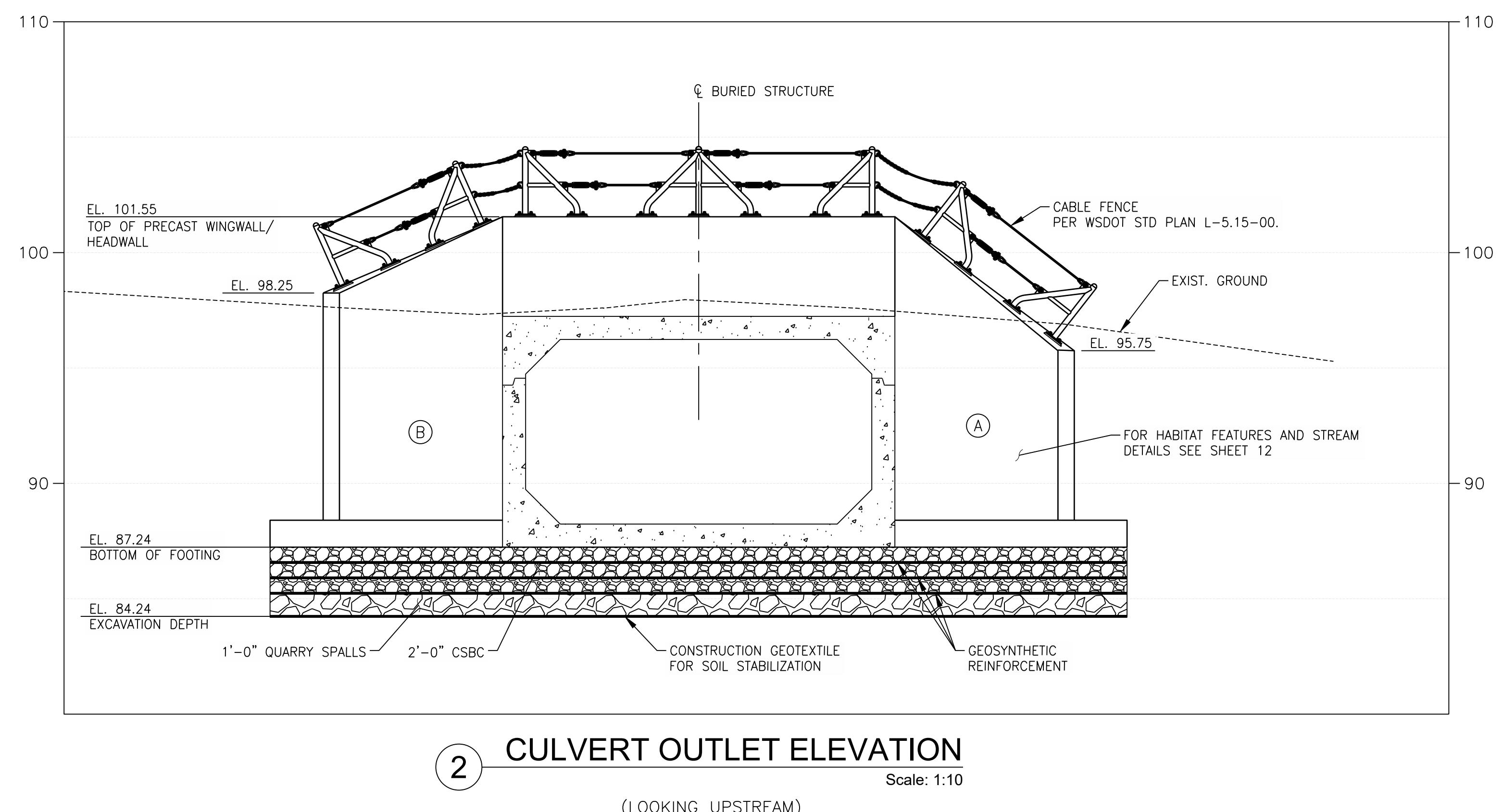
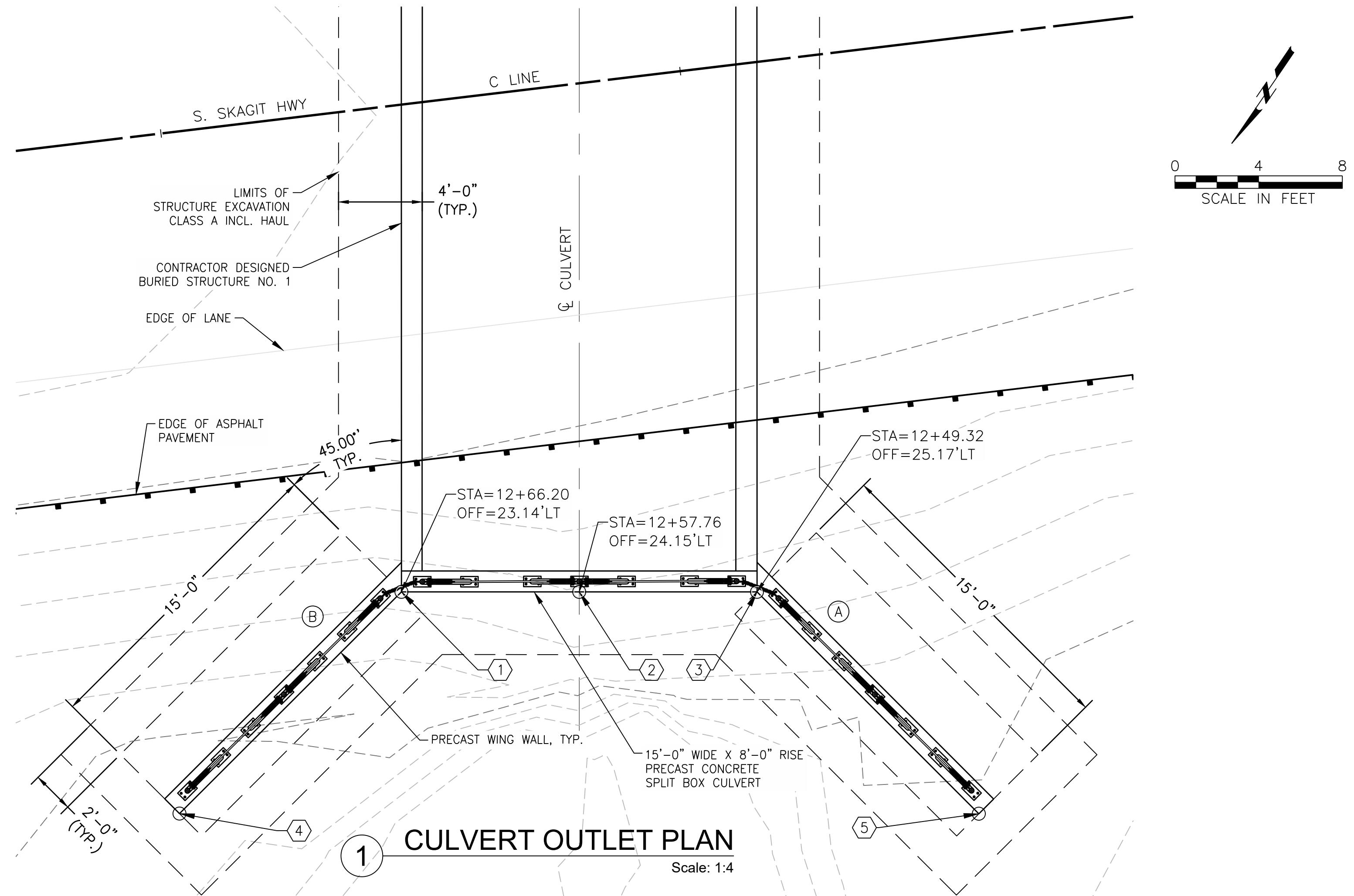
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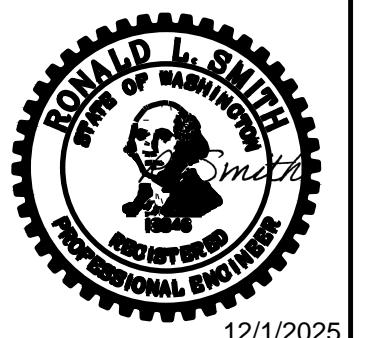
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STATION	GRADE ELEV.	STATION	GRADE ELEV.
STA 10+73.16	GR. ELEV. 98.34	STA 14+35.28	GR. ELEV. 103.12
NO. REVISIONS	DATE		
ENGINEER OF RECORD			
RONALD L. SMITH PROJECT MANAGER 12/1/2025			
PROJECT NO.: ES07000-15	DRAWN BY: MH APPROVED BY: SJK		
FED AID NO.: NA	DESIGNED BY: RS	CHECKED BY: HC	PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 56 W.

CULVERT STATION / OFFSET DIMENSIONS	
POINT	STATION / OFFSET
①	C 12+66.20 (23.14' LT)
②	C 12+57.76 (24.15' LT)
③	C 12+49.32 (25.17' LT)
④	C 12+78.00 (32.40' LT)
⑤	C 12+40.06 (36.97' LT)

NOTES:

1. ELEVATIONS IN UNITS OF FEET.
2. CONCRETE WINGWALLS ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL REFER TO MANUFACTURER'S DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION.
3. HEADWALL AND WINGWALLS ARE INCLUDED IN LUMP SUM BID ITEM "CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1".
4. CABLE FENCE TO BE CONSTRUCTED ON TOP OF WINGWALLS AND HEADWALLS.
5. SEE SHEET 17 FOR DETAILS.



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NO. REVISIONS	DATE
ENGINEER OF RECORD	
 RONALD L. SMITH P.E. OF WASHINGTON CONTRACTOR 12/1/2025	
PROJECT NO.: ES07000-15	FED AID NO.: NA
DESIGNED BY: RS	DRAWN BY: MH
CHECKED BY: HC	APPROVED BY: SJK
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.	
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	
WL01ES07000-15 WING WALL DETAILS (SHEET 1 OF 3)	1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY
15 OF 20	

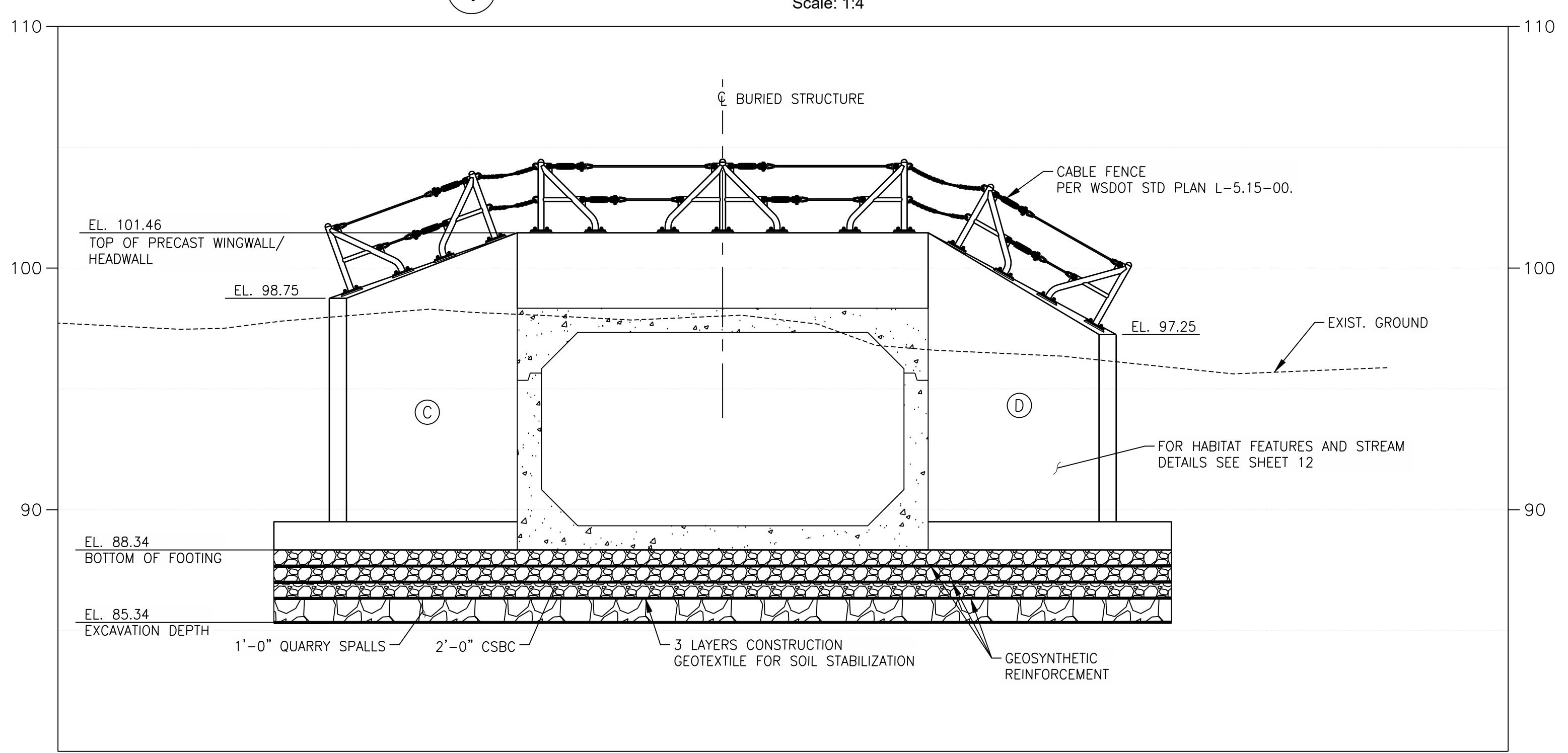
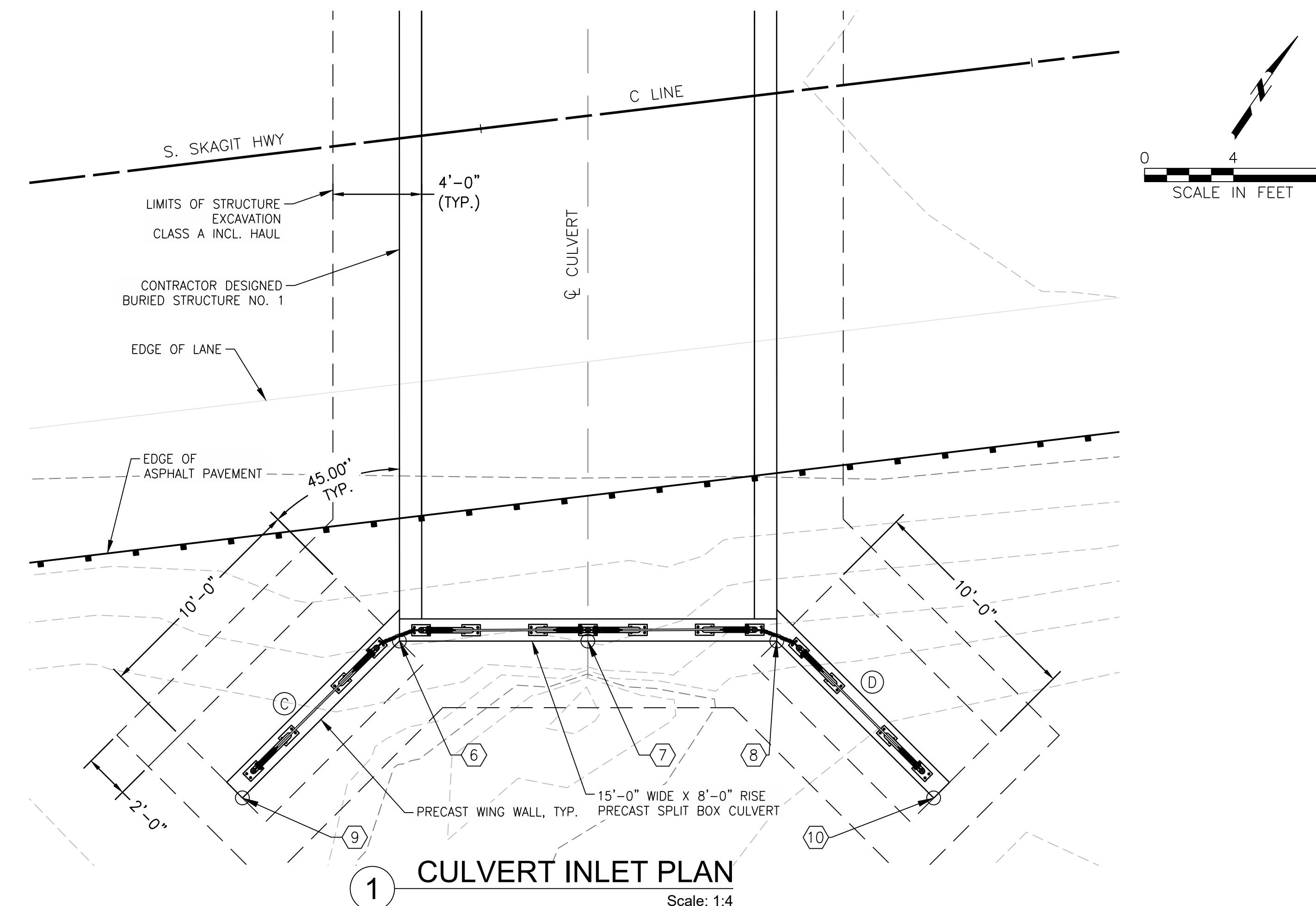
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CULVERT STATION / OFFSET DIMENSIONS	
POINT	STATION / OFFSET
6	C 12+43.61 (22.49' RT)
7	C 12+52.05 (23.51' RT)
8	C 12+60.49 (24.52' RT)
9	C 12+35.74 (28.67' RT)
10	C 12+66.66 (32.38' RT)

NOTES:

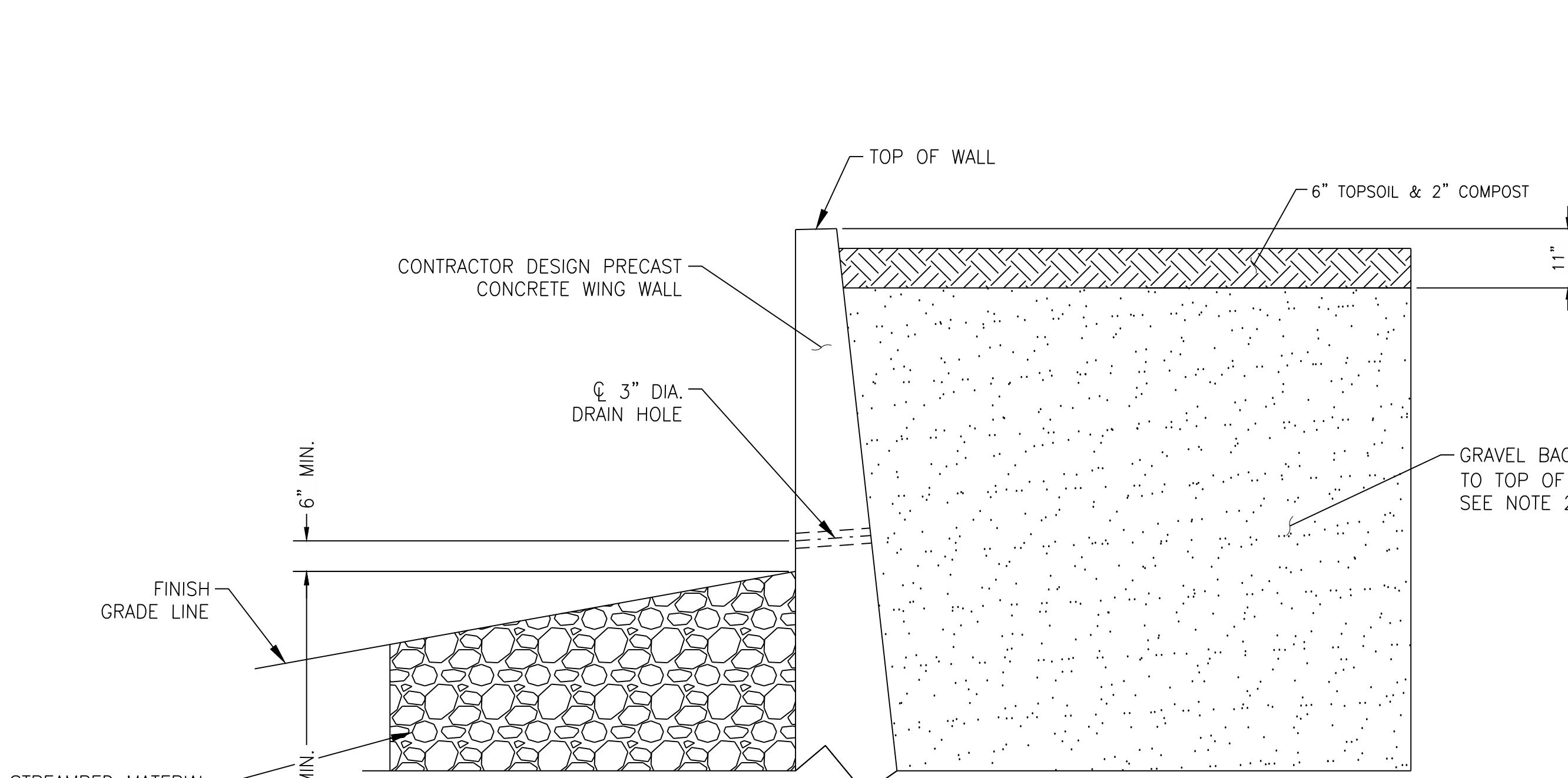
1. ELEVATIONS IN UNITS OF FEET.
2. CONCRETE WINGWALLS ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL REFER TO MANUFACTURER'S DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION.
3. HEADWALL AND WINGWALLS ARE INCLUDED IN LUMP SUM BID ITEM "CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1".
4. CABLE FENCE TO BE CONSTRUCTED ON TOP OF WINGWALLS AND HEADWALLS.
5. SEE SHEET 17 FOR DETAILS.



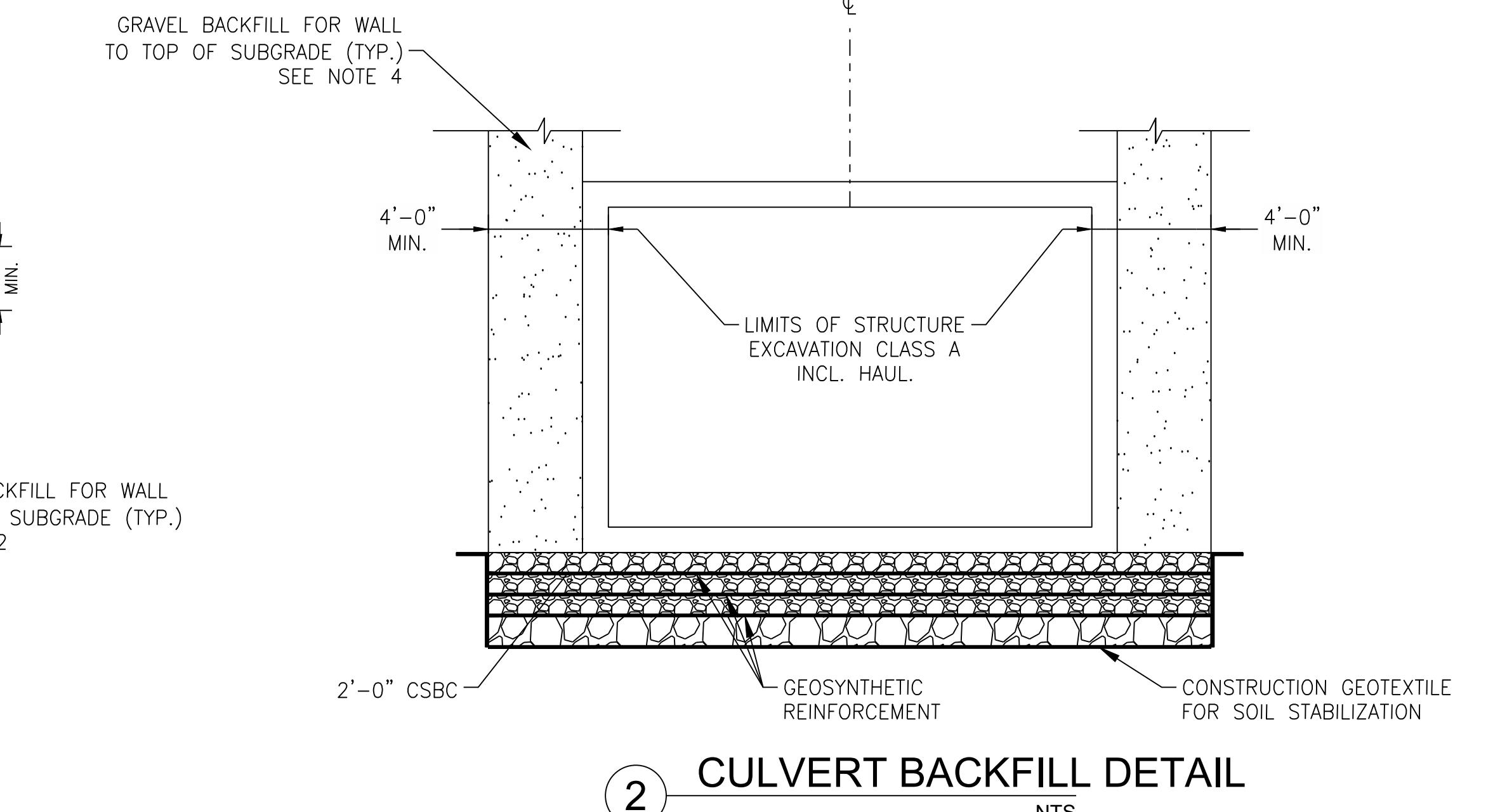
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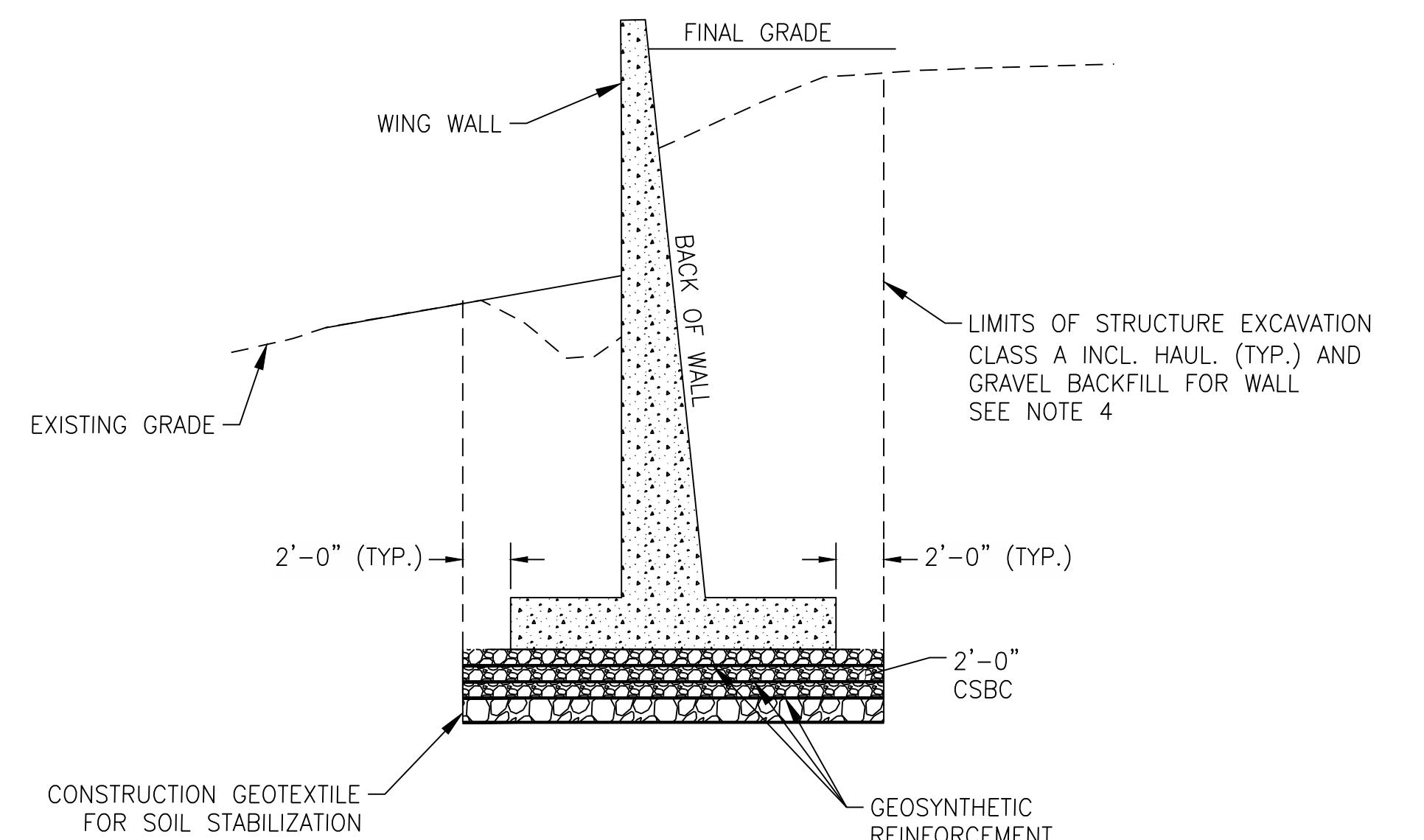
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REVISIONS	DATE
RONALD L. SMITH PROJECT ENGINEER WSDOT 12/1/2025	
PROJECT NO.: ES07000-15	FED AID NO.: NA
DESIGNED BY: RS	DRAWN BY: MH
CHECKED BY: HC	APPROVED BY: SJK
PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 56 W.	
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)	W01ES07000-15 WING WALL DETAILS (SHEET 2 OF 3)
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY	
SHEET 16 OF 20	



① RETAINING WING WALL BACKFILL DETAIL (TYP.) NTS



② CULVERT BACKFILL DETAIL NTS



③ RETAINING WING WALL GRADING DETAIL (TYP.) NTS

NOTES:

1. ALL DISTANCES MEASURED ALONG TOP OF WALL.
2. BACKFILL MATERIAL SHALL CONSIST OF GRAVEL BACKFILL FOR WALLS UNLESS OTHERWISE NOTED.
3. SEE SHEETS 15 AND 16 FOR TOP OF WALL ELEVATIONS AND GEOTECHNICAL INFORMATION.
4. LOCATE TWO DRAIN HOLES BELOW THE FINISHED GROUND LINE AND TWO DRAIN HOLES ABOVE THE FINISHED GROUND LINE AS SHOWN IN THE WING WALL BACKFILL DETAIL. EACH DRAIN HOLE SHALL BE LOCATED 2 FT HORIZONTALLY FROM EITHER END OF THE WING WALL. COVER OUTLET AND INLET OF DRAIN HOLES WITH GEOTEXTILE PER STANDARD SPEC 6-02.3(22).
5. PLACE CABLE FENCE ALONG TOP OF HEADWALLS AND WING WALLS.



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12/1/2025

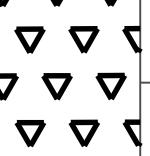
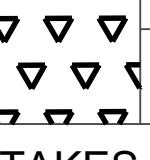
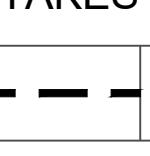
PROJECT NO.: ES07000-15
FED. AID NO.: NA
DRAWN BY: MH
DESIGNED BY: RS
CHECKED BY: HC
APPROVED BY: SJK
PROJECT LOCATED NEAR:
SEDRO-WOOLEY, WA
SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.

STEVENS CREEK FISH PASSAGE
IMPROVEMENT PROJECT
(ES07000-15)
W01ES07000-15
WING WALL DETAILS (SHEET 3 OF 3)

1 INCH SCALE BAR
 ADJUST SCALE ACCORDINGLY

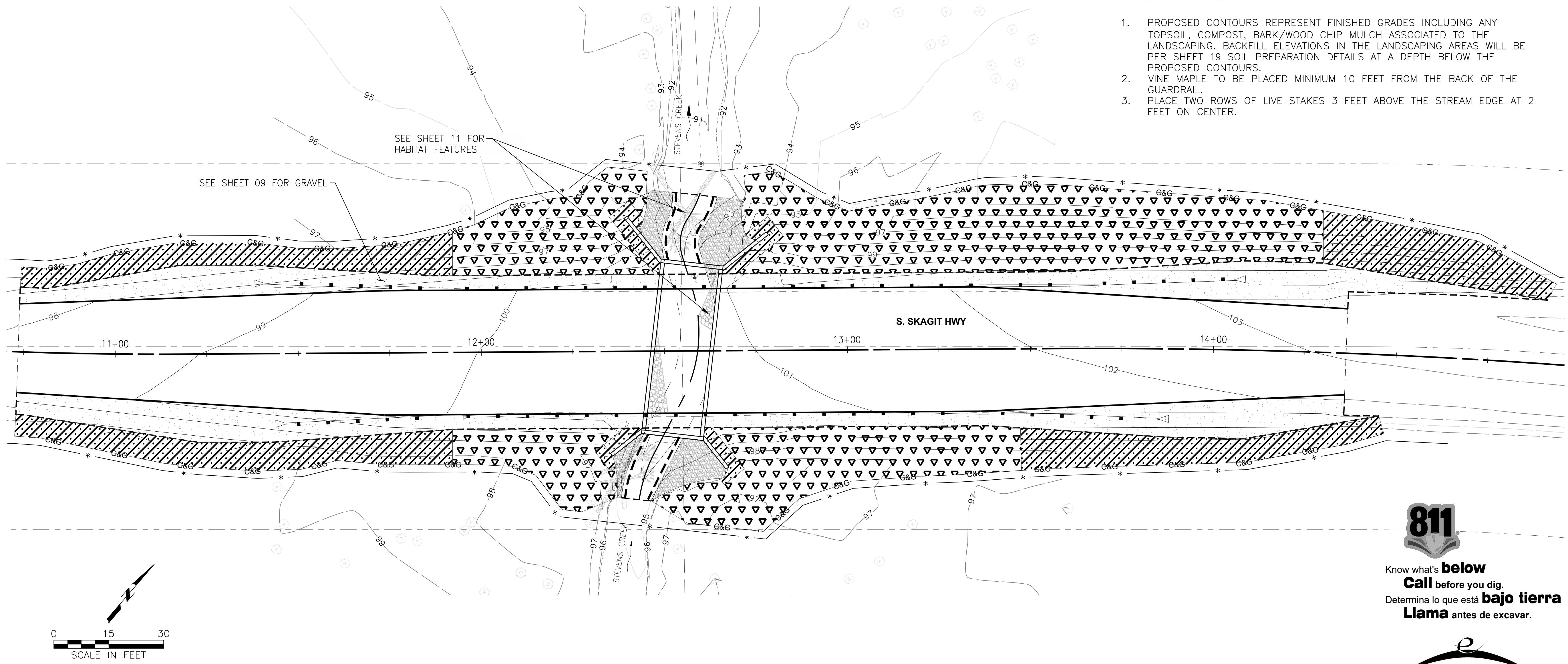
SHEET
17 OF 20

**SECTION 34, T. 35 N., R. 5E., W.M.
SKAGIT COUNTY, WA**

PLANT LIST		
SYMBOL	ITEM	PERCENTAGE
ZONE A (6,455 SF)		
	VINE MAPLE	30%
	RED-OSIER DOGWOOD	10%
	THIMBLEBERRY	10%
	SALMONBERRY	30%
	SNOWBERRY	20%
LIVE STAKES (76 LF), 2 ROWS AT 2' O.C.		
	SITKA WILLOW	
EROSION CONTROL SEED MIX WITH POLLINATORS ZONE (3,440 SF)		
		

GENERAL NOTES

1. PROPOSED CONTOURS REPRESENT FINISHED GRADES INCLUDING ANY TOPSOIL, COMPOST, BARK/WOOD CHIP MULCH ASSOCIATED TO THE LANDSCAPING. BACKFILL ELEVATIONS IN THE LANDSCAPING AREAS WILL BE PER SHEET 19 SOIL PREPARATION DETAILS AT A DEPTH BELOW THE PROPOSED CONTOURS.
2. VINE MAPLE TO BE PLACED MINIMUM 10 FEET FROM THE BACK OF THE GUARDRAIL.
3. PLACE TWO ROWS OF LIVE STAKES 3 FEET ABOVE THE STREAM EDGE AT 2 FEET ON CENTER.

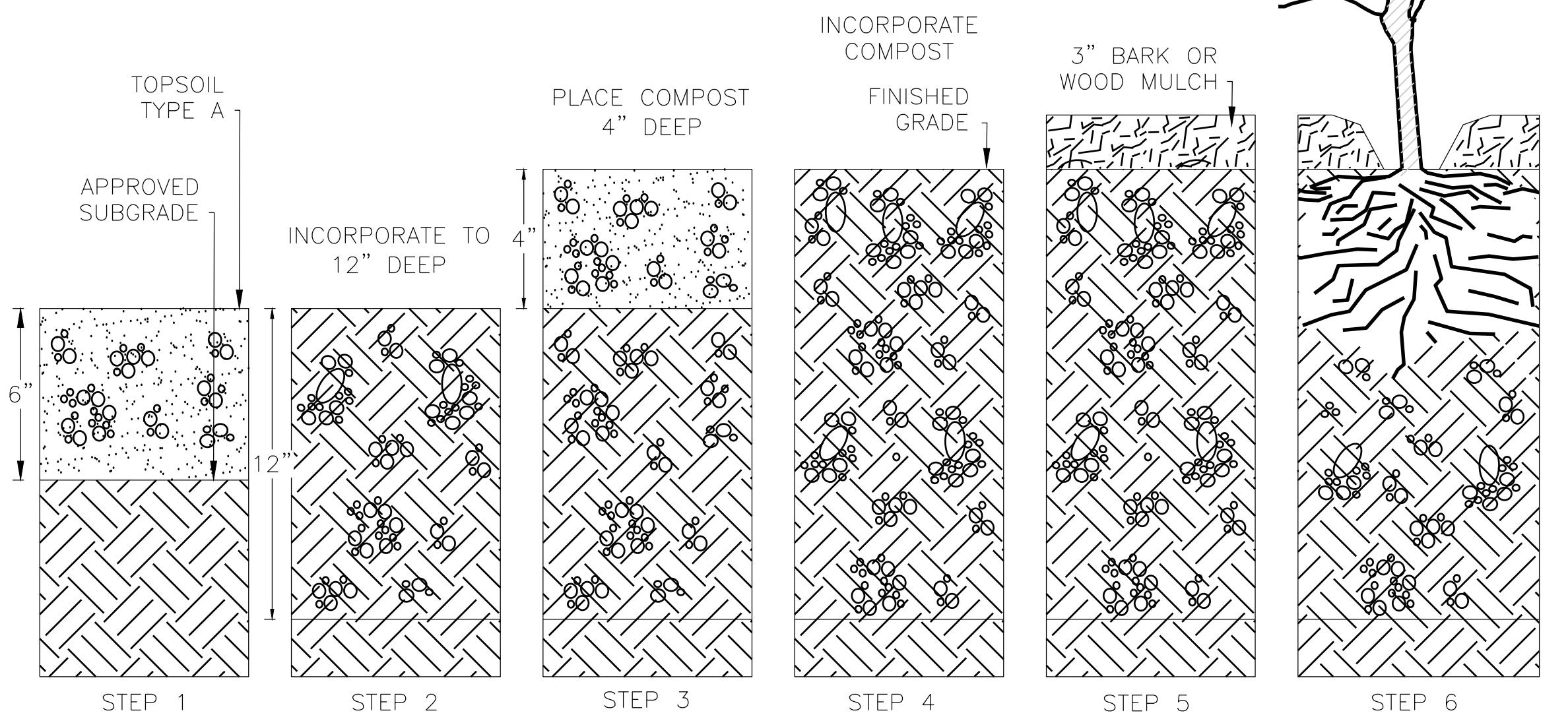


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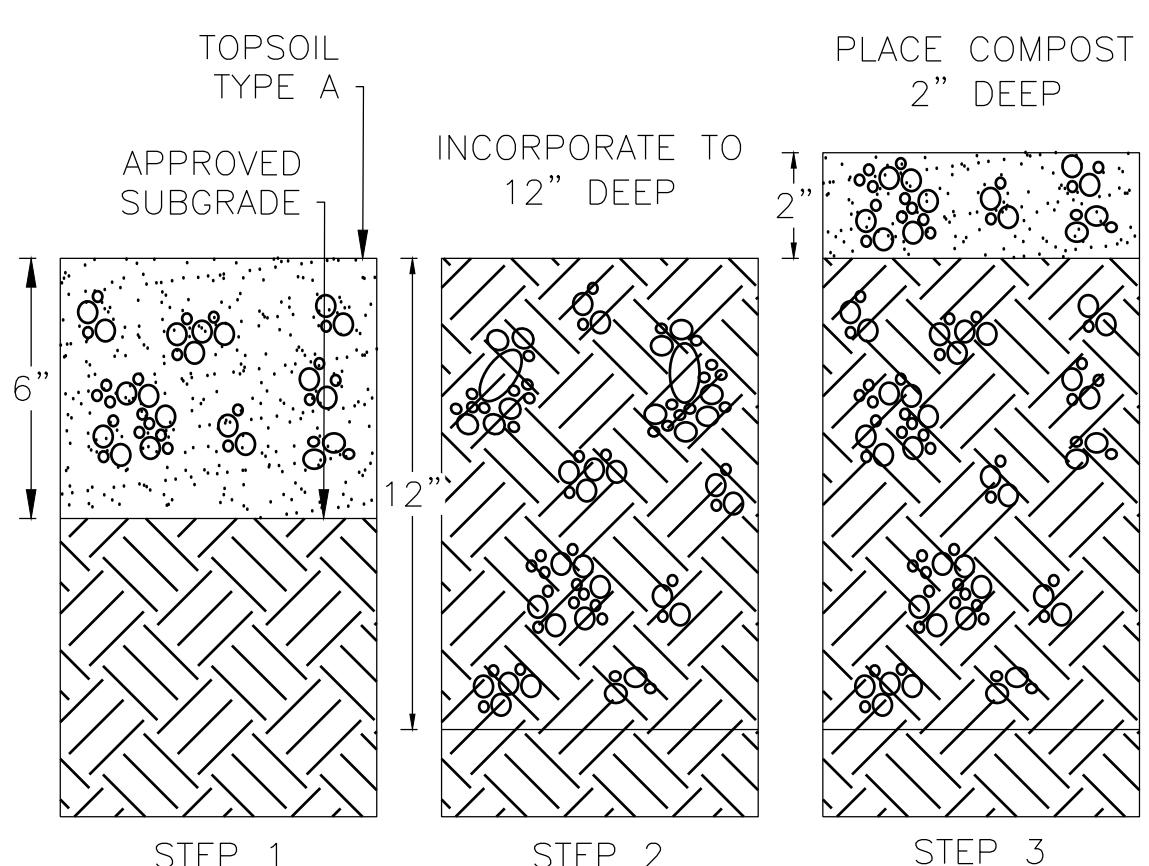
<p>STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)</p>		PROJECT NO.: ES07000-15	COUNTY ENGINEER	ENGINEER OF RECORD
		FED. AID NO.: N/A		
		DESIGNED BY: JA	DRAWN BY: JA	
		CHECKED BY: JC	APPROVED BY: SJK	
		<p>PROJECT LOCATED NEAR: SEDRO-WOOLEY, WA SECTION 35, TOWNSHIP 35 N, RANGE 5E W.M.</p>		
<p>LS01IES07000-15 RESTORATION PLANTING PLAN</p>				
<p>1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY</p>				
<p>SHEET 18 OF 25</p>				

PLANTING AREA SOIL PREPARATION – SEQUENCE OF WORK:
 STEP 1: PLACE 6 INCHES OF TOPSOIL TYPE A OVER THE APPROVED SUBGRADE
 STEP 2: INCORPORATE 6 INCHES OF TOPSOIL INTO EXISTING SUBGRADE TO A DEPTH OF 12 INCHES
 STEP 3: PLACE 4 INCHES DEPTH OF COMPOST AT ALL PLANTING AREAS.
 STEP 4: INCORPORATE THE 4 INCHES COMPOST INTO EXISTING SUBGRADE.
 STEP 5: PLACE 3 INCHES OF BARK OR WOOD MULCH OVER ENTIRE PLANTING AREA.
 STEP 6: INSTALL PLANT (SEE STANDARD PLAN H-10.10-00). FEATHER BARK OR WOOD CHIP MULCH TO TOP OF ROOT BALL CREATING A 3 INCHES WATER BASIN AROUND THE BASE OF THE PLANT. BARK OR WOOD CHIP MULCH SHALL NOT BE PLACED BELOW ORDINARY HIGH WATER ELEVATIONS.

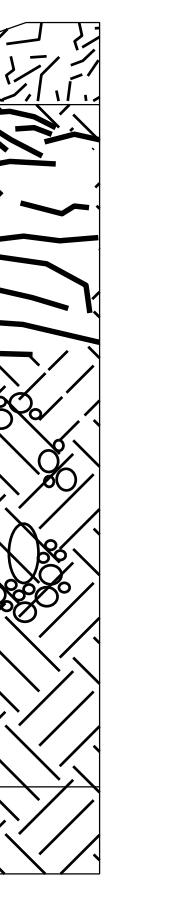


1 PLANTING AREA SOIL PREPARATION

PLANTING AREA SOIL PREPARATION – SEQUENCE OF WORK:
 STEP 1: PLACE 6 INCHES OF TOPSOIL TYPE A OVER THE APPROVED SUBGRADE
 STEP 2: INCORPORATE 6 INCHES OF TOPSOIL INTO EXISTING SUBGRADE TO A DEPTH OF 12 INCHES
 STEP 3: PLACE 2 INCHES DEPTH OF COMPOST AT ALL PLANTING AREAS.



2 SEEDED AREA SOIL PREPARATION



Scale: NTS

Scale: NTS

PLANT MATERIAL LIST

SYMBOL	ITEM	SPACING	PERCENTAGE	ROOT CONDITION	QUANTITY
ZONE A					
▼▼▼▼	ACER CIRCINATUM/VINE MAPLE	6' O.C.	30%	NO. 1 CONT.	62
▼▼▼▼	CORNUS SERICEA/RED-OSIER DOGWOOD	6' O.C.	10%	NO. 1 CONT.	21
▼▼▼▼	RUBUS PARVIFLORUS/THIMBLEBERRY	6' O.C.	10%	NO. 1 CONT.	21
▼▼▼▼	RUBUS SPECTABILIS/SALMONBERRY	6' O.C.	30%	NO. 1 CONT.	62
▼▼▼▼	SYMPHORICARPOS ALBUS/SNOWBERRY	6' O.C.	20%	NO. 1 CONT.	41
LIVE STAKES					
— — — —	SITKA WILLOW	2' O.C.	2 ROWS	LIVE STAKES	76 LF
■■■■■■	EROSION CONTROL SEED MIX WITH POLLINATORS				3,440 SF

GENERAL NOTES:

1. LIMIT OF WORK TO CLEARING AND GRUBBING LINE. CLEAR AND GRUB ALL INVASIVE SPECIES WITHIN PROJECT LIMIT.
2. ANY DISCREPANCIES WITH THE DRAWING OR SPECIFICATIONS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER/LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. LOCATE UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR TO REVIEW ALL UTILITY LOCATIONS IN FIELD AND SHALL NOTIFY THE ENGINEER IF CONFLICTS WITH PLANT MATERIAL LOCATION EXIST.
4. ALL SEEDING AND PLANTING AREAS WITHIN THE PROJECT SITE SHALL BE WEED FREE PRIOR TO APPLICATION OF BARK MULCH AND TOPSOIL.
5. NEW PLANTING TO BE INSTALLED A MINIMUM OF TWO FEET FROM NEW OR EXISTING TREES.
6. NEW TREES IN PROJECT AREA SHALL HAVE A SETBACK OF 15 FEET FROM ROADWAY EDGE OR GUARDRAIL AND 15 FEET FROM BURIED UTILITIES.
7. PLANT SHRUBS IN GROUPS OF 3-5 BY SPECIES. RANDOMLY MIX SPECIES GROUPS WITHIN PLANTING AREAS.
8. PLACE ALL ROOTBALLS SO TOPS ARE LEVEL WITH FINISH GRADE.
9. PLANTING PITS WILL BE BACKFILLED WITH TOPSOIL THAT IS FREE OF ROCKS OVER 3/4 INCHES, LUMPS, AND OTHER FOREIGN MATERIALS. BACKFILLING AROUND TRUNKS OR STEMS IS NOT PERMITTED.
10. THE BACKFILL MATERIAL AND ROOTBALL SHALL BE THOROUGHLY WATERED ON THE SAME DAY THAT PLANTING OCCURS REGARDLESS OF SEASON.
11. POSITION ROOT CROWN AT SLOPE ELEVATION. ENSURE PLANT ROOTS ARE FULLY COVERED AND PLANT IS VERTICAL.
12. PLANT MATERIAL MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER/LANDSCAPE ARCHITECT.
13. ALL PLANTING AREAS SHALL RECEIVE A TWO-INCH UNIFORM DEPTH OF BARK OR WOOD CHIP MULCH.
14. POSITION ROOT CROWN AT SLOPE ELEVATION. ENSURE PLANT ROOTS ARE FULLY COVERED AND PLANT IS VERTICAL.
15. DURING ESTABLISHMENT, AT A MINIMUM 2 INCHES OF WATER, INCLUDING PRECIPITATION, SHALL BE PROVIDED TO PLANTING AREAS EVERY 2 WEEKS FROM JUNE 1 THROUGH SEPTEMBER 15. ENSURE ADEQUATE WATERING FOR 100% OF THE PLANTS TO BE ALIVE, HEALTHY, ESTABLISHMENT AND VIGOROUSLY GROWING.
16. WATERING PLAN SHALL BE DEVELOPED BY LANDSCAPE CONTRACTOR AND REVIEWED BY ENGINEER/LANDSCAPE ARCHITECT.
17. IF CONTRACTOR DISTURBS AN AREA OUTSIDE THE PROJECT LIMITS, THEY SHALL COORDINATE WITH THE ENGINEER/LANDSCAPE ARCHITECT TO RESTORE THE AREA IMPACTED.
18. DURING CONSTRUCTION THE CONTRACTOR WILL ATTEMPT TO REDUCE IMPACTS WHERE FEASIBLE. IF IMPACTS EXTEND BEYOND WHAT IS SHOWN IN LANDSCAPE PLANS, ADDITIONAL PLANTINGS WILL BE INCORPORATED IN THOSE LOCATIONS (WITH APPROPRIATE PLANTINGS AND SPACING) DURING CONSTRUCTION PHASE.
19. ALL PLANT MATERIAL SHALL MEET THE MINIMUM SIZE, CONDITION AND HEALTH FOR THE CONTAINER SIZE LISTED IN COMPLIANCE WITH THE CURRENT VERSION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND WSDOT APPROVED.
20. IF STAKING IS REQUIRED CONTRACTOR TO GET APPROVAL FROM LANDSCAPE ARCHITECT.
21. WARRANTY AND ESTABLISHMENT PERIOD SHALL CONSIST OF PROVIDING ADEQUATE AND PROPER CARE FOR PLANT MATERIALS AND LANDSCAPE AREAS WITHIN THE CONTRACT LIMITS FOR ONE (1) YEAR (365 DAYS) PERIOD TO ENSURE HEALTHY, VIGOROUS GROWTH OF PLANTED MATERIAL. THE WARRANTY AND ESTABLISHMENT PERIOD SHALL BEGIN IMMEDIATELY UPON WRITTEN NOTIFICATION BY PROFESSIONAL OF RECORD OF THE ACCEPTANCE OF THE PLANTING MATERIALS.

SKAGIT COUNTY	
PUBLIC WORKS	
1800 CONTINENTAL PLACE	
MOUNT VERNON, WA 98273-5625	
(360) 416-1400	
NO. REVISIONS	DATE



COUNTY ENGINEER
JASMINE ARYANA
Landscape Architect
No. 0442 Exp. 6/5/2025
12/1/2025

PROJECT NO.: ES07000-15
FED. AID NO.: NA
DRAWN BY: JA
CHECKED BY: JC
APPROVED BY: SJK

PROJECT LOCATED NEAR:
SEDRO-WOOLEY, WA
SECTION 35, TOWNSHIP 35 N, RANGE 56 W.

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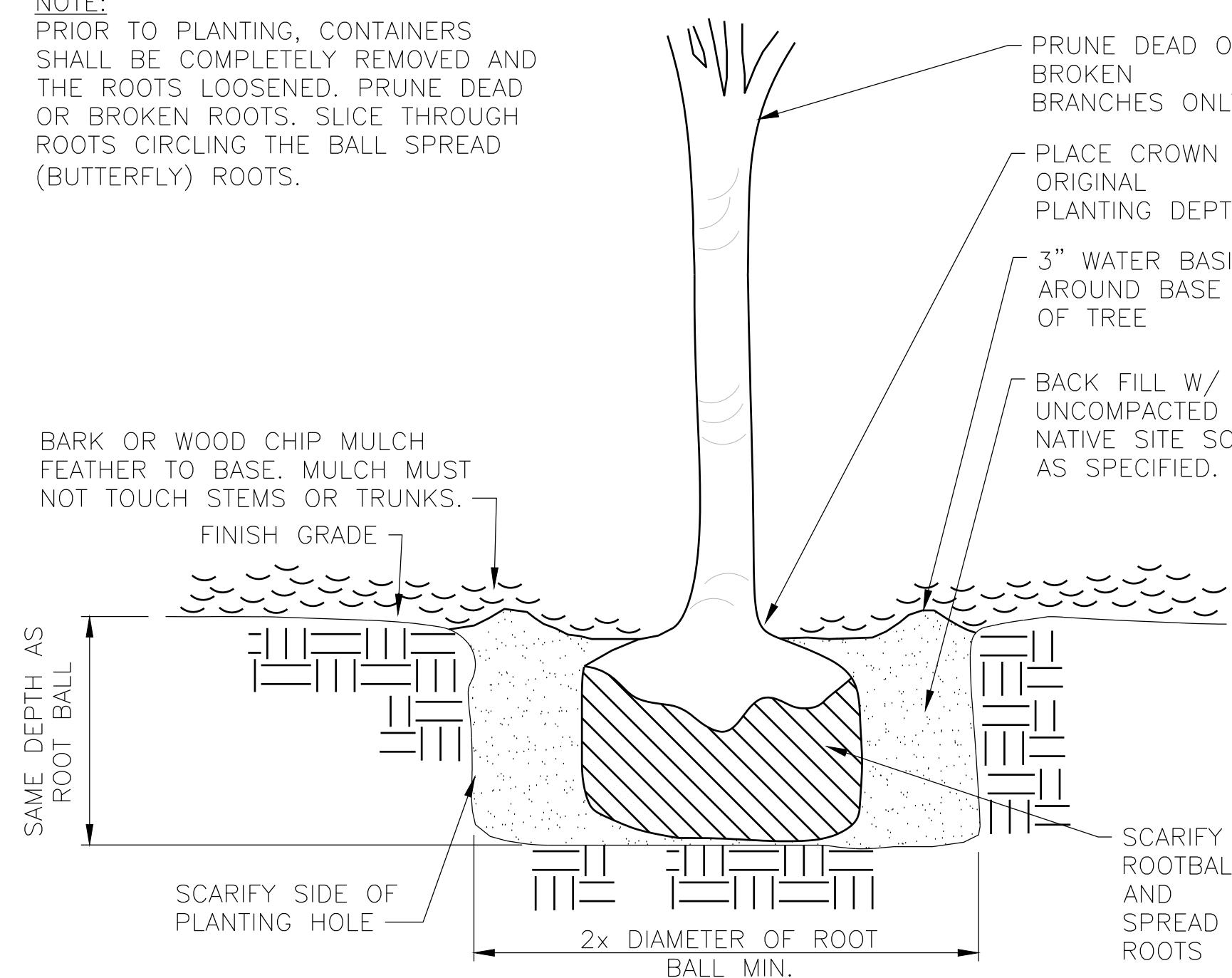
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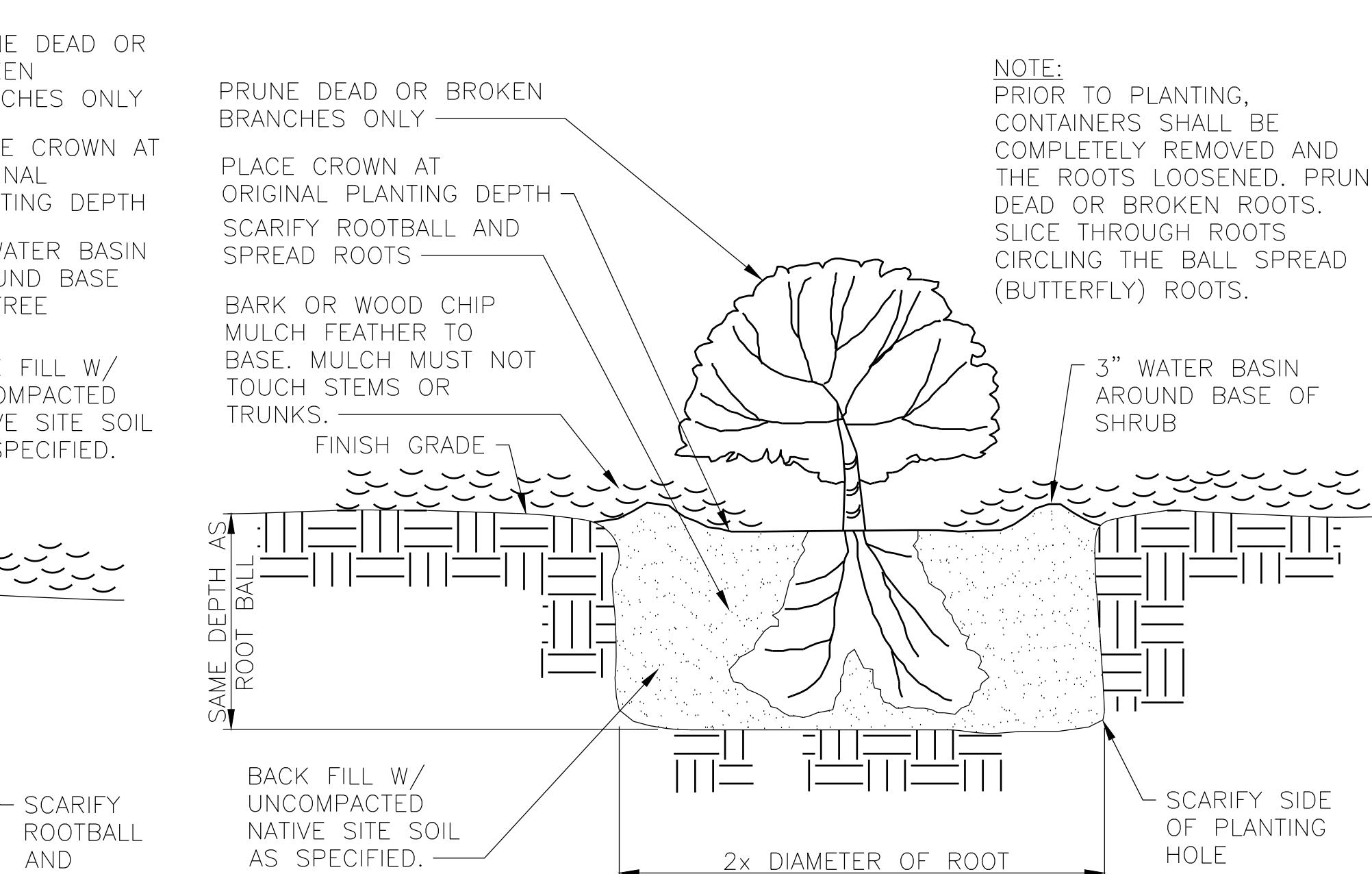
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PROJ. NO.: ES07000-15
FED. AID NO.: NA
DRAWN

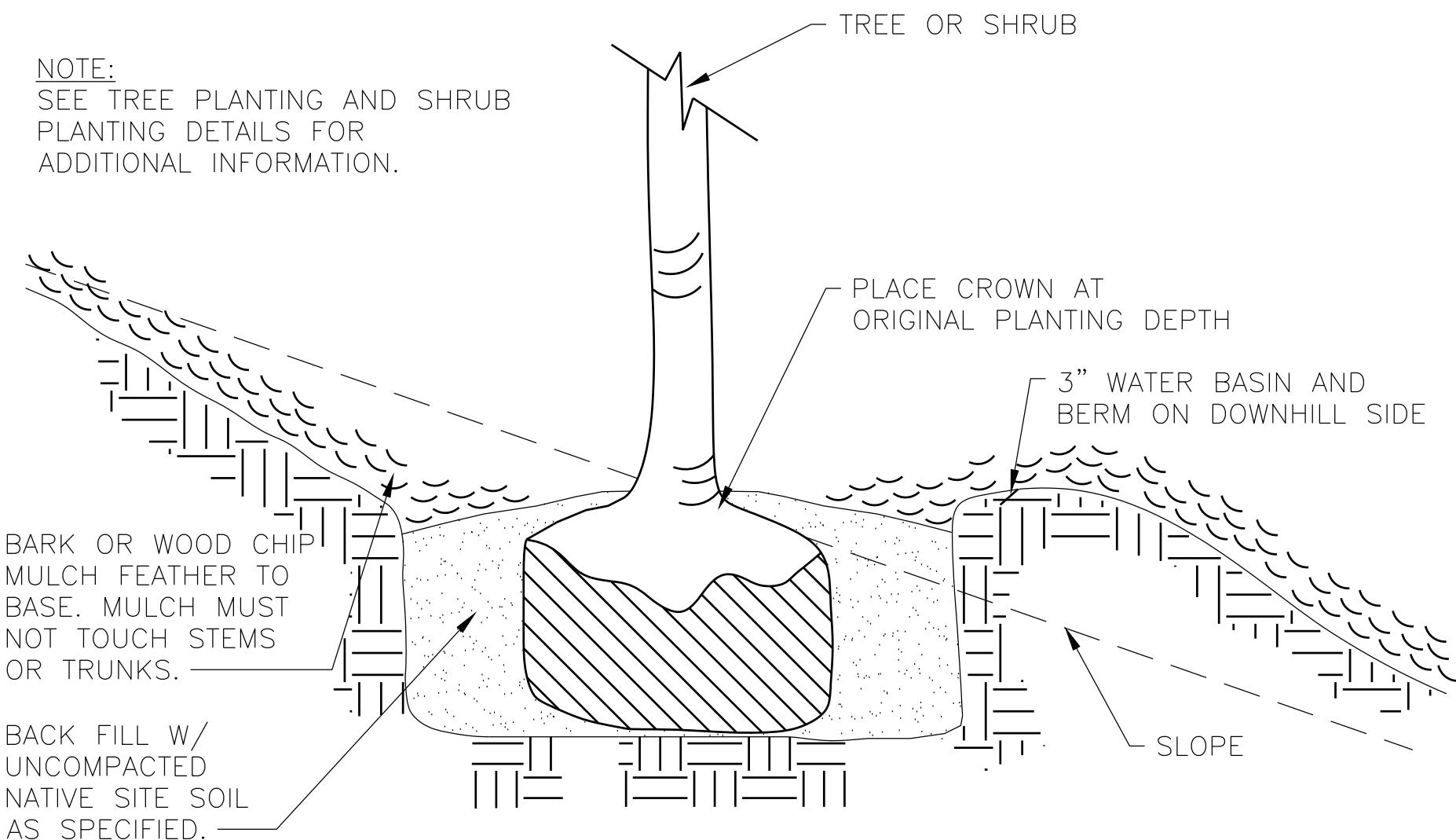
NOTE:
PRIOR TO PLANTING, CONTAINERS
SHALL BE COMPLETELY REMOVED AND
THE ROOTS LOOSEND. PRUNE DEAD
OR BROKEN ROOTS. SLICE THROUGH
ROOTS CIRLING THE BALL SPREAD
(BUTTERFLY) ROOTS.



1 DECIDUOUS TREE PLANTING



2 SHRUB PLANTING

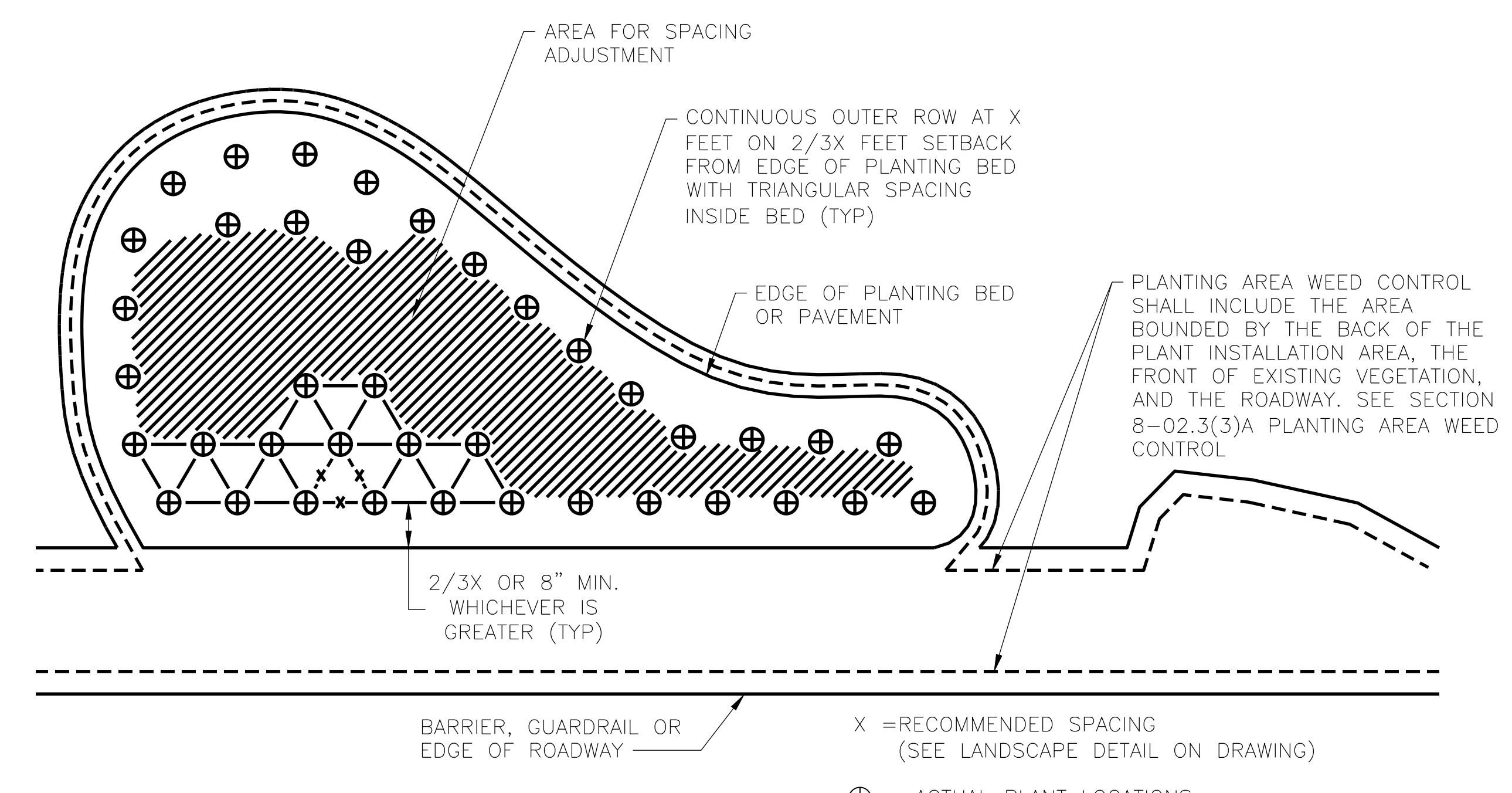


3 SLOPE TREE/SHRUB PLANTING

Scale: NTS

Scale: NTS

Scale: NTS



4 PLANTING AREA LAYOUT, SETBACK, AND WEED CONTROL

Scale: NTS

811
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REVISIONS	DATE	NO.	12/1/2025
			
PROJECT NO.: ES07000-15	COUNTY ENGINEER		
FED. AID NO.: NA	DRAWN BY: JA	APPROVED BY: SJK	12/1/2025
DESIGNED BY: JA	CHECKED BY: JC	PROJECT LOCATED NEAR:	SEDRO-WOOLEY, WA
LS01ES07000-15	SECTION 35, TOWNSHIP 35 N, RANGE 56 W.M.		
STEVENS CREEK FISH PASSAGE IMPROVEMENT PROJECT (ES07000-15)			
1 INCH SCALE BAR ADJUST SCALE ACCORDINGLY			
SHEET 20 OF 20			