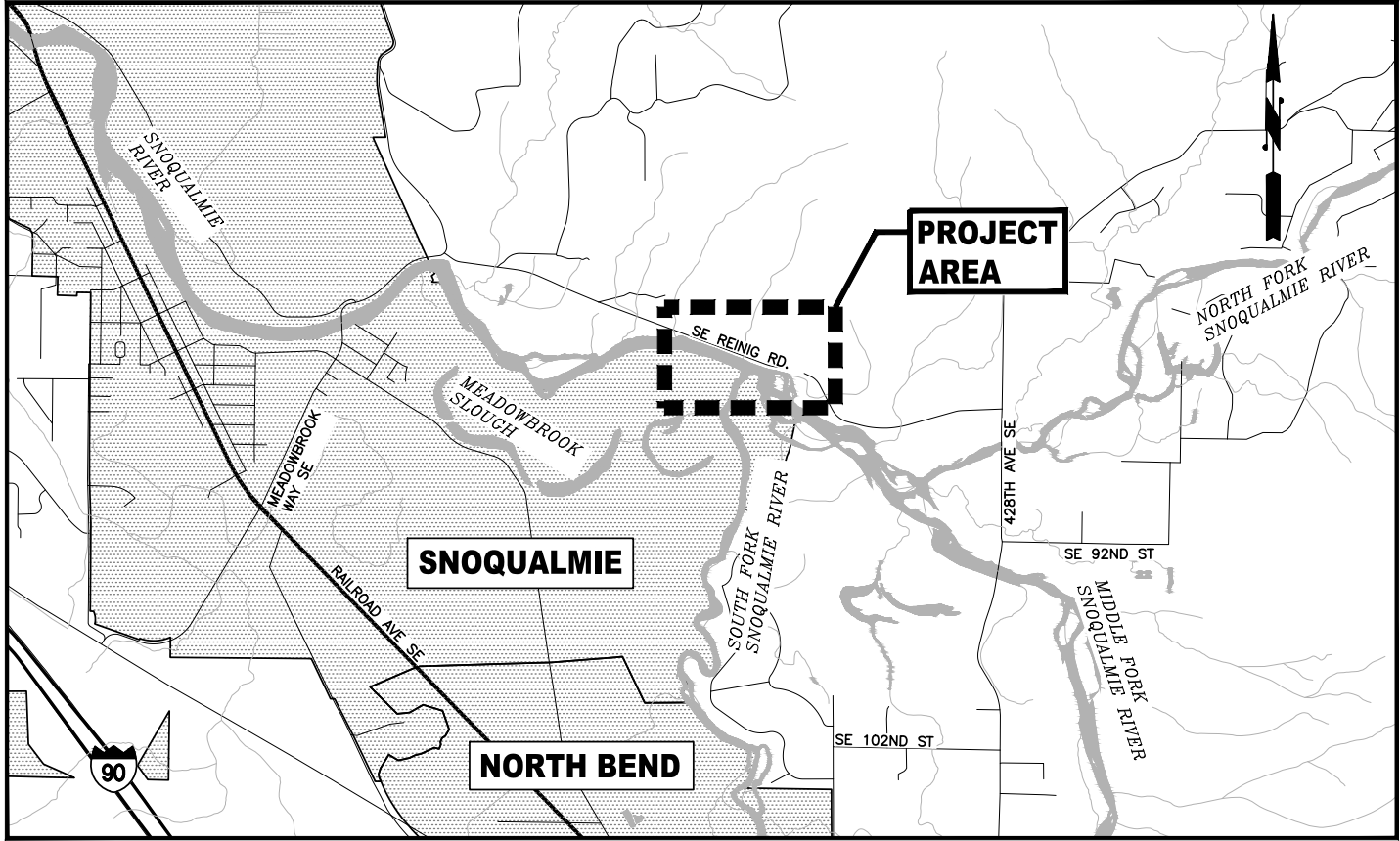


VICINITY MAP



REINIG ROAD REVETMENT REPAIR

SNOQUALMIE RIVER RM 41.8

47.525 N LAT / -121.786 W LONG

SHEET INDEX



SHEET DESCRIPTION

- 1 – COVER SHEET – VICINITY MAP & SHEET INDEX
- 2 – LEGEND AND ABBREVIATIONS
- 3 – DAMAGED AREAS
- 4 – EXISTING CONDITIONS AND TESC PLAN
- 5 – PROPOSED DESIGN PLAN
- 6 – CROSS SECTIONS (1)
- 7 – CROSS SECTIONS (2)
- 8 – CROSS SECTIONS (3)
- 9 – GRADING DETAILS
- 10 – ENGINEERED LOG JAM PLAN & SECTION
- 11 – ENGINEERED LOG JAM DETAILS
- 12 – PLANTING PLAN



Know what's below.
Call before you dig.

(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK: SURVEYED: PARAMETRIX SURVEY BASE MAP: KDB CHECKED: RWP	10/2017 10/2017 10/2017	NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019	PROJECT No. 1132628 CONTRACT No. --	 	King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section <i>Christie True, Director</i>	REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 COVER SHEET - VICINITY MAP & SHEET INDEX	SHEET 1 OF 12 SHEETS
						PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019					
						DESIGNED: MARK BEGGS, P.E.	02/2019					
						JESSY HARDY, E.I.T.	02/2019					
						DARIAN KIS-YOUNG, E.I.T.	02/2019					
		NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: KEVIN WARD	02/2019					

GENERAL NOTES:

1. BEFORE BEGINNING CONSTRUCTION VERIFY THAT EXISTING SITE CONDITIONS ARE AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
2. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
3. PROTECT, SUPPORT, OR MAINTAIN ALL UTILITIES WHICH ARE NOT ABANDONED OR REMOVED DURING CONSTRUCTION.
4. PROTECT NEARBY EXISTING UTILITIES, STRUCTURES, PAVEMENTS, AND FACILITIES.
5. A COPY OF THE CONTRACT DRAWINGS AND ANY REQUIRED PERMITS MUST BE ON SITE AT ALL TIMES DURING CONSTRUCTION.
6. IMMEDIATELY CONTACT THE PROJECT REPRESENTATIVE IF A UTILITY OR OTHER EXISTING CONDITION PRESENTS A CONFLICT OR OTHERWISE PREVENTS OR INTERFERES WITH COMPLETION OF THE WORK.
7. CLEAR AND GRUB ALL SHRUBS AND TREES NOTED TO BE REMOVED OR AS DIRECTED BY THE PROJECT REPRESENTATIVE. PROTECT AND PRESERVE ALL OTHER SHRUBS AND TREES UNLESS APPROVED BY PROJECT REPRESENTATIVE FOR REMOVAL.
8. PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, COUNTY, AND CITY PERMIT REQUIREMENTS.
9. ALL EQUIPMENT OPERATING IN AREAS OTHER THAN THE EXISTING ROAD AND GRAVEL SHOULDER SHALL USE ONLY BIODEGRADABLE VEGETABLE BASED HYDRAULIC FLUIDS OR APPROVED OTHER.

SOURCES OF INFORMATION:

LIDAR

KING COUNTY
2016

AERIAL IMAGERY

KING COUNTY
2017

ORDINARY HIGH WATER

HERRERA ENVIRONMENTAL CONSULTANTS
THE WATERSHED COMPANY
JANUARY 2019

TOPOGRAPHIC AND BATHYMETRIC SURVEY

PARAMETRIX
TOPOGRAPHIC SURVEY OCTOBER 2017
BATHYMETRIC SURVEY APRIL 2018

HORIZONTAL DATUM

THE HORIZONTAL DATUM FOR THIS SURVEY IS NORTH AMERICAN DATUM OF 1983 ADJUSTMENT 1991 WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE BASED ON GPS FIELD SURVEY TO WGS MONUMENT DESIGNATION "2954" WITH CONFIRMATION MEASUREMENT TO WGS MONUMENT DESIGNATION "2965".

POINT DESIGNATION 2954
NORTHING: 194,094.304
EASTING: 1,398,638.127

POINT DESIGNATION 2965
NORTHING: 193,183.267
EASTING: 1,398,456.426
VERTICAL DATUM

THE VERTICAL DATUM FOR THIS SURVEY IS NAVD 88 BASED ON GPS FIELD SURVEY TO WGS MONUMENT DESIGNATION "2954" WITH CONFIRMATION GPS FIELD MEASUREMENT TO WSDOT MONUMENT DESIGNATION "2965".

ELEV.= 416.18

EXISTING LINE TYPES:

	425	MAJOR 5' CONTOUR (EXISTING)
	422	MINOR 1' CONTOUR (EXISTING)
		PROPERTY LINES
	R/W	RIGHT-OF-WAY
		EDGE OF ASPHALT/ PAVEMENT
		EDGE OF WATER (DATE)
	OHW	ORDINARY HIGH WATER
		EXISTING RIP-RAP
		DITCH FLOWLINE
	OH-P	OVERHEAD POWER LINE
	W	WATERLINE
	W?	APPROX ABANDONED WATERLINE
		PAINTED ROAD LINES
		EDGE OF VEGETATED AREA
	SURVEY	SURVEY LIMIT LINE
		STORM DRAIN PIPE
	LWL	LOW WATER LINE

DESIGN LINETYPES:

	10	MAJOR 5' CONTOUR
	12	MINOR 1' CONTOUR
		WORK LIMITS
	C&G	CLEAR AND GRUB LINE
		STRAW WATTLE
	SF	SILT FENCE
	HVF	HIGH VISIBILITY FENCE
	TC	TURBIDITY CURTAIN
	CD	BULK BAG COFFER DAM

LEGEND:

	POWER POLE WITH ANCHOR
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING HYDRANT
	SURVEY CONTROL POINT
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING WOOD POST
	STABILIZED CONSTRUCTION ENTRANCE
	STAGING/STOCKPILE AREA
	SPLASH PAD
	8' ROAD SHOULDER
	BOULDER CASCADE CHANNEL
	GEOGRID LIFTS
	ENGINEERED LOG JAM
	SALVAGED TREE IN WATER
	REMOVE EXISTING TREE
	FLAGGER

ABBREVIATIONS:

APPROX	APPROXIMATELY
BMP	BEST MANAGEMENT PRACTICE
C	CENTERLINE
CY	CUBIC YARD
EA	EACH
EL	ELEVATION
EOP	EDGE OF PAVEMENT
ESA	ENDANGERED SPECIES ACT
EXIST	EXISTING
FIS	FLOOD INSURANCE STUDY
FT	FEET/FOOT
G	GAS LINE, GREEN
GD	GROUND
HORIZ	HORIZONTAL
HT	HUB AND TACK
INV	INVERT
IP	IRON PIPE
KC	KING COUNTY
KC WLRD	KING COUNTY WATER AND LAND RESOURCES DIVISION
LCPE	LINED CORRUGATED POLYETHYLENE PIPE
LF	LINEAR FOOT/FEET
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
MW	MONITORING WELL
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OHW	ORDINARY HIGH WATER
PP	POWER POLE
PSP&L	PUGET SOUND POWER AND LIGHT
QTY	QUANTITY
R	RADIUS
RCKC	REBAR AND CAP, KING COUNTY
RD	ROAD
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
SD	STORM DRAIN
SF	SQUARE FEET/FOOT
SHT	SHEET
SPEC	SPECIAL
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	SEPTIC DRAIN SYSTEM
ST	STREET
STA	STATION
STM	STREAM
SWPE	SOLID WALL POLYETHYLENE PIPE
T	TELEPHONE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TEMP	TEMPORARY
TYP	TYPICAL
VERT	VERTICAL
WM	WATER METER
W/O	WITHOUT
YDS	YARDS
YR	YEAR
&	AND

DRAWING REFERENCE:


	DETAIL REFERENCE NUMBER
	DRAWING ON WHICH DETAIL IS SHOWN
	SECTION REFERENCE LETTER
	DRAWING ON WHICH SECTION IS SHOWN
	SECTION/DETAIL REFERENCE LETTER
	DRAWING FROM WHICH SECTION/DETAIL WAS TAKEN

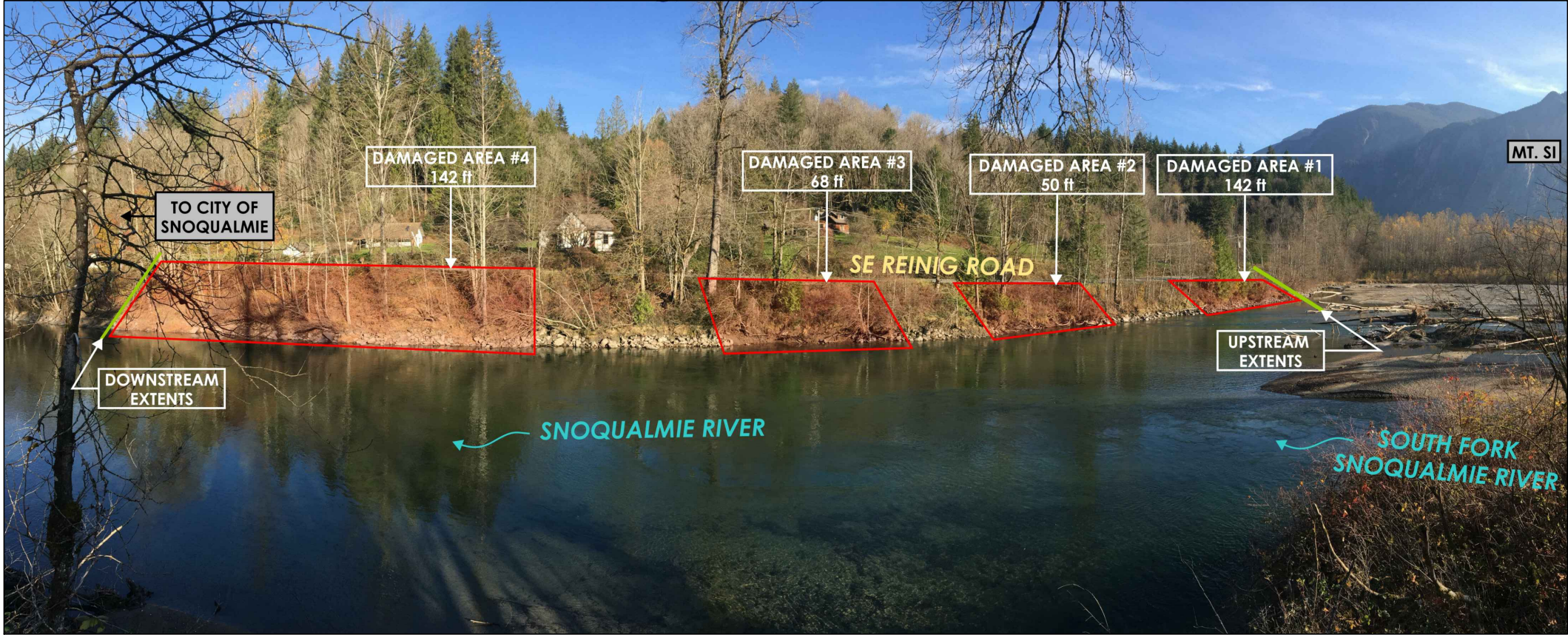
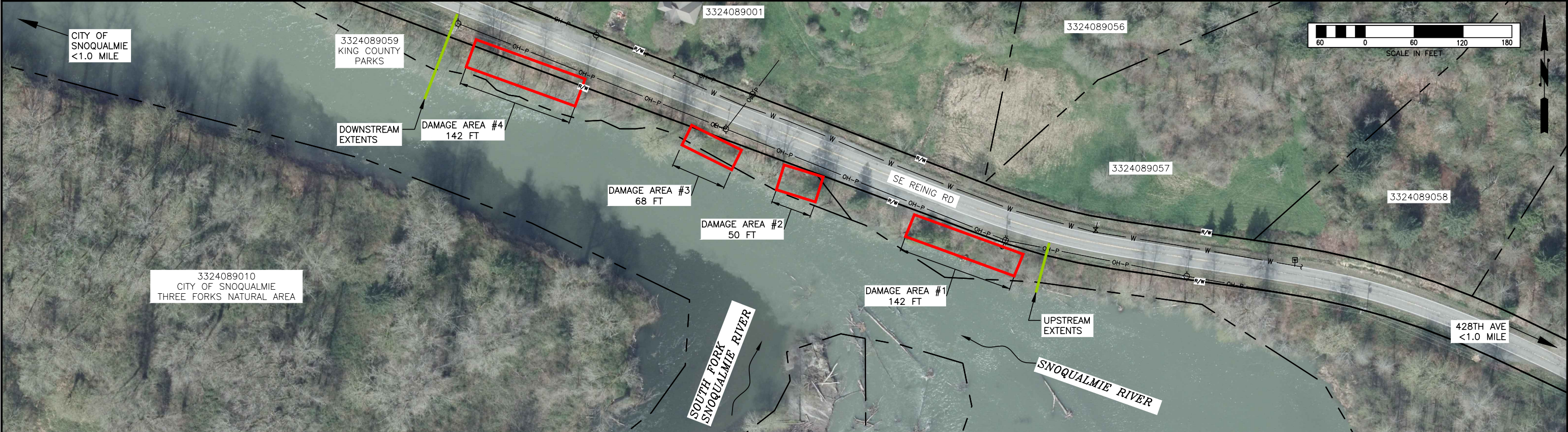
SECTION/DETAIL
SCALE: 1"=XX'




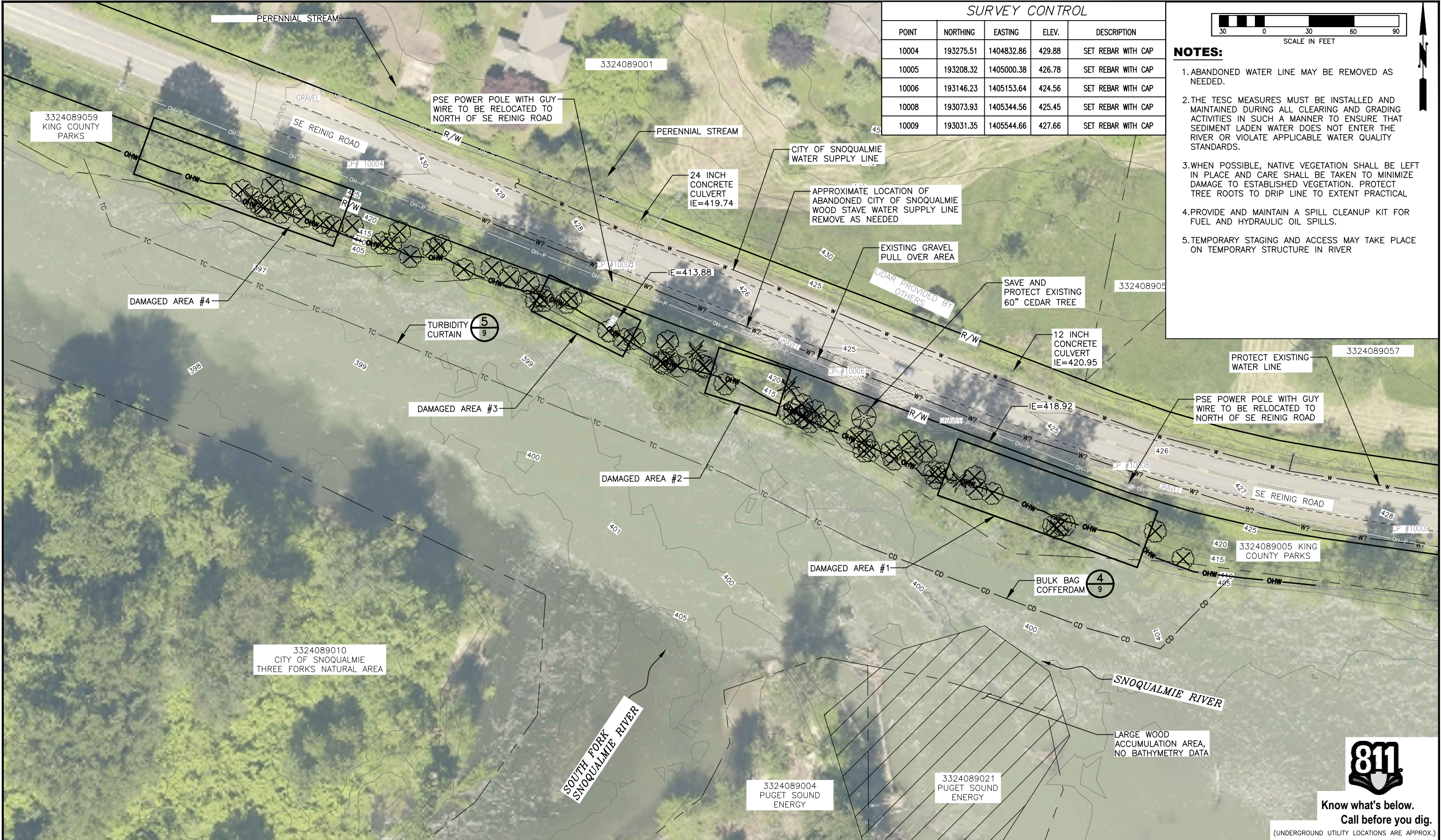
Know what's below.
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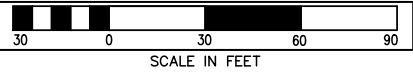
FIELD BOOK: _____		NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019			King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section <i>Christie True, Director</i>	REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 LEGEND AND ABBREVIATIONS	SHEET 2 OF 12 SHEETS	
SURVEYED: PARAMETRIX	10/2017					PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019						PROJECT No. 1132628
SURVEY BASE MAP: KDB	10/2017					DESIGNED: MARK BEGGS, P.E.	02/2019						CONTRACT No. --
CHECKED: RWP	10/2017					JESSY HARDY, E.I.T.	02/2019						
		NUM.	RECORD CHANGES APPROVED	BY	DATE	DARIAN KIS-YOUNG, E.I.T.	02/2019						
						CAD DESIGN: KEVIN WARD	02/2019						



FIELD BOOK:		NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019	PROJECT No. 1132628	CONTRACT No. --		King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 DAMAGED AREAS	SHEET 3 OF 12 SHEETS
						PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019						
SURVEYED: PARAMETRIX	10/2017					DESIGNED: MARK BEGGS, P.E.	02/2019						
SURVEY BASE MAP: KDB	10/2017					JESSY HARDY, E.I.T.	02/2019						
CHECKED: RWP	10/2017					DARIAN KIS-YOUNG, E.I.T.	02/2019						
		NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: KEVIN WARD	02/2019						

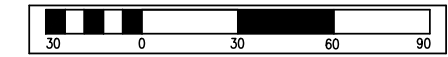
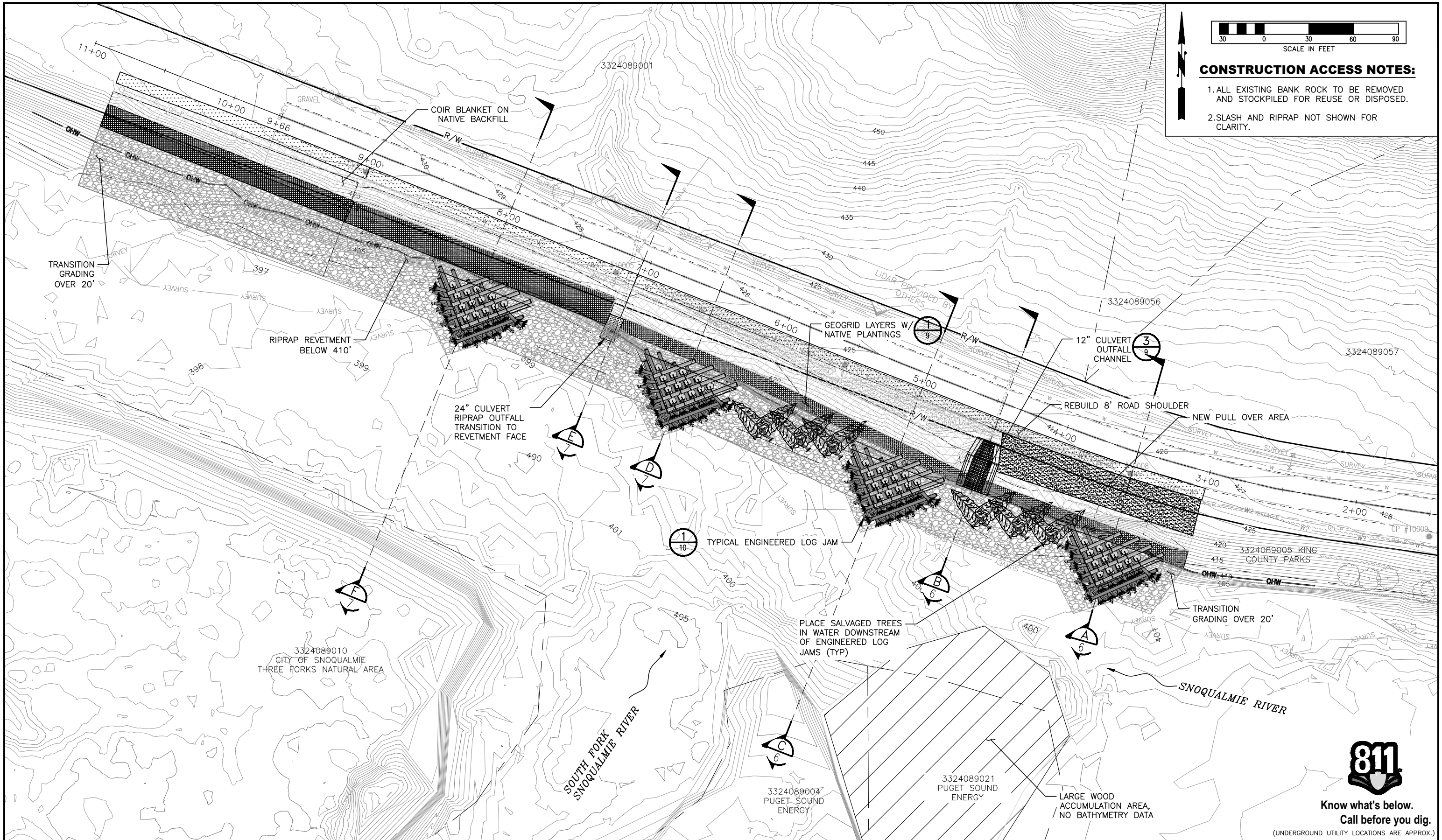


SURVEY CONTROL				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
10004	193275.51	1404832.86	429.88	SET REBAR WITH CAP
10005	193208.32	1405000.38	426.78	SET REBAR WITH CAP
10006	193146.23	1405153.64	424.56	SET REBAR WITH CAP
10008	193073.93	1405344.56	425.45	SET REBAR WITH CAP
10009	193031.35	1405544.66	427.66	SET REBAR WITH CAP




- NOTES:**
- 1.ABANDONED WATER LINE MAY BE REMOVED AS NEEDED.
 - 2.THE TESC MEASURES MUST BE INSTALLED AND MAINTAINED DURING ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE RIVER OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.
 - 3.WHEN POSSIBLE, NATIVE VEGETATION SHALL BE LEFT IN PLACE AND CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO ESTABLISHED VEGETATION. PROTECT TREE ROOTS TO DRIP LINE TO EXTENT PRACTICAL
 - 4.PROVIDE AND MAINTAIN A SPILL CLEANUP KIT FOR FUEL AND HYDRAULIC OIL SPILLS.
 - 5.TEMPORARY STAGING AND ACCESS MAY TAKE PLACE ON TEMPORARY STRUCTURE IN RIVER

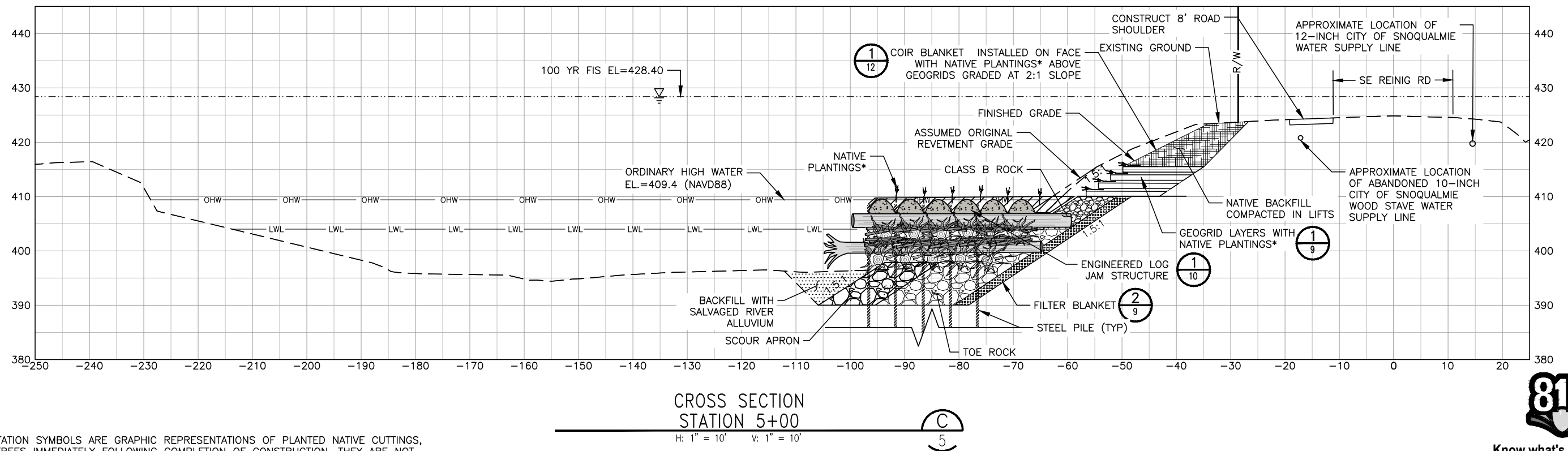
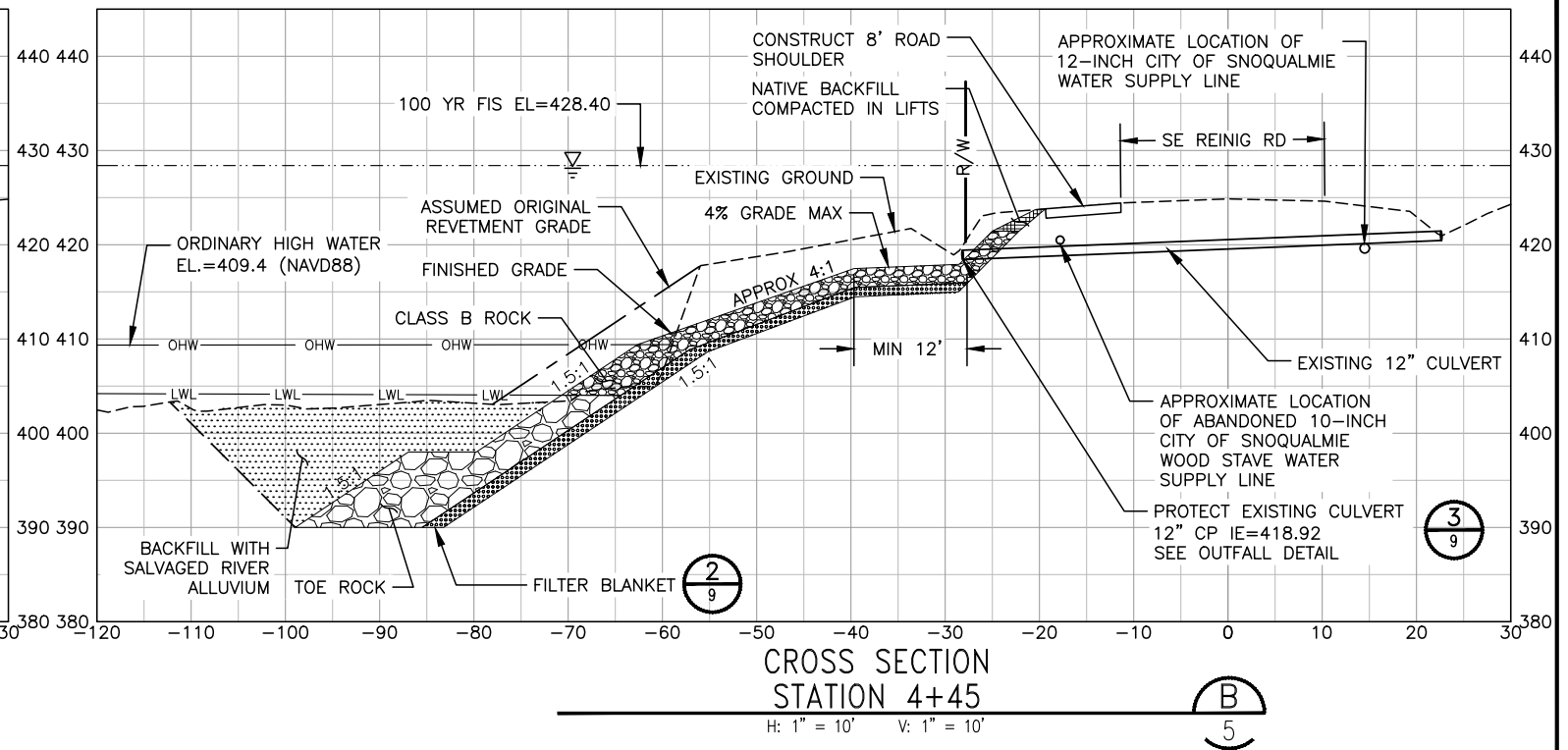
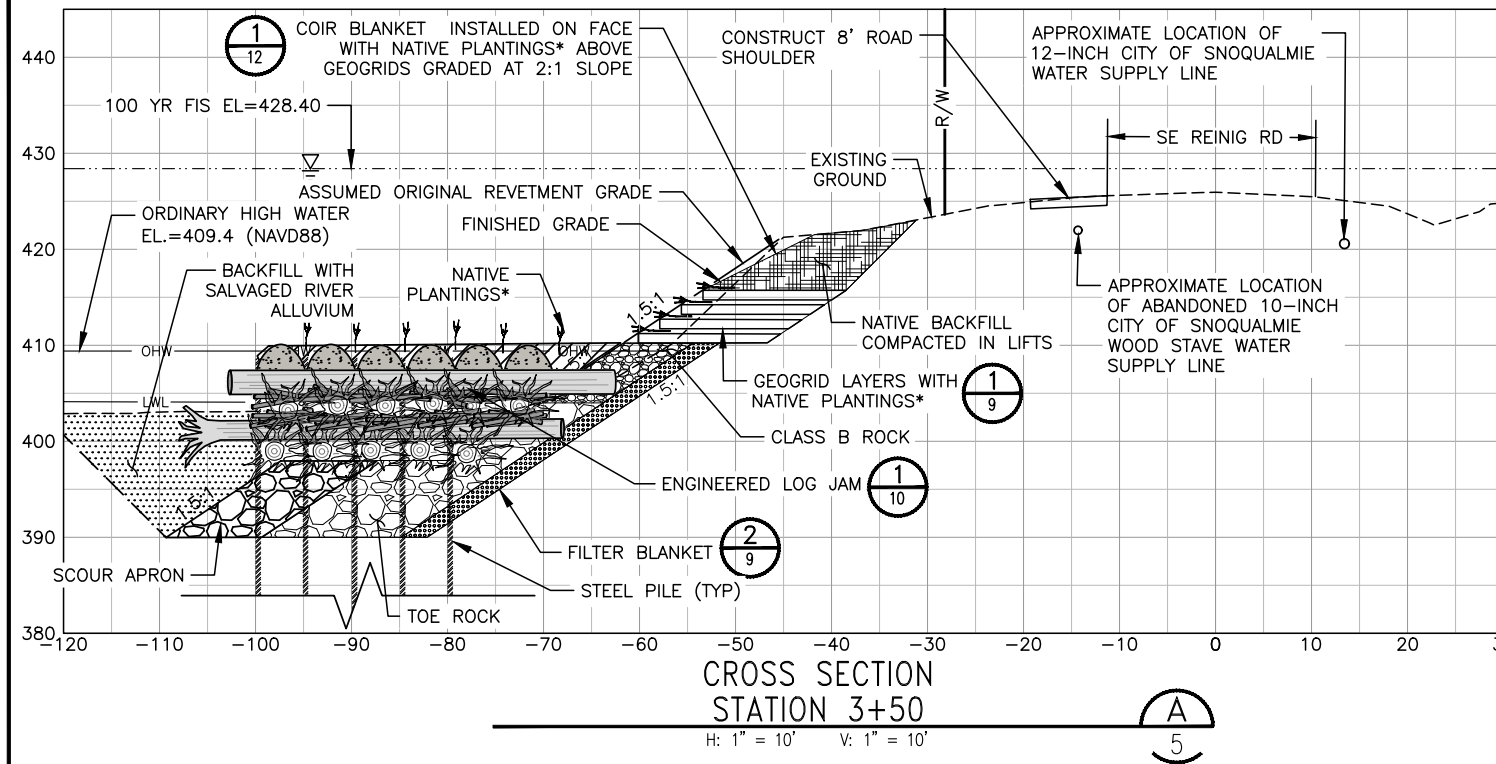
FIELD BOOK:		NUM.		REVISION		BY		DATE		APPROVED: MARK RUEBEL, P.E.		02/2019		PROJECT No. 1132628 CONTRACT No. --				King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director		REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 EXISTING CONDITIONS AND TESC PLAN		SHEET 4 OF 12 SHEETS	
SURVEYED: PARAMETRIX		10/2017						PROJECT MANAGER: CRAIG GARRIC, P.E.		02/2019													
SURVEY BASE MAP: KDB		10/2017						DESIGNED: MARK BEGGS, P.E.		02/2019													
CHECKED: RWP		10/2017						JESSY HARDY, E.I.T.		02/2019													
				NUM.		RECORD CHANGES APPROVED		BY		DATE		DARIAN KIS-YOUNG, E.I.T.		02/2019									
										CAD DESIGN: KEVIN WARD		02/2019											



CONSTRUCTION ACCESS NOTES:

- 1. ALL EXISTING BANK ROCK TO BE REMOVED AND STOCKPILED FOR REUSE OR DISPOSED.
- 2. SLASH AND RIPRAP NOT SHOWN FOR CLARITY.

FIELD BOOK:		NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019	PROJECT No. 1132628 CONTRACT No. --		King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 PROPOSED DESIGN PLAN	SHEET 5 OF 12 SHEETS
SURVEYED: PARAMETRIX		10/2017	JARPA SET 2/22/2019			PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019					
SURVEY BASE MAP: KDB		10/2017				DESIGNED: MARK BEGGS, P.E.	02/2019					
CHECKED: RWP		10/2017				JESSY HARDY, E.I.T.	02/2019					
			NUM.	RECORD CHANGES APPROVED	BY	DATE	DARIAN KIS-YOUNG, E.I.T.	02/2019				
							CAD DESIGN: KEVIN WARD	02/2019				



* THESE VEGETATION SYMBOLS ARE GRAPHIC REPRESENTATIONS OF PLANTED NATIVE CUTTINGS, SHRUBS AND TREES IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION. THEY ARE NOT TO SCALE AND ARE NOT INTENDED TO REPRESENT MATURE, FULLY DEVELOPED VEGETATION.

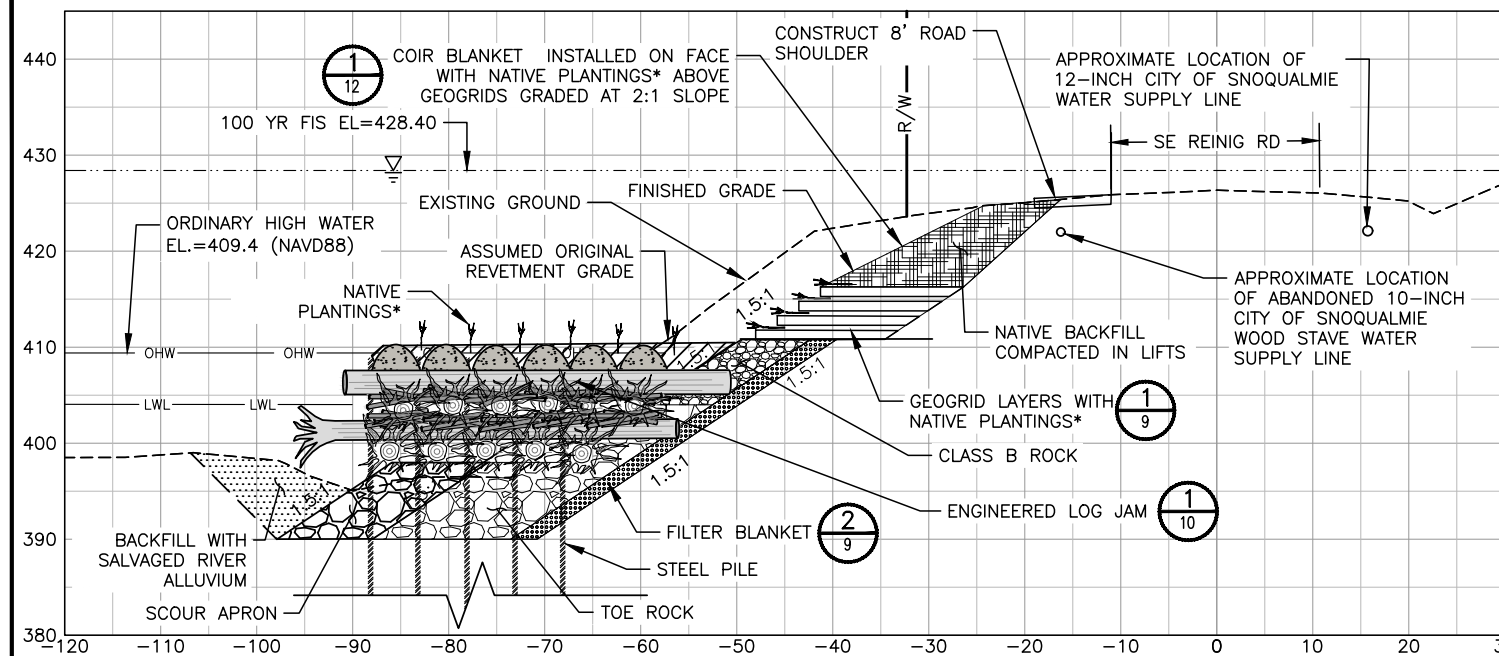


Know what's below.
Call before you dig.

(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SURVEYED: PARAMETRIX	10/2017	JARPA SET 2/22/2019			PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019					
SURVEY BASE MAP: KDB	10/2017				DESIGNED: MARK BEGGS, P.E.	02/2019					
CHECKED: RWP	10/2017				JESSY HARDY, E.I.T.	02/2019					
		NUM.	RECORD CHANGES APPROVED	BY	DATE	02/2019					
					DARIAN KIS-YOUNG, E.I.T.	02/2019					
					CAD DESIGN: KEVIN WARD	02/2019					

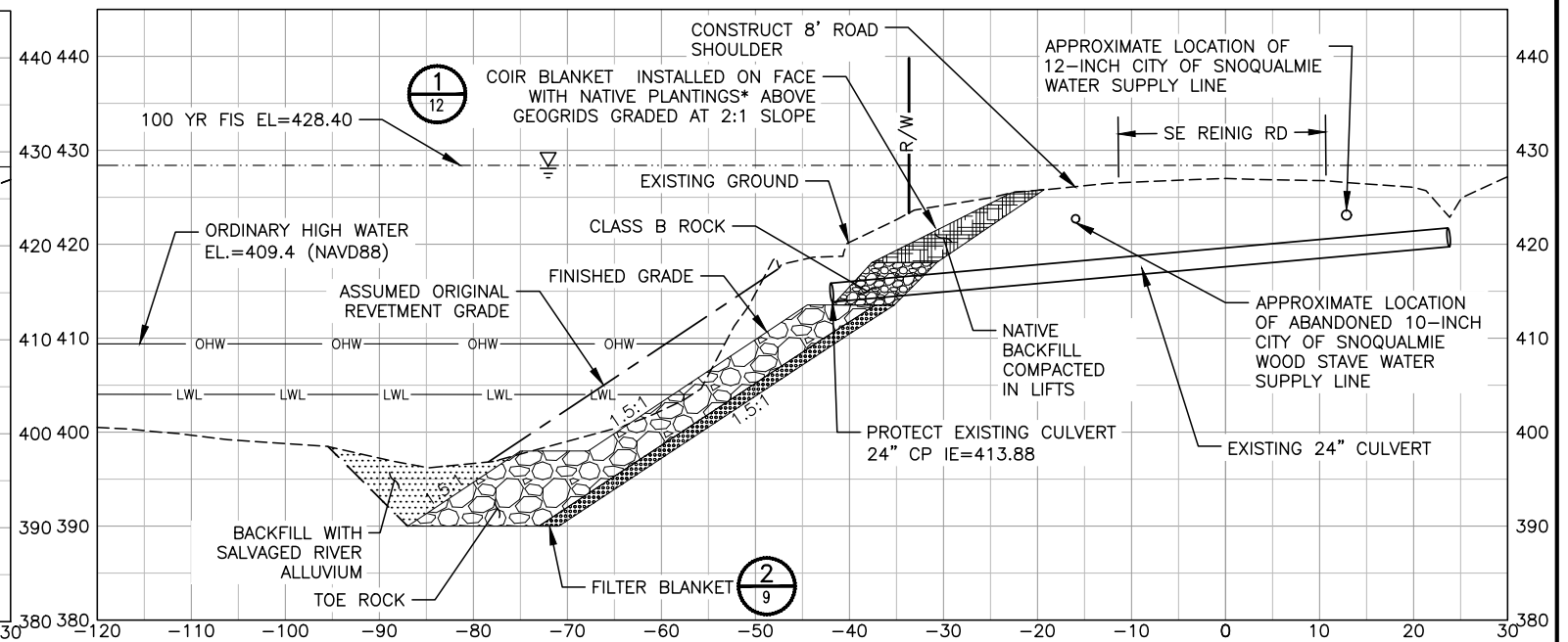




CROSS SECTION
STATION 6+50

H: 1" = 10' V: 1" = 10'

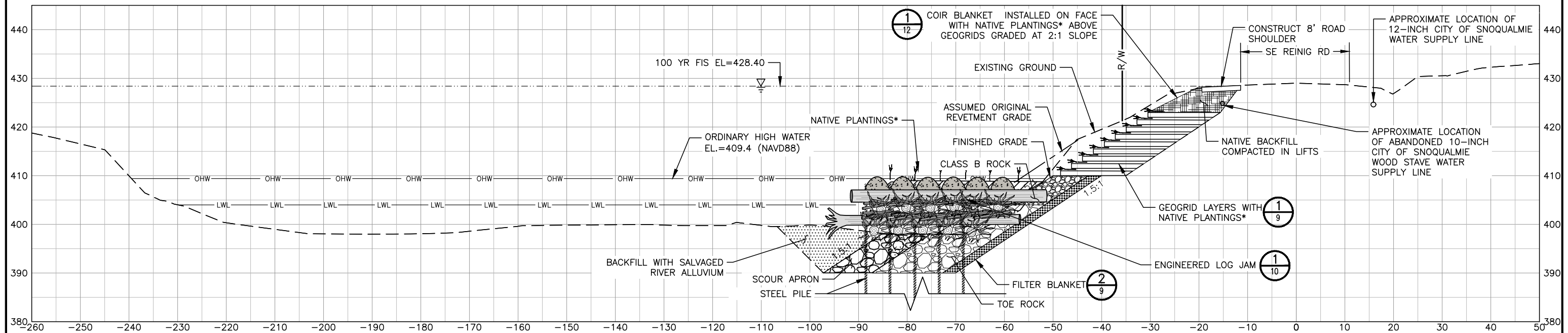
D
5



CROSS SECTION
STATION 7+05

H: 1" = 10' V: 1" = 10'

E
5



CROSS SECTION
STATION 8+00

H: 1" = 10' V: 1" = 10'

F
5

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SURVEYED: PARAMETRIX	10/2017					PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019
SURVEY BASE MAP: KDB	10/2017					DESIGNED: MARK BEGGS, P.E.	02/2019
CHECKED: RWP	10/2017					JESSY HARDY, E.I.T.	02/2019
		NUM.	RECORD CHANGES APPROVED	BY	DATE	DARIAN KIS-YOUNG, E.I.T.	02/2019
						CAD DESIGN: KEVIN WARD	02/2019



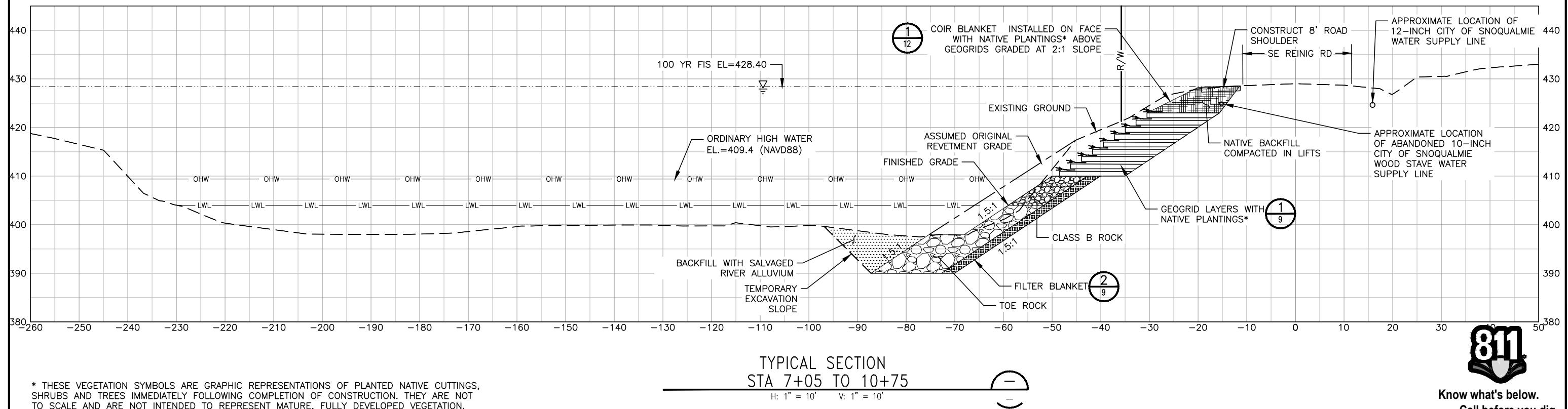
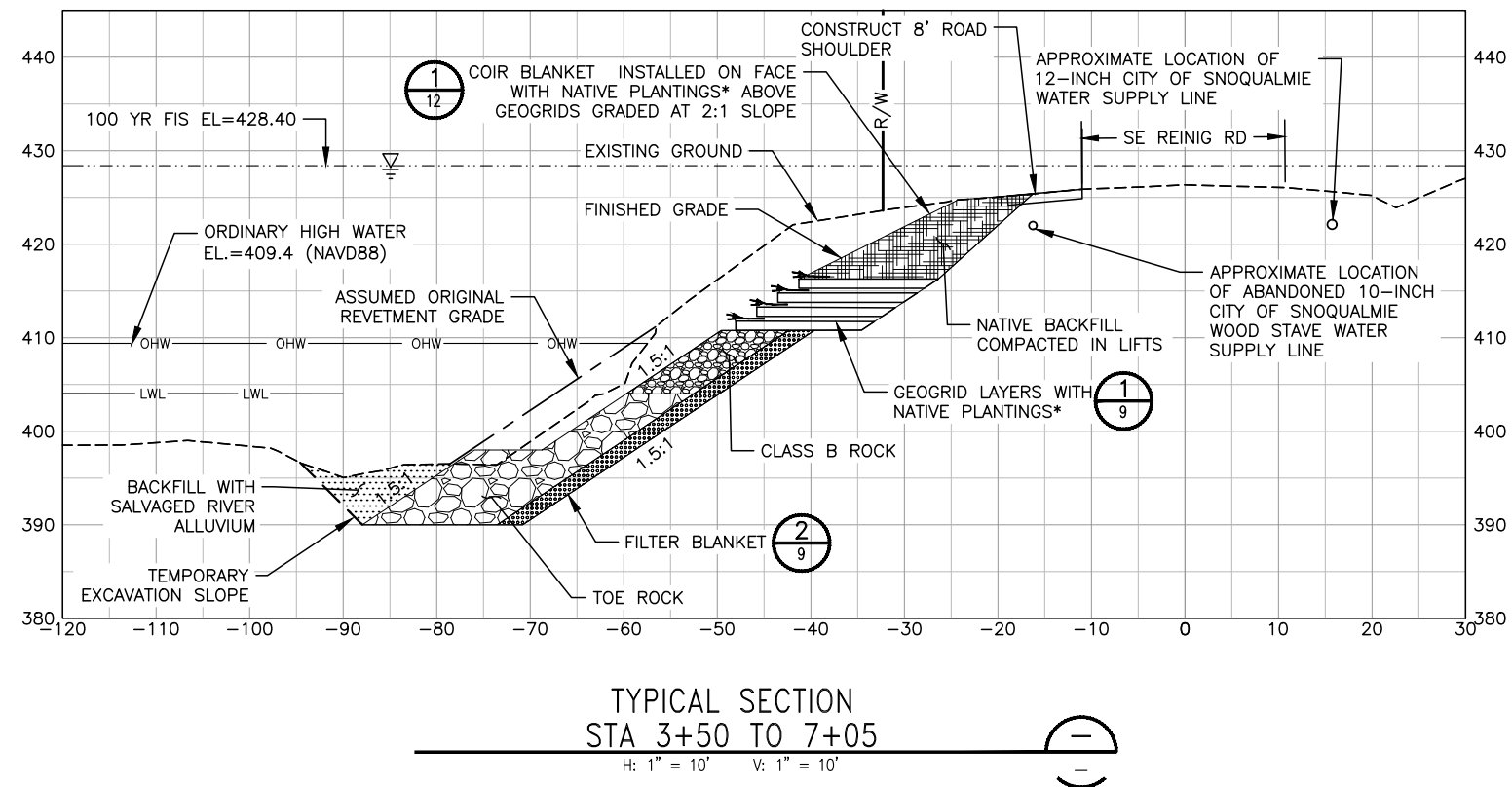
King County
Department of Natural Resources and Parks
Water and Land Resources Division
**River and Floodplain
Management Section**
Christie True, Director

**REINIG ROAD REVETMENT REPAIR
SNOQUALMIE RIVER RM 41.8**

CROSS SECTIONS (2)

SHEET
7
OF
12
SHEETS

USACE Ref # NWS-2019-197-WRD



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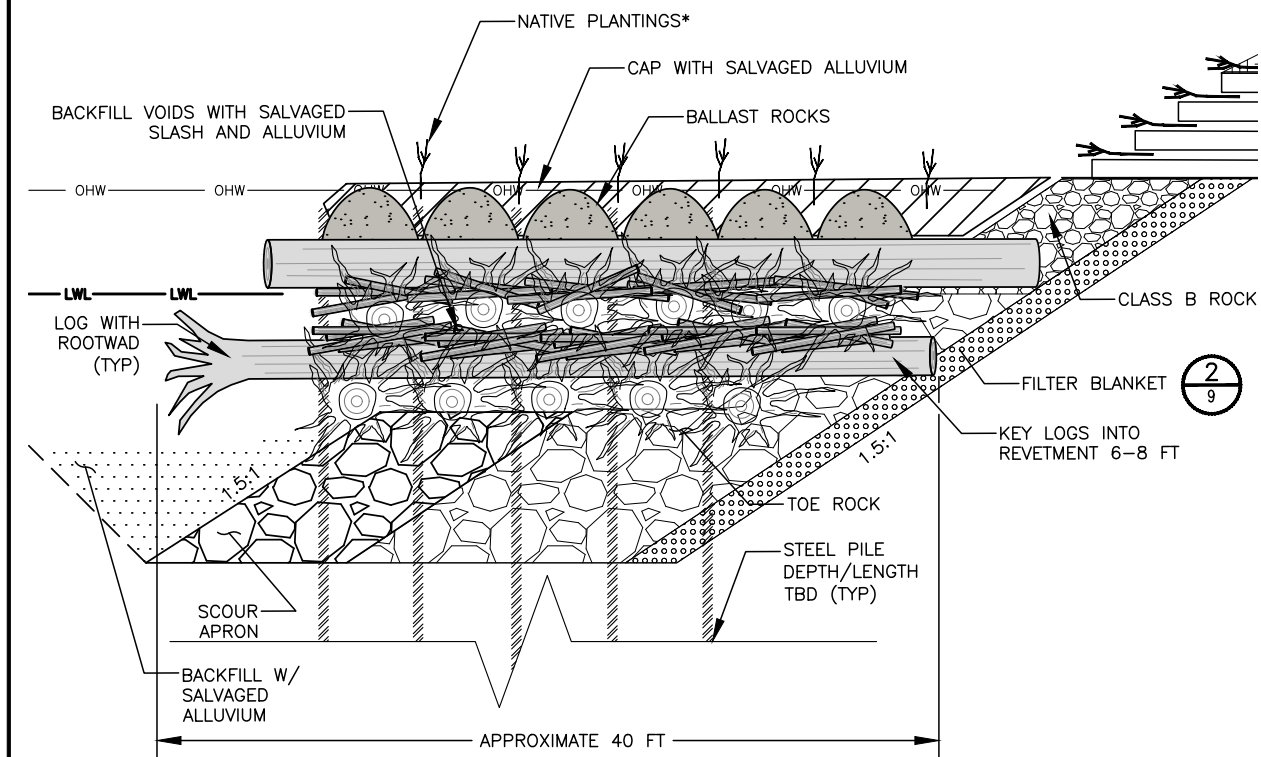


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						PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019						
SURVEYED: PARAMETRIX	10/2017					DESIGNED: MARK BEGGS, P.E.	02/2019						
SURVEY BASE MAP: KDB	10/2017					JESSY HARDY, E.I.T.	02/2019						
CHECKED: RWP	10/2017					DARIAN KIS-YOUNG, E.I.T.	02/2019						
						CAD DESIGN: KEVIN WARD	02/2019						
		NUM.	RECORD CHANGES APPROVED	BY	DATE								





ENGINEERED LOG JAM
TYPICAL CROSS SECTION

NOT TO SCALE

A

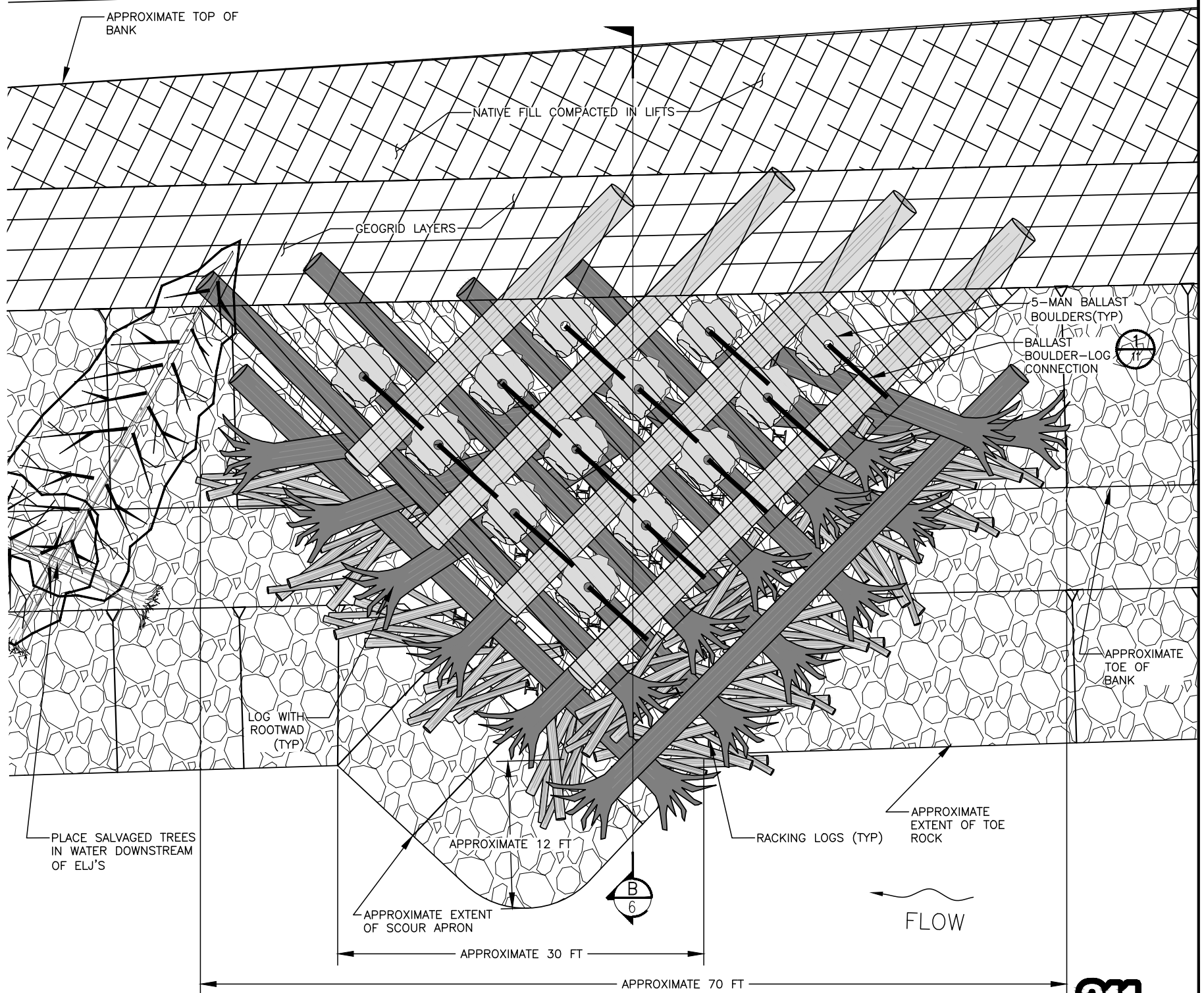
ELJ CONSTRUCTION NOTES:

1. ADJUST TEMPORARY RIVER ISOLATION SYSTEM AS NECESSARY TO ENSURE WATER QUALITY REQUIREMENTS ARE MET.
2. BACKFILL MATERIALS WILL BE APPROVED BY THE ENGINEER BEFORE PLACEMENT.
3. PLACE SLASH AND ALLUVIUM TO FILL VOID SPACE BETWEEN LOGS
4. FINAL PLACEMENT OF WOOD TO BE APPROVED BY THE ENGINEER.
5. SEE LAYER PLAN, SHEET 11

PILE CONSTRUCTION NOTES:

1. THE DRIVE MECHANISMS OF EQUIPMENT SHALL NOT OPERATE LOWER THAN THE ORDINARY HIGH WATER LINE.
2. HORIZONTAL PILE TOLERANCE ± 0.5 FT

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ENGINEERED LOG JAM
TYPICAL PLAN

NOT TO SCALE


1

5,6

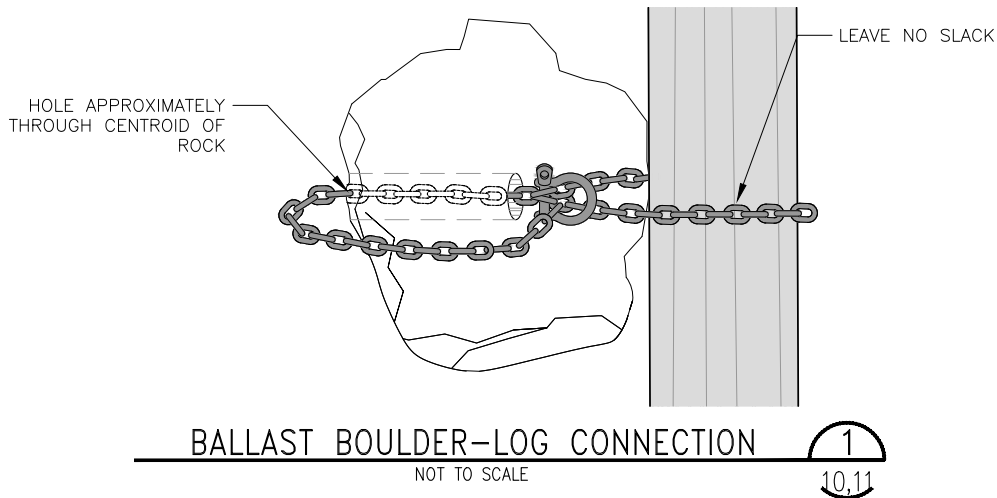
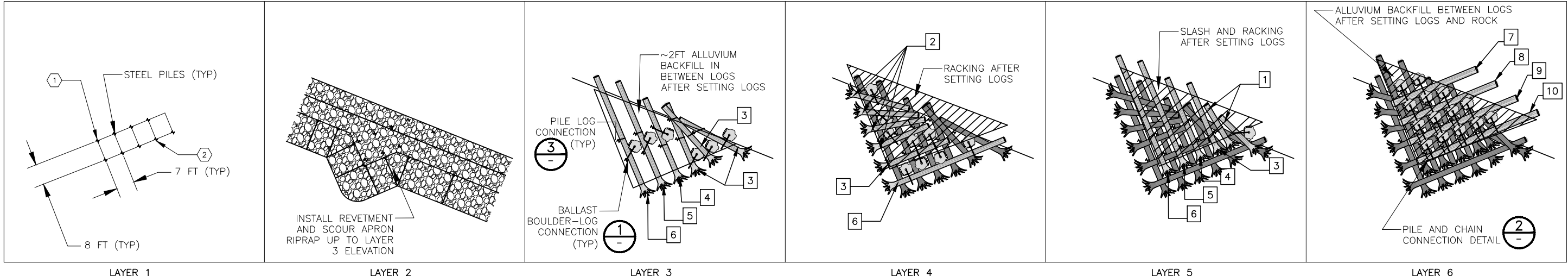


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		NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019			King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section <i>Christie True, Director</i>	REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 ENGINEERED LOG JAM PLAN & SECTION	SHEET 10 OF 12 SHEETS		
FIELD BOOK:			JARPA SET 2/22/2019			PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019						PROJECT No. 1132628	CONTRACT No. --
SURVEYED: PARAMETRIX	10/2017				DESIGNED: MARK BEGGS, P.E.	02/2019								
SURVEY BASE MAP: KDB	10/2017				JESSY HARDY, E.I.T.	02/2019								
CHECKED: RWP	10/2017				DARIAN KIS-YOUNG, E.I.T.	02/2019								
		NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: KEVIN WARD	02/2019							

ELJ LAYER PLAN



PILE CONTROL POINT SCHEDULE


PILE #	NORTHING	EASTING	TOP OF PILE ELEV	PILE TIP ELEV
1			410	370
2			410	370
3			410	370
4			410	370
5			410	370
6			410	370
7			410	370
8			410	370

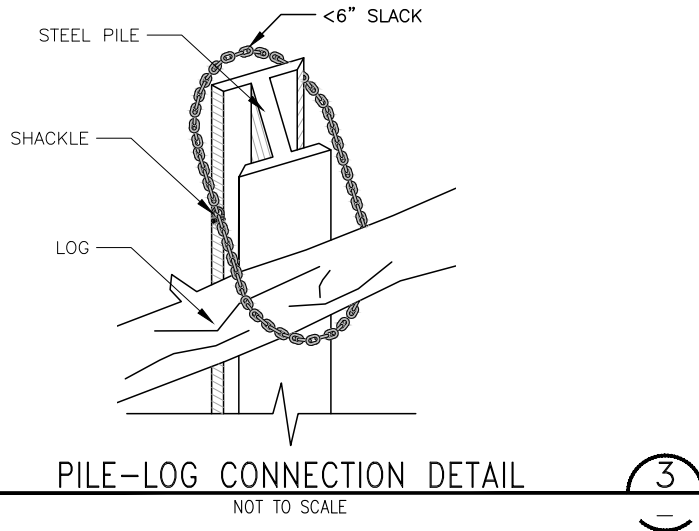
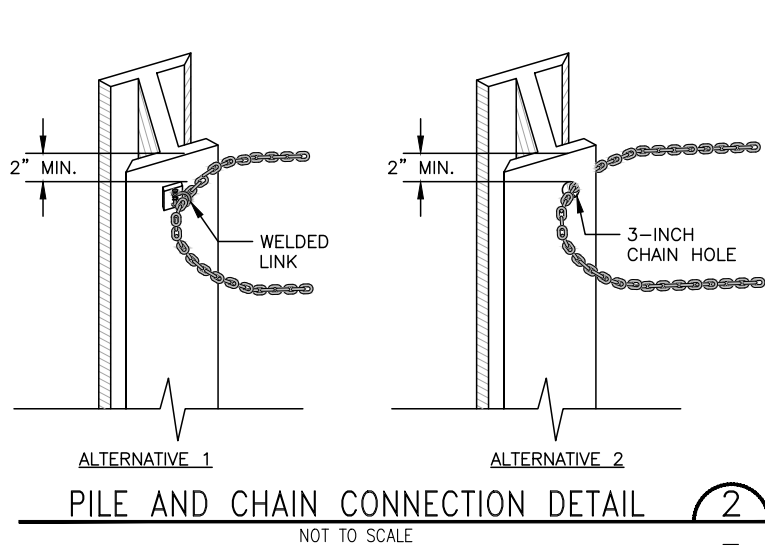
LOG SCHEDULE

LOG TYPE	NUMBER PER DEFLECTOR	DBH DIA (IN)	LENGTH (FT)*	ROOTWAD**	MATERIAL
1	2	24	20	YES	DOUGLAS FIR
2	4	24	25	YES	DOUGLAS FIR
3	5	24	30	YES	DOUGLAS FIR
4	2	24	35	YES	DOUGLAS FIR
5	2	24	45	YES	DOUGLAS FIR
6	3	24	50	YES	DOUGLAS FIR
7	1	30	35	NO	DOUGLAS FIR
8	1	30	40	NO	DOUGLAS FIR
9	1	30	45	NO	DOUGLAS FIR
10	1	30	50	NO	DOUGLAS FIR

* LOGS MAY BE FIELD FIT TRIMMED AS APPROVED BY ENGINEER
** ALL ROOTWAD DIAMETERS BETWEEN 4-7 FT

POTENTIAL ELJ CONSTRUCTION SEQUENCING NOTES:

1. ELJ GENERAL LOCATION AND ORIENTATION SHALL BE STAKED BY THE CONTRACTOR. FINAL ELJ LOCATION AND ORIENTATION TO BE FIELD VERIFIED AND APPROVED BY THE PROJECT REPRESENTATIVE FOLLOWING CONTRACTOR STAKING.
2. CLEARING AND GRUBBING, ROUGH GRADING OF REVETMENT SLOPE AND BENCHING PRIOR TO ELJ EXCAVATION
3. INSTALL PILES USING CONTROL POINTS AND OFFSETS..
3. EXCAVATE TO ELEV 390'
4. BUILD SCOUR APRON FOR ELJ.
5. WOOD MATERIALS SHALL BE PLACED AT THE LOCATIONS AND ORIENTATION SHOWN IN CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE PROJECT REPRESENTATIVE.
6. BALLAST ROCKS TO BE ATTACHED PER DETAIL 
7. RACKING/SWASH AND NATIVE ALLUVIUM BACKFILL TO BE PLACED IN ALTERNATING LAYERS. RACKING LOGS SHALL EXTEND INTO THE CORE OF THE STRUCTURE AND BE PINNED BETWEEN KEY LOGS.
8. CAP WITH SALVAGED NATIVE ALLUVIUM
9. STAKE WITH NATIVE VEGETATION BETWEEN BALLAST ROCKS



**Know what's below.
Call before you dig.**

(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

		NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019
FIELD BOOK: _____			JARPA SET 2/22/2019			PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019
SURVEYED: <u>PARAMETRIX</u>	10/2017					DESIGNED: MARK BEGGS, P.E.	02/2019
SURVEY BASE MAP: <u>KDB</u>	10/2017					<u>JESSY HARDY, E.I.T.</u>	02/2019
CHECKED: <u>RWP</u>	10/2017					<u>DARIAN KIS—YOUNG, E.I.T.</u>	02/2019
		NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: KEVIN WARD	02/2019



King County

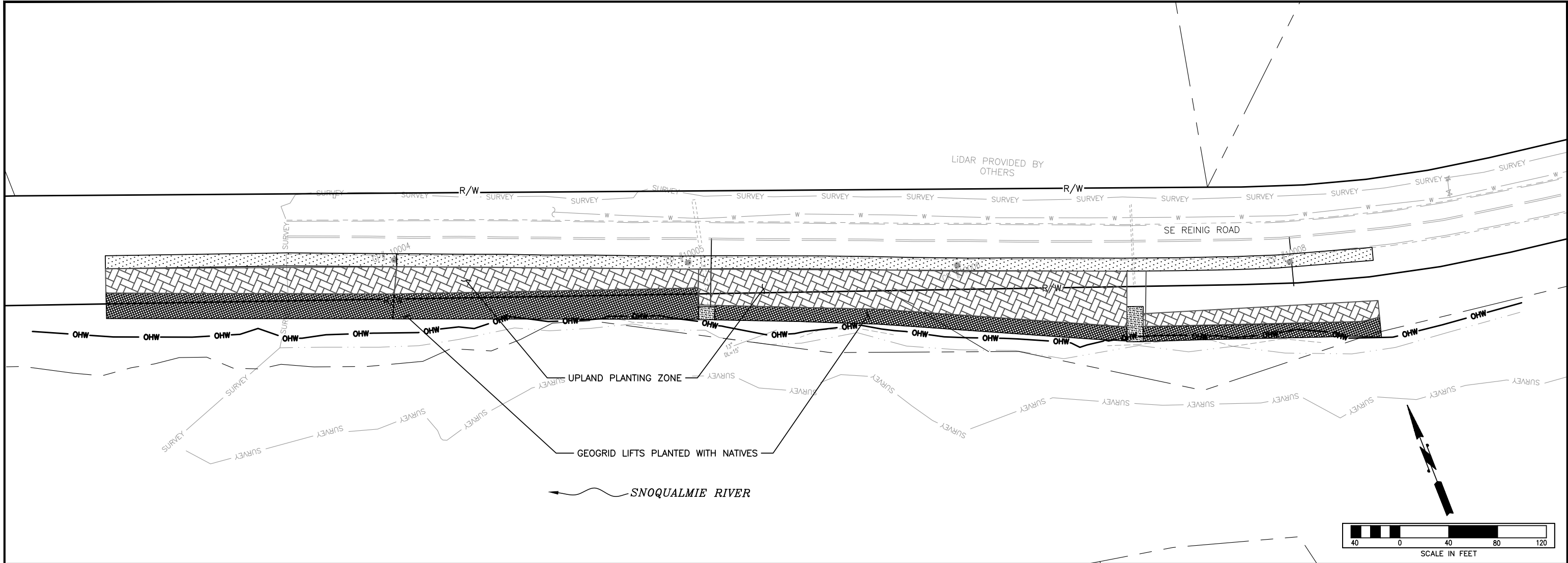
Department of Natural Resources and Parks
Water and Land Resources Division
**River and Floodplain
Management Section**
Christie True, Director

REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8

ENGINEERED LOG JAM DETAILS

SHEET
11
OF
12
SHEETS

USACE Ref # NWS-2019-197-WRD

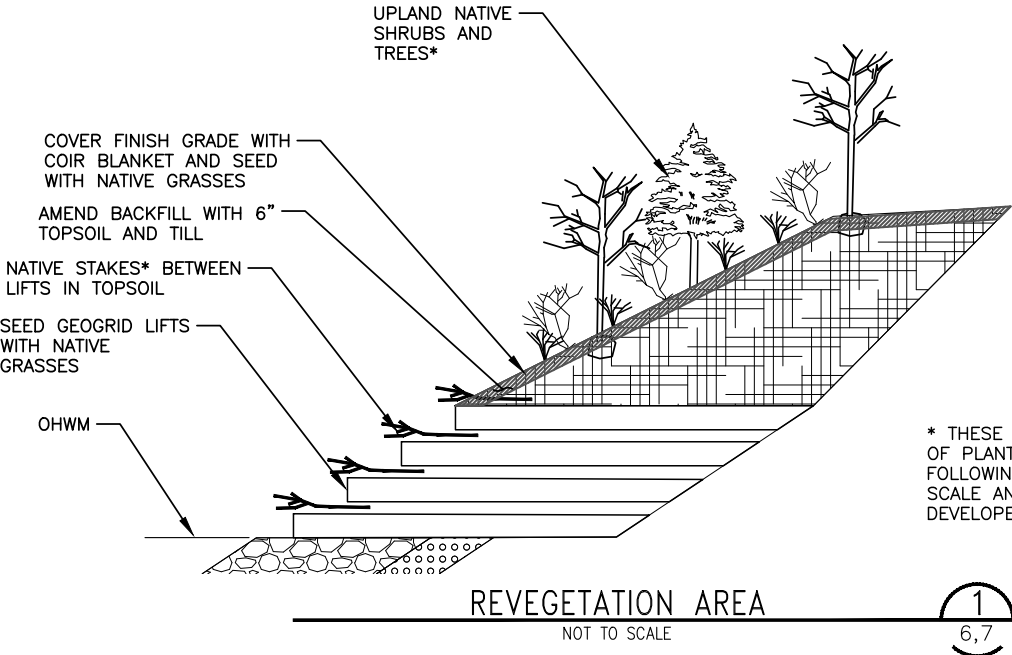


WILLOW CUTTING NOTES:

1. USE HEALTHY LIVE WOOD THAT IS AT LEAST ONE YEAR OLD.
2. MAKE A CLEAN DIAGONAL CUT AT THE BUTT END WHEN HARVESTING WILLOW CUTTINGS.
3. CUTTINGS SHOULD BE 4'-6' LONG, AND A MINIMUM OF 1" DIAMETER. CUTTINGS CAN BE BRUSHY WITH SIDE BRANCHES.
4. PRIOR TO INSTALLATION, SOAK CUTTINGS (MINIMUM OF 1' DEPTH AT BUTT END) IN WATER FOR A MINIMUM OF 24 HOURS.
5. MAINTAIN CUTTINGS IN WATER CONTINUOUSLY FROM TIME OF HARVEST UNTIL INSTALLATION IN MIN. 1' DEPTH WATER AT BUTT END.

WILLOW CUTTING INSTALLATION:

1. HAVE A WATER TRUCK OR WITHDRAWAL PUMP (ONLY IF WITHDRAWAL PERMIT IS IN HAND) ON SITE DURING WILLOW INSTALLATION.
2. FOR THE LOWEST WILLOW LIFT, PLACE COIR FABRIC OVER THE ROCK LAYER WITH AT LEAST 5 FEET OF EXCESS FABRIC EXTENDING LANDWARD.
3. PLACE 6 INCH LIFT OF TOP SOIL WITH WILLOW CUTTINGS SPACED 1 PER LINEAR FOOT OVER THE FABRIC AND FOLD THE FABRIC OVER THE FRONT OF THE SOIL LIFT.
4. WATER THE SOIL THOROUGHLY; SATURATE SOIL TO 6 INCH DEPTH AND MUDDY.



GENERAL PLANTING NOTES:


1. ALL DISTURBED AREAS SHALL BE MULCHED AND SEEDED AT CONCLUSION OF LAND DISTURBING ACTIVITIES. KC REPRESENTATIVE TO APPROVE SEED MIX PRIOR TO USE.
2. POTTED PLANTS TO BE INSTALLED BY OTHERS AFTER CONSTRUCTION IS COMPLETE. KC REPRESENTATIVE TO DIRECT FINAL LOCATION OF PLANTS.

* THESE VEGETATION SYMBOLS ARE GRAPHIC REPRESENTATIONS OF PLANTED NATIVE CUTTINGS, SHRUBS AND TREES IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION. THEY ARE NOT TO SCALE AND ARE NOT INTENDED TO REPRESENT MATURE, FULLY DEVELOPED VEGETATION.



Know what's below.
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK:	10/2017	NUM.	REVISION	BY	DATE	APPROVED: MARK RUEBEL, P.E.	02/2019	PROJECT No. 1132628		King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	REINIG ROAD REVETMENT REPAIR SNOQUALMIE RIVER RM 41.8 PLANTING PLAN	SHEET 12 OF 12 SHEETS
						PROJECT MANAGER: CRAIG GARRIC, P.E.	02/2019					
						DESIGNED: MARK BEGGS, P.E.	02/2019					
						JESSY HARDY, E.I.T.	02/2019					
SURVEYED: PARAMETRIX	10/2017					DARIAN KIS-YOUNG, E.I.T.	02/2019	CONTRACT No. --				
SURVEY BASE MAP: KDB	10/2017					CAD DESIGN: KEVIN WARD	02/2019					
CHECKED: RWP	10/2017	NUM.	RECORD CHANGES APPROVED	BY	DATE							