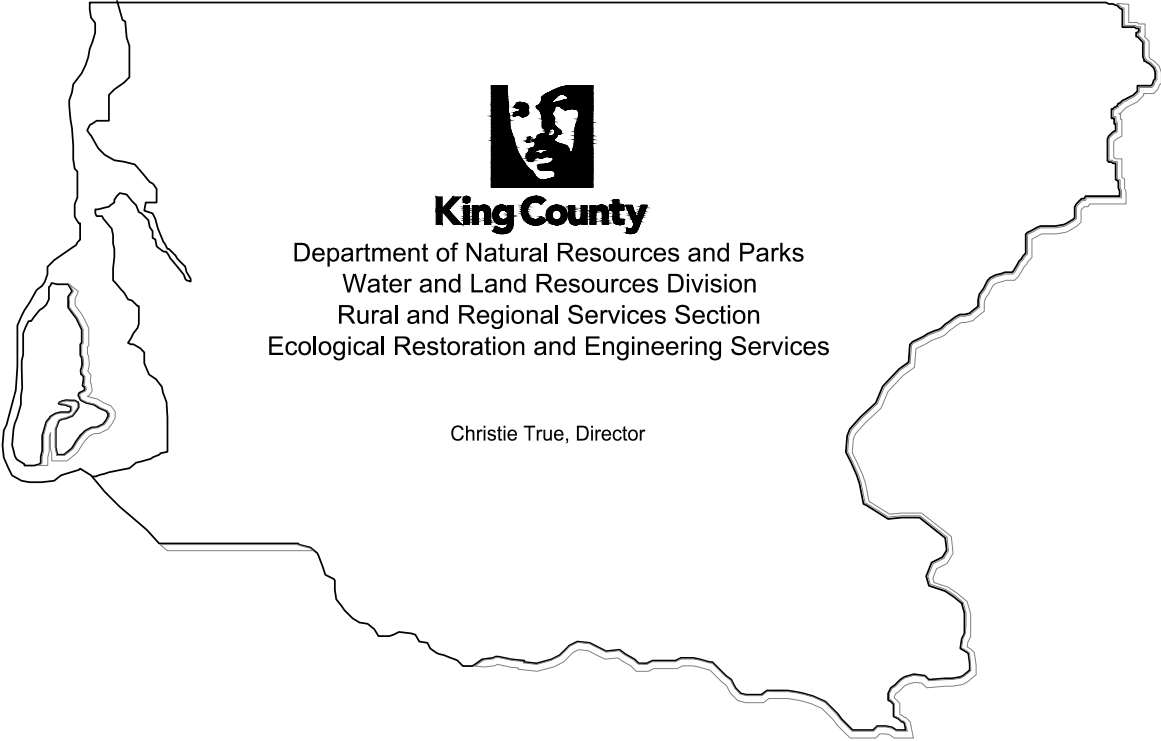


VICINITY MAP  
SCALE: 1" = 2000'



# FALL CITY FLOODPLAIN RESTORATION PROJECT

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| CHECKED:                  | ---  | ---     |
| CAD ENTERED:              | E.M. | 11/2020 |
| DESIGNED:                 | J.W. | 11/2020 |
| CHECKED:                  | I.M. | 11/2020 |
| SUPERVISOR:               | M.E. | 11/2020 |
| SECTION MANAGER APPROVED: | RL   | ---     |


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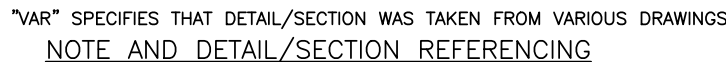
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| FALL CITY<br>FLOODPLAIN RESTORATION PROJECT |  |
| COVER SHEET                                 |  |

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| FALL CITY<br>FLOODPLAIN RESTORATION PROJECT |  |
| COVER SHEET                                 |  |

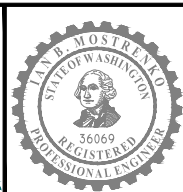
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| <br>King County | SHEET<br>1<br>OF<br>50<br>SHEETS |
| XXX-XX (1)   |                                  |



1. THE WORK INCLUDES CLEARING WORK AREAS OF VEGETATION, STOCKPILING CLEARED VEGETATION, OFFSITE DISPOSAL OF INVASIVE VEGETATION THAT IS CLEARED, REMOVING AN EXISTING LEVEE AND ROCK ARMORING, CONSTRUCTING A NEW SETBACK ROCK REVETMENT, CONSTRUCTING PROJECT ENGINEERED LOG STRUCTURES, INSTALLING TIMBER PILES AND IMPORTED AND SALVAGED LOGS IN THE FLOODPLAIN, PLANTING, CONSTRUCTING AND REMOVING TEMPORARY FACILITIES, WORKING AROUND EXISTING ABOVE GROUND UTILITIES, AND RESTORING THE DISTURBED AREAS.
2. THE WORK SHOWN ON THE PLANS SHALL BE SEQUENCED AND PERFORMED IN A MANNER THAT MINIMIZES IMPACTS TO THE RIVER, WETLANDS, EXISTING VEGETATION, THE WORK SITE AND ADJACENT PRIVATE PROPERTY AND PUBLIC INFRASTRUCTURE.
3. THE CONTRACTOR MAY DECIDE HOW TO SEQUENCE THE WORK AT EACH SITE. HOWEVER THIS PROJECT WILL BE CONSTRAINED BY AN IN-WATER WORK WINDOW SET FORTH IN THE PROJECT HYDRAULIC PROJECT APPROVAL, SECTION 404 PERMIT, AND ANY OTHER APPLICABLE PERMIT, OUTSIDE OF WHICH NO IN-WATER WORK MAY OCCUR. WORK WITHIN THE ORDINARY HIGH WATER LINE WILL BE RESTRICTED TO THE DATES SET FORTH IN THE HYDRAULIC PROJECT APPROVAL.
4. PROJECT REPRESENTATIVE IS DEFINED AS THE OWNER'S REPRESENTATIVE OR OWNER'S PROJECT REPRESENTATIVE. KING COUNTY IS DEFINED AS THE OWNER.
5. THE CONTRACTOR SHALL STAKE THE PROJECT CONSTRUCTION LIMITS FOR APPROVAL BY THE OWNER OR PROJECT REPRESENTATIVE AT LEAST 5 WORKING DAYS PRIOR TO COMMENCING ONSITE ACTIVITIES. PROJECT CONSTRUCTION LIMITS SHOWN ON THE PLANS REPRESENT WORK AREAS AND DO NOT REPRESENT CLEARING LIMITS. CLEARING LIMITS ARE SHOWN.
6. TREES AND BRUSH NOT SHOWN ON THE PLANS WILL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES. THE OWNER SHALL IDENTIFY AND FLAG ALL TREES TO BE REMOVED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL OTHER TREES NOT MARKED. FOLLOWING CLEARING OF ALLOWED VEGETATION, THE CONTRACTOR SHALL STOCKPILE ALL TREES AND BRUSH PRIOR TO AND DURING CONSTRUCTION ACTIVITIES, FOR USE IN AREAS AS SHOWN ON THE PLANS, AND AS DIRECTED BY THE OWNER OR PROJECT REPRESENTATIVE TO CREATE ROUGH FINISHED GRADED SURFACES. CERTAIN VEGETATION MAY BE FLAGGED BY THE PROJECT REPRESENTATIVE OR OWNER FOR SALVAGE, AND CARE SHALL BE TAKEN TO PROTECT THOSE PLANTS FROM DAMAGE AND DESICCATION.
7. ALTERATION OR DISTURBANCE OF THE CHANNEL, FLOODPLAIN, AND ANY BANK AND FLOODPLAIN VEGETATION SHALL BE MINIMIZED TO THAT NECESSARY TO CONSTRUCT THE PROJECT. THE CONTRACTOR SHALL KEEP DISTURBED AREAS WITHIN THE PROJECT CONSTRUCTION LIMITS SHOWN ON THE PLANS, AND SHALL NOT EXTEND THESE LIMITS UNLESS APPROVED BY THE PROJECT REPRESENTATIVE.
8. THE CONTRACTOR SHALL PROVIDE 24 HOURS ADVANCE NOTICE TO THE OWNER OR PROJECT REPRESENTATIVE PRIOR TO ANY REQUIRED SPECIAL INSPECTION.
9. CONSTRUCTION MATERIAL AND EQUIPMENT STAGING AREAS SHALL BE LOCATED ENTIRELY WITHIN THE PROJECT CONSTRUCTION LIMITS. CONSTRUCTION MATERIALS AND EQUIPMENT SHALL NOT BE STORED OUTSIDE OF IDENTIFIED STAGING AREAS, UNLESS APPROVED BY THE OWNER OR PROJECT REPRESENTATIVE. THE CONTRACTOR SHALL PROTECT ALL CONSTRUCTION MATERIALS AND EQUIPMENT FROM DAMAGE AT ALL TIMES.
10. NO EQUIPMENT OR CONSTRUCTION MATERIALS SHALL BE STORED OVERNIGHT BELOW THE ORDINARY HIGH WATER (OHW) LINE. EQUIPMENT FUELING AREAS SHALL BE LOCATED MORE THAN 150' FROM THE EXISTING OHW LINE OF THE RIVER AND WETLAND BOUNDARIES.
11. EQUIPMENT USED FOR THIS PROJECT SHALL BE FREE OF EXTERNAL PETROLEUM-BASED PRODUCTS WHILE WORKING NEAR AND IN ANY SURFACE WATER OR WETLANDS. ACCUMULATION OF SOILS OR DEBRIS SHALL BE REMOVED FROM EQUIPMENT PRIOR TO ITS WORKING BELOW THE OHW LINE AND WITHIN THE WATER.
12. ALL EQUIPMENT OPERATING BELOW OHW, WETLANDS, OR IN AREAS OTHER THAN EXISTING UNIMPROVED ACCESS ROADS SHALL USE ONLY BIODEGRADABLE, VEGETABLE BASED HYDRAULIC FLUIDS OR APPROVED OTHER.
13. EQUIPMENT SHALL BE CHECKED AT THE BEGINNING OF EACH WORK SHIFT FOR LEAKS, AND ANY NECESSARY REPAIRS SHALL BE COMPLETED PRIOR TO COMMENCING WORK ACTIVITIES.
14. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE RIVER, WETLANDS OR THE PROJECT SITE FROM EQUIPMENT OR SUPPLIES USED DURING CONSTRUCTION.
15. CONTRACTOR SHALL LIMIT MACHINERY MOVEMENT TO THE PROJECT CONSTRUCTION LIMITS DEFINED ON THE PLANS OR IDENTIFIED AS ACCEPTABLE BY THE OWNER OR PROJECT REPRESENTATIVE.
16. IF AT ANY TIME, AS A RESULT OF PROJECT ACTIVITIES, FISH ARE OBSERVED IN DISTRESS, A FISH KILL OCCURS, OR WATER QUALITY PROBLEMS DEVELOP (INCLUDING EQUIPMENT LEAKS OR SPILLS), OPERATIONS SHALL CEASE AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY. WASHINGTON DEPARTMENT OF FISH AND WILDLIFE AND WASHINGTON STATE DEPARTMENT OF ECOLOGY SHALL BE CONTACTED IMMEDIATELY BY THE OWNER OR BY HIS/HER DESIGNEE. WORK SHALL NOT RESUME UNTIL FURTHER APPROVAL BY THE OWNER.
17. EROSION AND SEDIMENT CONTROL METHODS SHALL BE USED TO MINIMIZE SILT-LADEN WATER FROM ENTERING THE RIVER AND WETLANDS. MINIMUM EROSION AND WATER POLLUTION CONTROL AND WATER MANAGEMENT BMPs ARE SHOWN ON THE TESC AND WATER MANAGEMENT SITE PLAN. THE CONTRACTOR SHALL IMPLEMENT THE PLAN, ADD ANY ADDITIONAL MEASURES REQUIRED TO MEET WASHINGTON STATE WATER QUALITY STANDARDS AND PROJECT PERMIT CONDITIONS, AND SHALL BE RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL AND WATER MANAGEMENT NEEDED DURING CONSTRUCTION ACTIVITIES.
18. IF HIGH FLOW CONDITIONS THAT MAY CAUSE SILTATION, EROSION OR A DANGEROUS WORK ENVIRONMENT ARE ENCOUNTERED DURING CONSTRUCTION, WORK SHALL STOP IN THOSE AFFECTED AREAS UNTIL THE FLOW SUBSIDES.
19. APPROPRIATE CULTURAL RESOURCES MONITORING WILL BE COMPLETED BY THE OWNER DURING CONSTRUCTION. IF AT ANY TIME, AS A RESULT OF PROJECT ACTIVITIES, ARTIFACTS OR HUMAN REMAINS ARE FOUND, OPERATIONS SHALL CEASE AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY. ALL CONSTRUCTION STAFF SHALL BE TRAINED IN CULTURAL RESOURCES MONITORING BASICS.



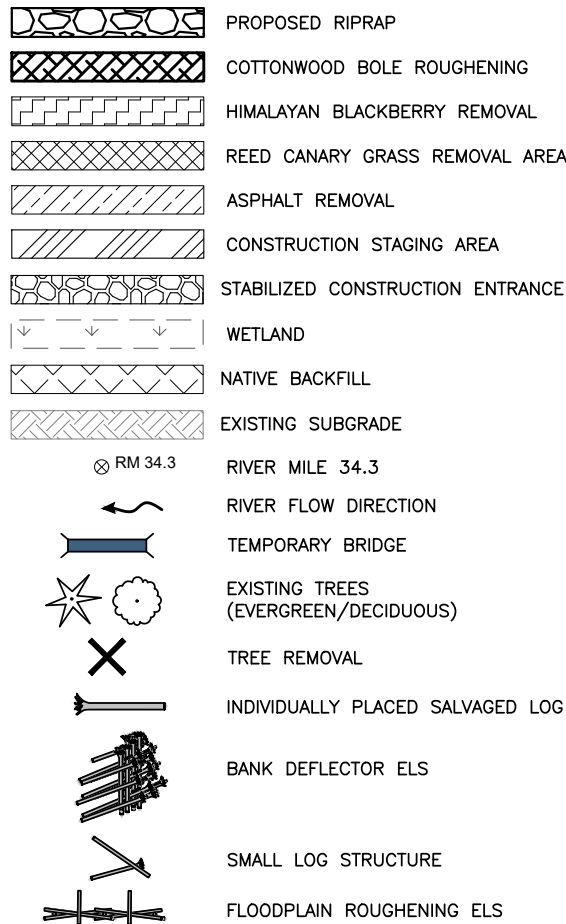
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| CHECKED:       | --   | --      |  |          |    |      |
| CAD ENTERED:   | E.M. | 11/2020 |  |          |    |      |
| DESIGNED:      | J.W. | 11/2020 |  |          |    |      |
| CHECKED:       | I.M. | 11/2020 |  |          |    |      |
| SUPERVISOR:    | M.E. | 11/2020 |  |          |    |      |
|                |      |         | NUM.   | REVISION | BY | DATE |



MAINTENANCE DIVISION No. \_\_\_\_-\_\_\_\_

|  |   |
|--|---|
|  | PARCEL LINE (APPROX)  |
|  | PROJECT LIMITS  |
|  | SURVEY EXTENTS  |
|  | ORDINARY HIGH WATER MARK                                      |
|  | CLEARING AND GRUBBING LIMITS                                  |
|  | SELECTIVE CLEARING AND GRUBBING LIMITS                        |
|  | ACCESS ROAD   |
|  | RIPRAP EXPLORATION TRENCH                                     |
|  | STRAW WATTLES   |
|  | SILT FENCE  |
|  | SILT CURTAIN  |
|  | ROCK CHECKDAM   |
|  | EXISTING TREE LINE (APPROX)                                   |
|  | EXISTING CONTOURS   |
|  | PROPOSED CONTOURS (1 FT INTERVAL)                             |
|  | WIRE FENCE (TYPE 2)   |
|  | CUT LINE  |
|  | FILL LINE   |
|  | NEW ASPHALT   |
|  | FILTER STRIP  |
|  | EXISTING RIPRAP TO BE REMOVED                                 |
|  | POSSIBLE EXISTING BURIED RIPRAP TO BE REMOVED, IF ENCOUNTERED |
|  | EXISTING RIPRAP TO REMAIN                                     |

|           |                               |      |                                |       |                          |
|-----------|-------------------------------|------|--------------------------------|-------|--------------------------|
| APPROX    | APPROXIMATE                   | HMA  | HOT MIX ASPHALT                | SPEC  | SPECIFICATION            |
| AVG       | AVERAGE                       | HOR  | HORIZONTAL                     | SRR   | SETBACK ROCK REVETMENT   |
| BLDG      | BUILDING                      | HR   | HAFFNER REVETMENT              | STA   | STATION                  |
| BMP       | BEST MANAGEMENT PRACTICE      | HT   | HEIGHT                         | STD   | STANDARD                 |
| BSB       | BARFUSE SETBACK BERM          | HSC  | HAFFNER SIDE CHANNEL           | SWPPP | STORMWATER POLLUTION     |
| BVC       | BEGIN VERTICAL CURVE          | IN   | INCH/INCHES                    |       | PREVENTION PLAN          |
| CB        | CATCH BASIN                   | L    | LENGTH                         | TESC  | TEMPORARY EROSION AND    |
| CFS       | CUBIC FEET PER SECOND         | LF   | LINEAL FOOT/FEET               |       | SEDIMENT CONTROL         |
| CG        | CLEAR AND GRUB                | LT   | LEFT                           | TYP   | TYPICAL                  |
| C/L, CL   | CENTERLINE                    | MAX  | MAXIMUM                        | VCL   | VERTICAL CURVE LENGTH    |
| CONC      | CONCRETE                      | MIN  | MINIMUM                        | W     | WEST, WATER              |
| CONST     | CONSTRUCT, CONSTRUCTION       | N    | NORTH/NORTHING                 | WSDOT | WASHINGTON STATE         |
| COS       | CITY OF SEATTLE               | NA   | NOT APPLICABLE                 |       | DEPARTMENT OF            |
| CP        | CONTROL POINT                 | NO   | NUMBER                         |       | TRANSPORTATION           |
| CSBC      | CRUSHED SURFACING BASE COURSE | NTS  | NOT TO SCALE                   | WSE   | WATER SURFACE ELEVATION  |
| CSTC      | CRUSHED SURFACING TOP COURSE  | OC   | ON CENTER                      | WQMP  | WATER QUALITY MONITORING |
| DEMO      | DEMOLITION                    | OHW  | ORDINARY HIGH WATER            |       | AND PROTECTION PLAN      |
| DIA       | DIAMETER                      | PC   | POINT OF CURVATURE             |       |                          |
| DWG       | DRAWING                       | PI   | POINT OF INTERSECTION          |       |                          |
| E         | EAST, EASTING                 | PREP | PREPARATION                    |       |                          |
| EA        | EACH                          | PVI  | POINT OF VERTICAL INTERSECTION |       |                          |
| EG        | EXISTING GROUND               | QTY  | QUANTITY                       |       |                          |
| EL        | ELEVATION                     | RD   | ROAD                           |       |                          |
| ELS       | ENGINEERED LOG STRUCTURE      | REF  | REFERENCE                      |       |                          |
| EVC       | END VERTICAL CURVE            | RM   | RIVER MILE                     |       |                          |
| EX, EXIST | EXISTING                      | ROW  | RIGHT-OF-WAY                   |       |                          |
| FG        | FINISHED GROUND               | RT   | RIGHT                          |       |                          |
| FT        | FEET/FOOT                     | S    | SOUTH, SLOPE                   |       |                          |



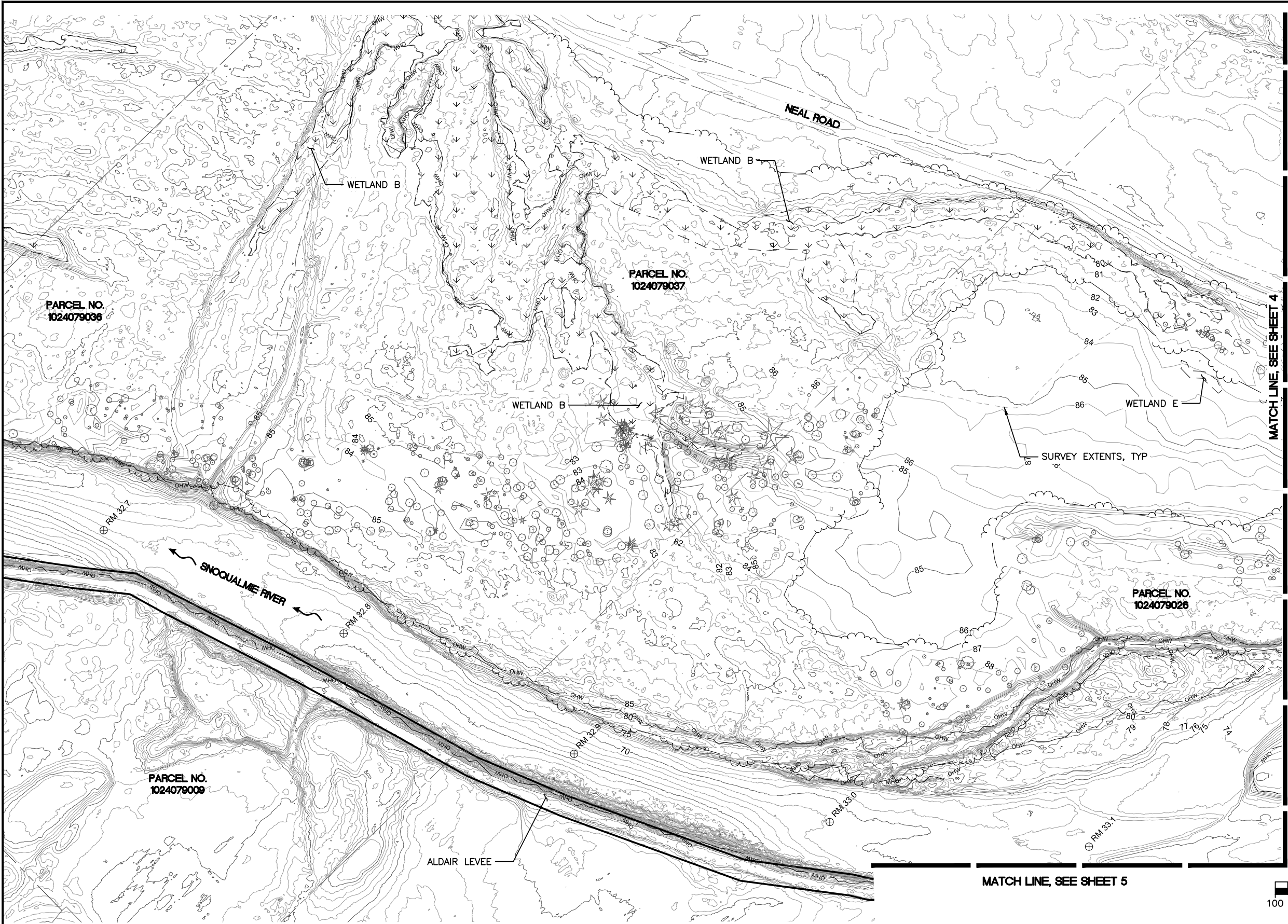
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**2**  
OF  
**50**  
SHEETS

XXX-XX (1)





**HORIZONTAL DATUM**

THE HORIZONTAL DATUM FOR THIS SURVEY IS NAD 83-91, WASHINGTON NORTH ZONE, STATE PLANE COORDINATE SYSTEM BASED ON PUBLISHED COORDINATES FOR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) MONUMENT WITH DESIGNATION 'KC NEAL' AND MONUMENT ID 5215

NORTHING: 209787.674 US SURVEY FEET  
EASTING: 1380151.400 US SURVEY FEET

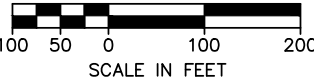
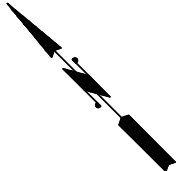
**VERTICAL DATUM**

THE VERTICAL DATUM FOR THIS SURVEY IS NAVD 88, BASED ON PUBLISHED COORDINATES FOR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) MONUMENT WITH DESIGNATION 'KC NEAL' AND MONUMENT ID 5215

ELEVATION: 94.760 US SURVEY FEET

**SURVEYOR'S NOTES**

1. ALL DOCUMENTS ARE RECORDS OF WSDOT AND KING COUNTY, WASHINGTON. LINES OF OCCUPATION WERE NOT SURVEYED AND NO CORNERS WERE SET IN THE COURSE OF THIS SURVEY. GIS DATA FOR SNOQUALMIE RIVER WAS USED TO DEPICT THE NORTHERLY AND EASTERLY BOUNDARIES OF PARCELS 1254079002 AND 1524079145. A PORTION OF THE SURVEYED LOCATION OF NEAL ROAD IS IN CONFLICT WITH THE COUNTY ENGINEER'S SURVEY OF THE RIGHT OF WAY. IT WAS NOT WITHIN THE SCOPE OF THIS PROJECT TO ADDRESS OR RESOLVE THIS SITUATION.
2. PGS, INC COLLECTED TOPOGRAPHIC DATA WITHIN THE OUTLINED AREAS MARKED HEREON. THIS DATA WAS MERGED WITH AN EXISTING LIDAR DATASET PROVIDED TO PGS, INC BY HERRERA ENVIRONMENTAL CONSULTANTS ON JULY 29, 2020.
3. ALL UNDERGROUND UTILITY LOCATIONS ARE BASED ON OBSERVED EVIDENCE OF STRUCTURES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION PROVIDED.
4. EXISTING TREES ONLY SHOWN WITHIN PROJECT SURVEY LIMITS.



|                |      |         |      |          |         |
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| SURVEY JOB NO: | ---  | ---     |      |          |         |
| CHECKED:       | ---  | ---     |      |          |         |
| CAD ENTERED:   | E.M. | 11/2020 |      |          |         |
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| SUPERVISOR:    | M.E. | 11/2020 |      |          |         |
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PERMIT PLANS  
NOV 2020



|                          |     |
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| FED. AID No.             | --- |
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| MAINTENANCE DIVISION No. | --- |

**FALL CITY  
FLOODPLAIN RESTORATION PROJECT**

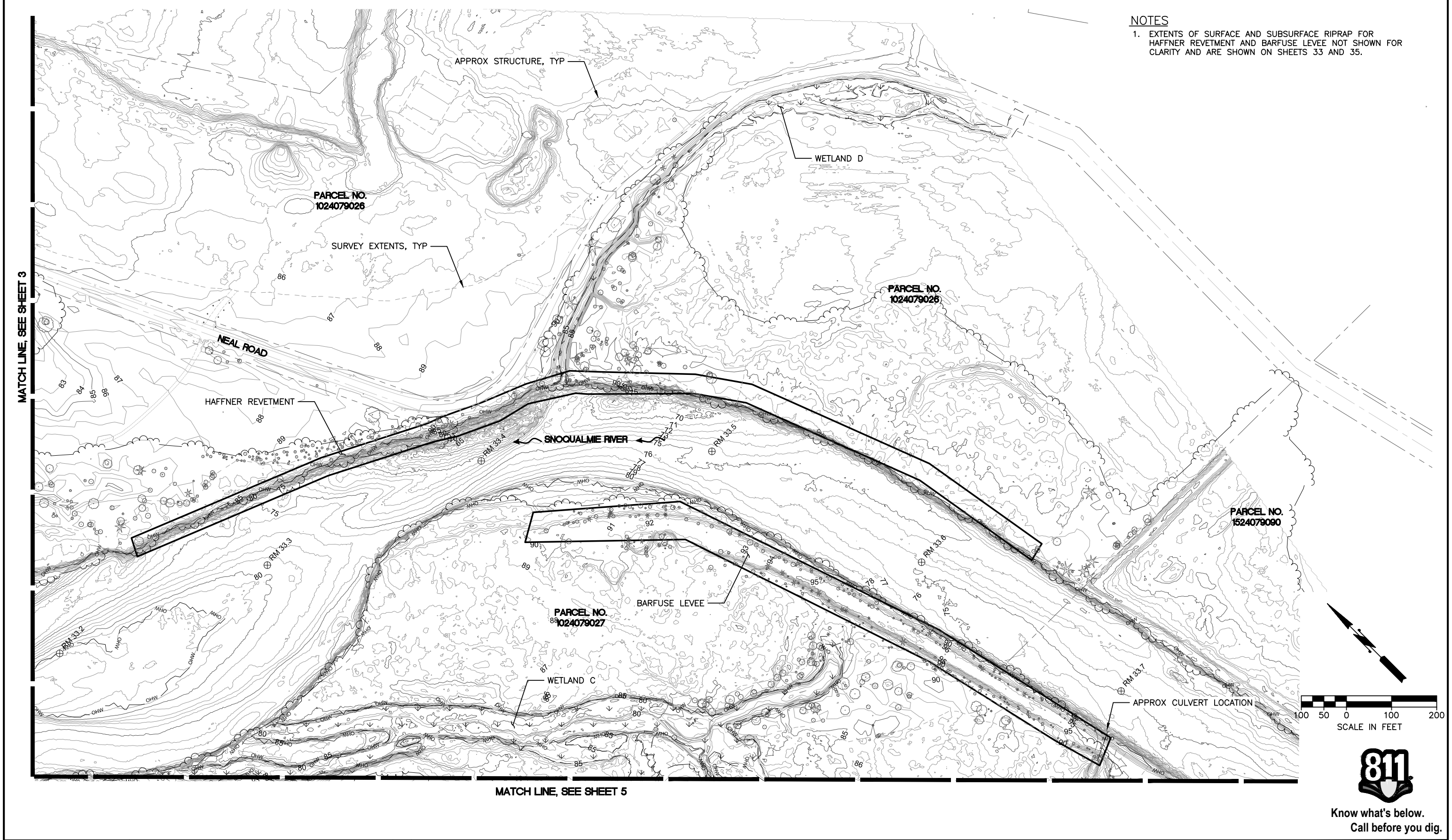
EXISTING CONDITIONS 1



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| SUPERVISOR:    | M.E. | 11/2020 |


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| PERMIT PLANS<br>NOV 2020 |          |    |      |  |  |
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| FED. AID No.             | --- |
| PROJECT No.              | --  |
| MAINTENANCE DIVISION No. | --- |

FALL CITY  
FLOODPLAIN RESTORATION PROJECT

EXISTING CONDITIONS 2

  
King County

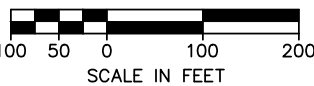
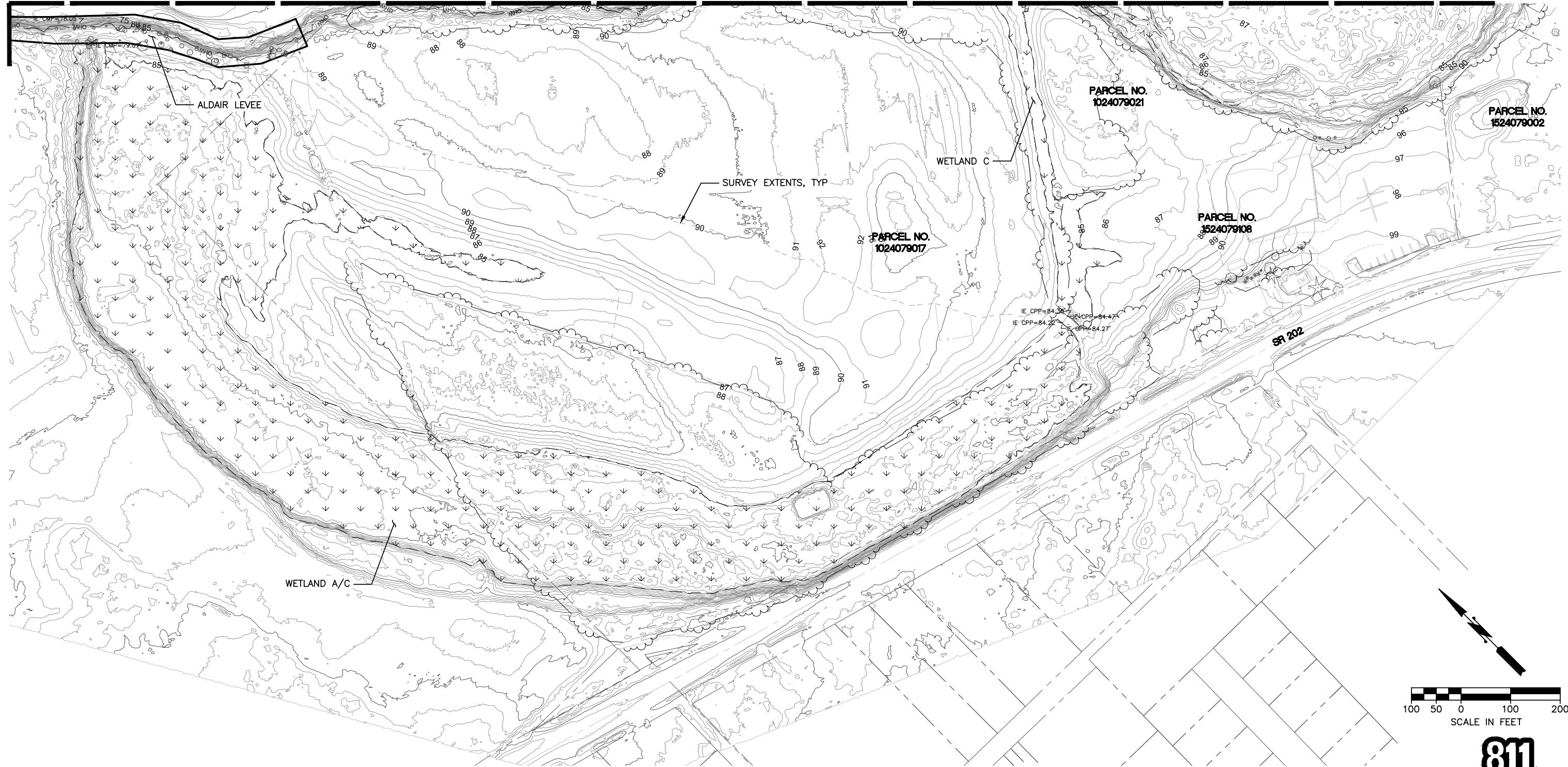
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MATCH LINE, SEE SHEET 3

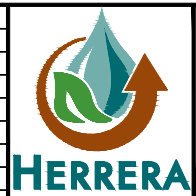
MATCH LINE, SEE SHEET 4



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|                |      |         | NUM. | REVISION | BY DATE |

PERMIT PLANS  
NOV 2020



FED. AID No. \_\_\_\_\_

PROJECT No. \_\_\_\_\_

MAINTENANCE DIVISION No. \_\_\_\_\_

**FALL CITY  
FLOODPLAIN RESTORATION PROJECT**

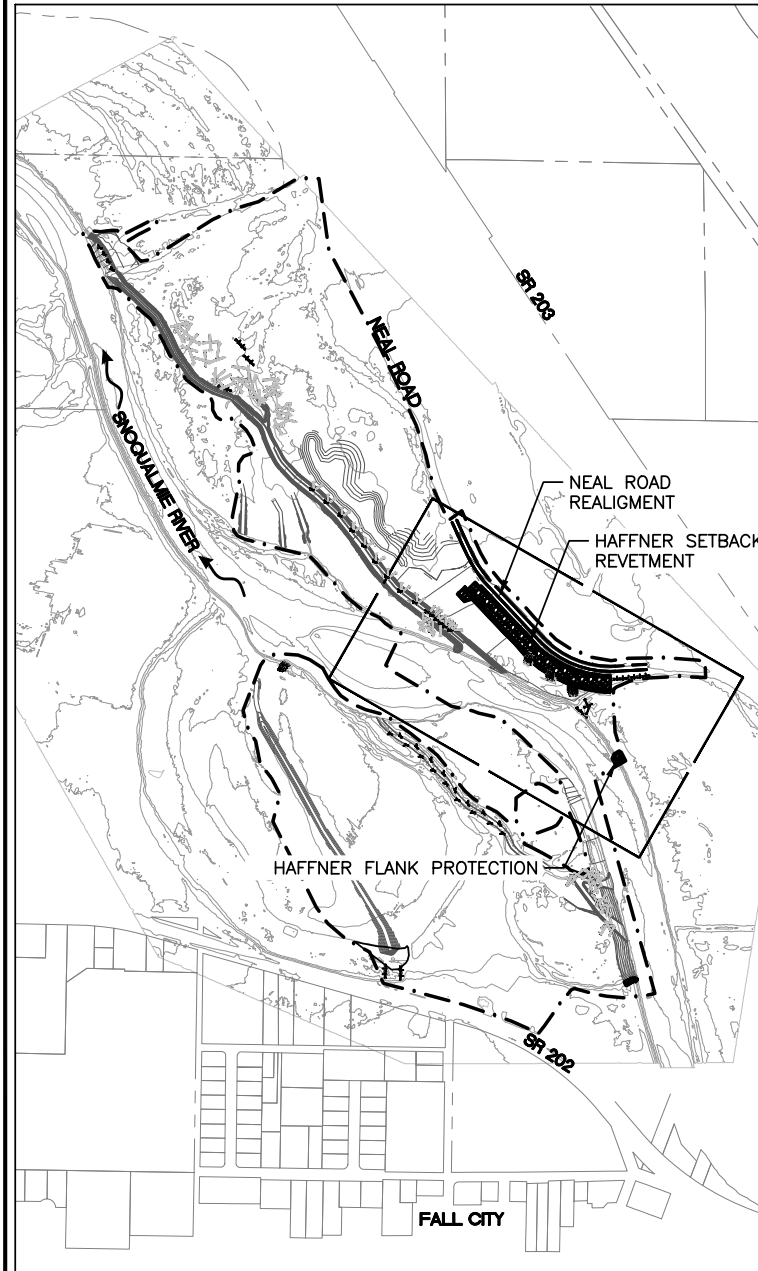
EXISTING CONDITIONS 3

**King County**

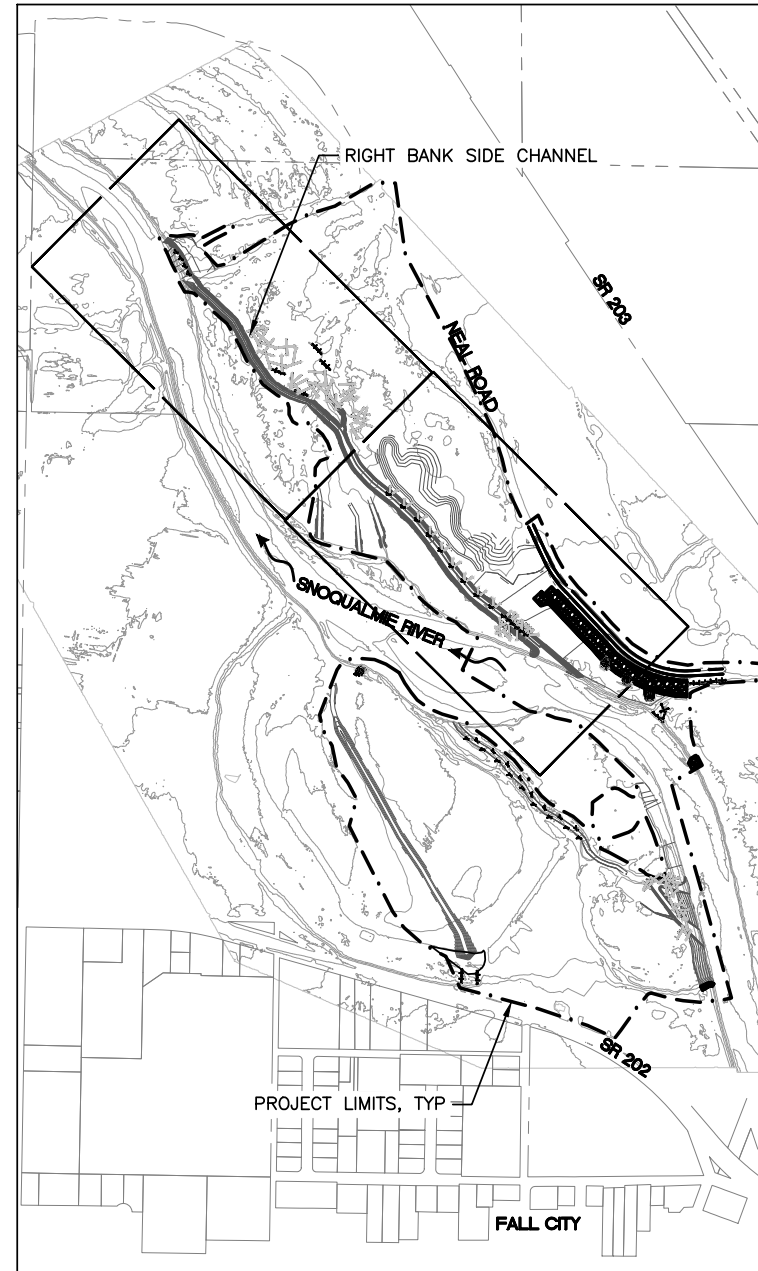
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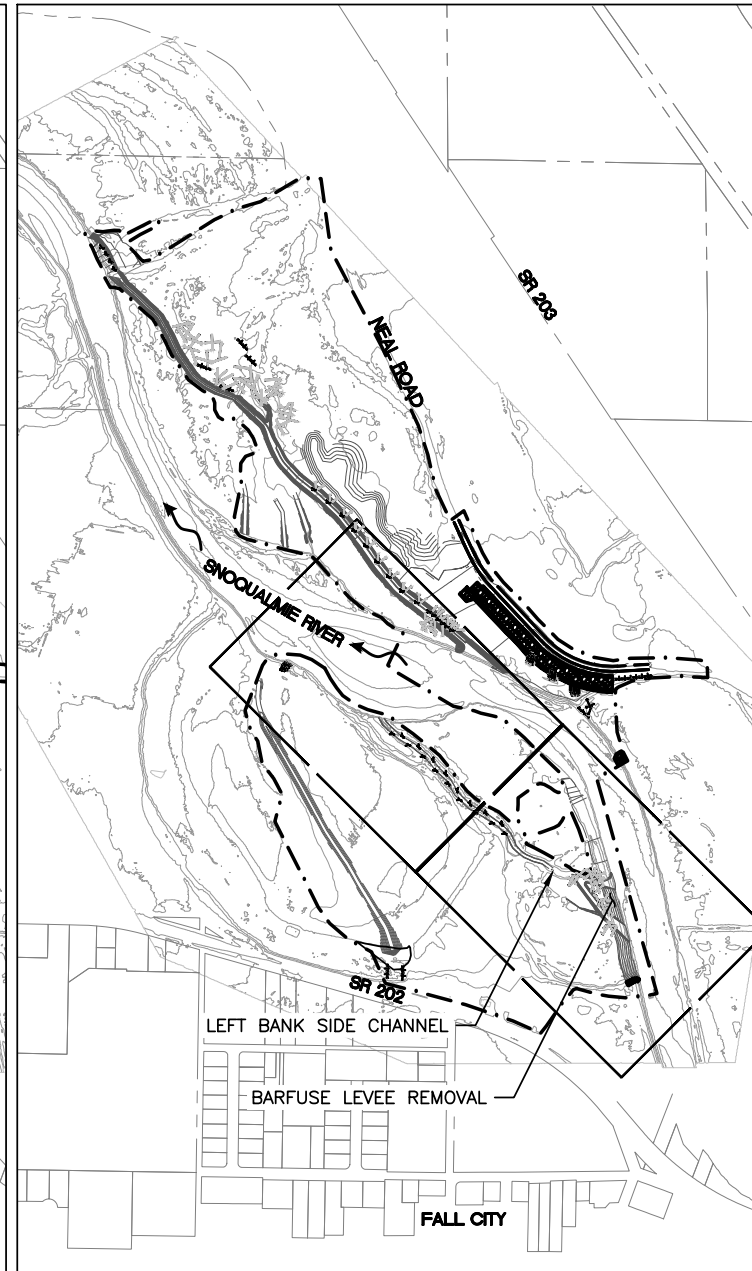




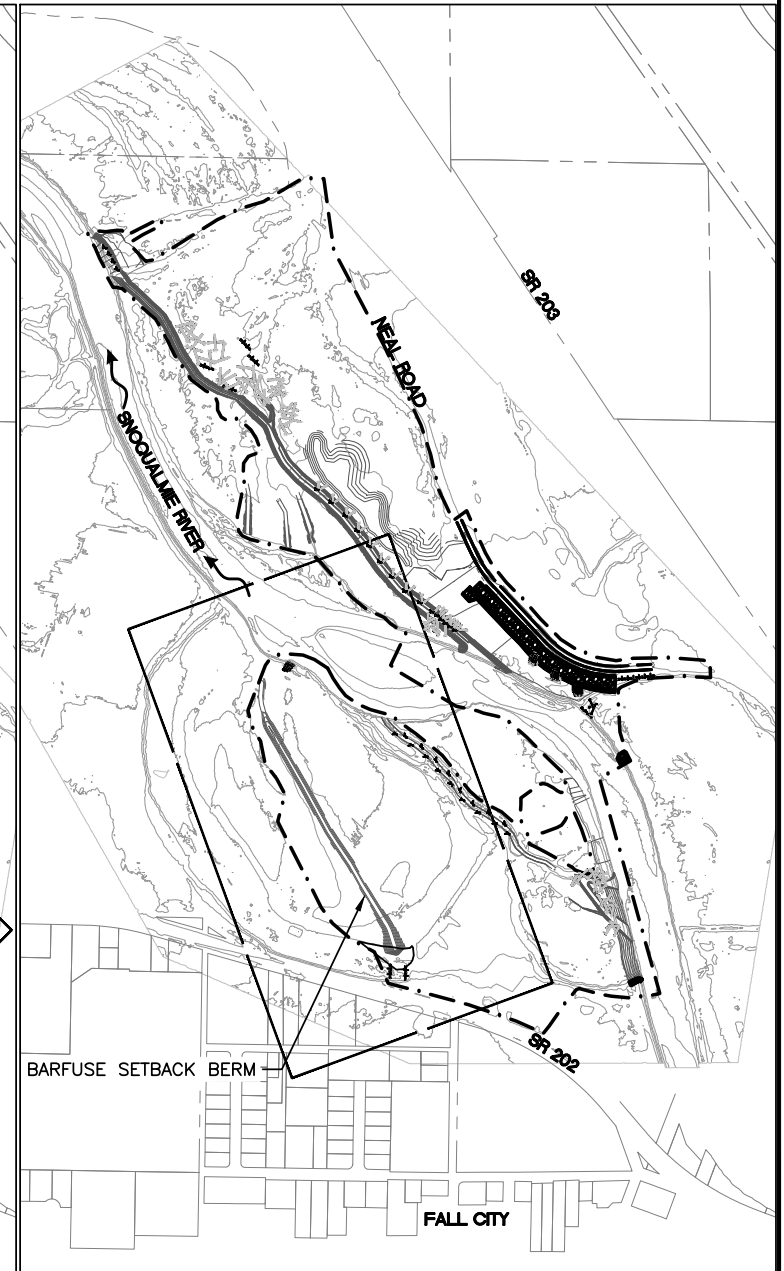
NEAL ROAD REALIGNMENT, SEE SHEETS 7-13  
 HAFFNER REVETMENT REMOVAL, SEE SHEETS 33-34  
 HAFFNER SETBACK REVETMENT, SEE SHEETS 14-15



RIGHT BANK SIDE CHANNEL, SEE SHEETS 16-18



BARFUSE LEVEE REMOVAL AND LEFT BANK  
 SIDE CHANNEL, SEE SHEETS 23-36

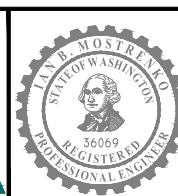


BARFUSE SETBACK BERM SEE SHEETS 26-27



Know what's below.  
 Call before you dig.

|                                      |      |         |      |          |      |
|--------------------------------------|------|---------|------|----------|------|
| SURVEY JOB NO:                       | ---  | ---     |      |          |      |
| CHECKED:                             | ---  | ---     |      |          |      |
| CAD ENTERED:                         | E.M. | 11/2020 |      |          |      |
| DESIGNED:                            | J.W. | 11/2020 |      |          |      |
| CHECKED:                             | I.M. | 11/2020 |      |          |      |
| SUPERVISOR:                          | M.E. | 11/2020 |      |          |      |
| <div>PERMIT PLANS<br/>NOV 2020</div> |      |         | NUM. | REVISION | BY   |
|                                      |      |         |      |          | DATE |



FED. AID No. \_\_\_\_\_

PROJECT No. \_\_\_\_\_

MAINTENANCE DIVISION No. \_\_\_\_\_

## FALL CITY FLOODPLAIN RESTORATION PROJECT

KEY MAP - CONSTRUCTION ELEMENTS



King County

XXX-XX (1)

SHEET  
6  
OF  
50  
SHEETS




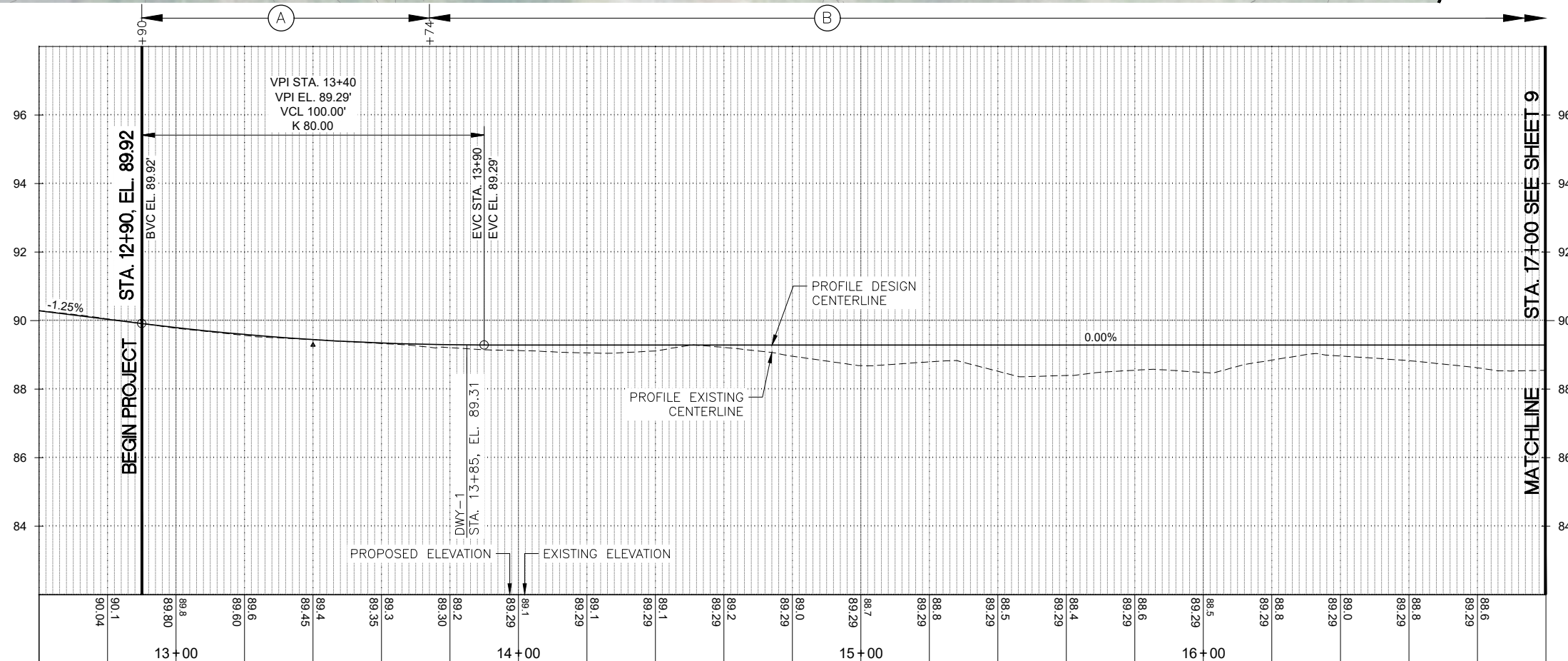
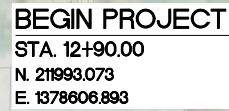


NW<sup>4</sup> SE

X-XXXX-XXX-XX

FALL CITY FARMS, LLC

1. DRIVEWAY LIMITS. MATCH EXIST GRADE.
2. INSTALL FILTER STRIP PER DETAIL "E" SHOWN ON SHEET 12.
3. INSTALL WIRE FENCE (TYPE 2) PER WSDOT STD. PLAN L-10.10.
4. INSTALL DOUBLE GATE PER WSDOT STD PLAN L-10.10.



NAVd88



**Know what's below.  
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PERMIT PLANS  
NOV. 2020

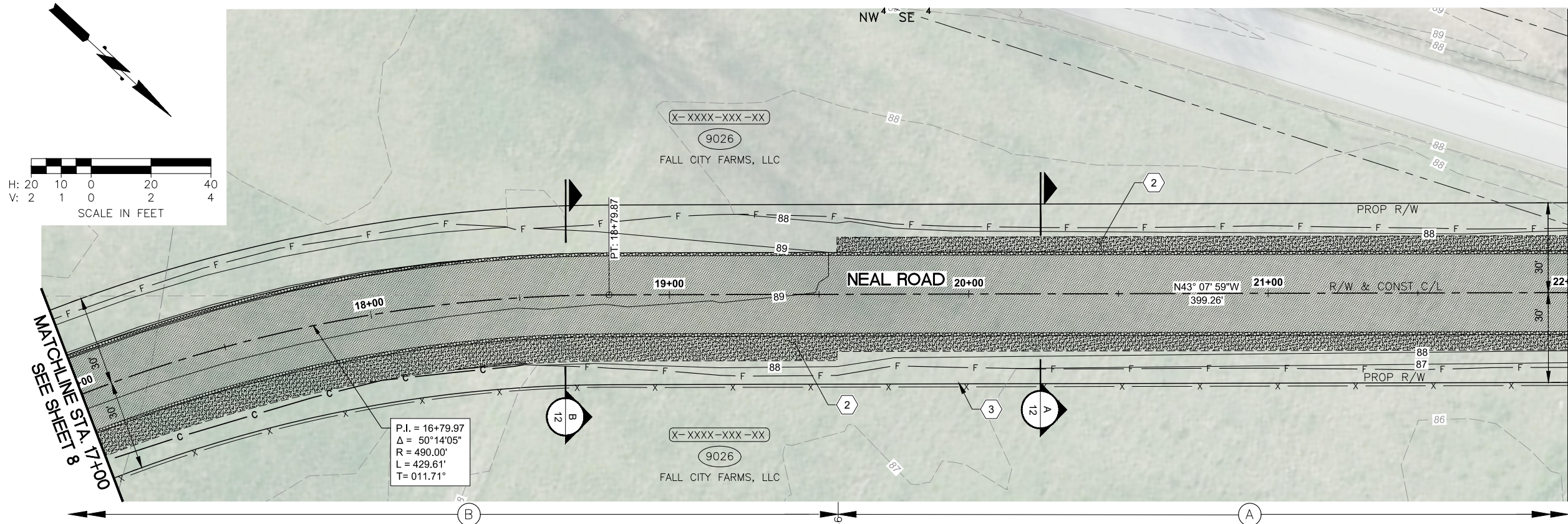
# FALL CITY FLOODPLAIN RESTORATION PROJECT

PLAN & PROFILE  
NEAL RD REALIGNMENT 1

**King County**  
**XXX-XX (1)**

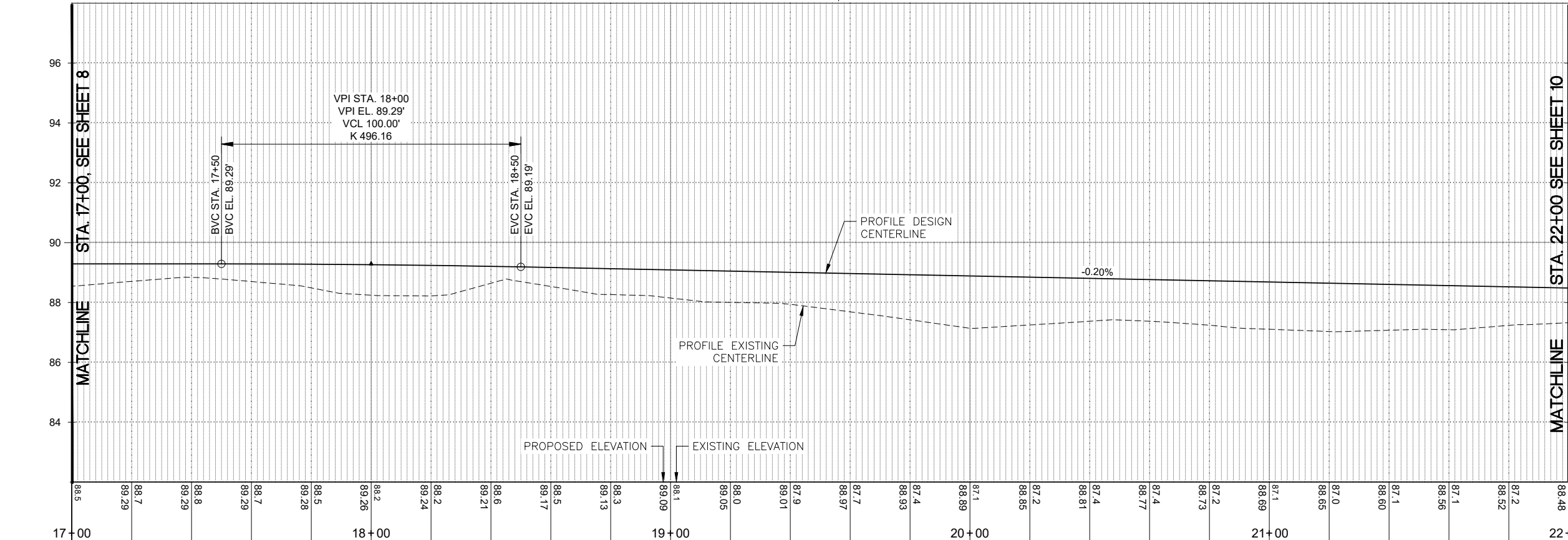


SEC. 10, T.24 N., R.07 E., W.M.

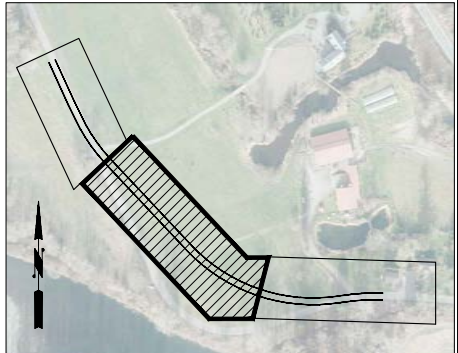


CONSTRUCTION NOTES:

1. DRIVEWAY LIMITS. MATCH EXIST GRADE.
2. INSTALL FILTER STRIP PER DETAIL "E" SHOWN ON SHEET 12.
3. INSTALL WIRE FENCE (TYPE 2) PER WSDOT STD. PLAN L-10.10.
4. INSTALL DOUBLE GATE PER WSDOT STD PLAN L-10.10.



SHEET LOCATION KEY



Meridian W.S.L.G.N.Z. NAVD88

**811**

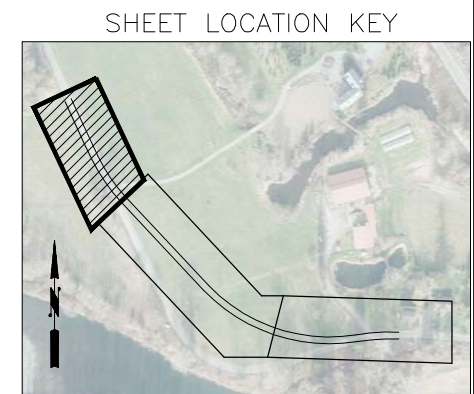
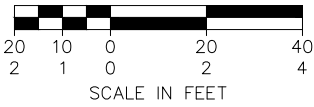
Know what's below.  
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|                                   |  |                                   |  |  |  |      |  |                                |  |  |  |   |  |   |  |
|-----------------------------------|--|-----------------------------------|--|--|--|------|--|--------------------------------|--|--|--|---|--|---|--|
| SURVEY JOB NO. _____              |  | <b>PERMIT PLANS<br/>NOV. 2020</b> |  | <b>TRANTECH</b><br>Engineering LLC<br>1221 Fraser Street<br>Suite E-3<br>Bellingham, WA 98229<br>P: 360.255.2563 |  |      |  | FED. AID No. _____             |  |  |  | <b>FALL CITY<br/>FLOODPLAIN RESTORATION PROJECT</b> |  | SHEET<br><b>9</b><br>OF<br><b>50</b><br>SHEETS<br><b>XXX-XX (1)</b> |  |
| CHECKED: _____                    |  |                                   |  |  |  |      |  | PROJECT No. _____              |  |  |  |   |  |   |  |
| CAD ENTERED: _____ R.S.B. 11/2020 |  |                                   |  |  |  |      |  | MAINTENANCE DIVISION No. _____ |  |  |  |   |  |   |  |
| DESIGNED: _____ R.S.B. 11/2020    |  |                                   |  |  |  |      |  |                                |  |  |  |   |  |   |  |
| CHECKED: _____ T.M.W. 11/2020     |  |                                   |  |  |  |      |  |                                |  |  |  |   |  |   |  |
| SUPERVISOR: _____ T.M.W. 11/2020  |  |                                   |  |  |  |      |  |                                |  |  |  |   |  |   |  |
| NUM.                              |  | REVISION                          |  | BY   |  | DATE |  |                                |  |  |  |   |  |   |  |



NW<sup>4</sup> SE<sup>4</sup>

1. DRIVEWAY LIMITS. MATCH EXIST GRADE.
2. INSTALL FILTER STRIP PER DETAIL "E"  
SHOWN ON SHEET 12.
3. INSTALL WIRE FENCE (TYPE 2) PER  
WSDOT STD. PLAN L-10.10.
4. INSTALL DOUBLE GATE PER WSDOT STD  
PLAN L-10.10.



NAV88

**Know what's below.  
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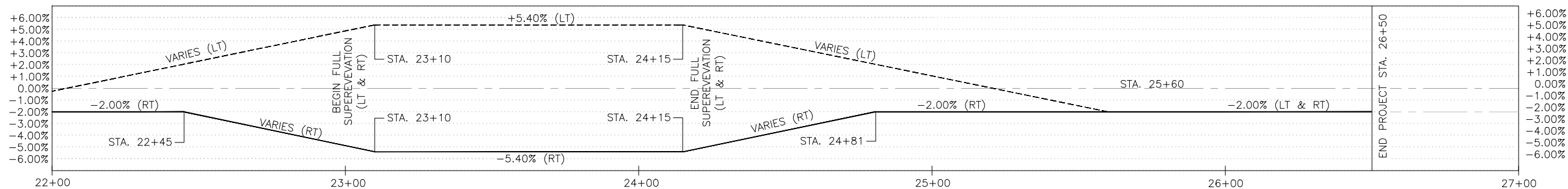
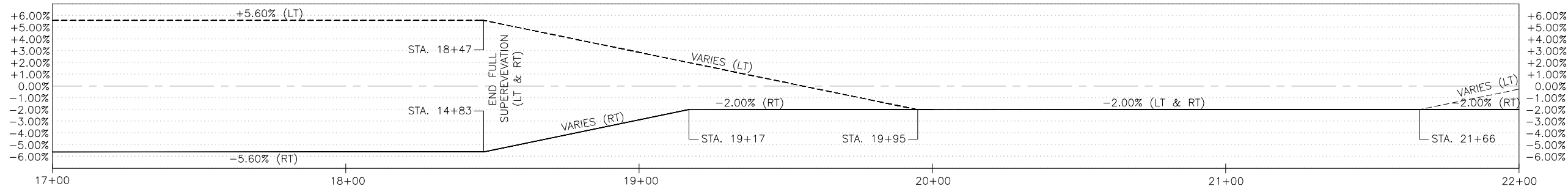
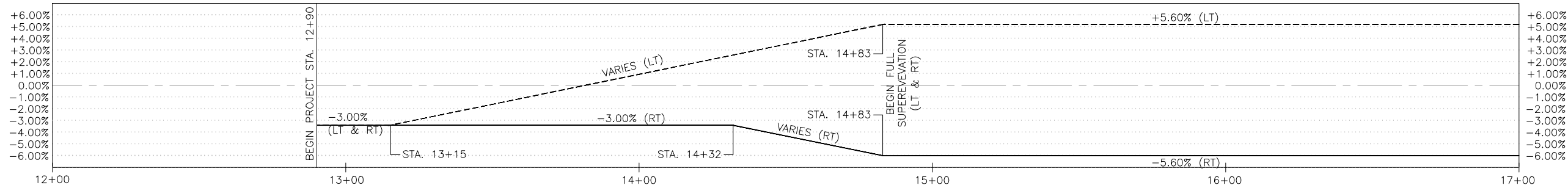
PERMIT PLANS  
NOV. 2020

# FALL CITY FLOODPLAIN RESTORATION PROJECT

King County

XXX-XX (1)

SHEET  
10  
OF  
50  
SHEETS



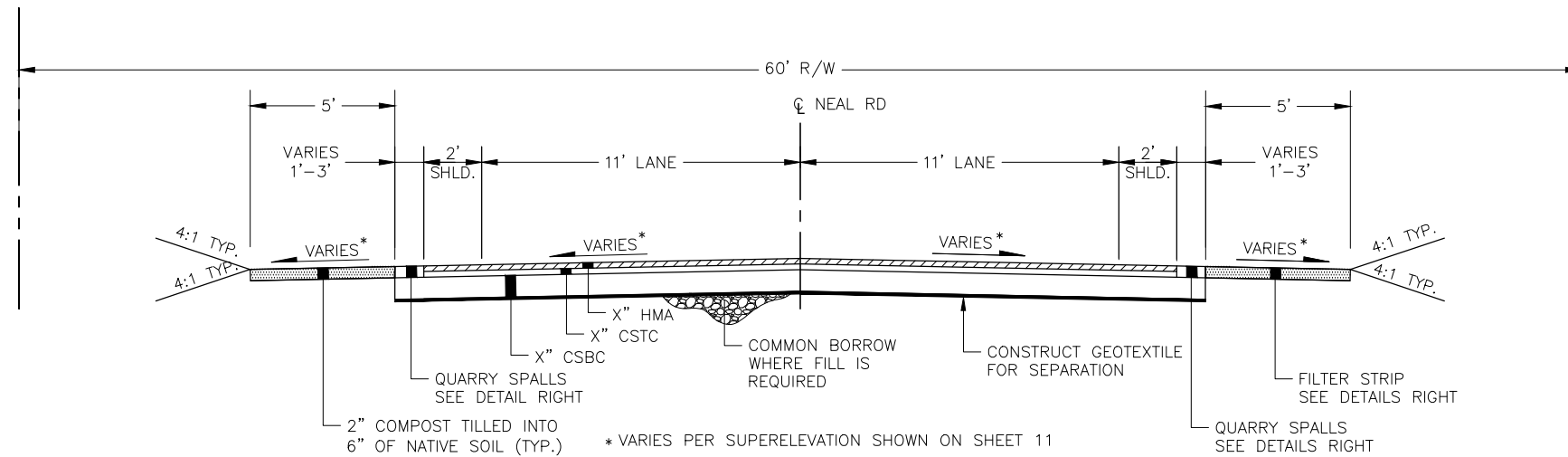
**SUPERELEVATION**  
SCALE: NTS



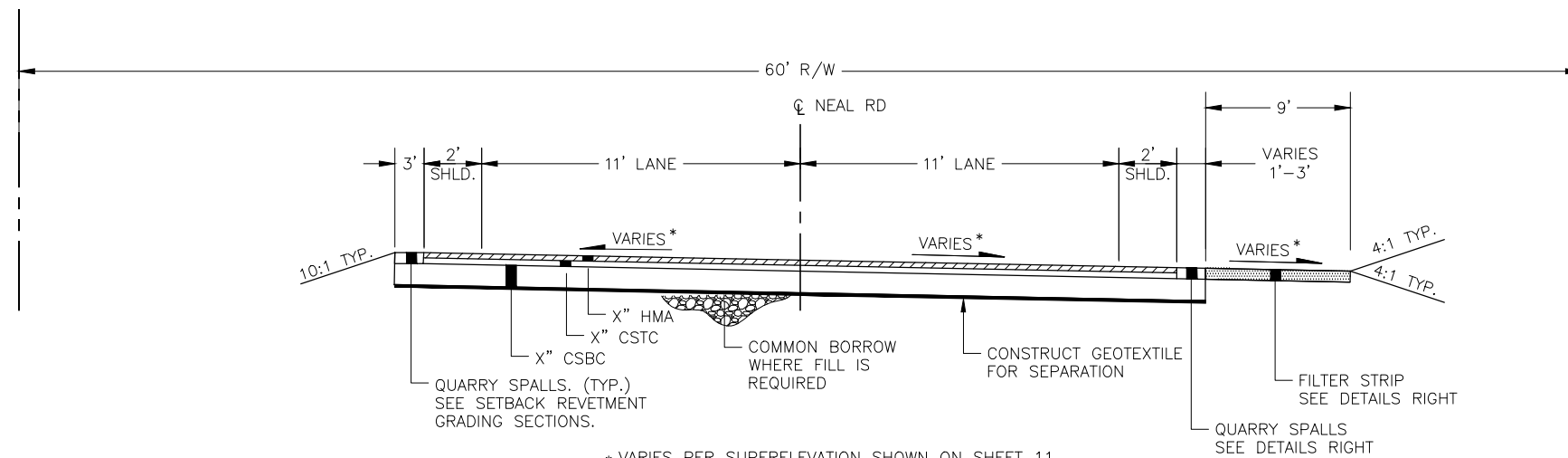
Know what's below.  
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|                      |          |                |      |                                   |  |                                |    |                               |  |                                  |  |                                   |  |  |  |  |  |                    |  |                   |  |                                |  |   |  |   |  |
|----------------------|----------|----------------|------|-----------------------------------|--|--------------------------------|----|-------------------------------|--|----------------------------------|--|-----------------------------------|--|--|--|--|--|--------------------|--|-------------------|--|--------------------------------|--|---|--|---|--|
| SURVEY JOB NO: _____ |          | CHECKED: _____ |      | CAD ENTERED: _____ R.S.B. 11/2020 |  | DESIGNED: _____ R.S.B. 11/2020 |    | CHECKED: _____ T.M.W. 11/2020 |  | SUPERVISOR: _____ T.M.W. 11/2020 |  | <b>PERMIT PLANS<br/>NOV. 2020</b> |  | <b>TRANTECH</b><br>Engineering LLC<br>1221 Fraser Street<br>Suite E-3<br>Bellingham, WA 98229<br>P: 360.255.2563 |  |  |  | FED. AID No. _____ |  | PROJECT No. _____ |  | MAINTENANCE DIVISION No. _____ |  | <b>FALL CITY<br/>FLOODPLAIN RESTORATION PROJECT</b><br><br>NEAL ROAD DETAILS<br>SUPERELEVATION PLAN |  | <br>SHEET 11 OF 50 SHEETS<br>XXX-XX (1) |  |
| NUM.                 | REVISION | BY             | DATE | NUM.                              |  | REVISION                       | BY | DATE                          |  |                                  |  |                                   |  |  |  |  |  |                    |  |                   |  |                                |  |   |  |   |  |

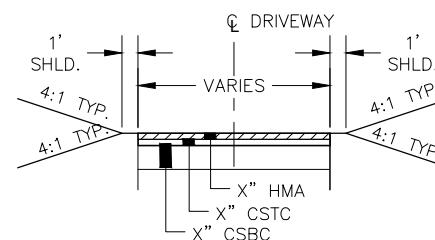




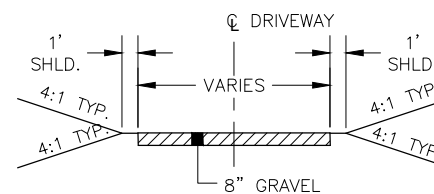
TYPICAL ROADWAY SECTION **A**  
SCALE: NTS



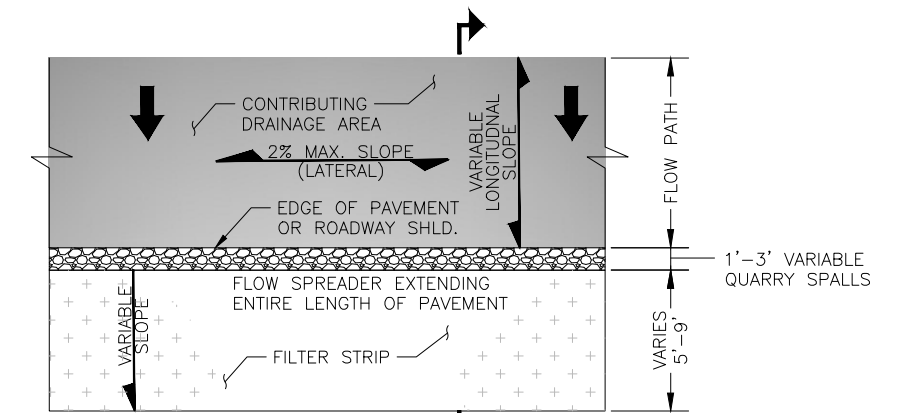
TYPICAL ROADWAY SECTION **B**  
SCALE: NTS



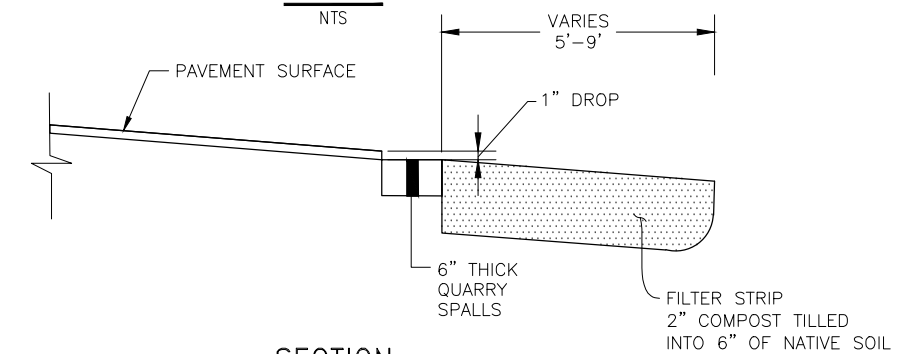
TYPICAL DRIVEWAY SECTION **C**  
SCALE: NTS



GRAVEL DRIVEWAY SECTION **D**  
SCALE: NTS



PLAN  
NTS



SECTION  
NTS

FILTER STRIP DETAIL **E**  
SCALE: NTS



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SURVEY JOB NO: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
CAD ENTERED: R.S.B. 11/2020  
DESIGNED: R.S.B. 11/2020  
CHECKED: T.M.W. 11/2020  
SUPERVISOR: T.M.W. 11/2020

PERMIT PLANS  
NOV. 2020

**TRANTECH**  
Engineering LLC  
1221 Fraser Street  
Suite E-3  
Bellingham, WA 98229  
P: 360.255.2563



FED. AID No. \_\_\_\_\_  
PROJECT No. \_\_\_\_\_  
MAINTENANCE DIVISION No. \_\_\_\_\_

**FALL CITY  
FLOODPLAIN RESTORATION PROJECT**

NEAL ROAD DETAILS  
TYPICAL SECTIONS



XXX-XX (1)

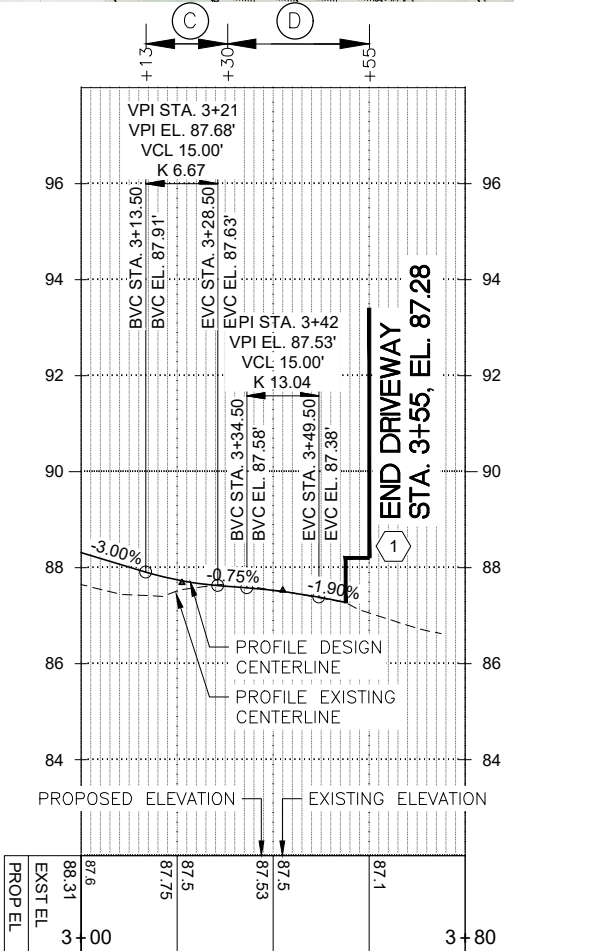
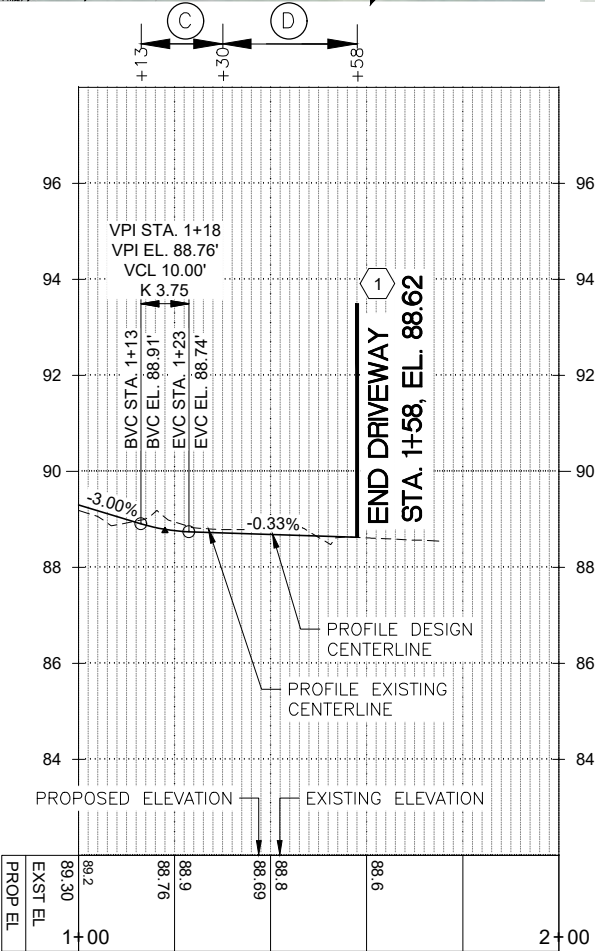
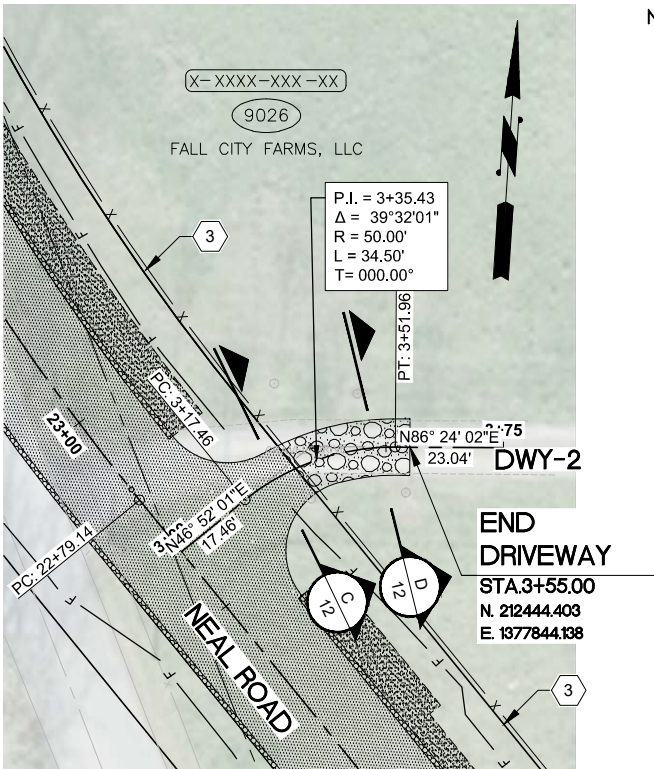
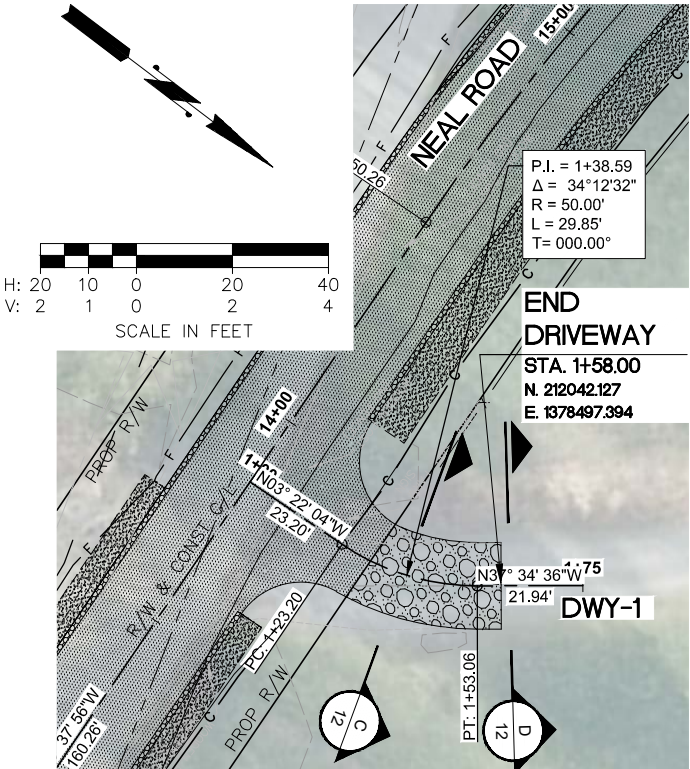
SHEET  
12  
OF  
50  
SHEETS

SEC. 10, T.24 N., R.07 E., W.M.

NW<sup>4</sup> SE<sup>4</sup>

CONSTRUCTION NOTES:

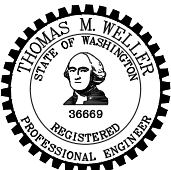
1. DRIVEWAY LIMITS. MATCH EXIST GRADE.
2. INSTALL FILTER STRIP PER DETAIL "E" SHOWN ON SHEET 12.
3. INSTALL WIRE FENCE (TYPE 2) PER WSDOT STD. PLAN L-10.10.
4. INSTALL DOUBLE GATE PER WSDOT STD PLAN L-10.10.



SURVEY JOB NO.:  
CHECKED:  
CAD ENTERED: R.S.B. 11/2020  
DESIGNED: R.S.B. 11/2020  
CHECKED: T.M.W. 11/2020  
SUPERVISOR: T.M.W. 11/2020

PERMIT PLANS  
NOV. 2020

TRANTECH  
Engineering LLC  
1221 Fraser Street  
Suite E-3  
Bellingham, WA 98229  
P: 360.255.2563



FED. AID No. --  
PROJECT No. --  
MAINTENANCE DIVISION No. --

FALL CITY  
FLOODPLAIN RESTORATION PROJECT

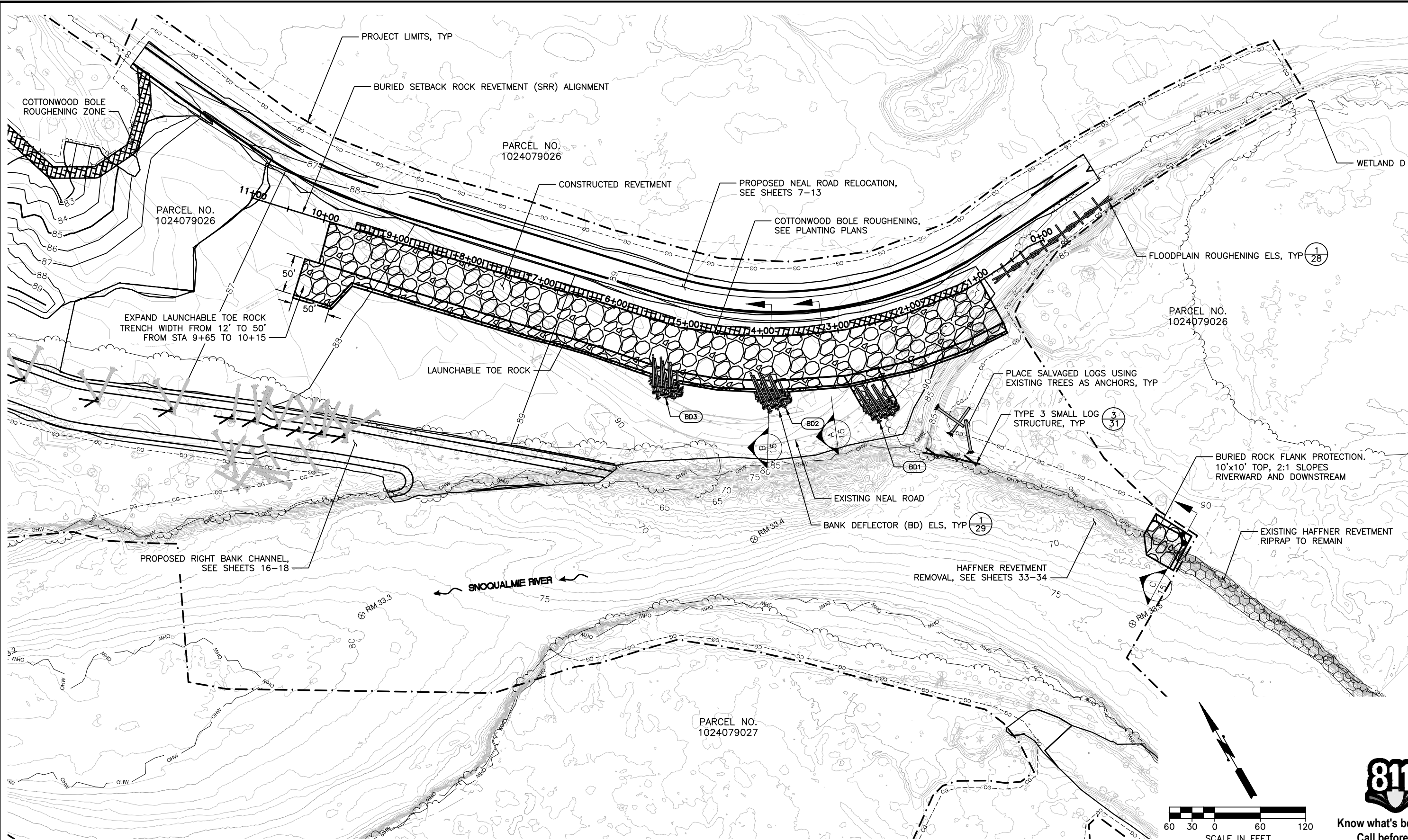
NEAL ROAD DETAILS  
(DRIVEWAY DETAILS)



XXX-XX (1)

SHEET  
13  
OF  
50  
SHEETS





|                |      |         |
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| SURVEY JOB NO: | ---  | ---     |
| CHECKED:       | ---  | ---     |
| CAD ENTERED:   | E.M. | 11/2020 |
| DESIGNED:      | J.W. | 11/2020 |
| CHECKED:       | I.M. | 11/2020 |
| SUPERVISOR:    | M.E. | 11/2020 |

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|--------------------------|----------|----|------|--|--|
| PERMIT PLANS<br>NOV 2020 |          |    |      |  |  |
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| NUM.                     | REVISION | BY | DATE |  |  |




FED. AID No. \_\_\_\_\_

PROJECT No. \_\_\_\_\_

MAINTENANCE DIVISION No. \_\_\_\_\_

FALL CITY  
FLOODPLAIN RESTORATION PROJECT

PLAN - HAFFNER SETBACK REVETMENT AND NEAL ROAD

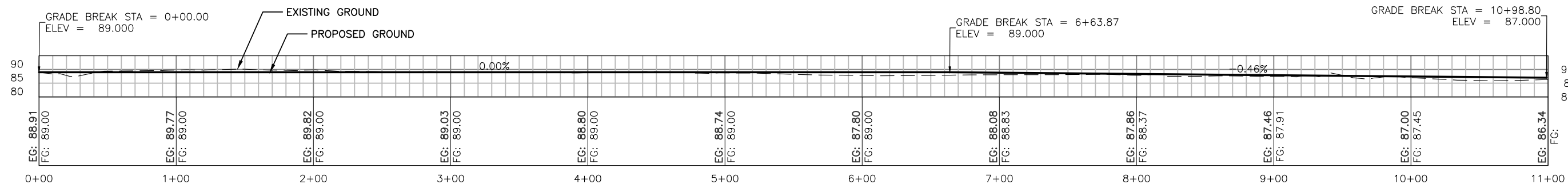
  
King County

SHEET  
14  
OF  
50  
SHEETS

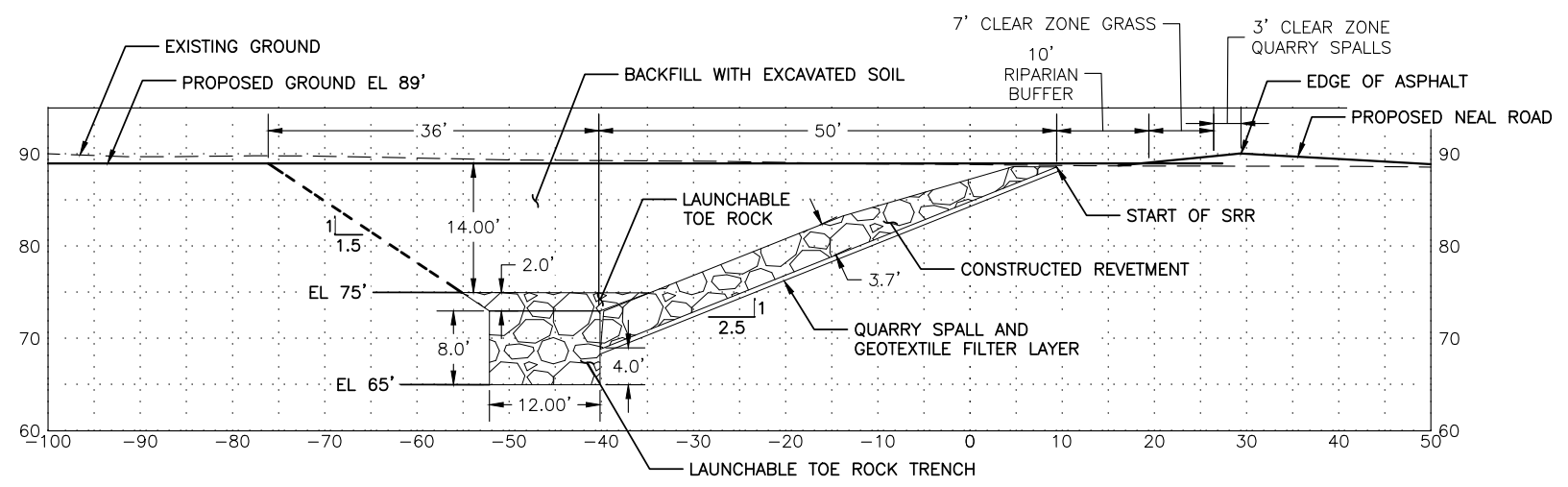
XXX-XX (1)

  
Know what's below.  
Call before you dig.

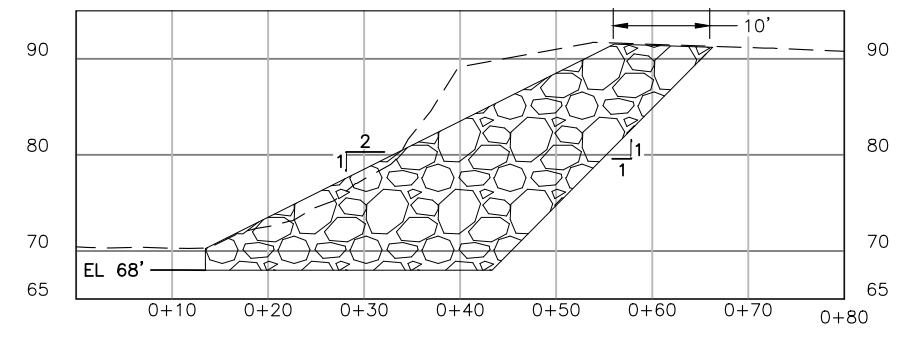




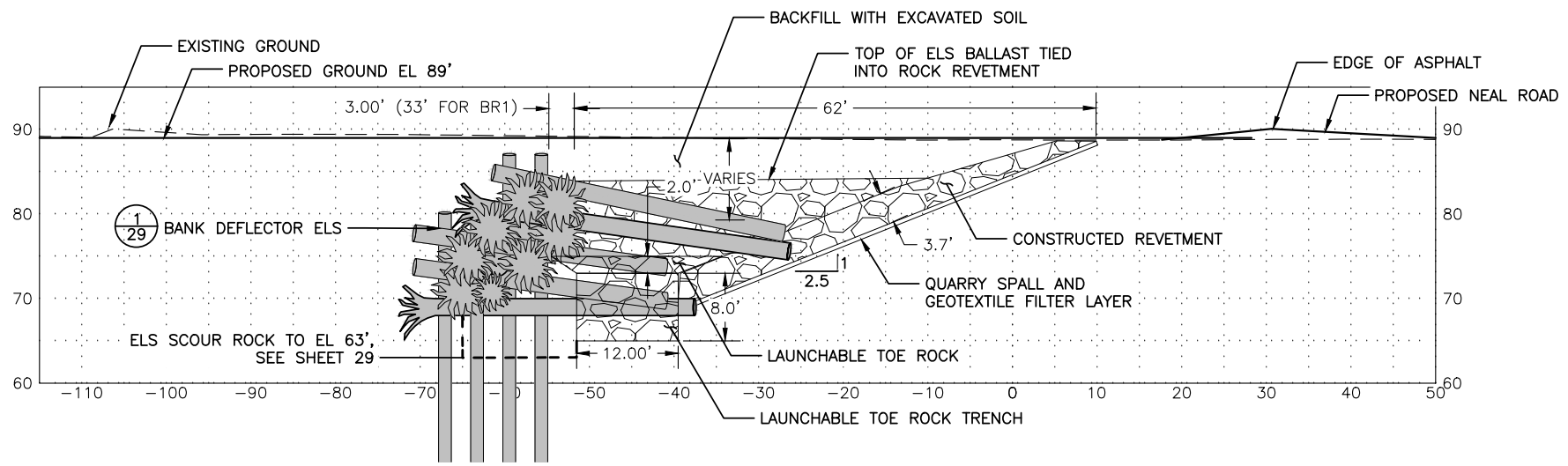
PROFILE – HAFFNER SETBACK ROCK REVETMENT (SRR ALIGNMENT)  
H: 1"=40' V: 1"=20'



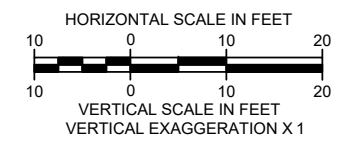
SECTION – TYPICAL SETBACK ROCK REVETMENT (SRR ALIGNMENT) A  
H: 1"=10' V: 1"=10'



SECTION – BURIED FLANK ROCK STRUCTURE C  
H: 1"=10' V: 1"=10'



SECTION – TYPICAL SETBACK ROCK REVETMENT AT ELS (SRR ALIGNMENT) B  
H: 1"=10' V: 1"=10'



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| SURVEY JOB NO: | ---  | ---     |
| CHECKED:       | ---  | ---     |
| CAD ENTERED:   | E.M. | 11/2020 |
| DESIGNED:      | J.W. | 11/2020 |
| CHECKED:       | I.M. | 11/2020 |
| SUPERVISOR:    | M.E. | 11/2020 |

| NUM. | REVISION | BY | DATE |
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FED. AID No. \_\_\_\_\_

PROJECT No. \_\_\_\_\_

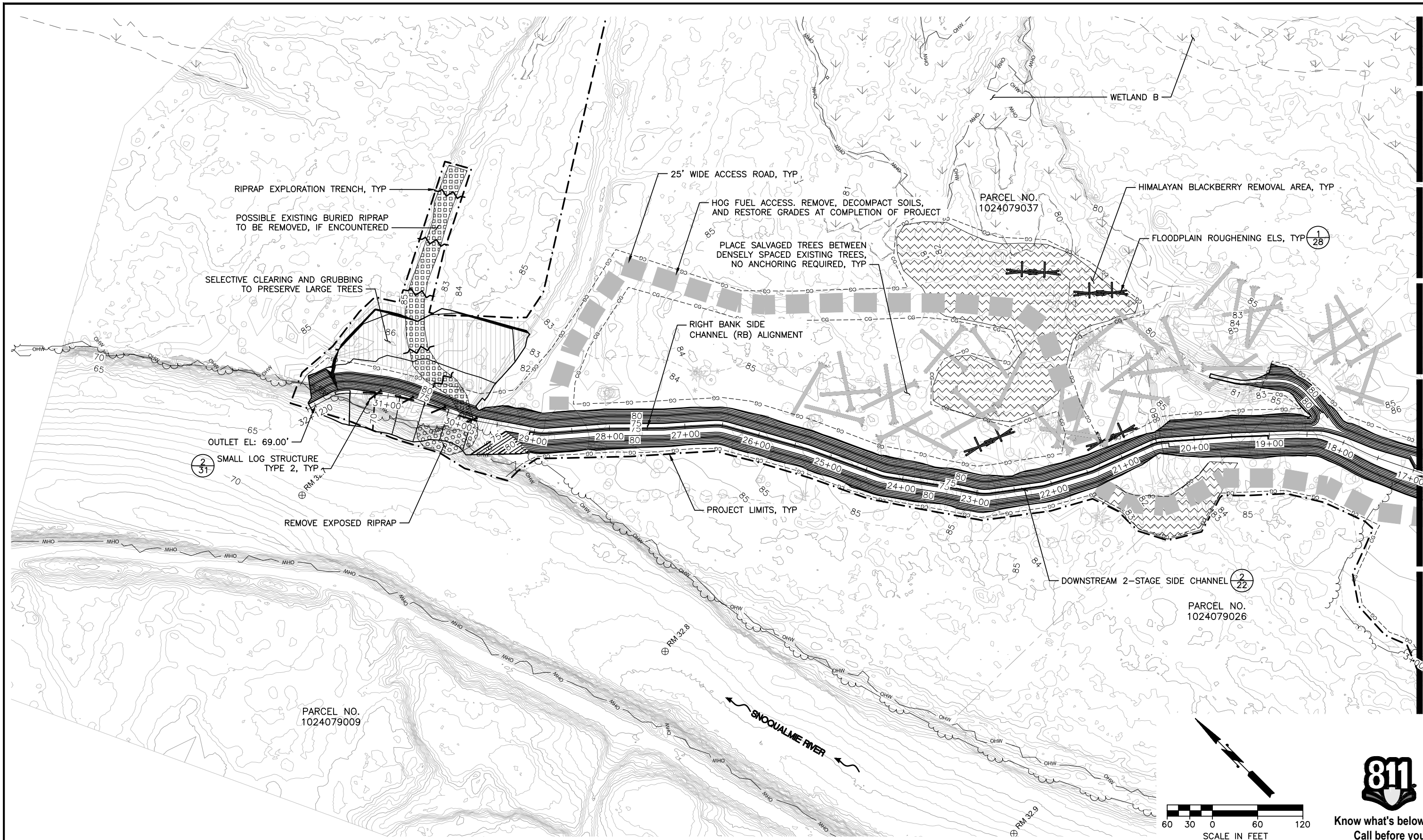
MAINTENANCE DIVISION No. \_\_\_\_\_

**FALL CITY  
FLOODPLAIN RESTORATION PROJECT**

PROFILE AND CROSS SECTIONS – HAFFNER SETBACK REVETMENT  
AND BURIED ROCK FLANK STRUCTURE







MATCH LINE, SEE SHEET 16

|                |      |         |
|----------------|------|---------|
| SURVEY JOB NO: | --   | --      |
| CHECKED:       | --   | --      |
| CAD ENTERED:   | E.M. | 11/2020 |
| DESIGNED:      | J.W. | 11/2020 |
| CHECKED:       | I.M. | 11/2020 |
| SUPERVISOR:    | M.E. | 11/2020 |

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|--------------------------|----------|----|------|--|--|
| PERMIT PLANS<br>NOV 2020 |          |    |      |  |  |
|                          |          |    |      |  |  |
| NUM.                     | REVISION | BY | DATE |  |  |




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| FED. AID No.             | -- |
| PROJECT No.              | -- |
| MAINTENANCE DIVISION No. | -- |

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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

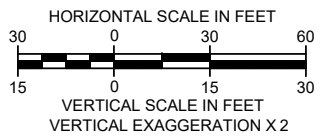
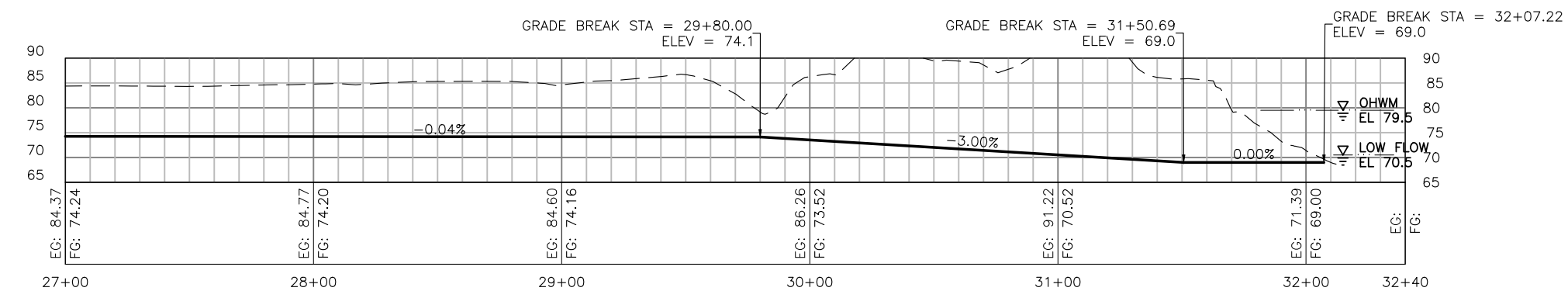
PLAN - RIGHT BANK SIDE CHANNEL - STA 16+80-34+33

  
King County

SHEET  
17  
OF  
50  
SHEETS

XXX-XX (1)





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Call before you dig.**

|                      |      |         |                                      |          |         |
|----------------------|------|---------|--------------------------------------|----------|---------|
| SURVEY JOB NO: _____ | ___  | ___     | <div>PERMIT PLANS<br/>NOV 2020</div> |          |         |
| CHECKED: _____       | ___  | ___     |                                      |          |         |
| CAD ENTERED: _____   | E.M. | 11/2020 |                                      |          |         |
| DESIGNED: _____      | J.W. | 11/2020 |                                      |          |         |
| CHECKED: _____       | I.M. | 11/2020 |                                      |          |         |
| SUPERVISOR: _____    | M.E. | 11/2020 |                                      |          |         |
|                      |      |         |                                      |          |         |
|                      |      |         | NUM.                                 | REVISION | BY DATE |



FED. AID No. \_\_\_\_\_

PROJECT No. \_\_\_\_\_

MAINTENANCE DIVISION No. \_\_\_\_\_

# FALL CITY FLOODPLAIN RESTORATION PROJECT

PROFILE - RIGHT BANK SIDE CHANNEL

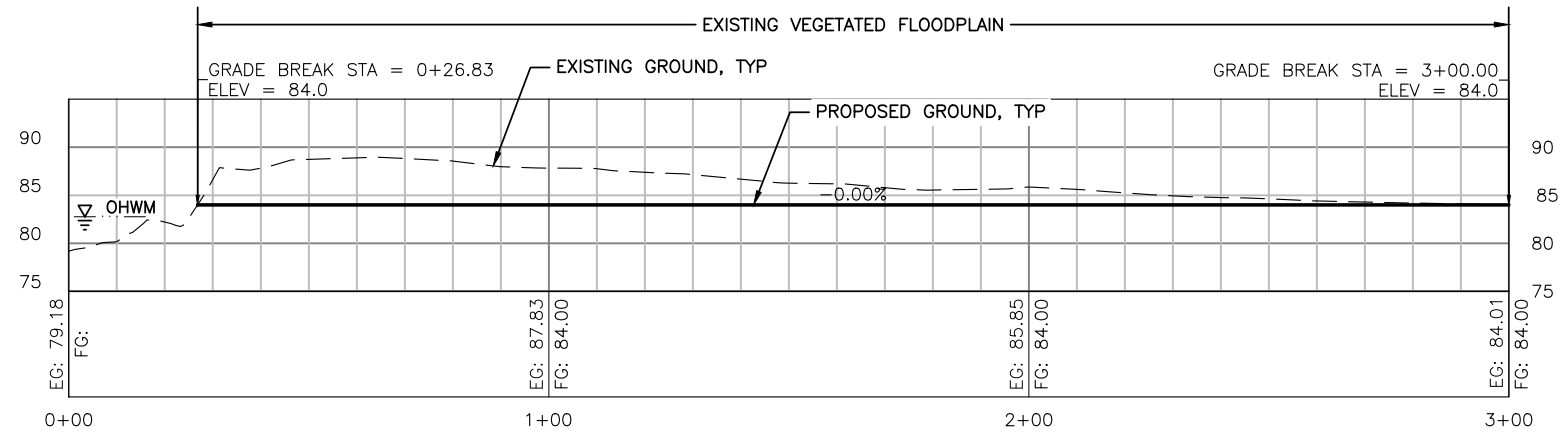


## King County

SHEET  
**18**  
OF  
**50**  
SHEETS

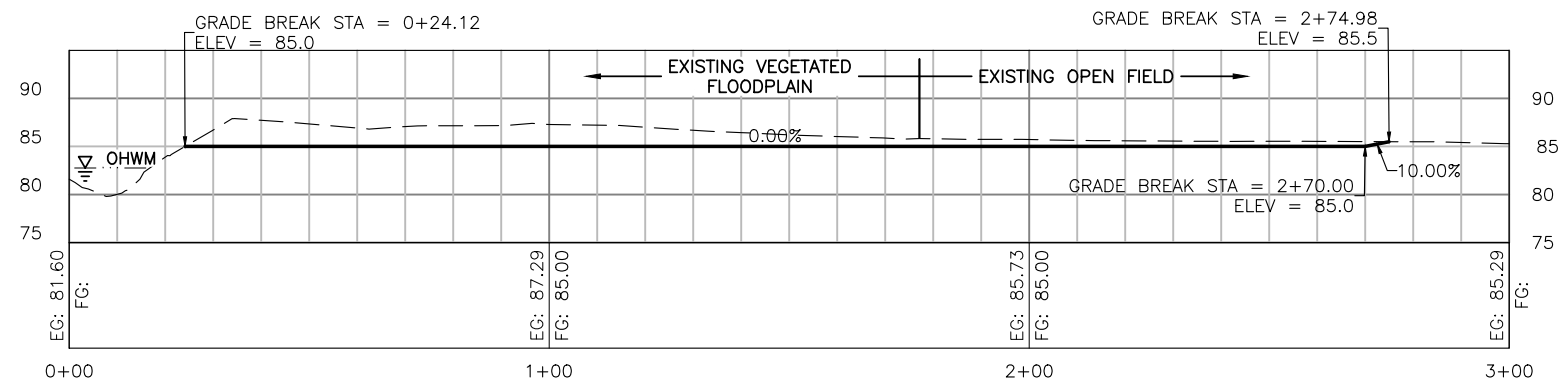
XXX-XX (1)





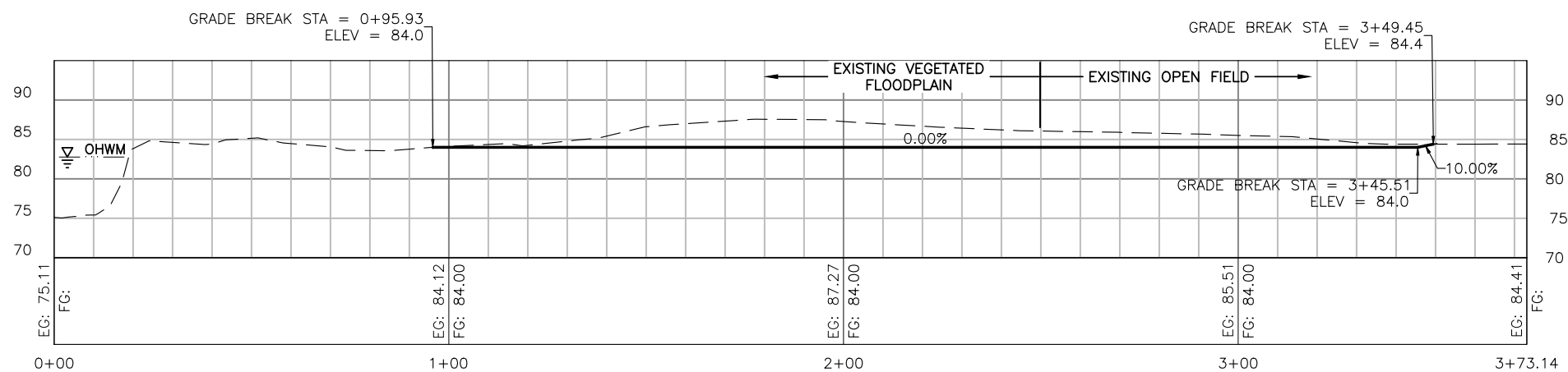
PROFILE - FLOODPLAIN SWALE 1

H: 1"=20' V: 1"=10'



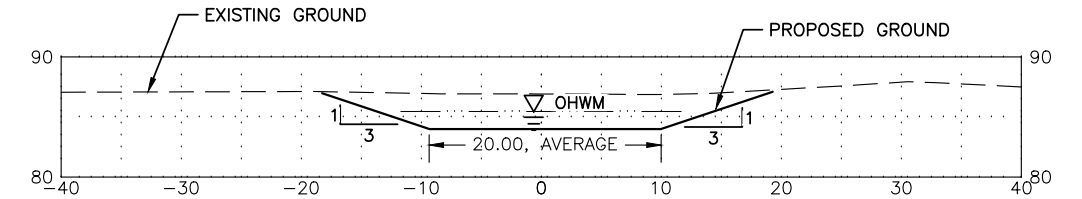
PROFILE - FLOODPLAIN SWALE 2

H: 1"=20' V: 1"=10'



PROFILE - FLOODPLAIN SWALE 3

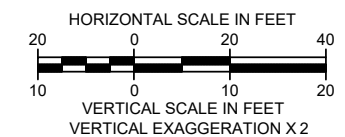
H: 1"=20' V: 1"=10'



DETAIL -  
TYPICAL FLOODPLAIN SWALE

NTS

1  
16



Know what's below.  
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SURVEY JOB NO: --  
CHECKED: --  
CAD ENTERED: E.M. 11/2020  
DESIGNED: J.W. 11/2020  
CHECKED: I.M. 11/2020  
SUPERVISOR: M.E. 11/2020

PERMIT PLANS  
NOV 2020



FED. AID No. --  
PROJECT No. --  
MAINTENANCE DIVISION No. --

FALL CITY  
FLOODPLAIN RESTORATION PROJECT

PROFILE - FLOODPLAIN SWALES

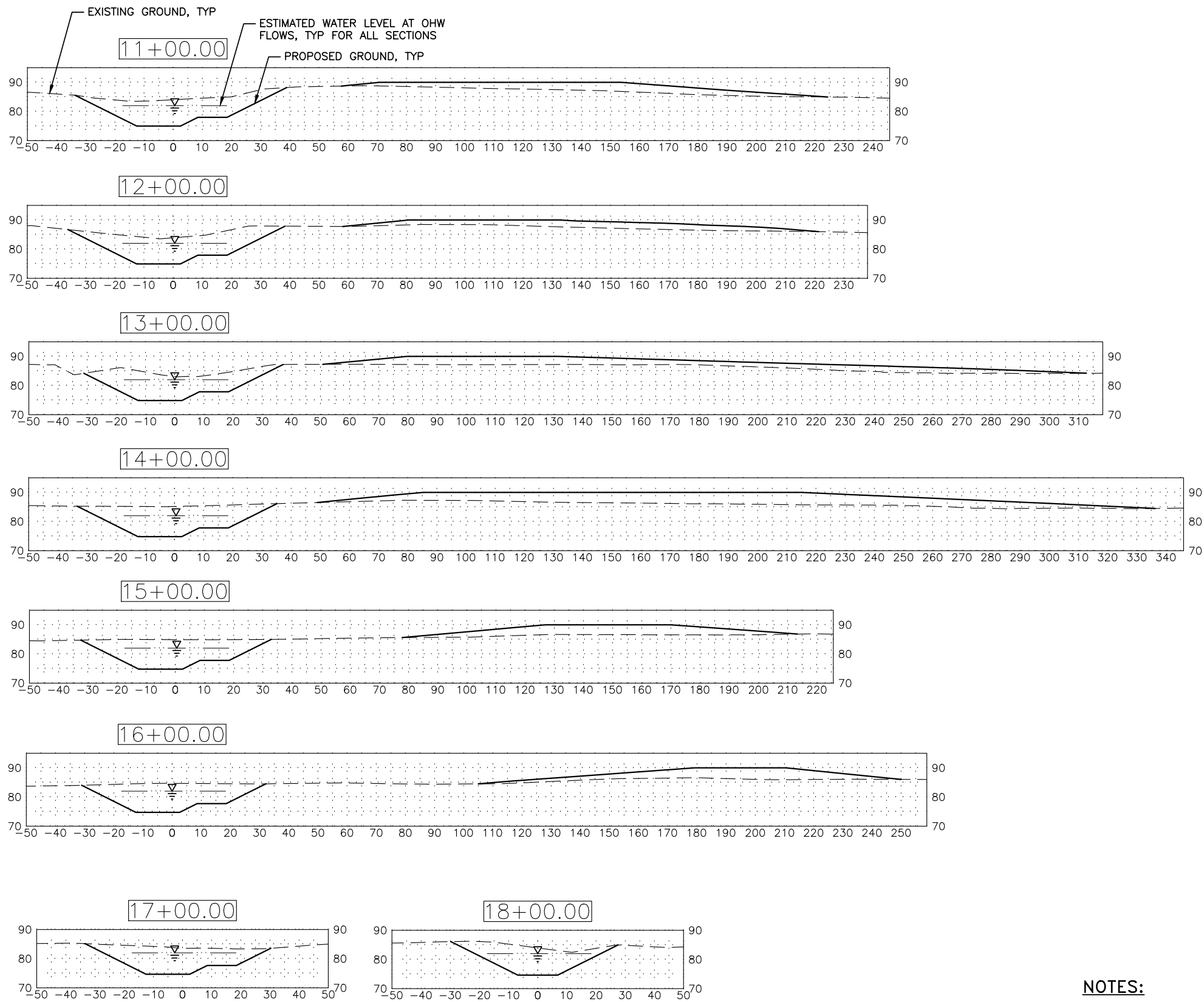


XXX-XX (1)

SHEET  
19  
OF  
50  
SHEETS

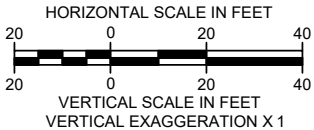






NOTES:

1. ALL CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.



Know what's below.  
Call before you dig.

SURVEY JOB NO: -- --  
CHECKED: -- --  
CAD ENTERED: E.M. 11/2020  
DESIGNED: J.W. 11/2020  
CHECKED: I.M. 11/2020  
SUPERVISOR: M.E. 11/2020

PERMIT PLANS  
NOV 2020

NUM. REVISION BY DATE



FED. AID No. --  
PROJECT No. --  
MAINTENANCE DIVISION No. --

FALL CITY  
FLOODPLAIN RESTORATION PROJECT

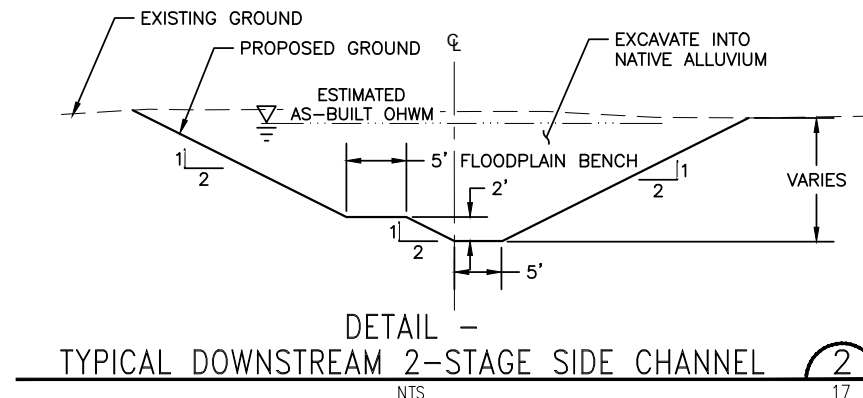
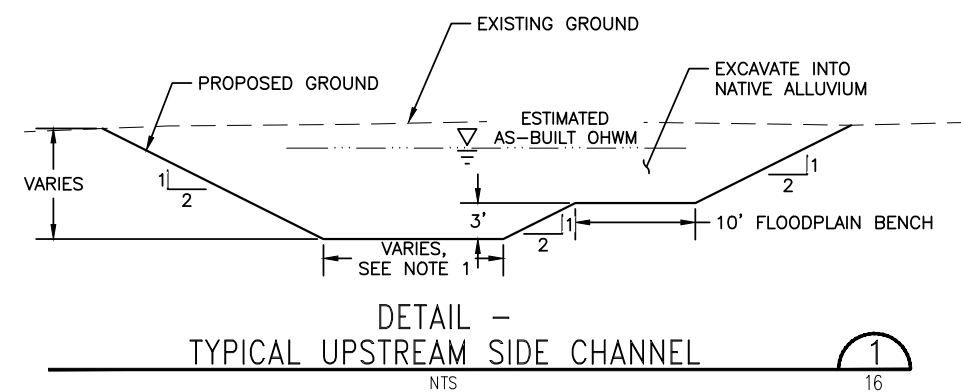
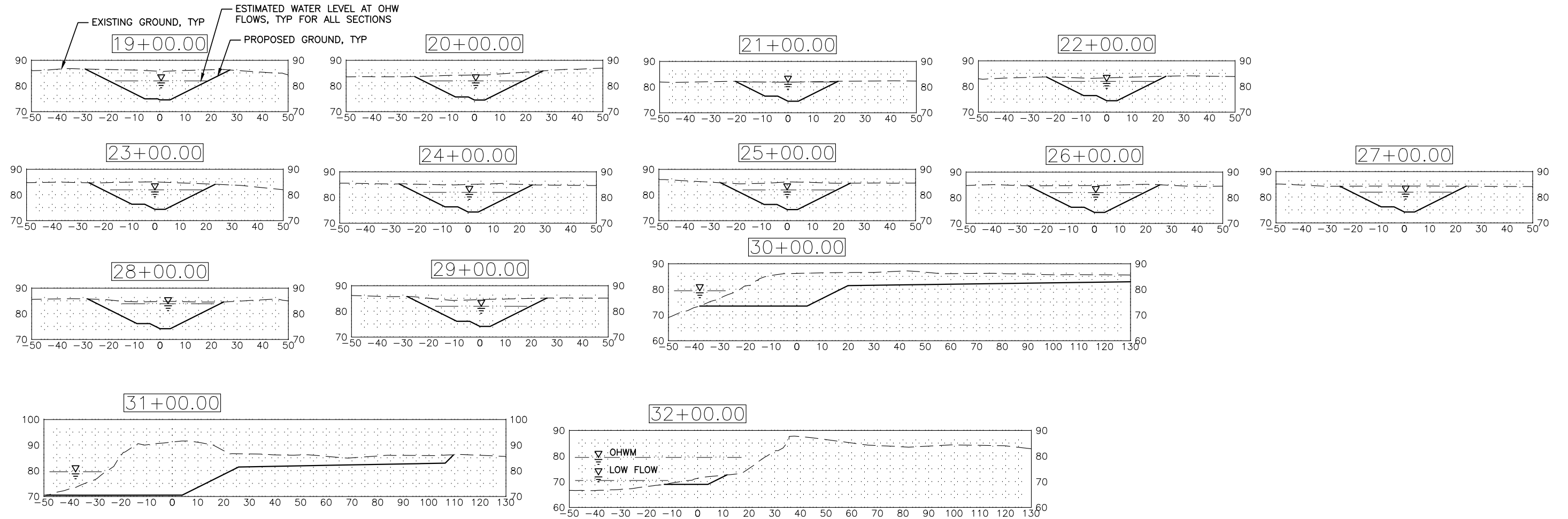
CROSS SECTIONS – RIGHT BANK SIDE CHANNEL 2



SHEET  
21  
OF  
50  
SHEETS

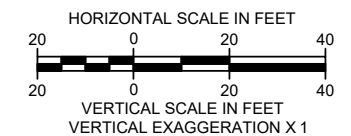
XXX-XX (1)





#### NOTES:

1. SIDE CHANNEL BOTTOM WIDTH VARIES FROM 12' BETWEEN STATION 2+60 TO 4+65, TO 15' WITH A 10' WIDE BENCH BETWEEN STATION 4+65 TO 17+00, BENCH THEN NARROWS TO 5' WIDTH WITH A 5' BENCH TO TRANSITION INTO DOWNSTREAM 2-STAGE CHANNEL AT STATION 18+50.
2. CHANNEL CROSS SECTION WILL TRANSITION FROM DETAIL 1 GEOMETRY TO DETAIL 2 GEOMETRY BETWEEN STATION 18+50 TO 21+00.
3. ALL CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.

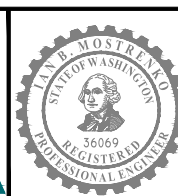


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## FALL CITY FLOODPLAIN RESTORATION PROJECT

CROSS SECTIONS - RIGHT BANK SIDE CHANNEL 3



XXX-XX (1)

SHEET  
22  
OF  
50  
SHEETS

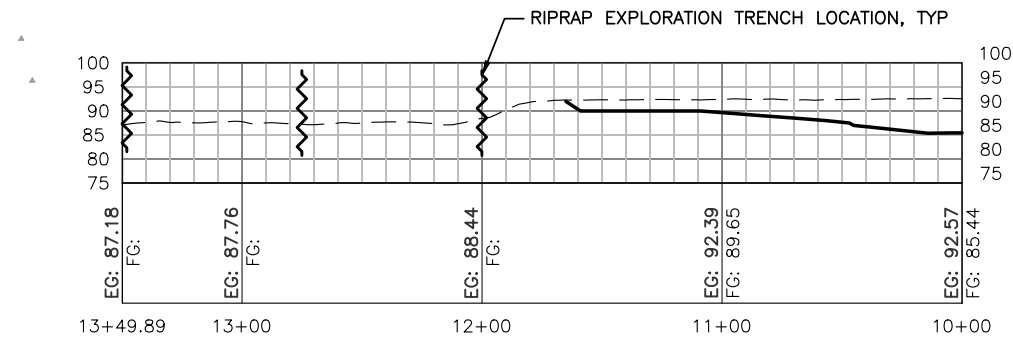
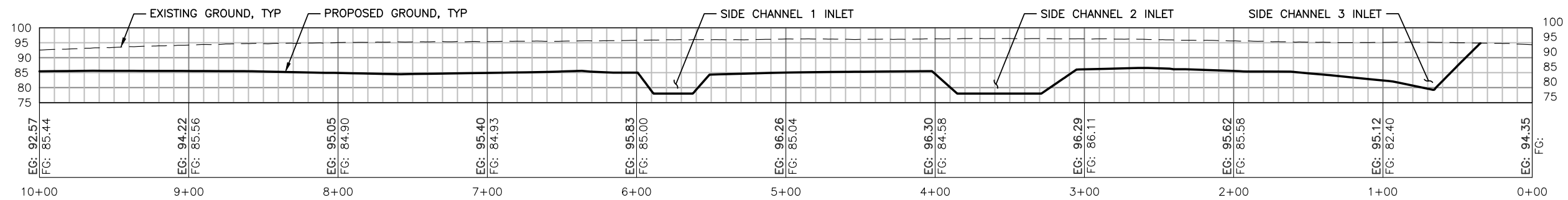






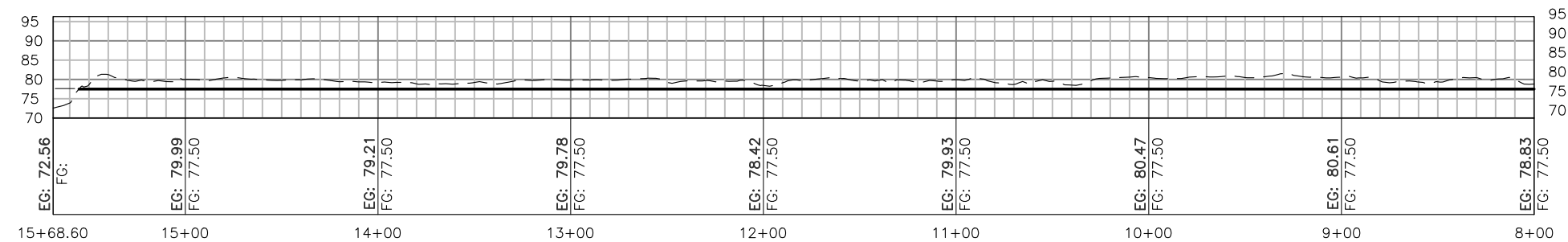
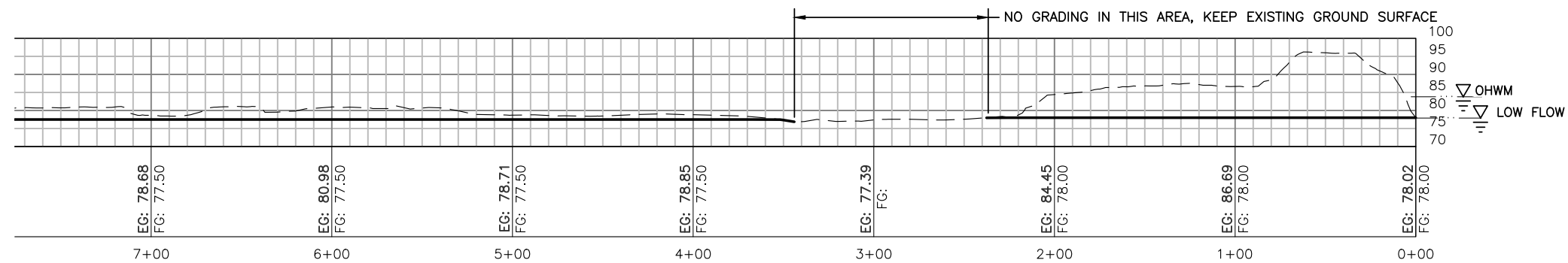






### PROFILE - BARFUSE LEVEE REMOVAL

H:1"=40' V:1"=20'

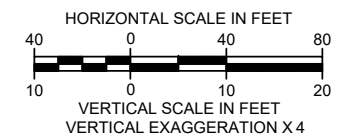


### PROFILE - BARFUSE PILOT CHANNEL

H:1"=40' V:1"=20'

#### NOTES

1. GRADE BREAKS ALONG LEVEE REMOVAL MATCH ELEVATION ON BACKSIDE OF LEVEE TO MAXIMIZE FLOODPLAIN CONNECTIVITY.



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### FALL CITY FLOODPLAIN RESTORATION PROJECT

PROFILE - BARFUSE LEVEE REMOVAL AND PILOT CHANNEL

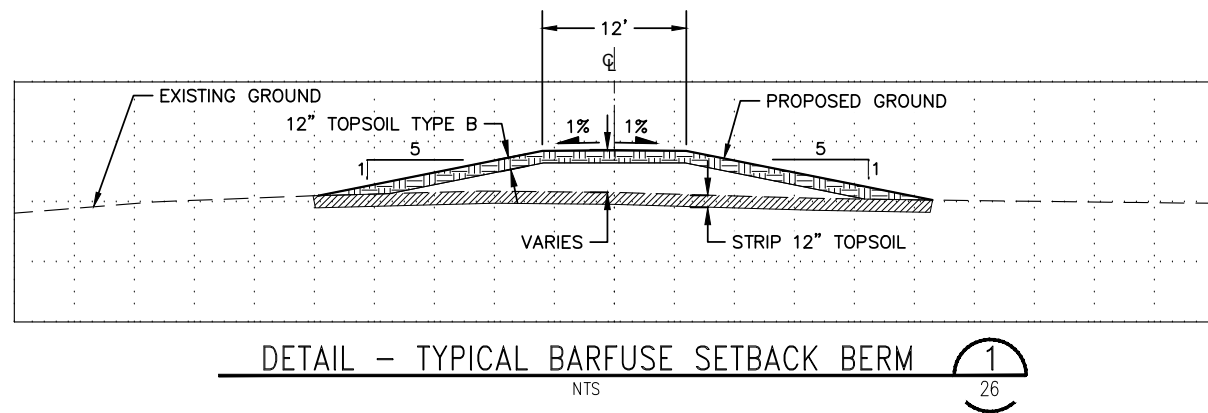
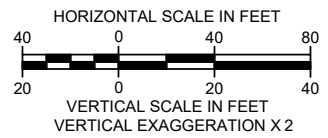
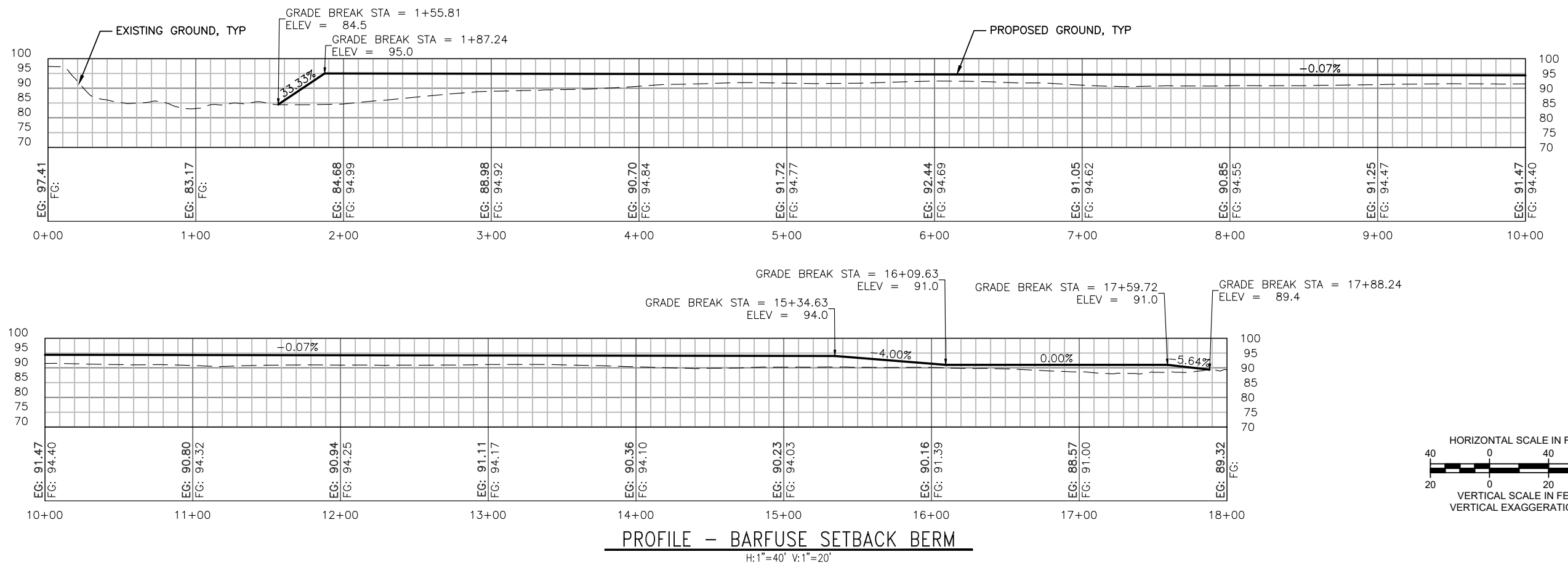


XXX-XX (1)

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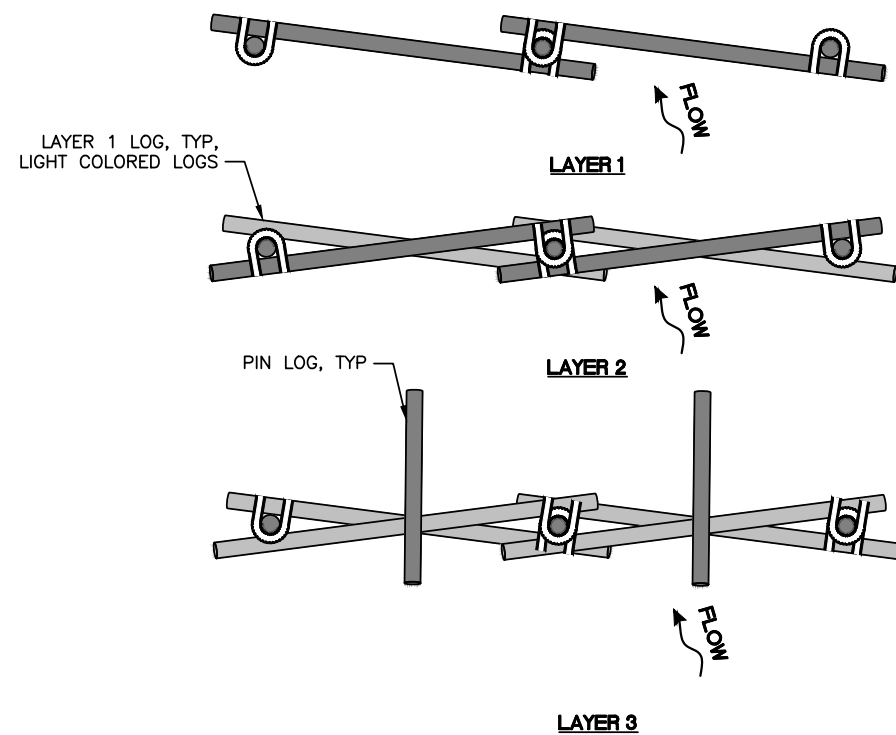
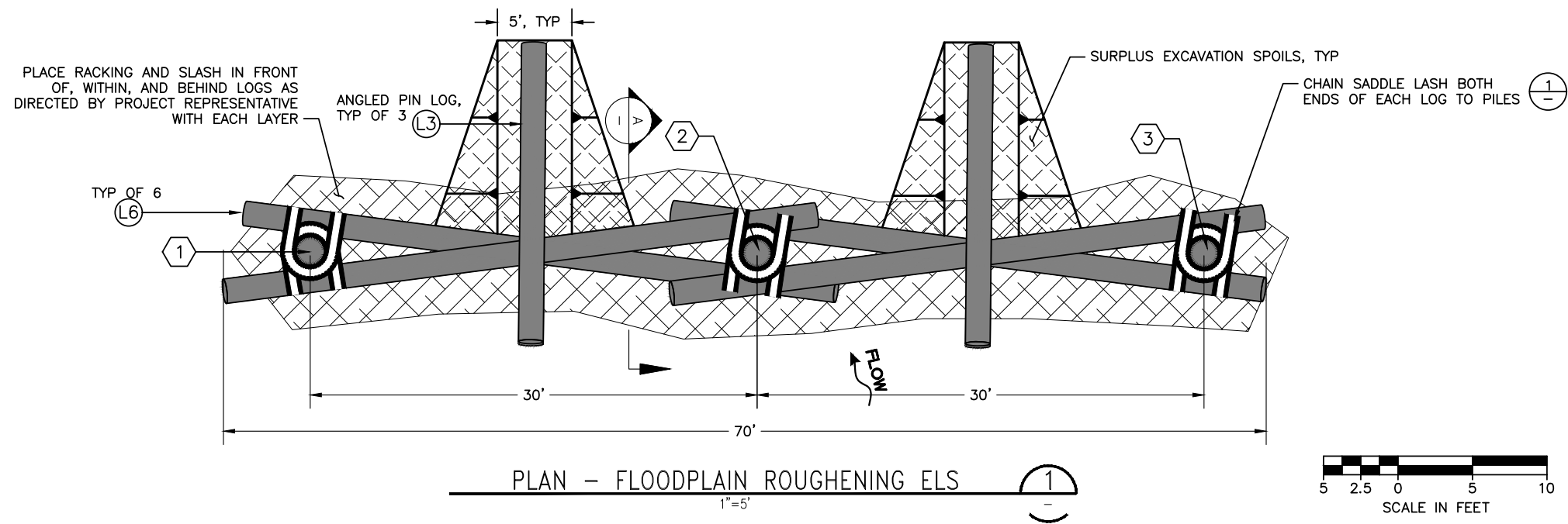


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| FALL CITY<br>FLOODPLAIN RESTORATION PROJECT      |  |
| PROFILE AND CROSS SECTION – BARFUSE SETBACK BERM |  |

|             |              |
|-------------|--------------|
| King County | SHEET        |
|             | 27           |
|             | OF 50 SHEETS |
| XXX-XX (1)  |              |



#### NOTES:

1. LOCATIONS FOR ALL PILES SHALL BE STAKED BY PROJECT REPRESENTATIVE FOR LAYOUT.
2. LOG MATERIALS SHALL BE PLACED AT THE LOCATIONS AND ELEVATIONS SPECIFIED ON THE DRAWINGS OR AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. RACKING AND SLASH NOT SHOWN IN LAYERING PLAN FOR CLARITY.

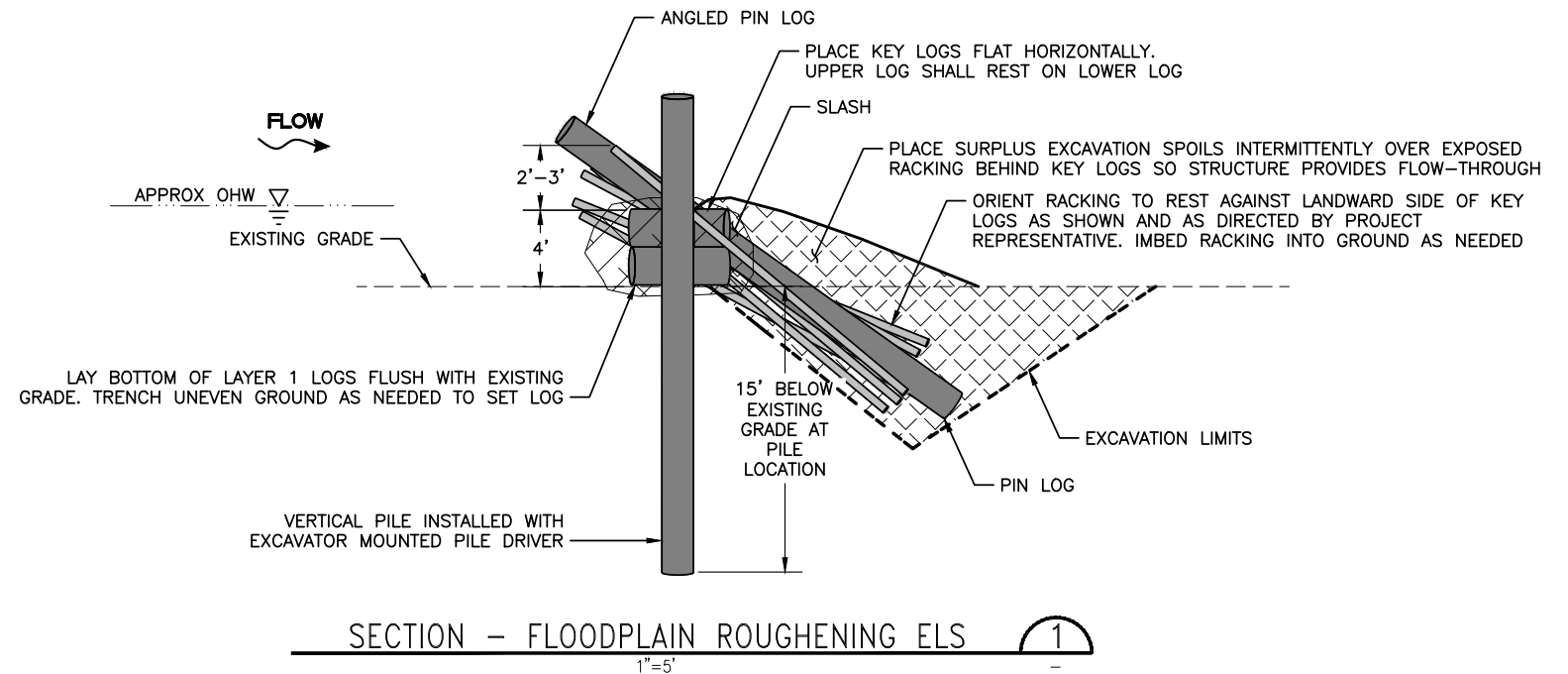


TABLE - FLOODPLAIN ROUGHENING ELS LOG SCHEDULE:

| LOG ID # | DIAMETER (IN) | LENGTH (FT) | ROOTWAD | QUANTITY/ STRUCTURE |
|----------|---------------|-------------|---------|---------------------|
| (L3)     | 18-24         | 25          | NO      | 2                   |
| (L6)     | 18-24         | 40          | NO      | 4                   |
| PILE #   | 24            | 25          | NO      | 3                   |

TABLE - FLOODPLAIN ROUGHENING ELS RACKING & SLASH SCHEDULE:

|              | QUANTITY/ STRUCTURE |
|--------------|---------------------|
| RACKING LOGS | 40                  |
| SLASH        | 60 CY               |



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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

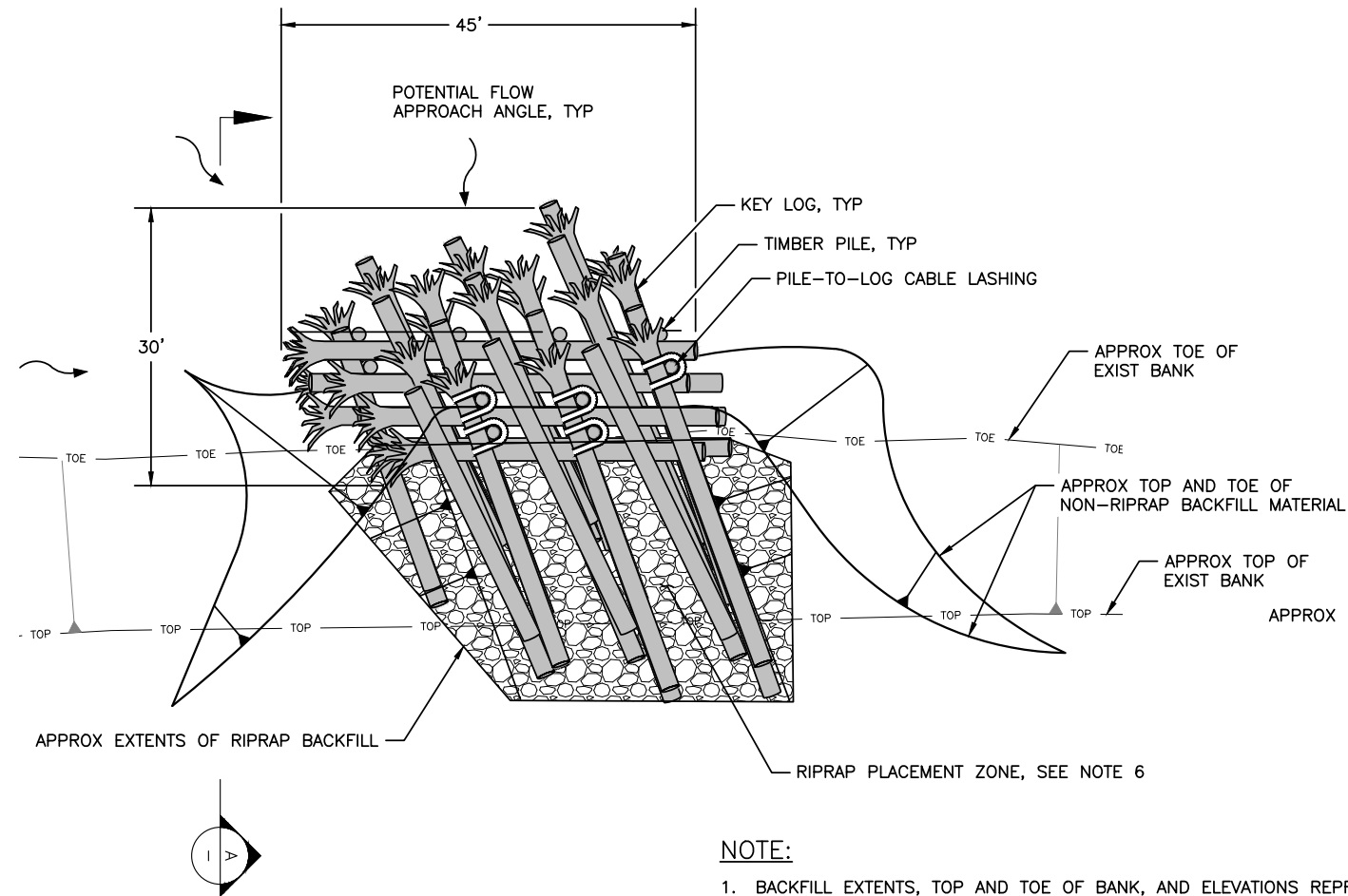
FLOODPLAIN ROUGHENING ELS DETAILS



XXX-XX (1)

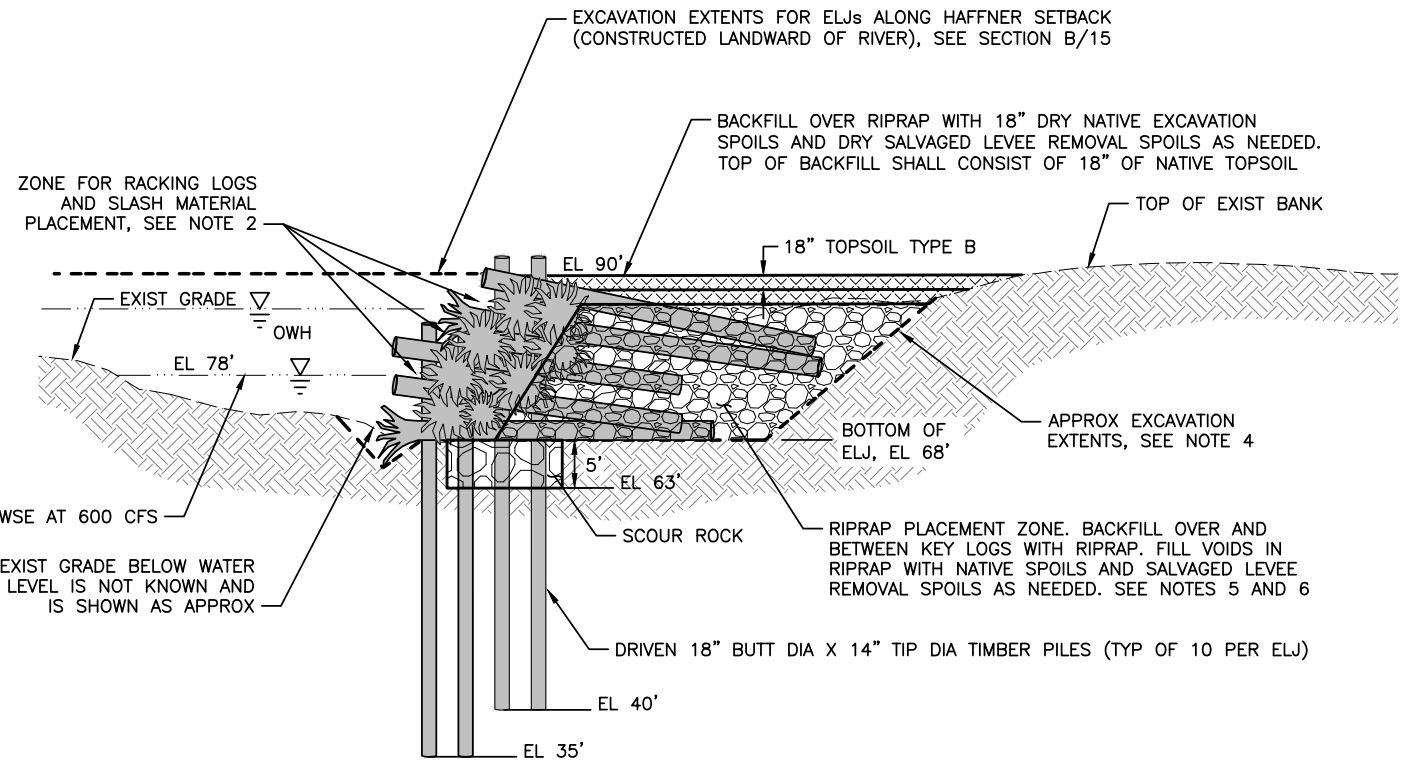
SHEET  
28  
OF  
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SHEETS





PLAN - BANK DEFLECTOR ELS 1

1"=10'



SECTION - BANK DEFLECTOR ELS A

1"=10'

NOTES:

1. ONLY THE TOP LAYER OF LOGS FOR EACH STRUCTURE SHALL BE CHAINED TO DRIVEN PILES. DO NOT SECURE LOWER LAYER KEY LOGS TO PILE OR TO ANOTHER KEY LOG.
2. RACKING LOGS AND SLASH MATERIAL NOT SHOWN FOR CLARITY. RACKING LOG PLACEMENT SHALL BE COORDINATED WITH KEY LOG LAYER PLACEMENT AND SLASH PLACEMENT TO ENSURE RACKING AND SLASH EXTEND THROUGH WATERWARD FACE OF STRUCTURE.
3. EXTENTS OF BACKFILL SHOWN ARE APPROXIMATE AND WILL VARY FOR EACH STRUCTURE. PLACE ALL EXCESS SPOILS OVER KEY LOGS AS SHOWN AND AS DIRECTED BY THE PROJECT REPRESENTATIVE.
4. EXCAVATION LIMITS SHOWN ARE APPROXIMATE AND WILL VARY BASED ON CONSTRUCTION MEANS AND METHODS, SUBSURFACE CONDITIONS AND LOCATION OF STRUCTURE. CONTRACTOR SHALL ADJUST AND MINIMIZE EXCAVATION LIMITS AS NECESSARY TO COMPLETE CONSTRUCTION.
5. BACKFILL MATERIAL FOR ELS WILL CONSIST OF LOCALLY EXCAVATED SOILS, GRANULAR SALVAGED LEVEE REMOVAL SPOILS, AND RIPRAP. TOP ELEVATION OF BACKFILL SHALL NOT EXCEED ELEVATION OF NEAL ROAD.
6. RIPRAP FOR ELS BACKFILLING WILL CONSIST OF SALVAGED REVETMENT ROCK ("ELS ROCK") AND/OR IMPORTED HEAVY LOOSE RIPRAP. VOLUME OF SALVAGED REVETMENT ROCK PLACED IN ELS WILL DEPEND ON REMAINING VOLUME OF SALVAGED REVETMENT ROCK THAT IS NOT REUSED IN THE SRR LINE EMBANKMENT. PLACE MINIMUM VOLUME OF RIPRAP AS SHOWN IN SECTION A.



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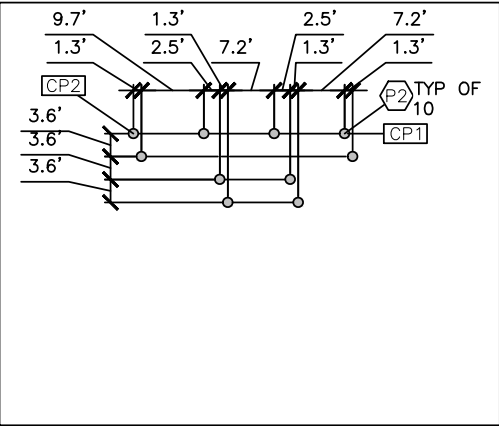
FALL CITY  
FLOODPLAIN RESTORATION PROJECT

BANK DEFLECTOR ELS DETAILS

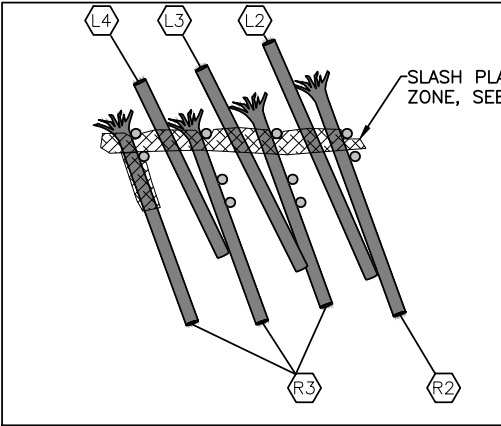


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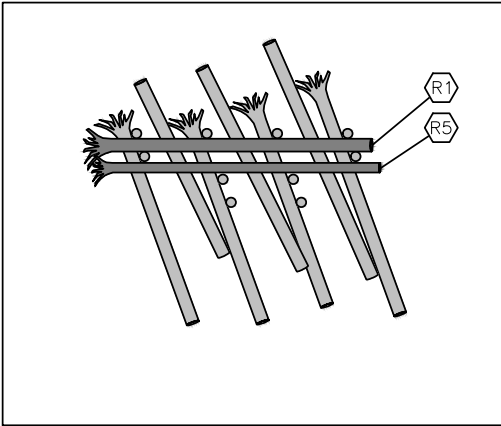
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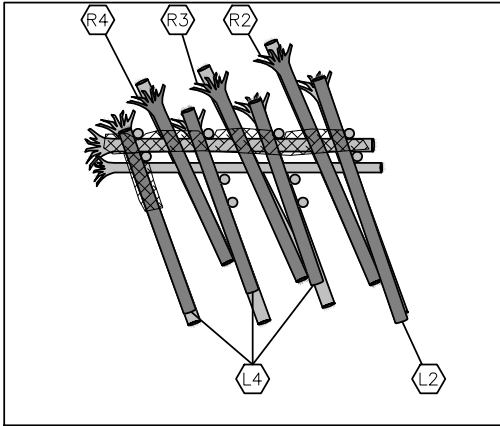
PILES



LAYER 1



LAYER 2

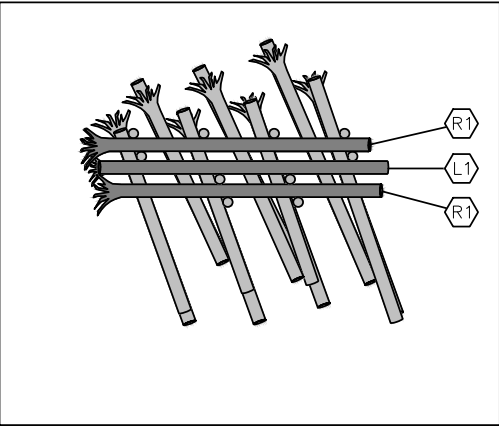


LAYER 3

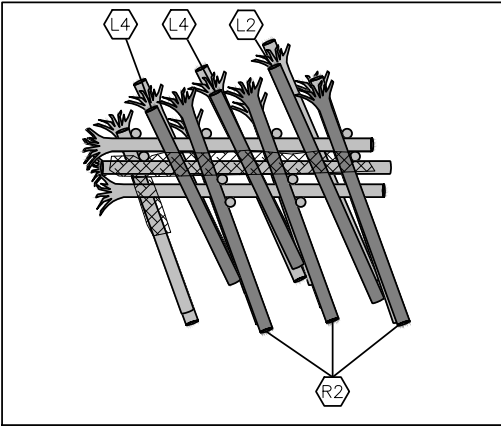
**LEGEND:**

- CURRENT LAYER KEY LOG
- PREVIOUS LAYER KEY LOG (AFTER BACKFILLING)
- TIMBER PILE
- SLASH PLACEMENT ZONE
- KEY LOG TYPE ID (LOG TYPE L1)
- STRUCTURE CONTROL POINT (1)

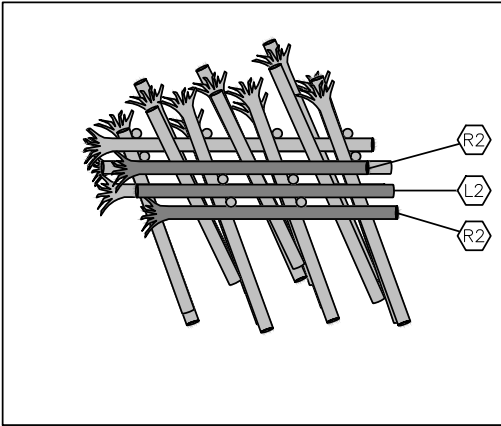
- NOTES:**
- GENERAL STRUCTURE LOCATION AND ORIENTATION SHALL BE STAKED BY THE CONTRACTOR. FINAL STRUCTURE LOCATION AND ORIENTATION TO BE FIELD VERIFIED BY THE PROJECT REPRESENTATIVE FOLLOWING CONTRACTOR STAKING.
  - ALL PILE LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE PROJECT REPRESENTATIVE PRIOR TO PILE INSTALLATION.
  - LOG MATERIALS SHALL BE PLACED AT THE LOCATIONS AND ORIENTATIONS SPECIFIED ON THE DRAWINGS OR AS DIRECTED BY THE PROJECT REPRESENTATIVE. TRIM CUT ENDS OF HORIZONTAL KEY LOGS TO FIT AS REQUIRED.
  - PLACE SLASH OVER AND BETWEEN KEY LOGS AND PILES AS SHOWN FOR EACH LAYER SPECIFIED FOLLOWING PLACEMENT OF KEY LOGS AND RACKING LOGS. PLACE APPROXIMATELY 2' TO 3' OF EXCAVATION SPOILS OR SALVAGED LEVEE REMOVAL SPOILS OVER 1/2 THE WIDTH OF SLASH TO SECURE IN PLACE SUCH THAT SLASH IS VISIBLE FOLLOWING CONSTRUCTION. COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO PLACING RACKING AND SLASH.
  - INDIVIDUAL RACKING LOGS NOT SHOWN FOR CLARITY. RACKING LOGS SHALL BE PLACED IN ZONES AND LAYERS SHOWN IN SLASH PLACEMENT ZONES. PLACE RACKING LOGS ALONG UPSTREAM FACES OF STRUCTURE. APPROXIMATELY 1/2 OF RACKING LOGS SHALL BE PLACED ACROSS PILE ROWS AND 1/2 OF THE LOGS EXTENDING INTO THE CORE OF THE STRUCTURE BETWEEN HORIZONTAL LOGS. RACKING SHALL BE PLACED WITH EACH LAYER OF LOGS, SHALL BE ANGLED UP AND DOWN FROM THE HORIZONTAL, AND SHALL BE PLACED TO CREATE AN INTERLOCKING MATRIX OF LOGS SECURED BETWEEN VERTICAL PILE LOGS AND HORIZONTAL LOGS. COORDINATE WITH PROJECT REPRESENTATIVE PRIOR TO PLACING RACKING LOGS, SLASH AND BACKFILLING.
  - BACKFILL EACH LAYER WITH DRY EXCAVATION SPOILS OR DRY SALVAGED LEVEE REMOVAL SPOILS AND SALVAGED OR IMPORTED RIPRAP FLUSH TO TOP OF CURRENT LAYER PRIOR TO CONSTRUCTING SUBSEQUENT LAYER. COMPACT BACKFILL WITH EXCAVATOR BUCKET. FILL ALL VOIDS BETWEEN ROCKS GREATER THAN 12" DIAMETER WITH FINER BACKFILL MATERIAL TO ACHIEVE A WELL GRADED AND COMPACTED MASS.



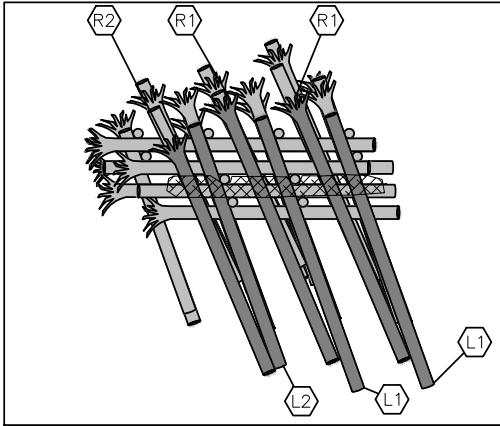
LAYER 4



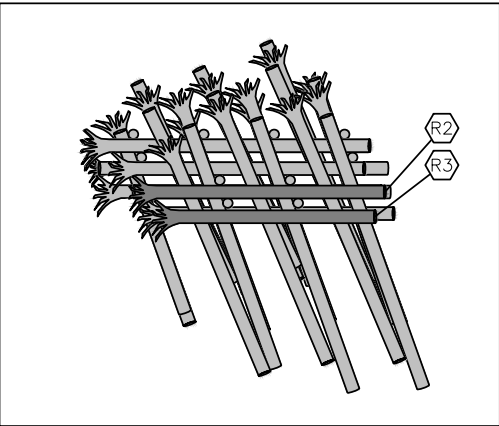
LAYER 5



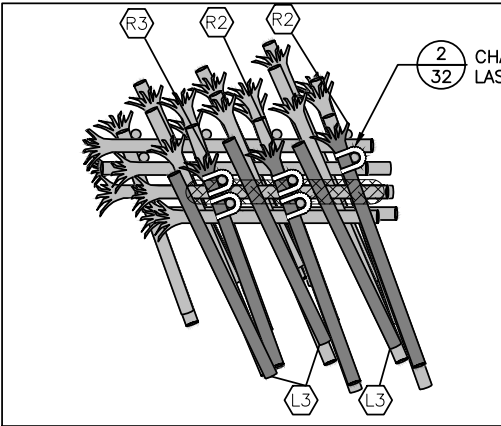
LAYER 6



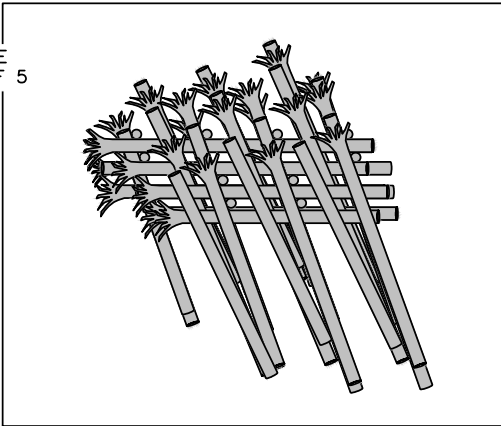
LAYER 7



LAYER 8



LAYER 9



COMPLETE

TABLE – ELS CONTROL POINTS:

| ELS NO. | CONTROL POINT NO. | NORTHING | EASTING |
|---------|-------------------|----------|---------|
| BD1     |                   |          |         |
| BD2     |                   |          |         |
| BD3     |                   |          |         |
| BD4     |                   |          |         |

TABLE – ELS LOG SCHEDULE:

| LOG TYPE | DIAMETER (IN)       | LENGTH (FT) | ROOTWAD  | TOTAL/ELS |
|----------|---------------------|-------------|----------|-----------|
| P2       | 18 (BUTT), 14 (TIP) | 50          | NO       | 10        |
| R1       | 24                  | 45          | YES      | 5         |
| R2       | 24                  | 40          | YES      | 11        |
| R3       | 24                  | 35          | YES      | 6         |
| R4       | 24                  | 30          | YES      | 1         |
| R5       | 18                  | 45          | YES      | 1         |
| L1       | 24                  | 45          | NO       | 3         |
| L2       | 24                  | 40          | NO       | 5         |
| L3       | 24                  | 35          | NO       | 4         |
| L4       | 24                  | 30          | NO       | 6         |
| RACKING  | 4"–16"              | 15–30       | OPTIONAL | 100       |
| SLASH    |                     |             |          | 120 CY    |

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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

BANK DEFLECTOR ELS LAYERING PLAN



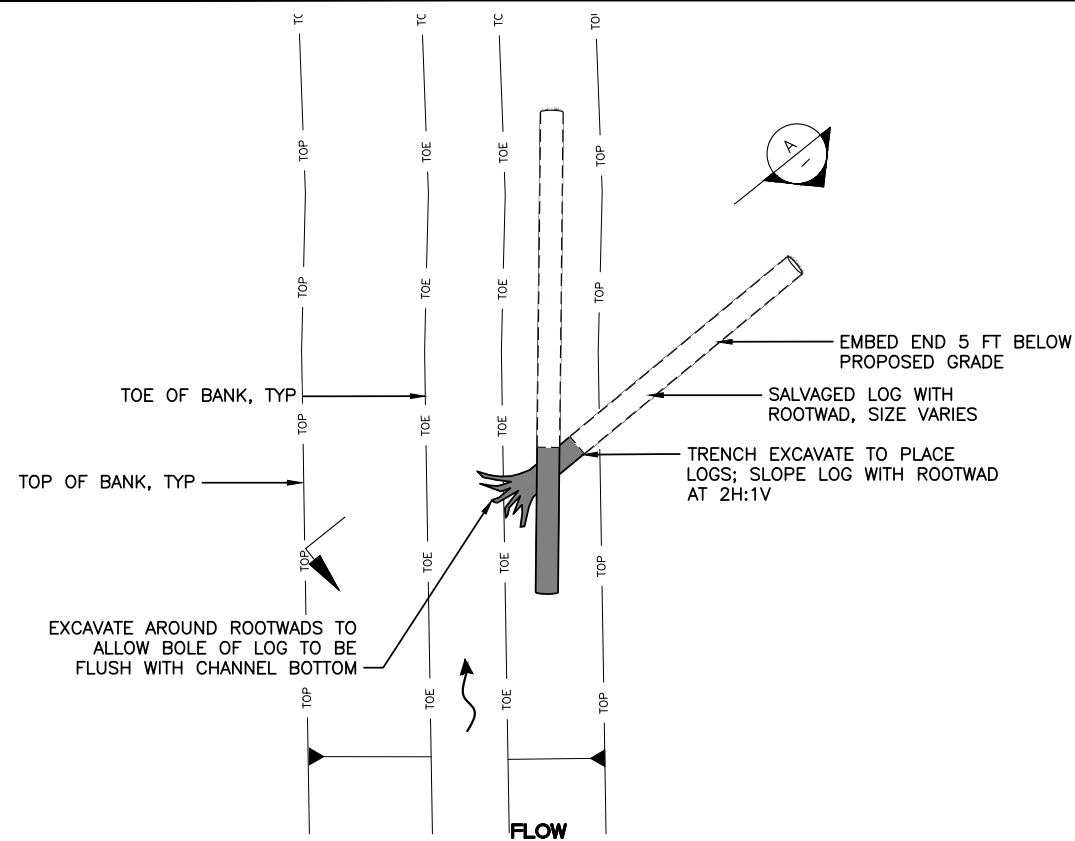
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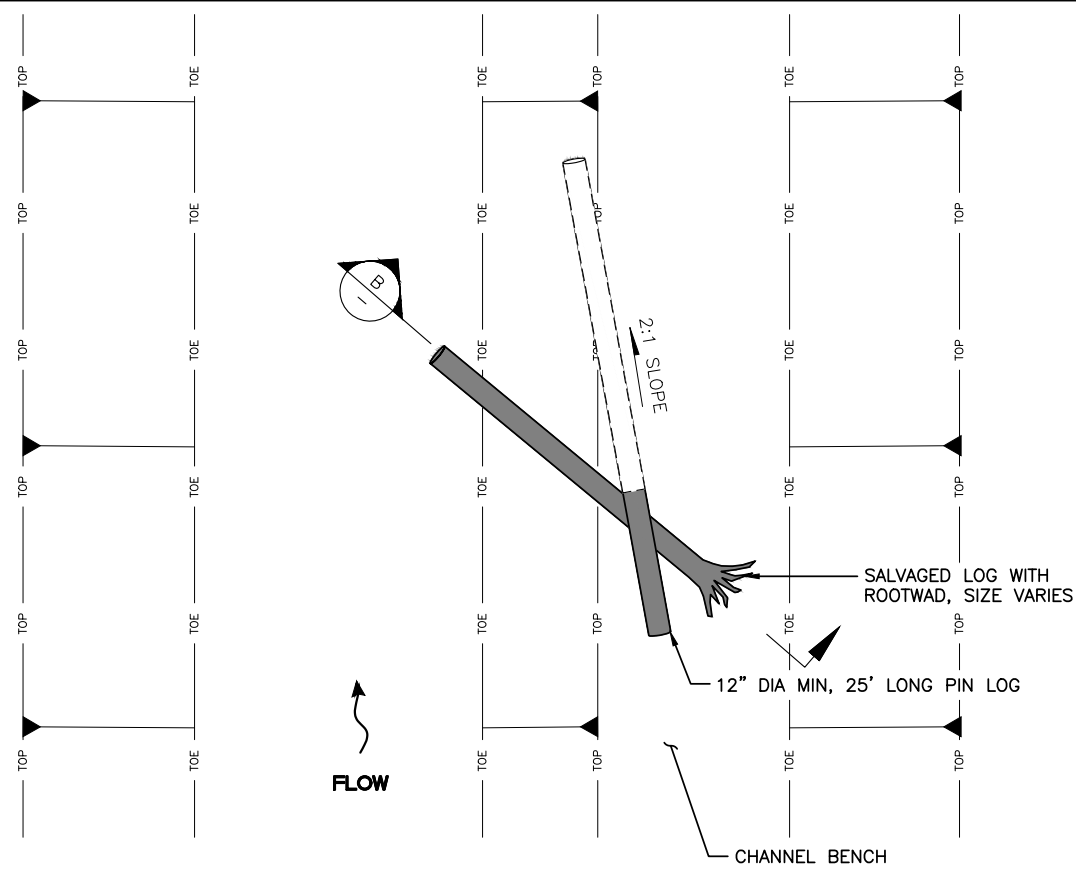
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XXX-XX (1)

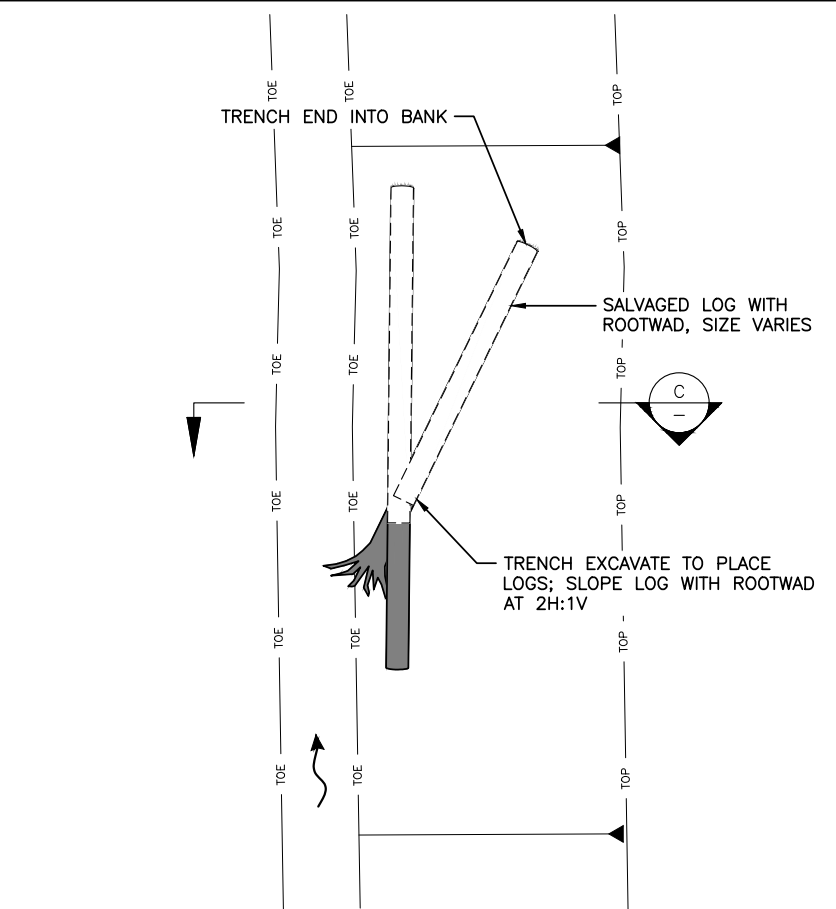




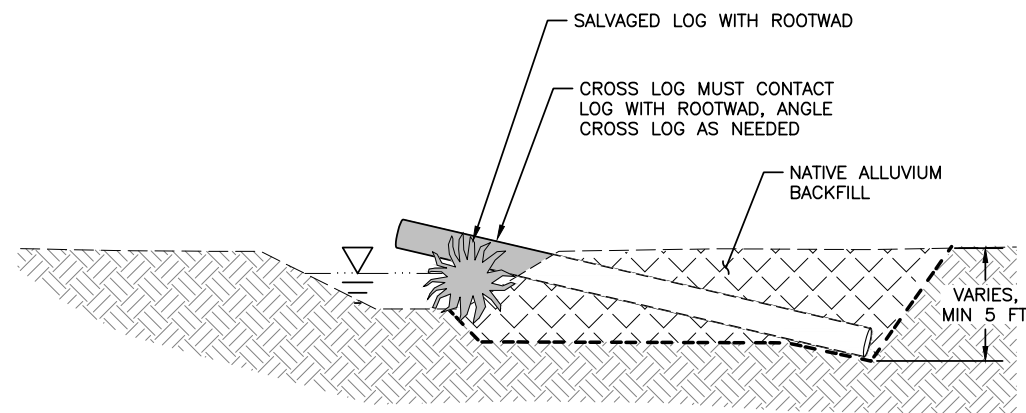
PLAN - TYPE 1 SMALL LOG STRUCTURE (1)  
SCALE: NTS



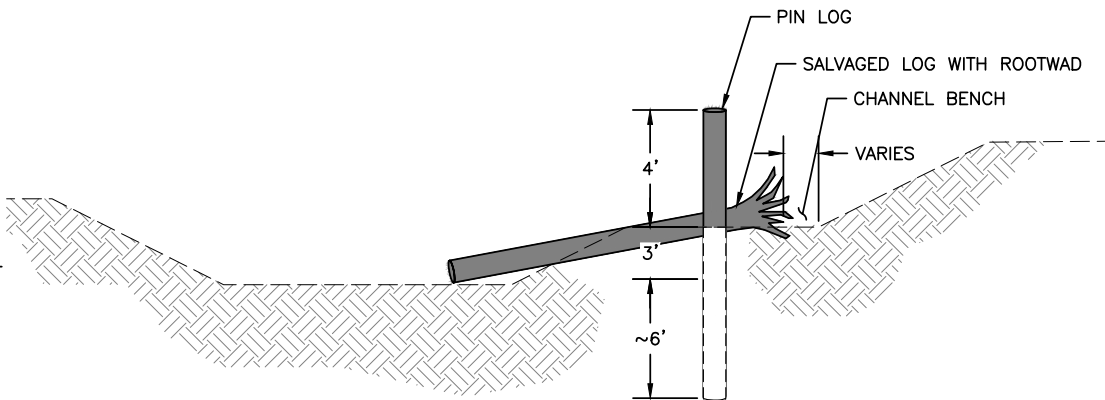
PLAN - TYPE 2 SMALL LOG STRUCTURE (2)  
SCALE: NTS



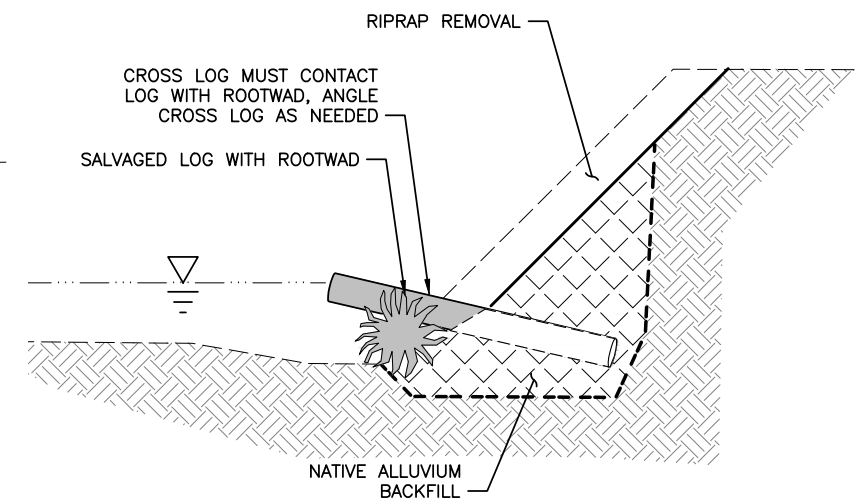
PLAN - TYPE 3 SMALL LOG STRUCTURE (3)  
SCALE: NTS



SECTION - TYPE 1 SMALL LOG STRUCTURE (A)  
SCALE: NTS



SECTION - TYPE 2 SMALL LOG STRUCTURE (B)  
SCALE: NTS



SECTION - TYPE 3 SMALL LOG STRUCTURE (C)  
SCALE: NTS



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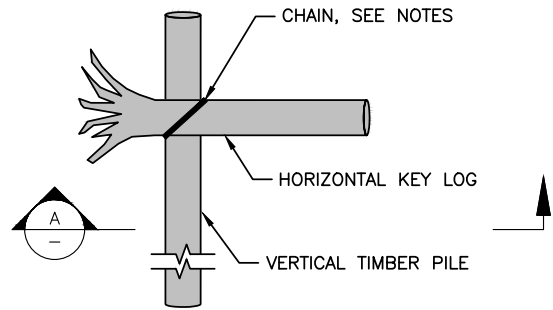
## FALL CITY FLOODPLAIN RESTORATION PROJECT

SIDE CHANNEL SMALL LOG STRUCTURE DETAILS



XXX-XX (1)

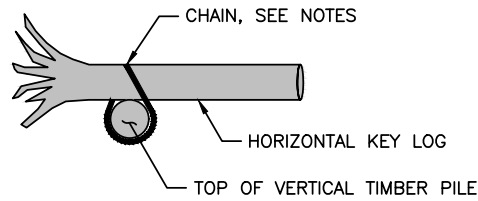
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31  
OF  
50  
SHEETS



DETAIL – SIMPLE LASHING

SCALE: NTS

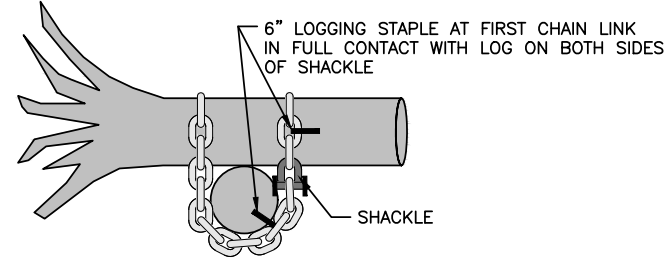
1  
VAR



SECTION – SIMPLE LASHING

SCALE: NTS

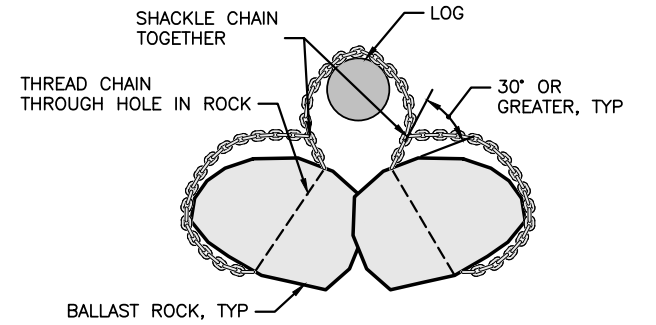
A  
-



DETAIL – CHAIN CONNECTION

SCALE: N.T.S.

3  
-



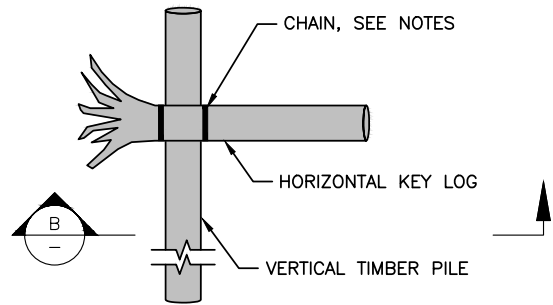
NOTE:

REMOVE SLACK IN CHAIN OVER LOG.

DETAIL – LOG TO ROCK CONNECTION

SCALE: NTS

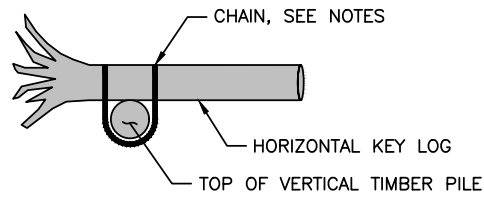
4  
-



DETAIL – SADDLE LASHING

SCALE: NTS

2  
VAR



SECTION – SADDLE LASHING

SCALE: NTS

B  
-

LASHING NOTES:

1. LASHING SHALL USE 3/8"Ø GRADE 43 NATURAL FINISH CHAIN AS SPECIFIED IN LAYER PLANS.
2. ALL LASHING CONNECTION HARDWARE SHALL BE STAINLESS STEEL OR NATURAL UNTREATED STEEL AND HAVE A RATED WORKING LOAD LIMIT OF EQUAL OR GREATER STRENGTH THAN THE CHAIN WORKING LOAD LIMIT.
3. SHACKLES SHALL BE SAFETY SHACKLES AND THREADS SHALL BE MARRED TO PREVENT REMOVAL OF SHACKLES.
4. CHAIN LASHING SYSTEM SHALL BE PUT IN TENSION TO 1/4 OF THE CHAIN WORKING LOAD LIMIT AND BE MAINTAINED DURING CHAIN SHACKLING.
5. CHAIN LENGTHS NEEDED PER LASHING WILL VARY BASED ON DIAMETER OF LOGS AT THE ACTUAL LOCATIONS THEY ARE LASHED TOGETHER.
6. MAR ALL EXPOSED CONNECTION HARDWARE THREADS AFTER INSTALLATION TO PREVENT REMOVAL OF NUTS AND BOLTS. PROJECT REPRESENTATIVE OR OWNER SHALL APPROVE ANY COATING BEFORE CONTRACTOR APPLIES IT.
7. CONTRACTOR MAY SUBMIT ALTERNATIVE CHAIN CONNECTION SYSTEM FOR APPROVAL.
8. CUT OFF ENDS OF CHAIN CLOSE TO FINAL CONNECTION AFTER LASHING IS IN PLACE SO THAT NO LOOSE ENDS EXIST AND DISPOSE OF CHAIN CUTTING OFF SITE.



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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

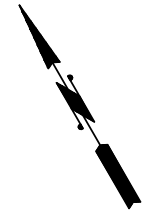
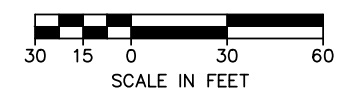
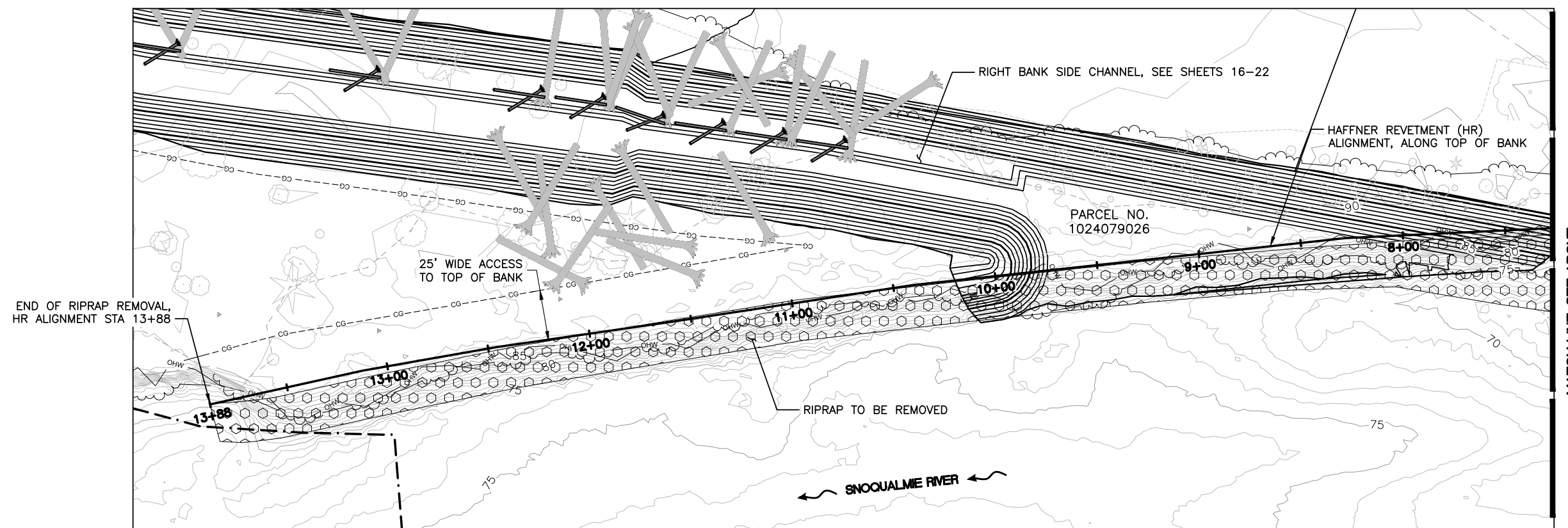
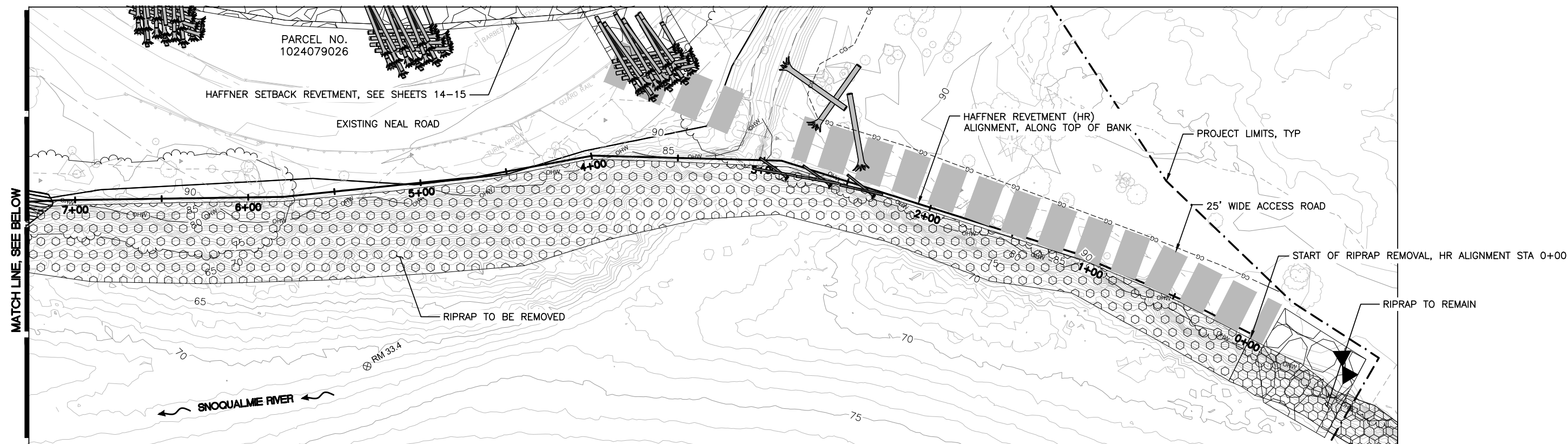
LOG LASHING AND BANK REINFORCEMENT DETAILS



XXX-XX (1)

SHEET  
32  
OF  
50  
SHEETS





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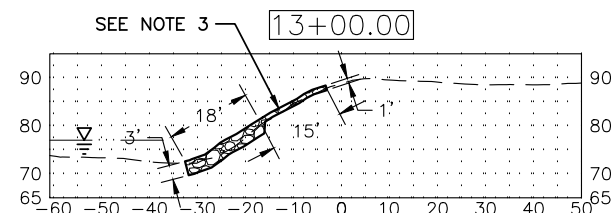
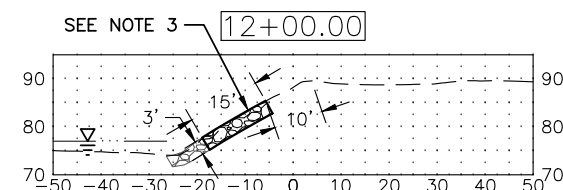
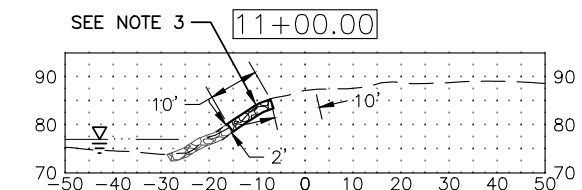
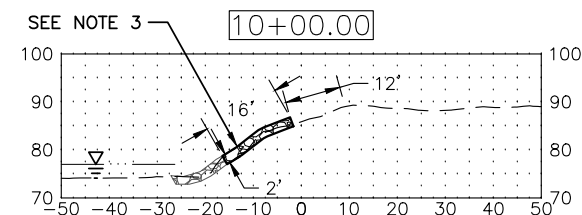
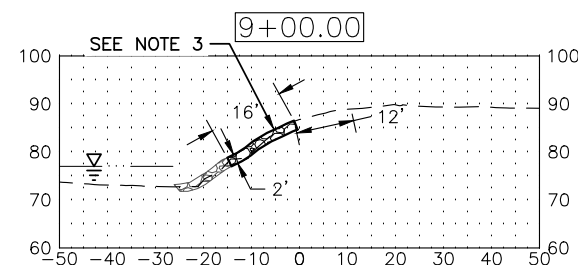
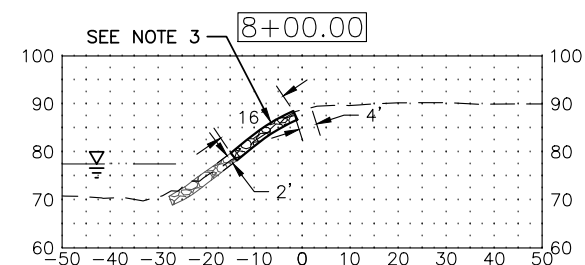
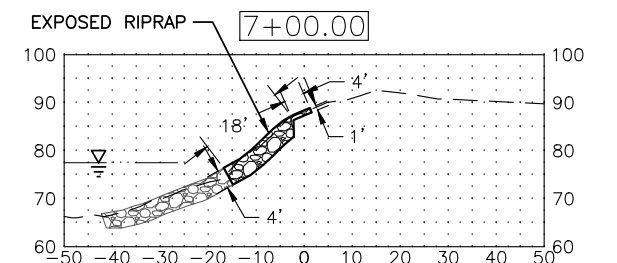
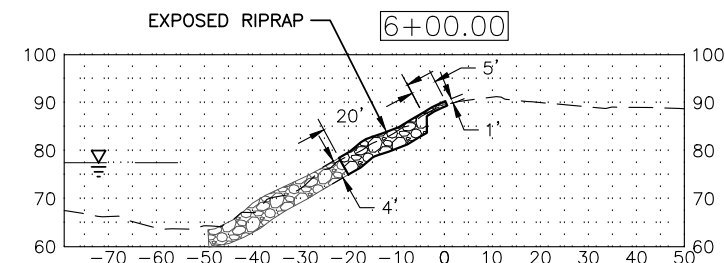
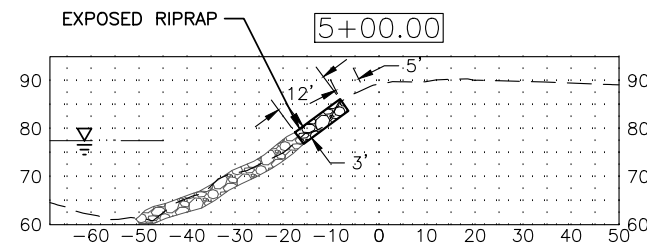
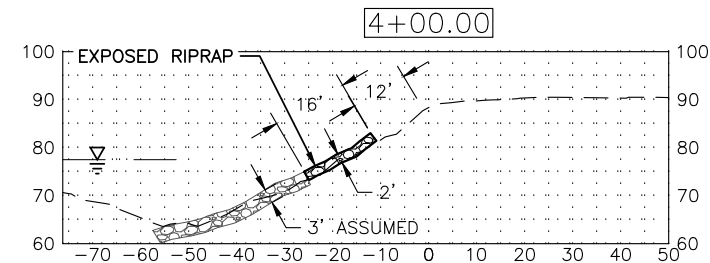
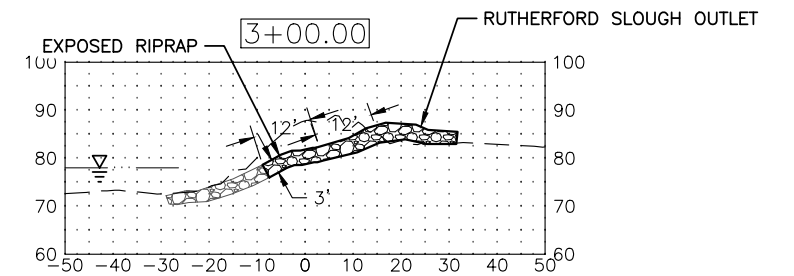
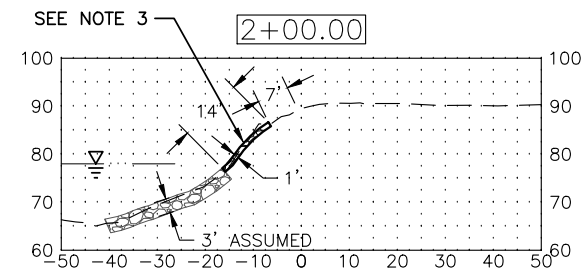
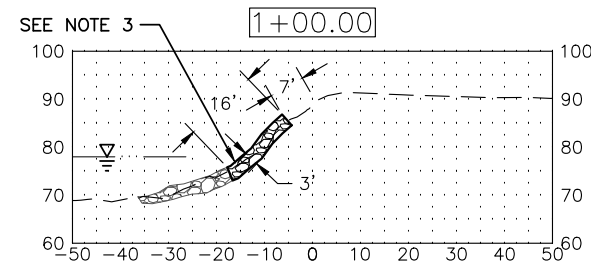
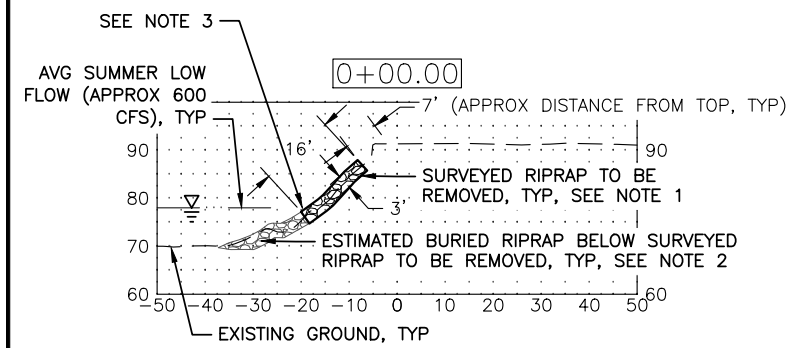
**FALL CITY  
FLOODPLAIN RESTORATION PROJECT**

PLAN - HAFFNER RIPRAP REMOVAL

**King County**

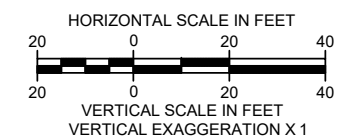
SHEET **33** OF **50** SHEETS

**XXX-XX (1)**



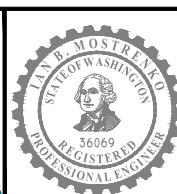
# NOTES

1. SURVEYED RIPRAP EXTENTS PER SHANNON AND WILSON JANUARY 2020 GEOTECHNICAL DESIGN REPORT.
2. ESTIMATED QUANTITIES OF RIPRAP TO BE REMOVED INCLUDE ADDITIONAL RIPRAP LIKELY BURIED AND BELOW AVERAGE SUMMER LOW FLOW WATER CONDITIONS (APPROX 600 CFS) THAT WAS NOT ACCESSIBLE FOR SURVEY.
3. RIPRAP IS BURIED UNDER A THIN LAYER OF SOIL.
4. SURVEYED RIPRAP QUANTITY = 1,700 CUBIC YARDS.
5. ESTIMATED BURIED AND SUBMERGED RIPRAP = 3,000 CUBIC YARDS.



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PERMIT PLANS  
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## FALL CITY FLOODPLAIN RESTORATION PROJECT

CROSS SECTIONS – HAFFNER RIPRAP REMOVAL



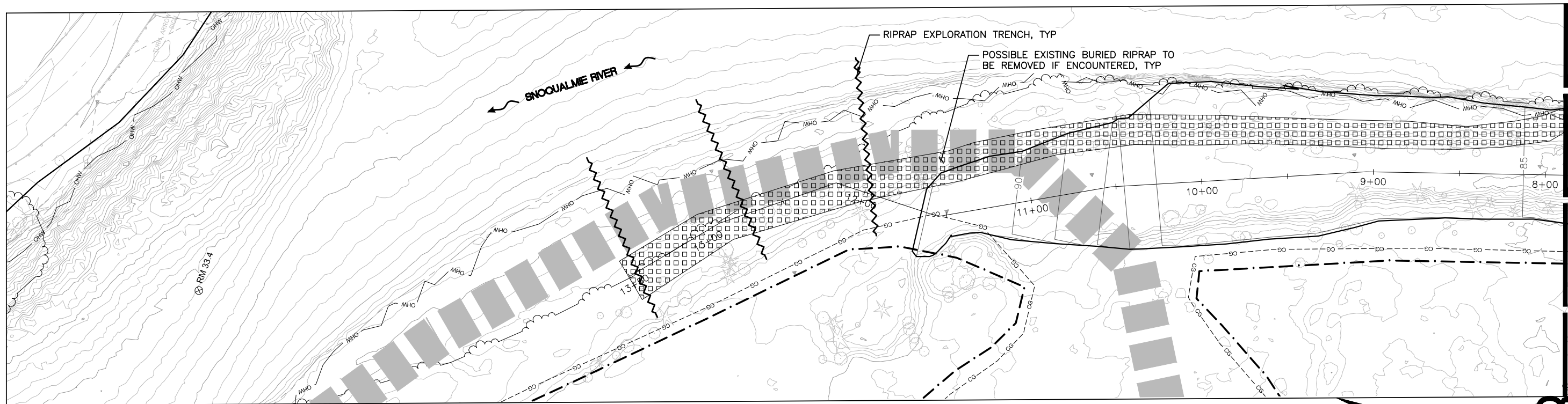
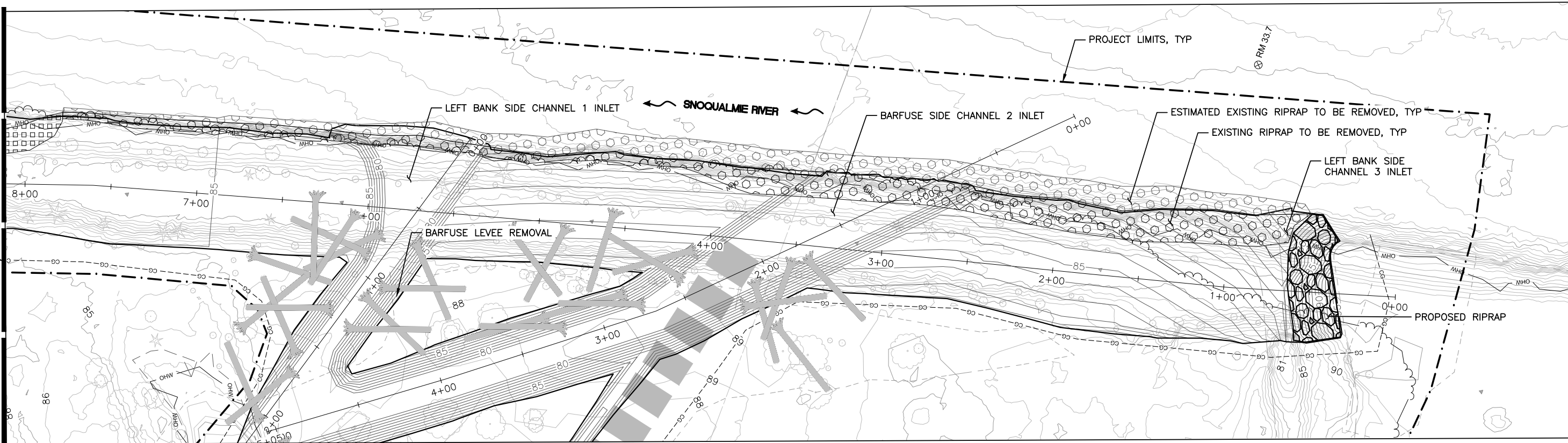
King County

XXX-XX (1)

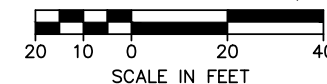
SHEET  
 34  
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MATCH LINE, SEE BELOW



MATCH LINE, SEE ABOVE



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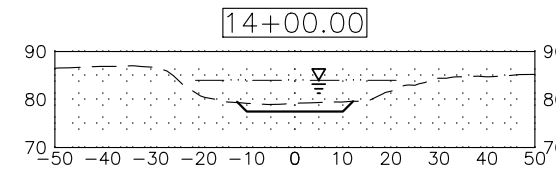
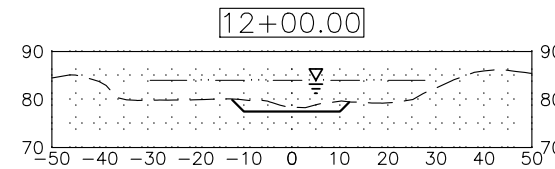
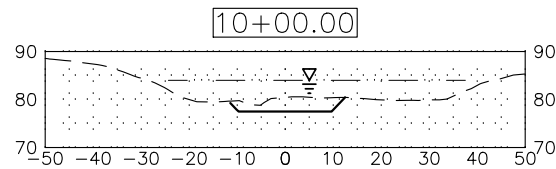
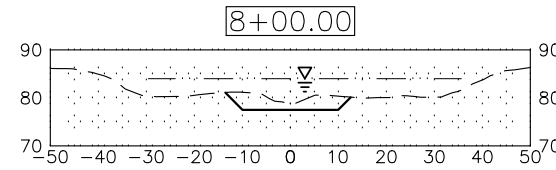
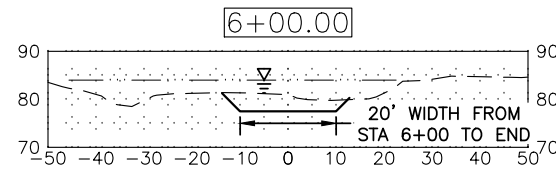
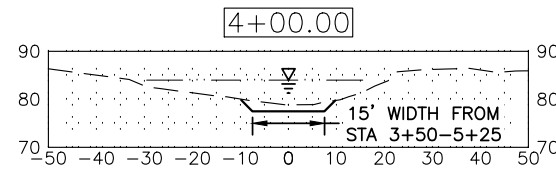
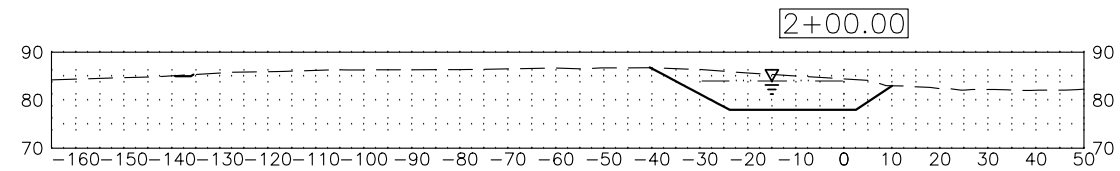
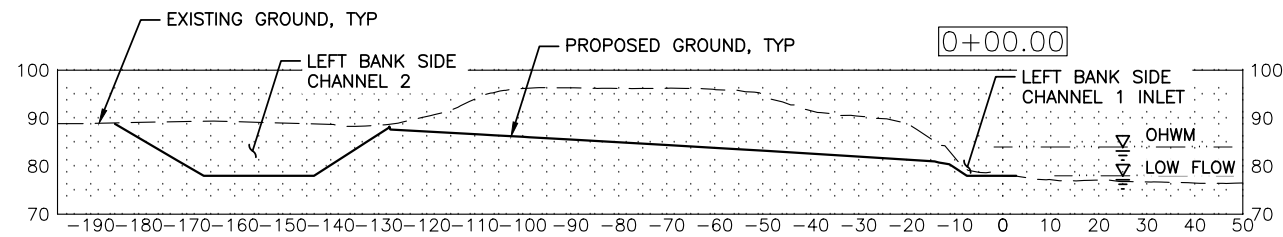


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| FALL CITY<br>FLOODPLAIN RESTORATION PROJECT |  |
| PLAN - BARFUSE RIPRAP REMOVAL               |  |

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| <br>King County | SHEET<br>35<br>OF<br>50<br>SHEETS |
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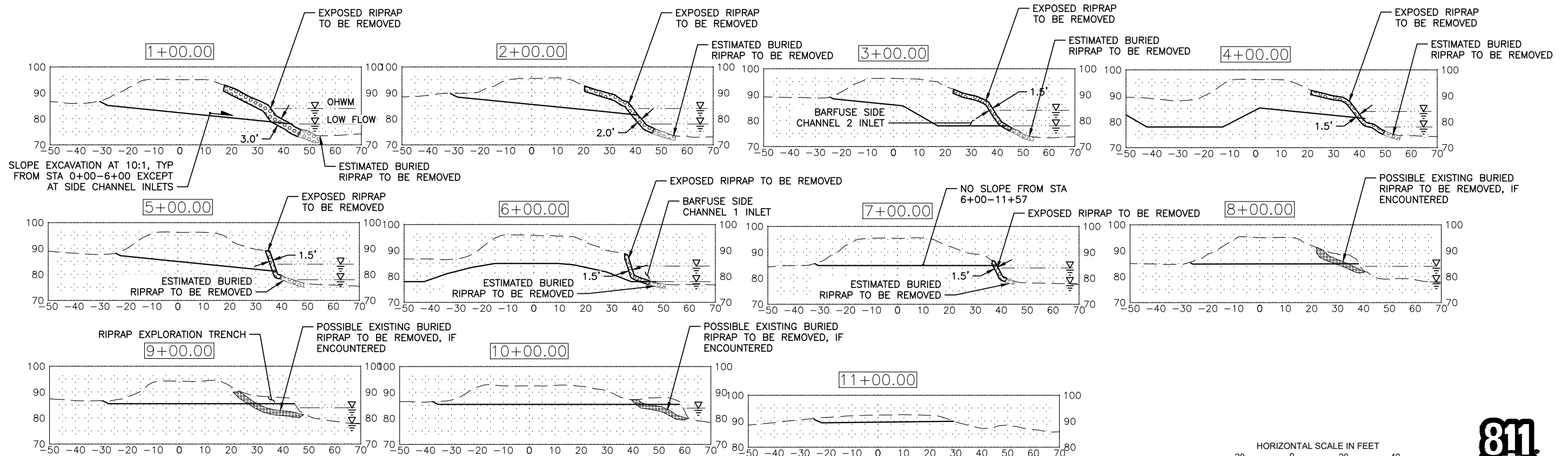


### NOTES

- CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.

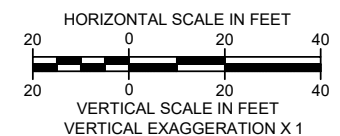
## SECTIONS - BARFUSE PILOT CHANNEL

H:1"=20' V:1"=20'



## SECTIONS - BARFUSE LEVEE REMOVAL

H:1"=20' V:1"=20'



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NOV 2020



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## FALL CITY FLOODPLAIN RESTORATION PROJECT

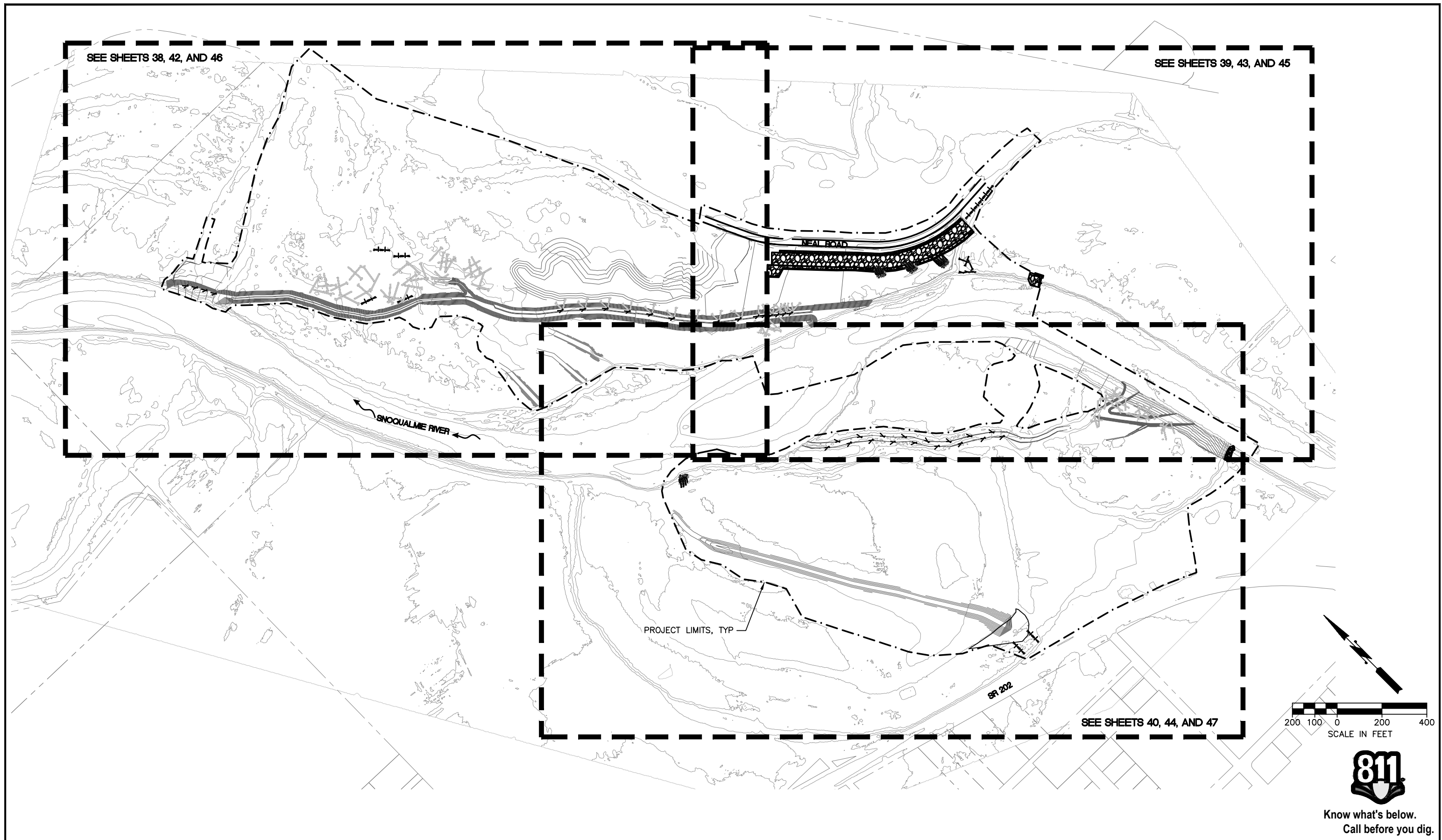
CROSS SECTIONS - BARFUSE LEVEE REMOVAL AND PILOT CHANNEL



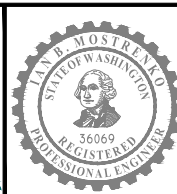
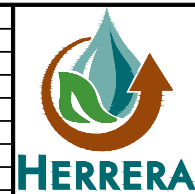
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## FALL CITY FLOODPLAIN RESTORATION PROJECT

KEY MAP - SITE PREP, TESC, PLANTING SITE PLANS

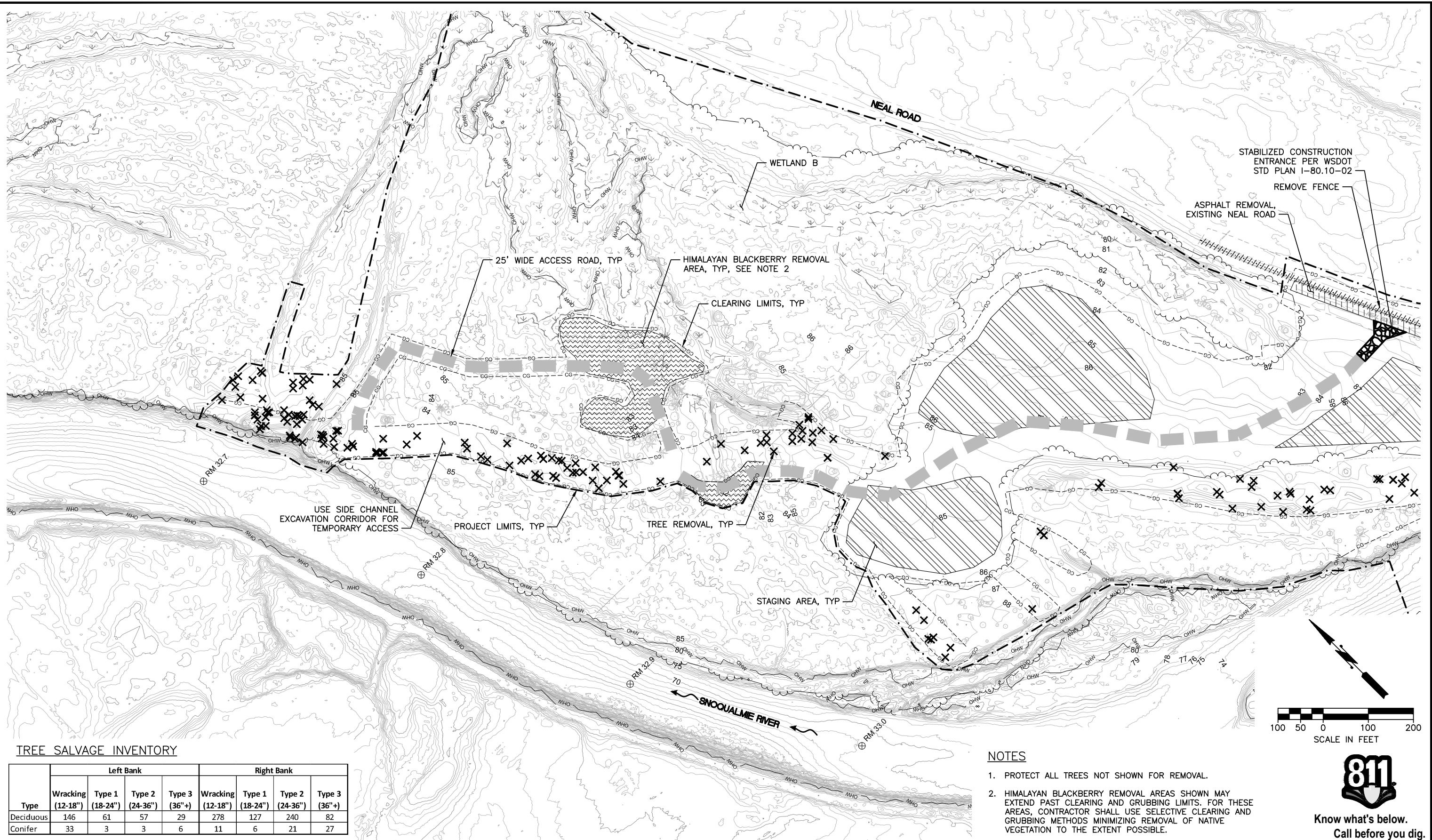


**King County**

XXX-XX (1)

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TREE SALVAGE INVENTORY

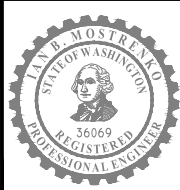
| Type      | Left Bank            |                    |                    |                  | Right Bank           |                    |                    |                  |
|-----------|----------------------|--------------------|--------------------|------------------|----------------------|--------------------|--------------------|------------------|
|           | Wracking<br>(12-18") | Type 1<br>(18-24") | Type 2<br>(24-36") | Type 3<br>(36"+) | Wracking<br>(12-18") | Type 1<br>(18-24") | Type 2<br>(24-36") | Type 3<br>(36"+) |
| Deciduous | 146                  | 61                 | 57                 | 29               | 278                  | 127                | 240                | 82               |
| Conifer   | 33                   | 3                  | 3                  | 6                | 11                   | 6                  | 21                 | 27               |

NOTES

1. PROTECT ALL TREES NOT SHOWN FOR REMOVAL.
2. HIMALAYAN BLACKBERRY REMOVAL AREAS SHOWN MAY EXTEND PAST CLEARING AND GRUBBING LIMITS. FOR THESE AREAS, CONTRACTOR SHALL USE SELECTIVE CLEARING AND GRUBBING METHODS MINIMIZING REMOVAL OF NATIVE VEGETATION TO THE EXTENT POSSIBLE.

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FALL CITY  
FLOODPLAIN RESTORATION PROJECT


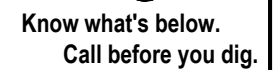
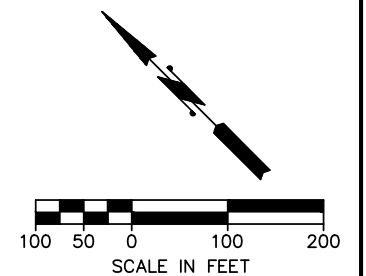
PLAN - SITE PREPARATION, ACCESS ROADS, AND DEMOLITION 1

SHEET  
**38**  
OF  
**50**  
SHEETS

**XXX-XX (1)**



1. PROTECT ALL TREES NOT SHOWN FOR REMOVAL.
2. HIMALAYAN BLACKBERRY REMOVAL AREAS SHOWN MAY EXTEND PAST CLEARING AND GRUBBING LIMITS. FOR THESE AREAS, CONTRACTOR SHALL USE SELECTIVE CLEARING AND GRUBBING METHODS MINIMIZING REMOVAL OF NATIVE VEGETATION TO THE EXTENT POSSIBLE.

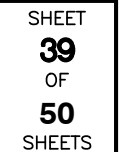


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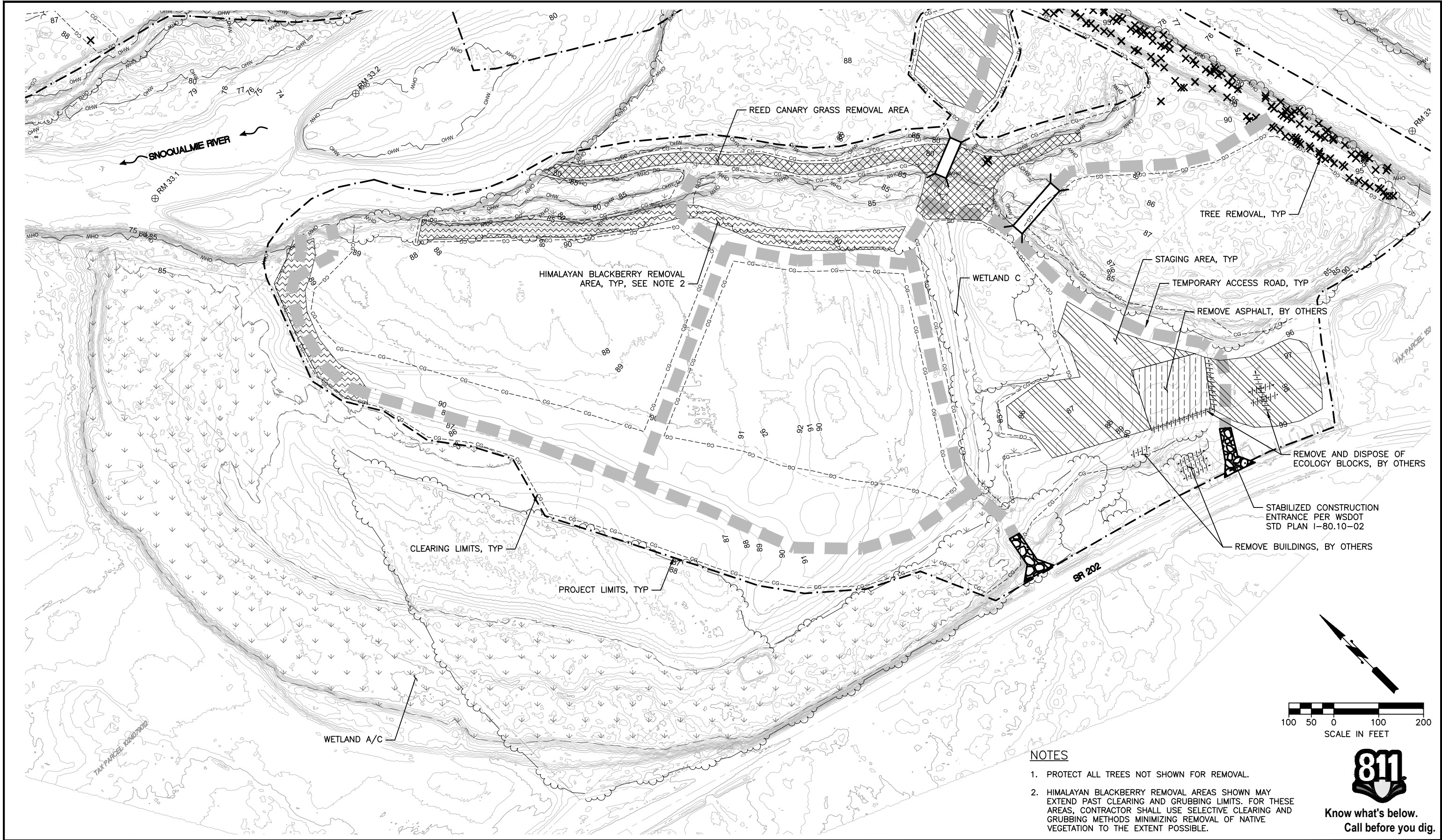
MAINTENANCE DIVISION No. \_\_\_\_\_

## PLAN - SITE PREPARATION, ACCESS ROADS, AND DEMOLITION 2



XXX-XX (1)





NOTES

1. PROTECT ALL TREES NOT SHOWN FOR REMOVAL.
2. HIMALAYAN BLACKBERRY REMOVAL AREAS SHOWN MAY EXTEND PAST CLEARING AND GRUBBING LIMITS. FOR THESE AREAS, CONTRACTOR SHALL USE SELECTIVE CLEARING AND GRUBBING METHODS MINIMIZING REMOVAL OF NATIVE VEGETATION TO THE EXTENT POSSIBLE.

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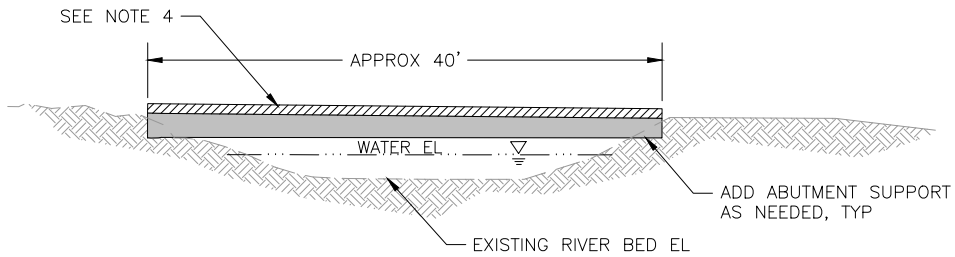
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| FALL CITY<br>FLOODPLAIN RESTORATION PROJECT             |
| PLAN - SITE PREPARATION, ACCESS ROADS, AND DEMOLITION 3 |

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| King County | SHEET<br>40<br>OF<br>50<br>SHEETS |
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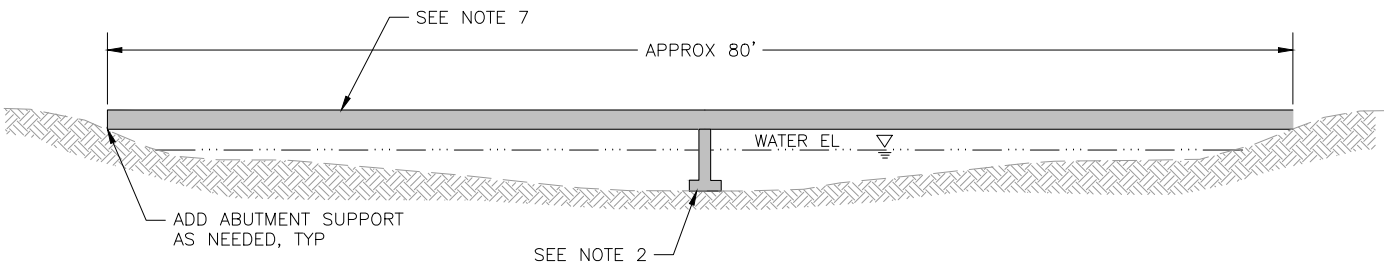




SINGLE SPAN BRIDGE NOTES:

1. SINGLE SPAN BRIDGES SHALL BE LOCATED SUCH THAT THEY REQUIRE ONLY ONE SPAN TO ELIMINATE IMPACTS TO SUBSTRATE.
2. END OF BRIDGE SHALL BEAR ON HIGH BANKS WITH SUFFICIENT BEARING CAPACITY TO PREVENT SLOUGHING OR COLLAPSE OF CHANNEL BANKS.
3. CONCRETE ECOLOGY BLOCKS OR WOOD ABUTMENTS MAY BE USED TO SUPPORT END OF TEMPORARY BRIDGE AS NEEDED.
4. BRIDGES MAY BE CONSTRUCTED FROM LOGS, RAIL CAR BEDS OR APPROVED EQUAL AND DECKED WITH STEEL SHEET, WOOD LAGGING OR APPROVED EQUAL.
5. ADDITIONAL MEASURES MAY BE REQUIRED TO REDUCE RISK FROM SCOUR.
6. PROVIDE ADEQUATE FREEBOARD TO ALLOW PASSAGE OF WATER FOR VARYING WATER SURFACE.

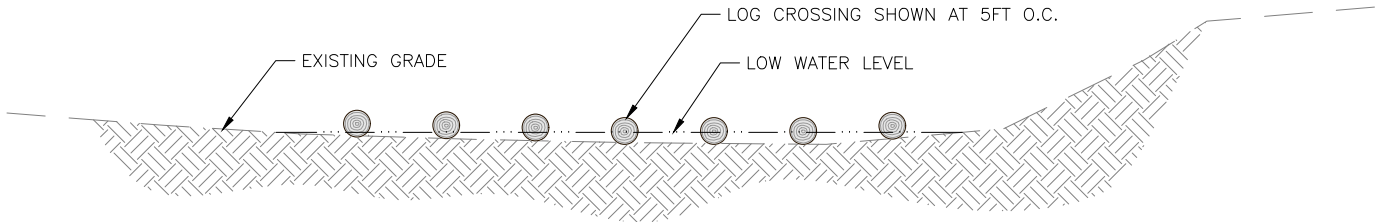
DETAIL – SINGLE SPAN TEMPORARY BRIDGE 1  
SCALE: NTS VAR



MULTI-SPAN BRIDGE NOTES:

1. MULTI-SPAN TEMPORARY BRIDGES USED TO CROSS WIDE CHANNELS OR WETLANDS.
2. MULTI-SPAN BRIDGES MAY OFTEN BE CONSTRUCTED BY PLACING TEMPORARY SUPPORTS INTO THE CHANNEL OR WETLAND AS SHOWN. THESE SUPPORTS MAY CONSIST OF LARGE DIAMETER LOGS, ECOLOGY BLOCKS, STEEL PIERS, OR SIMILAR MATERIAL.
3. ENDS OF BRIDGE SHALL BEAR DIRECTLY ONTO EXISTING GROUND.
4. SPANS MAY BE LINKED IN SERIES TO CROSS BROAD WATERWAYS OR WETLANDS.
5. TWO 40-FOOT SPAN SHOWN. LARGER SPANS OR MORE THAN TWO SPANS MAY BE USED TO BRIDGE LONGER DISTANCES.
6. BRIDGES MAY BE CONSTRUCTED FROM LOGS, RAIL CAR BEDS OR APPROVED EQUAL AND DECKED WITH STEEL SHEET, WOOD LAGGING OR APPROVED EQUAL.
7. PROVIDE ADEQUATE FREEBOARD TO ALLOW PASSAGE OF WATER FOR VARYING WATER SURFACE.

DETAIL – MULTI-SPAN TEMPORARY BRIDGE 2  
SCALE: NTS VAR



CHANNEL LOG CROSSING NOTES:

1. ENSURE LOGS USED IN CROSSINGS ARE NOT DAMAGED OR BROKEN IN THE COURSE OF PLACING, REMOVING, OR USING CROSSINGS SO THEY CAN BE USED AS SHOWN ON PLANS.
2. PLACE LOGS USED IN LOG CROSSINGS ORIENTED PARALLEL TO FLOW. IF LOGS INTENDED FOR CROSSING HAVE ROOTWADS THEN PLACE LOGS ORIENTED WITH THE ROOTWAD UPSTREAM.
3. REMOVE LOG CROSSINGS AT THE END OF THE DAY. REMOVE LOG CROSSINGS DURING HIGH FLOW AS DIRECTED BY ENGINEER OR IF FLOW CONDITIONS CAUSE LOGS TO BECOME BUOYANT.
4. IF FLOW DEPTH EXCEEDS 1/2 OF THE DIAMETER OF LOGS, OR IF LOGS APPEAR TO BE BUOYANT THEN PLACE LOGS WITH ROOTWADS IN LOG CROSSING. IF LOGS WITH ROOTWADS CONTINUE TO BE BUOYANT THEN REMOVE LOGS FROM CROSSING.
5. ENSURE AT ALL TIMES THAT EQUIPMENT TIRES OR TRACKS DO NOT DISTURB GRAVEL OR SEDIMENT WITHIN THE WETTED CHANNEL.

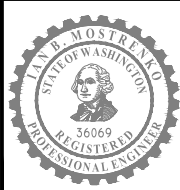
DETAIL – TEMPORARY CHANNEL LOG CROSSING 3  
SCALE: NTS VAR



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| SUPERVISOR:    | M.E. | 11/2020 |

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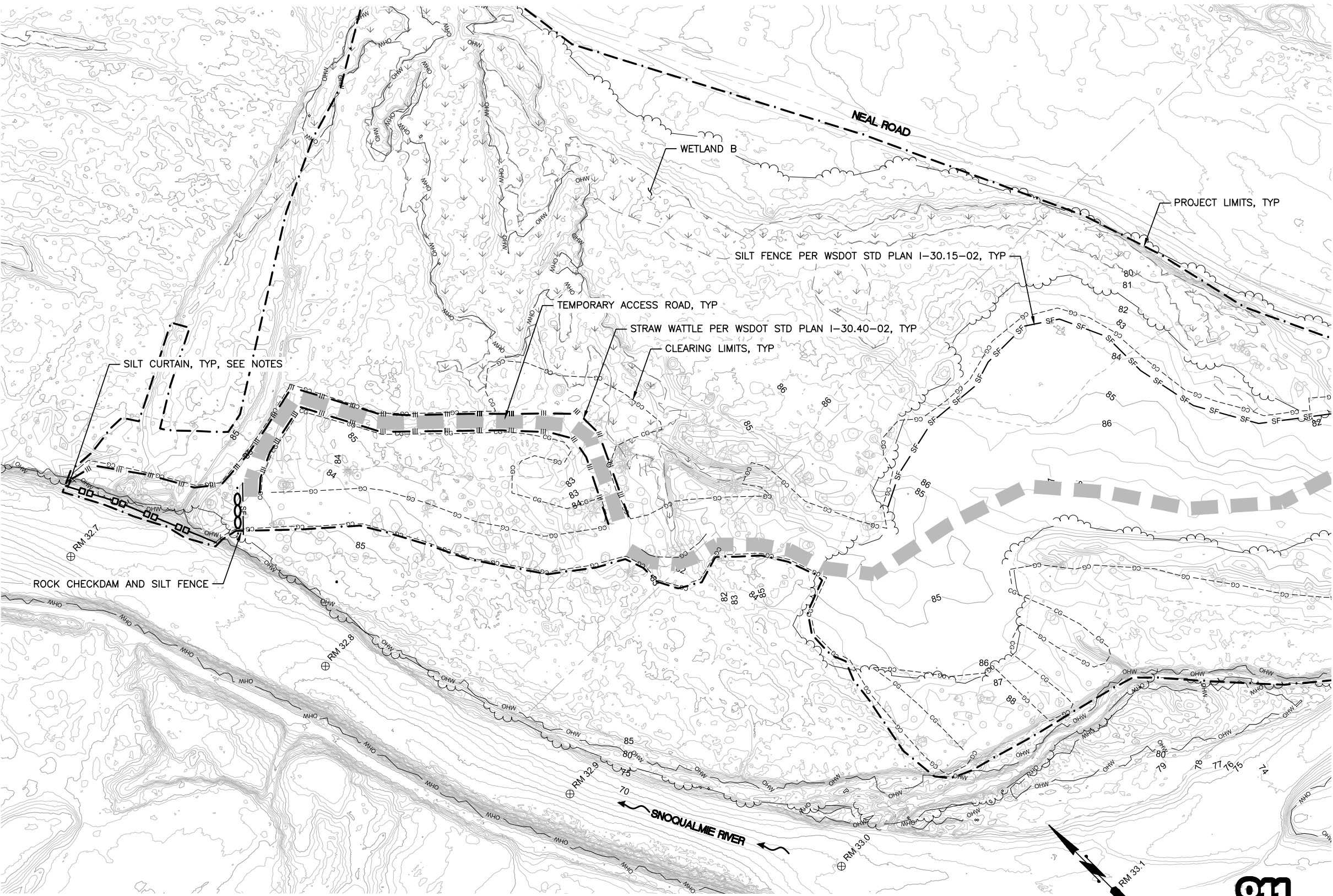
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| FALL CITY<br>FLOODPLAIN RESTORATION PROJECT |  |
| SITE PREPARATION DETAILS                    |  |

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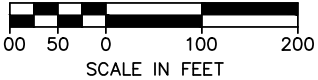
TESC NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DDES INSPECTOR FOR REVIEW.



NOTES

1. LOCATION OF SILT CURTAIN WILL DEPEND ON CONTRACTOR CONSTRUCTION SEQUENCING AND WQMP REQUIREMENTS.
2. USE OF SILT CURTAIN, SILT FENCE, TRIANGULAR SILT DYKE, OR ROCK CHECK DAMS MAY BE REQUIRED DEPENDING ON ACCESS AND CONSTRUCTION SEQUENCING OF HAFFNER SIDE CHANNEL EXCAVATION.



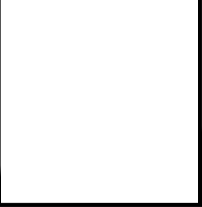
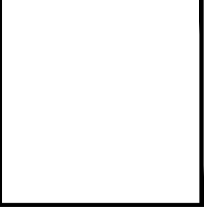
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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

PLAN – TESC AND WATER MANAGEMENT SITE PLAN 1

King County

SHEET  
42  
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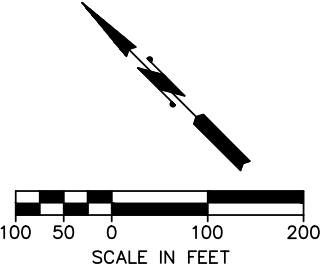
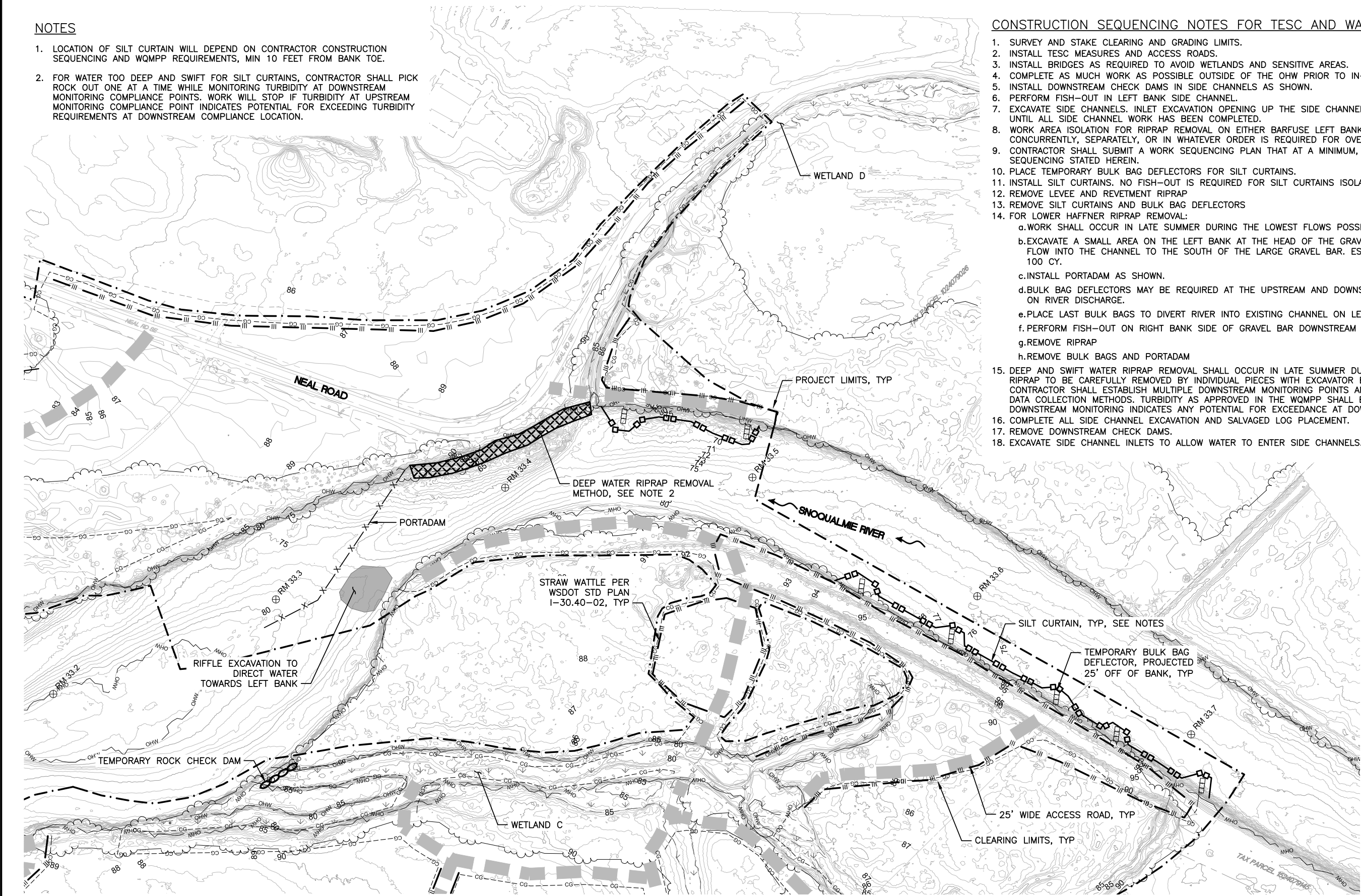


NOTES

1. LOCATION OF SILT CURTAIN WILL DEPEND ON CONTRACTOR CONSTRUCTION SEQUENCING AND WQMP REQUIREMENTS, MIN 10 FEET FROM BANK TOE.
2. FOR WATER TOO DEEP AND SWIFT FOR SILT CURTAINS, CONTRACTOR SHALL PICK ROCK OUT ONE AT A TIME WHILE MONITORING TURBIDITY AT DOWNSTREAM MONITORING COMPLIANCE POINTS. WORK WILL STOP IF TURBIDITY AT UPSTREAM MONITORING COMPLIANCE POINT INDICATES POTENTIAL FOR EXCEEDING TURBIDITY REQUIREMENTS AT DOWNSTREAM COMPLIANCE LOCATION.

CONSTRUCTION SEQUENCING NOTES FOR TESC AND WATER MANAGEMENT:

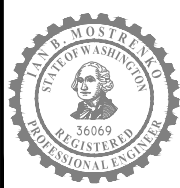
1. SURVEY AND STAKE CLEARING AND GRADING LIMITS.
2. INSTALL TESC MEASURES AND ACCESS ROADS.
3. INSTALL BRIDGES AS REQUIRED TO AVOID WETLANDS AND SENSITIVE AREAS.
4. COMPLETE AS MUCH WORK AS POSSIBLE OUTSIDE OF THE OHW PRIOR TO IN-WATER WORK AND RIPRAP REMOVAL.
5. INSTALL DOWNSTREAM CHECK DAMS IN SIDE CHANNELS AS SHOWN.
6. PERFORM FISH-OUT IN LEFT BANK SIDE CHANNEL.
7. EXCAVATE SIDE CHANNELS. INLET EXCAVATION OPENING UP THE SIDE CHANNEL FOR ACTIVE FLOWS SHALL NOT OCCUR UNTIL ALL SIDE CHANNEL WORK HAS BEEN COMPLETED.
8. WORK AREA ISOLATION FOR RIPRAP REMOVAL ON EITHER BARFUSE LEFT BANK OR HAFFNER RIGHT BANK CAN OCCUR CONCURRENTLY, SEPARATELY, OR IN WHATEVER ORDER IS REQUIRED FOR OVERALL PROJECT WORK SEQUENCING.
9. CONTRACTOR SHALL SUBMIT A WORK SEQUENCING PLAN THAT AT A MINIMUM, FOLLOWS THE REQUIREMENT OF WORK SEQUENCING STATED HEREIN.
10. PLACE TEMPORARY BULK BAG DEFLECTORS FOR SILT CURTAINS.
11. INSTALL SILT CURTAINS. NO FISH-OUT IS REQUIRED FOR SILT CURTAINS ISOLATED AREAS.
12. REMOVE LEVEE AND REVETMENT RIPRAP
13. REMOVE SILT CURTAINS AND BULK BAG DEFLECTORS
14. FOR LOWER HAFFNER RIPRAP REMOVAL:
  - a.WORK SHALL OCCUR IN LATE SUMMER DURING THE LOWEST FLOWS POSSIBLE.
  - b.EXCAVATE A SMALL AREA ON THE LEFT BANK AT THE HEAD OF THE GRAVEL BAR RIFFLE TO ENCOURAGE MORE FLOW INTO THE CHANNEL TO THE SOUTH OF THE LARGE GRAVEL BAR. ESTIMATED EXCAVATION VOLUME LESS THAN 100 CY.
  - c.INSTALL PORTADAM AS SHOWN.
  - d.BULK BAG DEFLECTORS MAY BE REQUIRED AT THE UPSTREAM AND DOWNSTREAM END OF PORTADAM DEPENDING ON RIVER DISCHARGE.
  - e.PLACE LAST BULK BAGS TO DIVERT RIVER INTO EXISTING CHANNEL ON LEFT BANK SIDE OF GRAVEL BAR.
  - f.PERFORM FISH-OUT ON RIGHT BANK SIDE OF GRAVEL BAR DOWNSTREAM OF PORTADAM.
  - g.REMOVE RIPRAP
  - h.REMOVE BULK BAGS AND PORTADAM
15. DEEP AND SWIFT WATER RIPRAP REMOVAL SHALL OCCUR IN LATE SUMMER DURING THE LOWEST FLOWS POSSIBLE. RIPRAP TO BE CAREFULLY REMOVED BY INDIVIDUAL PIECES WITH EXCAVATOR BUCKET AND THUMB METHOD. CONTRACTOR SHALL ESTABLISH MULTIPLE DOWNSTREAM MONITORING POINTS AND COMPLIANCE POINT WITH CONTINUOUS DATA COLLECTION METHODS. TURBIDITY AS APPROVED IN THE WQMP SHALL BE MONITORED AND WORK STOPPED IF DOWNSTREAM MONITORING INDICATES ANY POTENTIAL FOR EXCEEDANCE AT DOWNSTREAM COMPLIANCE POINT.
16. COMPLETE ALL SIDE CHANNEL EXCAVATION AND SALVAGED LOG PLACEMENT.
17. REMOVE DOWNSTREAM CHECK DAMS.
18. EXCAVATE SIDE CHANNEL INLETS TO ALLOW WATER TO ENTER SIDE CHANNELS.



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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

PLAN - TESC AND WATER MANAGEMENT SITE PLAN 2

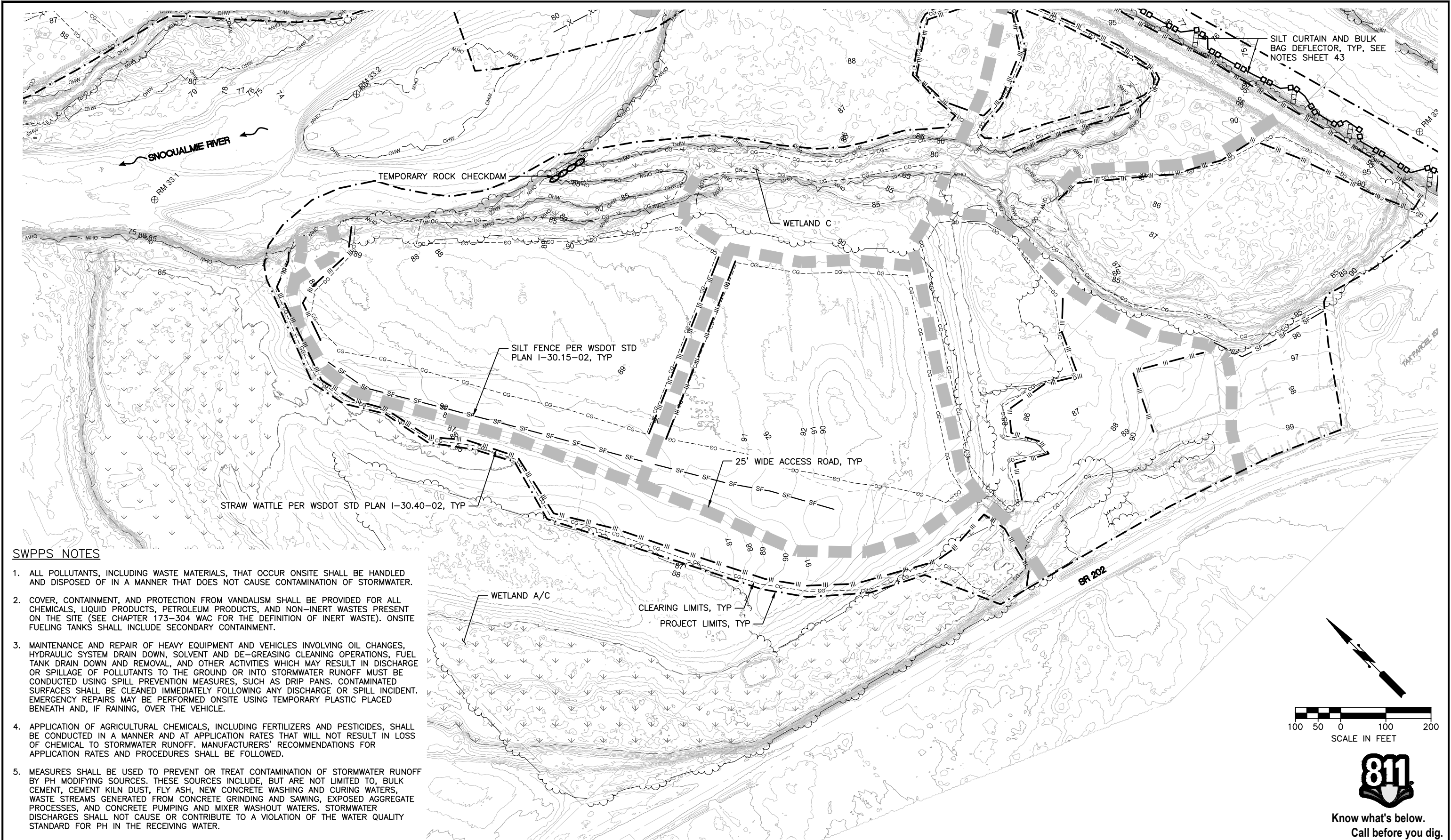


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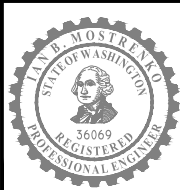


SWPPS NOTES

1. ALL POLLUTANTS, INCLUDING WASTE MATERIALS, THAT OCCUR ONSITE SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
2. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND NON-INERT WASTES PRESENT ON THE SITE (SEE CHAPTER 173-304 WAC FOR THE DEFINITION OF INERT WASTE). ONSITE FUELING TANKS SHALL INCLUDE SECONDARY CONTAINMENT.
3. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. EMERGENCY REPAIRS MAY BE PERFORMED ONSITE USING TEMPORARY PLASTIC PLACED BENEATH AND, IF RAINING, OVER THE VEHICLE.
4. APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, SHALL BE CONDUCTED IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICAL TO STORMWATER RUNOFF. MANUFACTURERS' RECOMMENDATIONS FOR APPLICATION RATES AND PROCEDURES SHALL BE FOLLOWED.
5. MEASURES SHALL BE USED TO PREVENT OR TREAT CONTAMINATION OF STORMWATER RUNOFF BY PH MODIFYING SOURCES. THESE SOURCES INCLUDE, BUT ARE NOT LIMITED TO, BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHING AND CURING WATERS, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, AND CONCRETE PUMPING AND MIXER WASHOUT WATERS. STORMWATER DISCHARGES SHALL NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE WATER QUALITY STANDARD FOR PH IN THE RECEIVING WATER.

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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

PLAN - TESC AND WATER MANAGEMENT SITE PLAN 3



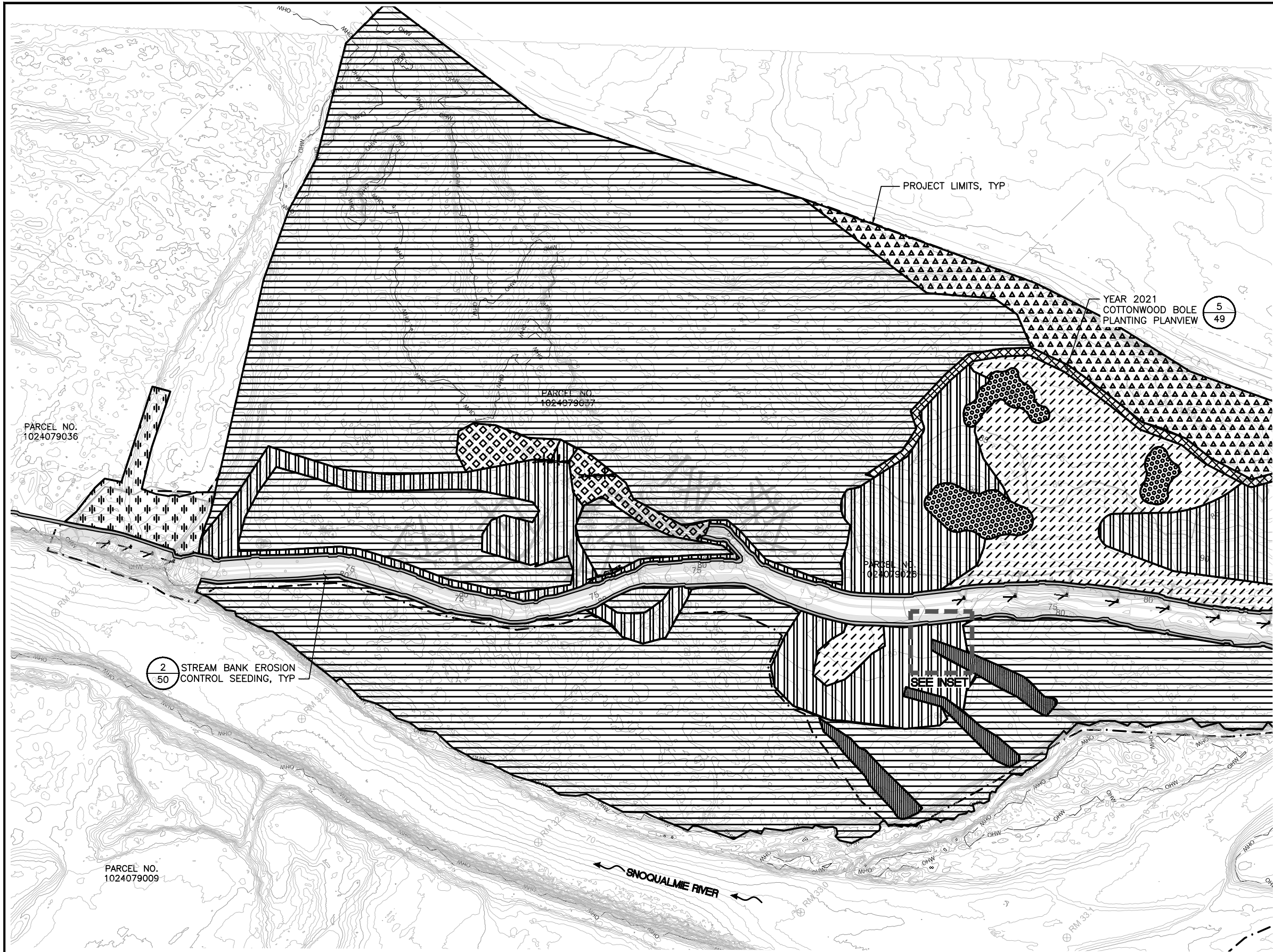
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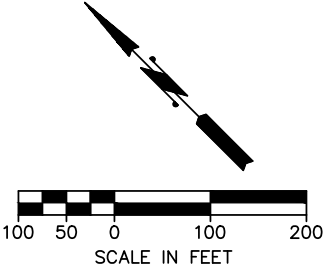
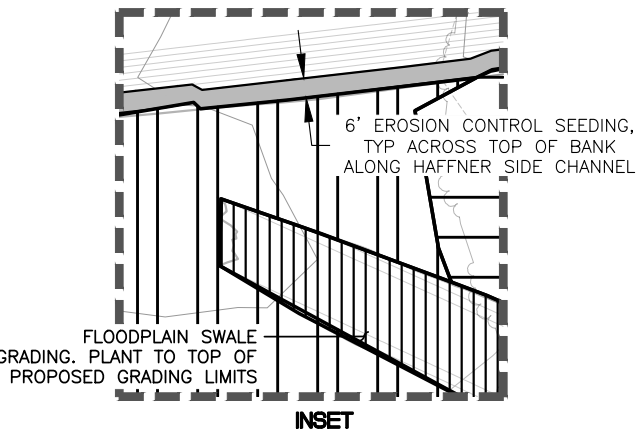


PLANTING ZONES

- EXISTING FLOODPLAIN FOREST (PLANTING AREA ASSUMES REMOVAL OF EXISTING INVASIVE VEGETATION AND REVEGETATING BARE AREAS. ASSUMES 20% OF EXISTING FLOODPLAIN FOREST IS WEEDY OR INVASIVE SPECIES)
- FLOODPLAIN FOREST
- FLOODPLAIN SHRUB
- FLOODPLAIN TERRACE
- SWALE
- MEADOW SEEDING
- 6' NATIVE EROSION CONTROL SEEDING AT TOP OF NEW CHANNEL (TO BE APPLIED EACH SPRING AFTER SEASONAL HIGH WATER EVENTS FOR FIRST THREE YEARS OF CHANNEL MIGRATION)
- LIVE STAKE PLANTING
- WINTER 2021 COTTONWOOD BOLE PLANTING
- SELECTIVE CLEARING AND GRUBBING AND WET FOREST PLANTING (PLANTING AREA ASSUMES PROTECTION OF NATIVE TREES, SHRUBS, AND GROUND COVER AND 50 PERCENT INVASIVE VEGETATION REMOVAL AND NATIVE REVEGETATION)

NOTES:

- SEE SHEET 48 FOR PLANTING NOTES AND SCHEDULE.



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FALL CITY  
FLOODPLAIN RESTORATION PROJECT

PLAN - PLANTING 1

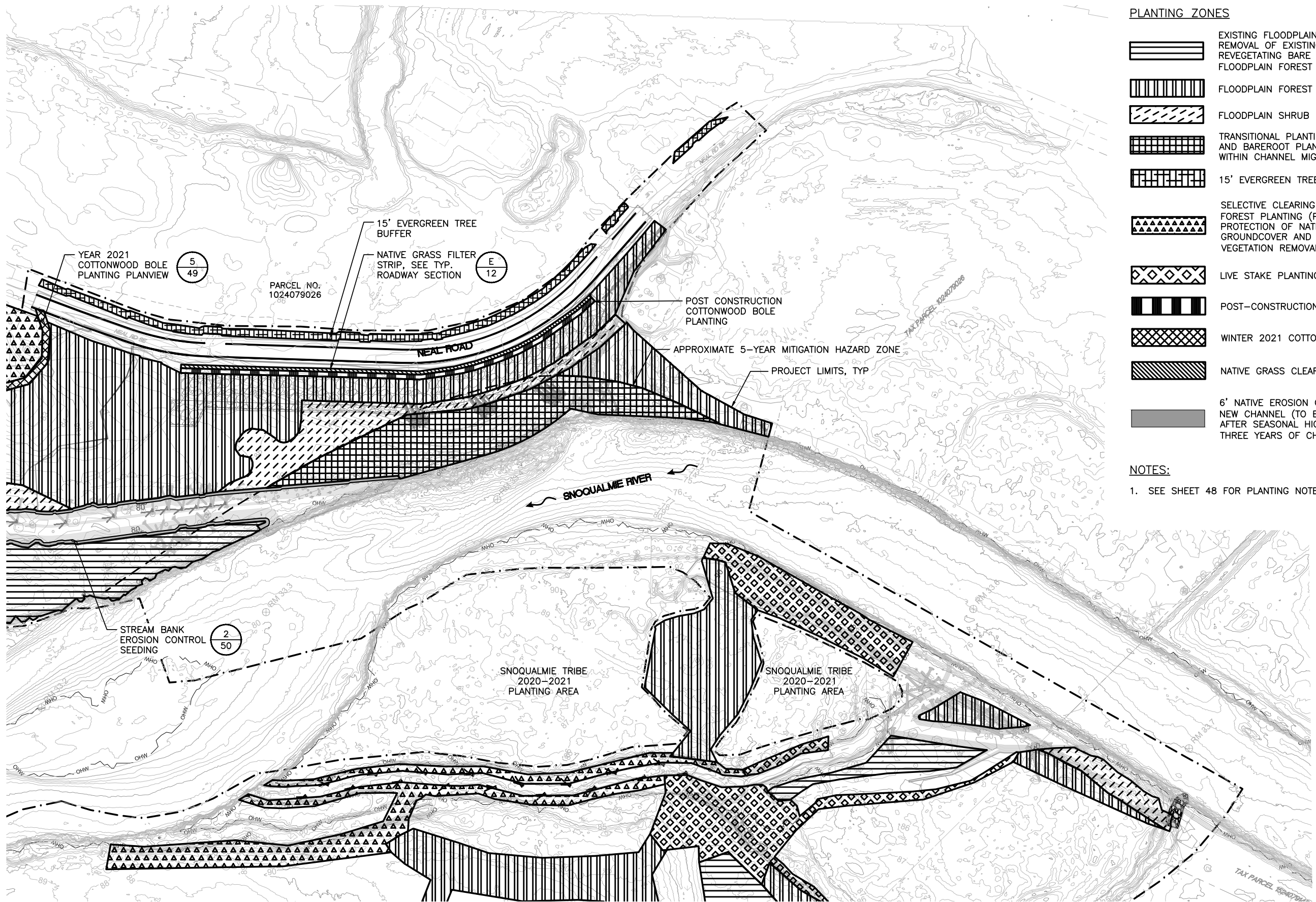


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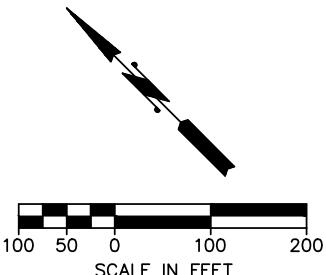


PLANTING ZONES

- EXISTING FLOODPLAIN FOREST (PLANTING AREA ASSUMES REMOVAL OF EXISTING INVASIVE VEGETATION AND REVEGETATING BARE AREAS. ASSUMES 20% OF EXISTING FLOODPLAIN FOREST IS WEEDY OR INVASIVE SPECIES)
- FLOODPLAIN FOREST
- FLOODPLAIN SHRUB
- TRANSITIONAL PLANTING ZONE (LIVE STAKE, BOLE, AND BAREROOT PLANTING AT WIDER SPACING WITHIN CHANNEL MIGRATION AREA)
- 15' EVERGREEN TREE BUFFER
- SELECTIVE CLEARING AND GRUBBING AND WET FOREST PLANTING (PLANTING AREA ASSUMES PROTECTION OF NATIVE TREES, SHRUBS, AND GROUND COVER AND 50 PERCENT INVASIVE VEGETATION REMOVAL AND NATIVE REVEGETATION)
- LIVE STAKE PLANTING
- POST-CONSTRUCTION COTTONWOOD BOLE PLANTING
- WINTER 2021 COTTONWOOD BOLE PLANTING
- NATIVE GRASS CLEAR ZONE
- 6' NATIVE EROSION CONTROL SEEDING AT TOP OF NEW CHANNEL (TO BE APPLIED EACH SPRING AFTER SEASONAL HIGH WATER EVENTS FOR FIRST THREE YEARS OF CHANNEL MIGRATION)

NOTES:

- SEE SHEET 48 FOR PLANTING NOTES AND SCHEDULE.



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FLOODPLAIN RESTORATION PROJECT

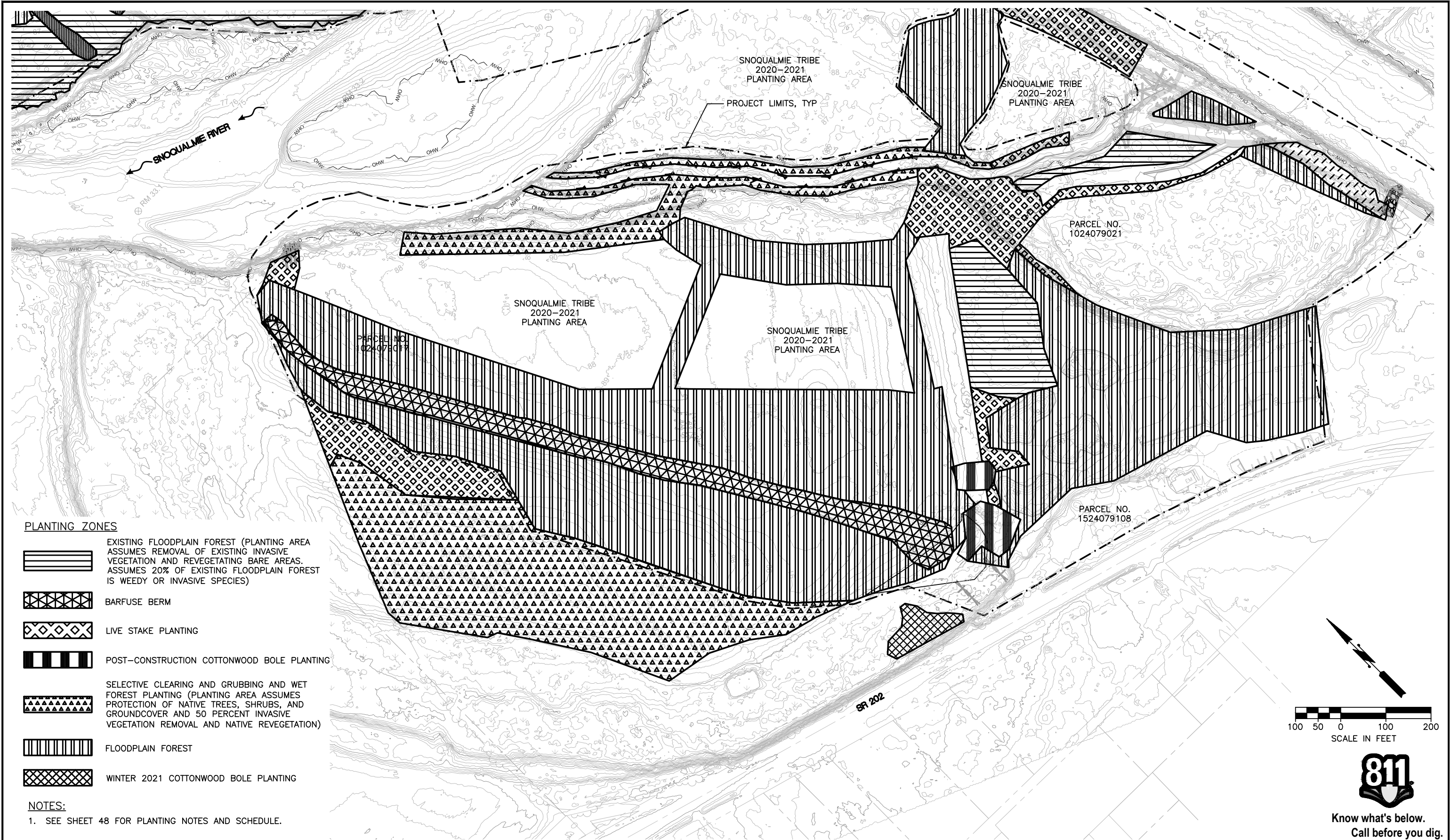
PLAN - PLANTING 2

King County

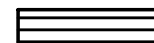






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**PLANTING ZONES**

-  EXISTING FLOODPLAIN FOREST (PLANTING AREA ASSUMES REMOVAL OF EXISTING INVASIVE VEGETATION AND REVEGETATING BARE AREAS. ASSUMES 20% OF EXISTING FLOODPLAIN FOREST IS WEEDY OR INVASIVE SPECIES)
-  BARFUSE BERM
-  LIVE STAKE PLANTING
-  POST-CONSTRUCTION COTTONWOOD BOLE PLANTING
-  SELECTIVE CLEARING AND GRUBBING AND WET FOREST PLANTING (PLANTING AREA ASSUMES PROTECTION OF NATIVE TREES, SHRUBS, AND GROUND COVER AND 50 PERCENT INVASIVE VEGETATION REMOVAL AND NATIVE REVEGETATION)
-  FLOODPLAIN FOREST
-  WINTER 2021 COTTONWOOD BOLE PLANTING

**NOTES:**  
1. SEE SHEET 48 FOR PLANTING NOTES AND SCHEDULE.

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**FALL CITY  
FLOODPLAIN RESTORATION PROJECT**

PLAN - PLANTING 3

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## FALL CITY PERMIT DESIGN PLANTING SCHEDULE

| Scientific name  | Common Name           | Spacing On Center (Feet) | Stock Type*   | Habitat Type               |                   |                  |                            |                     |                                      |  |       |                    |              |                           |   | Total |
|--|-----------------------|--------------------------|---------------|----------------------------|-------------------|------------------|----------------------------|---------------------|--------------------------------------|--|-------|--------------------|--------------|---------------------------|---|-------|
|  |                       |                          |               | Existing Floodplain Forest | Floodplain Forest | Floodplain Shrub | Transitional Planting Zone | Live Stake Planting | Winter 2021 Cottonwood Bole Planting | Post-Construction Cottonwood Bole Planting | Swale | Floodplain Terrace | Barfuse Berm | 15' Evergreen Tree Buffer | Selective Clearing and Grubbing Wet Forest Planting (Approx. 50% of Area To Be Planted) |       |
| Trees  |                       |                          |               |                            |                   |                  |                            |                     |                                      |  |       |                    |              |                           |   |       |
| Acer circinatum  | Vine maple            | 15'                      | BRS           | 110                        | 386               | 50               |                            |                     |                                      |  |       |                    | 16           |                           | 50  | 611   |
| Acer macrophyllum  | Bigleaf maple         | 20'                      | BRS           | 75                         | 318               |                  |                            |                     |                                      |  |       |                    |              |                           |   | 393   |
| Alnus rubra  | Red alder             | 15'                      | BRS           | 157                        | 643               | 200              |                            |                     |                                      |  |       | 91                 | 41           |                           | 79  | 1211  |
| Alnus viridis  | Green alder           | 15'                      | BRS           | 157                        | 643               | 100              |                            |                     |                                      |  |       |                    | 41           |                           | 79  | 1020  |
| Fraxinus latifolia                                       | Oregon ash            | 15'                      | BRS           |                            |                   |                  |                            |                     |                                      |  |       |                    |              |                           | 50  | 50    |
| Malus fusca  | Pacific crabapple     | 15'                      | BRS           | 110                        | 450               |                  |                            |                     |                                      |  |       |                    | 20           |                           |   | 580   |
| Populus balsamifera ssp. trichocarpa                     | Black cottonwood      | 4'                       | 4' Live stake | 1804                       | 8333              |                  |                            | 3065                |                                      |  |       |                    |              |                           | 1426  | 14629 |
| Populus balsamifera ssp. trichocarpa                     | Black cottonwood      | 3'                       | 8' - 12' Pole |                            |                   |                  |                            |                     | 3580                                 | 3386                                       |       |                    |              |                           |   | 6966  |
| Populus balsamifera ssp. trichocarpa - Transitional Area | Black cottonwood      | 15'                      | 8' - 12' Pole |                            |                   |                  | 68                         |                     |                                      |  |       | 78                 |              |                           |   | 146   |
| Picea sitchensis   | Sitka spruce          | 15'                      | 5 Gallon      | 157                        | 643               |                  |                            |                     |                                      |  |       |                    | 41           | 40                        |   | 880   |
| Thuja plicata  | Western red cedar     | 15'                      | 5 Gallon      | 157                        | 691               |                  |                            |                     |                                      |  |       |                    | 33           | 60                        |   | 941   |
| Shrubs   |                       |                          |               |                            |                   |                  |                            |                     |                                      |  |       |                    |              |                           |   |       |
| Cornus stolonifera                                       | Red-osier dogwood     | 4'                       | 4' Live stake | 451                        | 1389              | 866              |                            | 2452                |                                      |  |       | 1051               | 263          |                           | 1426  | 7898  |
| Cornus stolonifera -Transitional Area                    | Red-osier dogwood     | 6'                       | 4' Live stake |                            |                   |                  | 219                        |                     |                                      |  |       |                    |              |                           |   | 219   |
| Corylus cornuta  | Beaked hazelnut       | 6'                       | BRS           | 200                        | 823               | 192              |                            |                     |                                      |  |       |                    | 156          |                           |   | 1372  |
| Lonicera involucrata                                     | Twinberry honeysuckle | 6'                       | BRS           | 200                        | 905               |                  |                            |                     |                                      |  |       |                    | 156          |                           |   | 1262  |
| Oemleria cerasiformis                                    | Osoberry              | 6'                       | BRS           | 200                        | 905               |                  |                            |                     |                                      |  |       | 88                 | 156          |                           | 127   | 1476  |
| Physocarpus copitatus                                    | Pacific ninebark      | 6'                       | BRS           | 200                        | 864               | 257              |                            |                     |                                      |  | 311   | 175                |              |                           | 317   | 2125  |
| Physocarpus capitatus -Transitional Area                 | Pacific ninebark      | 10'                      | BRS           |                            |                   |                  | 66                         |                     |                                      |  |       |                    |              |                           |   | 66    |
| Rosa gymnocarpa  | Dwarf rose            | 4'                       | BRS           |                            |                   | 722              |                            |                     |                                      |  |       |                    | 468          |                           | 428   | 1618  |
| Rosa nutkana   | Nootka rose           | 4'                       | BRS           |                            |                   | 722              |                            |                     |                                      |  |       |                    |              |                           | 428   | 1149  |
| Rosa woodsii   | Wood's rose           | 4'                       | BRS           | 564                        | 2315              | 289              |                            |                     |                                      |  |       |                    |              |                           |   | 3167  |
| Rubus parviflorus  | Thimbleberry          | 4'                       | BRS           | 564                        | 2315              | 433              |                            |                     |                                      |  |       |                    | 351          |                           |   | 3663  |
| Rubus parviflorus -Transitional Area                     | Thimbleberry          | 6'                       | BRS           |                            |                   |                  | 109                        |                     |                                      |  |       |                    |              |                           |   | 109   |
| Rubus spectabilis  | Salmonberry           | 6'                       | BRS           | 251                        | 1029              | 192              |                            |                     |                                      |  |       |                    |              |                           | 507   | 1979  |
| Rubus spectabilis -Transitional Area                     | Salmonberry           | 8'                       | BRS           |                            |                   |                  | 111                        |                     |                                      |  |       |                    |              |                           |   | 111   |
| Rubus ursinus  | Pacific blackberry    | 3'                       | Plug          | 204                        |                   | 521              |                            |                     |                                      |  |       |                    | 106          |                           |   | 830   |
| Salix hookeriana   | Dune willow           | 4'                       | 4' Live stake | 338                        | 1389              | 866              |                            | 3065                |                                      |  |       |                    |              |                           | 2139  | 7797  |
| Salix hookeriana -Transitional Area                      | Dune willow           | 6'                       | 4' Live stake |                            |                   |                  | 263                        |                     |                                      |  |       |                    |              |                           |   | 263   |
| Salix lasiandra  | Pacific willow        | 4'                       | 4' Live stake | 338                        | 1389              | 866              |                            | 3678                |                                      |  |       |                    |              |                           | 2139  | 8410  |
| Salix lasiandra -Transitional Area                       | Pacific willow        | 6'                       | 4' Live stake |                            |                   |                  | 263                        |                     |                                      |  |       |                    |              |                           |   | 263   |
| Salix sitchensis   | Sitka willow          | 4'                       | 4' Live stake |                            |                   | 866              |                            | 3065                |                                      |  |       |                    |              |                           |   | 3931  |
| Salix sitchensis -Transitional Area                      | Sitka willow          | 6'                       | 4' Live stake |                            |                   |                  | 263                        |                     |                                      |  |       |                    |              |                           |   | 263   |
| Sambucus racemosa  | Red elderberry        | 6'                       | BRS           | 200                        | 823               | 257              |                            |                     |                                      |  |       |                    | 182          |                           |   | 1462  |
| Sambucus racemosa -Transitional Area                     | Red elderberry        | 10'                      | BRS           |                            |                   |                  | 33                         |                     |                                      |  |       |                    |              |                           |   | 33    |
| Spiraea douglasii  | Western spirea        | 4'                       | BRS           |                            |                   | 433              |                            |                     |                                      |  |       |                    |              |                           |   | 433   |
| Spiraea douglasii -Transitional Area                     | Western spirea        | 8'                       | BRS           |                            |                   | 0                | 37                         |                     |                                      |  |       |                    |              |                           |   | 37    |
| Symphoricarpos albus                                     | Common snowberry      | 4'                       | BRS           | 677                        | 2778              | 722              |                            |                     |                                      |  |       |                    | 585          |                           | 1141  | 5902  |
| Symphoricarpos albus -Transitional Area                  | Common snowberry      | 6'                       | BRS           |                            |                   |                  | 109                        |                     |                                      |  |       |                    |              |                           |   | 109   |
| Groundgrover   |                       |                          |               |                            |                   |                  |                            |                     |                                      |  |       |                    |              |                           |   |       |
| Athyrium filix-femina                                    | Lady fern             | 3'                       | 1 Gallon      | 407                        | 836               |                  |                            |                     |                                      |  |       |                    |              |                           |   | 1243  |
| Carex obnupta  | Slough sedge          | 3'                       | DRP           | 204                        | 836               | 261              |                            |                     |                                      |  |       |                    |              |                           |   | 1300  |
| Juncus tenuis  | Poverty rush          | 3'                       | DRP           |                            |                   | 261              |                            |                     |                                      |  |       |                    |              |                           |   | 261   |
| Polystichum munitum                                      | Western swordfern     | 3'                       | 1 Gallon      | 611                        | 1672              |                  |                            |                     |                                      |  |       |                    | 211          |                           |   | 2494  |
| Tolmiea menziesii  | Piggyback plant       | 3'                       | Plug          | 407                        | 1672              |                  |                            |                     |                                      |  |       |                    | 106          |                           |   | 2185  |

\*BRS = Bareroot seedling, DRP = Deep-rooted plug

**6' Native Erosion Control Seed Mix 0.88 Acres/Annually**

| Scientific name                | Common Name      | % Species Mix |
|--------------------------------|------------------|---------------|
| <i>Bromus carinatus</i>        | California brome | 0.25          |
| <i>Deschampsia cespitosa</i>   | Tufted hairgrass | 0.18          |
| <i>Elymus glaucus</i>          | Blue wildrye     | 0.3           |
| <i>Festuca rubra var rubra</i> | Red fescue       | 0.27          |

## Barfuse Berm Seed Mix

| Scientific name                | Common Name      | % Species Mix |
|--------------------------------|------------------|---------------|
| <i>Achillea millefolium</i>    | Common yarrow    | 0.03          |
| <i>Chamerion angustifolium</i> | Fireweed         | 0.04          |
| <i>Deschampsia cespitosa</i>   | Tufted hairgrass | 0.28          |
| <i>Elymus glaucus</i>          | Blue wildrye     | 0.35          |
| <i>Festuca rubra var rubra</i> | Red fescue       | 0.30          |

### 0.2 Acres

### Meadow Seed Mix

| Scientific name                    | Common Name        | % Species Mix |
|------------------------------------|--------------------|---------------|
| <i>Achillea millefolium</i>        | Common yarrow      | 0.03          |
| <i>Anaphalis margaritacea</i>      | Pearly everlasting | 0.02          |
| <i>Chamerion angustifolium</i>     | Fireweed           | 0.04          |
| <i>Clarkia amoena</i>              | Farewell to spring | 0.02          |
| <i>Deschampsia cespitosa</i>       | Tufted hairgrass   | 0.21          |
| <i>Elymus glaucus</i>              | Blue wildrye       | 0.30          |
| <i>Geum macrophyllum</i>           | Large-leaved avens | 0.02          |
| <i>Koeleria macrantha</i>          | Prairie junegrass  | 0.27          |
| <i>Lupinus rivularis</i>           | Riverbank lupine   | 0.03          |
| <i>Solidago canadensis</i>         | Canada goldenrod   | 0.03          |
| <i>Symphoyotrichum subspicatum</i> | Douglas aster      | 0.03          |

**0.67 Acres**




### **Native Grass Filter Strip Seed Mix**

| Scientific name                       | Common Name        | % Species Mix |
|---------------------------------------|--------------------|---------------|
| <i>Achillea millefolium</i>           | Common yarrow      | 0.03          |
| <i>Elymus glaucus</i>                 | Blue wildrye       | 0.30          |
| <i>Festuca rubra</i> var <i>rubra</i> | Red fescue         | 0.25          |
| <i>Geum macrophyllum</i>              | Large-leaved avens | 0.02          |
| <i>Koeleria macrantha</i>             | Prairie junegrass  | 0.20          |
| <i>Poa palustris</i>                  | Poa palustris      | 0.20          |

**0.14 Acres**



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| SURVEY JOB NO: --         |  | --            |  | <div>PERMIT PLANS<br/>NOV 2020</div> <div></div> |  | FED. AID No. --             |  |  |  | <div>FALL CITY<br/>FLOODPLAIN RESTORATION PROJECT</div> <div>PLANTING NOTES AND SCHEDULE</div> |  |  |  | SHEET |  |
| CHECKED: --               |  | --            |  |  |  | PROJECT No. --              |  |  |  |  |  | 48  |  |       |  |
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| CHECKED: I.M. 11/2020     |  |               |  |  |  |                             |  |  |  |  |  | SHEETS  |  |       |  |
| SUPERVISOR: M.E. 11/2020  |  |               |  |  |  | MAINTENANCE DIVISION No. -- |  |  |  |  |  | XXX-XX (1)  |  |       |  |
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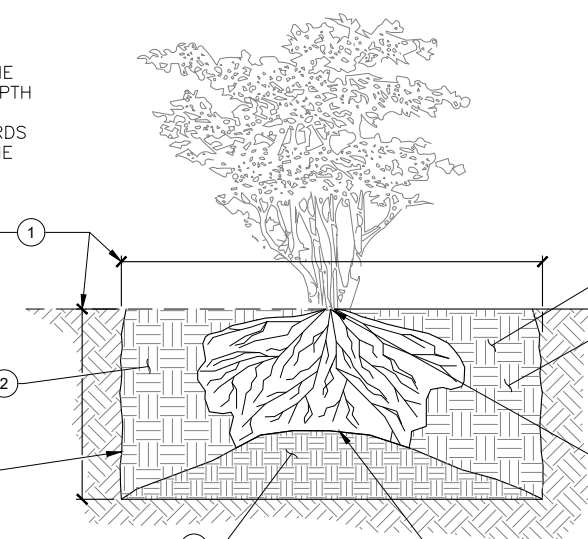


EXCAVATE PLANTING HOLE 2x THE ROOT WIDTH AND 1.5x ROOT DEPTH WITH ENOUGH ROOM TO ALLOW ROOTS TO BE SPREAD DOWNWARDS AND Laterally Throughout the SOIL PROFILE. EDGES OF THE PLANTING HOLE SHALL BE CUT PERPENDICULARLY TO THE SOIL SURFACE

REMOVE ROOTS, ROCKS, AND WOODY DEBRIS LARGER THAN 2 INCHES FROM PLANTING HOLE. REMOVE ALL WEEDS AND DEBRIS FROM PLANTING AREA

ROUGHEN SIDES OF PLANTING HOLE WITH SHOVEL OR SPADE

BUILD A SMALL SOIL MOUND IN CENTER OF PLANTING HOLE TO PROVIDE A STABLE BASE FOR PLANTING THE TREE OR SHRUB. COMPACT SOIL MOUND TO REDUCE SOIL SETTLING EFFECTS



BACKFILLED SOIL

WHILE BACKFILLING, FIRM SOIL AROUND PLANT GENTLY WITH HANDS TO ELIMINATE AIR POCKETS. DO NOT INJURE ROOT SYSTEM WHILE BACKFILLING AND COMPACTING. ALL ROOTS SHALL BE BURIED BELOW THE SOIL SURFACE

ROOT-SHOOT INTERFACE SHALL BE AT SOIL SURFACE. DO NOT BURY TREE COLLAR WHERE TRUNK FLARE OCCURS IN ORDER TO AVOID ROTTING DUE TO BURIAL

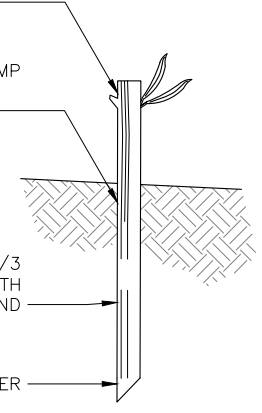
PLACE PLANT ROOTS INTO PLANTING HOLE ON TOP OF SOIL MOUND AND GENTLY SPREAD ROOTS OUT EVENLY WITH FINGERS. CAREFUL NOT TO CAUSE HARM OR DAMAGE TO ROOTS. NO BUNCHING, J-ROOTING, OR TANGLING OF ROOTS SHALL OCCUR

PLANT LIVE STAKE WITH MIN 2 LATERAL BUDS ABOVE GRADE

PRE-DIG HOLE BEFORE INSERTING LIVE STAKE, TAMP SOIL TO REMOVE AIR POCKETS

MINIMUM 2/3 OF LENGTH BELOW GROUND

BASE DIAMETER



LIVE STAKE PLANTING NOTES:

- 1. STAKES MUST BE 1/2" TO 1" DIAMETER AT BASE OF STAKE.
- 2. STAKES WILL HAVE MINIMAL WARPING OR BENDS, BEING MOSTLY STRAIGHT IN FORM, FOR EASE OF PLANTING.

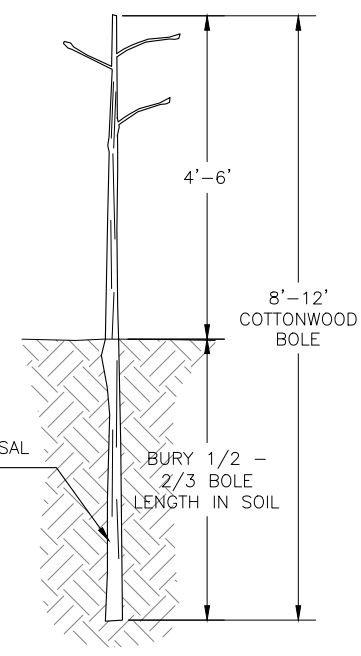
DETAIL - BARE ROOT TREE OR SHRUB PLANTING

SCALE: NTS



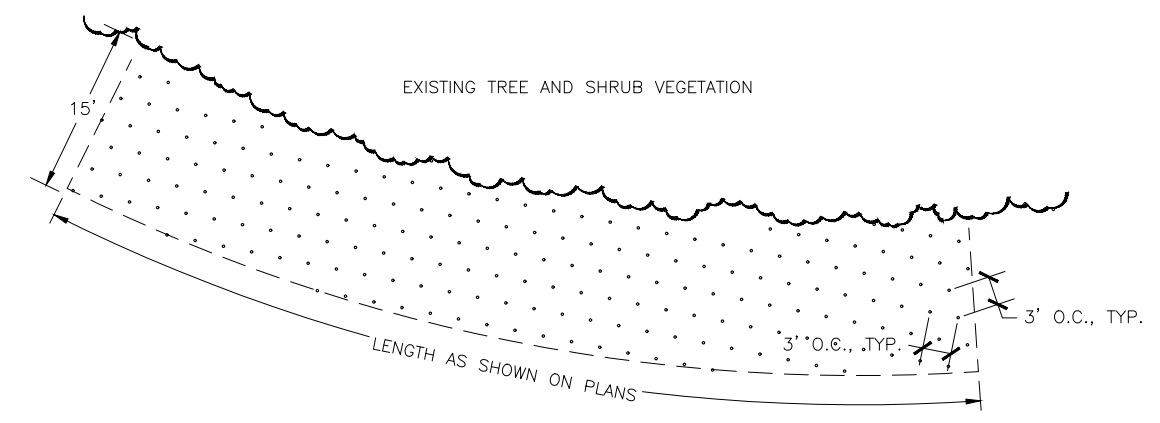
DETAIL - LIVE STAKE PLANTING

SCALE: NTS



NOTES:

- 1. EXCAVATE HOLE WITH POWER AUGER OR STINGER.
- 2. INSERT LIVE BOLE, BURYING 1/2 - 2/3 OF LENGTH IN SOIL.
- 3. BACKFILL WITH FINE SOIL.
- 4. WATER IN WELL TO ELIMINATE AIR POCKETS.
- 5. TAMP AROUND TRUNK TO FIRM SOIL.
- 6. MINIMUM OF HALF THE TOTAL NUMBER OF SPECIFIED BOLES MUST BE 3" IN DIAMETER.



NOTES:

- 1. COTTONWOOD BOLE PLANTING AREA BOUNDARIES SHALL BE STAKED OR CLEARLY MARKED PRIOR TO PLANTING.
- 2. PLANTING SHALL OCCUR WITHIN 15 FEET OF EXISTING TREE AND SHRUB VEGETATION, AS SHOWN ON PLANS.
- 3. BOLES SHALL BE PLANTED 3 FEET APART ON CENTER AND UTILIZE TRIANGLE SPACING.
- 4. LARGER DIAMETER BOLES SHALL BE EVENLY DISTRIBUTED THROUGHOUT PLANTING AREA.

DETAIL - COTTONWOOD BOLE PLANTING

SCALE: NTS



DETAIL - YEAR 2021 COTTONWOOD BOLE PLANTING PLANVIEW

SCALE: NTS



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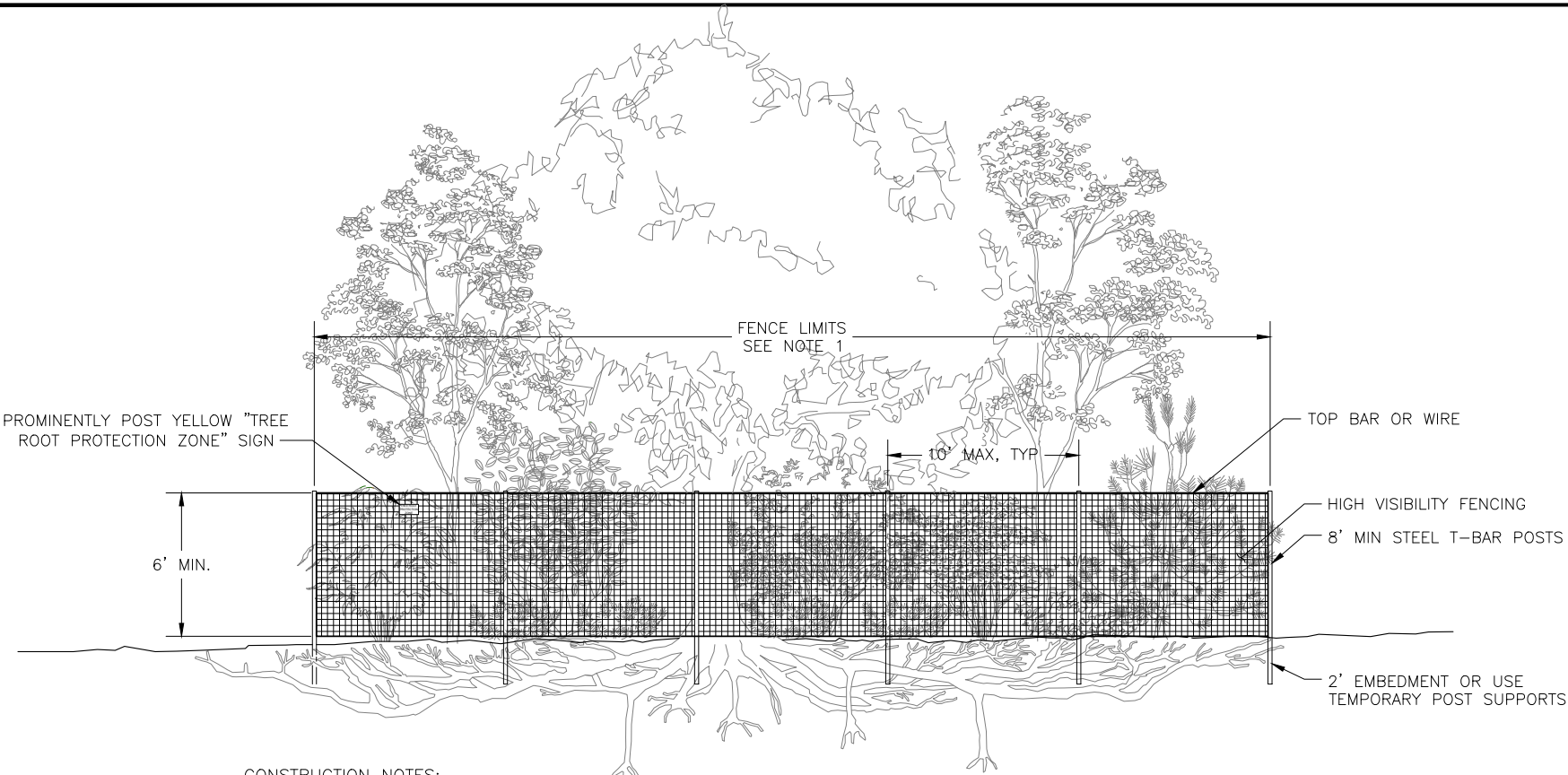
## FALL CITY FLOODPLAIN RESTORATION PROJECT

PLANTING DETAILS

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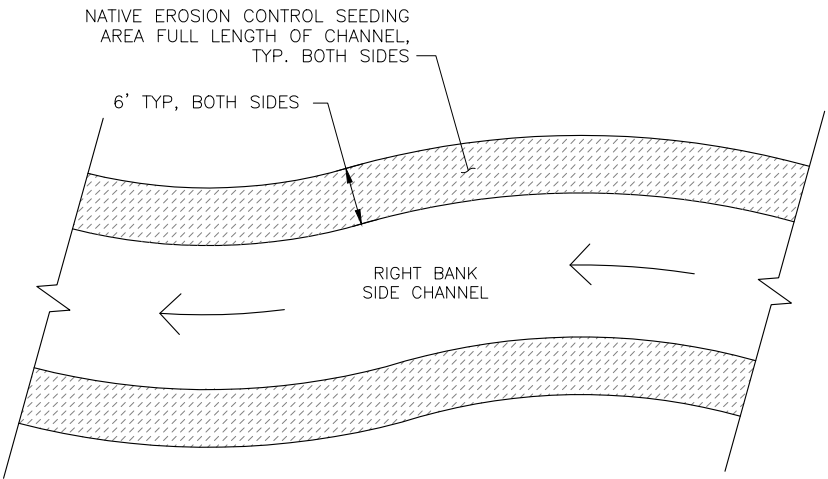


CONSTRUCTION NOTES:  
1. MAXIMIZE BUFFER BETWEEN FENCE LINE AND PLANT COMMUNITY FOR NATIVE VEGETATION PROTECTION ZONES. WHERE POSSIBLE, PLACE FENCING OUTSIDE OF THE ROOT PROTECTION ZONE (RPZ) FOR TREES. RPZ IS DEFINED AS AREA EQUAL TO A 1-FOOT RADIUS FROM THE BASE OF THE TREE'S TRUNK FOR EACH 1-INCH OF THE TREE'S DIAMETER AT 4.5 FEET ABOVE GRADE (DIAMETER AT BREAST HEIGHT: DBH).

DETAIL – NATIVE VEGETATION PROTECTION FENCING

SCALE: NTS

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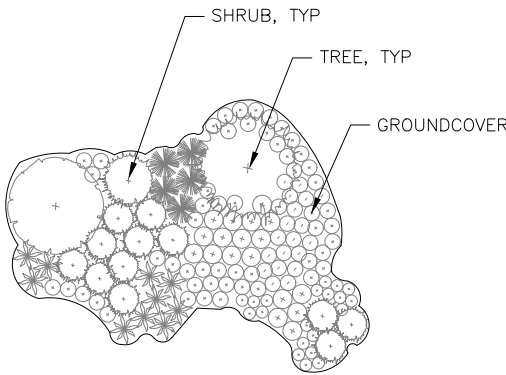


YEAR ONE NOTES:  
1. TOP 6' OF SIDE CHANNEL BANK SHALL BE SEEDDED WITH A NATIVE EROSION CONTROL MIX IN LATE SPRING AFTER RISK OF SEASONAL HIGH FLOWS HAS DECREASED. SEEDING IS INTENDED TO ESTABLISH A NATIVE PLANT COMMUNITY AND REDUCE THE ESTABLISHMENT OF INVASIVE VEGETATION.  
2. SEEDING SHALL OCCUR ACCORDING TO SECTION 8-02.3(9) OF SPECIAL PROVISIONS.

DETAIL – STREAM BANK EROSION CONTROL SEEDING

SCALE: NTS

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VAR

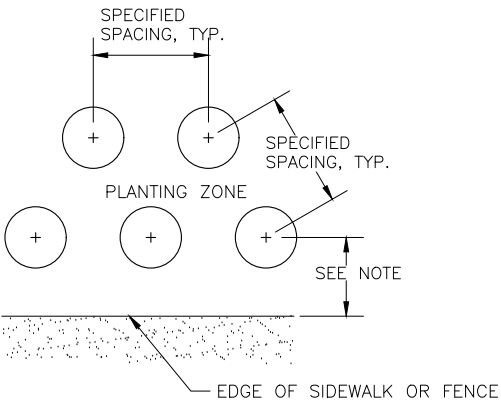


PLANTING LAYOUT NOTES:  
1. PLANT GROUNDCOVERS, SHRUBS, AND TREES AS SHOWN ON PLAN. GROUNDCOVERS AND SHRUBS SHALL BE IN CLUSTERS OF UNEVEN NUMBERS (E.G. THREE, FIVE, SEVEN, ETC.)  
2. PLANTS SHALL BE ARRANGED SO THAT AS THEY MATURE, THEY GROW IN TO MASSINGS AND FULLY COVER THE SOIL SURFACE.

DETAIL – PLANTING LAYOUT

SCALE: NTS

3  
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NOTES:  
1. PLANTING LAYOUT SHALL USE TRIANGULAR SPACING FOR TREES, SHRUBS, AND GROUND COVERS.

DETAIL – PLANT SPACING

SCALE: NTS

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