

Map showing the project location in Duvall, Alaska. The map includes the Snodgrass River, NE 138th St, NE 124th St, and West Snodgrass Valley Rd NE. A black arrow points to the project location on the river. A scale bar indicates distances up to 4000 feet. A north arrow is also present. A small inset map shows the location relative to the town of Duvall.



Christie True, Director

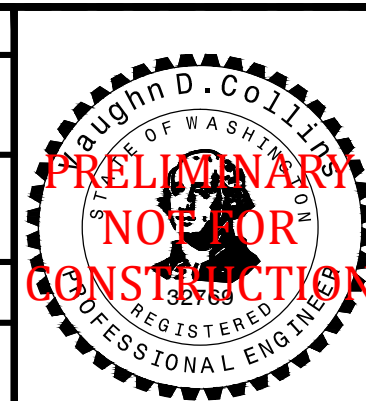
ONE INCH

 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXXXX
SURVEYED: XXXXXXXXXX
SURVEY BASE MAP: XXXXXXXXXX
CHECKED: XXXXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXXXX

[illegible]

APPROVED: <u>XXXXXXXXXX</u>	00/00/00
PROJECT	
SUPERVISOR: <u>XXXXXXXXXX</u>	00/00/00
PROJECT	
MANAGER: <u>XXXXXXXXXX</u>	00/00/00
DESIGNED: <u>D. HINTON</u>	00/00/00
DESIGN ENTERED: <u>T.SHINKLE</u>	00/00/00



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Christie True, Director















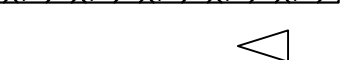

TITLE SHEET

**SHEET
1
OF
34
SHEETS**













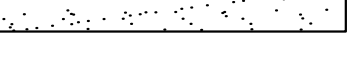




G1

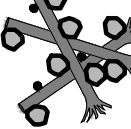


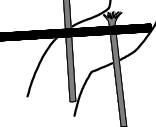

Path: Q:\2001084_Winkelman_PhaseII\AC_2001084.dwg\WINKELMAN - Current\WINKELMAN COVER.dwg
Plot Date: 11/26/2015 3:50 AM
Cad User: Darren Hinton

EXISTING LEGEND

	PARCEL BOUNDARY
	PARCEL NUMBER
	RIGHT OF WAY
	EXISTING BARB WIRE FENCE
	EXISTING GRAVEL TRAIL
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	ORDINARY HIGH WATER LINE
	EXISTING LARGE TREE
	EXISTING UTILITY POLE
	HISTORICAL BORING LOCATION AND NUMBER
	SURVEY CONTROL
	EXISTING REVETMENT
	EXISTING WETLAND
	NATIVE GROUND
	EXISTING WETLAND DELINEATION MARKER

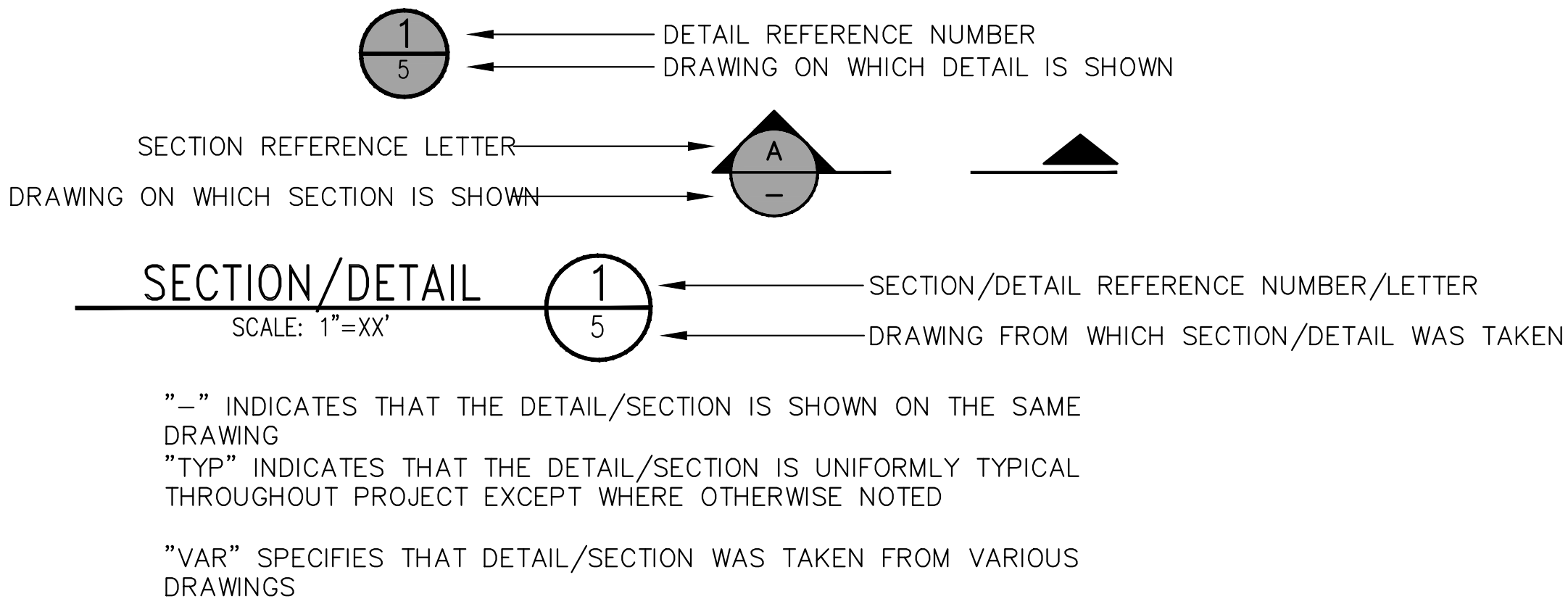
PROPOSED LEGEND

	PROJECT LIMITS
	EXCAVATION AND BACKFILL EXTENTS
	CONSTRUCTION ACCESS ROUTE
	EQUIPMENT STAGING AREA
	TURBIDITY CURTAIN
	WOOD CHIP FILTER BERM
	LIMITS OF EXCAVATION
	TIGHTLINE
	PROPOSED MAJOR CONTOUR (5 FT)
	PROPOSED MINOR CONTOUR (1 FT)
	PROPOSED GRADING LIMIT
	RIPRAP
	FARM ROAD GRADING
	NATIVE ALLUVIUM BACKFILL
	COIR BLANKET WITH LIVE STAKES, PLANTINGS, AND COTTONWOOD BOLES
	BOULDER CASCADE (TYP.)
	RACKING AND SLASH MATERIAL

	BANK ROUGHENING JAM (TYP.) CONTINUOUS
	BALLASTED WOOD JACK (TYP.)
	ALCOVE ELJ TYPE 1 (TYP.)
	ALCOVE IN-CHANNEL LOGS
	COTTONWOOD BOLE

ABBREVIATIONS

ALCAP	ALUMINUM CAP	NA	NOT APPLICABLE
ALD	ALDER	NO	NUMBER
APPROX	APPROXIMATE	NTS	NOT TO SCALE
AVG	AVERAGE	OC	ON CENTER
BD	BRASS DISK	OHW	ORDINARY HIGH WATER
BMP	BEST MANAGEMENT PRACTICE	PL	PROPERTY LINE
BVCE	BEGIN VERTICAL CURVE ELEVATION	PLS	PROFESSIONAL LAND SURVEYOR
BVCS	BEGIN VERTICAL CURVE STATION	PSF	POUNDS PER SQUARE FOOT
CF	CUBIC FEET	PT	POINT
CFS	CUBIC FEET PER SECOND	RBC	REBAR W/ CAP
CP	CONTROL POINT	ROW	RIGHT OF WAY
CSBC	CRUSHED SURFACING BASE COURSE	RR	ROCK REMOVAL
CSTC	CRUSHED SURFACING TOP COURSE	SEW	STRUCTURAL EARTH WALL
CW	COTTONWOOD	SR	STATE ROUTE
CY	CUBIC YARDS	STA	STATION
DBH	DIAMETER AT BREAST HEIGHT	SY	SQUARE YARD
DET	DETAIL	TEMP	TEMPORARY
DIA	DIAMETER	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
EL	ELEVATION	TFP	TREE FELLING AND PLACEMENT
ELS	ENGINEERED LOG STRUCTURE	TOT	TOTAL
EOP	EDGE OF PAVEMENT	TYP	TYPICAL
EVCE	END VERTICAL CURVE ELEVATION	VERT	VERTICAL
EVCS	END VERTICAL CURVE STATION	WDFW	WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
EXIST	EXISTING	WET	WETLAND
FT	FEET	WQs	WATER QUALITY STANDARDS
HORIZ	HORIZONTAL	WQMP	WATER QUALITY PROTECTION AND MONITORING PLAN
IE	INVERT ELEVATION	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
IN	INCHES	WSE	WATER SURFACE ELEVATION
KC	KING COUNTY		
LF	LINEAR FEET		
LWL	LOW WATER LEVEL		
MAX	MAXIMUM		
MIN	MINIMUM		
MPL	MAPLE		







NOTE AND DETAIL/SECTION REFERENCING

60% FINAL
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CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
↑
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INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXX					APPROVED: XXXXXXXX	00/00/00				 Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	Winkelman Revetment Reconstruction Project LEGEND AND ABBREVIATIONS	SHEET 2 OF 34 SHEETS
SURVEYED: XXXXXXXX					PROJECT	00/00/00						
SURVEY BASE MAP: XXXXXXXX					SUPERVISOR: XXXXXXXX	00/00/00						
CHECKED: XXXXXXXX					PROJECT MANAGER: XXXXXXXX	00/00/00						
					DESIGNED: D. HINTON	00/00/00						
PROJECT No. 2001084						00/00/00						
SURVEY No. XXXXXXXX	NUM.	REVISION	BY	DATE	DESIGN ENTERED: T.SHINKLE	00/00/00						

Path: Q:\2001084_Winkelman_PhaseII\AC_2001084.dwg\WINKELMAN - Current\WINKELMAN COVER.dwg
Plot Date: 11/20/2015 9:30 AM
Cad User: Darren Hinton

GENERAL CONSTRUCTION NOTES:

1. THE WORK INCLUDES CLEARING WORK AREAS OF VEGETATION, STOCKPILING CLEARED VEGETATION, OFFSITE DISPOSAL OF INVASIVE VEGETATION THAT IS CLEARED, PILING ROCK ARMORING, CONSTRUCTING ENGINEERED LOG STRUCTURES, REGRADING THE UPPER BANK OF THE RIVER, CONSTRUCTING AND REMOVING TEMPORARY FACILITIES, AND RESTORING THE SITE.
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. HOWEVER THIS PROJECT WILL BE CONSTRAINED BY AN IN-WATER WORK WINDOW SET FORTH IN THE PROJECT HYDRAULIC PROJECT APPROVAL PERMIT, 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 PERMIT.
4. ENGINEER IS DEFINED AS THE OWNER’S REPRESENTATIVE OR OWNER’S ENGINEER. KING COUNTY IS DEFINED AS THE OWNER.
5. THE CONTRACTOR SHALL STAKE THE PROJECT CONSTRUCTION LIMITS FOR APPROVAL BY THE OWNER OR ENGINEER AT LEAST 5 WORKING DAYS PRIOR TO COMMENCING ONSITE ACTIVITIES. PROJECT CONSTRUCTION LIMITS SHOWN ON THE PLANS REPRESENT WORK AREAS AND DOES NOT REPRESENT CLEARING LIMITS. CLEARING LIMITS ARE NOT SHOWN. CLEARING MAY OCCUR WITHIN THE PROJECT LIMITS; HOWEVER, THE CONTRACTOR SHALL STAKE CLEARING LIMITS FOR APPROVAL BY THE OWNER OR ENGINEER AT LEAST 5 WORKING DAYS PRIOR TO COMMENCING ONSITE CLEARING ACTIVITIES. ALL CLEARING NECESSARY FOR CONSTRUCTION SHALL BE LIMITED TO THE AREA REQUIRED FOR SAFE EQUIPMENT OPERATION AND TO MINIMIZE THE AREA OF DISTURBANCE. CLEARING LIMITS SHALL NOT BE EXPANDED UNLESS APPROVED BY THE OWNER OR ENGINEER. THE CONTRACTOR SHALL PRESERVE AS MUCH EXISTING VEGETATION AS POSSIBLE AND NOT DAMAGE OR DISTURB VEGETATION MARKED BY THE OWNER OR ENGINEER FOR PRESERVATION.
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 PROTECTED FROM DAMAGE PRIOR TO CONSTRUCTION. 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 ENGINEER TO CREATE ROUGH FINISHED GRADED SURFACES. CERTAIN VEGETATION MAY BE FLAGGED BY THE ENGINEER 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 ENGINEER.
8. THE CONTRACTOR SHALL PROVIDE 24 HOURS ADVANCE NOTICE TO THE OWNER OR ENGINEER 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 ENGINEER. 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 UNLESS APPROVED BY ENGINEER.
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 IN AREAS OTHER THAN EXISTING 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 ENGINEER.
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 PREVENT 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 AND WORK AREA ISOLATION 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, WATER MANAGEMENT, AND WORK AREA ISOLATION 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.

GENERAL SURVEY NOTES:

1. PARCEL ID NUMBERS FROM KING COUNTY GIS CENTER). DATA COMPILED IN 2014. OBTAINED SEPTEMBER 4, 2015 FROM AGENCY WEBSITE
HTTP: //WWW5.KINGCOUNTY.GOV/GISDATAPORTAL/DEFAULT.ASPX
2. BOUNDARY SURVEY PROVIDED BY PACIFIC GEOMATIC SERVICES.

HORIZONTAL DATUM:
THE HORIZONTAL DATUM FOR THIS SURVEY IS NAD 83/91, WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, BASED ON GPS MEASUREMENTS TO WSDOT MONUMENTS DESIGNATED GP17203-221 & GP17203-46AZ.

VERTICAL DATUM:
THE VERTICAL DATUM FOR THIS SURVEY IS NAVD 88, BASED ON THE WASHINGTON STATE REFERENCE NETWORK (WSRN) AND GPS MEASUREMENTS TO THE WSDOT MONUMENT DESIGNATED BM17203-2.

BM17203-2 ELEVATION: 83.458 US SURVEY FEET

STATISTICS:
EQUIPMENT: TRIMBLE S6 ROBOTIC TOTAL STATION
TRIMBLE GeoXR NETWORK ROVER
SONARMITE MILSPEC ECHO SOUNDER

METHODOLOGY: FIELD TRAVERSE & NETWORK RTK

ALL SURVEY WORK OCCURRED BETWEEN JULY 15 AND JULY 30, 2015.

- GROUND SURVEYOR NOTES:
1. RIVERBED AND BANK CONDITIONS CONDITIONS CHANGE FREQUENTLY. THE BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE CONDITIONS AS THEY EXISTED AT THE TIME OF SURVEY ONLY.
2. THE SURVEY WAS PERFORMED USING A COMBINATION OF GROUND-BASED SURVEY TECHNIQUES AND AN INTEGRATED SINGLE-BEAM HYDROGRAPHIC SYSTEM.
3. HYDROGRAPHIC POINTS OBTAINED ON THIS PROJECT (CODED "HYDRO" IN THE ELECTRONIC DELIVERABLES) WERE COLLECTED UTILIZING A SONARMITE MILSPEC SINGLE BEAM ECHO SOUNDER WITH A 200KHZ, 4 DEGREE BEAM WIDTH TRANSDUCER WITH A STATED ACCURACY OF 1CM + 0.1% DEPTH, INTEGRATED WITH NETWORK RTK OR ROBOTIC TOTAL STATION FOR POSITIONS AND ALTITUDE.

60% FINAL
NOT FOR CONSTRUCTION

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY


FIELD BOOK: XXXXXXXX	
SURVEYED: XXXXXXXX	
SURVEY BASE MAP: XXXXXXXX	
CHECKED: XXXXXXXX	
PROJECT No. 2001084	
SURVEY No. XXXXXXXX	

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX	00/00/00
PROJECT	
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT	
MANAGER: XXXXXXXX	00/00/00
DESIGNED: D. HINTON	00/00/00
DESIGN ENTERED: T.SHINKLE	00/00/00



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

Christie True, Director

Winkelman Revetment Reconstruction
Project

CONSTRUCTION NOTES

SHEET
3
OF
34
SHEETS

G3

60% FINAL
NOT FOR CONSTRUCTION



BARRICADE OR GATE EXISTING
ROAD WITH SIGN STATING "NO
CONSTRUCTION ACCESS"



SIGN STATING
"NO CONSTRUCTION ACCESS"
ON EXISTING GATE

NO ACCESS FROM SR-203

CITY OF SEATTLE TOLT PIPELINE ROW

CITY OF SEATTLE TOLT PIPELINE ROW

POTENTIAL STAGING AREA

NEW ACCESS
AROUND ALCOVE

APN 2526069005
OWNER - PATRICK T. BURNS

APN 2526069005
OWNER - PATRICK
T. BURNS

PROJECT LIMITS

EX. ACCESS ROAD OVER EX.
CULVERT TO BE REMOVED

ACCESS ROAD FROM
NE 124th STREET

SNOQUALMIE RIVER

APN 2626069004
OWNER - WALLACE
ACRES LLC

APN 2526069007
OWNER - WALLACE
ACRES LLC

SNOQUALMIE RIVER

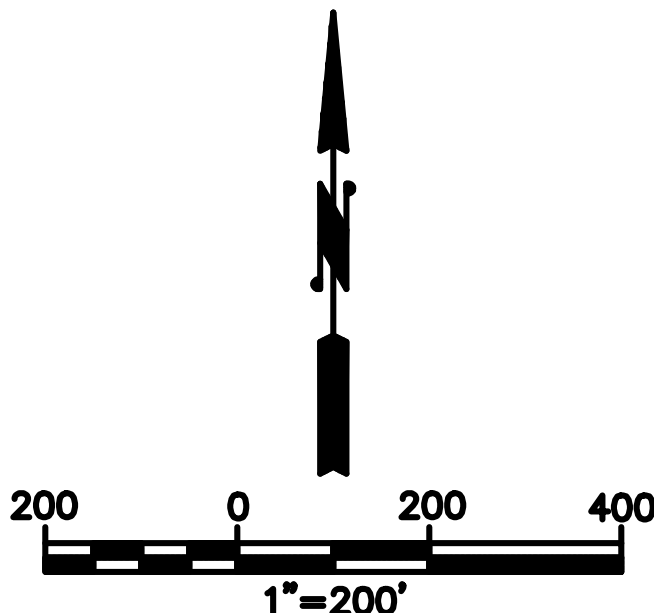
APN 2626069005
OWNER - BONNIE
JEAN WOOLSLAYER

APN 2526069008
OWNER - LARRY
PICKERING

POTENTIAL
STAGING AREA

NE 124th ST

MUTCD "TRUCK"
SIGN (TYP.)



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(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

FIELD BOOK:	XXXXXXXX
SURVEYED:	XXXXXXXX
SURVEY BASE MAP:	XXXXXXXX
CHECKED:	XXXXXXXX
PROJECT No.	2001084
SURVEY No.	XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED:	XXXXXXXX	00/00/00
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SUPERVISOR:	XXXXXXXX	00/00/00
PROJECT		
MANAGER:	XXXXXXXX	00/00/00
DESIGNED:	D. HINTON	00/00/00
DESIGN ENTERED:	T. SHINKLE	00/00/00



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Christie True, Director

Winkelman Revetment Reconstruction
Project

SITE ACCESS, TRAFFIC CONTROL,
AND OWNERSHIP SHEET

SHEET
4
OF
34
SHEETS

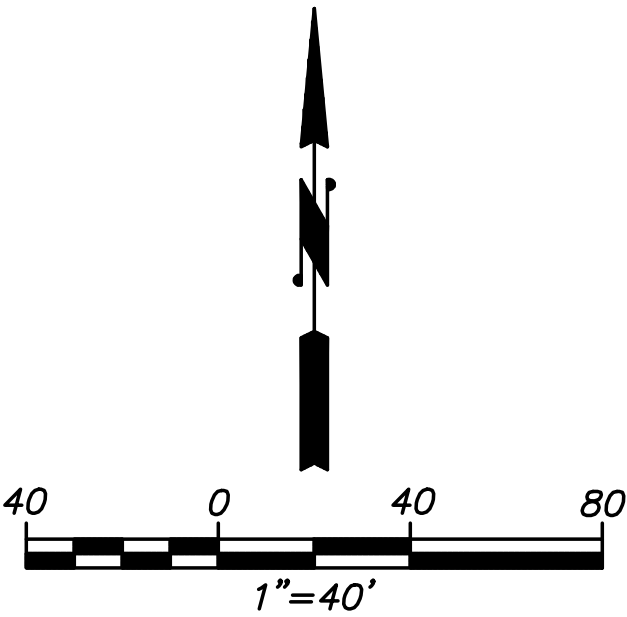
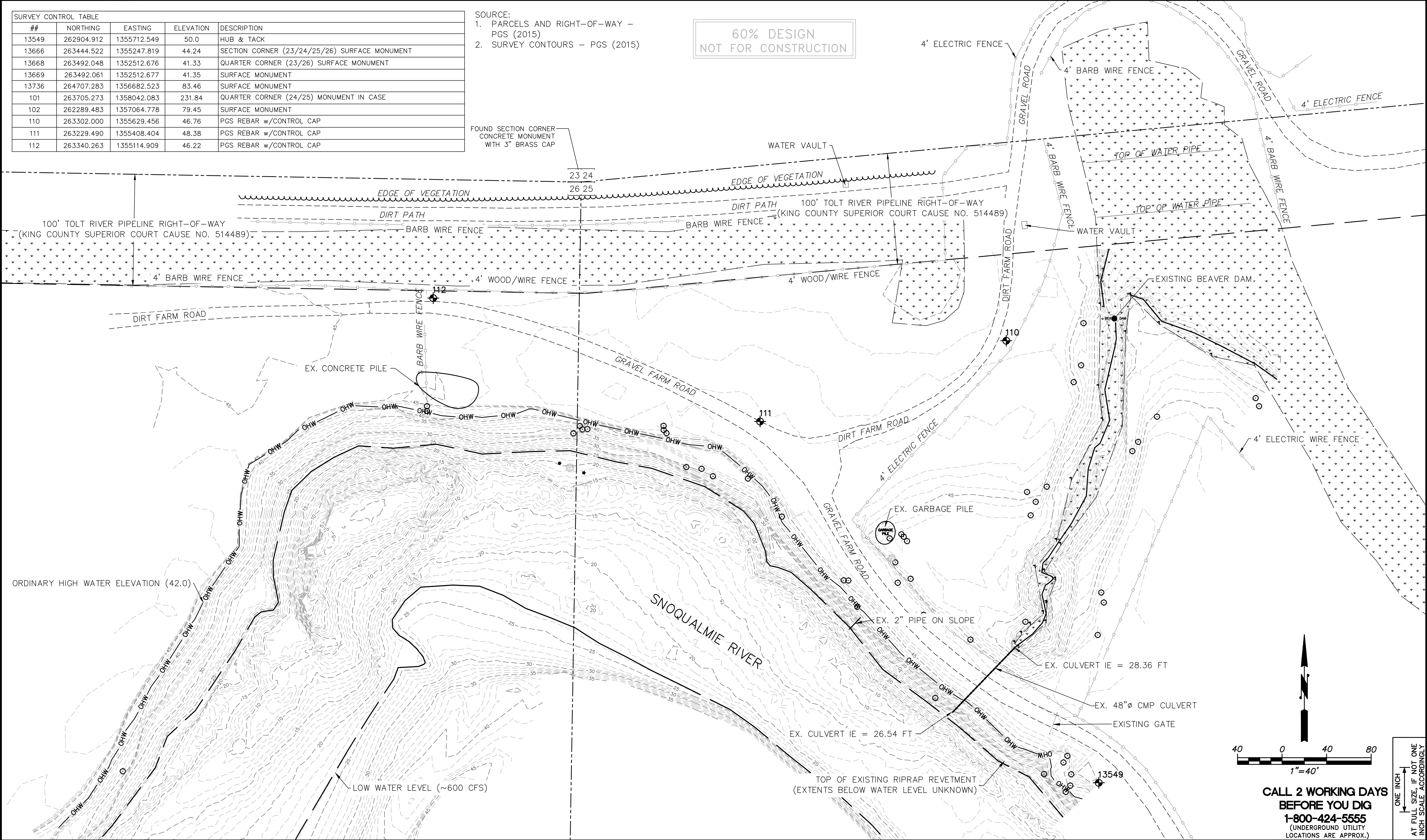
G4

SURVEY CONTROL TABLE				
##	NORTHING	EASTING	ELEVATION	DESCRIPTION
13549	262904.912	1355712.549	50.0	HUB & TACK
13666	263444.522	1355247.819	44.24	SECTION CORNER (23/24/25/26) SURFACE MONUMENT
13668	263492.048	1352512.676	41.33	QUARTER CORNER (23/26) SURFACE MONUMENT
13669	263492.061	1352512.677	41.35	SURFACE MONUMENT
13736	264707.283	1356682.523	83.46	SURFACE MONUMENT
101	263705.273	1358042.083	231.84	QUARTER CORNER (24/25) MONUMENT IN CASE
102	262289.483	1357064.778	79.45	SURFACE MONUMENT
110	263302.000	1355629.456	46.76	PGS REBAR w/CONTROL CAP
111	263229.490	1355408.404	48.38	PGS REBAR w/CONTROL CAP
112	263340.263	1355114.909	46.22	PGS REBAR w/CONTROL CAP

SOURCE:
1. PARCELS AND RIGHT-OF-WAY - PGS (2015)
2. SURVEY CONTOURS - PGS (2015)

60% DESIGN
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FOUND SECTION CORNER
CONCRETE MONUMENT
WITH 3" BRASS CAP

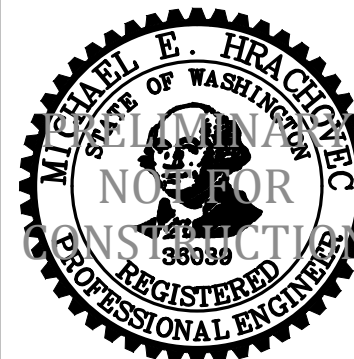
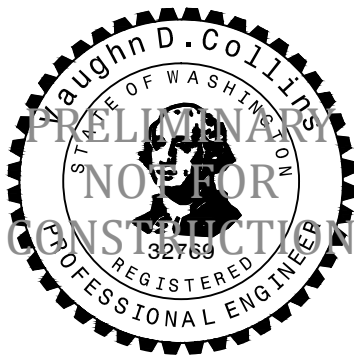


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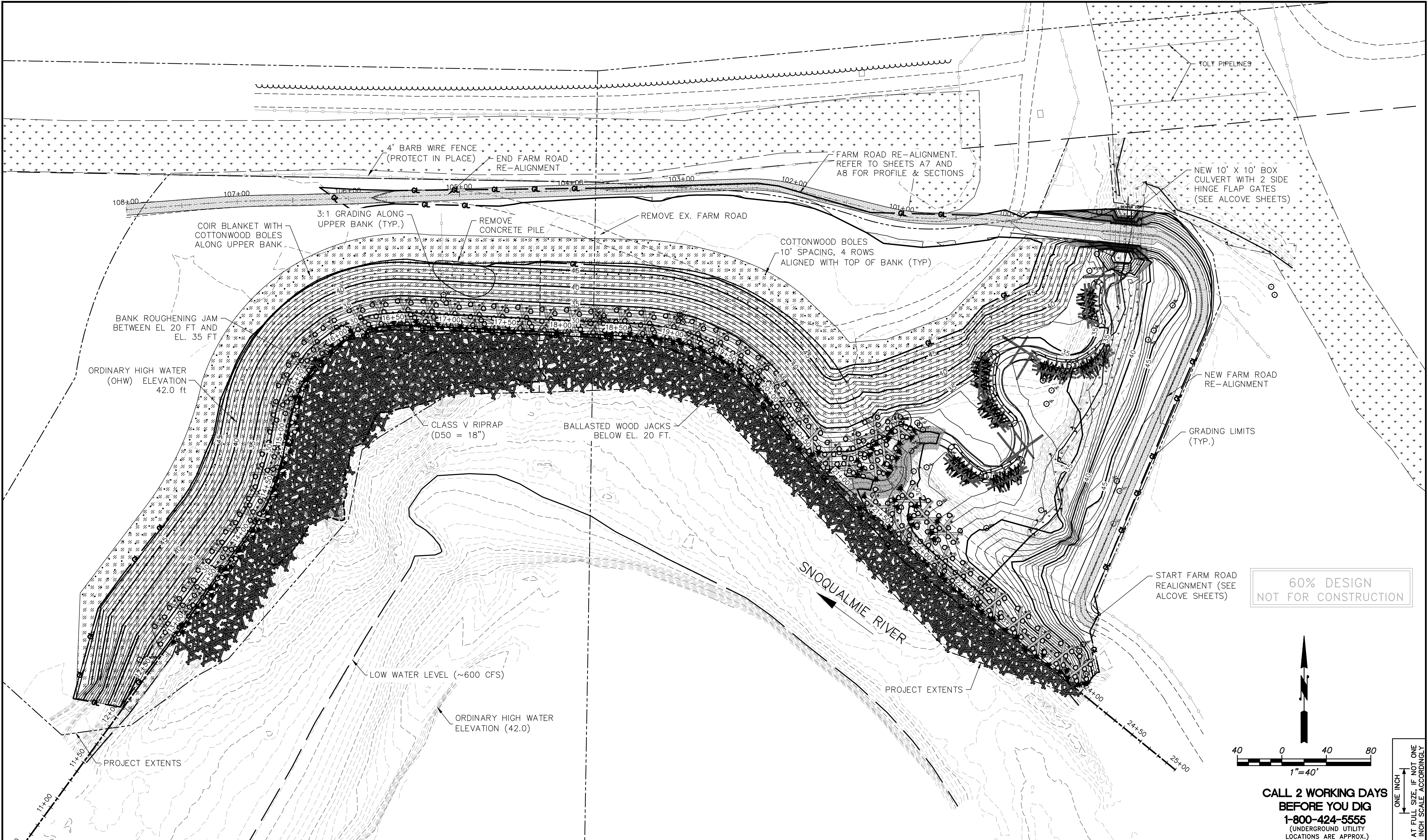
Christie True, Director

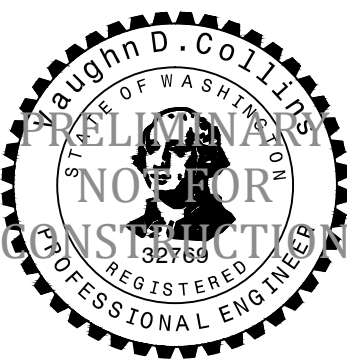



**Winkelman Revetment Reconstruction
Project**

**EXISTING SITE PLAN
AND SURVEY CONTROL**

SHEET
5
OF
34
SHEETS
G5

Path: Q:\2001084_Winkelman_PhaseII\AC_2001084.dwg\WINKELMAN - Current\WINKELMAN.DWG
Plot Date: 11/28/2015 11:59 PM
Cad User: Darren Hinton



FIELD BOOK: xxxxxxxx				APPROVED: xxxxxxxx 00/00/00							 King County Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section <i>Christie True, Director</i>	Winkelman Revetment Reconstruction Project PROPOSED SITE PLAN	SHEET 6 OF 34 SHEETS G6
SURVEYED: xxxxxxxx				PROJECT 00/00/00									
SURVEY BASE MAP: xxxxxxxx				SUPERVISOR: xxxxxxxx 00/00/00									
CHECKED: xxxxxxxx				PROJECT MANAGER: xxxxxxxx 00/00/00									
DESIGNED: D. HINTON 00/00/00				DESIGN ENTERED: T.SHINKLE 00/00/00									
PROJECT No. 2001084													
SURVEY No. xxxxxxxx													
NUM.	REVISION	BY	DATE										

60% DESIGN
NOT FOR CONSTRUCTION

NOTES:
1. FARM ROAD GRADING NOT SHOWN
THIS SHEET. REFER TO SHEETS G6,
A7, AND A8 FOR ADDITIONAL DETAIL.

PROJECT DISTURBANCE
EXTENTS

REFER TO PLANTINGS
SHEETS FOR UPPER BANK
REVTMENT

COTTONWOOD BOLES STAGGERED AT
10' SPACING, 4 ROWS
ALIGNED WITH TOP OF BANK (TYP)

ORDINARY HIGH WATER LINE
(EL 42.0 FT)

TRANSITION 3:1
GRADING SLOPE TO
EXISTING GROUND
(STA 12+00 TO
12+75)

GRADE BANK AT 3:1
SLOPE TO DAYLIGHT
(TYP.)

REMOVE AND DISPOSE TREE (TYP)

REMOVE AND DISPOSE
OF BARB WIRE FENCE
REMOVE & REALIGN
EXISTING FARM ROAD

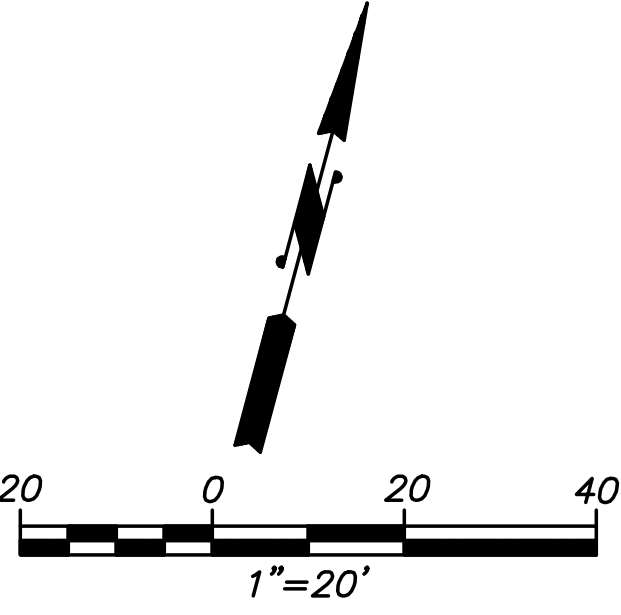
MATCHLINE
SHEET C2

INSTALL 275 FT³/FT CLASS V
RIPRAP (D₅₀ = 18") BETWEEN
STA 14+50 TO 17+00

INSTALL 100 FT³/FT CLASS V
RIPRAP (D₅₀ = 18") BETWEEN
STA 17+00 TO 17+90

INSTALL 100 FT³/FT CLASS V
RIPRAP (D₅₀ = 18") BETWEEN
STA 13+93 TO 14+50

LOW WATER LEVEL (~600 CFS)



CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX	00/00/00
PROJECT	00/00/00
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT MANAGER: XXXXXXXX	00/00/00
DESIGNED: D. HINTON	00/00/00
DESIGN ENTERED: T.SHINKLE	00/00/00



nhc
northwest hydraulic consultants
16300 christensen road, suite 350
seattle, washington 98188-3422
phone: (206) 241-6000
fax: (206) 439-2420
www.nhcweb.com

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

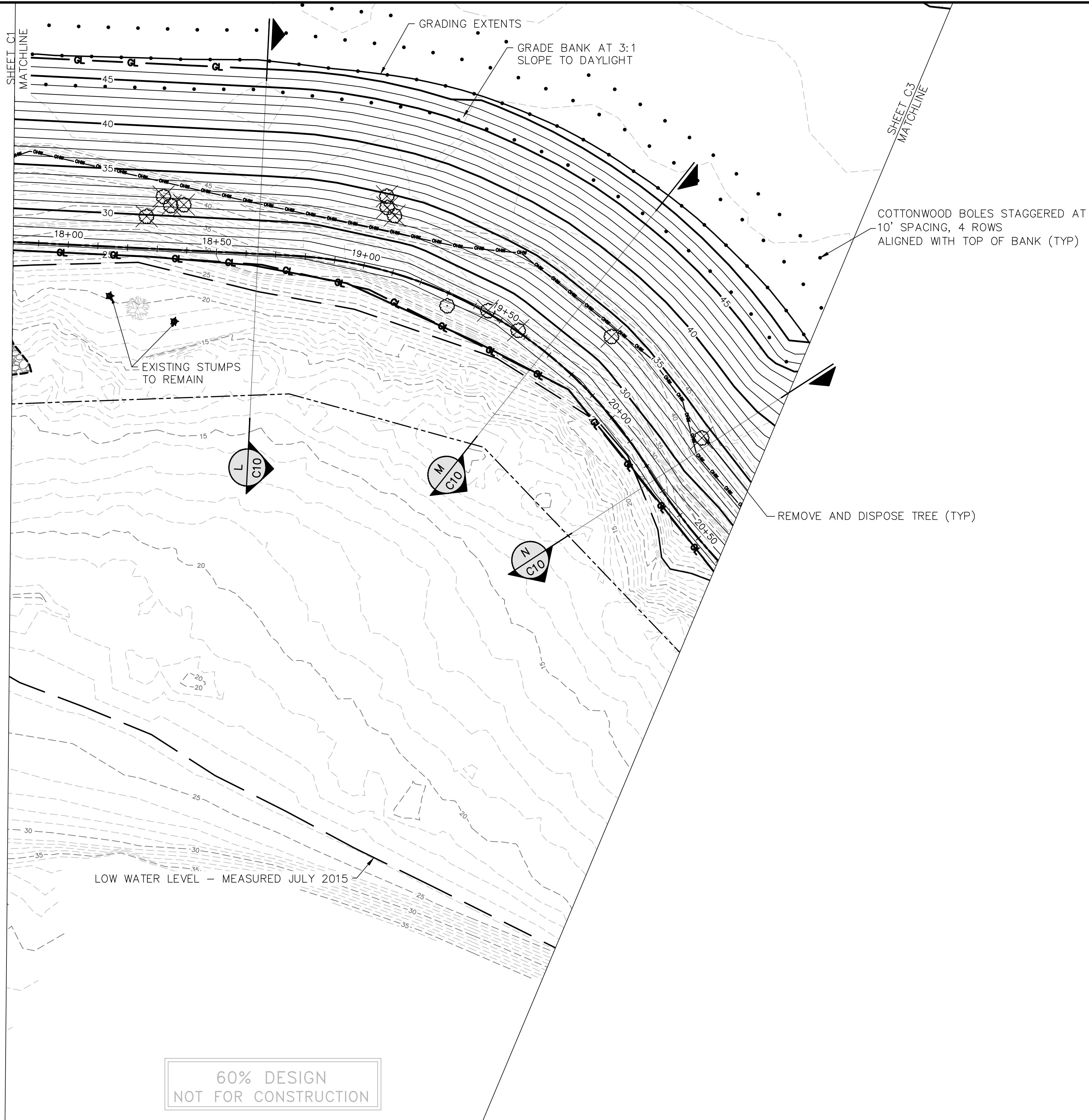
Christie True, Director

Winkelman Revetment Reconstruction
Project

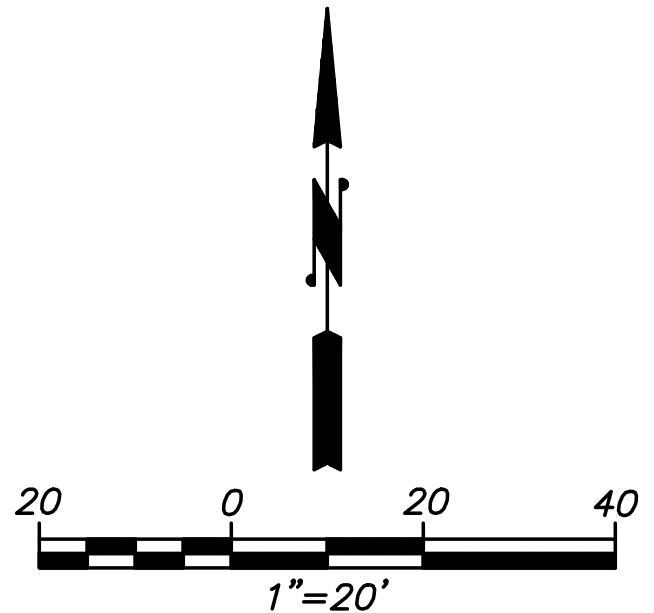
DOWNSTREAM GRADING PLAN

SHEET
7
OF
34
SHEETS

C1



NOTES:
1. FARM ROAD GRADING NOT SHOWN
THIS SHEET, REFER TO SHEETS G6,
A7, AND A8 FOR ADDITIONAL DETAIL.

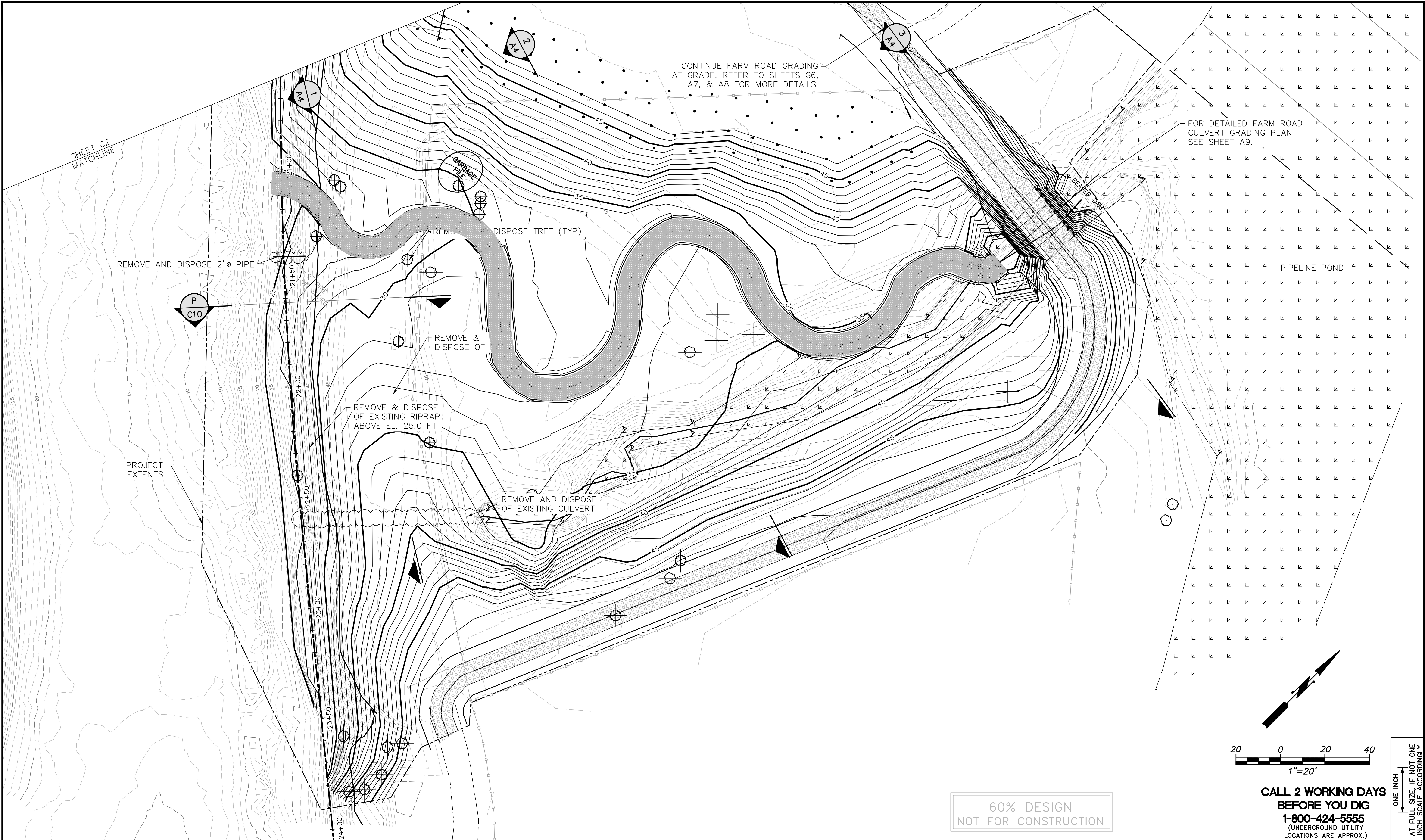


CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
↑
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

60% DESIGN
NOT FOR CONSTRUCTION

<div>FIELD BOOK: <u>XXXXXXXX</u></div> <div>SURVEYED: <u>XXXXXXXX</u></div> <div>SURVEY BASE MAP: <u>XXXXXXXX</u></div> <div>CHECKED: <u>XXXXXXXX</u></div> <div>PROJECT No. <u>2001084</u></div> <div>SURVEY No. <u>XXXXXXXX</u></div>				<table><tr><td>NUM.</td><td>REVISION</td><td>BY</td><td>DATE</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>				NUM.	REVISION	BY	DATE																									<div>APPROVED: <u>XXXXXXXX</u> 00/00/00</div> <div>PROJECT 00/00/00</div> <div>SUPERVISOR: <u>XXXXXXXX</u> 00/00/00</div> <div>PROJECT MANAGER: <u>XXXXXXXX</u> 00/00/00</div> <div>DESIGNED: <u>D. HINTON</u> 00/00/00</div> <div>DESIGN ENTERED: <u>T.SHINKLE</u> 00/00/00</div>		<div></div> <div></div>		<div> 16300 christensen road, suite 350 seattle, washington 98188-3422 phone: (206) 241-6000 fax: (206) 439-2420 www.nhcweb.com</div>		<div> Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section <i>Christie True, Director</i></div>		<div>Winkelman Revetment Reconstruction Project</div> <div>UPSTREAM GRADING PLAN</div>		<div>SHEET 8 OF 34 SHEETS</div> <div>C2</div>	
NUM.	REVISION	BY	DATE																																												



FIELD BOOK: XXXXXXXX

SURVEYED: XXXXXXXX

SURVEY BASE MAP: XXXXXXXX

CHECKED: XXXXXXXX

PROJECT No. 2001084

SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX

PROJECT

SUPERVISOR: XXXXXXXX

PROJECT MANAGER: XXXXXXXX

DESIGNED: D. HINTON

DESIGN ENTERED: T.SHINKLE

00/00/00

00/00/00

00/00/00

00/00/00

00/00/00

00/00/00

DAVID D. COLLINS

REGISTERED PROFESSIONAL ENGINEER

32769

MICHAEL E. HRADECKY

REGISTERED PROFESSIONAL ENGINEER

38038

nhc

northwest hydraulic consultants

16300 christensen road, suite 350

seattle, washington 98188-3422

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King County

Department of Natural Resources and Parks

Water and Land Resources Division

River and Floodplain Management Section

Christie True, Director

Winkelman Revetment Reconstruction Project

ALCOVE GRADING PLAN

SHEET 9 OF 34 SHEETS

C3

60% DESIGN
NOT FOR CONSTRUCTION

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

20 0 20 40
1"=20'

ONE INCH
AT FULL SIZE. IF NOT ONE INCH SCALE ACCORDINGLY

NOTES:
1. REFER TO SHEETS C7 - C9 FOR
SECTION VIEWS

60% DESIGN
NOT FOR CONSTRUCTION

A
C12
INSTALL BANK ROUGHENING JAM
REVTMENT ALONG LOWER BANK

COTTONWOOD BOLES STAGGERED AT
10' SPACING, 4 ROWS
ALIGNED WITH TOP OF BANK (TYP)

PROJECT EXTENTS

RIPRAP FILL BELOW
BALLASTED WOOD JACKS.
SEE SHEET C1.

EXTENT OF RIPRAP

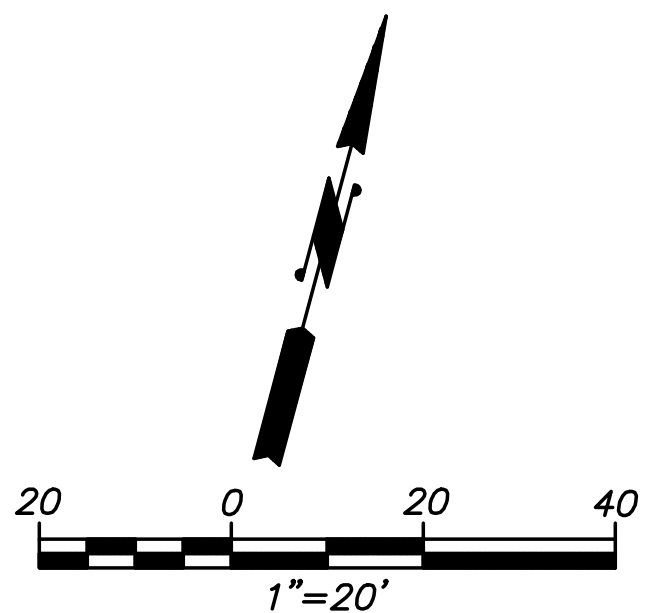
PROJECT EXTENTS

INSTALL LAYER OF BALLASTED
WOOD JACKS BELOW EL. 20 FT.

A
C11

LOW WATER LEVEL - MEASURED JULY 2015

MATCHLINE
SHEET C5



CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
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PROJECT No. 2001084
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NUM.	REVISION	BY	DATE

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DESIGNED: D. HINTON 00/00/00
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Christie True, Director

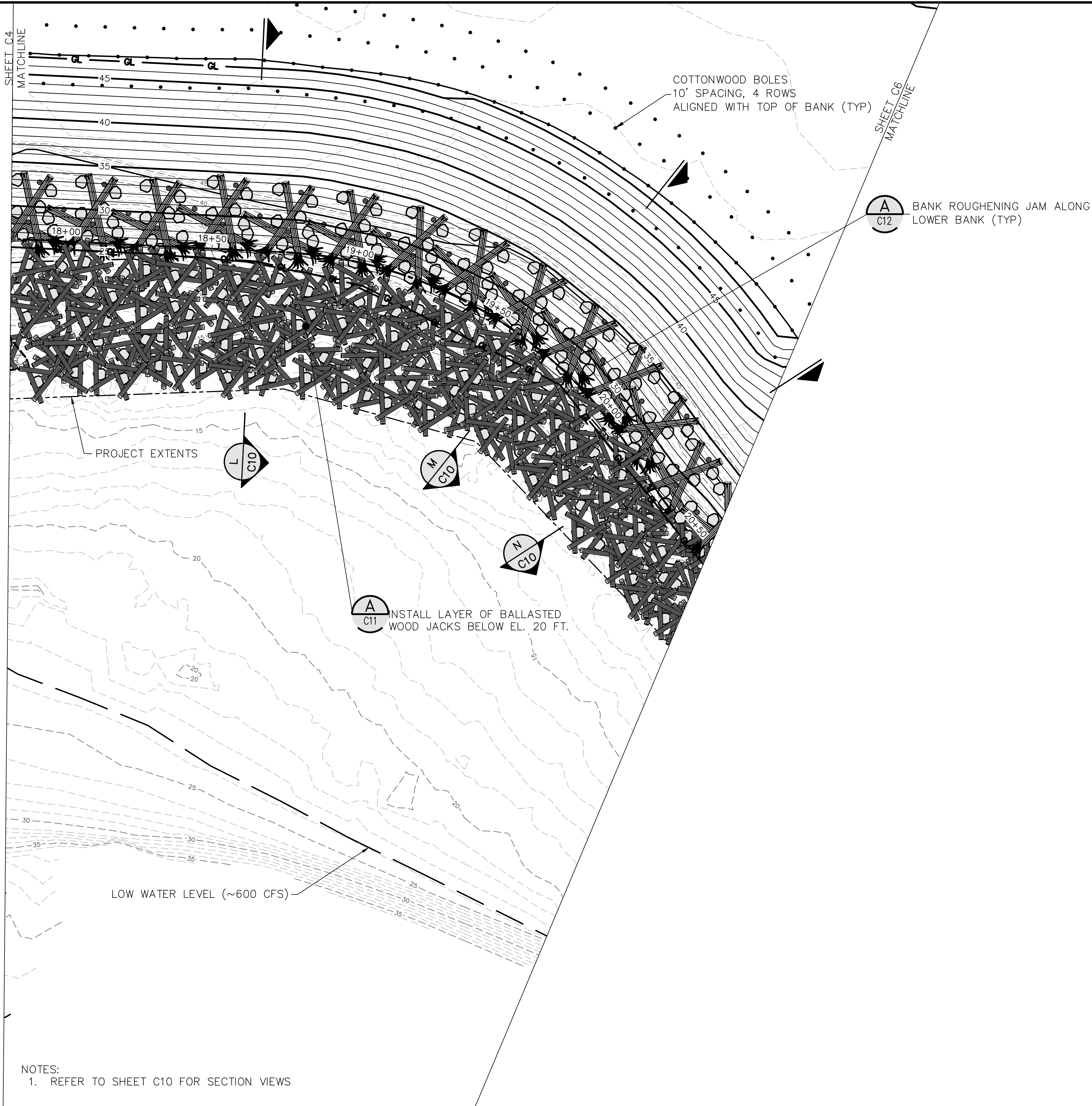
Winkelman Revetment Reconstruction
Project

DOWNSTREAM REVETMENT PLAN

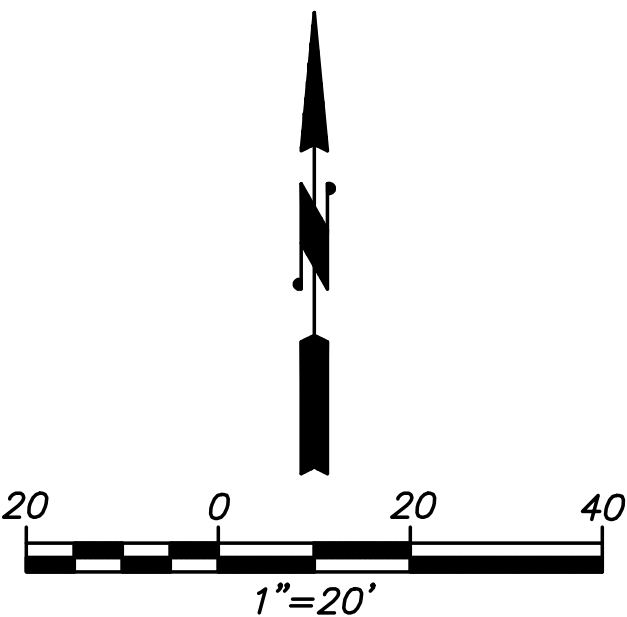
SHEET
10
OF
34
SHEETS

C4

60% DESIGN
NOT FOR CONSTRUCTION



NOTES:
1. REFER TO SHEET C10 FOR SECTION VIEWS



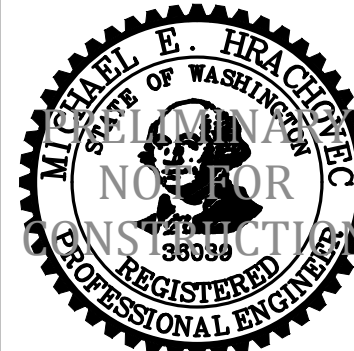
CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX 00/00/00
PROJECT 00/00/00
SUPERVISOR: XXXXXXXX 00/00/00
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DESIGNED: D. HINTON 00/00/00
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Christie True, Director

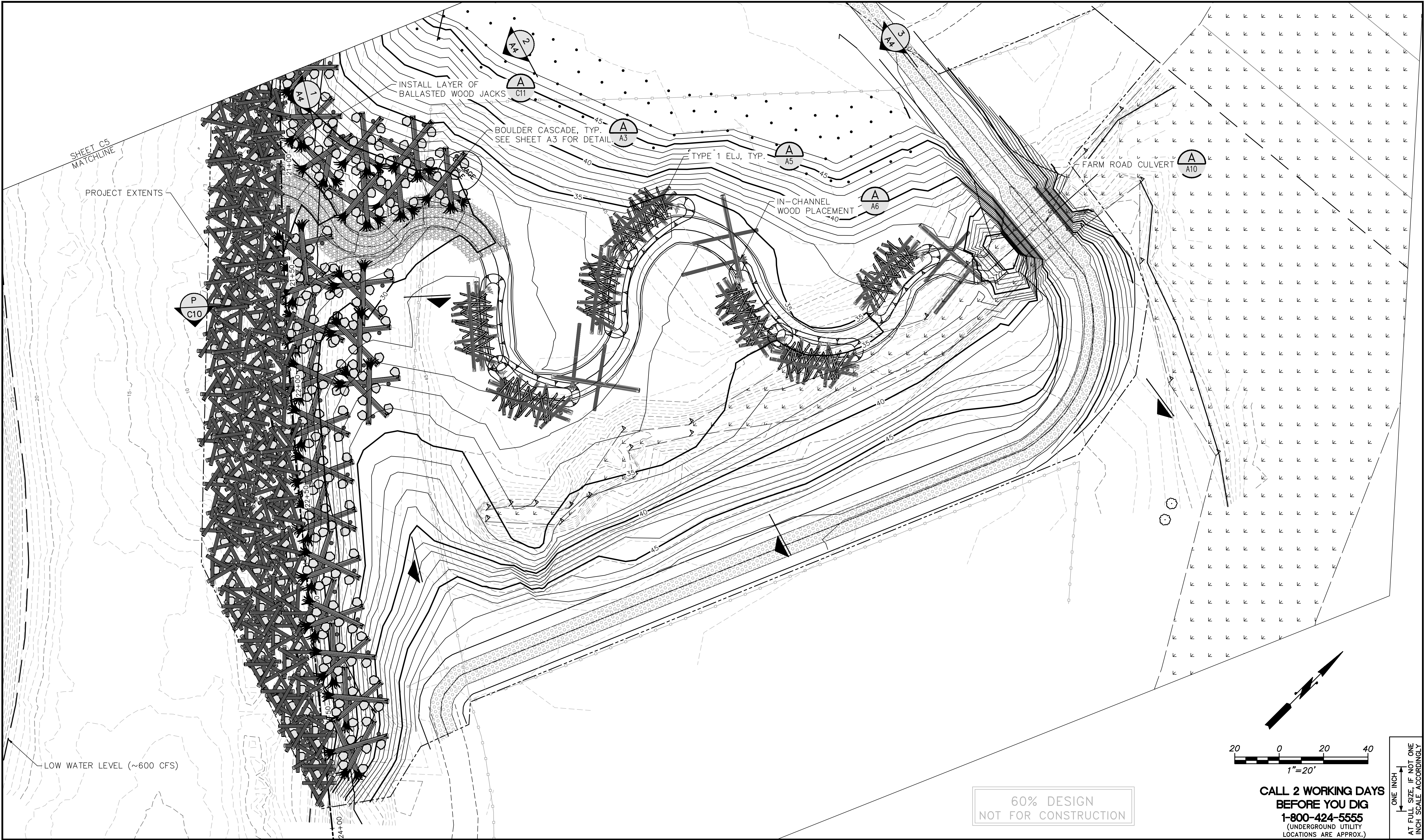
**Winkelman Revetment Reconstruction
Project**

UPSTREAM REVETMENT PLAN

SHEET
11
OF
34
SHEETS

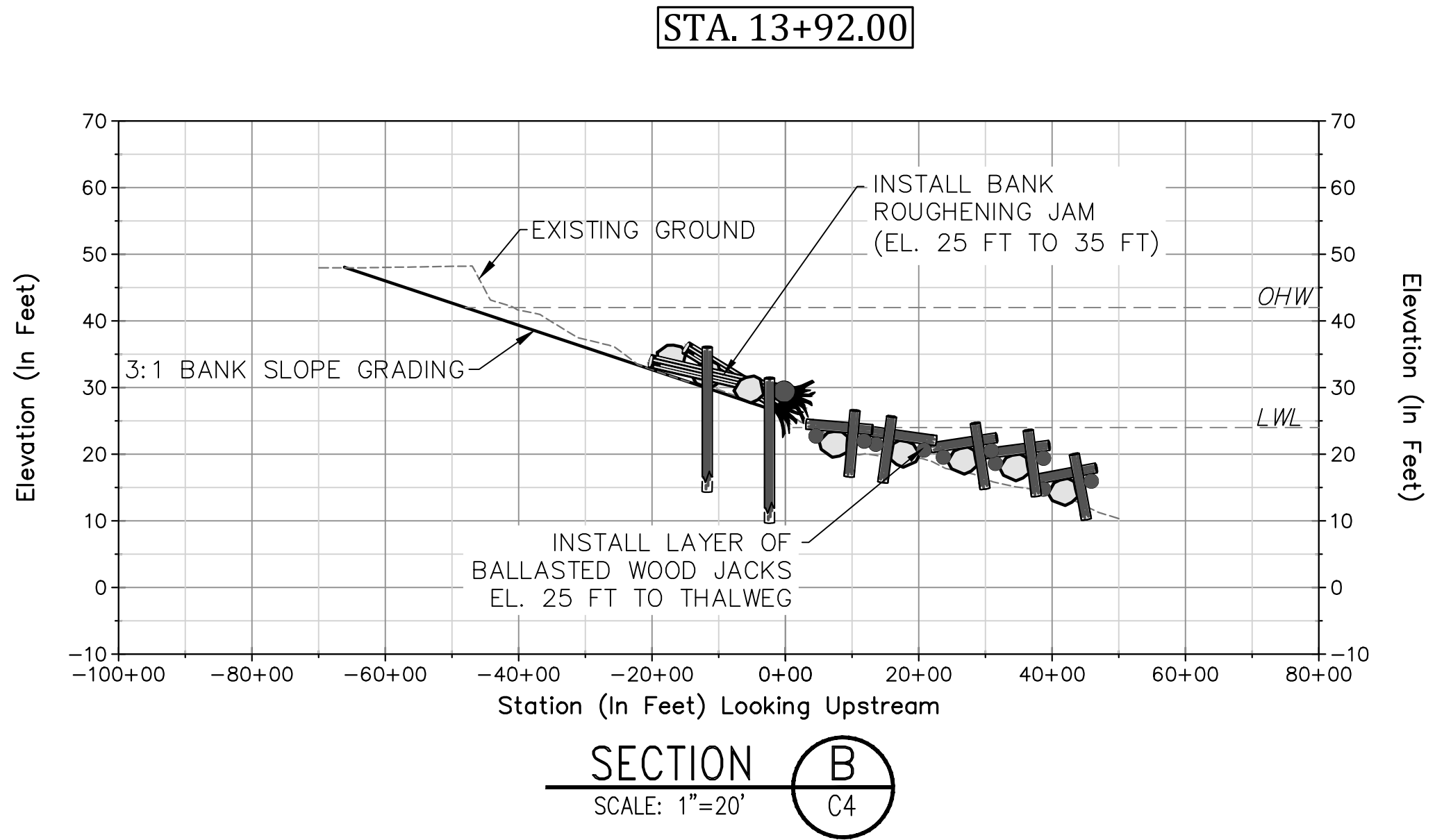
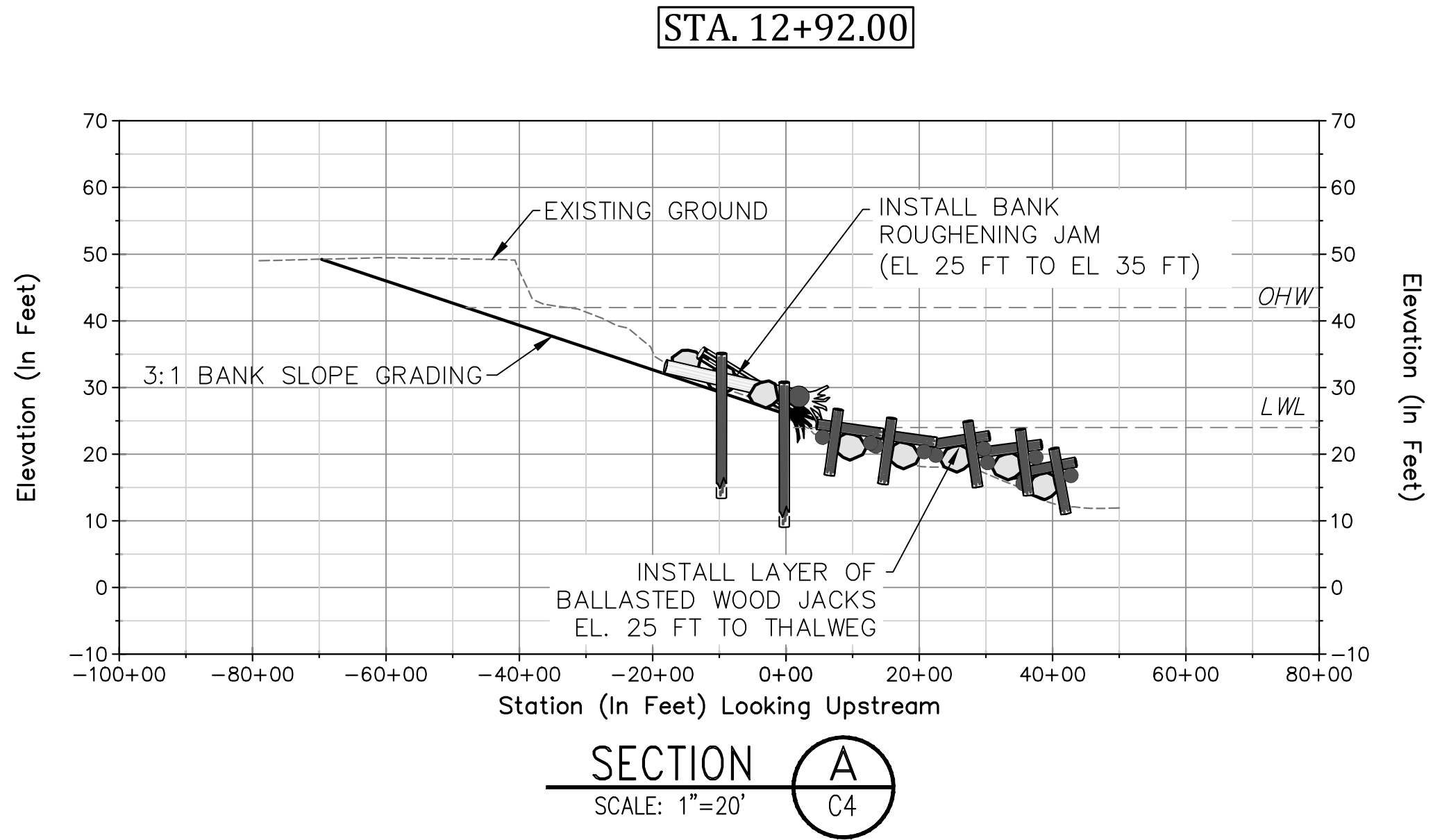
C5

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Plot Date: 11/26/2015 4:40 AM
Cad User: Darren Hinton



FIELD BOOK: <u>XXXXXXXX</u>				APPROVED: <u>XXXXXXXX</u>	00/00/00			 16300 christensen road, suite 350 seattle, washington 98188-3422 phone: (206) 241-6000 fax: (206) 439-2420 www.nhcweb.com	 Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	Winkelman Revetment Reconstruction Project ALCOVE REVETMENT PLAN	SHEET 12 OF 34 SHEETS
SURVEYED: <u>XXXXXXXX</u>				PROJECT	00/00/00						
SURVEY BASE MAP: <u>XXXXXXXX</u>				SUPERVISOR: <u>XXXXXXXX</u>	00/00/00						
CHECKED: <u>XXXXXXXX</u>				PROJECT MANAGER: <u>XXXXXXXX</u>	00/00/00						
PROJECT No. <u>2001084</u>				DESIGNED: <u>D. HINTON</u>	00/00/00						DESIGN ENTERED: <u>T.SHINKLE</u>
SURVEY No. <u>XXXXXXXX</u>	NUM.	REVISION	BY	DATE							

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Plot Date: 11/26/2015 4:43 AM
Cad User: Darren Hinton



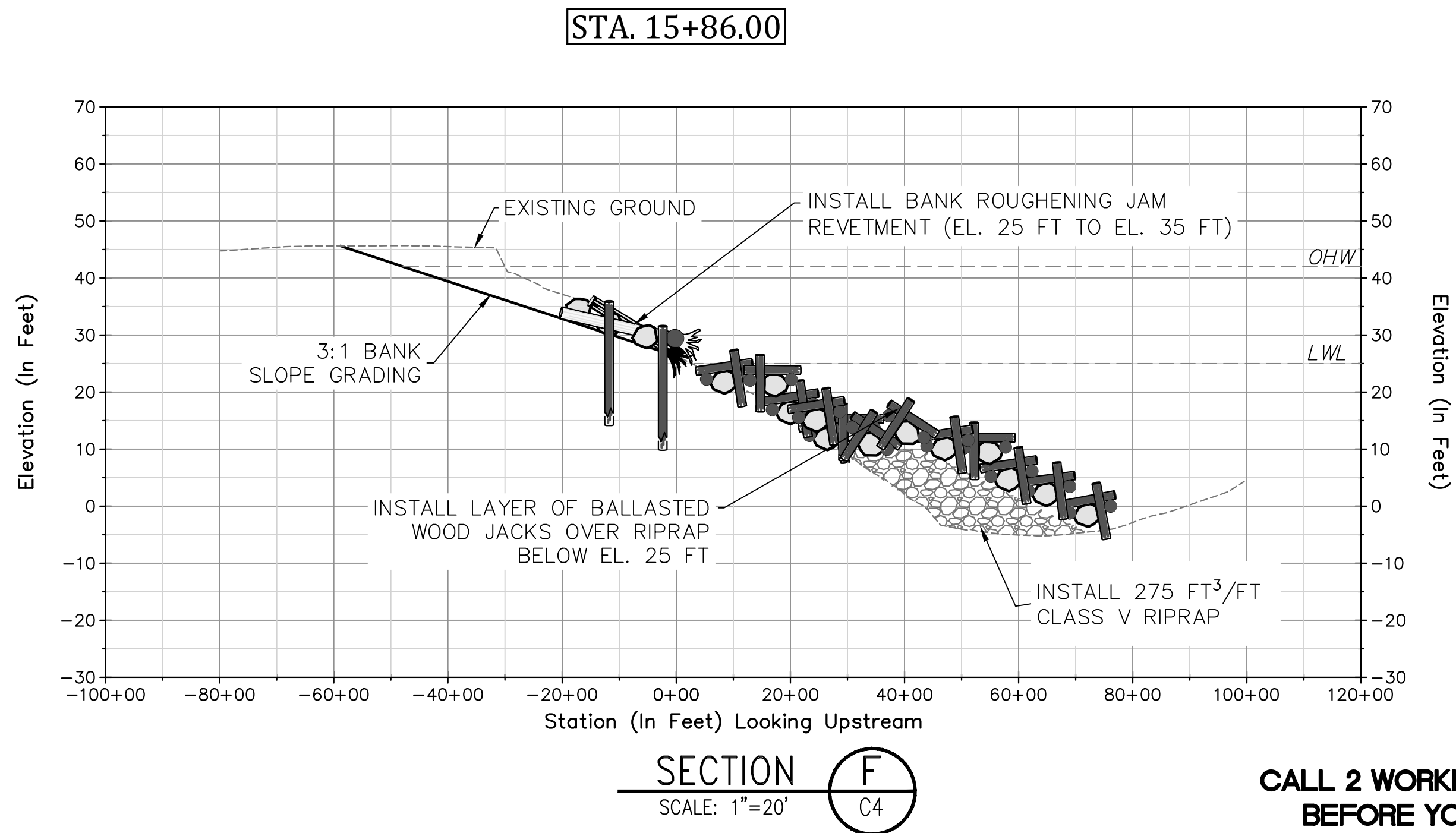
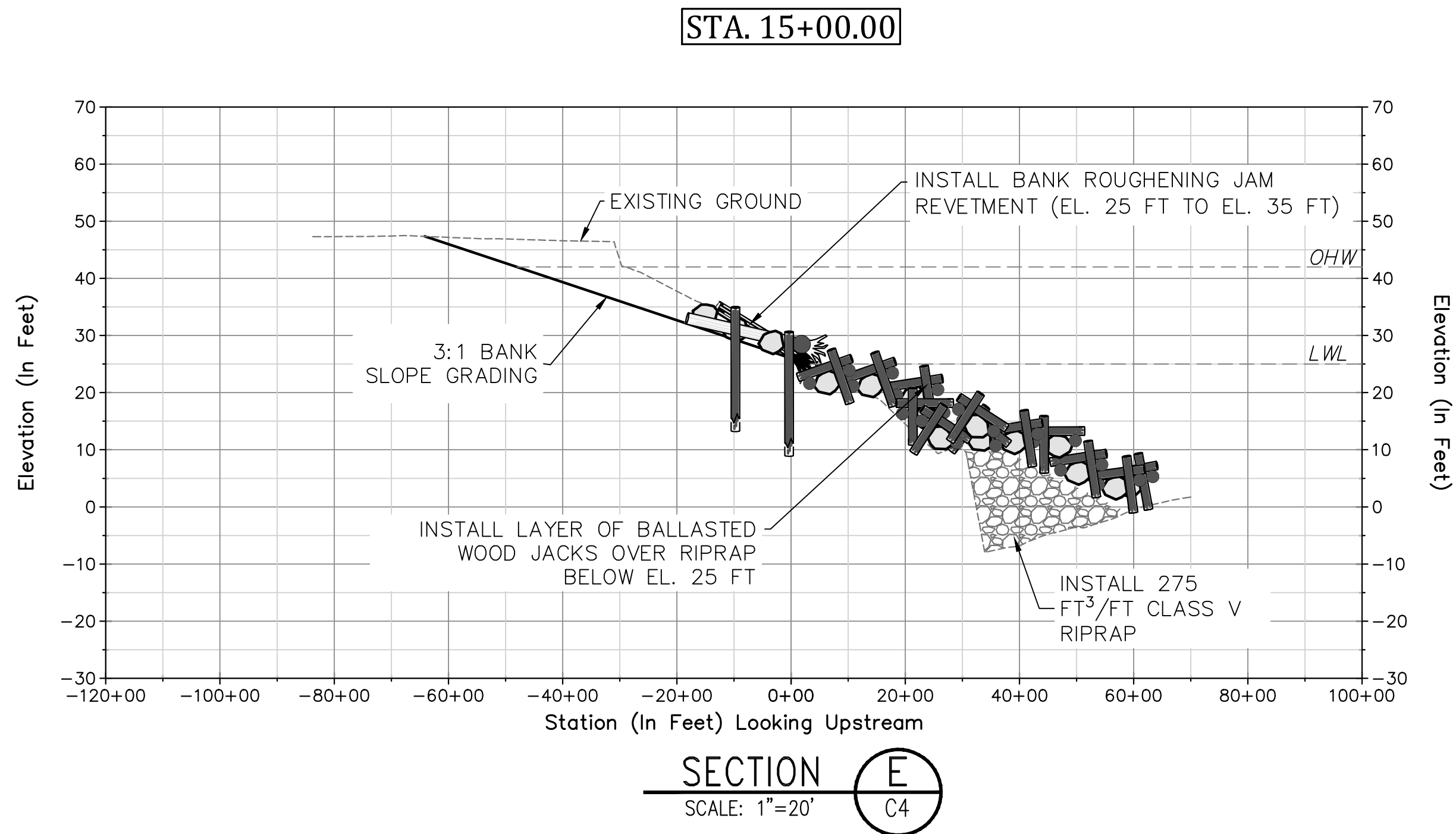
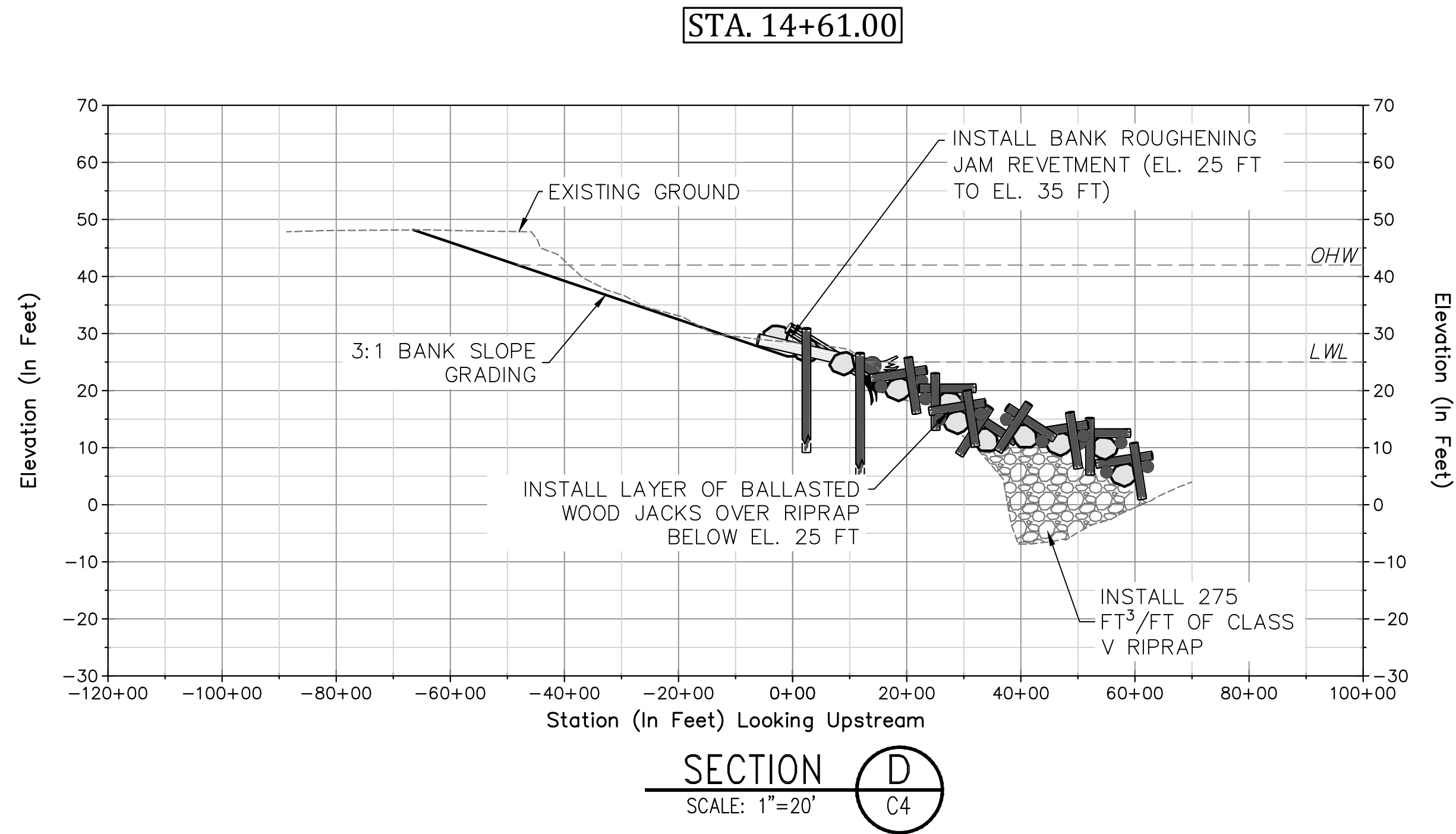
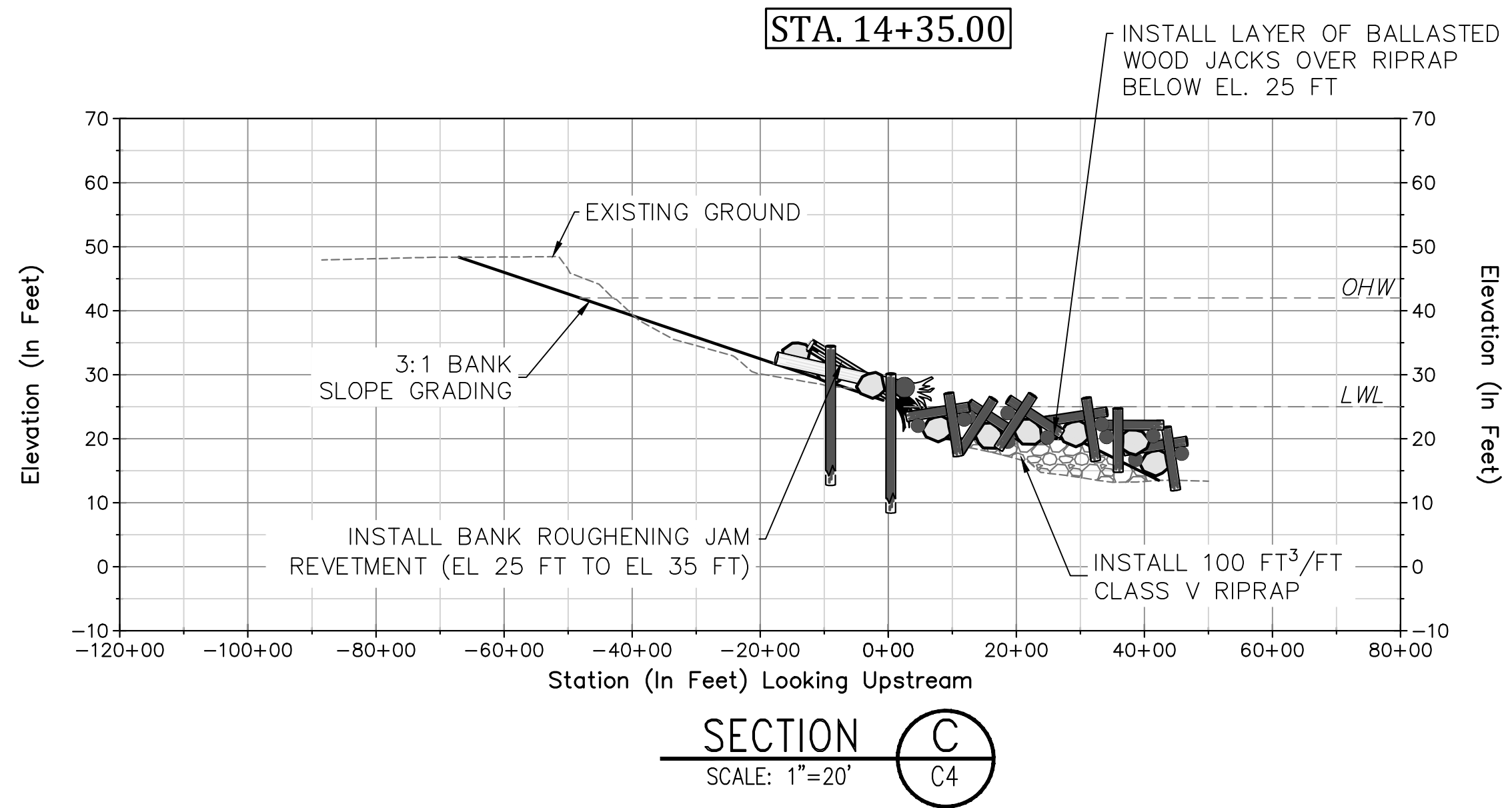
60% DESIGN
NOT FOR CONSTRUCTION

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXX				APPROVED: XXXXXXXX	00/00/00			 16300 christensen road, suite 350 seattle, washington 98188-3422 phone: (206) 241-6000 fax: (206) 439-2420 www.nhcweb.com	 Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	Winkelman Revetment Reconstruction Project CROSS SECTIONS	SHEET 13 OF 34 SHEETS C7
SURVEYED: XXXXXXXX				PROJECT	00/00/00						
SURVEY BASE MAP: XXXXXXXX				SUPERVISOR: XXXXXXXX	00/00/00						
CHECKED: XXXXXXXX				PROJECT MANAGER: XXXXXXXX	00/00/00						
PROJECT No. 2001084				DESIGNED: D. HINTON	00/00/00						
SURVEY No. XXXXXXXX				DESIGN ENTERED: T.SHINKLE	00/00/00						
	NUM.	REVISION	BY	DATE							

60% DESIGN
NOT FOR CONSTRUCTION



CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

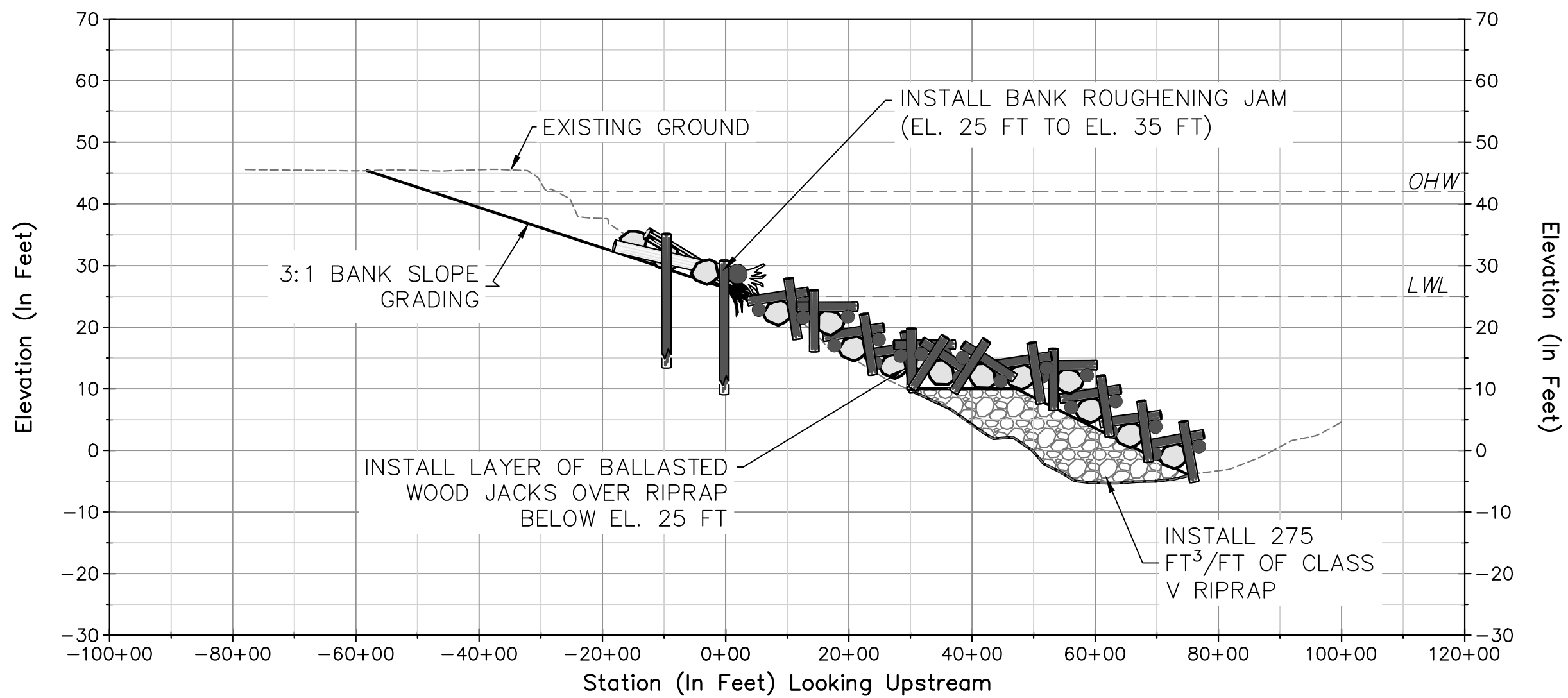
ONE INCH
↑
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

Pair: Q:\2001084_Winkelman_PhaseII\AC_2001084.dwg WINKELMAN - Current WINKELMAN.DWG
Plot Date: 11/29/2015 12:48 AM
Cad User: Darren Hinton

FIELD BOOK: XXXXXXXX				APPROVED: XXXXXXXX	00/00/00			 16300 christensen road, suite 350 seattle, washington 98188-3422 phone: (206) 241-6000 fax: (206) 439-2420 www.nhcweb.com	 Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	Winkelman Revetment Reconstruction Project CROSS SECTIONS	SHEET 14 OF 34 SHEETS C8
SURVEYED: XXXXXXXX				PROJECT	00/00/00						
SURVEY BASE MAP: XXXXXXXX				SUPERVISOR: XXXXXXXX	00/00/00						
CHECKED: XXXXXXXX				PROJECT MANAGER: XXXXXXXX	00/00/00						
PROJECT No. 2001084				DESIGNED: D. HINTON	00/00/00						
SURVEY No. XXXXXXXX				DESIGN ENTERED: T. SHINKLE	00/00/00						
	NUM.	REVISION	BY	DATE							

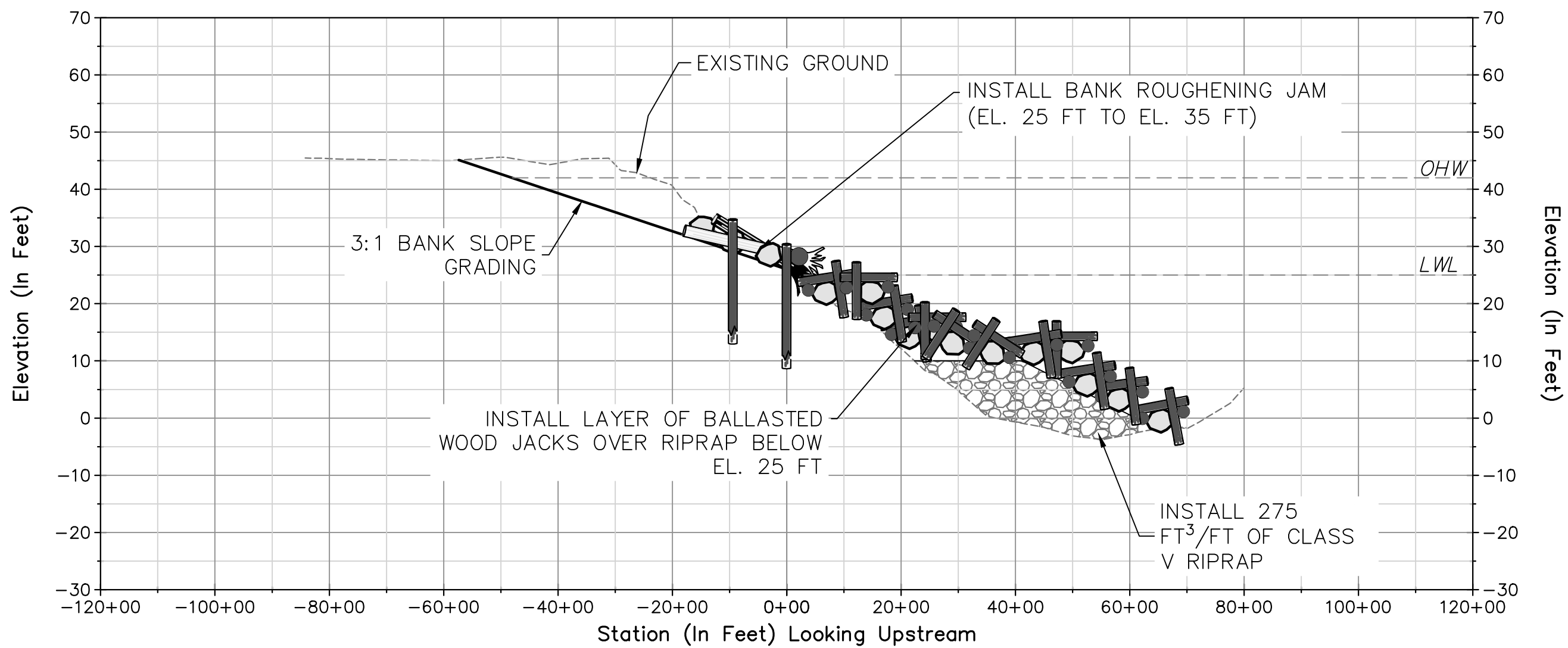
60% DESIGN
NOT FOR CONSTRUCTION

STA. 16+46.00



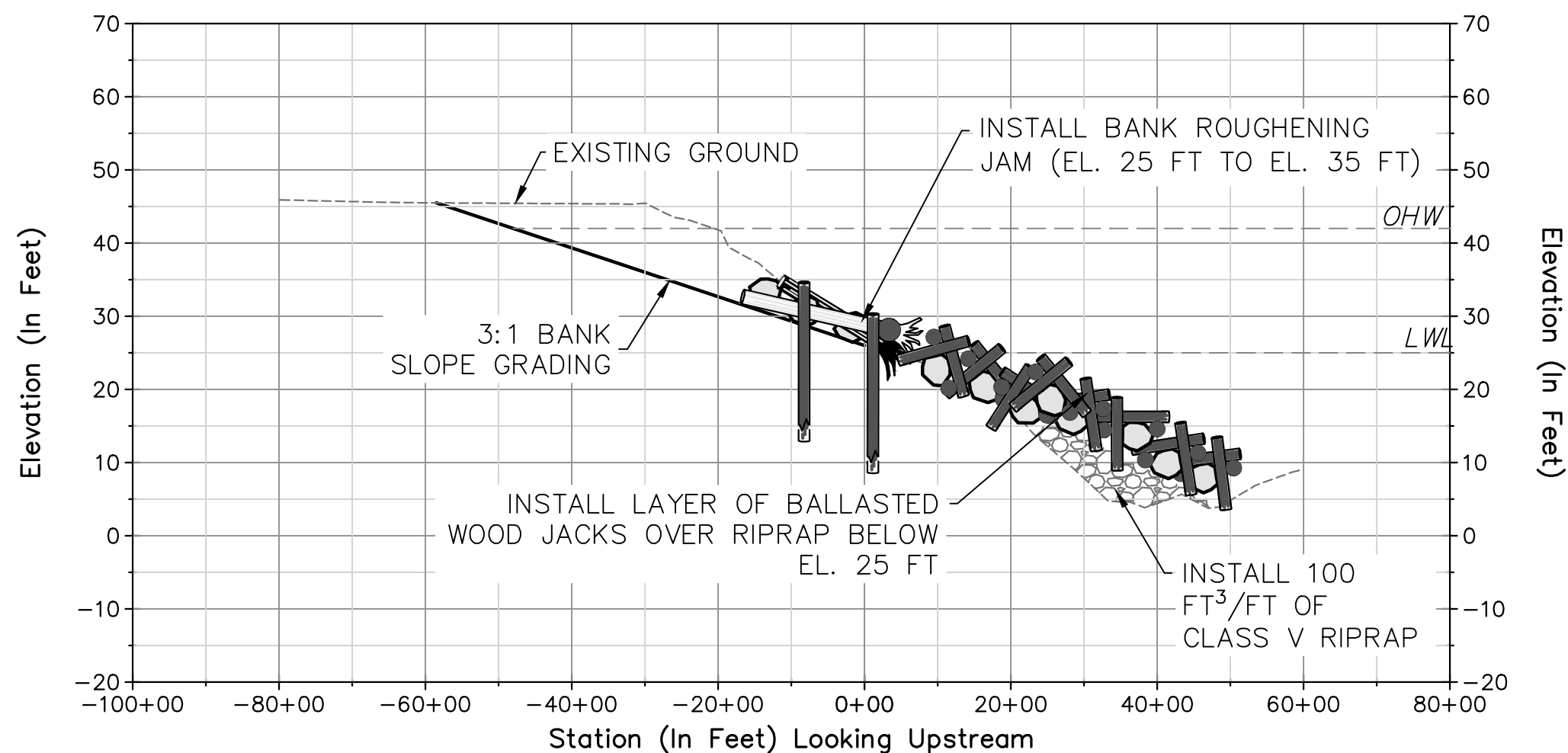
SECTION G
SCALE: 1"=20'

STA. 16+91.00



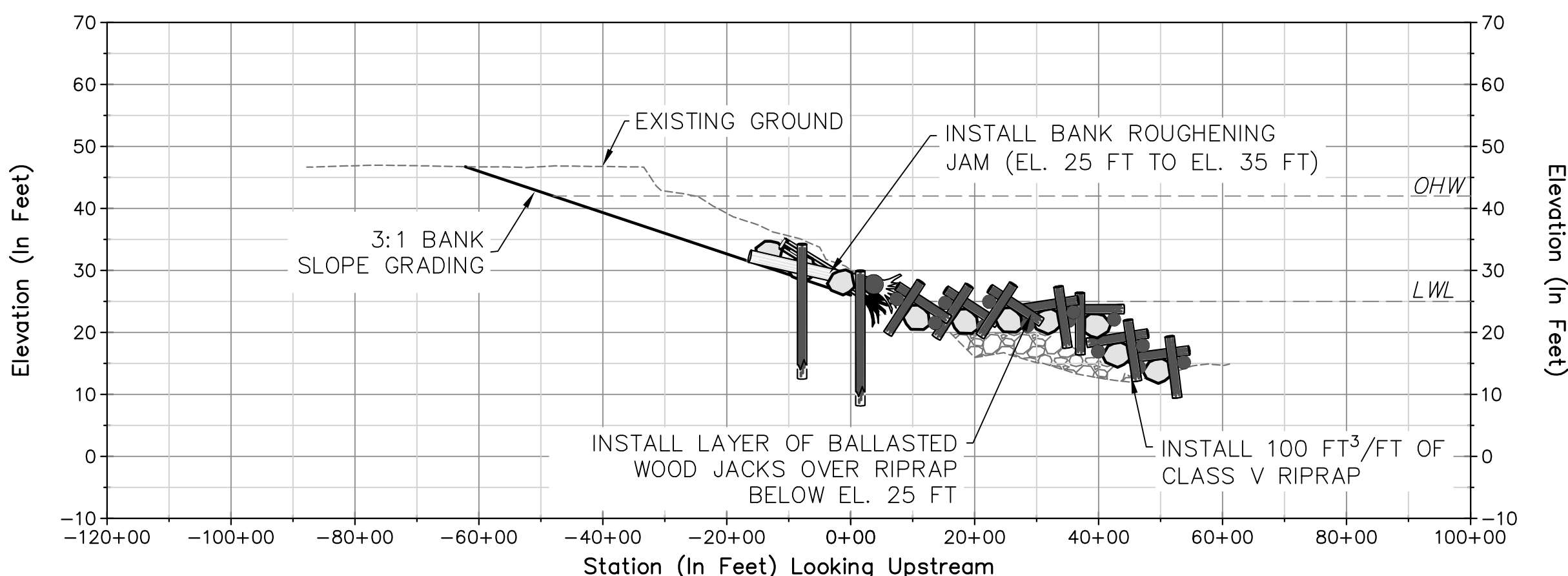
SECTION H
SCALE: 1"=20'

STA. 17+18.00



SECTION J
SCALE: 1"=20'

STA. 17+70.00



SECTION K
SCALE: 1"=20'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

Path: Q:\2001084_Winkelman_PhaseII\AC_2001084.dwg WINKELMAN - Current WINKELMAN.DWG
Plot Date: 11/29/2015 12:49 AM
Cad User: Darren Hinton

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX 00/00/00
PROJECT
SUPERVISOR: XXXXXXXX 00/00/00
PROJECT
MANAGER: XXXXXXXX 00/00/00
DESIGNED: D. HINTON 00/00/00
DESIGN ENTERED: T. SHINKLE 00/00/00



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phone: (206) 241-6000
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Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

**Winkelman Revetment Reconstruction
Project**

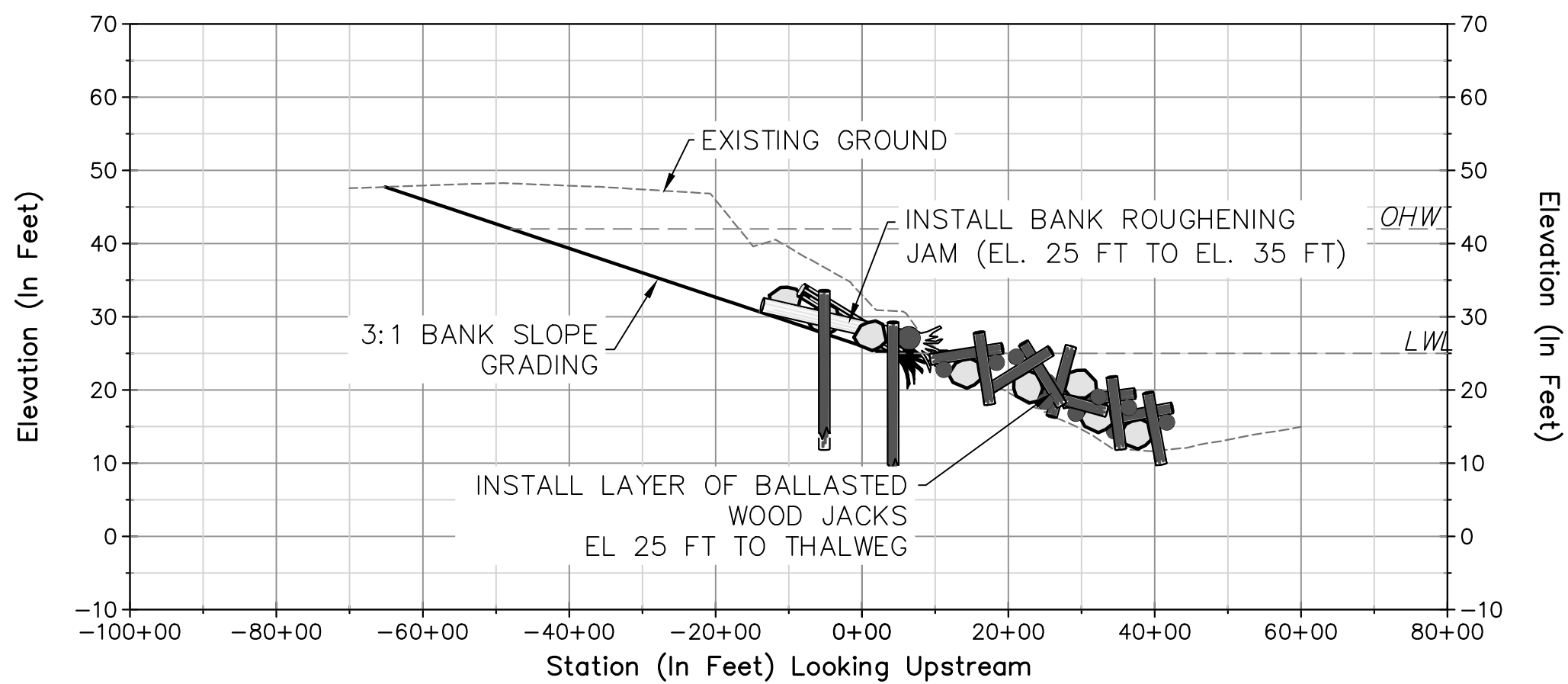
CROSS SECTIONS

SHEET
15
OF
34
SHEETS

C9

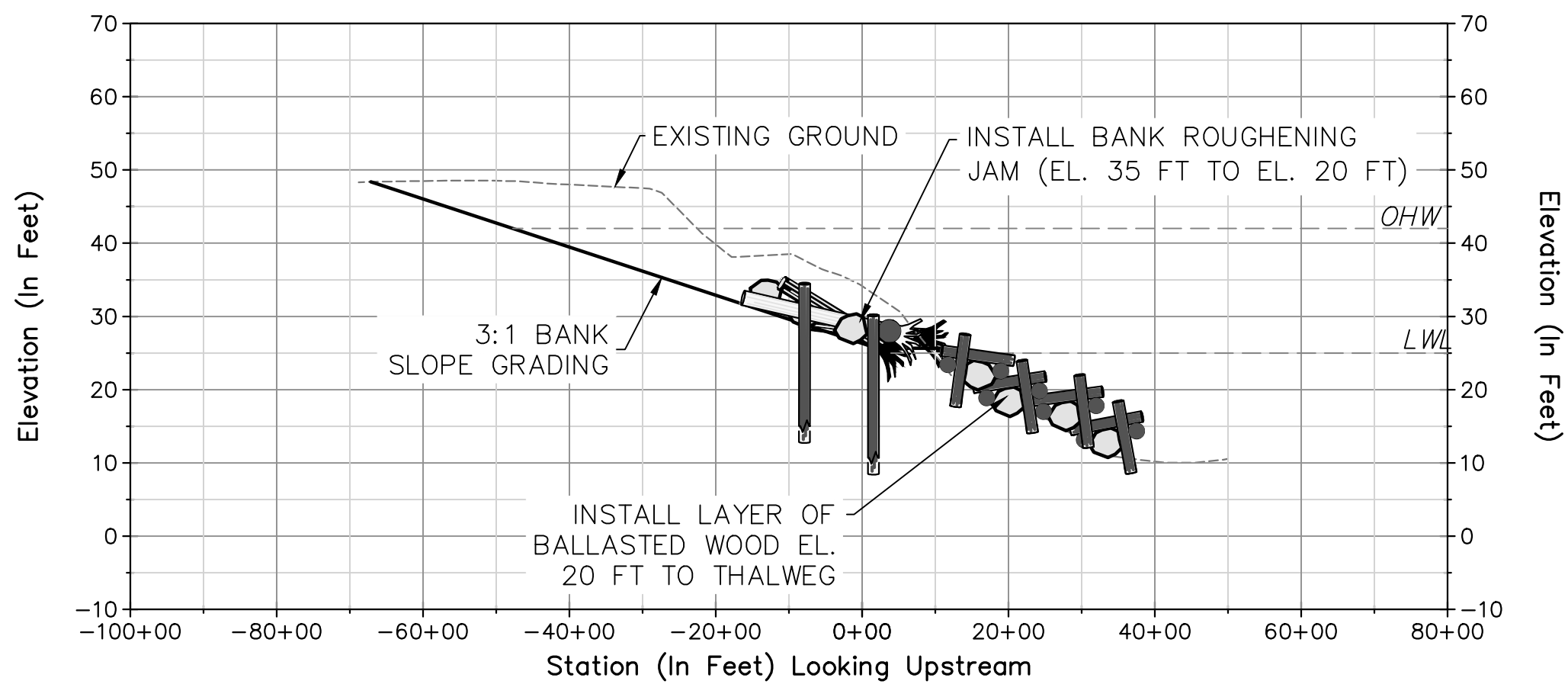
60% DESIGN
NOT FOR CONSTRUCTION

STA. 18+64.00



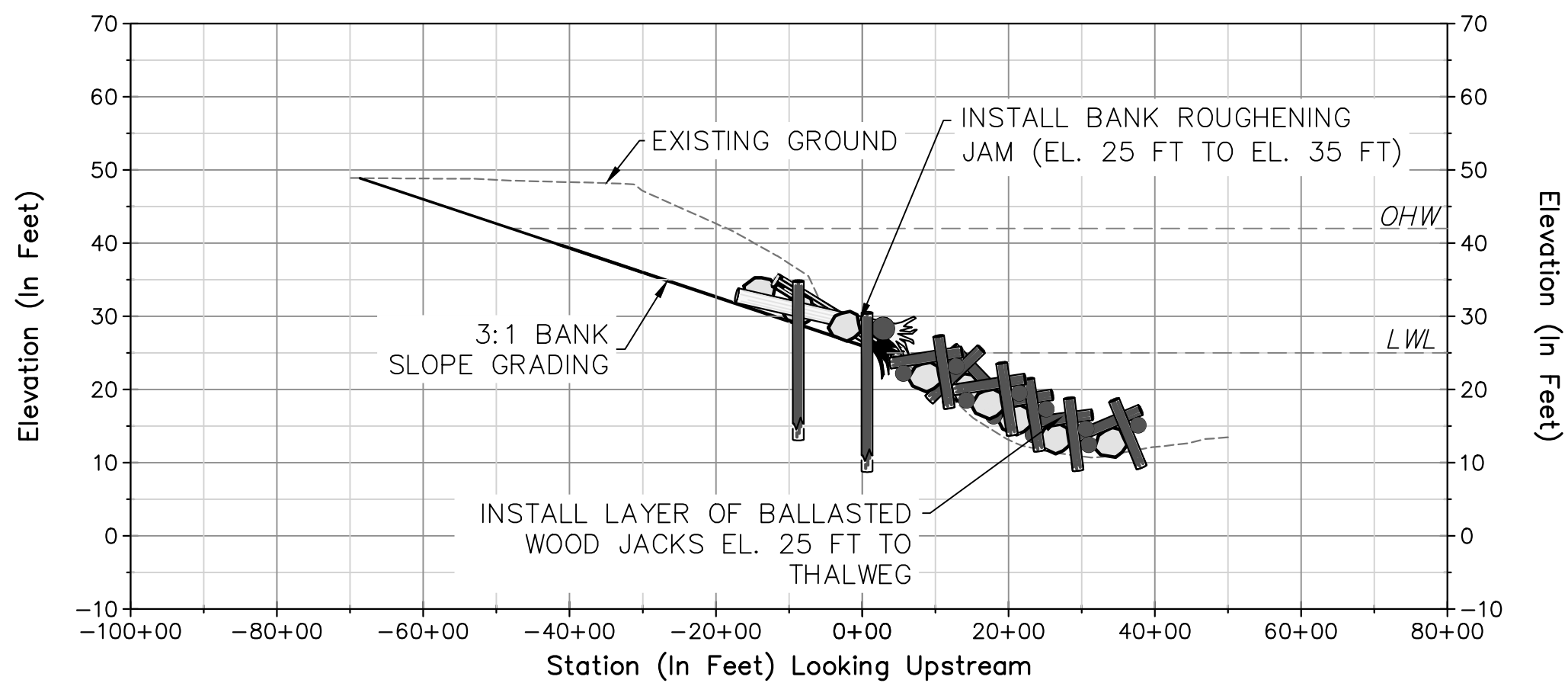
SECTION L
SCALE: 1"=20'
C5

STA. 19+68.00



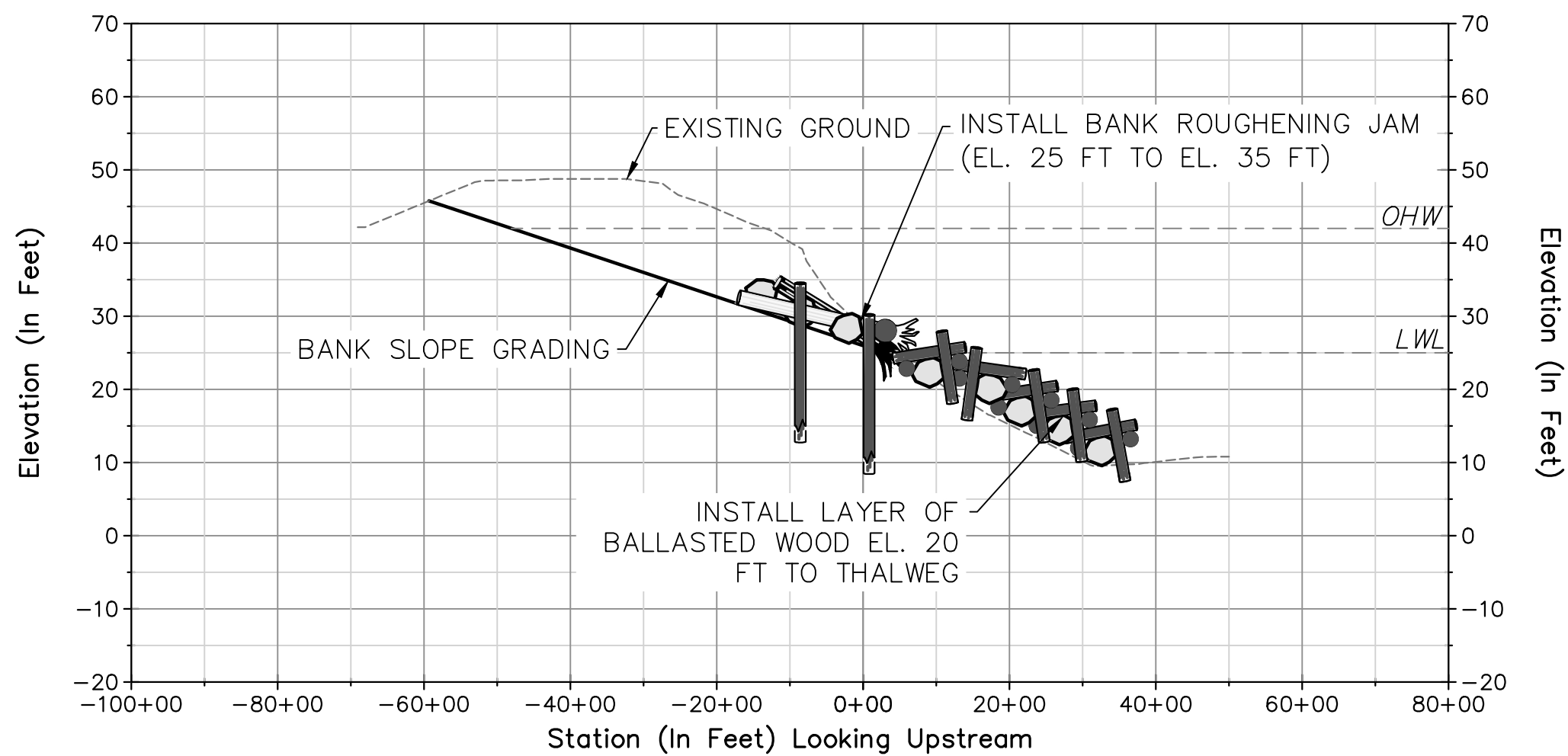
SECTION M
SCALE: 1"=20'
C5

STA. 20+25.34



SECTION N
SCALE: 1"=20'
C5

STA. 21+62.00



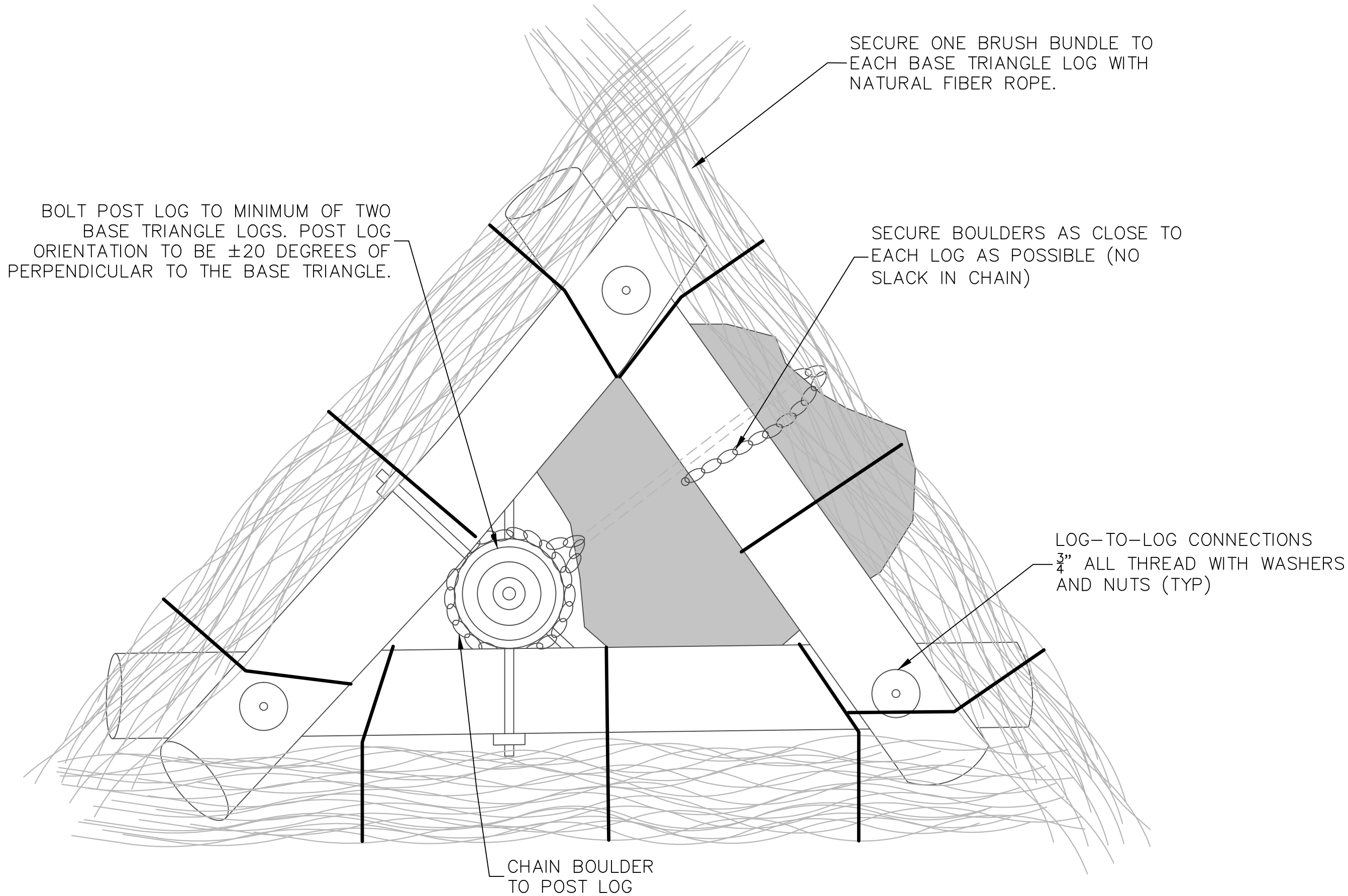
SECTION P
SCALE: 1"=20'
C5

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

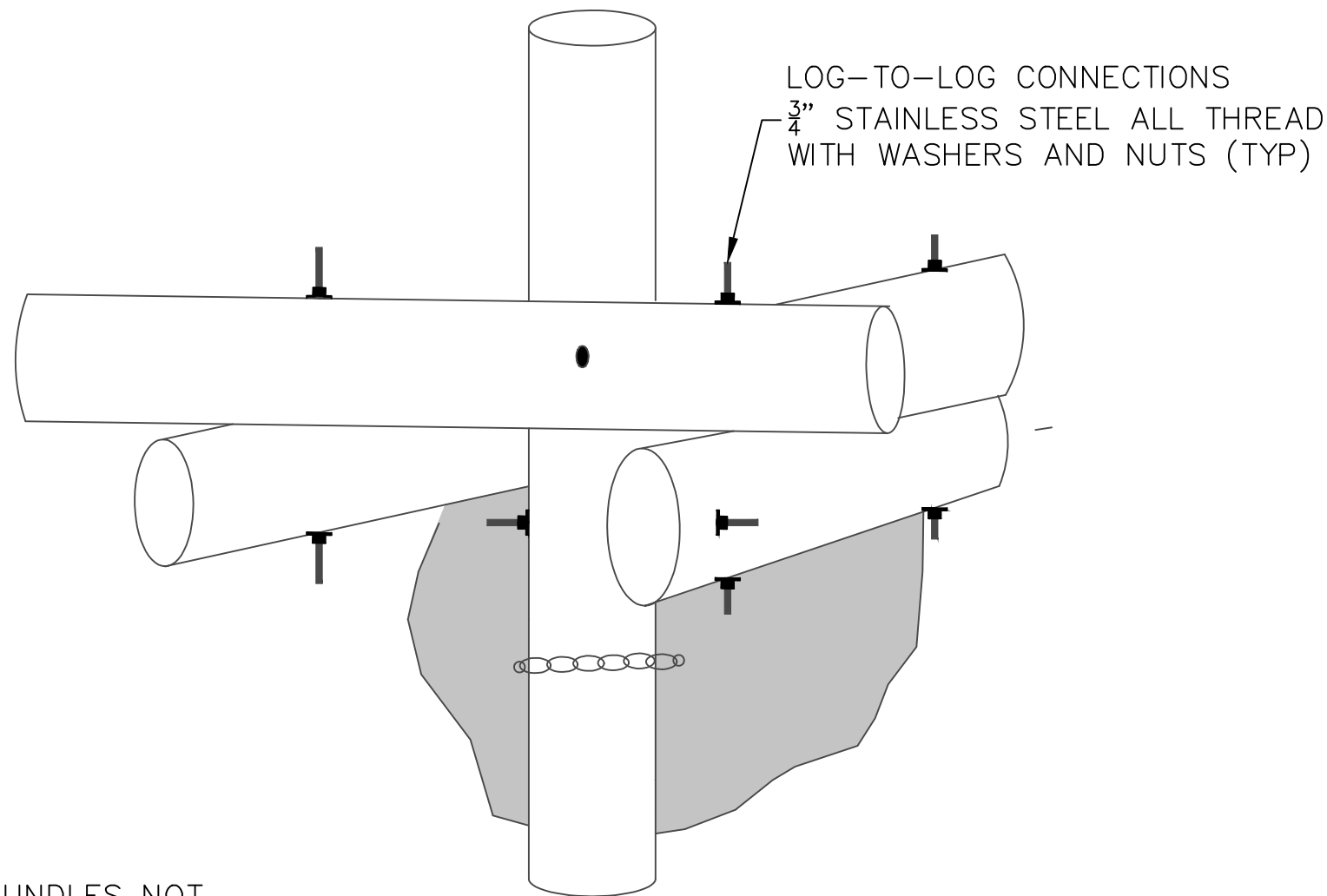
ONE INCH
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

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Cad User: Darren Hinton

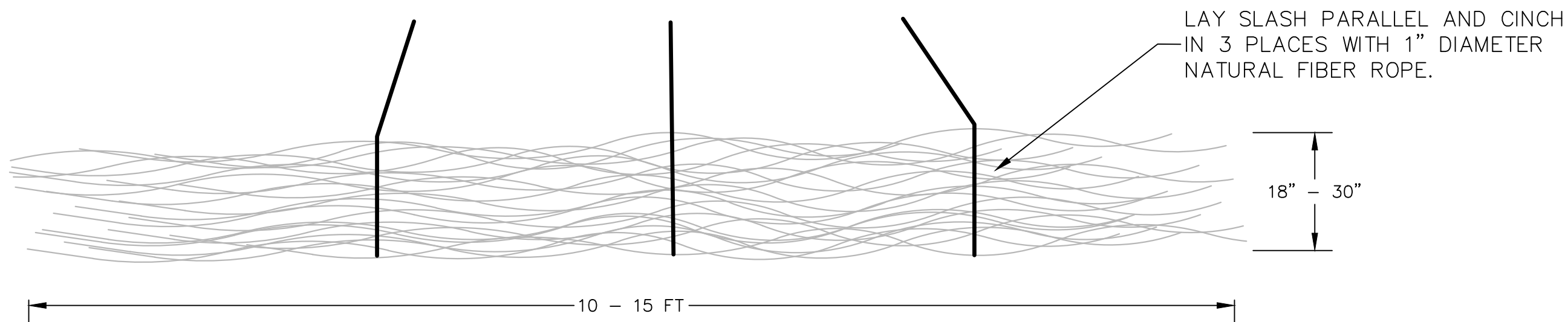
FIELD BOOK: XXXXXXXX				APPROVED: XXXXXXXX	00/00/00			nhc northwest hydraulic consultants 16300 christensen road, suite 350 seattle, washington 98188-3422 phone: (206) 241-6000 fax: (206) 439-2420 www.nhcweb.com	 Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	Winkelman Revetment Reconstruction Project CROSS SECTIONS	SHEET 16 OF 34 SHEETS C10
SURVEYED: XXXXXXXX				PROJECT	00/00/00						
SURVEY BASE MAP: XXXXXXXX				SUPERVISOR: XXXXXXXX	00/00/00						
CHECKED: XXXXXXXX				PROJECT MANAGER: XXXXXXXX	00/00/00						
DESIGNED: D. HINTON				DESIGNED: D. HINTON	00/00/00						
PROJECT No. 2001084											
SURVEY No. XXXXXXXX											
	NUM.	REVISION	BY	DATE	DESIGN ENTERED: T. SHINKLE	00/00/00					



A BALLASTED WOOD JACK DETAIL (TYP.)
NOT TO SCALE



ISOMETRIC WOOD JACK DETAIL (TYP.)
NOT TO SCALE



B BRUSH BUNDLE DETAIL
NOT TO SCALE

- NOTES:
1. BOULDER MUST REMAIN ON BOTTOM DURING LIFTING & PLACEMENT.
 2. LOG-TO-LOG CONNECTIONS ARE $\frac{3}{4}$ " ALL THREAD WITH WASHER AND NUTS.
 3. BRUSH BUNDLE TIED WITH HEMP ROPE (OR OTHER ENGINEER APPROVED EQUAL) SECURELY TIED TO LOGS IN THREE LOCATIONS, ONE BUNDLE PER HORIZONTAL LOG. 24"Ø, 10-15' LONG. 3 BRUSH BUNDLES PER BALLASTED WOOD JACK.

60% FINAL
NOT FOR CONSTRUCTION

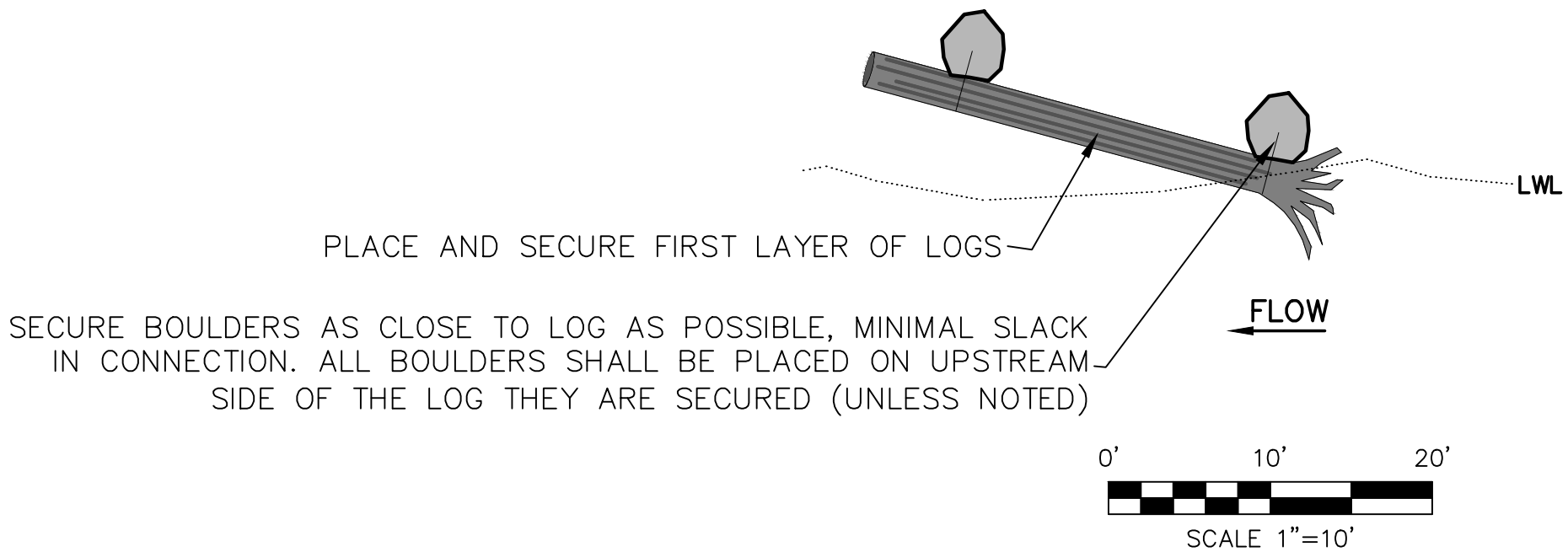
CALL 2 WORKING DAYS
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1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
↑
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INCH SCALE ACCORDINGLY

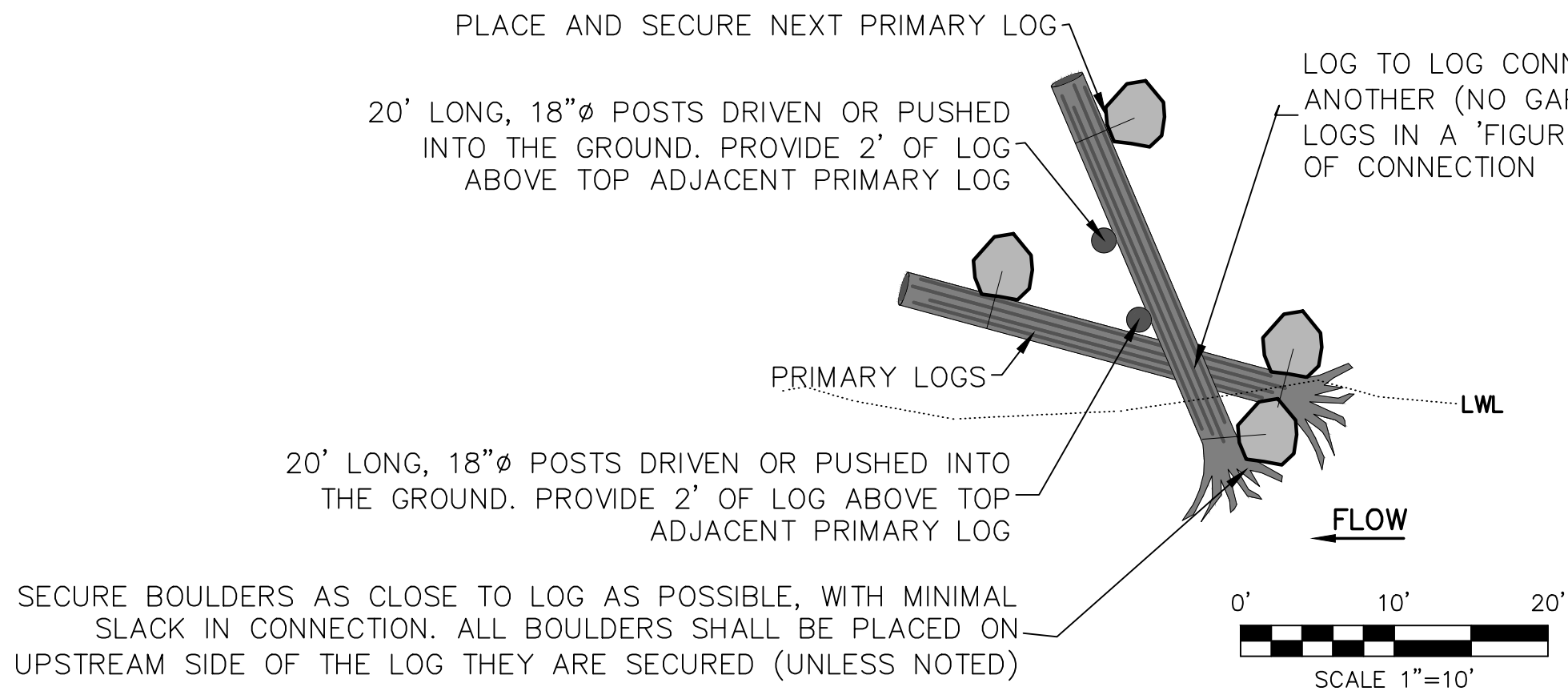
FIELD BOOK: XXXXXXXX					APPROVED: XXXXXXXX	00/00/00			 16300 christensen road, suite 350 seattle, washington 98188-3422 phone: (206) 241-6000 fax: (206) 439-2420 www.nhcweb.com	 Department of Natural Resources and Parks Water and Land Resources Division River and Floodplain Management Section Christie True, Director	Winkelman Revetment Reconstruction Project	SHEET 17 OF 34 SHEETS
SURVEYED: XXXXXXXX					PROJECT	00/00/00						
SURVEY BASE MAP: XXXXXXXX					SUPERVISOR: XXXXXXXX	00/00/00						
CHECKED: XXXXXXXX					PROJECT MANAGER: XXXXXXXX	00/00/00						
PROJECT No. 2001084					DESIGNED: D. HINTON	00/00/00						
SURVEY No. XXXXXXXX					DESIGN ENTERED: T.SHINKLE	00/00/00						
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Cad User: Darren Hinton

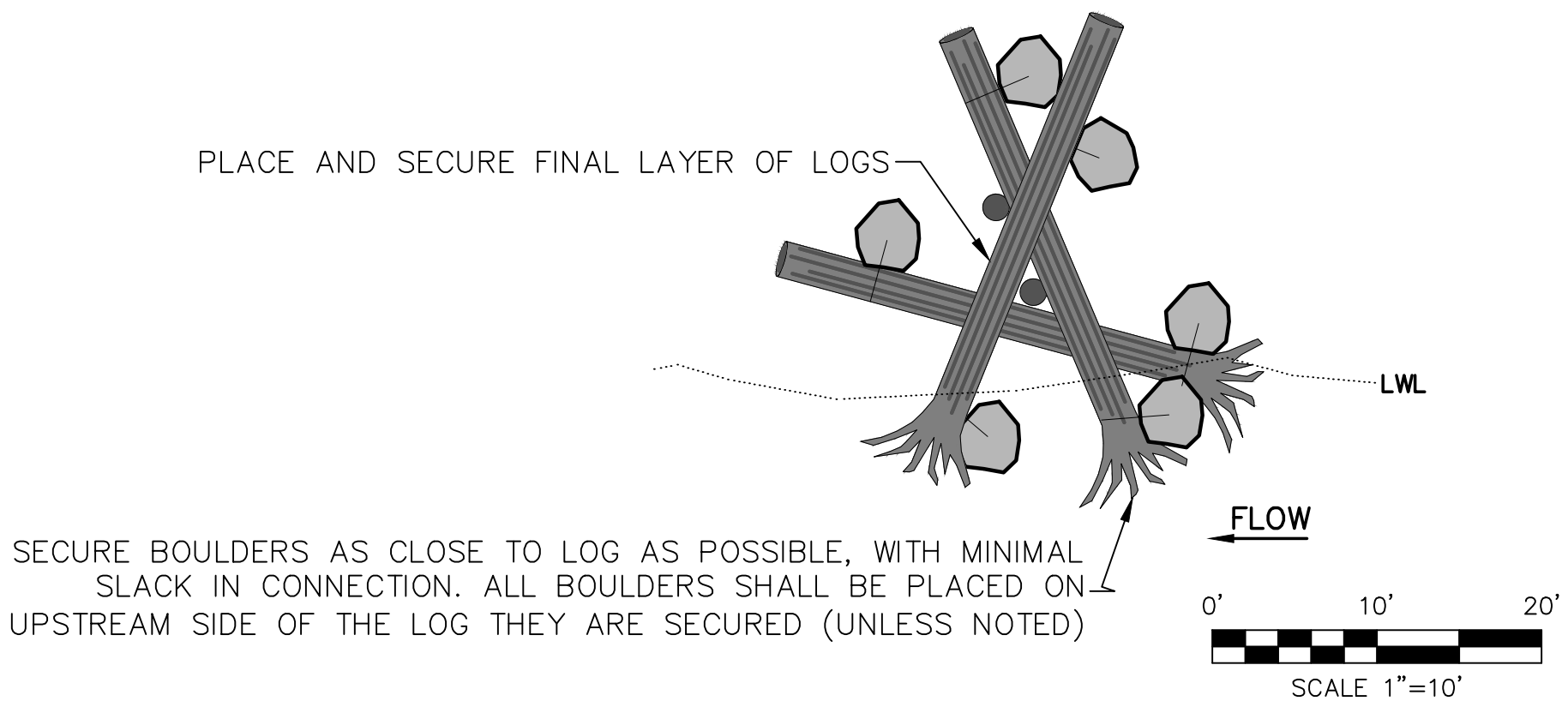


Jam Construction: Step 1



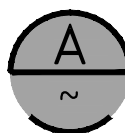
Jam Construction: Step 2

- NOTES:
1. INSTALL TWO POSTS PER LOG JAM.
 2. EACH POST SHOULD BE SECURED TO A DIFFERENT PRIMARY LOG.
 3. POSTS TO BE PUSHED BY EXCAVATOR OR VIBRATED INTO THE BANK AND CHAINED TO THE STRUCTURE.

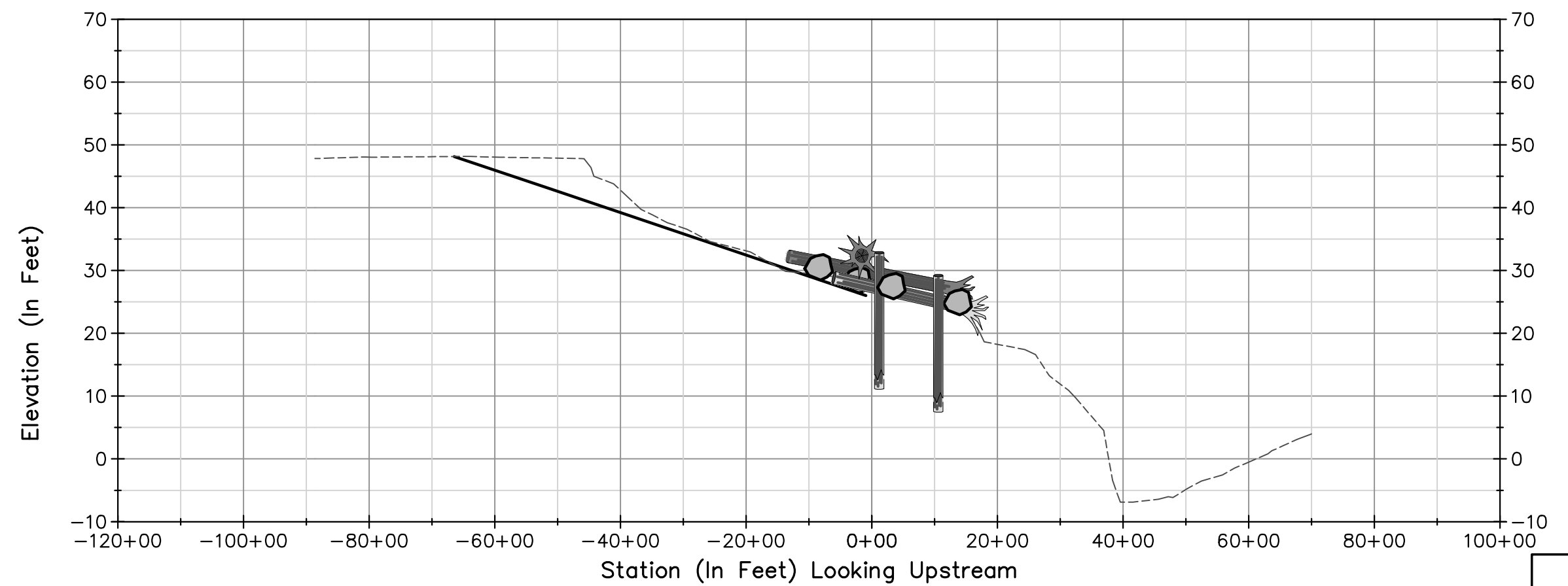
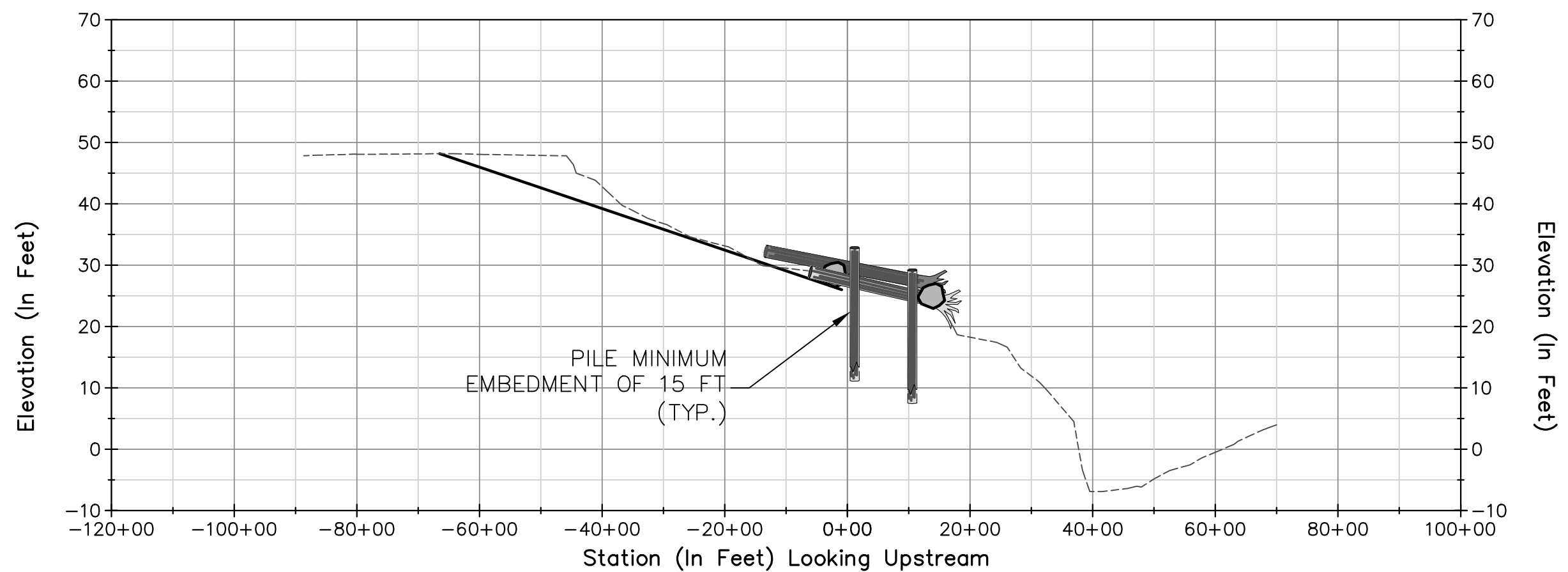
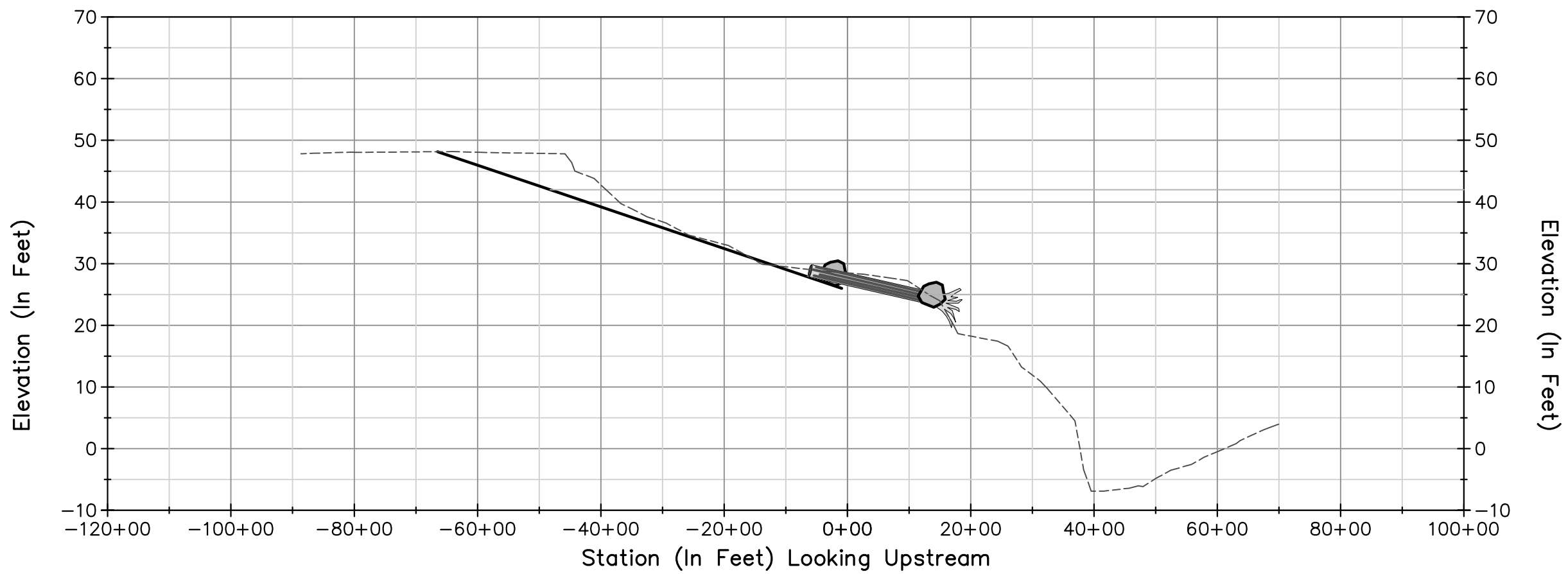


Jam Construction: Step 3

- NOTES:
1. ADD SLASH AFTER PRIMARY LOGS ARE ANCHORED & SECURED TO ONE ANOTHER.
 2. SLASH IS NOT SECURED TO THE STRUCTURE BUT IS PLACED AT THE DIRECTION OF THE PROJECT REPRESENTATIVE.



BANK ROUGHENING JAM REVETMENT
NOT TO SCALE



60% FINAL
NOT FOR CONSTRUCTION

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX 00/00/00
PROJECT
SUPERVISOR: XXXXXXXX 00/00/00
PROJECT
MANAGER: XXXXXXXX 00/00/00
DESIGNED: D. HINTON 00/00/00
DESIGN ENTERED: T.SHINKLE 00/00/00



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River and Floodplain Management Section

Christie True, Director

**Winkelman Revetment Reconstruction
Project**

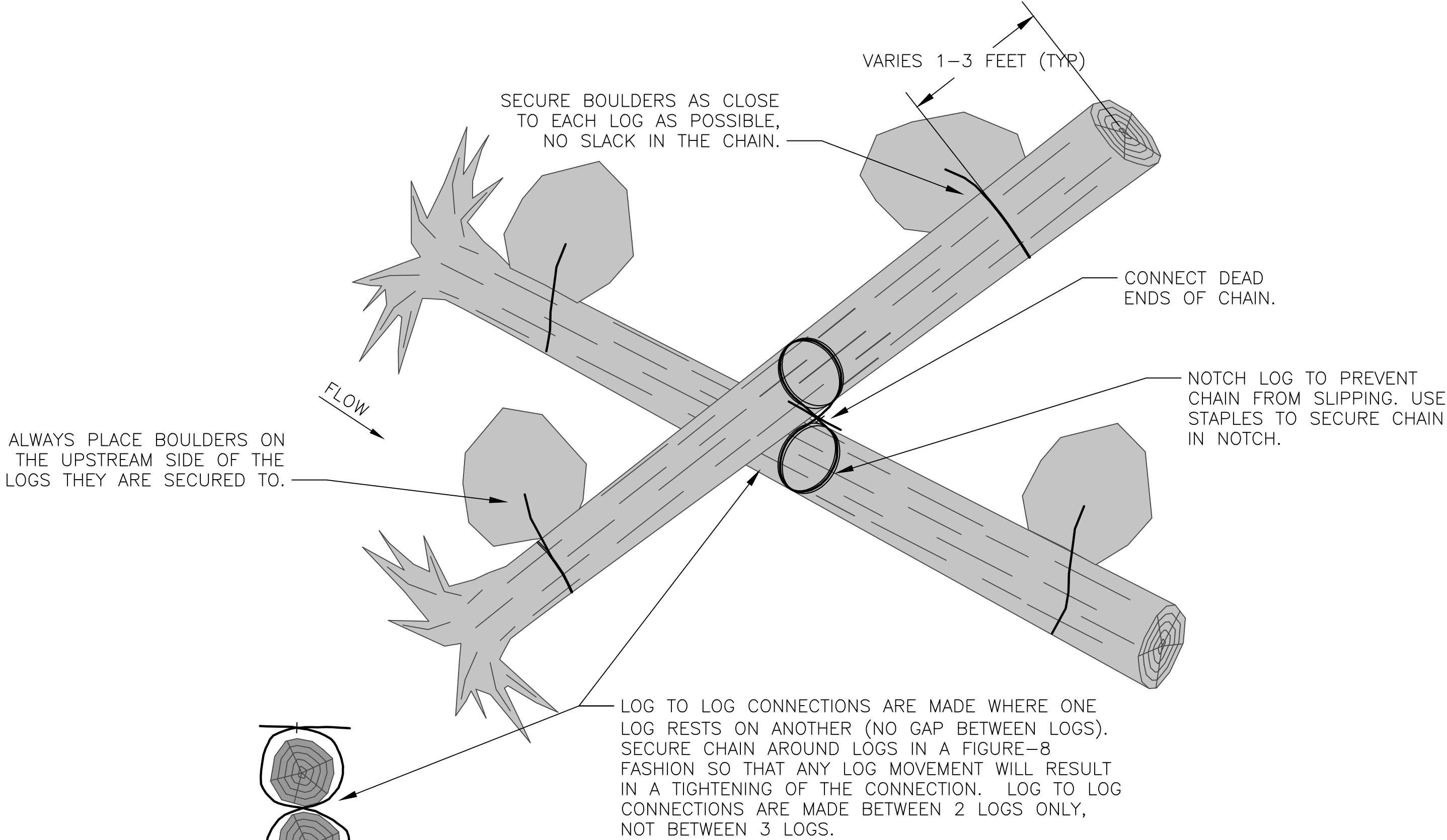
**BANK ROUGHENING JAM REVETMENT
WOOD LAYERING PLAN**

SHEET
18
OF
34
SHEETS

C12

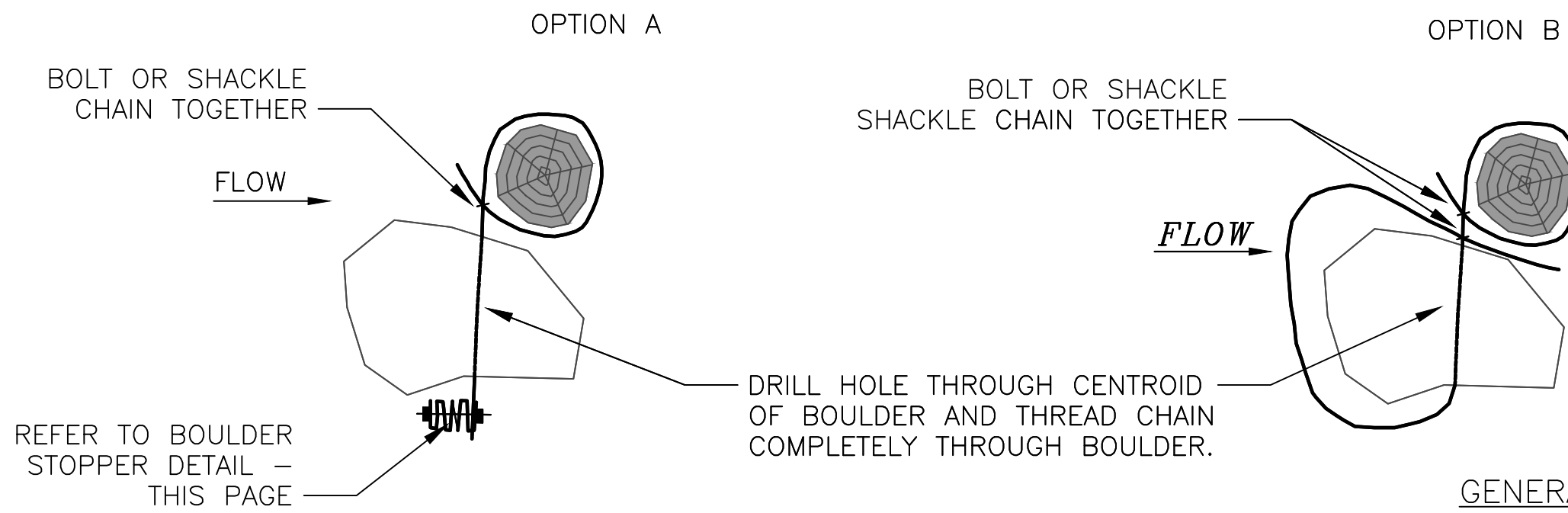
ONE INCH
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

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Plot Date: 11/28/2015 9:27 PM
Cad User: Darren Hinton



SEE SPECIFICATIONS FOR HARDWARE DESCRIPTION

A
LOG TO LOG CONNECTION (TYP.)
NOT TO SCALE



SEE SPECIFICATIONS FOR HARDWARE DESCRIPTION

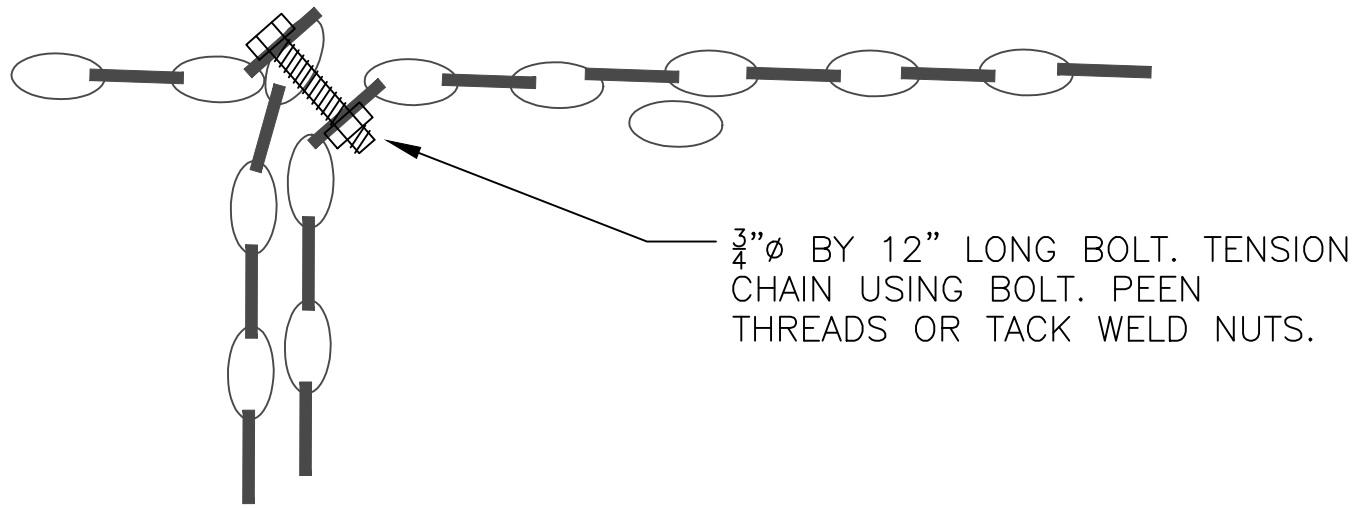
B
LOG TO BOULDER CONNECTION (TYP.)
NOT TO SCALE

GENERAL NOTES:

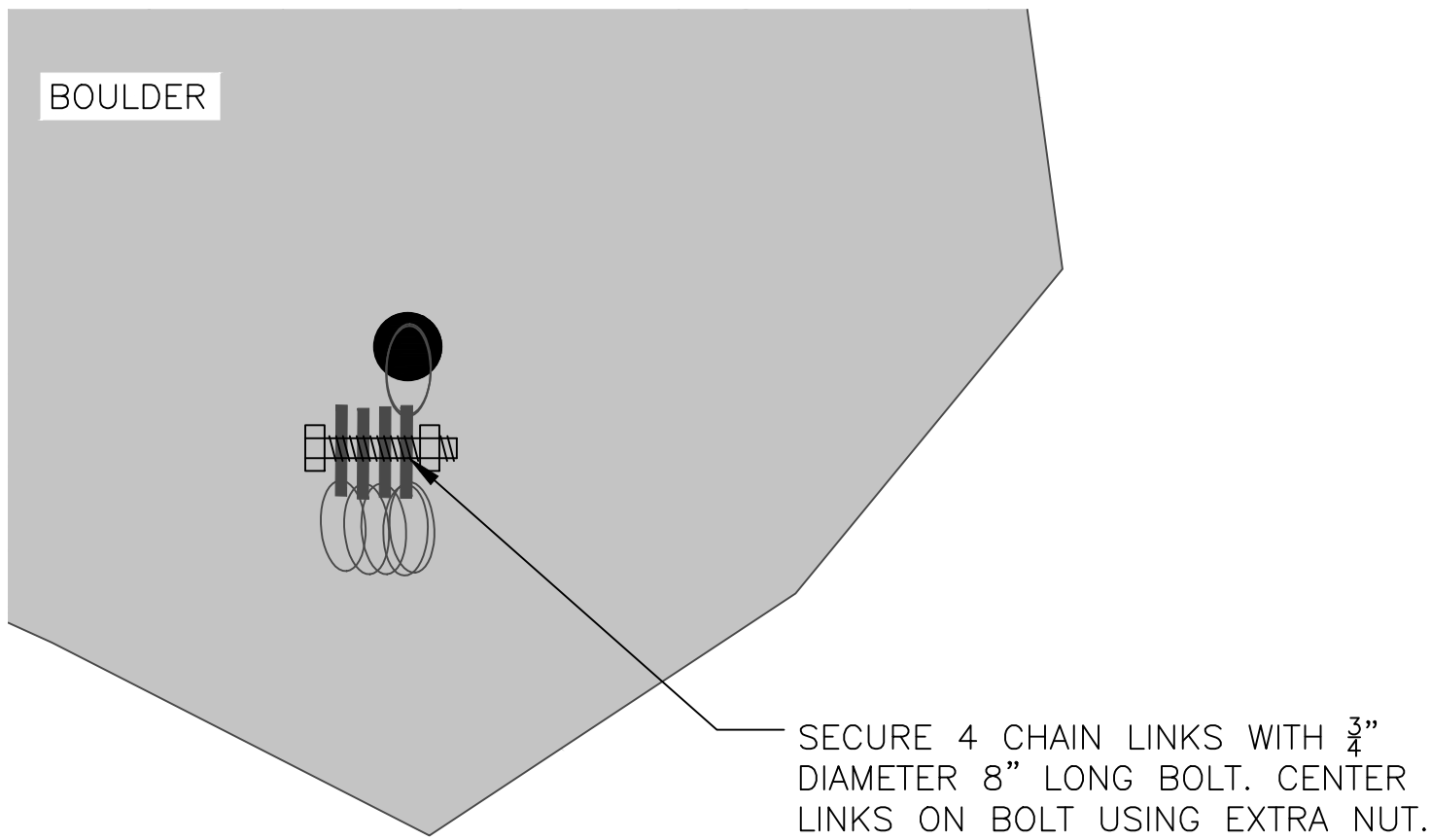
- SECURE BOULDERS AS CLOSE TO EACH LOG AS POSSIBLE, NO SLACK IN THE CHAIN.
- ALWAYS PLACE BOULDERS ON THE UPSTREAM SIDE OF THE LOGS THEY ARE SECURED TO OR AS DIRECTED BY PROJECT REPRESENTATIVE.

BANK ROUGHENING JAM REVETMENT SCHEDULE				
MEMBER	QUANTITY	DIAMETER (IN)	LENGTH (FT)	DESCRIPTION
TYPE R LOG	170	24±3	30±3	ROOTWAD ATTACHED
BALLAST BOULDER	340	N/A	N/A	WEIGHT 4+ TON EACH
SLASH	N/A	N/A	N/A	N/A
GENERAL PLACEMENT: SEE SHEETS C4-6 FOR GENERAL LOCATION AND ELEVATION. PLACE LOGS AS DIRECTED BY PROJECT REPRESENTATIVE. LAYOUT MAY VARY FROM THAT SHOWN IN PLANS.				

BALLASTED WOOD JACK SCHEDULE PER UNIT (690 UNITS TOTAL)				
MEMBER	QUANTITY	DIAMETER (IN)	LENGTH (FT)	DESCRIPTION
TYPE J LOG	4	18	10	
BALLAST BOULDER	1	N/A	N/A	WEIGHT 4+ TON EACH
SLASH	N/A	N/A	N/A	N/A
BRUSH BUNDLE	3	24	10 - 15	
GENERAL PLACEMENT: SEE SHEETS C4-6 FOR GENERAL LOCATION AND ELEVATION. PLACE LOGS AS DIRECTED BY PROJECT REPRESENTATIVE. LAYOUT MAY VARY FROM THAT SHOWN IN PLANS.				



C
CHAIN-CHAIN CONNECTION (ALTERNATIVE TO SHACKLE)
NOT TO SCALE



D
BOULDER STOPPER DETAIL
NOT TO SCALE

60% FINAL
NOT FOR CONSTRUCTION

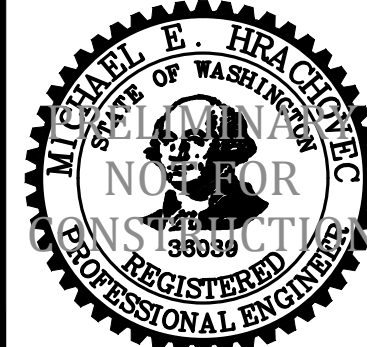
CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY
LOCATIONS ARE APPROX.)

ONE INCH
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX	00/00/00
PROJECT	00/00/00
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT MANAGER: XXXXXXXX	00/00/00
DESIGNED: D. HINTON	00/00/00
DESIGN ENTERED: T.SHINKLE	00/00/00



nhc
northwest hydraulic consultants
16300 christensen road, suite 350
seattle, washington 98188-3422
phone: (206) 241-6000
fax: (206) 439-2420
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King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

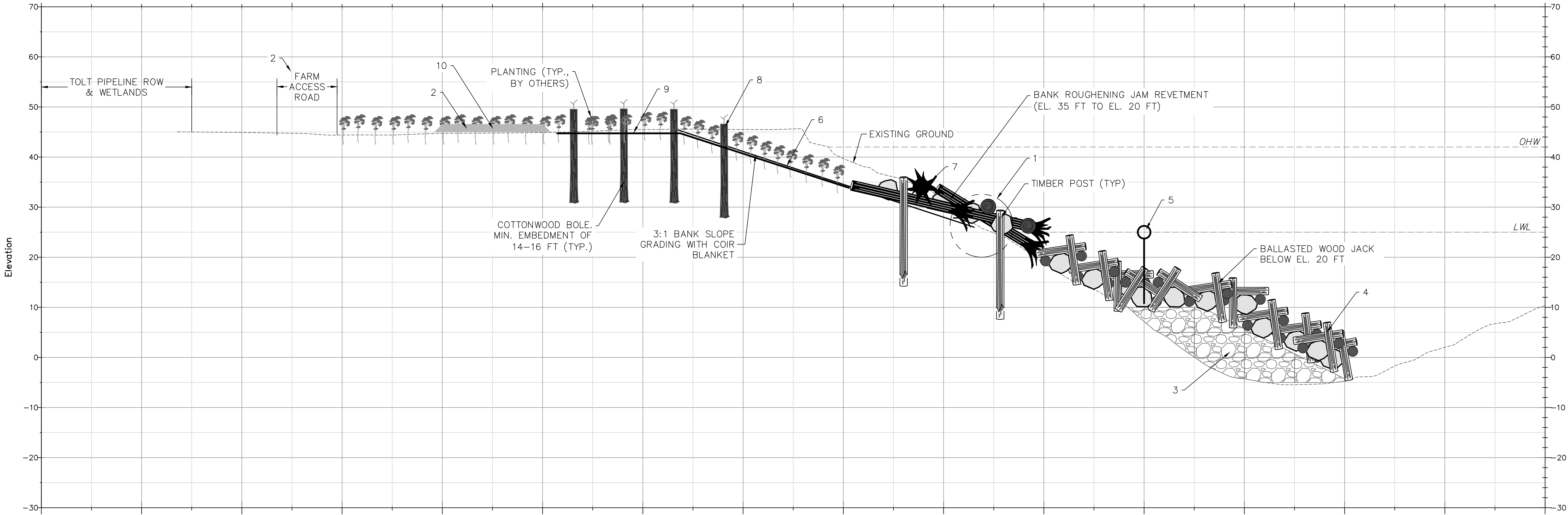
Winkelman Revetment Reconstruction Project

CONNECTION DETAILS

SHEET
19
OF
34
SHEETS

C13

- CONSTRUCTION SEQUENCE INCLUDING TESC:
1. INSTALL WOOD SLASH MULCH BERM AT EDGE OF WATER.
 2. INSTALL TEMPORARY 20-FT WIDE CRANE ACCESS ROAD AND FARM ROAD.
 3. INSTALL RIPRAP.
 4. INSTALL BALLASTED WOOD JACKS.
 5. INSTALL TURBIDITY CURTAIN WHERE DEPTH OF WATER <15 FT.
 6. GRADE BANK.
 7. INSTALL BANK ROUGHENING JAMS.
 8. INSTALL COTTONWOOD BOLES.
 9. INSTALL COIR FABRIC.
 10. REMOVE TEMPORARY CRANE ROAD AND SEED ALL DISTURBED AREAS.



TYPICAL SECTION Q
SCALE: 1"=10'

60% DESIGN
NOT FOR CONSTRUCTION

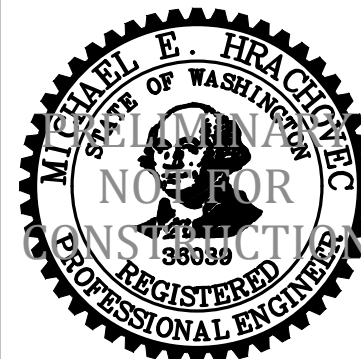
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**Winkelman Revetment Reconstruction
Project**

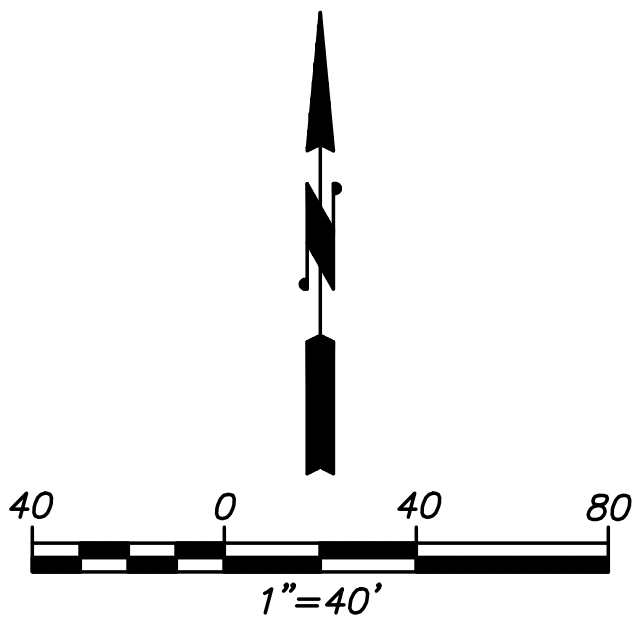
**TYPICAL SECTION AND
CONSTRUCTION/TESC SEQUENCE**

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20
OF
34
SHEETS

C14



60% DESIGN
NOT FOR CONSTRUCTION



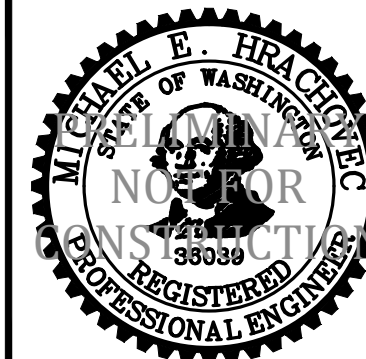
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FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

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Winkelman Revetment Reconstruction Project TESC PLAN	SHEET 21 OF 34 SHEETS
	SC1

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES:

1.

APPROVAL OF THE CONTRACTOR'S TEMPORARY EROSION AND SEDIMENT CONTROL 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 EROSION AND SEDIMENT CONTROL (TESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
3.

THE TESC 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.
4.

THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., ADDITIONAL SUMP PUMPS, RELOCATION OF WATTLES, ETC.).
5.

THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR'S TESC SUPERVISOR AND MAINTAINED AS NECESSARY.
6.

CONTRACTOR SHALL ENSURE THAT NO TRACK OUT SHALL OCCUR (SOIL AND/OR CONSTRUCTION DEBRIS) ONTO PAVED ROADS.
7.

ADDITIONAL TESC REQUIREMENTS SUCH AS REWORKING OR REPLACING TEMPORARY CONSTRUCTION ENTRANCES WILL BE REQUIRED IF ENGINEER DEEMS NECESSARY.
8.

SLOPES AND STOCKPILES 3H:1V OR STEEPER AND WITH MORE THAN 10 FEET OF VERTICAL RELIEF SHALL BE COVERED IF THEY ARE TO REMAIN UNWORKED FOR MORE THAN 12 HOURS.
9.

ANY AREAS OF EXPOSED SOILS THAT WILL NOT BE DISTURBED FOR SEVEN DAYS SHALL BE IMMEDIATELY STABILIZED WITH TESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.)
10.

ANY AREAS NEEDING TESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
11.

THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED PRIOR TO PREDICTS AND WITHIN TWENTY FOUR (24) HOURS FOLLOWS A STORM EVENTS.
12.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
13.

WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 TO 3 INCHES.
14.

AT COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL BACKBLADE TO MATCH EXISTING GRADE AND REPAIR SOFT SPOTS BY REPLACING SUITABLE NATIVE MATERIAL. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION BMPs INCLUDING CONSTRUCTION ENTRANCE. ALL DISTURBED AREAS SHALL BE SEEDED TO THE SPECIFICATIONS OF SECTION D.3.2.6 OF APPENDIX D "EROSION AND SEDIMENT CONTROL STANDARDS" OF THE 2009 KC SWDM.
15.

WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE TESC FACILITIES.
16.

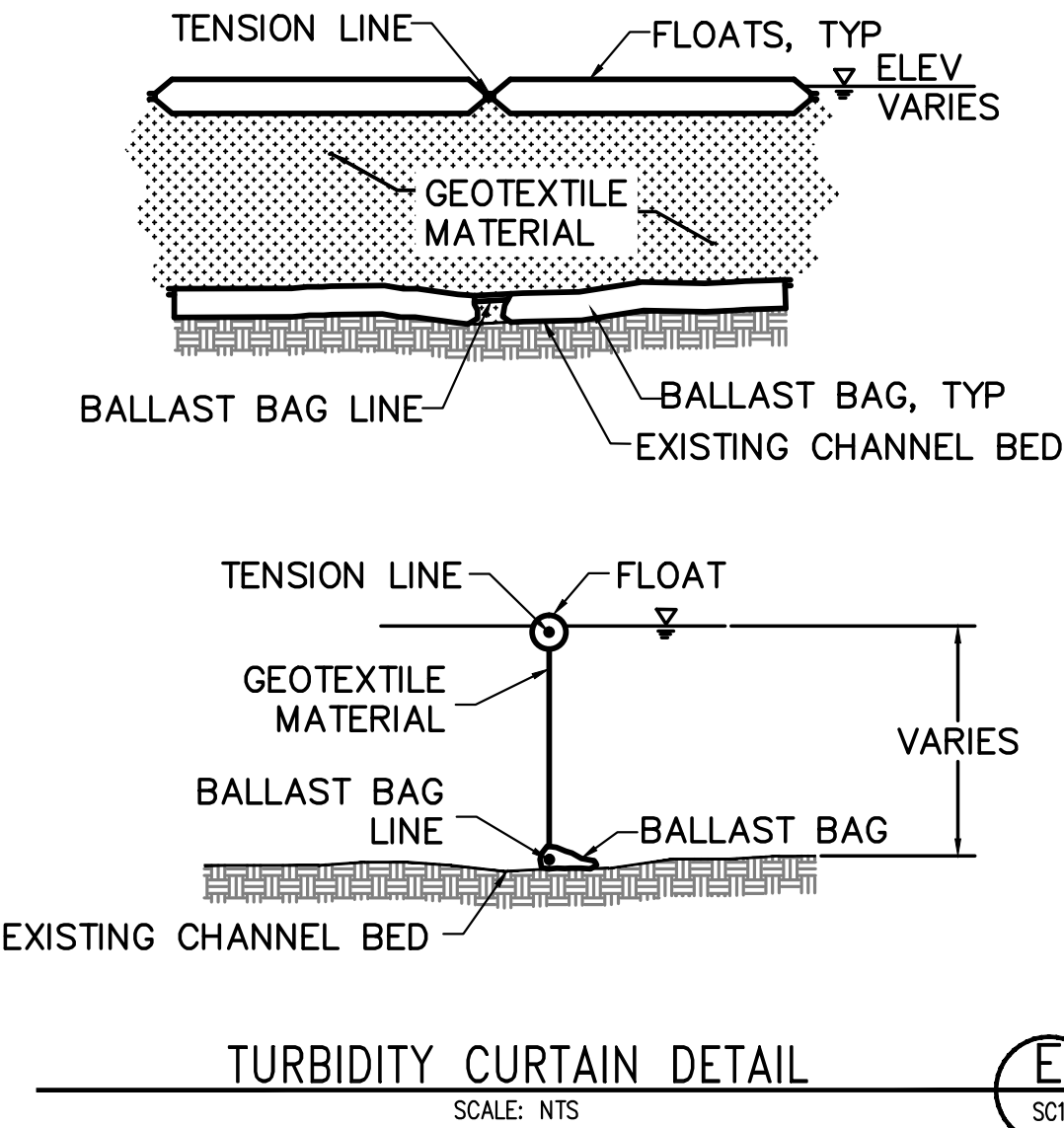
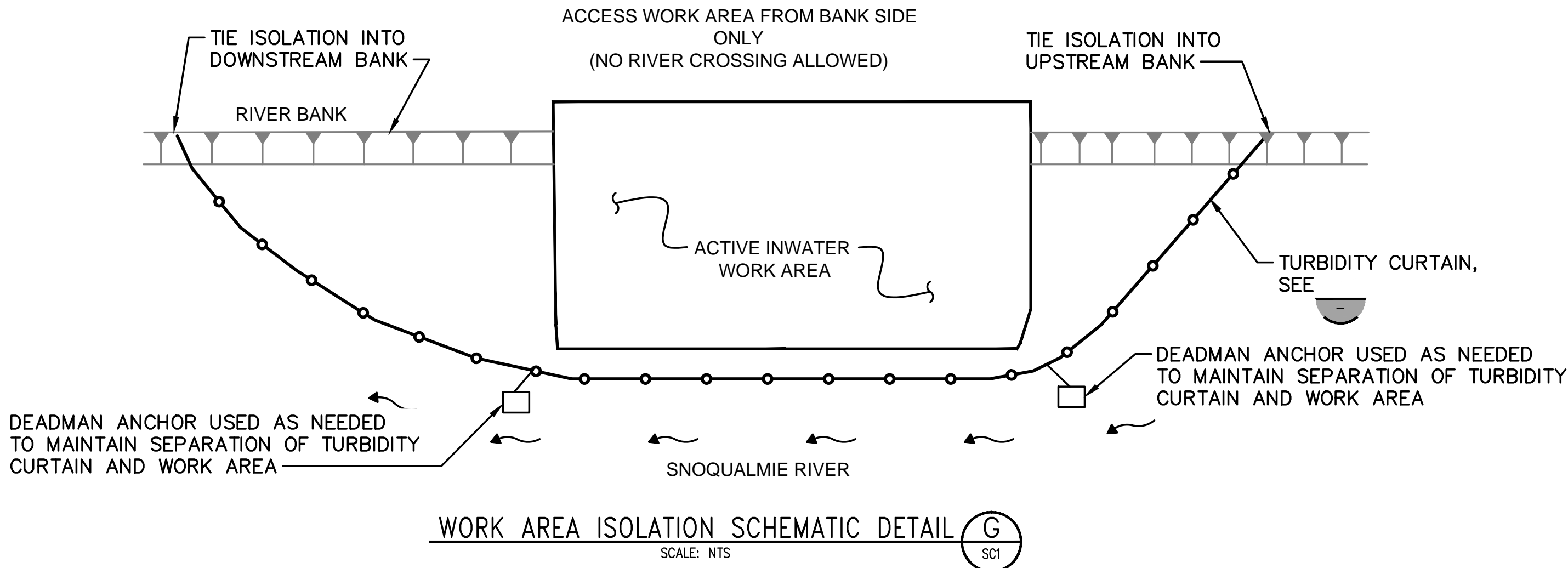
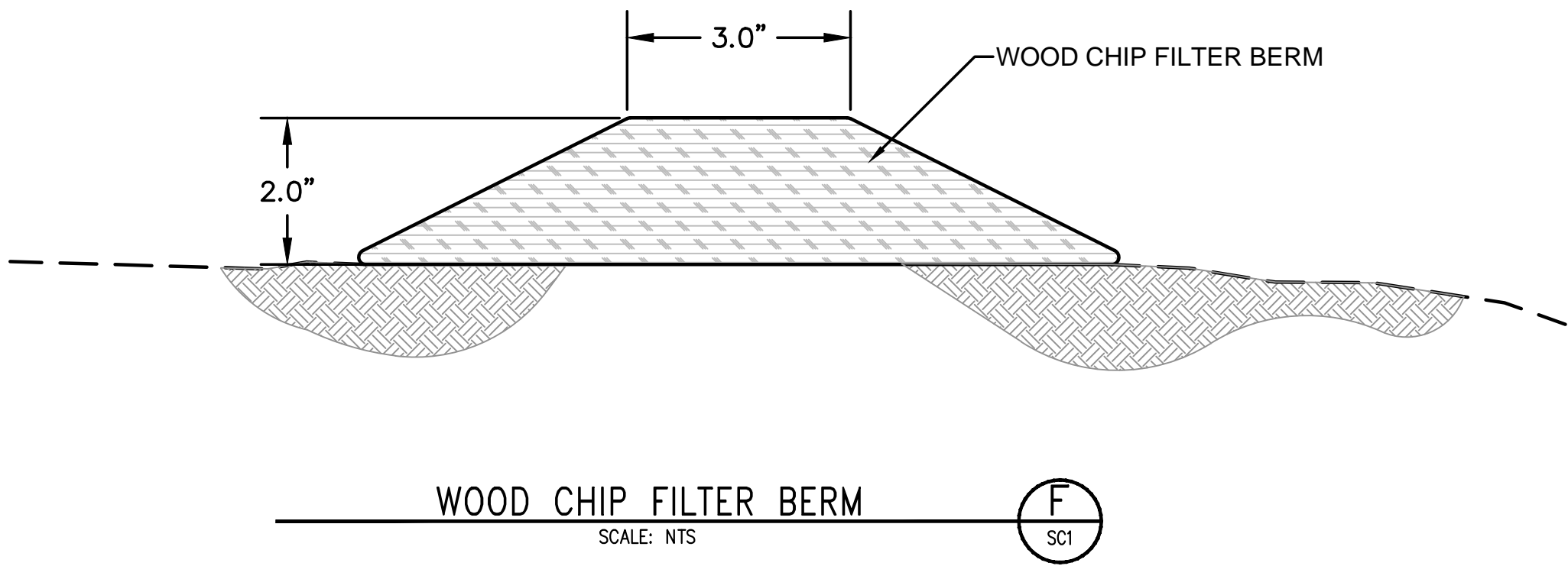
SEE CONTRACT SPECIFICATIONS FOR TESC REQUIREMENTS.

WATER MANAGEMENT AND IN-WATER WORK AREA ISOLATION NOTES:

1.

CONTRACTOR IS RESPONSIBLE FOR ALL OPERATION AND CONTINUED MAINTENANCE TO ENSURE TURBIDITY CURTAIN FUNCTIONS PER THE MANUFACTURER'S GUIDELINES.
2.

TURBIDITY CURTAIN AND SECONDARY TURBIDITY CURTAIN LENGTHS AND SEQUENCING SHALL BE PER THE CONTRACTORS MEANS AND METHODS AND ARE SHOWN FOR ILLUSTRATION ONLY.



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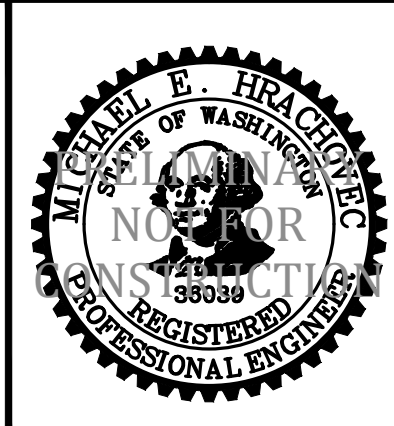
ONE INCH
↑
AT FULL SIZE. IF NOT ONE
INCH SCALE ACCORDINGLY

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Plot Date: 11/28/2015 9:23 PM
Cad User: Darren Hinton

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. 2001084
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX	00/00/00
PROJECT	00/00/00
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT MANAGER: XXXXXXXX	00/00/00
DESIGNED: D. HINTON	00/00/00
DESIGN ENTERED: T.SHINKLE	00/00/00



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fax: (206) 439-2420
www.nhcweb.com

King County

Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

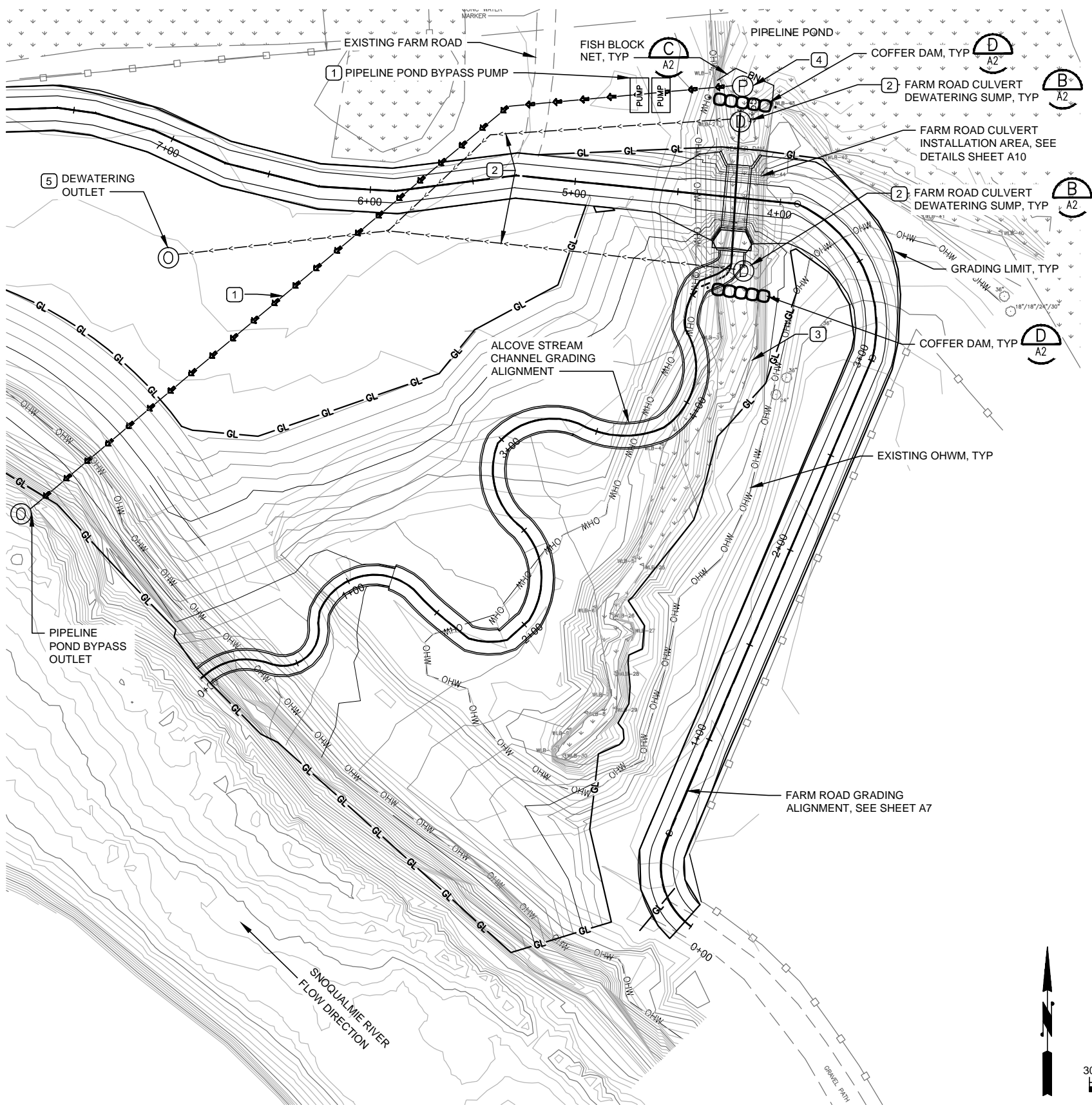
Winkelman Revetment Reconstruction
Project

REVETMENT TESC DETAILS AND
NOTES

SHEET
22
OF
34
SHEETS

SC2

Path: N:\Projects\Carlsbad Consulting\Winkelman\Design\CAD DWGs - Current\A-01 ALCOVE AND FARM ROAD SITE & TESC
Plot Date: 11/02/2015 11:43 AM
Cad User: Danielle Devier

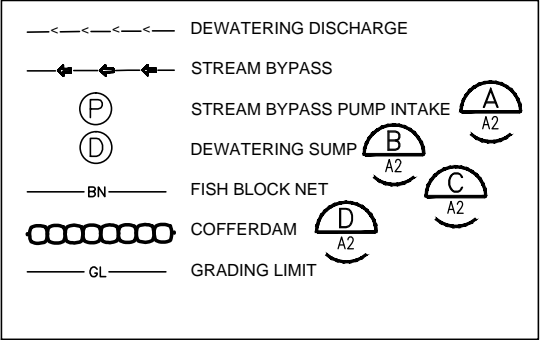


PLAN VIEW

NOTES:

- 1 PUMP BYPASS TO MAINTAIN WATER LEVEL IN PIPELINE POND BELOW LOWER LIMIT OF EXCAVATION.
- 2 DEWATER SOILS WITHIN CULVERT EXCAVATION AREA.
- 3 EXISTING CHANNEL TO DRAIN PIPELINE POND DURING ROUGH GRADING OF ALCOVE AREA OUTSIDE OF WOODCHIP FILTER BERMS AND EXISTING OHWM. PUMP BYPASS TO BE INITIATED WHEN GRADING WITHIN EXISTING OHWM OCCURS, SEE SHEET G5.
- 4 INSTALL BLOCK NETS AND REMOVE ALL FISH FROM WORK AREA PRIOR TO INITIATING PUMP BYPASS.
- 5 DEWATERING OUTLET LOCATION AND TURBIDITY CONTROL METHOD TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
6. WATER MANAGEMENT METHODS SHALL BE USED TO DIVERT FLOW AND ISOLATE IN-WATER WORK AREAS AS NECESSARY TO COMPLETE CONSTRUCTION AND TO AVOID IMPACTS TO WATER QUALITY. THE CONTRACTOR SHALL SUBMIT A WATER MANAGEMENT AND WORK AREA ISOLATION PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLING ANY ONSITE CONSTRUCTION ACTIVITIES ADDRESSING SITE SPECIFIC TECHNIQUES AND METHODS FOR TEMPORARILY ISOLATING WORK AREAS. ISOLATION MEANS SHALL CONSIST OF TURBIDITY CURTAINS, BULK BAGS, OR APPROVED EQUAL AS NECESSARY TO ALLOW CONSTRUCTION WHILE PREVENTING IMPACTS TO WATER QUALITY. COMBINATION OF ISOLATION MEASURES MAY BE USED AS NECESSARY. THIS PLAN MY BE COMBINED WITH THE TESC PLAN.
7. CONTRACTOR SHALL CONSTRUCT TEMPORARY FLOW ISOLATION MEASURES STARTING AT UPSTREAM END OF IN-WATER WORK AREA TO ISOLATE AND DIRECT WATER AWAY FROM WORK AREA.
8. CONSTRUCTION WITHIN THE ISOLATED WORK AREA MY CON COMMENCE UNTIL THE OWNER HAS COMPLETED ALL FISH EXCLUSION ACTIVITIES.
9. GROUND WATER ENCOUNTERED DURING EMBANKMENT EXCAVATION MAY BE PUMPED AS NECESSARY TO UPLAND INFILTRATION AREAS TO ALLOW CONSTRUCTION AND INSPECTION AND TO FACILITATE THE REMOVAL OF SEDIMENT AND TURBIDITY FROM THE WATER. ANY DISCHARGE OF WATER RETURNING TO THE RIVER OR ADJACENT WETLANDS SHALL NOT EXCEED THE WASTER QUALITY REQUIREMENTS SET FORTH IN THE PROJECT PERMITS.
10. WATER MAY BE PUMPED TO UPLAND INFILTRATION AREAS AND DISCHARGED THROUGH AN ENERGY DISSIPATER, LEVEL SPREADER, SILT BAGS, OR OTHER BMPs AS APPROVED BY THE ENGINEER. WATER DISCHARGED OR INFILTRATED IN WATER MANAGEMENT AREAS SHALL NO CAUSE EROSION OR RESULT IN TURBIDITY IMPACTS TO THE RIVER OR THE ADJACENT WETLANDS. CONTRACTOR SHALL INCLUDE PROPOSED DEWATERING DISCHARGE/INFILTRATION AREA(S) IN THE WATER MANAGEMENT AND WORK AREA ISOLATION PLAN SUBMITTAL.
11. WATER MAY NOT BE PUMPED DIRECTLY TO WETLANDS. WATER SHALL BE DISCHARGED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND PERMITS, AND THE APPROVED WATER MANAGEMENT AND WORK AREA ISOLATION PLAN.
12. THE ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ANY WATER PUMPING ACTIVITIES.
13. CONSTRUCTION WATER MANAGEMENT SHALL BE MAINTAINED 24 HOURS PER DAY DURING CONSTRUCTION AND MONITORED BY THE CONTRACTOR DURING NOHN-WORKING HOURS. 24-HOUR PUMPING IS NOT REQUIRED UNLESS TO CONTROL TURBIDITY.
14. THE PLANS ON THIS DRAWING SHOW A SUGGESTED METHOD FOR THE CONTRACTOR TO ISOLATE IN-WATER WORK AREAS. ACTUAL SITE CONDITIONS DURING CONSTRUCTION MAY REQUIRE ADJUSTMENTS TO THE PLANS SHOWN AND THE CONTRACTOR MY SELECT T TO IMPLEMENT AN ALTERNATIVE METHOD.
15. ANY DAMAGE TO THE WORK RESULTING FROM FAILURE OR INADEQUACY OF THE WORK AREA ISOLATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY ADDITIONAL PAYMENT FOR COSTS ASSOCIATED WITH THE FAILURE OF THE ISOLATION SYSTEM.

LEGEND:



60% FINAL
NOT FOR CONSTRUCTION

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK: XXXXXXXX
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SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. XXXXXXXX
SURVEY No. XXXXXXXX

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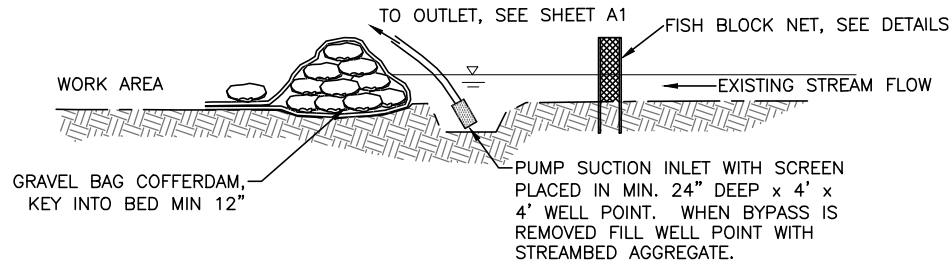
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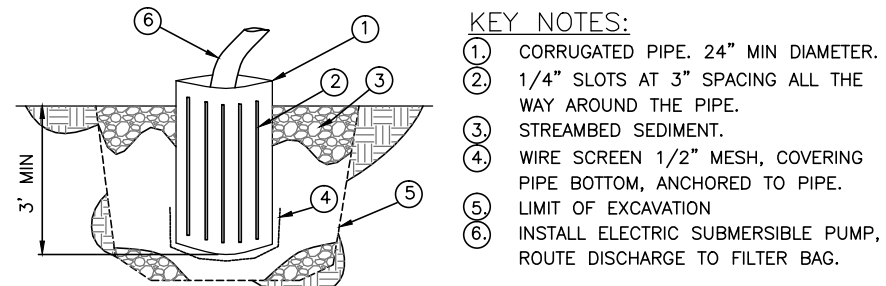


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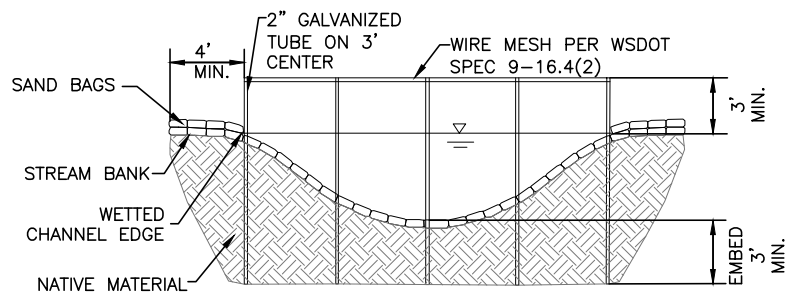
STREAM BYPASS AND DEWATERING PLAN



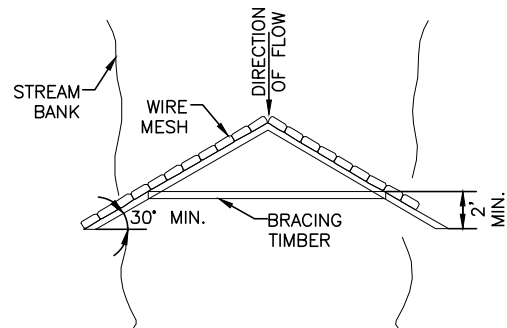
STREAM BYPASS PUMP INTAKE DETAIL **A**
SCALE: NTS
A2



DEWATERING SUMP DETAIL **B**
SCALE: NTS
A2



FRONT VIEW

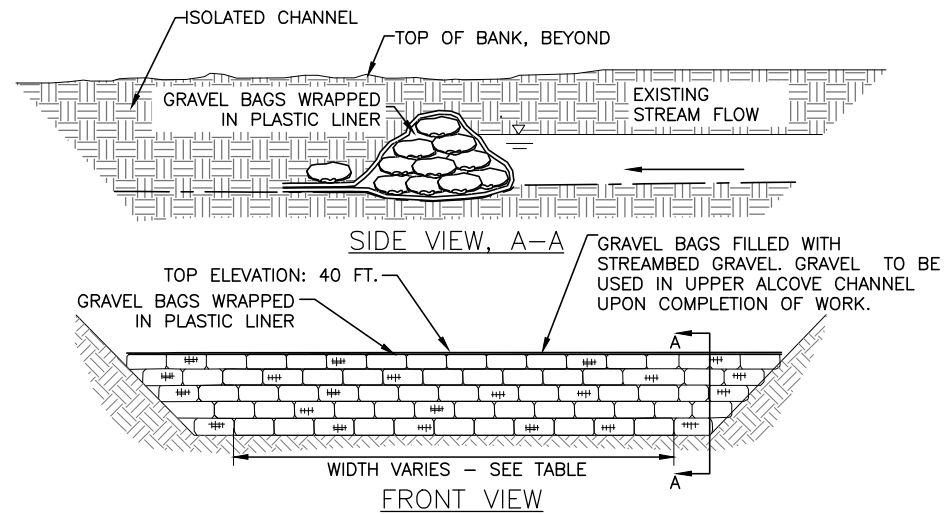


PLAN VIEW

CONSTRUCTION SEQUENCE

1. INSTALL 2" GALVANIZED TUBES ON 3' CENTERS.
2. SECURE WIRE MESH TO 2" GALVANIZED TUBES WITH WIRE FASTENER.
3. SECURE 1/4" MAX. FISH NYLON NET TO UPSTREAM SIDE OF WIRE MESH WITH WIRE FASTENER.
4. SECURE NYLON FISH NET TO STREAM BOTTOM WITH SAND BAGS.
5. EXTEND SAND BAGS 4' MIN. PAST WETTED CHANNEL EDGE.
6. ADD BRACING TIMBER AS NEEDED TO SUPPORT THE SCREEN
7. REMOVAL OF DEBRIS FROM THE UPSTREAM SIDE OF THE FENCE AS NECESSARY OTHERWISE THE SCREEN WILL BECOME CLOGGED AND WATER MAY TOPPLE OR BREACH THE SCREEN.

FISH BLOCK NET DETAIL **C**
SCALE: NTS
A2



COFFERDAM DETAIL **D**
SCALE: NTS
A2

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NOT FOR CONSTRUCTION

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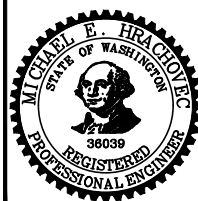
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SURVEY No. XXXXXXXX

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PROJECT	
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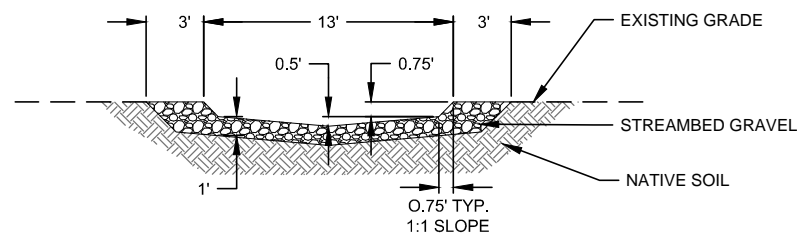
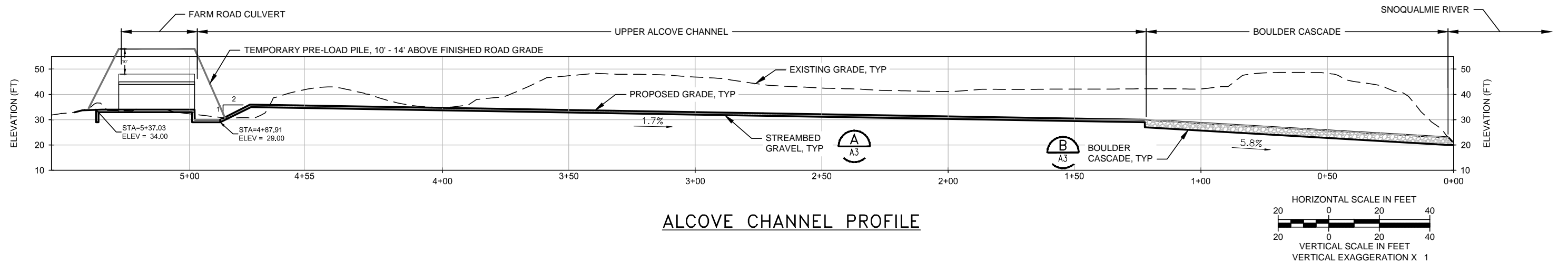
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Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

**Winkelman Revetment
Reconstruction**

STREAM BYPASS AND DEWATERING DETAILS

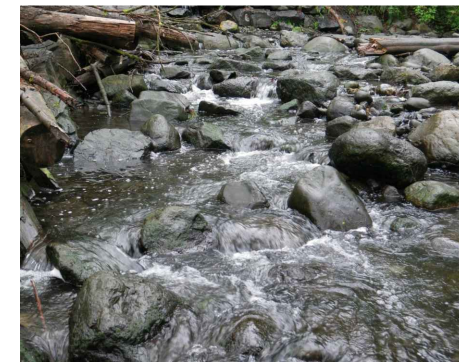
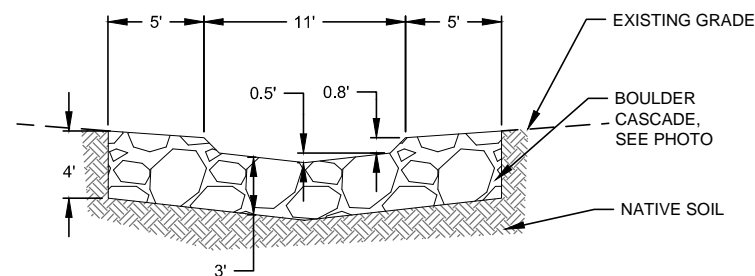
SHEET
24
OF
34
SHEETS
A2



STREAMBED GRAVEL MIX	
GRAVEL SIZE	% FINER
2" - 3"	100% - 84%
1" - 2"	84% - 50%
1/4" - 1"	50% - 16%
1/4" - NO. 200	16% - 5%

UPPER ALCOVE CHANNEL
TYPICAL CROSS SECTION DETAIL

SCALE: NTS



BOULDER CASCADE
EXAMPLE PHOTO

BOULDER CASCADE
TYPICAL CROSS SECTION DETAIL

SCALE: NTS

BOULDER CASCADE AGGREGATE MIX	
AGGREGATE SIZE	% FINER
17" - 22"	100% - 84%
8" - 17"	84% - 50%
2" - 8"	50% - 16%
2" - NO. 200	16% - 5%

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FIELD BOOK: XXXXXXXX

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SURVEY BASE MAP: XXXXXXXX

CHECKED: XXXXXXXX

PROJECT No. XXXXXXXX

SURVEY No. XXXXXXXX

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PROJECT

SUPERVISOR: XXXXXXXX 00/00/00

PROJECT MANAGER: XXXXXXXX 00/00/00

DESIGNED: XXXXXXXX 00/00/00

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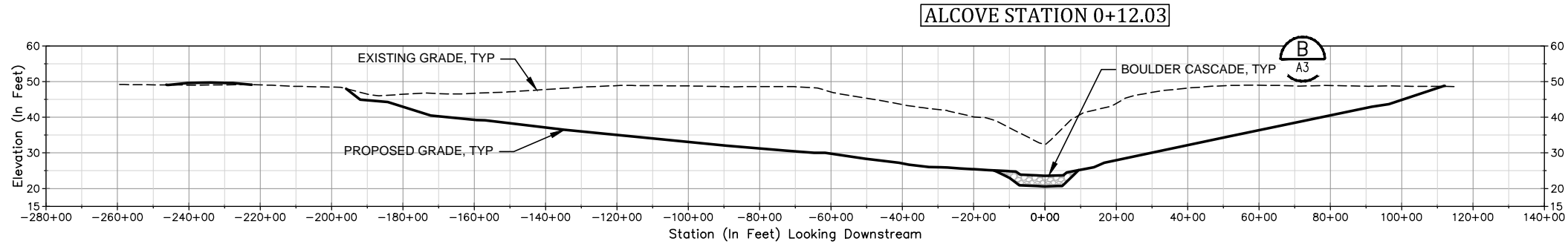
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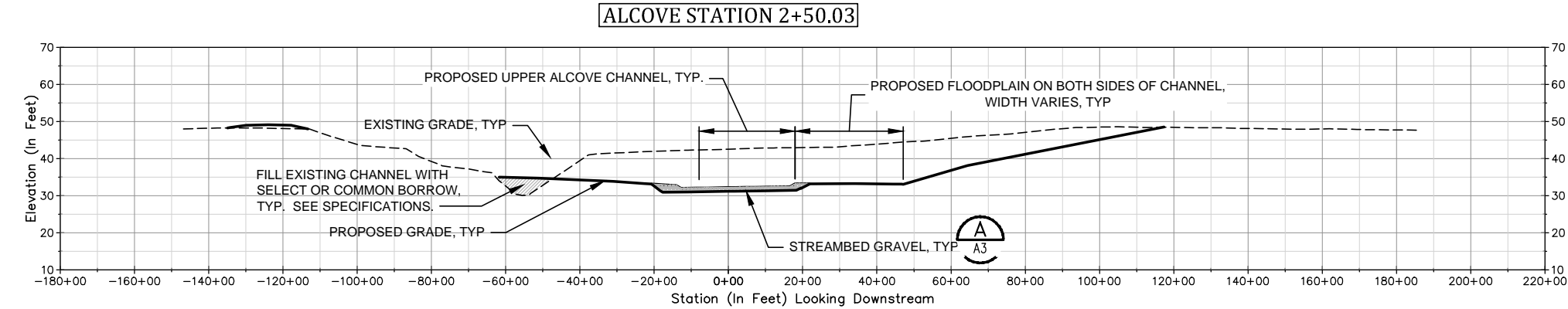
ALCOVE GRADING PROFILE AND TYPICAL CROSS
SECTION DETAILS

SHEET
25
OF
34
SHEETS

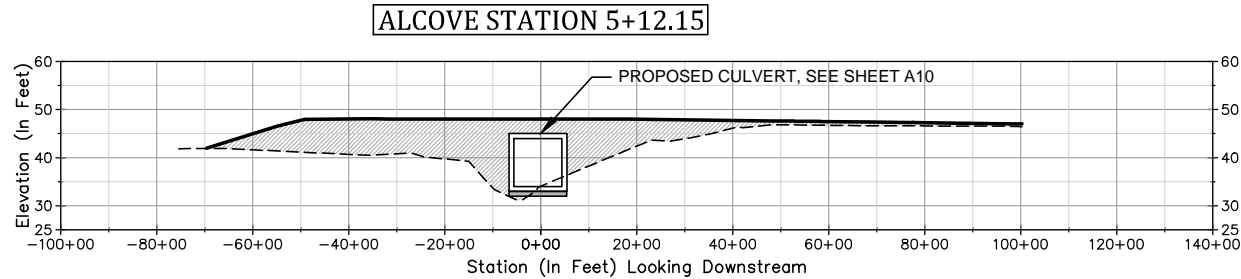
A3



ALCOVE GRADING CROSS SECTION
STA. 0+12 BOULDER CASCADE



ALCOVE GRADING CROSS SECTION
STA. 2+50 UPPER CHANNEL



ALCOVE GRADING CROSS SECTION
STA. 5+12.15 AT FARM ROAD CULVERT

ALCOVE CHANNEL ALIGNMENT
POINT LAYOUT TABLE

Station	Northing	Easting	Tangential Direction
0+00.00	263,065.0662'	1,355,463.5355'	S50° 22' 57.08"W
0+04.60	263,068.0333'	1,355,467.0488'	S52° 27' 06.87"W
0+54.60	263,075.0485'	1,355,514.3749'	S51° 39' 10.21"W
1+04.60	263,114.2208'	1,355,539.3501'	S72° 36' 07.90"W
1+54.60	263,094.1954'	1,355,581.7286'	N51° 26' 36.92"W
2+04.60	263,094.7324'	1,355,623.7056'	S30° 30' 26.71"W
2+54.60	263,140.2042'	1,355,617.0845'	S48° 27' 35.43"E
3+04.60	263,184.1796'	1,355,613.0241'	S52° 56' 31.75"W
3+54.60	263,183.8409'	1,355,660.2138'	N78° 22' 05.35"W
4+04.60	263,203.1949'	1,355,701.5069'	S21° 40' 21.84"W
4+54.60	263,251.3916'	1,355,701.7310'	S24° 43' 08.21"W
5+04.60	263,290.8610'	1,355,722.4938'	S3° 22' 30.99"W

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CHECKED: XXXXXXXX

PROJECT No. XXXXXXXX

SURVEY No. XXXXXXXX

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PROJECT

SUPERVISOR: XXXXXXXX00/00/00

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DESIGNED: XXXXXXXX00/00/00

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Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

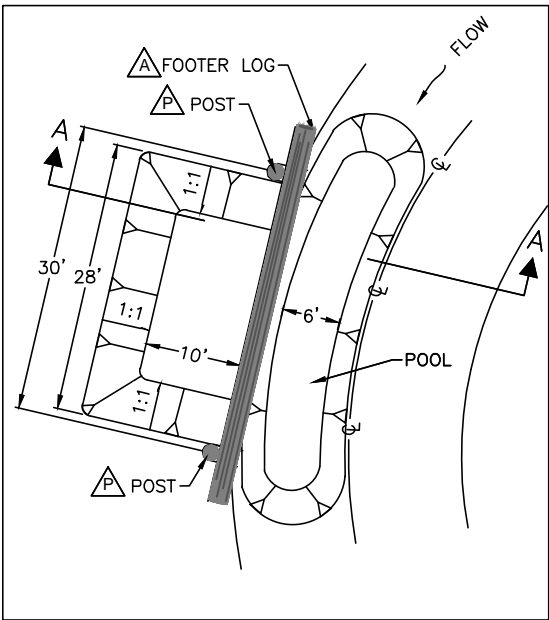
Christie True, Director

Winkelman Revetment
Reconstruction

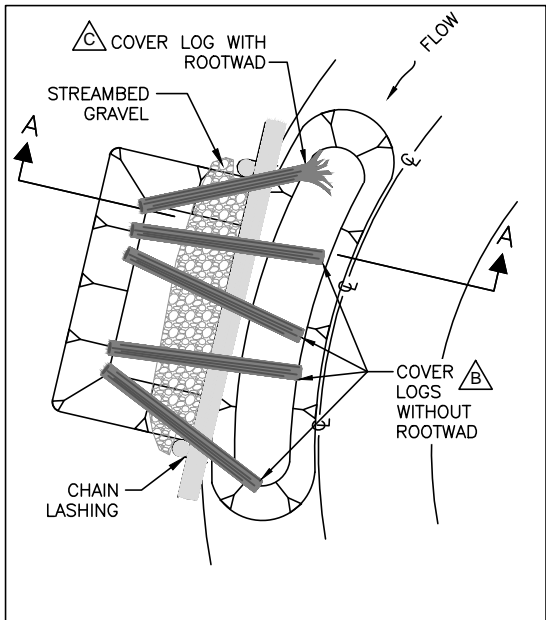
ALCOVE GRADING CROSS SECTIONS AND ALIGNMENT
POINT TABLE

SHEET
26
OF
34
SHEETS

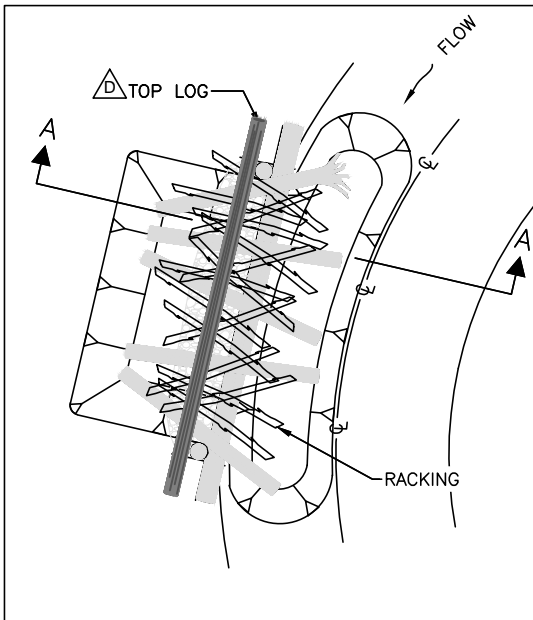
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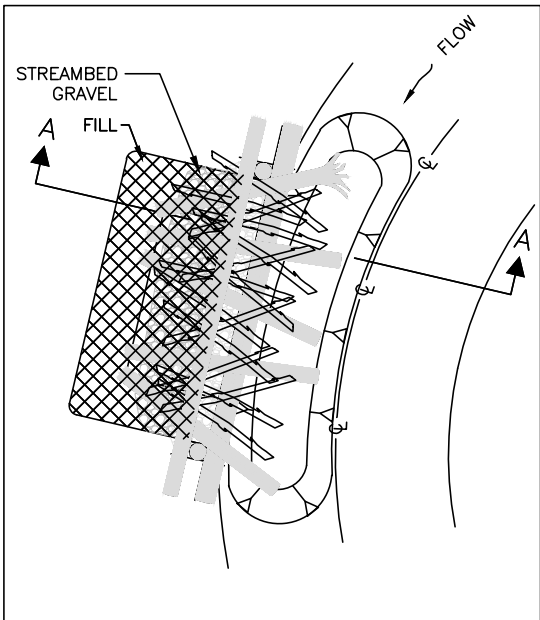
LAYER 1



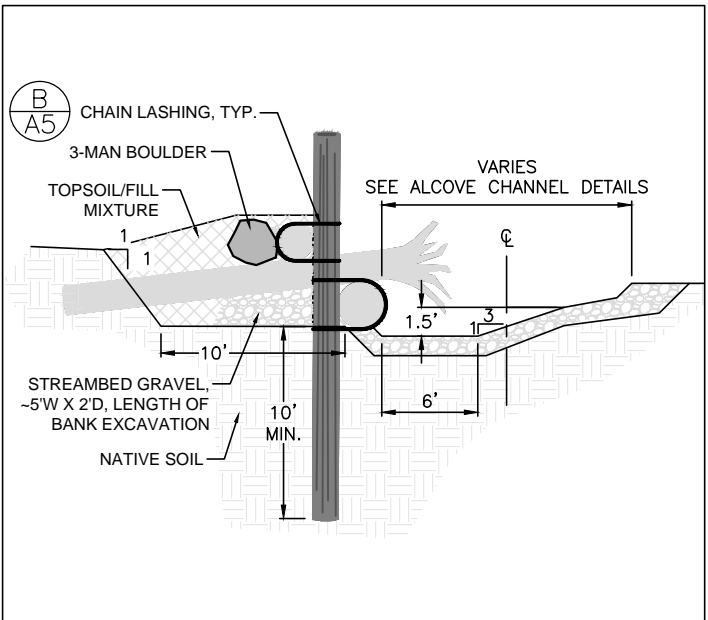
LAYER 2



LAYER 3



LAYER 4



SECTION A-A

TYPE 1 ELJ LAYERING PLAN

TYPE 1 ELJ CONSTRUCTION SEQUENCE NOTES

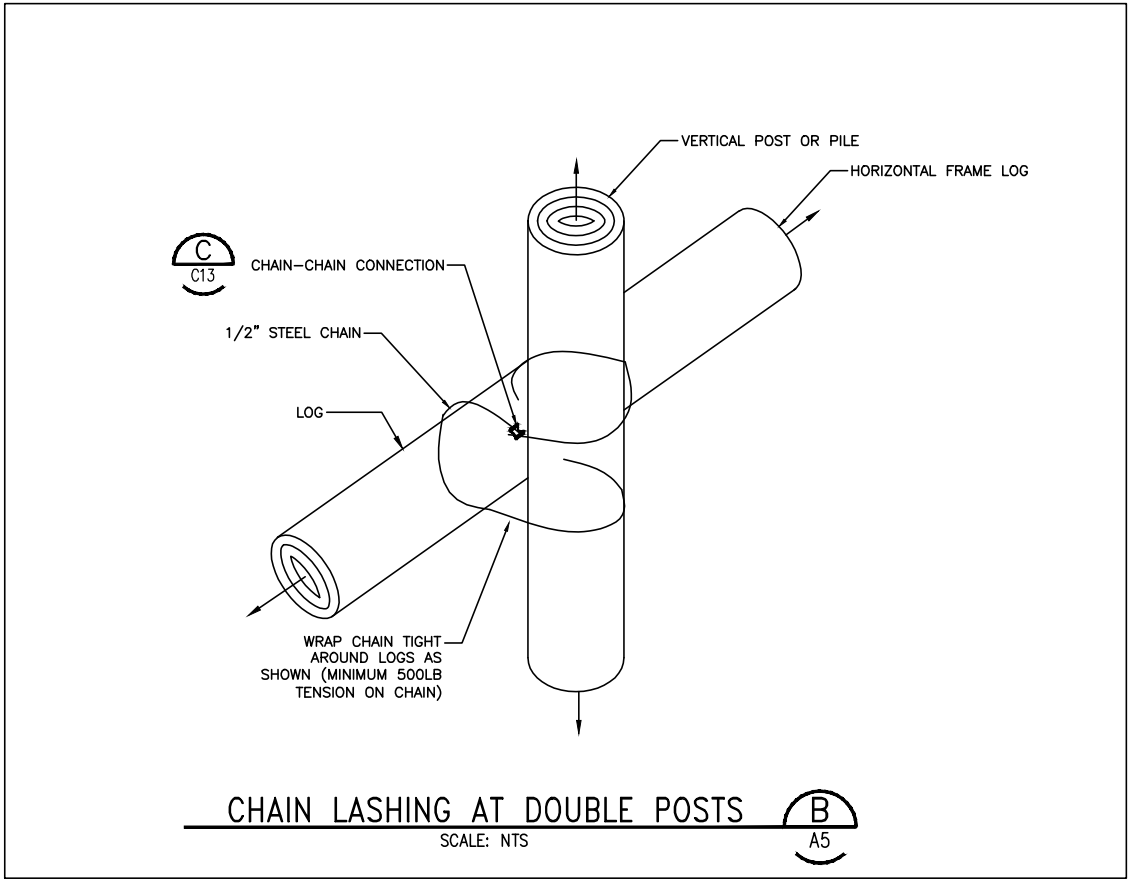
- LAYER 1:
- EXCAVATE POOL TO SPECIFIED GRADE, EXCAVATE BANK SUFFICIENTLY TO INSTALL STRUCTURE.
 - INSTALL POSTS PER LOG CONTROL POINTS TABLE
 - PLACE FOOTER LOG ALONG OUTER EDGE OF POOL, ADJUSTING EXCAVATION AND TRENCHING LOG INTO STREAM BANK AS NEEDED TO MEET CONTROL ELEVATIONS. INSTALL CHAIN LASHINGS.
 - MATERIAL LOCATION AND/OR ORIENTATION MAY BE ADJUSTED BY ENGINEER.
- LAYER 2:
- INSTALL COVER LOGS WITH ALL LOGS TOUCHING FOOTER LOG.
 - BACKFILL STRUCTURE VOID WITH STREAMBED GRAVEL TO EXISTING TOP LAYER
- LAYER 3:
- INSTALL RACKING AND TOP LOG. RACKING SHALL CONSIST OF APPROXIMATELY 1' THICK LAYER OF CONIFEROUS LIMBS AND LOGS WITH 6" - 8" DIAMETER AND MIN LENGTH OF 20'. MINIMUM OF 15 PIECES PER STRUCTURE.
 - INSTALL CHAIN LASHINGS.
- LAYER 4:
- BACKFILL STRUCTURE VOIDS WITH STREAMBED GRAVEL TO TOP OF EXISTING LOG LAYER.
 - BACKFILL WITH NATIVE SOIL AND COMPACT TO 90% ASTM D1557 (MODIFIED PROCTOR) TO PROVIDE MIN 2 FT FILL OVER COVER LOGS. TAPER FILL AT MAX 4H:1V TO MATCH SURROUNDING GRADING.
 - CUT POSTS AT 3 FT ABOVE FINAL GRADE.

TYPE 1 ELJ POST CONTROL TABLE

ELJ # - POST	NORTHING (FT)	EASTING (FT)	NOTES
1A			
1B			
2A			
2B			
3A			
3B			
4A			
4B			
5A			
5B			
6A			
6B			
7A			
7B			

TYPE 1 ELJ LOG SCHEDULE (PER UNIT, 7 UNITS TOTAL)

LOG TYPE	NO. EA.	LAYER	LOG DIA. (IN)	LENGTH (FT)	ROOTWAD
P	2	1	16	20	N
A	1	1	24	40	N
B	4	2	18	20	N
C	1	2	18	20	Y
D	1	3	18	40	N



TYPE 1 ELJ DETAILS

SCALE: NTS



60% FINAL
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BEFORE YOU DIG
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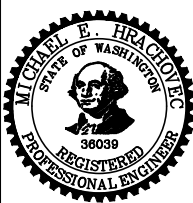
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SURVEY No. XXXXXXXX

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PROJECT	
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT MANAGER: XXXXXXXX	00/00/00
DESIGNED: XXXXXXXX	00/00/00
DESIGN ENTERED: XXXXXXXX	00/00/00

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King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

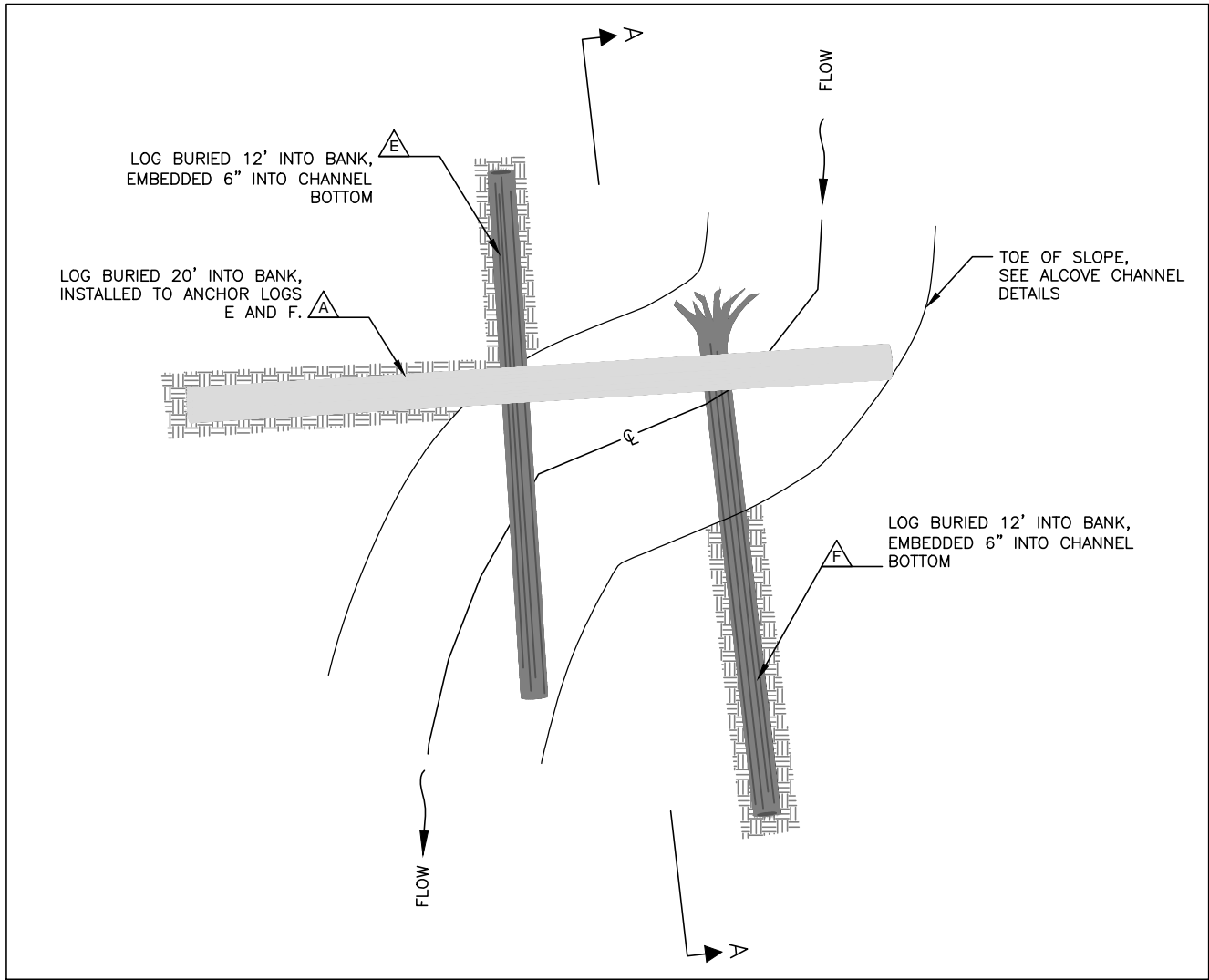
Christie True, Director

**Winkelman Revetment
Reconstruction**

ALCOVE TYPE 1 ELJ DETAILS

SHEET
27
OF
34
SHEETS
A5

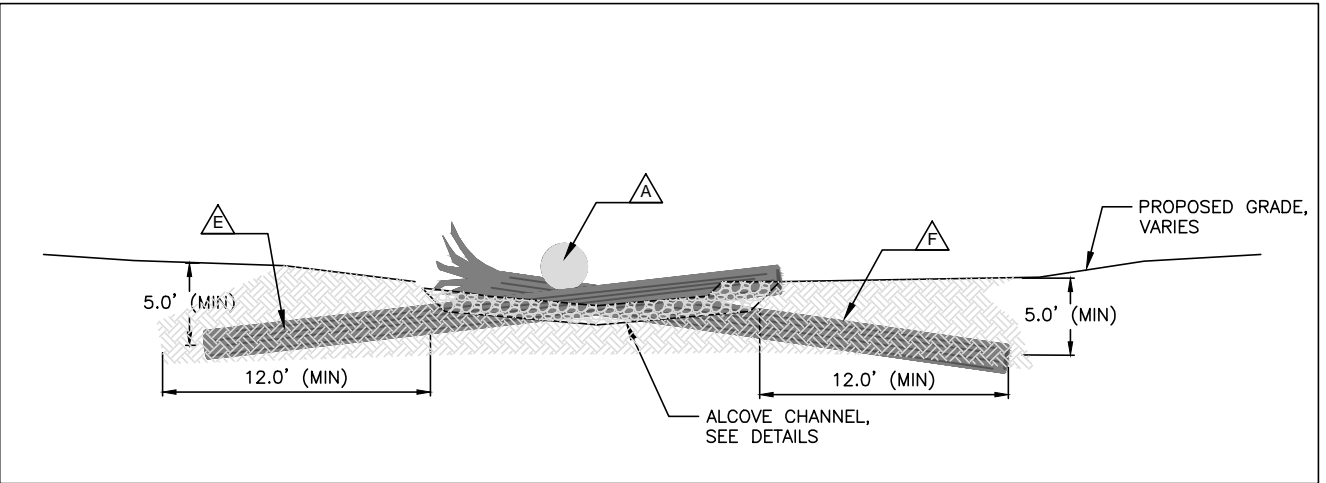
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Plot Date: 11/25/2015 11:46 AM
Cad User: Danielle Dewler



LOG PLACEMENT PLAN VIEW

IN-CHANNEL LOG PLACEMENT NOTES:

1. PLACE LOGS AS SHOWN ON PLANS OR AS DIRECTED BY OWNER'S REPRESENTATIVE.



LOG PLACEMENT SECTION A-A

LOG SCHEDULE (PER UNIT, 3 UNITS TOTAL)

LOG TYPE	NO. EA.	LAYER	LOG DIA. (IN)	LENGTH (FT)	ROOTWAD
A	1	2	24	40	N
E	1	1	18	30	N
F	1	1	18	30	Y

ALCOVE IN-CHANNEL LOG PLACEMENT DETAIL




SCALE: 1" = 5'



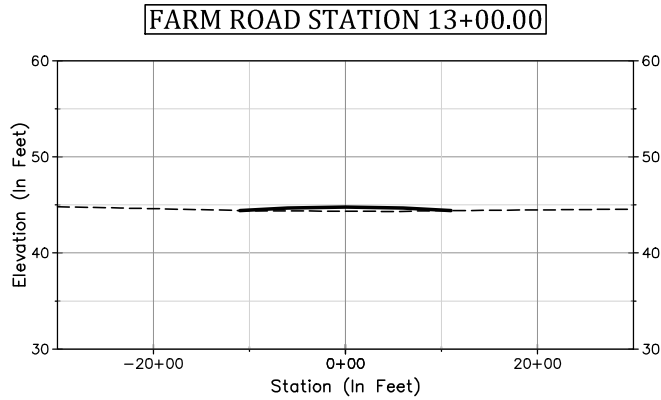
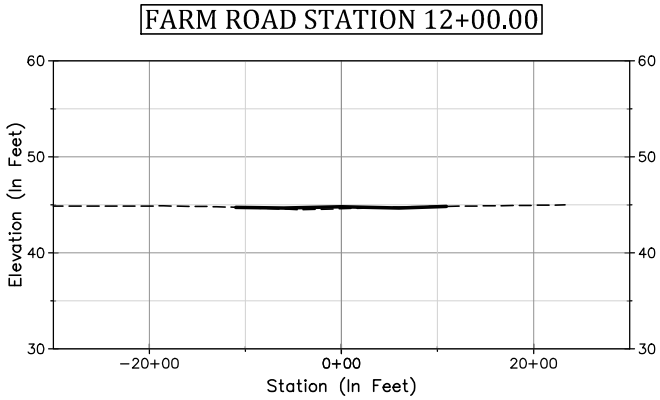
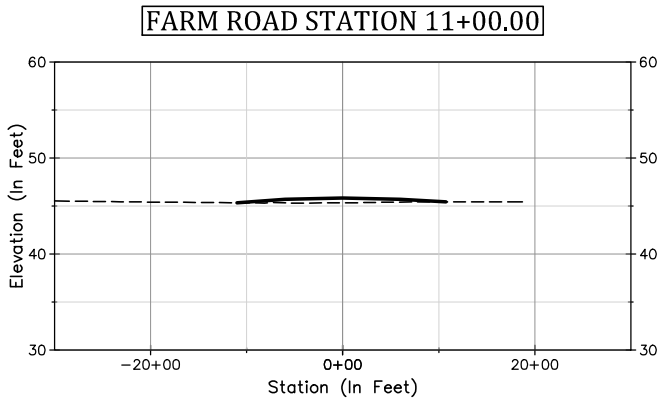
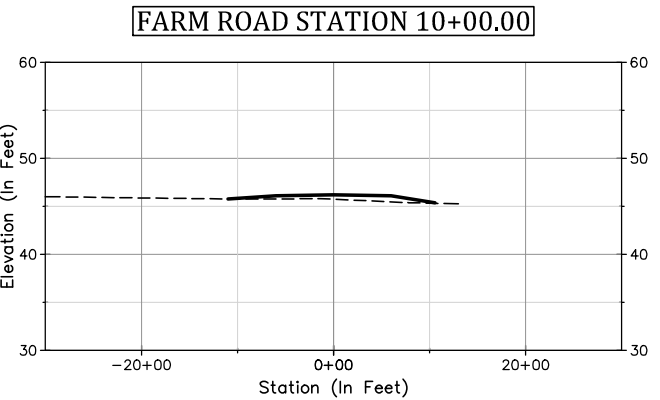
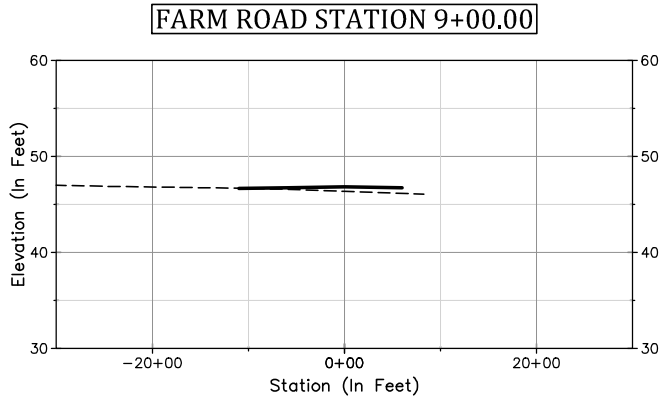
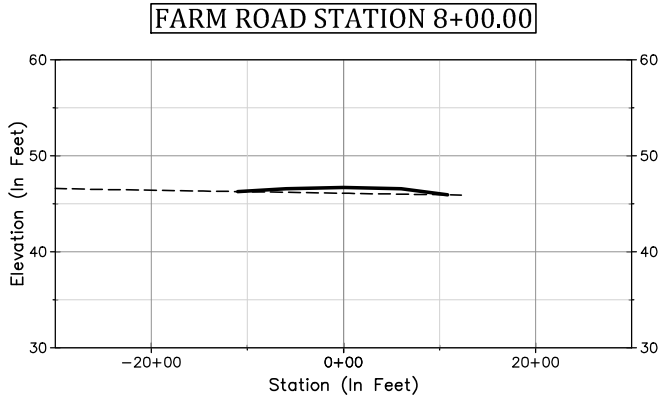
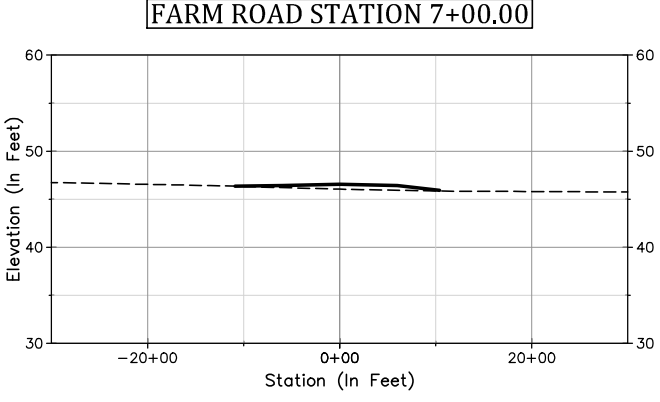
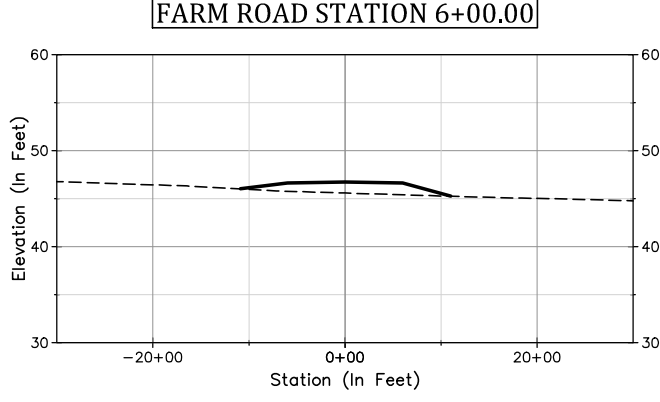
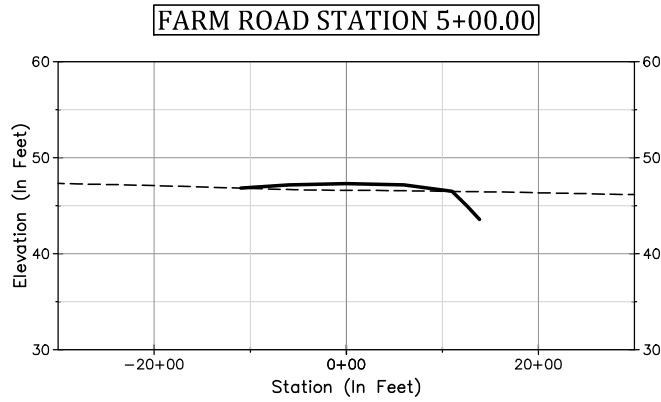
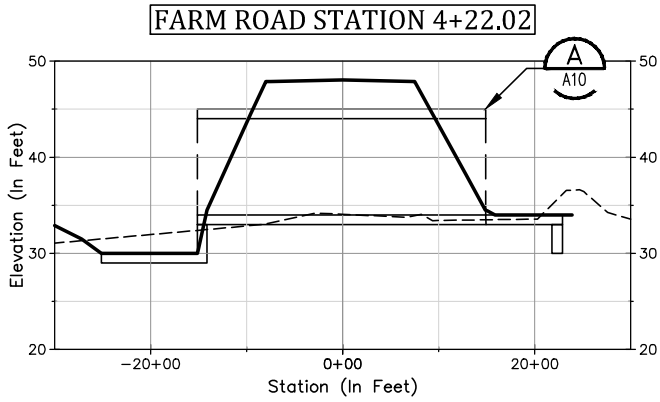
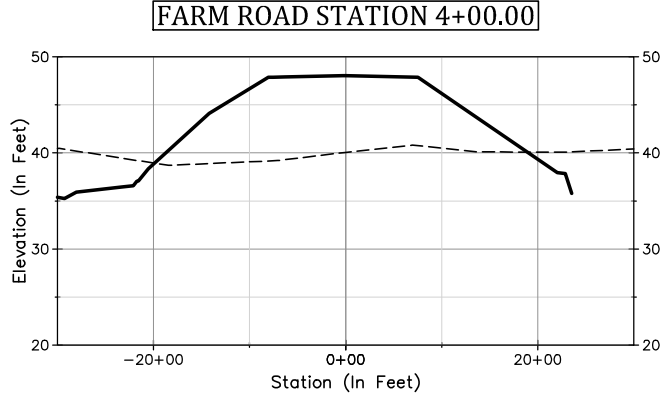
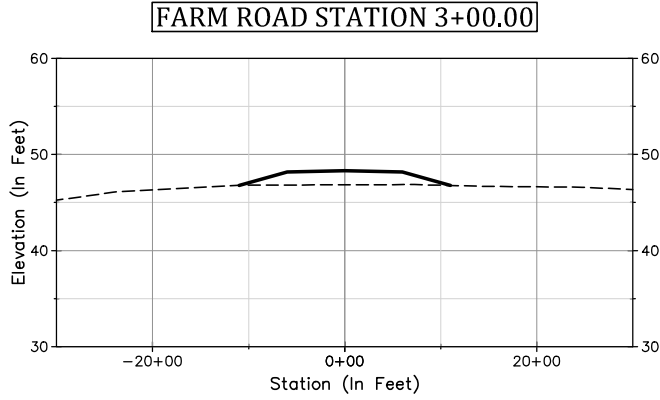
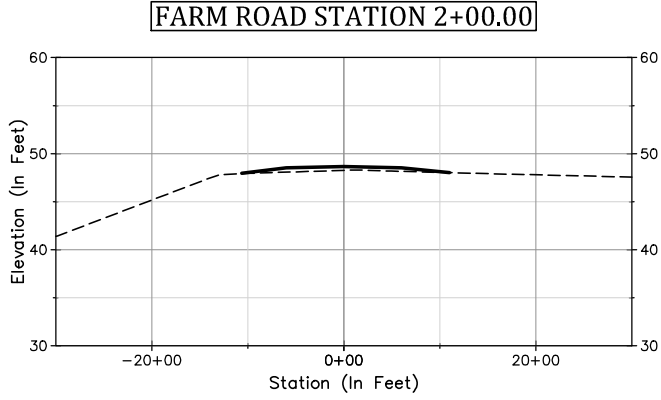
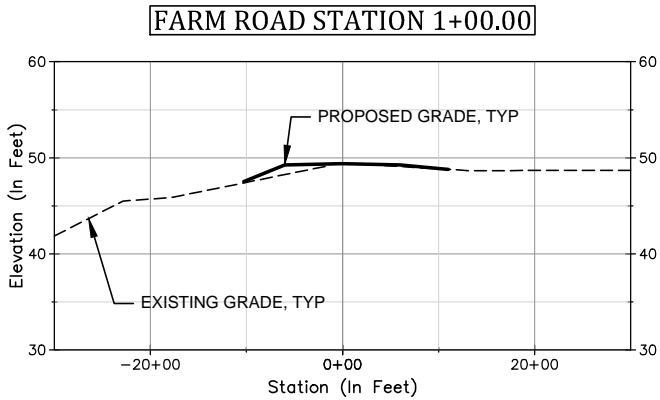
60% FINAL
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CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555

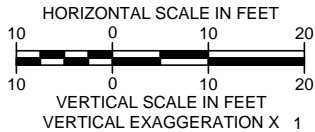
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SURVEYED: XXXXXXXX				PROJECT	00/00/00						
SURVEY BASE MAP: XXXXXXXX				SUPERVISOR: XXXXXXXX	00/00/00						
CHECKED: XXXXXXXX				PROJECT MANAGER: XXXXXXXX	00/00/00						
				DESIGNED: XXXXXXXX	00/00/00						
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	NUM.	REVISION	BY	DATE							

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Cad User: Danielle Devier



FARM ROAD GRADING SECTIONS



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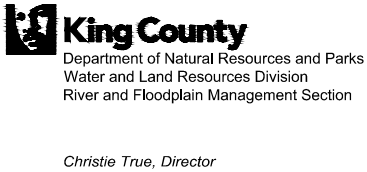
CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SURVEY BASE MAP: XXXXXXXX
CHECKED: XXXXXXXX
PROJECT No. XXXXXXXX
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX	00/00/00
PROJECT	
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT MANAGER: XXXXXXXX	00/00/00
DESIGNED: XXXXXXXX	00/00/00
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PRELIMINARY
NOT FOR
CONSTRUCTION

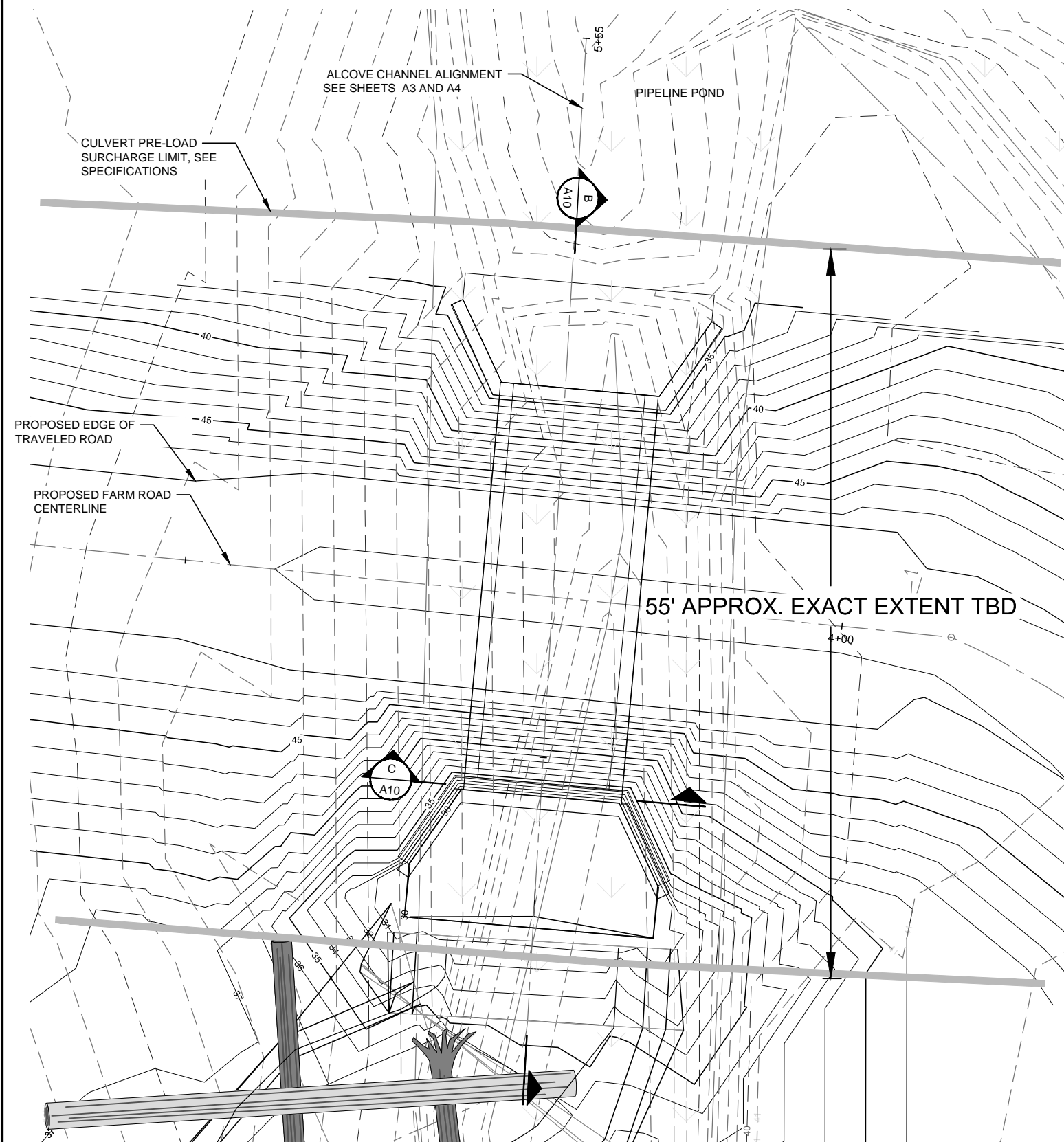


Winkelman Revetment
Reconstruction

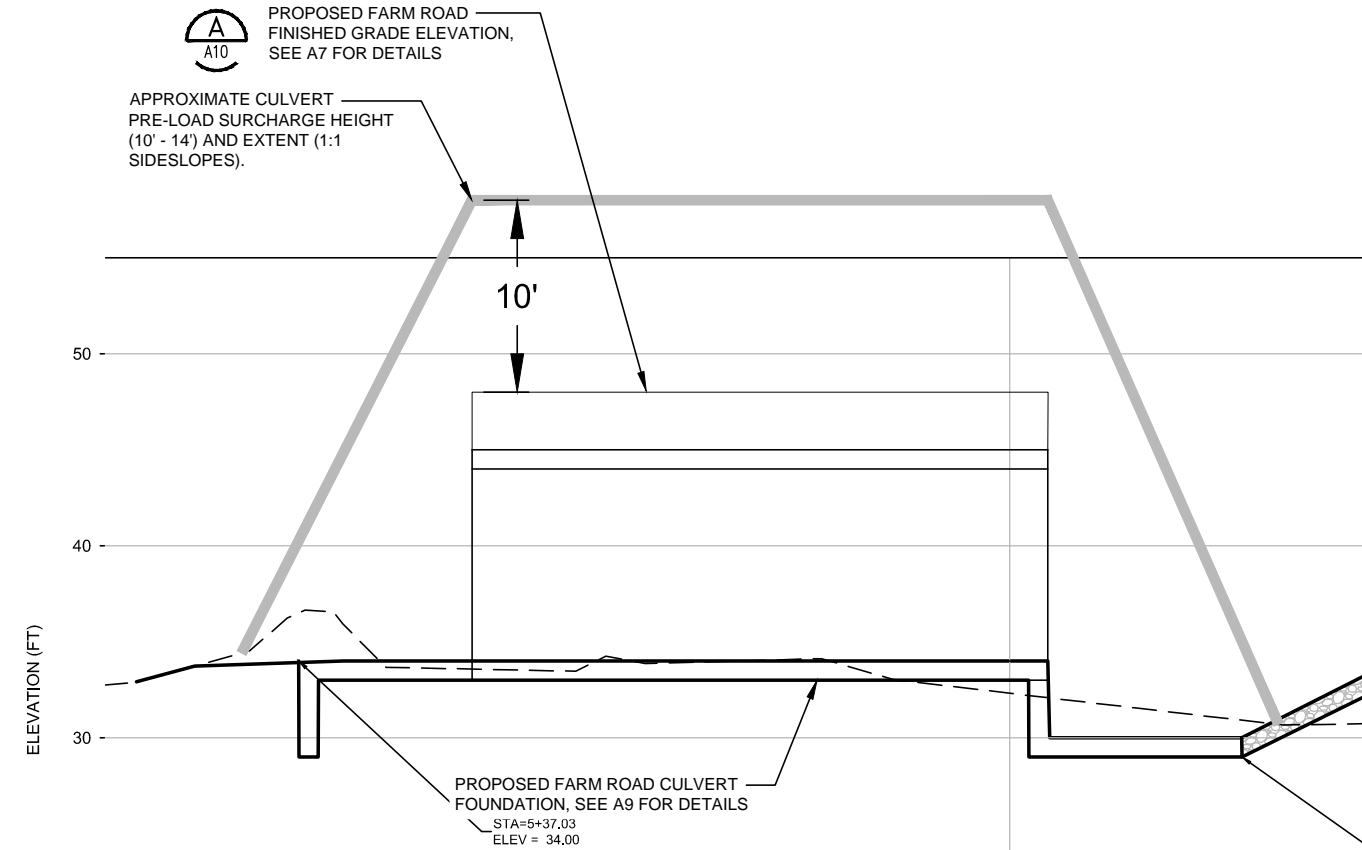
FARM ROAD GRADING SECTIONS

SHEET
30
OF
34
SHEETS
A8

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Plot Date: 11/25/2015 11:48 AM
Cad User: Danielle Devier



FARM ROAD CULVERT GRADING PLAN

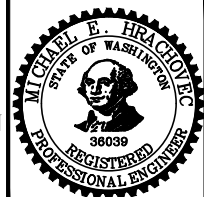


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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK: XXXXXXXX				APPROVED: XXXXXXXX	00/00/00
SURVEYED: XXXXXXXX				PROJECT	
SURVEY BASE MAP: XXXXXXXX				SUPERVISOR: XXXXXXXX	00/00/00
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NUM.	REVISION	BY	DATE		

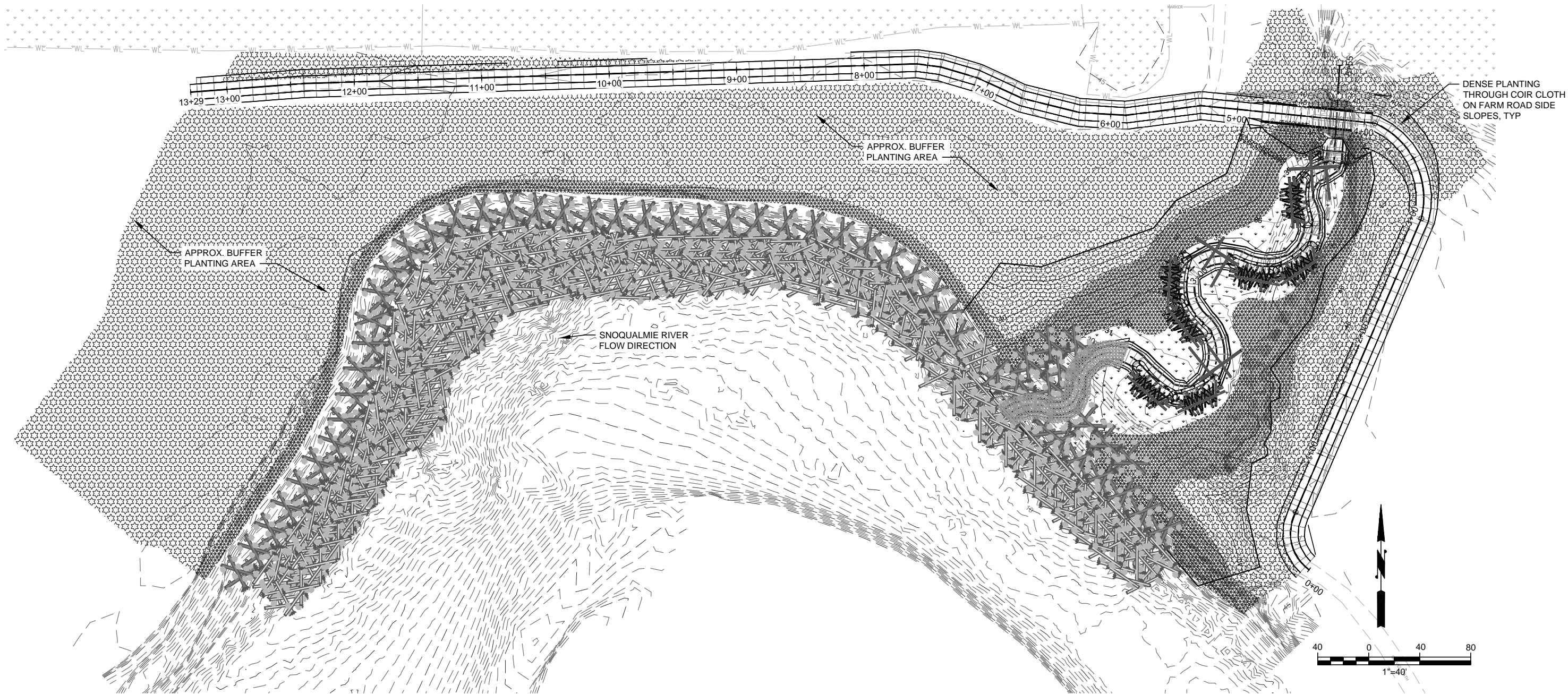
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CONSTRUCTION



King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

Winkelman Revetment Reconstruction	SHEET 31 OF 34 SHEETS
FARM ROAD CULVERT GRADING PLAN	
	A9



PLANTING PLAN

LEGEND:

	RIPARIAN PLANTING AREA (155,800 SF, 3.58 AC)
	SCRUB SHRUB WETLAND PLANTING AREA (34,700 SF, 0.8 AC)
	EMERGENT WETLAND PLANTING AREA (14,000 SF, 0.3 AC)

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CALL 2 WORKING DAYS
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK: XXXXXXXX
SURVEYED: XXXXXXXX
SURVEY BASE MAP: XXXXXXXX
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PROJECT No. XXXXXXXX
SURVEY No. XXXXXXXX

NUM.	REVISION	BY	DATE

APPROVED: XXXXXXXX	00/00/00
PROJECT	
SUPERVISOR: XXXXXXXX	00/00/00
PROJECT MANAGER: XXXXXXXX	00/00/00
DESIGNED: XXXXXXXX	00/00/00
DESIGN ENTERED: XXXXXXXX	00/00/00

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CONSTRUCTION



King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

Winkelman Revetment
Reconstruction

REVEGETATION PLAN (BY OTHERS)

SHEET
34
OF
34
SHEETS

A12