

March 7<sup>th</sup>, 2022

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
ICICLE CREEK STREAMBANK RESTORATION-RM 1.0



**ADDENDUM NO. 2**

To the Contractors, Subcontractors, Planholders and Suppliers:

The following items contain additions, deletions, or modifications to the Plans and/or Specifications. This Addendum forms as a part of the Contract Documents.

Bidders must acknowledge receipt of this Addendum on the Bid Proposal Form within the Bid Package.

**FINAL PLANS**

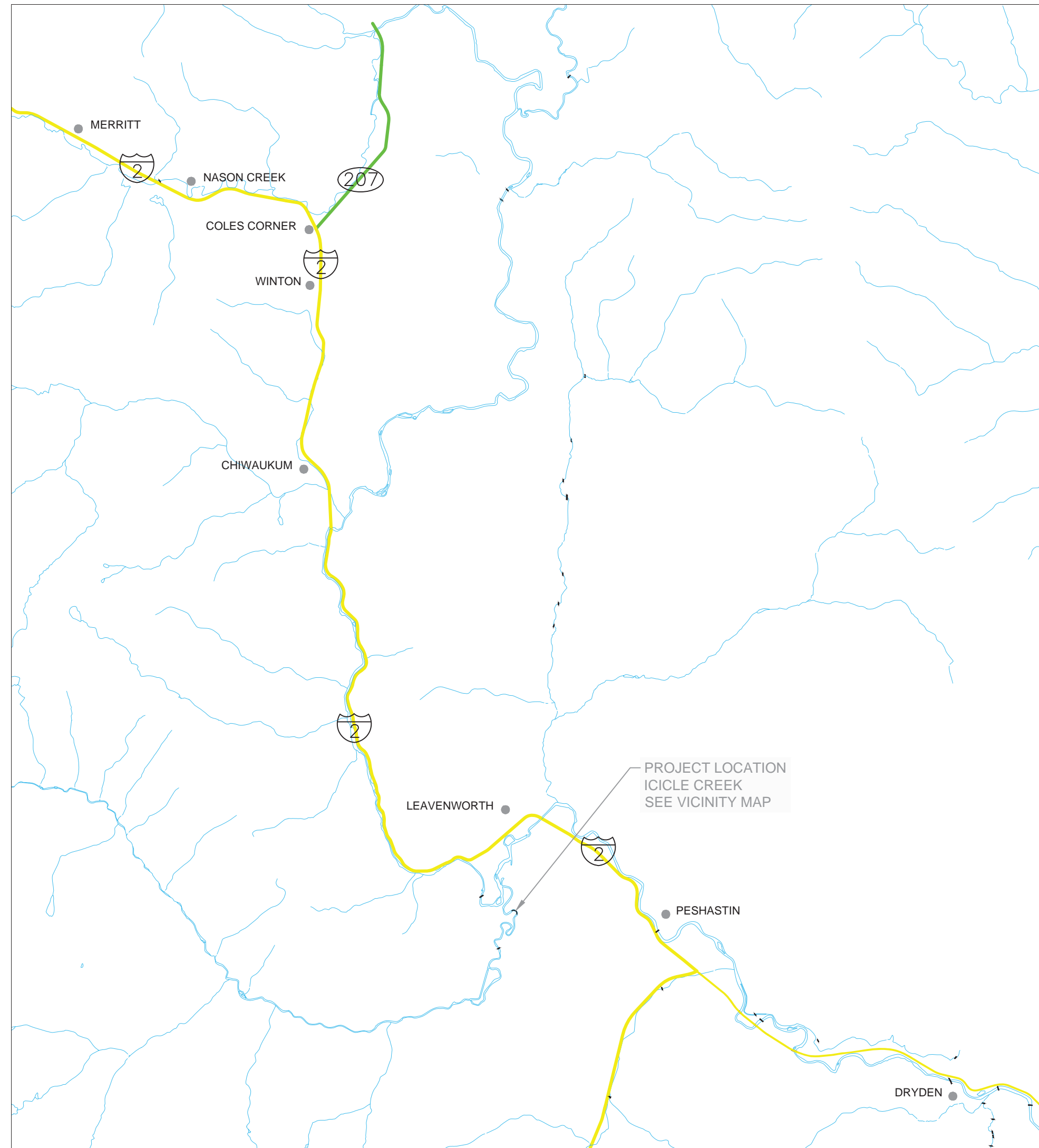
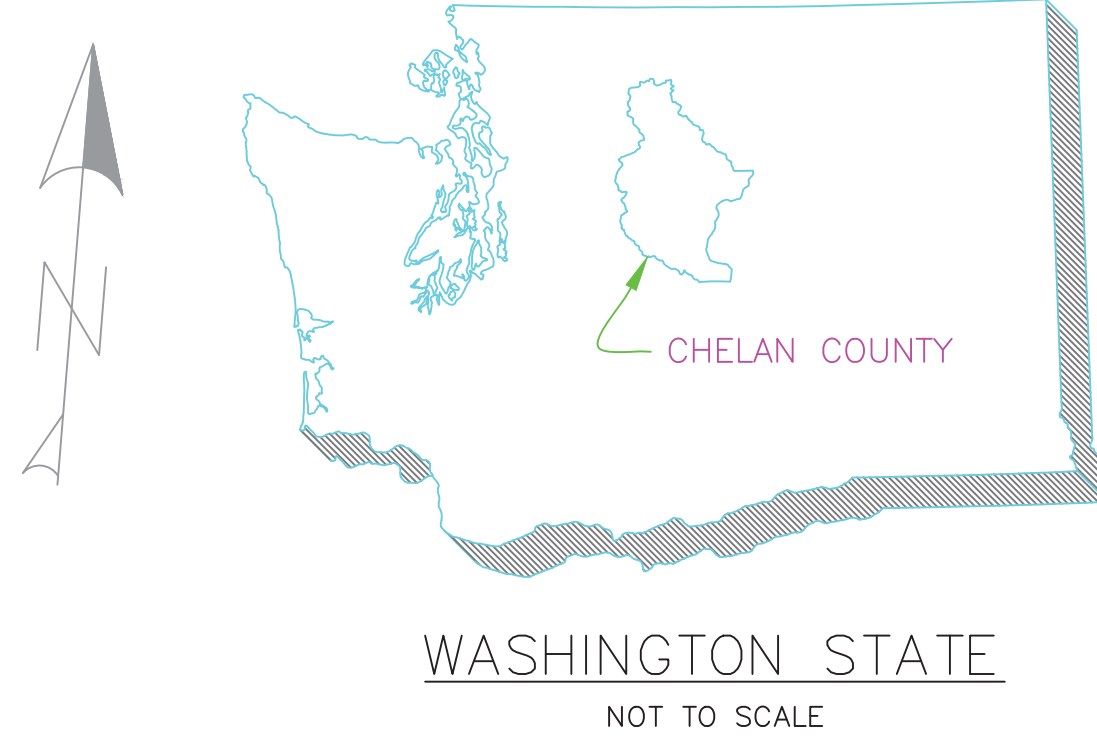
**1. Revised Final Plans Set with Corrections to LWM Structure Log Schedule's**

The "LWM Structure Log Schedule" on both sheets 9 (Type 1 LWM Structure) and 12 (Type 2 LWM Structure) have been corrected to show a pile length of 25' and dbh of 12"-15" as indicated in section 8-26.2(1) of the special provisions. The updated plans provided with this addendum are considered the new Final Plan set for this project.

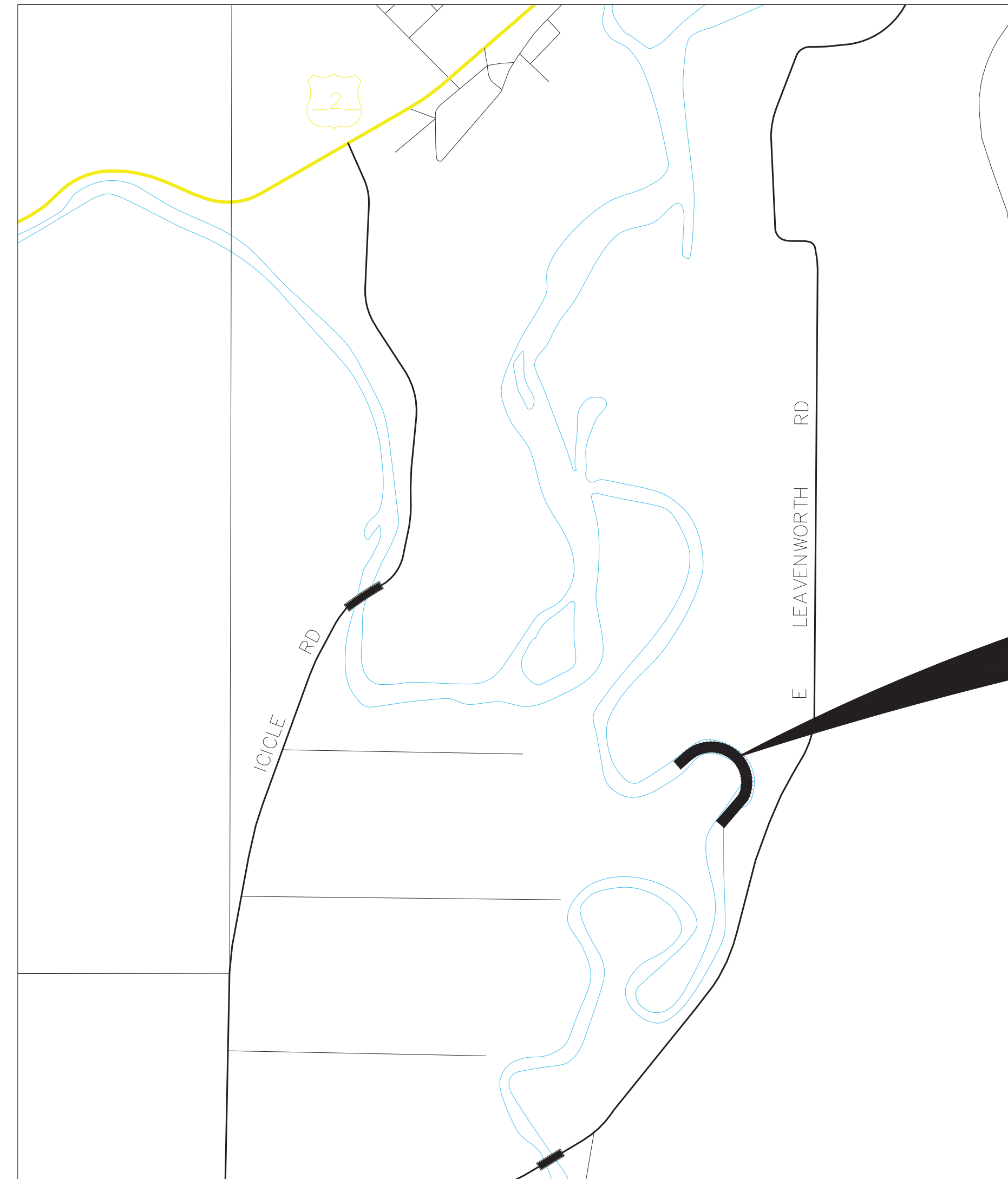
END OF ADDENDUM NO. 1

**Hannah Pygott**  
**Chelan County Natural Resource Department**  
411 Washington St., Suite 201  
Wenatchee, WA 98801  
Mobile 509-670-9306  
Email: [Hannah.pygott@co.chelan.wa.us](mailto:Hannah.pygott@co.chelan.wa.us)

# ICICLE CREEK STREAMBANK RESTORATION - RM 1.0



LOCATION MAP  
NOT TO SCALE



VICINITY MAP  
NOT TO SCALE

**PROJECT LOCATION**

Sheet List Table	
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PREPARED FOR

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
411 WASHINGTON ST. SUITE 201  
WENATCHEE, WA 98801  
TELEPHONE: (509) 667-6467  
CONTACT: ERIN MCKAY

PREPARED BY



SITE SUMMARY

Chelan County  
Leavenworth, Washington  
S13 T24N R17E

ICICLE CREEK STREAMBANK RESTORATION - RM 1.0  
FROM MM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
COVER SHEET

WA

CHELAN, WASHINGTON

NO.	DATE	REVISION	REVIEW BY



CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH  
FIRST SUBMITTAL DATE: 1/14/22

PROJECT NO.  
**CHEC00000020**

SHEET NO. 1 of 18

**CV01**

**GENERAL NOTES**

PREPARED AT THE REQUEST OF  
CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
411 WASHINGTON ST, SUITE 201  
WENATCHEE, WA 98801  
TELEPHONE: (509) 630-5303

- THE WORK SHOWN ON THESE PLANS WILL BE PERFORMED FOR CHELAN COUNTY NATURAL RESOURCE DEPARTMENT, HEREIN REFERRED TO AS THE "CONTRACTING AGENCY." THE DEPARTMENT'S REPRESENTATIVE WILL BE MRS. ERIN MCKAY OR OTHER PERSONS ASSIGNED BY CHELAN COUNTY NATURAL RESOURCE DEPARTMENT TO ACT AS THE CONTRACTING AGENCY'S REPRESENTATIVE, HEREIN REFERRED TO AS THE "CONTRACTING OFFICER."
- ANY ITEM NOT SPECIFICALLY DISCUSSED IN THE GENERAL CONTRACT FOR THIS PROJECT OR IN NOTES ON SHEETS IN THE PLANS SHALL BE AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND MUNICIPAL CONSTRUCTION, 2022 PUBLISHED BY THE STATE OF WASHINGTON DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR IS RESPONSIBLE TO BE FAMILIAR WITH THE STANDARD SPECIFICATIONS AND TO HAVE ACCESS TO THE STANDARD SPECIFICATIONS AT THE PROJECT SITE TO ENSURE THAT CONSTRUCTION OF THE PROJECT IS IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.
- HORIZONTAL DATUM: US STATE PLANE COORDINATE SYSTEM, WASHINGTON NORTH ZONE, NAD83/91, US SURVEY FEET. VERTICAL DATUM: NAVD88, US SURVEY FEET.
- THE TOPOGRAPHIC MAPPING WITHIN THE STREAM BANKS OF THE PROJECT AREA WAS PERFORMED BY NSD IN 2016, TOPOGRAPHIC OUTSIDE OF THE STREAM BANKS IS BASED ON 2015 LIDAR DEM DATA, CHELAN COUNTY, WASHINGTON. DUE TO EROSION OF THE STREAM BANK, THE FIELD CONDITIONS MAY VARY AT THE TIME OF CONSTRUCTION.
- ELEVATION AND DISTANCES SHOWN ARE IN FEET AND DECIMALS WITH CONTOURS INTERVALS AT ONE FOOT INCREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, AND EXECUTION OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SAFETY DURING CONSTRUCTION, AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- LAND OWNERSHIP BOUNDARIES ARE APPROXIMATE AND FOR DISPLAY PURPOSE ONLY. LAND OWNERSHIP BOUNDARIES DERIVED FROM GIS SHAPE FILE PRODUCED BY CHELAN COUNTY.
- EXISTING UTILITY LOCATIONS HAVE NOT BEEN IDENTIFIED AND ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE TO LOCATION UTILITIES PRIOR TO CONSTRUCTION AND PROTECT UTILITIES DURING CONSTRUCTION AS DESCRIBE IN SECTION 1-07.17 OF THE STANDARD SPECIFICATIONS. THE TELEPHONE NUMBER FOR THE ONE CALL CENTER FOR UTILITY LOCATES IS 1-800-424-5555. LANDOWNER INSTALLED IRRIGATION LINE IN THE PROJECT AREA IS TO BE PROTECTED IN PLACE AND REMAIN OPERATIONAL DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT WITHIN THE IN-WATER WORK TIME PERIODS OUTLINED BELOW.
- IN-WATER WORK SHALL BE LIMITED BY THE FOLLOWING TIME PERIODS AND CONDITIONS:  
  
JULY 15 THRU AUGUST 10, IN-WATER WORK AND INSTALLATION OF COFFERDAMS MAY OCCUR DURING THIS TIMEFRAME. ALL IN-WATER WORK EXECUTED FROM THE RIGHT BANK WATER QUALITY MUST BE PERFORMED, AS OUTLINED IN CONDITIONS D, BELOW.  
  
AUGUST 11 THRU OCTOBER 15 (ESTIMATED). ISOLATED IN-WATER WORK IS ALLOWED DURING THIS TIME PERIOD PROVIDED IT MEETS THE FOLLOW CONDITIONS:  
  
A. WORK IS EXECUTED FROM THE BANK AND WITHIN ISOLATED AREAS; AND  
  
B. IN-WATER EXECUTED FROM THE BANK AND WITHIN ISOLATED AREAS; AND  
  
C. NO SPRING-RUN CHINOOK SALMON REDDS ARE PRESENT WITHIN 100 FEET UPSTREAM OR 300 FEET DOWNSTREAM OF THE IN-WATER WORK AREA (TO BE SURVEYED BY THE CONTRACTING AGENCY OR THEIR REPRESENTATIVE); AND  
  
D. WATER QUALITY STANDARDS ARE MAINTAINED, AS DESCRIBED HERE. WATER QUALITY MONITORING WILL BE CONDUCTED UP TO 300 FEET DOWNSTREAM OF IN-WATER WORK TO ENSURE TURBIDITY DOES NOT INCREASE MORE THAN 5 NEPHELOMETRIC TURBIDITY UNITS (NTUs) ABOVE BACKGROUND (BACKGROUND TURBIDITY TO BE MEASURED AT LEAST 100 FEET UPSTREAM OF ALL IN-WATER WORK). IF TURBIDITY INCREASES MORE THAN 5 NTUs ABOVE BACKGROUND, IN WATER WORK SHALL CEASE UNTIL MEASURED NTUs MEET REQUIRED LEVELS.
- OCTOBER 16 (ESTIMATED) THRU NOVEMBER 1. ALL IN-WATER SHALL CONTINUE IN ISOLATION BEHIND COFFERDAMS. HOWEVER WORK MAY RESUME IN ISOLATION IN AREA NEAR SALMON REDDS, AND TURBIDITY MONITORING WILL CONTINUE IN ACCORDANCE WITH CONDITION D, ABOVE. WDFW WILL DETERMINE THE DATE OF SPRING-RUN CHINOOK SALMON EGG EYE-UP (APPROXIMATELY OCTOBER 16). ONCE EGG EYE-UP OCCURS, AS DETERMINED BY WDFW, COFFERDAM REMOVAL CAN OCCUR WHERE OTHER IN-WATER WORK IS COMPLETE. ALL IN-WATER WORK, INCLUDING REMOVAL OF COFFERDAMS, SHALL BE COMPLETED BY NOVEMBER 1.
- CONTRACTOR SHALL CONFIRM THE ACCESS POINT, ROUTE(S), AND LOCATION OF STORAGE OF MATERIALS AND EQUIPMENT WITH THE CONTRACTING OFFICER PRIOR TO TRANSPORTING MATERIALS AND EQUIPMENT TO THE PROJECT SITE.
- PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL PROVIDE THE CONTRACTING AGENCY WITH A DETAILED CONSTRUCTION SCHEDULE AND WORK PLAN FOR APPROVAL. THE CONTRACTOR SHALL NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE CONTRACTING OFFICER.
- ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE CONTRACTING OFFICER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED CONSTRUCTION STAGING AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AT THE CONTRACTOR'S EXPENSE, ALL CONSTRUCTION PERMITS AS REQUIRED BY THE LOCAL AGENCIES. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.
- CONTRACTORS SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS.
- THE CONTRACTOR SHALL ISOLATE THE WORK AREA BETWEEN THE ACTIVELY FLOWING RIVER AND THE EXTENTS OF ANY WORK TO KEEP FISH FROM ENTERING THE ACTIVE CONSTRUCTION AREA AND TO MAINTAIN WATER QUALITY STANDARDS AS REQUIRED BY THE PROJECT PERMITS.
- THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 5 WORKING DAYS IN ADVANCE OF IN-WATER WORK TO COORDINATE FISH REMOVAL. THE CONTRACTING AGENCY WILL BE RESPONSIBLE FOR ALL FISH REMOVAL AND HANDLING.
- DEWATERING SHALL BE PERFORMED TO THE EXTENT NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THESE PLANS, AS DETERMINED BY THE CONTRACTOR. DISCHARGE FROM DEWATERING WITHIN THE WORK AREA SHALL BE ROUTED TO FLOODPLAIN AREAS, A SMALL SETTLING BASIN BIOSWALE, NON-STREAM CONNECTING DITCH OR CHANNEL, UPLANDS AREA, OR OTHER WDFW-APPROVED DETENTION OR FILTERING SYSTEM, AND TEMPORARILY DETAINED OR FILTERED SO AS TO ALLOW THE REMOVAL OF FINE SEDIMENTS OR OTHER CONTAMINANTS PRIOR TO BEING ALLOWED TO REENTER ICICLE CREEK. ALL PUMPS ARE USED BY THE CONTRACTOR FOR DEWATERING SHALL HAVE SCREENED INTAKES THAT MEET WDFW SPECIFICATIONS AND JUVENILE FISH SCREENING CRITERIA.

**HPA PERMIT CONDITIONS**

THIS PROJECT IS SUBJECT TO WDFW'S HYDRAULIC PROJECT APPROVAL PERMIT # 2021-2-37+01 ISSUED ON MARCH 31, 2021. A FULL COPY OF THE PERMIT IS INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS REQUIRED TO REVIEW AND FOLLOW ALL PROVISIONS OF THE PERMIT. SEVERAL KEY PERMIT PROVISIONS, AS THEY ARE NUMBERED IN THE PERMIT, ARE PRESENTED TO SERVE AS A QUICK REFERENCE GUIDE DURING CONSTRUCTION.

- IN-STREAM WORK IS LIMITED TO JULY 18 - AUGUST 12
- ESTABLISH STAGING AREAS USED FOR EQUIPMENT STORAGE, VEHICLE STORAGE, FUELING, SERVICING, AND HAZARDOUS MATERIAL STORAGE IN A LOCATION AND MANNER THAT WILL PREVENT CONTAMINANTS SUCH AS PETROLEUM PRODUCTS, HYDRAULIC FLUID, FRESH CONCRETE, SEDIMENTS, SEDIMENT LADEN WATER, CHEMICALS, OR ANY OTHER TOXIC OR HARMFUL MATERIAL FROM ENTERING WATERS OF THE STATE.
- LIMIT THE REMOVAL OF NATIVE BANKLINE VEGETATION TO THE MINIMUM AMOUNT NEEDED TO CONSTRUCT THE PROJECT.
- REMOVE SOIL OR DEBRIS FROM THE DRIVE MECHANISM (WHEELS, TIRES, TRACKS, ETC.) AND UNDERCARRIAGE OF EQUIPMENT PRIOR TO OPERATING THE EQUIPMENT WATERWARD OF THE ORDINARY HIGH WATER LINE.
- CHECK EQUIPMENT DAILY FOR LEAKS AND COMPLETE ANY REQUIRED REPAIRS IN AN UPLAND LOCATION BEFORE USING THE EQUIPMENT IN OR NEAR THE WATER.
- USE ENVIRONMENTALLY ACCEPTABLE LUBRICANTS COMPOSED OF BIODEGRADABLE BASE OILS SUCH AS VEGETABLE OILS, SYNTHETIC ESTERS, AND POLYALKYLENE GLYCOLS IN EQUIPMENT OPERATED IN OR NEAR THE WATER.
- ALL EROSION CONTROL MATERIALS THAT WILL REMAIN ON SITE MUST BE COMPOSED OF 100% BIODEGRADABLE MATERIALS.
- MAINTAIN WATER QUALITY WHEN INSTALLING AND REMOVING THE COFFERDAM, DIKE, OR SIMILAR STRUCTURE.
- ROUTE THE CONSTRUCTION WATER (WASTEWATER) FROM THE PROJECT TO AN UPLAND AREA ABOVE THE LIMITS OF ANTICIPATED FLOODWATER. REMOVE FINE SEDIMENT AND OTHER CONTAMINANTS BEFORE DISCHARGING THE CONSTRUCTION WATER TO WATERS OF THE STATE.
- SEED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH A NATIVE SEED MIX SUITABLE FOR THE SITE THAT HAS AT LEAST ONE QUICK ESTABLISHING PLANT SPECIES.

**SUMMARY OF QUANTITIES**

ITEM NO.	QUANTITIES	UNITS	DESCRIPTION
1	1.00	LS	MOBILIZATION & DEMOBILIZATION (5% OF TOTAL CONSTRUCTION)
2	2.00	ACRE	CLEARING (INCLUDING STAGING AREA)
3	1.00	LS	SURVEYING
4	500.00	LF	HIGH VISIBILITY SAFETY FENCE
5	1.00	ACRE	MAINTAIN AND REPAIR TEMPORARY ACCESS AND HAUL ROUTES
6	1.00	LS	PROTECT LANDOWNER INFRASTRUCTURE
7	1296	LF	SALVAGE AND EXTEND SPLIT RAIL FENCE
8	1.00	LS	DEWATERING
9	3.00	EACH	IN WATER WORK AREA ISOLATION
10	308.00	CY	FLOODPLAIN GRADING
11	3.00	EACH	LOG ROOTWAD BARB STRUCTURE- TYPE 1
12	1.00	EACH	LOG ROOTWAD BARB STRUCTURE - TYPE 2
13	2.00	EACH	LOG ROOTWAD BARB STRUCTURE - TYPE 3
14	64.00	LF	FABRIC ENCAPSULATED SOIL LAYER (FESL)
15	7,500.00	DOLLAR	EROSION AND WATER POLLUTION CONTROL
16	0.50	ACRE	APPLY PERMANENT SEEDING - LOW AND HIGH BANK
17	1.70	ACRE	APPLY PERMANENT SEEDING - FLOODPLAIN FIELD AND UPLAND
18	25.00	TON	STRAW MULCH
19	29.00	EACH	PILE LOGS (12 TO 15-IN X 25-FT)
20	6.00	EACH	STRUCTURE LOGS (18 TO 24-IN X 50-FT)
21	18.00	EACH	ROOTWAD LOGS (24-IN DIA. X 50-FT)
22	12.00	EACH	BOULDER CLUSTER
23	1.00	DOLLAR	MINOR CHANGE



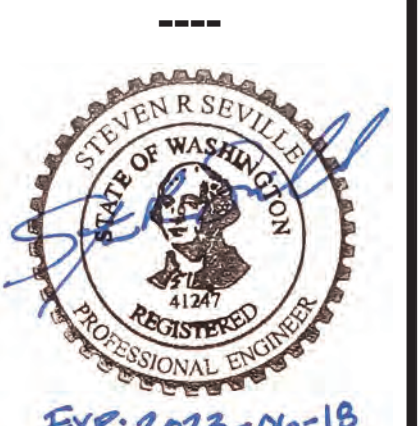
ICICLE CREEK STREAMBANK RESTORATION - RM 1.0 FROM MM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
**GENERAL NOTES**

WA

CHELAN, WASHINGTON

REVIEWED BY:	DATE:	BY:	DATE:
NO:	DATE:	REVISION:	



CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

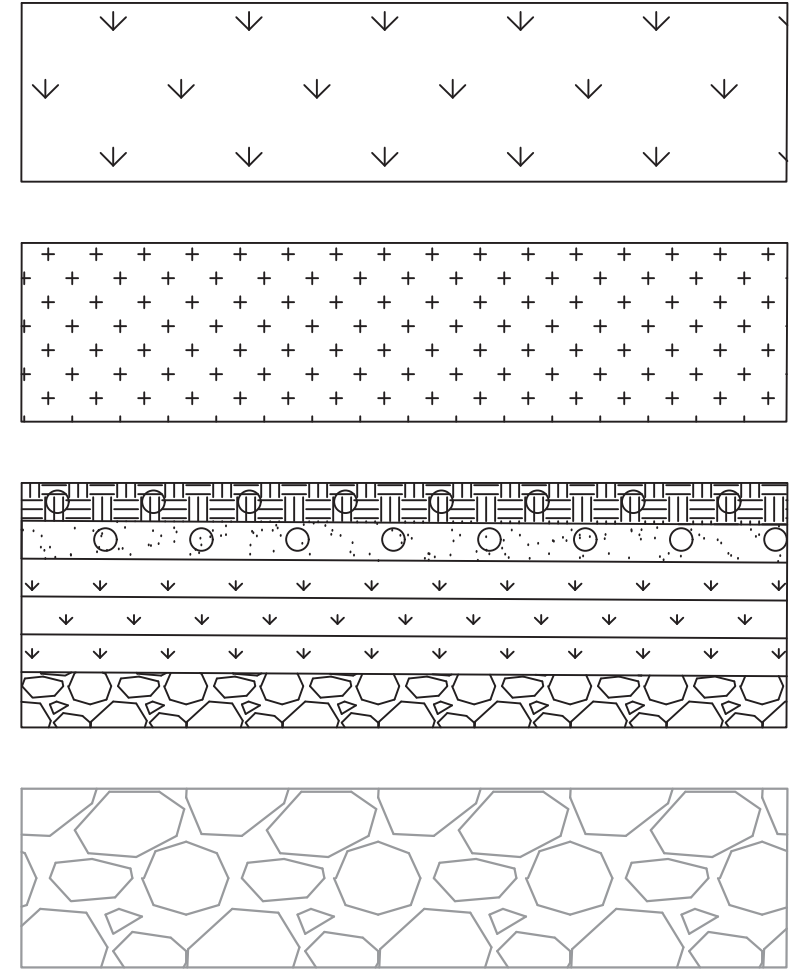
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**CHEC00000020**

SHEET NO. **2 of 18**

**GN01**

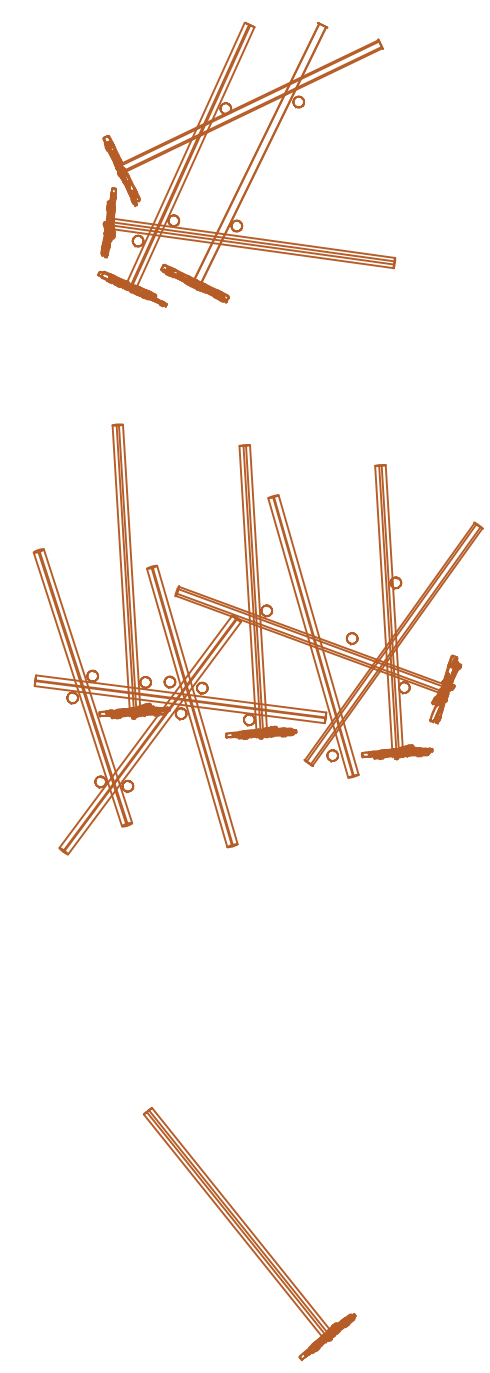
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	EXISTING CONTOUR (MINOR, 1 FOOT)
	EXISTING CONTOUR (MAJOR, 5 FOOT)
	PROPOSED CONTOUR (MAJOR, 1 FOOT)
	PROPOSED CONTOUR (MAJOR, 5 FOOT)
	APPROX. PROPERTY LINE
	ACCESS ROUTE
	WORK AREA ISOLATION COFFERDAM
	LANDOWNER ROADWAY
	ROCK BOULDERS
	CONSTRUCTION NOTE
	DETAIL REFERENCE
	CROSS SECTION
	LOG ID



RIPARIAN BUFFER PLANTING AREA  
 LWM STORAGE AREA & EQUIPMENT STAGING  
 FESL AREA  
 EXISTING RIPRAP

# MAIN CHANNEL LWM STRUCTURES



BANK ENHANCEMENT LWM TYPE 1  
 BANK ENHANCEMENT LWM TYPE 2  
 BANK ENHANCEMENT LWM TYPE 3

## ABBREVIATIONS

APPROX.	APPROXIMATELY
CFS	CUBIC FEET PER SECOND
CY	CUBIC YARD
ELEV.	ELEVATION
EX.	EXISTING
FESL	FABRIC ENCAPSULATED SOIL LIFTS
FT	FEET
IN	INCHES
LF	LENGTH FEET
LS	LUMP SUM
LWM	LARGE WOODY MATERIAL
MIN.	MINIMUM
M	METER
MM	MILIMETER
SF	SQUARE FEET
TEMP.	TEMPORARY
TYP.	TYPICAL
Y/N	YES OR NO
YR	YEAR

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 By: Willy Campbell  
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**DAVID EVANS AND ASSOCIATES INC.**  
 14432 SE EASTGATE WAY #400  
 BELLEVUE, WA, 98007  
 Phone: 425.519.6500

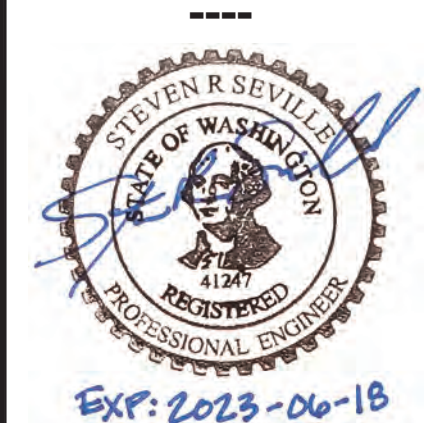
ICICLE CREEK STREAMBANK RESTORATION - RM 1.0  
 FROMM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
**LEGEND AND ABBREVIATIONS**

WA

CHELAN, WASHINGTON

REVIEWED BY:	DATE:	REVIEW BY:	DATE:
NO.	DATE	NO.	DATE



CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO.  
**CHEC00000020**  
 SHEET NO. **3** OF 18  
**GN02**



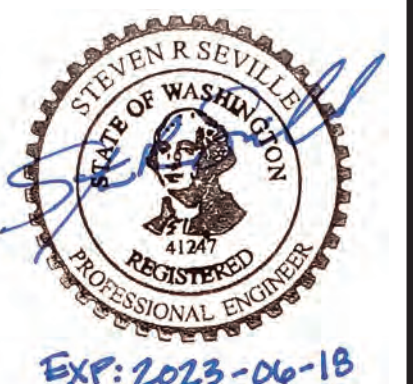
ICICLE CREEK STREAMBANK RESTORATION - RM 1.0  
FROM MM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
**LAYOUT PLAN**

WA

CHELAN, WASHINGTON

NO.	DATE	REVISION	REVIEWED BY:	DATE	BY



CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

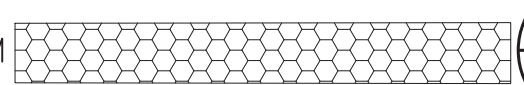
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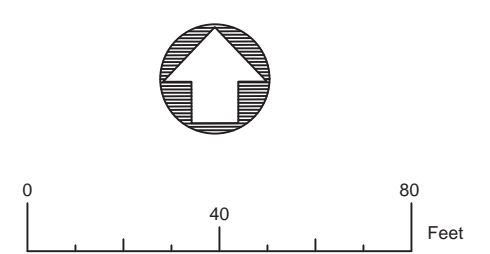
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**EC01**

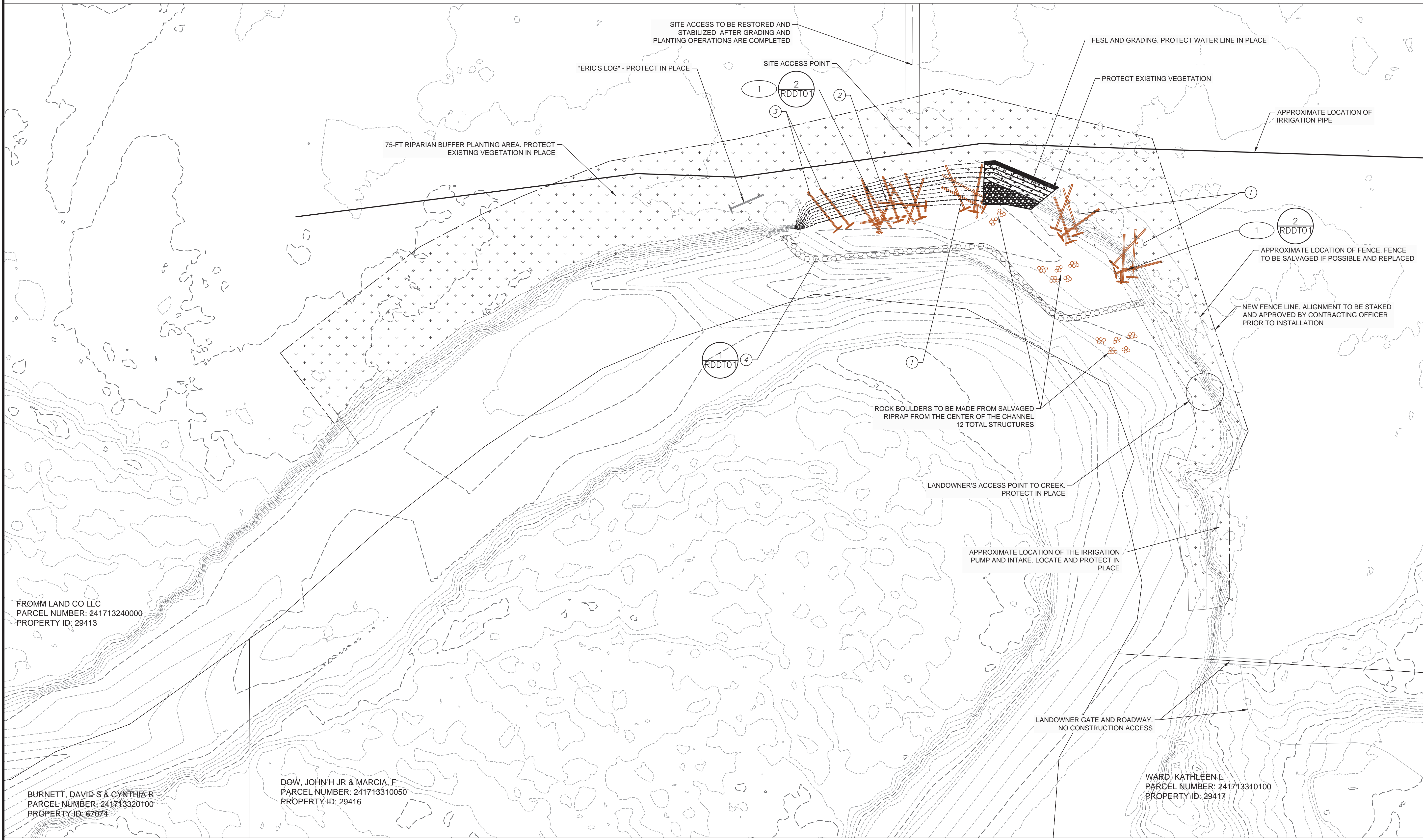
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- NOTES**
- ① BANK ENHANCEMENT LWM TYPE 1: INSTALL 3
  - ② BANK ENHANCEMENT LWM TYPE 2: INSTALL 1
  - ③ BANK ENHANCEMENT LWM TYPE 3: INSTALL 2

**LEGEND**

- ④ SITE ISOLATION COFFERDAM  ① RDDT01
- ① INSTALL NEW IN-WATER HAZARD SIGN. MOUNT TO WOODEN PILE ② RDDT01





ICICLE CREEK STREAMBANK RESTORATION - RM 1.0  
FROMMM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
LAYOUT PLAN

WA

CHELAN, WASHINGTON

FROMM LAND CO LLC  
PARCEL NUMBER: 241713240000  
PROPERTY ID: 29413

BURNETT, DAVID S & CYNTHIA R  
PARCEL NUMBER: 241713320100  
PROPERTY ID: 67074

DOW, JOHN H JR & MARCIA F  
PARCEL NUMBER: 241713310050  
PROPERTY ID: 29416

WARD, KATHLEEN L  
PARCEL NUMBER: 241713310100  
PROPERTY ID: 29417

NO.	DATE	REVISION	REVIEWED BY:	DATE	BY



CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH  
FIRST SUBMITTAL DATE: 1/14/22

PROJECT NO.  
**CHEC00000020**

SHEET NO. **5** OF 18

**EC02**

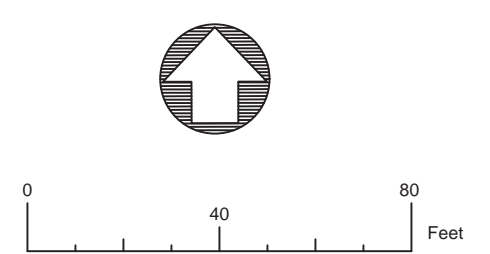
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**NOTES**

- ① BANK ENHANCEMENT LWM TYPE 1: INSTALL 3
- ② BANK ENHANCEMENT LWM TYPE 2: INSTALL 1
- ③ BANK ENHANCEMENT LWM TYPE 3: INSTALL 2

**LEGEND**

- ④ SITE ISOLATION COFFERDAM  ① RDDT01
- ① INSTALL NEW IN-WATER HAZARD SIGN. MOUNT TO WOODEN PILE ② RDDT01





FROMM, NICHOLAS A & NANCY R. DENNIS  
PARCEL NUMBER: 24173230000  
PROPERTY ID: 29411

STEMM, MICHAEL  
PARCEL NUMBER: 24173230000  
PROPERTY ID: 29411

FROMM, RICHARD L & MELISSA  
PARCEL NUMBER: 24171323000  
PROPERTY ID: 29412

FROMM LAND CO LLC  
PARCEL NUMBER: 24171324000  
PROPERTY ID: 29413

BURNETT, DAVID S & CYNTHIA  
PARCEL NUMBER: 24171323000  
PROPERTY ID: 67074

JACKSON, GRETCHEN R  
PARCEL NUMBER: 24171340000  
PROPERTY ID: 29425

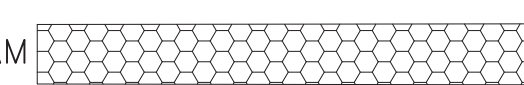

WARD, JAMES  
PARCEL NUMBER: 24173310000  
PROPERTY ID: 29426

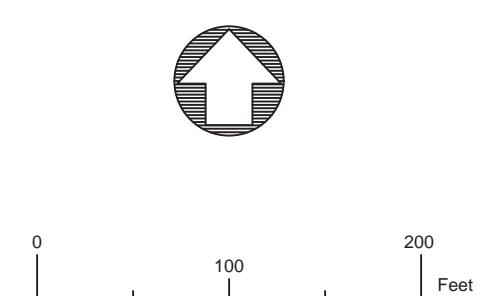
GUNTER, R  
PARCEL NUMBER: 24171331000  
PROPERTY ID: 29427

**NOTES**

1. MAINTAIN CONSTRUCTION ENTRANCE. REMOVE CONSTRUCTION ENTRANCE AND RESTORE ORIGINAL GRADE UPON PROJECT COMPLETION.
2. ACCESS ROUTES MAY REQUIRE VEGETATION CLEARING AND HIGH VISIBILITY FENCING SHALL BE PLACED ALONG WHERE MATERIAL IS BEING HAULED.
3. INSTALL MEASURES SUFFICIENT TO ISOLATE IN-WATER WORK AREAS FROM THE ACTIVELY FLOWING CHANNEL WHERE SHOWN, OR AS DIRECTED BY CONTRACTING OFFICER. IN-WATER WORK AREA ISOLATION SHALL BE SUFFICIENT TO MAINTAIN WATER QUALITY STANDARDS OUTLINE IN PROJECT PERMITS.
4. CLEAR AND GRUB EXISTING VEGETATION TO THE LIMITS OF PROPOSED EXCAVATION. LIMITS OF CLEARING AND GRUBBING SHALL BE APPROVED BY CONTACTING OFFICER PRIOR TO CLEARING ANY VEGETATION.
5. MAINTAIN EXISTING GATE TO CONTROL VEHICLE ACCESS TO THE WORK SITE.
6. RIPRAP RELOCATION MAY TAKE PLACE WITHOUT INSTALLATION OF SITE ISOLATION MEASURES. HOWEVER, THE CONTRACTOR SHALL ENSURE THAT WATER QUALITY STANDARDS AREA MAINTAINED. ALL IN-WATER WORK ASSOCIATED WITH RIPRAP RELOCATION REMOVAL SHALL BE COMPLETED DURING THE IN-WATER WORK WINDOW, AS DESCRIBED IN PROJECT PERMITS.

**LEGEND**

③ SITE ISOLATION COFFERDAM  ① 



NO.	DATE	REVISION	REVIEWED BY	DATE	BY



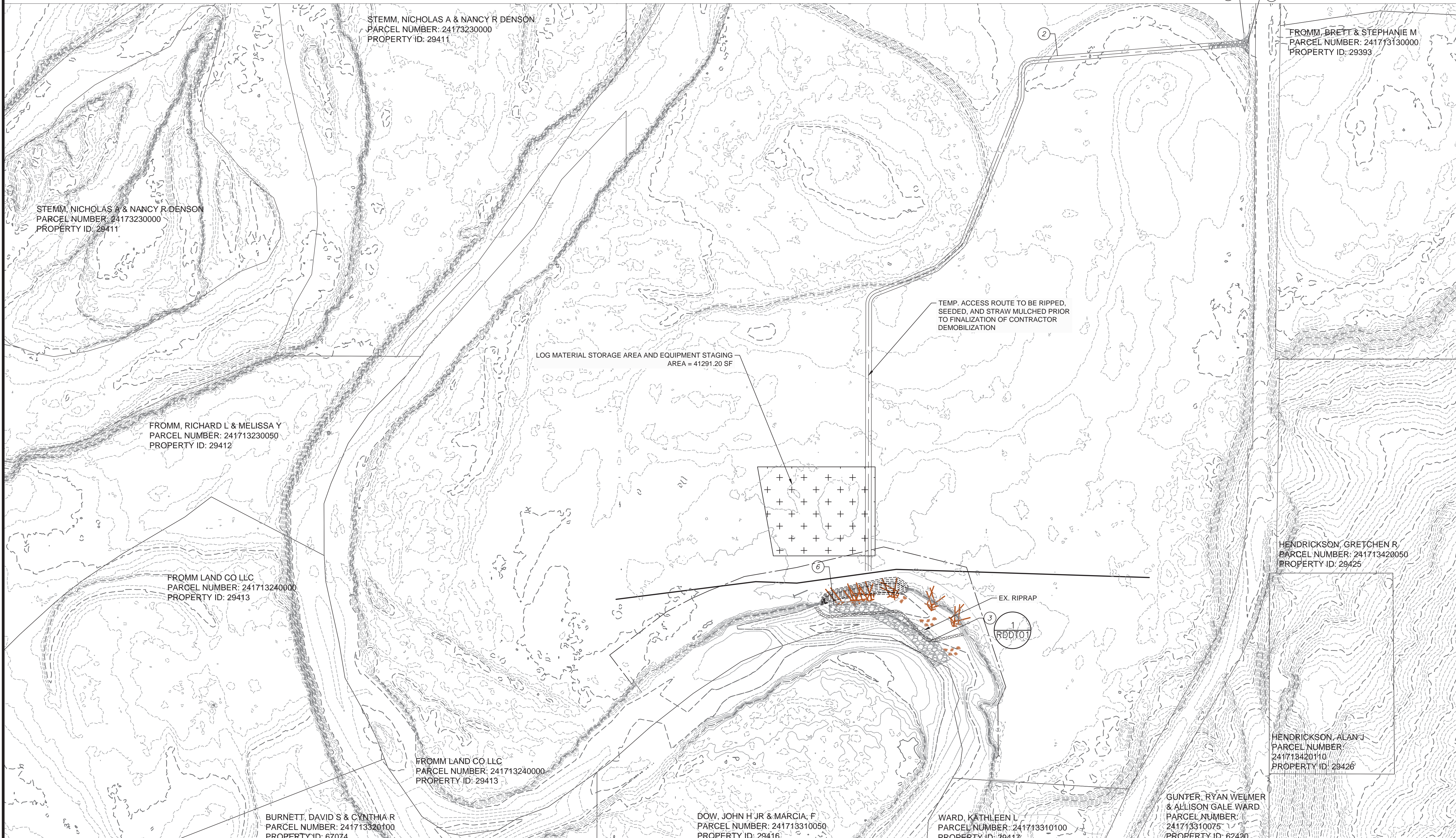
CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

PROJECT NO.  
**CHEC0000020**

SHEET NO. **6 of 18**  
**RD01**

Plot Date: 1/13/2022 2:18 PM  
 Save Date: 1/12/2022 11:34 AM  
 By: Dnh  
 File: P:\CHEC0000020\0400\CAD\SHEETS\SEC-RD-X-CHEC0020.dwg



STEMM, NICHOLAS A & NANCY R DENSON  
PARCEL NUMBER: 24173230000  
PROPERTY ID: 29411

STEMM, NICHOLAS A & NANCY R DENSON  
PARCEL NUMBER: 24173230000  
PROPERTY ID: 29411

FROMM, BRETT & STEPHANIE M  
PARCEL NUMBER: 241713130000  
PROPERTY ID: 29393

FROMM, RICHARD L & MELISSA Y  
PARCEL NUMBER: 241713230050  
PROPERTY ID: 29412

LOG MATERIAL STORAGE AREA AND EQUIPMENT STAGING  
AREA = 41291.20 SF

TEMP. ACCESS ROUTE TO BE RIPPED,  
SEEDED, AND STRAW MULCHED PRIOR  
TO FINALIZATION OF CONTRACTOR  
DEMobilIZATION

FROMM LAND CO LLC  
PARCEL NUMBER: 241713240000  
PROPERTY ID: 29413

FROMM LAND CO LLC  
PARCEL NUMBER: 241713240000  
PROPERTY ID: 29413

BURNETT, DAVID S & CYNTHIA R  
PARCEL NUMBER: 241713320100  
PROPERTY ID: 67074

DOW, JOHN H JR & MARCIA, F  
PARCEL NUMBER: 241713310050  
PROPERTY ID: 29416

WARD, KATHLEEN L  
PARCEL NUMBER: 241713310100  
PROPERTY ID: 29417

GUNTER, RYAN WELMER  
& ALLISON GALE WARD  
PARCEL NUMBER:  
241713310075  
PROPERTY ID: 62420

HENDRICKSON, GRETCHEN R  
PARCEL NUMBER: 241713420050  
PROPERTY ID: 29425

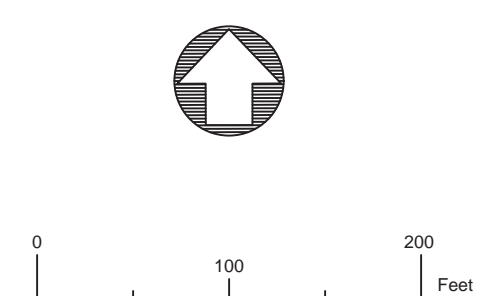
HENDRICKSON, ALAN J  
PARCEL NUMBER:  
241713420110  
PROPERTY ID: 29426

**NOTES**

1. MAINTAIN CONSTRUCTION ENTRANCE. REMOVE CONSTRUCTION ENTRANCE AND RESTORE ORIGINAL GRADE UPON PROJECT COMPLETION.
2. ACCESS ROUTES MAY REQUIRE VEGETATION CLEARING AND HIGH VISIBILITY FENCING SHALL BE PLACED ALONG WHERE MATERIAL IS BEING HAULED.
3. INSTALL MEASURES SUFFICIENT TO ISOLATE IN-WATER WORK AREAS FROM THE ACTIVELY FLOWING CHANNEL WHERE SHOWN, OR AS DIRECTED BY CONTRACTING OFFICER. IN-WATER WORK AREA ISOLATION SHALL BE SUFFICIENT TO MAINTAIN WATER QUALITY STANDARDS OUTLINE IN PROJECT PERMITS.
4. CLEAR AND GRUB EXISTING VEGETATION TO THE LIMITS OF PROPOSED EXCAVATION. LIMITS OF CLEARING AND GRUBBING SHALL BE APPROVED BY CONTACTING OFFICER PRIOR TO CLEARING ANY VEGETATION.
5. MAINTAIN EXISTING GATE TO CONTROL VEHICLE ACCESS TO THE WORK SITE.
6. RIPRAP RELOCATION MAY TAKE PLACE WITHOUT INSTALLATION OF SITE ISOLATION MEASURES. HOWEVER, THE CONTRACTOR SHALL ENSURE THAT WATER QUALITY STANDARDS AREA MAINTAINED. ALL IN-WATER WORK ASSOCIATED WITH RIPRAP RELOCATION REMOVAL SHALL BE COMPLETED DURING THE IN-WATER WORK WINDOW, AS DESCRIBED IN PROJECT PERMITS.

**LEGEND**

- ③ SITE ISOLATION COFFERDAM
- ①



**DAVID EVANS AND ASSOCIATES INC.**  
14432 SE EASTGATE WAY #400  
BELLEVUE, WA 98007  
Phone: 425.519.6500

ICICLE CREEK STREAMBANK RESTORATION - RM 1.0  
FROMM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
**SITE ACCESS PLAN**

WA

CHELAN, WASHINGTON

NO.	DATE	REVISION	REVIEWED BY:	DATE	BY	DATE

CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

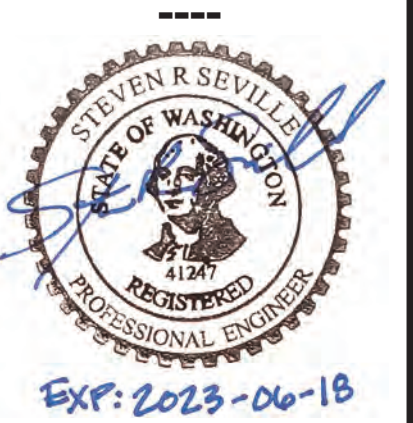
PROJECT NO.  
**CHEC0000020**

SHEET NO. **7** OF **18**  
**RD02**

Plot Date: 1/13/2022 2:19 PM  
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 By: Wily Campbell  
 File: P:\CHEC0000020\040\CAD\SHEET\SEC-RD-K-CHEC020 - No Aerial.dwg

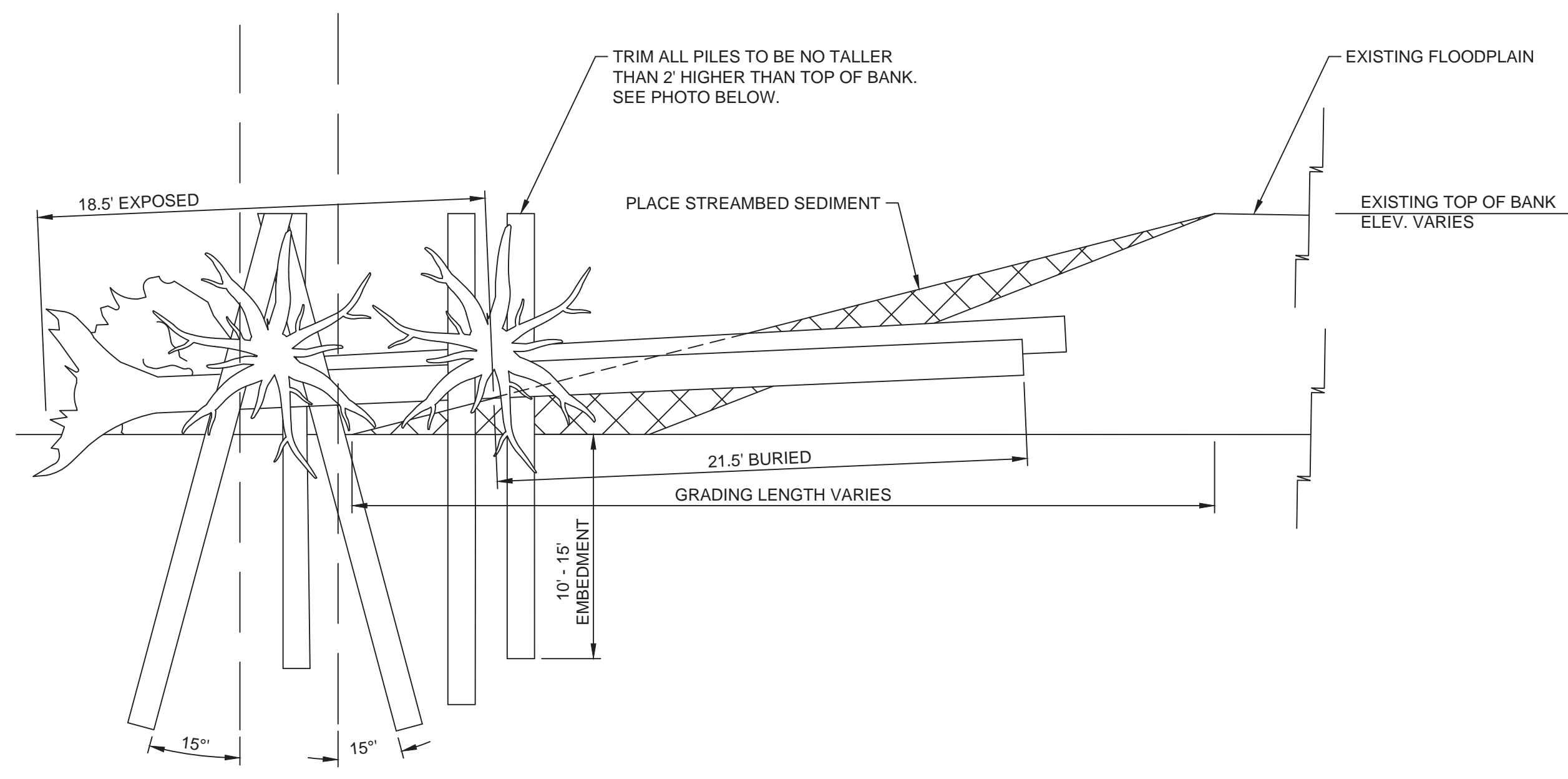


REVIEWED BY:	DATE:	REVIEW BY:	DATE:
NO.	DATE	NO.	DATE



CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO.  
**CHEC00000020**  
 SHEET NO. **8** OF **18**  
**DT01**

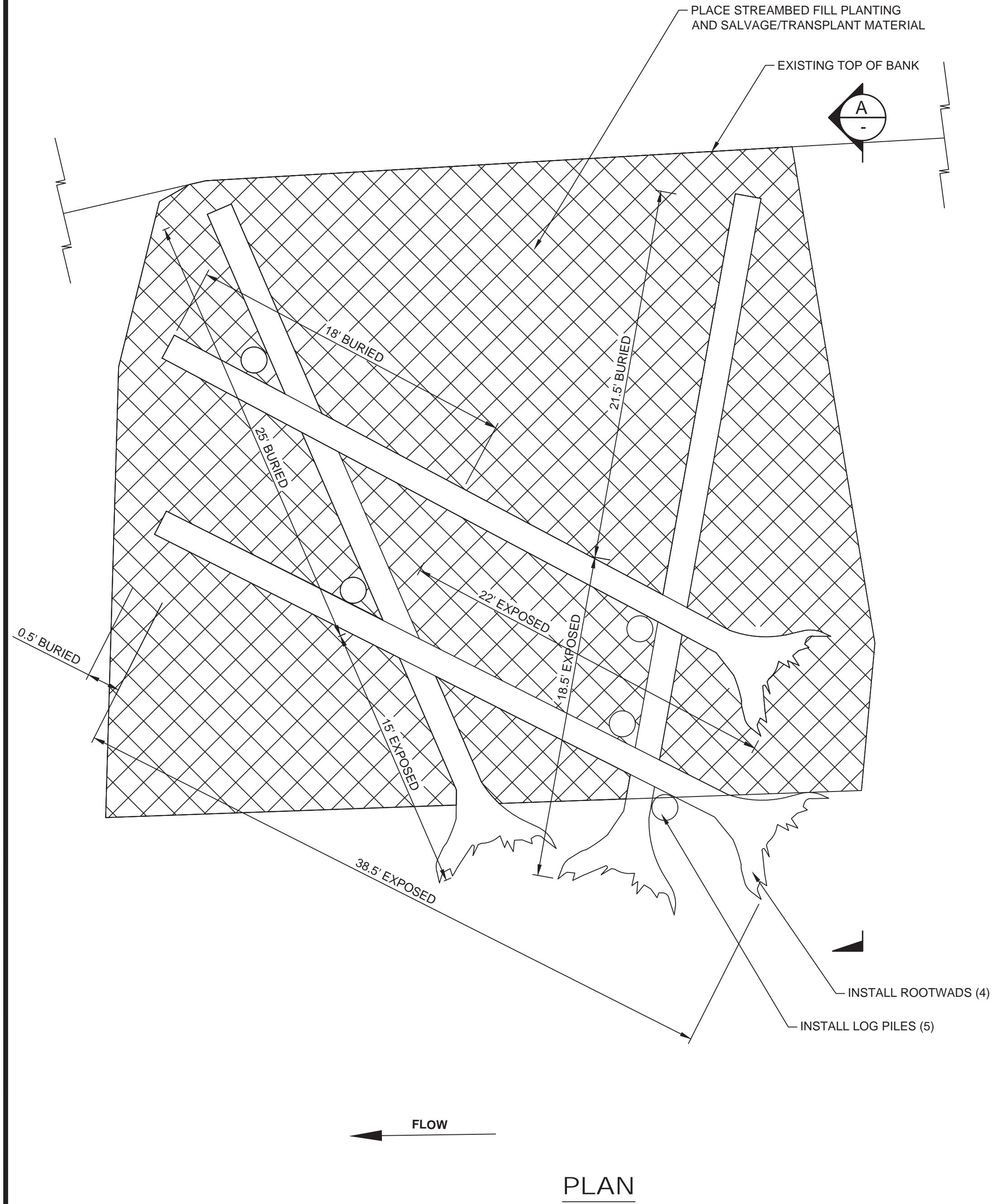
10-YR (APPROXIMATE) FLOW 8300 CFS  
 2-YR (APPROXIMATE) FLOW 5600 CFS  
 SPRING RUNOFF (APPROXIMATE) FLOW 1900 CFS  
 SUMMER RUNOFF (APPROXIMATE) FLOW 200 CFS  
 TOE OF GRADING



SECTION A - LOOKING DOWNSTREAM



PILE EXAMPLE PHOTO  
 TOP OF EACH PILE TO BE SHAPED SIMILAR TO SHOWN. A ROUGH FINISH IS PREFERRED



**1** BANK ENHANCEMENT LWM TYPE 1  
 DT01

**NOTES**

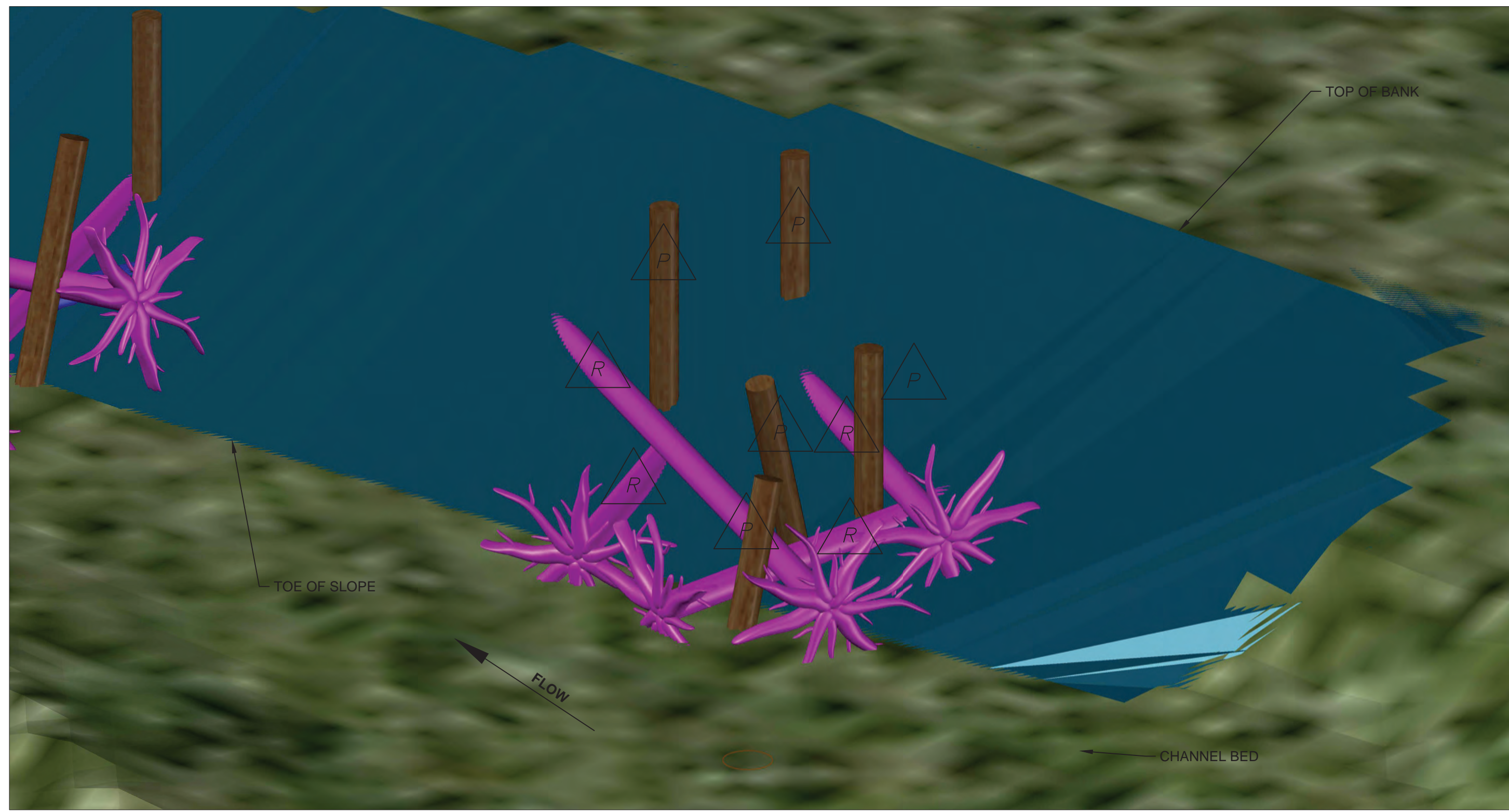
- REFER TO 3D DETAILS AND LAYERING PLANS FOR MORE INSTALLATION INFORMATION.
- INSTALL 8 PIECES OF RACKING AS DIRECTED BY THE CONTRACTING OFFICER.
- INSTALL 5 C.Y. OF SLASH AS DIRECTED BY THE CONTRACTING OFFICER.

Plot Date: 1/13/2022 2:19 PM  
 Save Date: 1/11/2022 2:28 PM  
 By: Dnh  
 File: P:\CHEC00000020\0400\CAD\SHSHEET\SEC-DT-X-CHEC0020.dwg  
 By: Willy Campbell

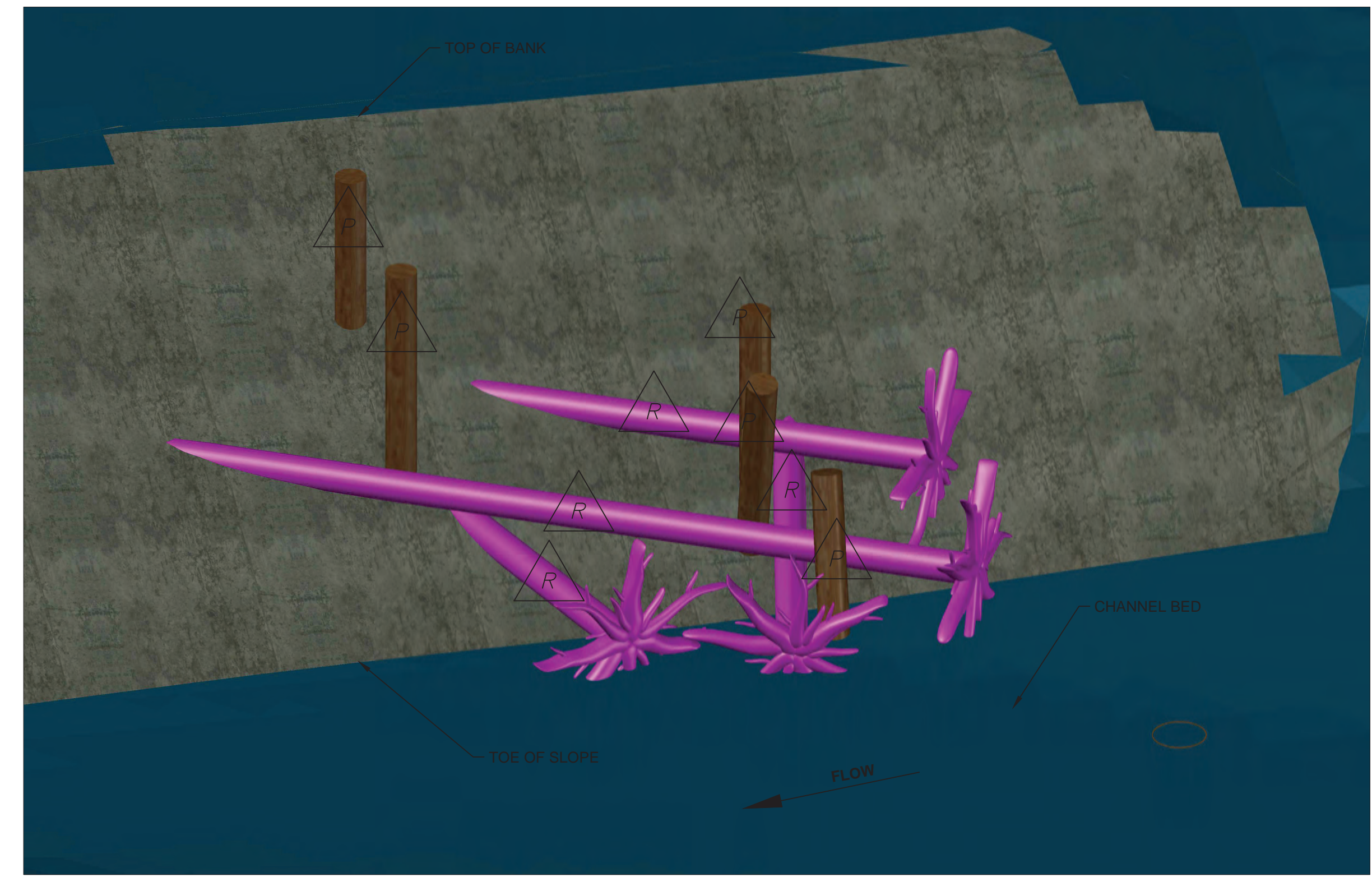
DATE:	3/4/22	BY:	OK
NO.:	1	REVISION:	SS
3/4/22 corrected pile log diameter and length			



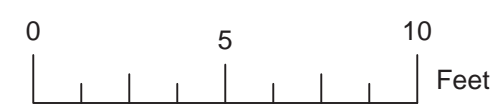
CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO. **CHEC00000020**  
 SHEET NO. **9** OF **18**  
**DT02**



BANK ENHANCEMENT 1 LWM STRUCTURE PLAN LOOKING DOWNSTREAM PRESPECTIVE



BANK ENHANCEMENT 1 LWM STRUCTURE PLAN LOOKING UPSTREAM PRESPECTIVE



**NOTES**

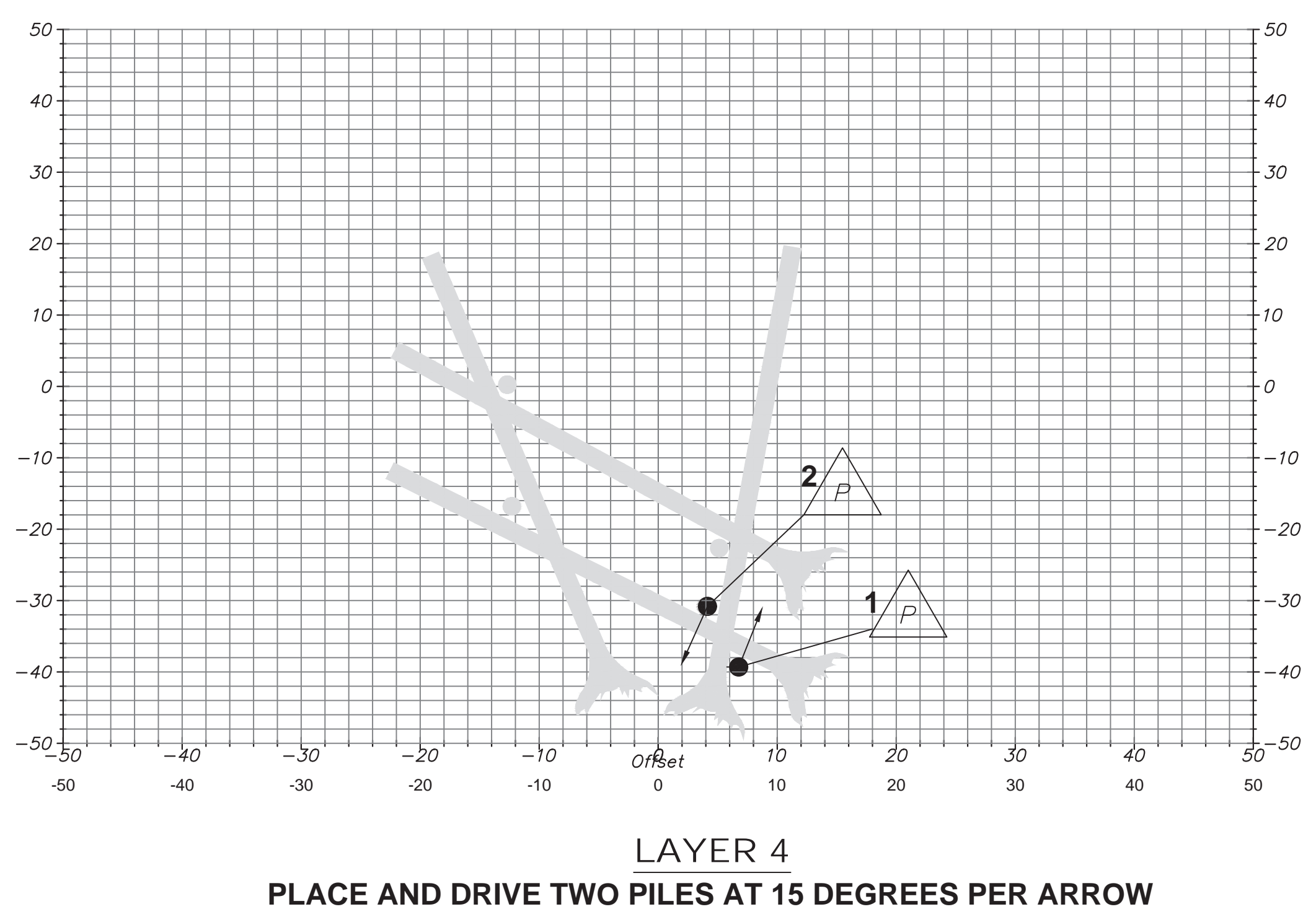
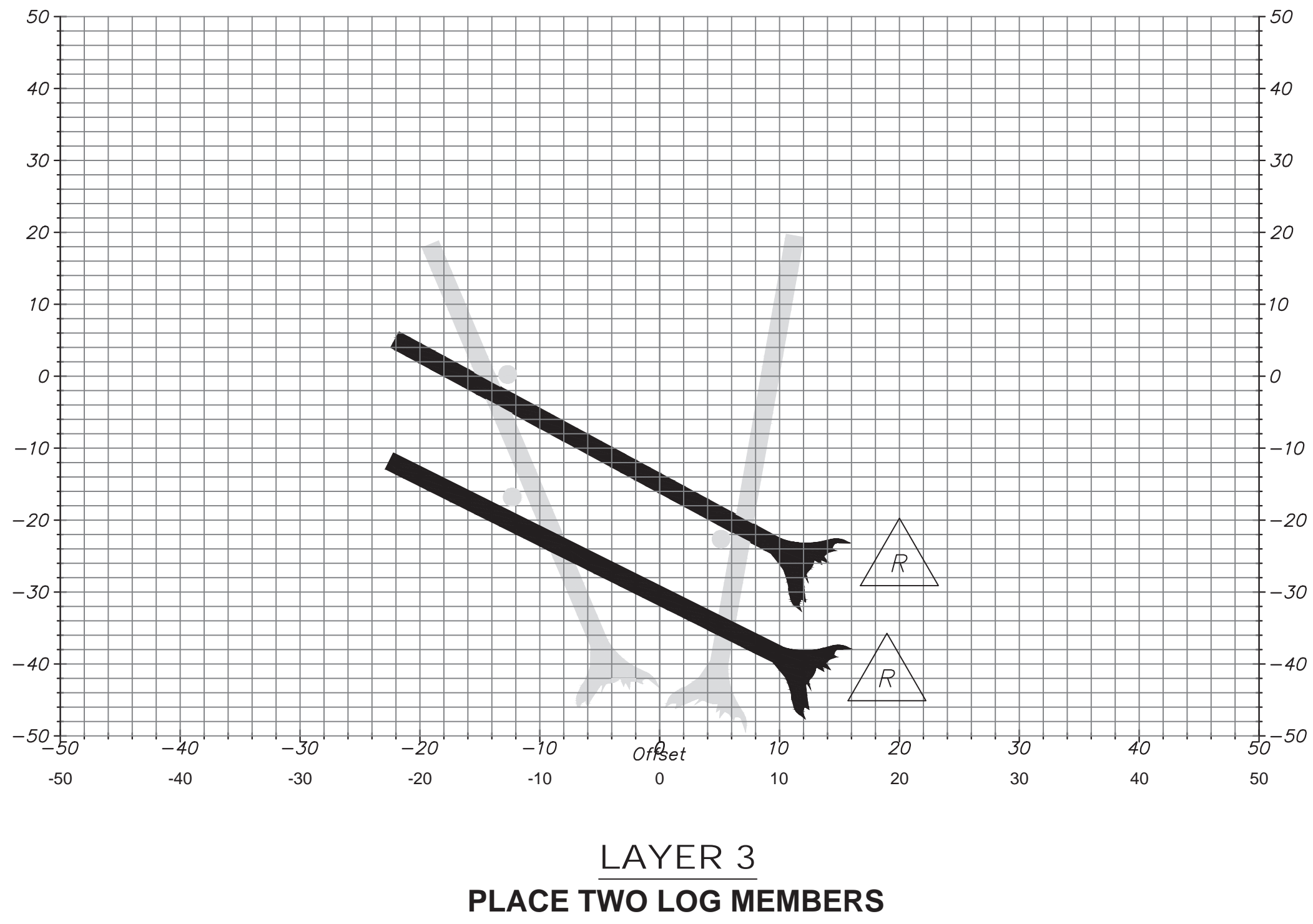
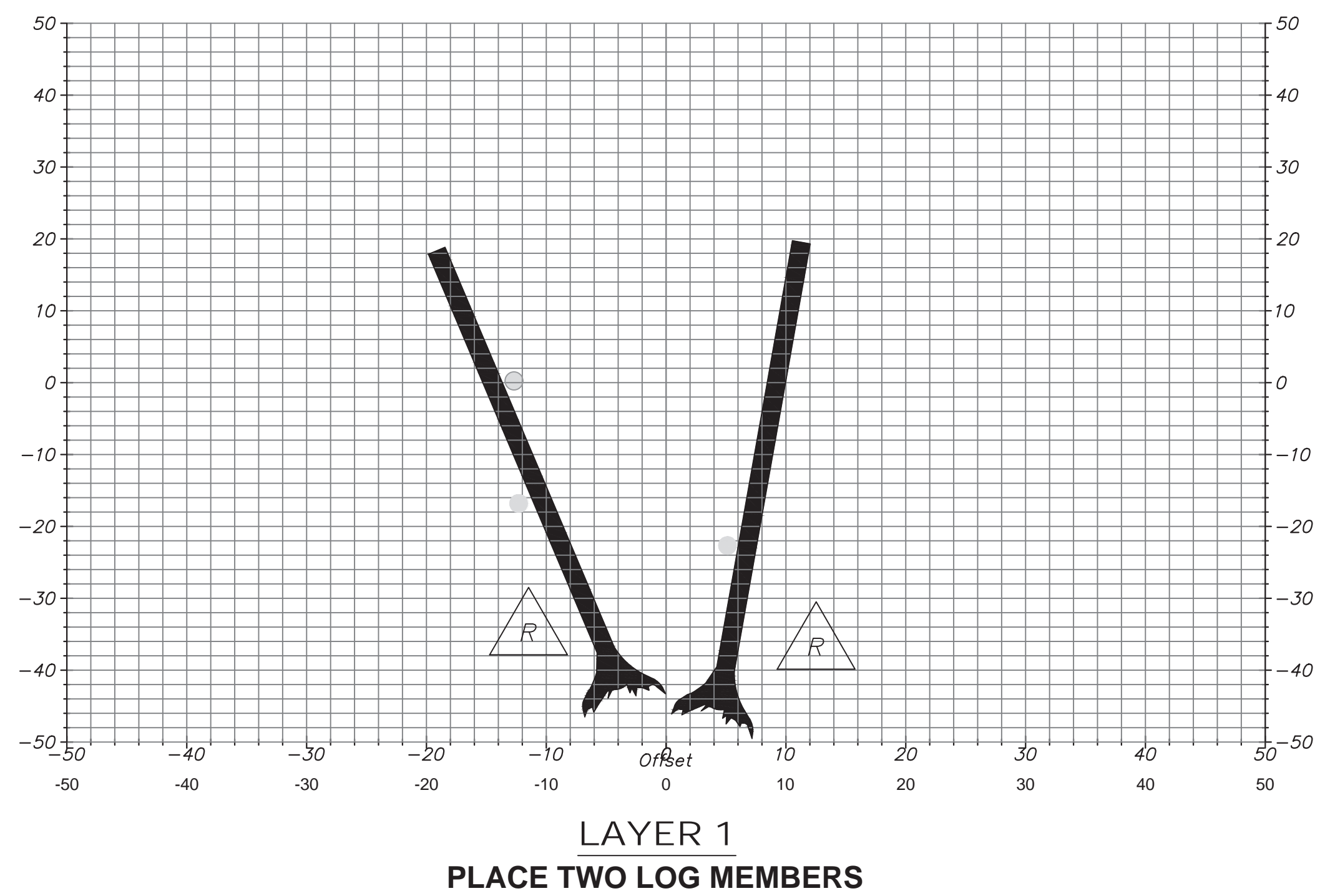
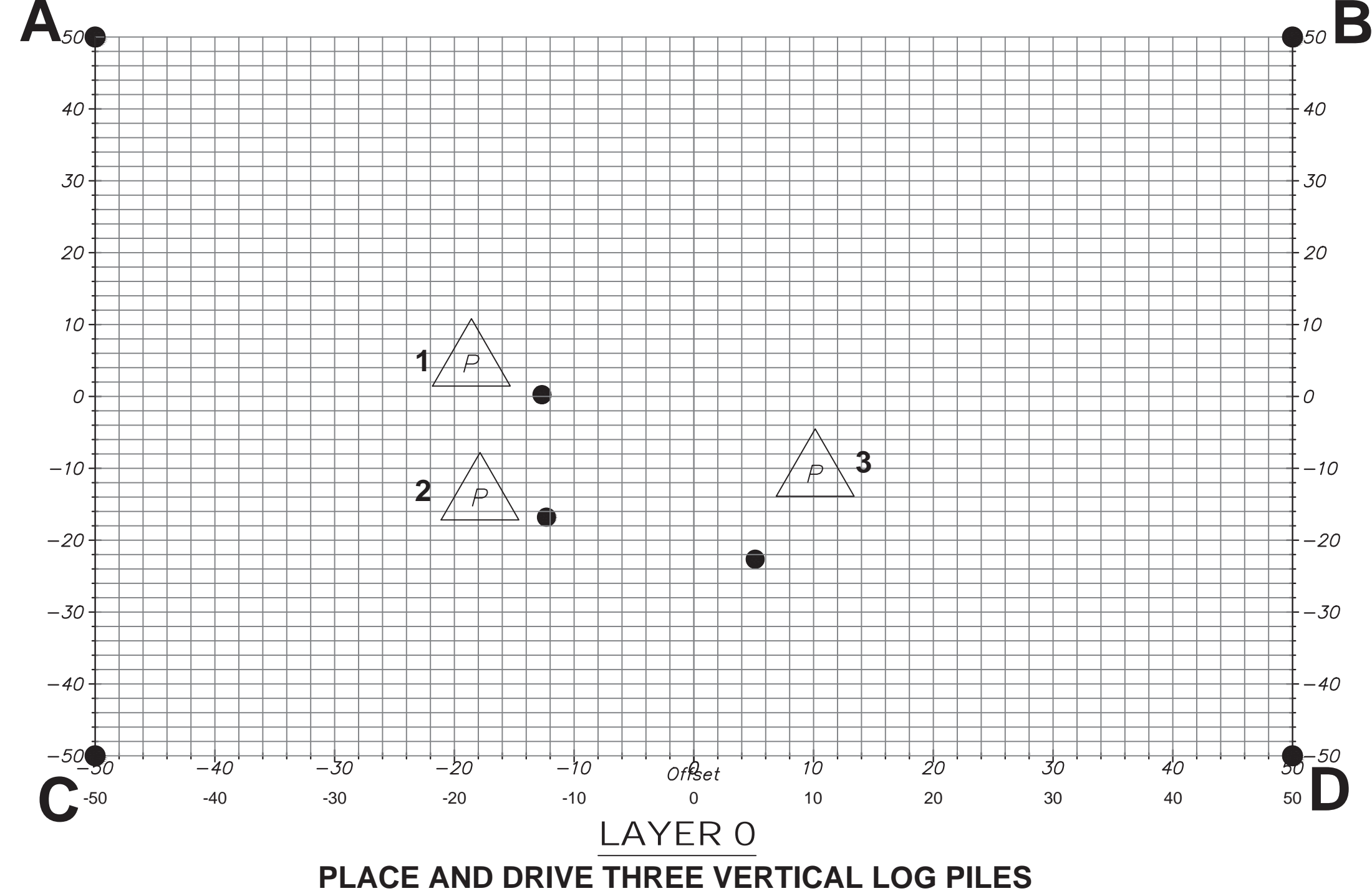
- ALL LOGS WILL BE DOUGLAS FIR, PONDEROSA PINE, OR WESTERN RED CEDAR TREES.
- LOGS WITH ROOTWADS SHALL HAVE A DIAMETER AS SHOWN MEASURED AT DBH, DEFINED AS 4.5 FEET ABOVE GROUND WHEN THE TREE WAS STANDING.
- THE CONTRACTOR SHALL PLACE LOGS AS ILLUSTRATED ON THIS SHEET UNLESS DIRECTED OTHERWISE BY THE CONTRACTING OFFICER.
- SOIL EXCAVATED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL GROUND FOLLOWING PLACEMENT OF ALL LOGS.
- THE LOCATION SHOWN ON THE SHEET IS APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BY THE CONTRACTING OFFICER.
- RACKING LOGS MAY BE EMBEDDED INTO BANK BASED UPON SITE CONDITIONS. EMBEDMENT TO BE ACHIEVED BY TRENCH EXCAVATION ABOVE OHW.
- RACKING LOGS MAY BE COMPRISED OF WHOLE TREES (NOT SHOWN FOR CLARITY) BASED UPON AVAILABILITY, ACCESS, AND EQUIPMENT.
- PILES TO BE DRIVEN WITH EXCAVATOR MOUNTED VIBRATORY EQUIPMENT. PILES TO BE DRIVEN IN A BATTERED (NON-VERTICAL) CONFIGURATION AS DIRECTED BY THE CONTRACTING OFFICER.
- PILES TO BE DRIVEN AND BROKEN AT THE STRUCTURE TOP,
- EXISTING WOODY MATERIAL AT THE STRUCTURE CONSTRUCTION SITE WILL BE MOVED OR PROTECTED FROM CONSTRUCTION ACTIVITIES AND THEN INCORPORATED INTO THE STRUCTURE AS INSTRUCTED BY THE CONTRACTING OFFICER.

**LWM STRUCTURE LOG SCHEDULE**

LOG ID	COLOR	DIA. (INCHES)	LENGTH (FEET)	ROOTWAD (Y/N)	QUANTITIES PER STRUCTURE	NOTES
R	Blue	18	40	Y	4	
P	Red	18- 12 to 15	40 25	N	5	

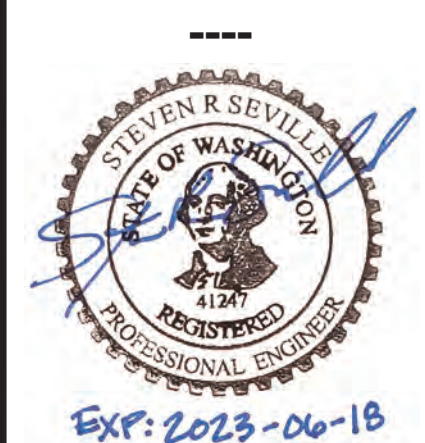
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Structure Number	A	B	C	D
1	N:209411.8421 E:1682836.0201	N:209411.8421 E:1682936.0201	N:209351.8421 E:1682836.0201	N:209351.8421 E:1682936.0201
2	N:209412.1070 E:1682965.3794	N:209341.8036 E:1683036.4950	N:209369.4376 E:1682923.1973	N:209299.1342 E:1682994.3129
3	N:209375.3792 E:1683038.9453	N:209284.7653 E:1683081.2432	N:209350.0004 E:1682984.5748	N:209259.3865 E:1683026.8748



Plot Date: 1/13/2022 2:22 PM  
 Save Date: 1/11/2022 2:28 PM  
 By: Dnh  
 File: P:\CHEC0000020\0400\CAD\SHSHEET\SEC-DT-X-CHEC000020.dwg  
 By: Willy Campbell

NO.	DATE	REVISION	REVIEWED BY:	DATE



CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

PROJECT NO.  
**CHEC0000020**

SHEET NO. **10** OF **18**

**DT03**

REVIEWED BY:	DATE:	REVIEW BY:	DATE:
NO.	DATE	NO.	DATE

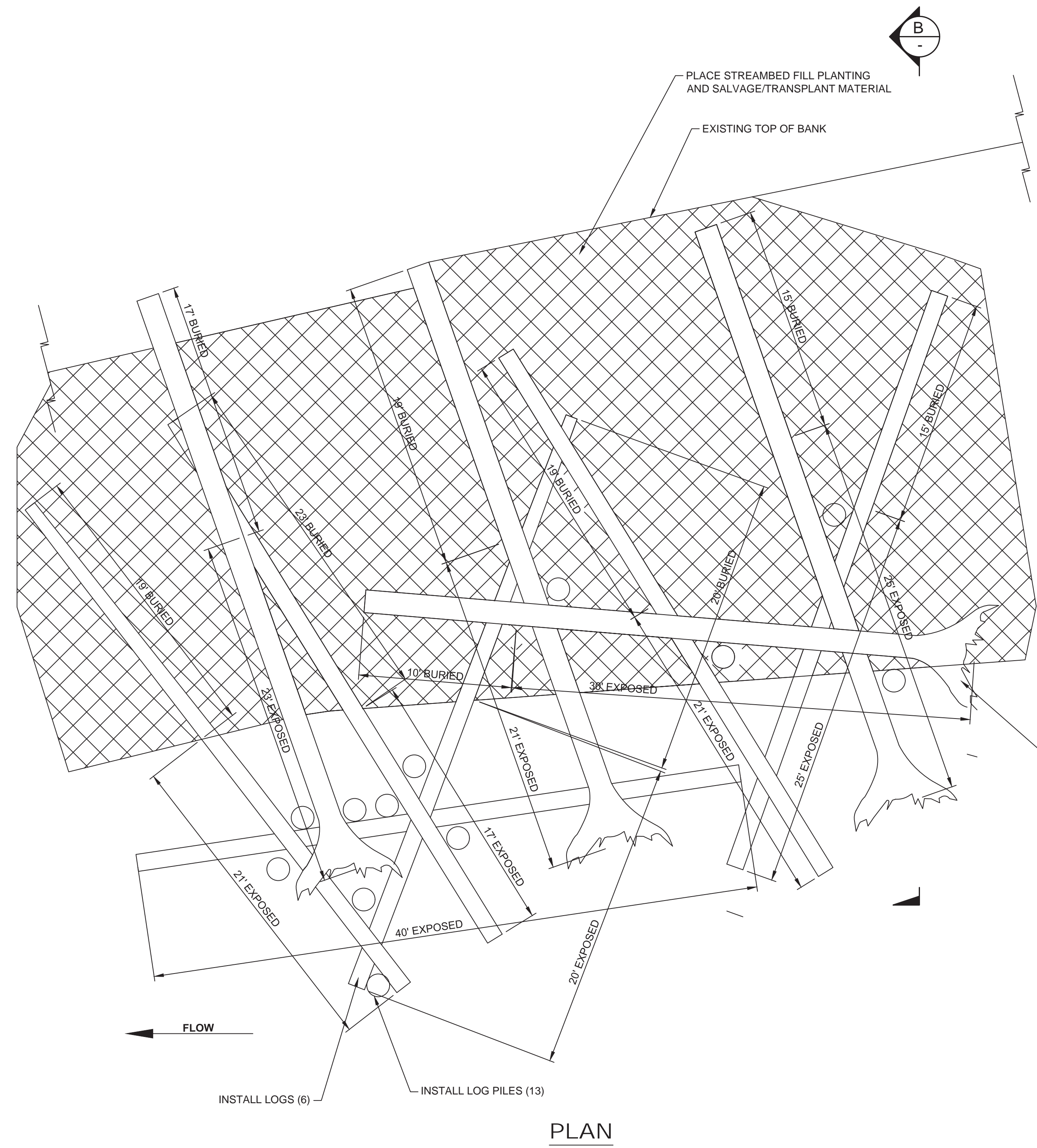


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 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO.  
**CHEC00000020**  
 SHEET NO. **11** OF **18**  
**DT04**



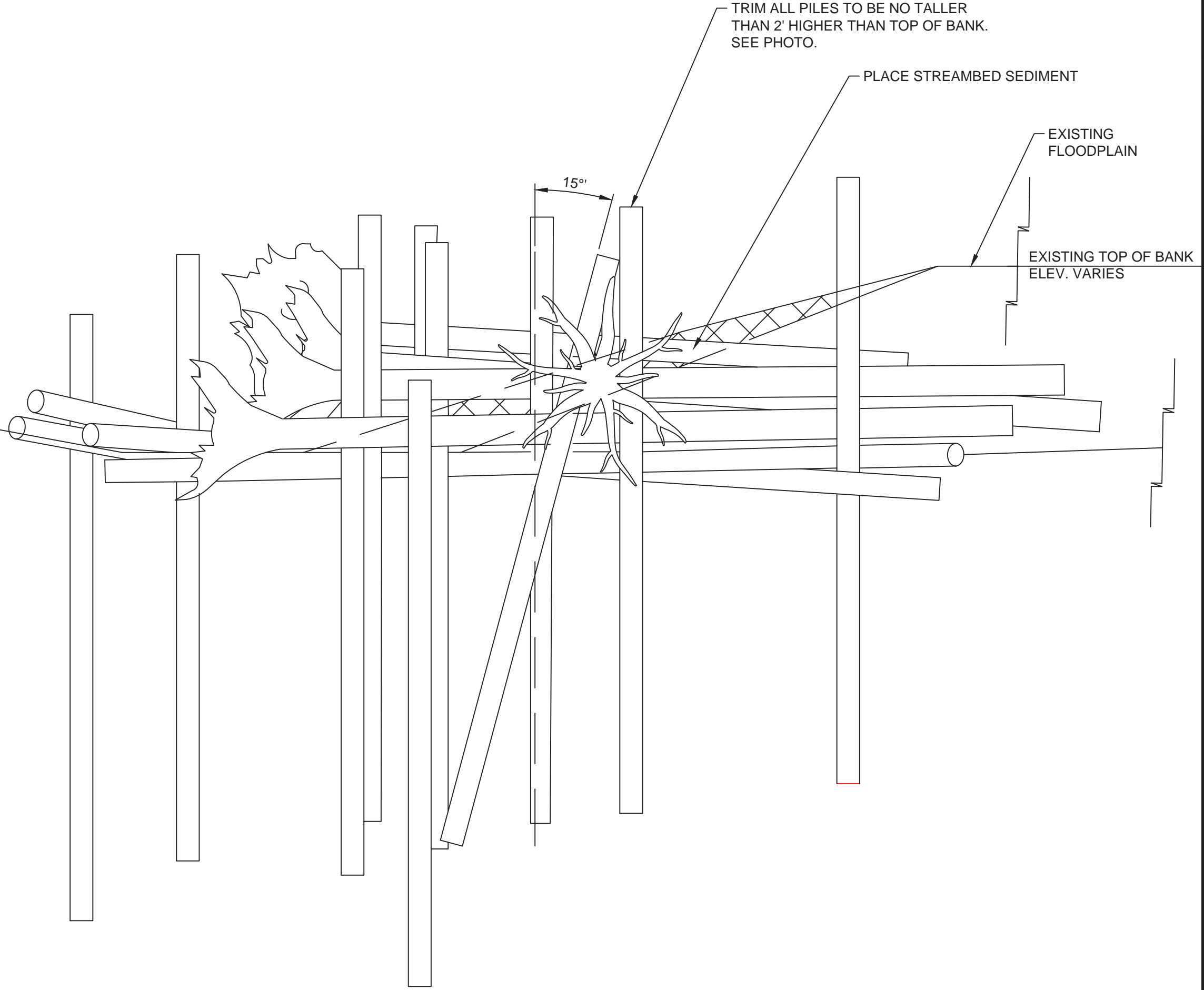
**PILE EXAMPLE PHOTO**

TOP OF EACH PILE TO BE SHAPED SIMILAR TO SHOWN. A ROUGH FINISH IS PREFERRED



**PLAN**

- 10-YR (APPROXIMATE) FLOW 8300 CFS
- 2-YR (APPROXIMATE) FLOW 5600 CFS
- SPRING RUNOFF (APPROXIMATE) FLOW 1900 CFS
- SUMMER RUNOFF (APPROXIMATE) FLOW 200 CFS
- TOE OF GRADING



**SECTION B - LOOKING DOWNSTREAM**

**1** BANK ENHANCEMENT LWM TYPE  
 DT04

**NOTES**

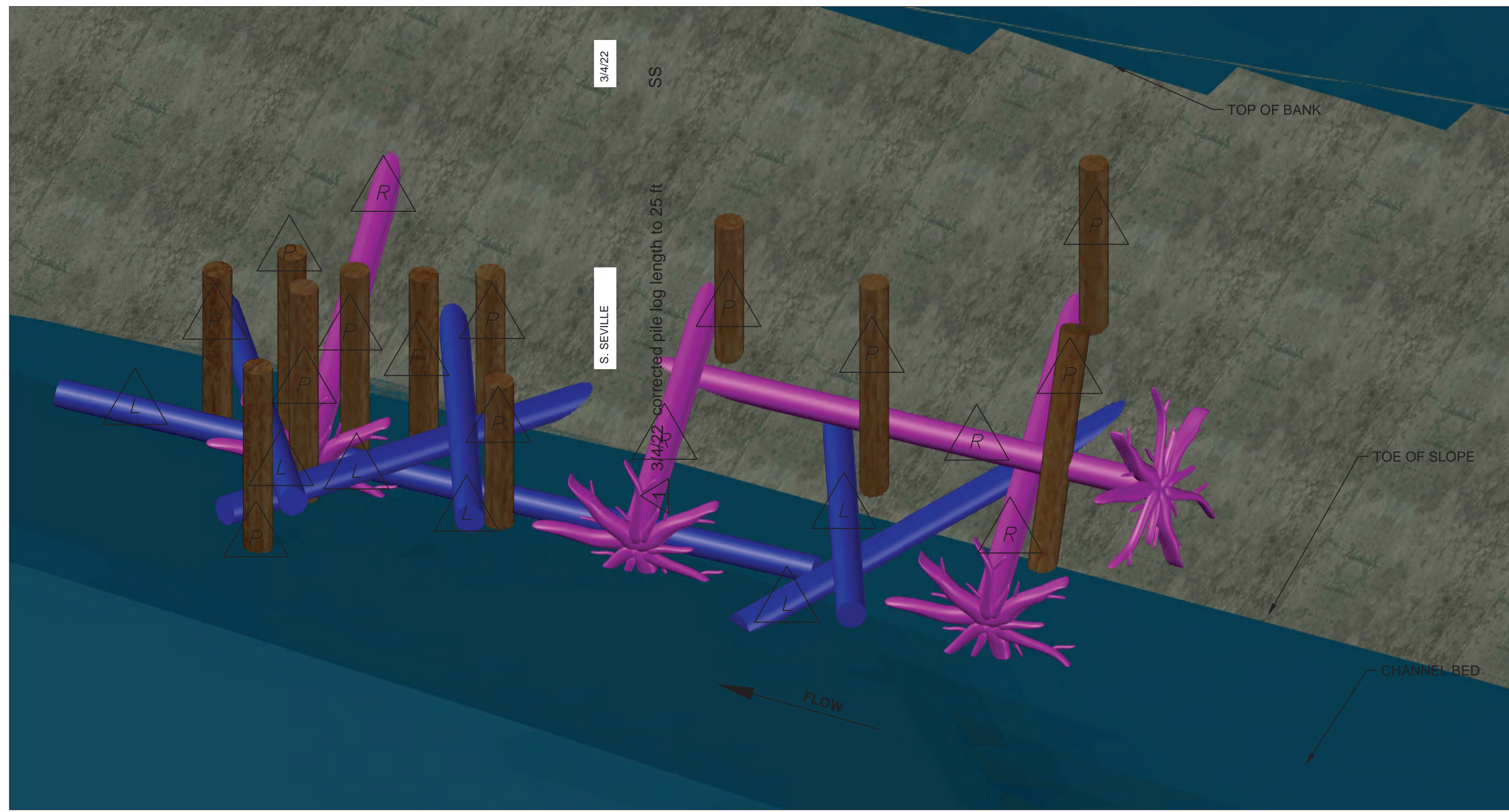
1. REFER TO 3D DETAILS AND LAYERING PLANS FOR MORE INSTALLATION INFORMATION.
2. INSTALL 20 PIECES OF RACKING AS DIRECTED BY THE CONTRACTING OFFICER.
3. INSTALL 12 C.Y. OF SLASH AS DIRECTED BY THE CONTRACTING OFFICER.

Plot Date: 1/13/2022 2:25 PM  
 Save Date: 1/11/2022 2:25 PM  
 By: Dnh  
 File: P:\ICHEC00000020\0400\CAD\SHSHEET\SEC-DT-X-CHEC0020.dwg  
 By: Willy Campbell

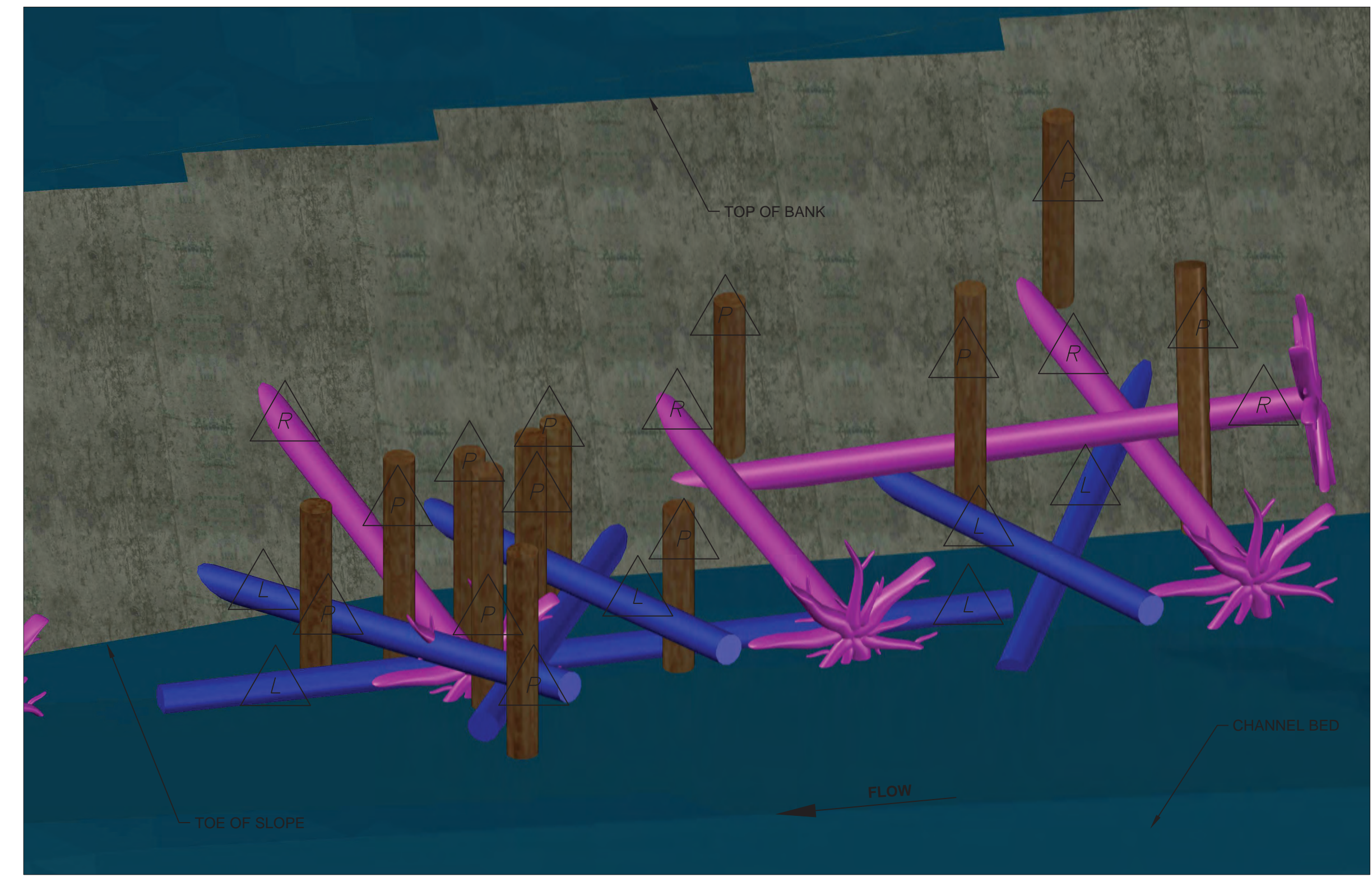
DATE: 3/4/22	BY: OK
REVIEWED BY: S. SEVILLE	SS
NO. DATE REVISION	
1 3/4/22 corrected pile log diameter and length	



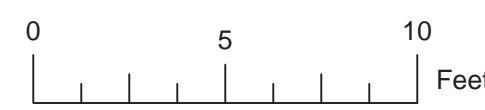
CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO. **CHEC00000020**  
 SHEET NO. **12** OF **18**  
**DT05**



BANK ENHANCEMENT 2 LWM STRUCTURE - LOOKING DOWNSTREAM PERSPECTIVE



BANK ENHANCEMENT 2 LWM STRUCTURE - LOOKING UPSTREAM PERSPECTIVE



**NOTES**

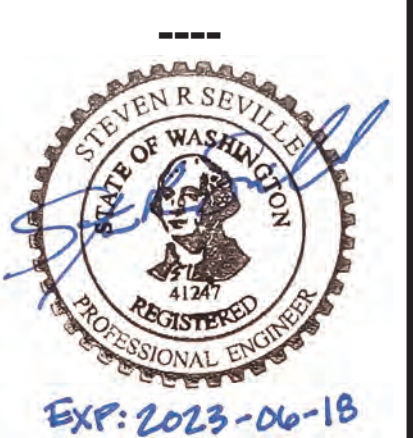
- ALL LOGS WILL BE DOUGLAS FIR, PONDEROSA PINE, OR WESTERN RED CEDAR TREES.
- LOGS WITH ROOTWADS SHALL HAVE A DIAMETER AS SHOWN MEASURED AT DBH, DEFINED AS 4.5 FEET ABOVE GROUND WHEN THE TREE WAS STANDING.
- THE CONTRACTOR SHALL PLACE LOGS AS ILLUSTRATED ON THIS SHEET UNLESS DIRECTED OTHERWISE BY THE CONTRACTING OFFICER.
- SOIL EXCAVATED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL GROUND FOLLOWING PLACEMENT OF ALL LOGS.
- THE LOCATION SHOWN ON THE SHEET IS APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BY THE CONTRACTING OFFICER.
- RACKING LOGS MAY BE EMBEDDED INTO BANK BASED UPON SITE CONDITIONS. EMBEDMENT TO BE ACHIEVED BY TRENCH EXCAVATION ABOVE OHW.
- RACKING LOGS MAY BE COMPRISED OF WHOLE TREES (NOT SHOWN FOR CLARITY) BASED UPON AVAILABILITY, ACCESS, AND EQUIPMENT.
- PILES TO BE DRIVEN WITH EXCAVATOR MOUNTED VIBRATORY EQUIPMENT. PILES TO BE DRIVEN IN A BATTERED (NON-VERTICAL) CONFIGURATION AS DIRECTED BY THE CONTRACTING OFFICER.
- PILES TO BE DRIVEN AND BROKEN OR ROUGH CUT AT THE STRUCTURE TOP.
- EXISTING WOODY MATERIAL AT THE STRUCTURE CONSTRUCTION SITE WILL BE MOVED OR PROTECTED FROM CONSTRUCTION ACTIVITIES AND THEN INCORPORATED INTO THE STRUCTURE AS INSTRUCTED BY THE CONTRACTING OFFICER.

Structure Number	A	B	C	D
1	N:209372.3513 E:1682767.8992	N:209404.7150 E:1682862.5173	N:209315.5804 E:1682797.3175	N:209347.9442 E:1682881.9356

REFER TO DETAIL SHEET DT06 FOR A, B, C, & D LOCATION

LWM STRUCTURE LOG SCHEDULE						
LOG ID	COLOR	DIA. (INCHES)	LENGTH (FEET)	ROOTWAD (Y/N)	QUANTITIES PER STRUCTURE	NOTES
R		18	40	Y	4	
P		18- 12 to 15	40 25	N	12	
L		18	40	N	6	

NO.	DATE	REVISION	REVIEWED BY:	DATE	REVISION	BY



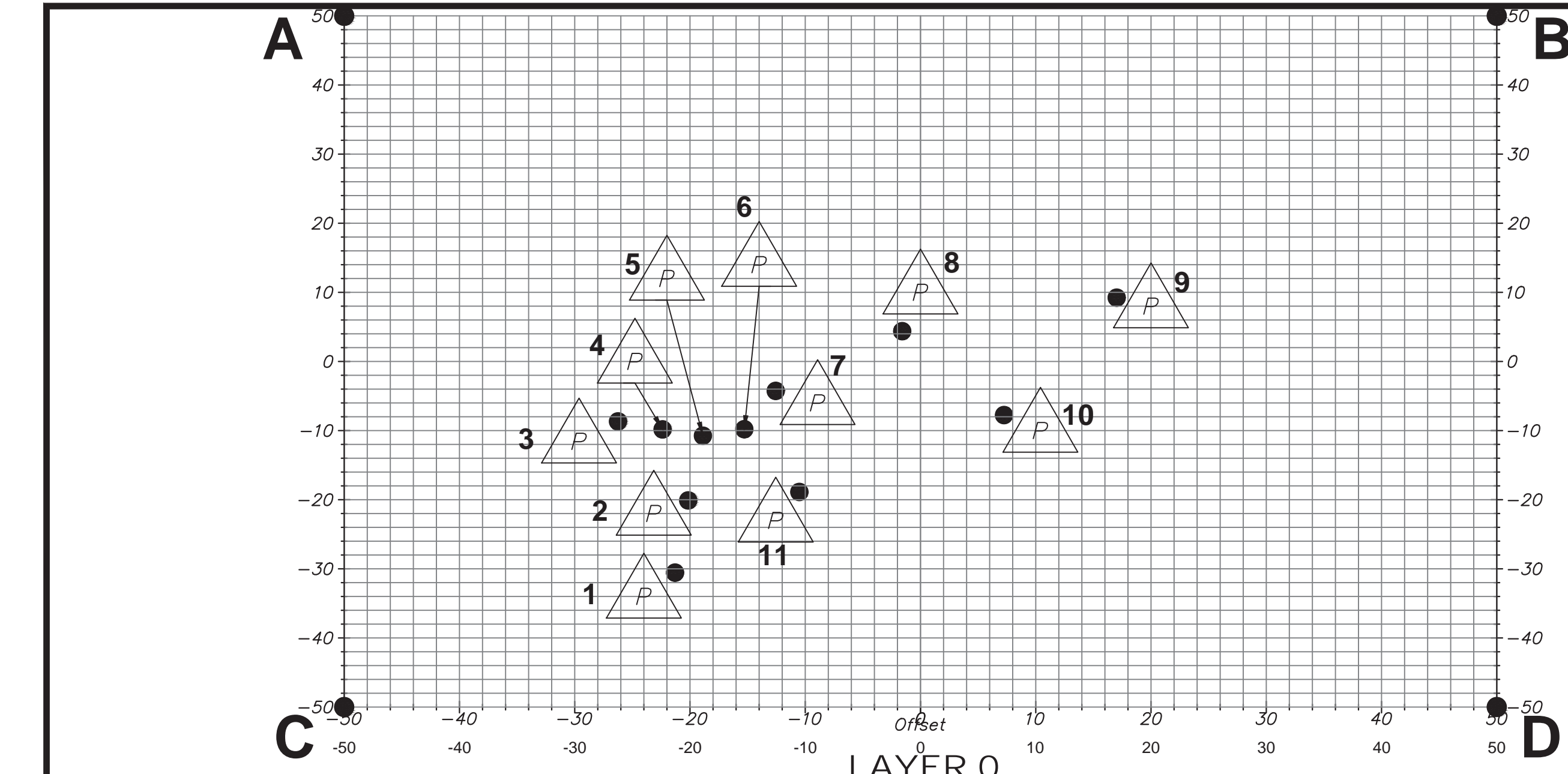
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FIRST SUBMITTAL DATE: 1/14/22

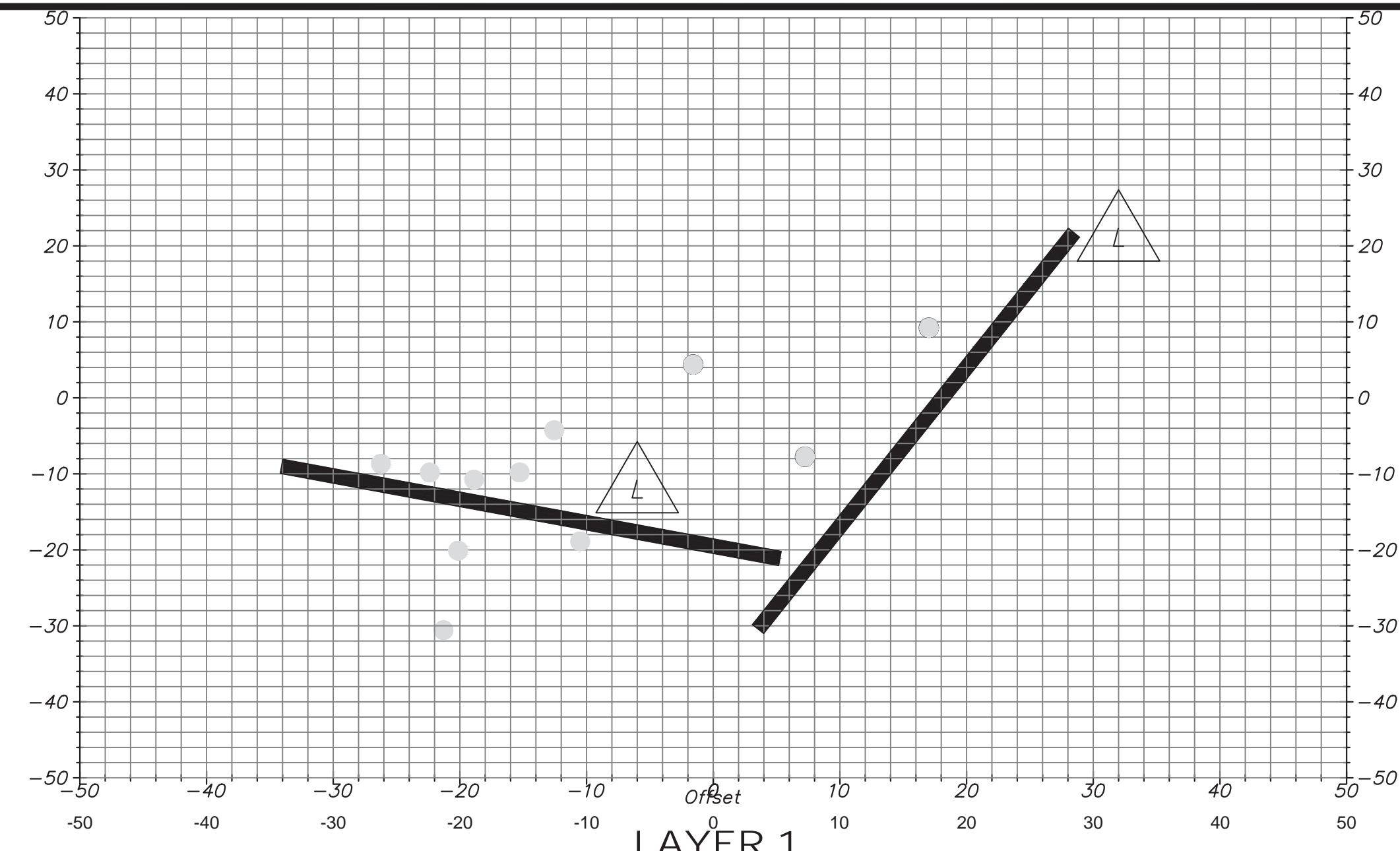
PROJECT NO.  
**CHEC00000020**

SHEET NO. **13** OF **18**

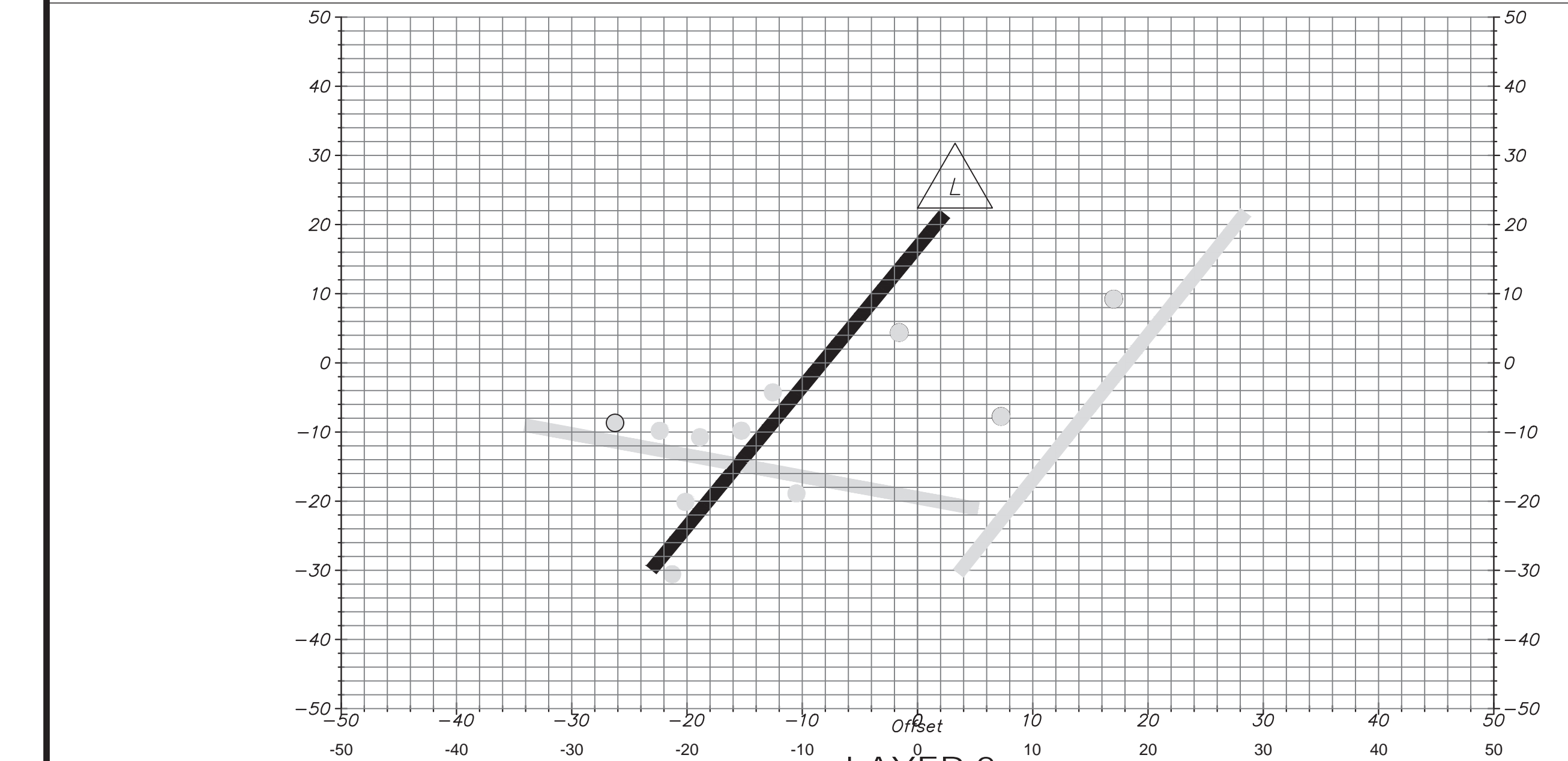
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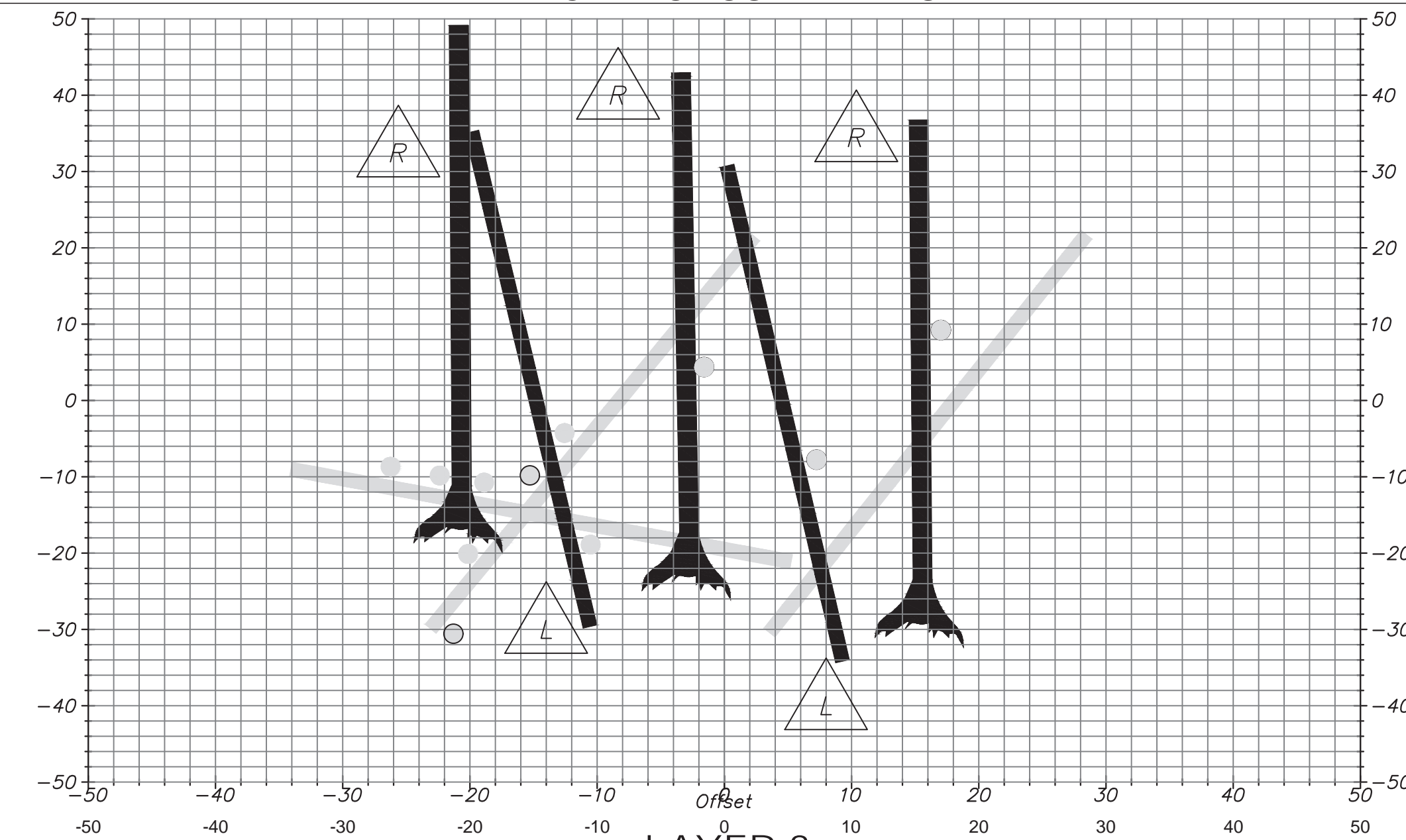
**LAYER 0  
 PLACE AND DRIVE THIRTEEN VERTICAL LOG PILES**



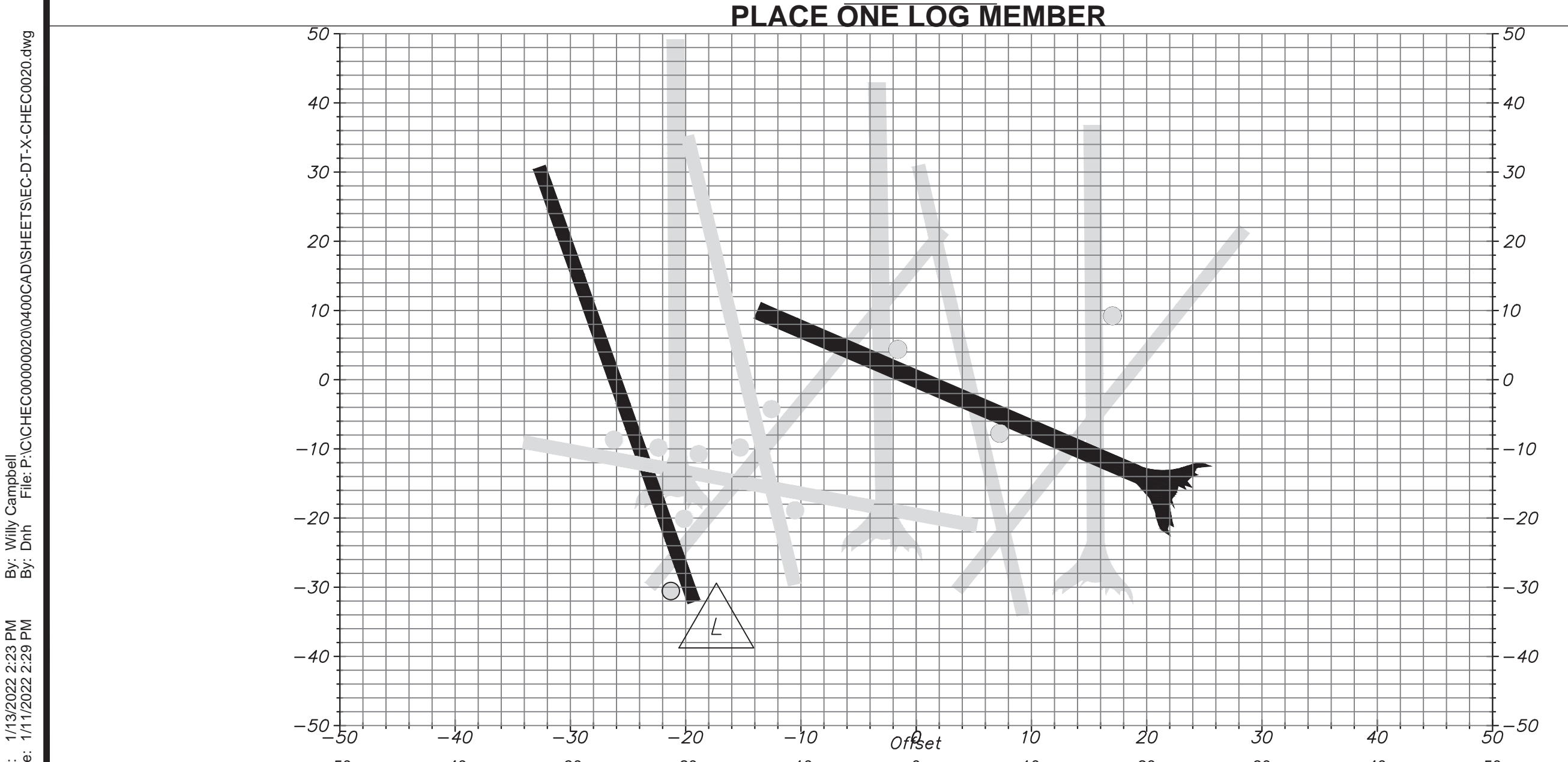
**LAYER 1  
 PLACE TWO LOG MEMBERS**



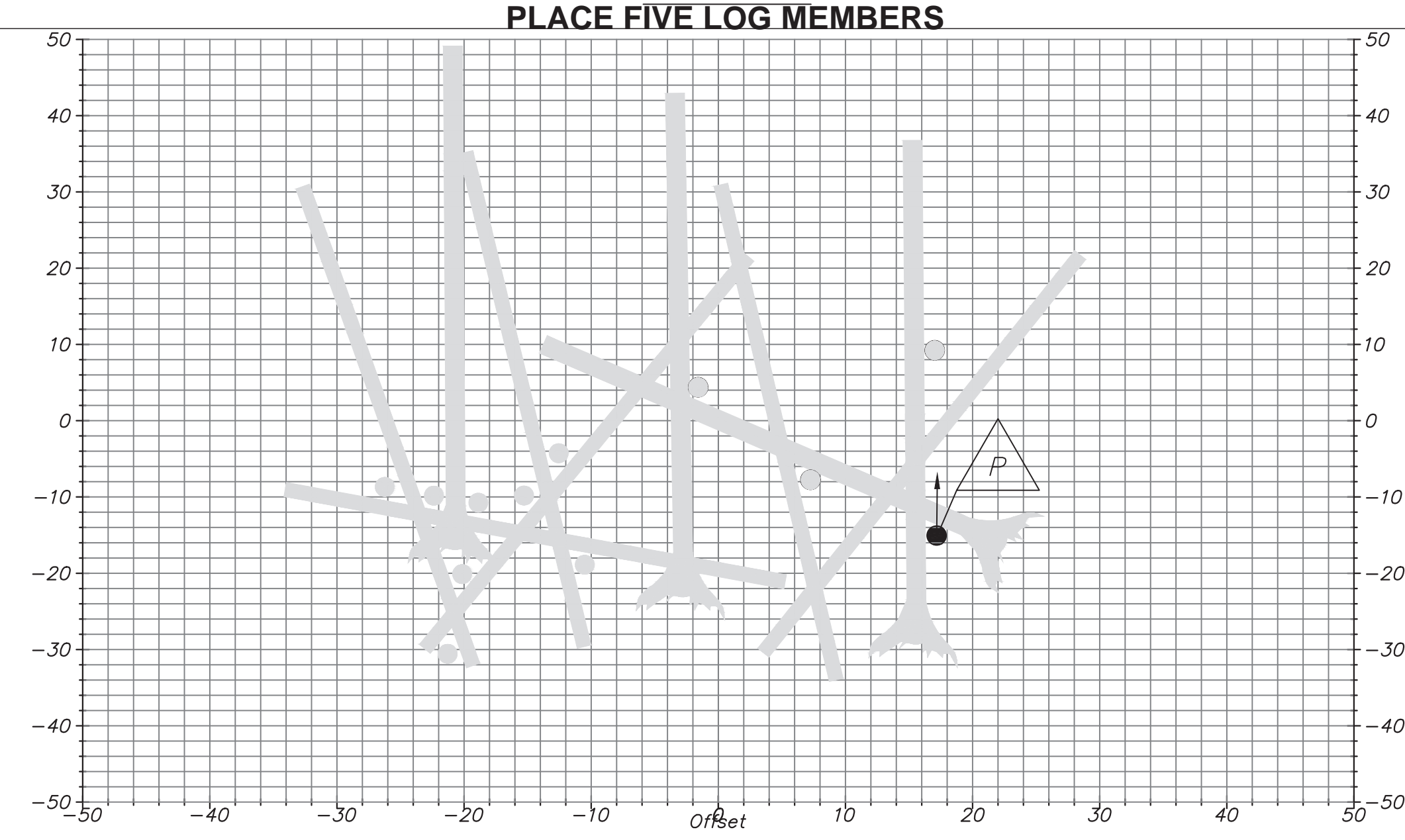
**LAYER 2  
 PLACE ONE LOG MEMBER**



**LAYER 3  
 PLACE FIVE LOG MEMBERS**



**LAYER 4  
 PLACE ONE LOG MEMBER**



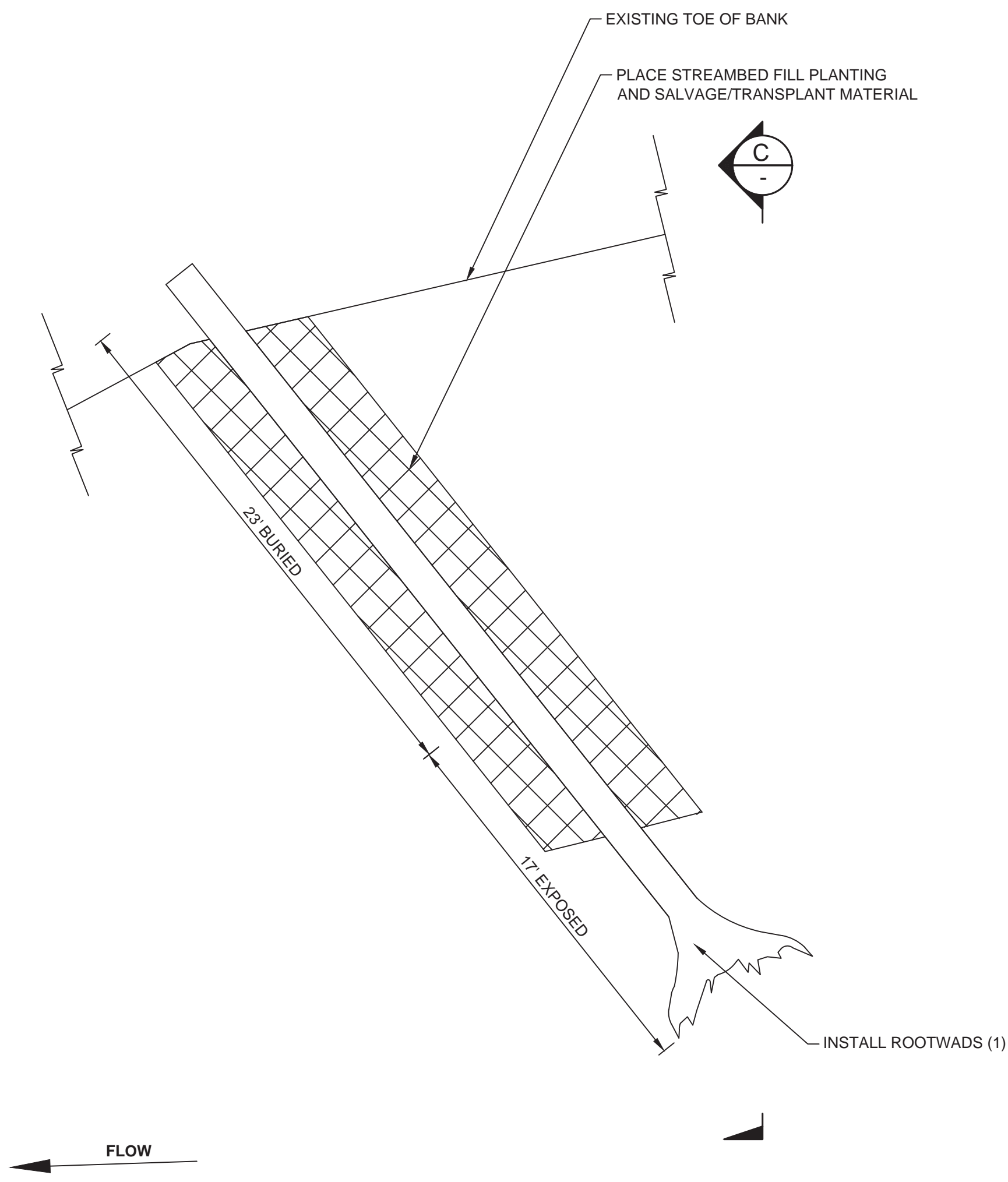
**LAYER 5  
 PLACE AND DRIVE PILE AT 15 DEGREES PER ARROW**

Plot Date: 1/13/2022 2:23 PM  
 By: Willy Campbell  
 Save Date: 1/11/2022 2:23 PM  
 File: P:\CHEC00000020\0400\CAD\SHEET\SHEET DT-X-CHEC0020.dwg

REVIEWED BY:	DATE:	REVIEW BY:	DATE:
NO.	DATE	NO.	DATE

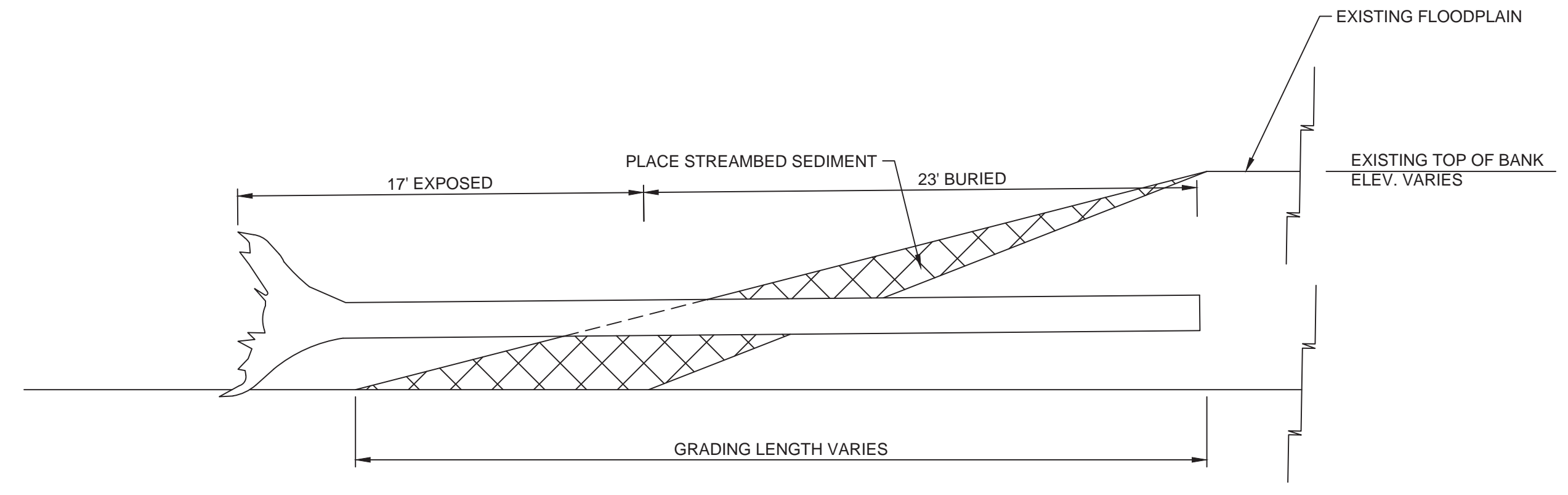


CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO.  
**CHEC00000020**  
 SHEET NO. **14** OF 18  
**DT07**



**PLAN**

10-YR (APPROXIMATE) FLOW 8300 CFS  
 2-YR (APPROXIMATE) FLOW 5600 CFS  
 SPRING RUNOFF (APPROXIMATE) FLOW 1900 CFS  
 SUMMER RUNOFF (APPROXIMATE) FLOW 200 CFS  
 TOE OF GRADING



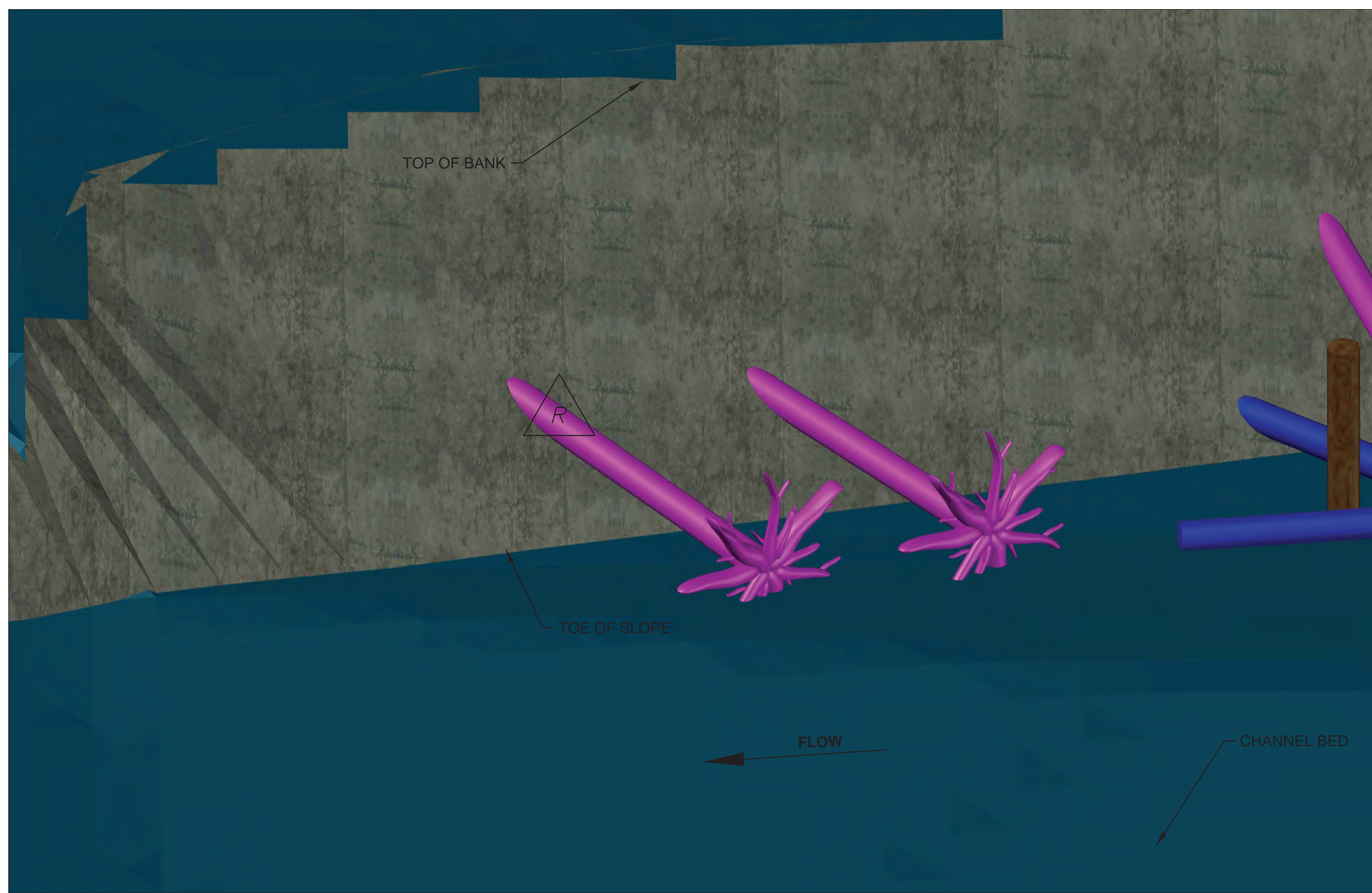
**SECTION C - LOOKING DOWNSTREAM**

**1 BANK ENHANCEMENT LWM TYPE 3**  
**DT07**

**NOTES**

1. REFER TO 3D DETAILS AND LAYERING PLANS FOR MORE INSTALLATION INFORMATION.

Plot Date: 1/13/2022 2:23 PM  
 Save Date: 1/11/2022 2:23 PM  
 By: Dnh  
 File: P:\C\CHEC00000020\04\00\CAD\SHSHEET\SEC-DT-X-CHEC0020.dwg

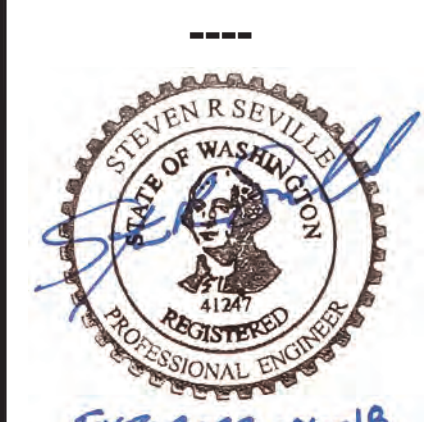


BANK ENHANCEMENT 3 LWM STRUCTURE PERSPECTIVE

**NOTES**

1. ALL LOGS WILL BE DOUGLAS FIR, PONDEROSA PINE, OR WESTERN RED CEDAR TREES.
2. LOGS WITH ROOTWADS SHALL HAVE A DIAMETER AS SHOWN MEASURED AT DBH, DEFINED AS 4.5 FEET ABOVE GROUND WHEN THE TREE WAS STANDING.
3. THE CONTRACTOR SHALL PLACE LOGS AS ILLUSTRATED ON THIS SHEET UNLESS DIRECTED OTHERWISE BY THE CONTRACTING OFFICER.
4. SOIL EXCAVATED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL GROUND FOLLOWING PLACEMENT OF ALL LOGS.
5. THE LOCATION SHOWN ON THE SHEET IS APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BY THE CONTRACTING OFFICER.

REVIEWED BY:	REVIEW BY	DATE	DATE	BY	DATE
NO.	REVISION				

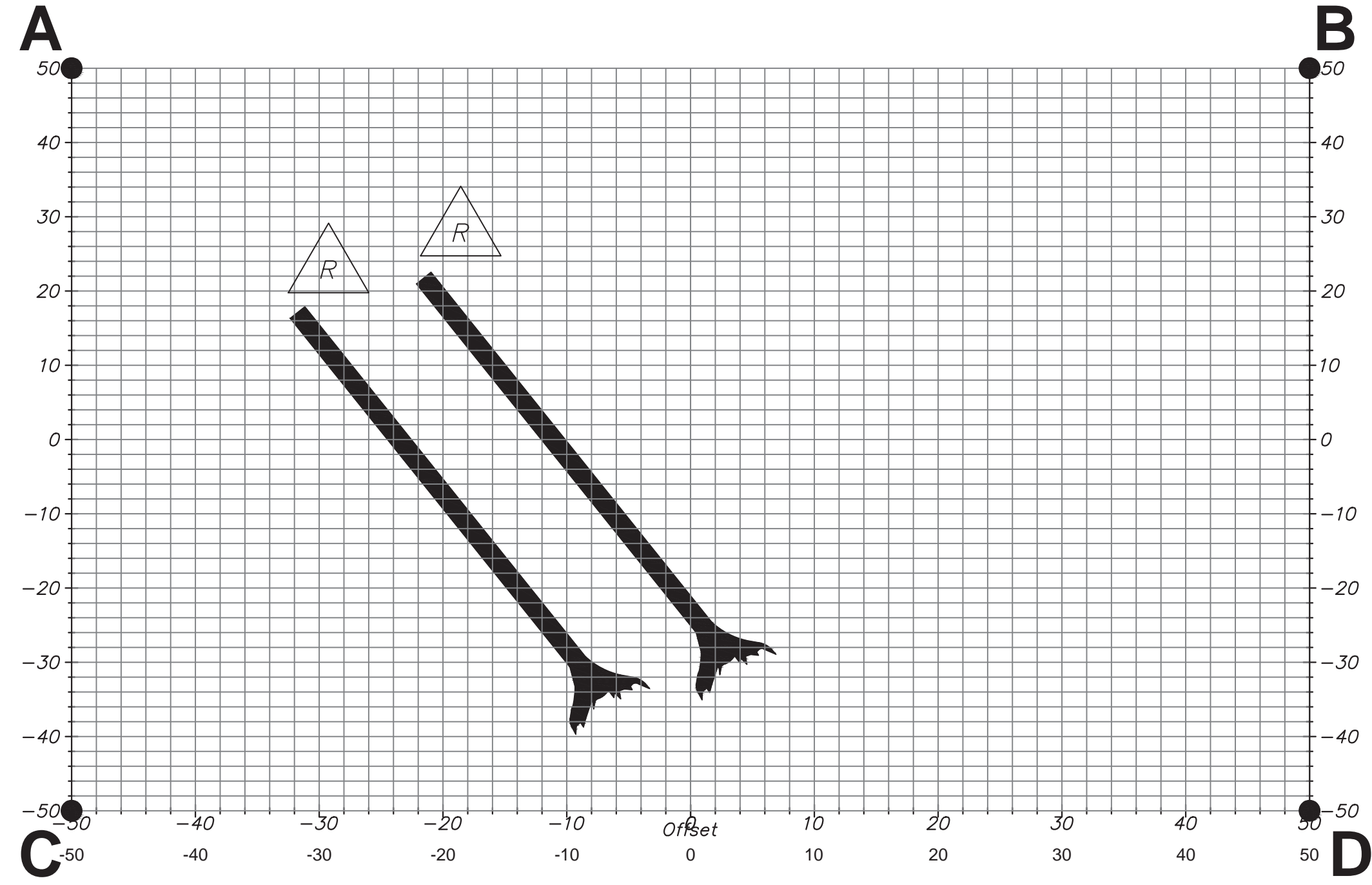


CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH  
 FIRST SUBMITTAL DATE: 1/14/22  
 PROJECT NO.  
**CHEC00000020**  
 SHEET NO. **15** OF 18  
**DT08**

LWM STRUCTURE LOG SCHEDULE						
LOG ID	COLOR	DIA. (INCHES)	LENGTH (FEET)	ROOTWAD (Y/N)	QUANTITIES PER STRUCTURE	NOTES
		18	40	Y	1	



Structure Number	A	B	C	D
1	N:209390.0164 E:1682732.4608	N:209390.0164 E:1682832.4608	N:209330.0164 E:1682732.4608	N:209330.0164 E:1682832.4608



LAYER 0  
PLACE ONE LOG MEMBER

Plot Date: 1/13/2022 2:24 PM  
Save Date: 1/11/2022 2:28 PM  
By: Willy Campbell  
File: P:\CHEC00000020\04\00\CAD\SHSHEET\SEC-DT-X-CHEC0020.dwg

**DAVID EVANS  
AND ASSOCIATES INC.**  
14432 SE EASTGATE WAY #400  
BELLEVUE, WA, 98007  
Phone: 425.519.6500

ICICLE CREEK STREAMBANK RESTORATION – RM 1.0  
FROM MM PROPERTY

CHELAN COUNTY NATURAL RESOURCE DEPARTMENT  
LWM LAYERIAL PLANS TYPE 3

WA

CHELAN, WASHINGTON

REVIEWED BY:	REVIEW BY	DATE	DATE
△	BY CK	----	----
NO.	REVISION		

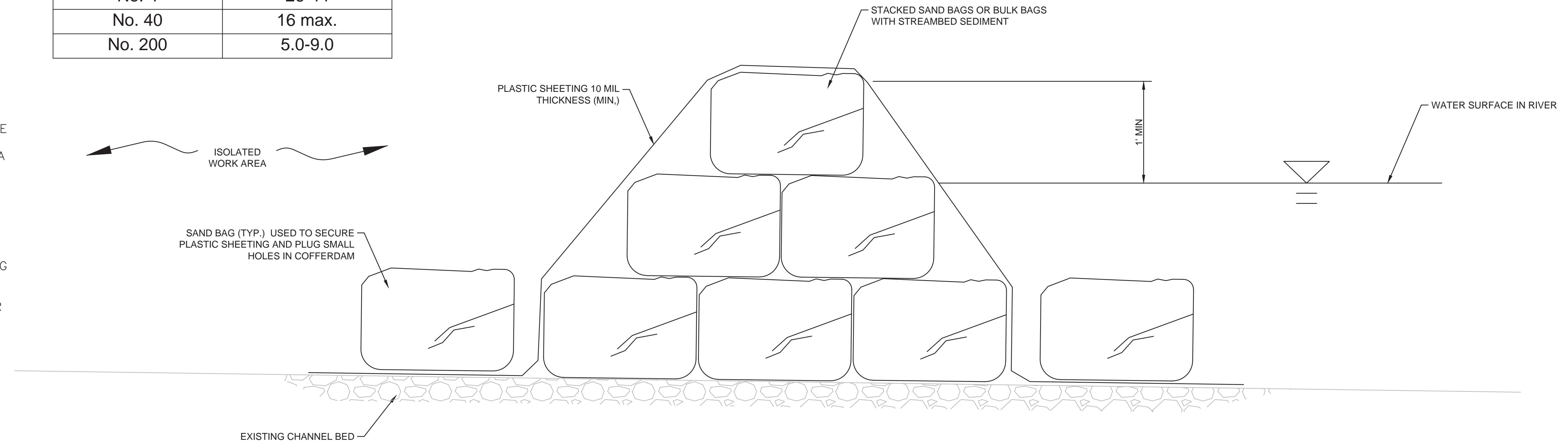


CHECKED BY: SRSE  
DESIGNED BY: DNH  
DRAWN BY: DNH  
FIRST SUBMITTAL DATE: 1/14/22  
PROJECT NO.  
**CHEC00000020**  
SHEET NO. **16** OF 18  
**DT09**

# COFFERDAM NOTES

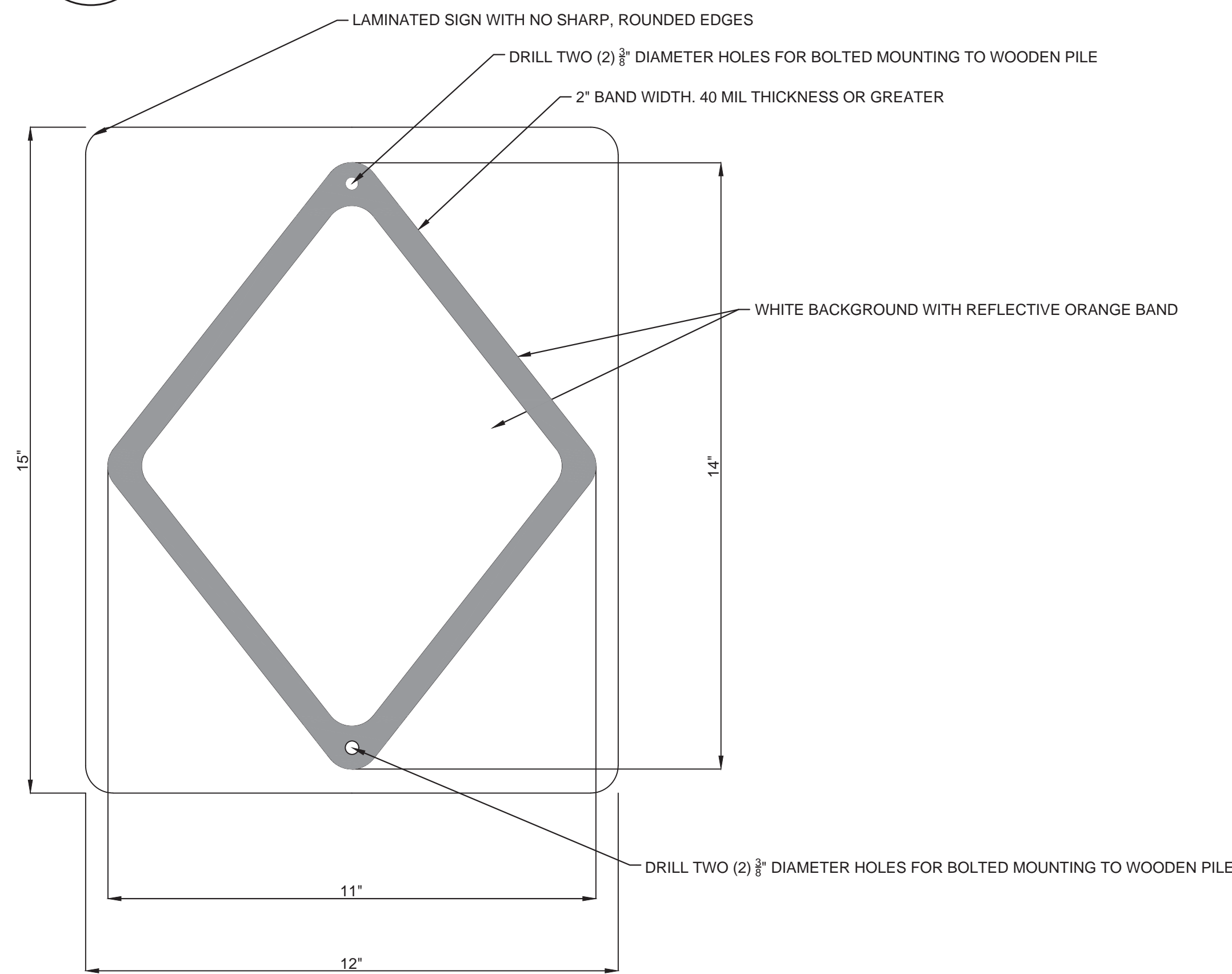
1. THE CONTRACTOR SHALL INSTALL IN-WATER WORK AREA ISOLATION MEASURES WHENEVER EQUIPMENT IS WORKING IN THE WETTED CHANNEL, UNLESS OTHERWISE ALLOWED WITHIN PROJECT PERMITS. IN-WATER WORK AREA ISOLATION SHALL BE SUFFICIENT TO ISOLATE THE WORK AREA FROM THE ACTIVELY FLOWING CHANNEL AND CONTAIN SEDIMENT AND TURBID WATERS.
2. IN-WATER WORK AREA ISOLATION SHALL BE INSTALLED IN LOCATIONS SHOWN ON THESE PLANS, OR AS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER.
3. PRIOR TO BEGINNING WORK IN ANY ISOLATED IN-WATER WORK AREA, FISH SHALL BE REMOVED FROM ISOLATED AREA. FISH REMOVAL WILL BE PERFORMED BY THE CONTRACTING AGENCY. THE CONTRACTOR SHALL PROVIDE NOTICE FIVE (5) WORKING DAYS PRIOR TO NEEDING FISH REMOVAL TO OCCUR.
4. COFFERDAM SHALL BE USED TO ISOLATE IN-WATER WORK AREAS TO PERFORM WORK IN THE WETTED CHANNEL. DEWATERING IS NOT REQUIRED, ALTHOUGH DEWATERING TECHNIQUES MAY BE NECESSARY TO CONTROL TURBIDITY IN THE WORK AREA AND ALLOW FOR CONSTRUCTION IN THE DRY. IF DEWATERING IS IMPLEMENTED ALTERNATE IN-WATER WORK AREA ISOLATION METHODS MAY BE NECESSARY. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND FLOW CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO ANY DEWATERING ACTIVITIES. COFFERDAMS MAY BE CONSTRUCTED AS SHOWN IN THESE PLANS. ALTERNATIVE METHODS OF COFFERDAM CONSTRUCTION ARE ACCEPTABLE IF APPROVED BY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL SUBMIT ANY ALTERNATE COFFERDAM PLANS FOR REVIEW AND APPROVAL AT LEAST FIVE (5) WORKING DAYS PRIOR TO COFFERDAM INSTALLATION.
5. BULK BAGS AND SAND BAGS FOR COFFERDAMS SHALL BE FILLED WITH COFFERDAM GRAVEL OR STREAMBED SEDIMENT PER SPECIFICATION 9-03.11(1).

STREAMBED SEDIMENT	
Sieve Size	Percent Passing
0'-2.50"	99-100
0'-2"	65-95
0'-1"	50-85
No. 4	26-44
No. 40	16 max.
No. 200	5.0-9.0



## 1 SAND BAG COFFERDAM DETAIL - TYPICAL SECTION

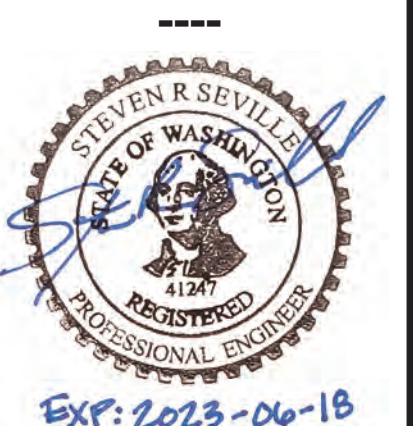
RDDT01



## 2 IN-WATER HAZARD SIGN PROVIDED BY OTHERS

RDDT01

NO.	DATE	REVISION	REVIEWED BY	DATE	BY



CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

PROJECT NO.  
**CHEC00000020**

SHEET NO. 17 OF 18

**RDDT01**

REVIEWED BY:	DATE:	REVISION:
NO.	DATE	REVISION



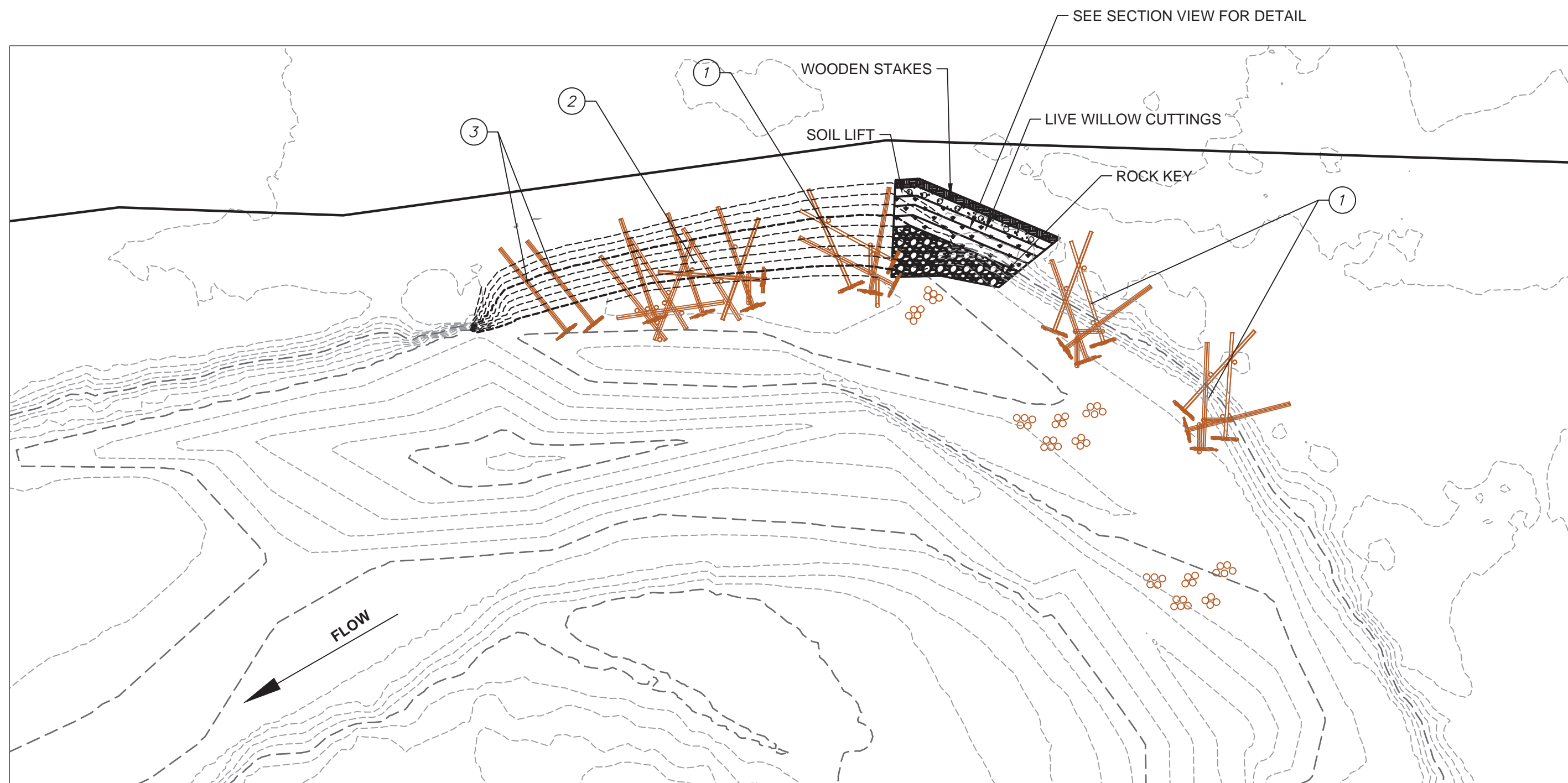
CHECKED BY: SRSE  
 DESIGNED BY: DNH  
 DRAWN BY: DNH

FIRST SUBMITTAL DATE: 1/14/22

PROJECT NO.  
**CHEC00000020**

SHEET NO. **18** OF 18

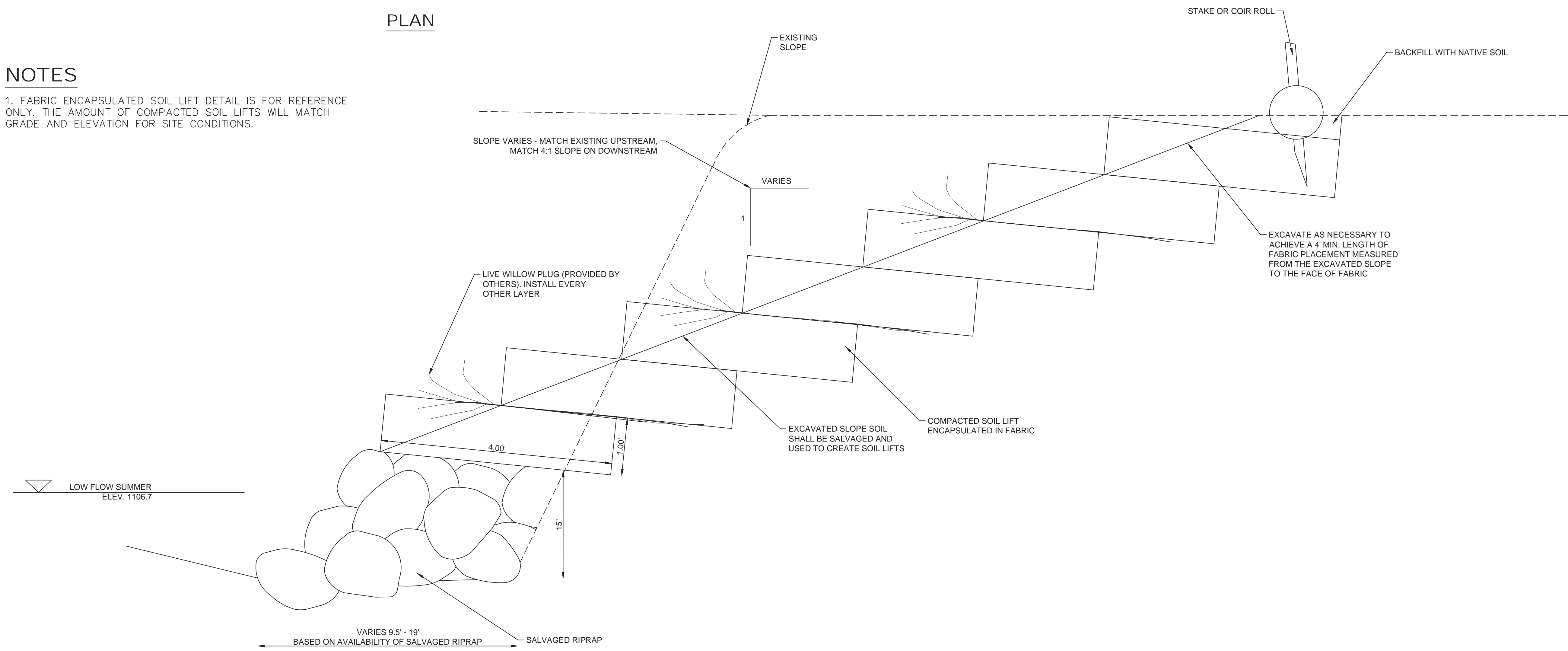
**LD01**



**PLAN**

**NOTES**

1. FABRIC ENCAPSULATED SOIL LIFT DETAIL IS FOR REFERENCE ONLY. THE AMOUNT OF COMPACTED SOIL LIFTS WILL MATCH GRADE AND ELEVATION FOR SITE CONDITIONS.

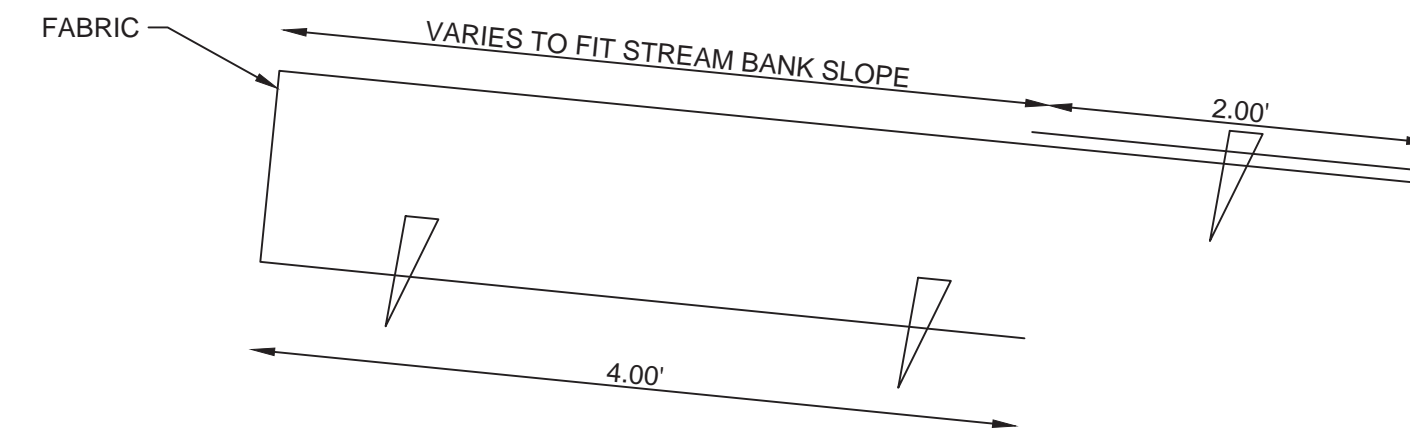


**SECTION**

**1 FABRIC ENCAPSULATED SOIL LIFTS**

**NOTES**

- 1 BANK ENHANCEMENT LWM TYPE 1: INSTALL 3
- 2 BANK ENHANCEMENT LWM TYPE 2: INSTALL 1
- 3 BANK ENHANCEMENT LWM TYPE 3: INSTALL 2



**TYPICAL FABRIC PLACEMENT AND STAKING**

STAKE SIZE AND TYPE PER MANUFACTURER RECOMMENDATIONS, OR 2" x 2" x 3' WITH WEDGE OR SHARPENED TIP