

# FORMER PANHANDLE SMELTING & REFINING SITE REMEDICATION AND LAKESHORE ENHANCEMENT 100% FINAL DESIGN PONDERAY IDAHO JUNE 2024

**OWNER:**  
**CITY OF PONDERAY**  
288 FOURTH STREET  
PONDERAY, IDAHO 83852



**PROJECT SPONSORS:**

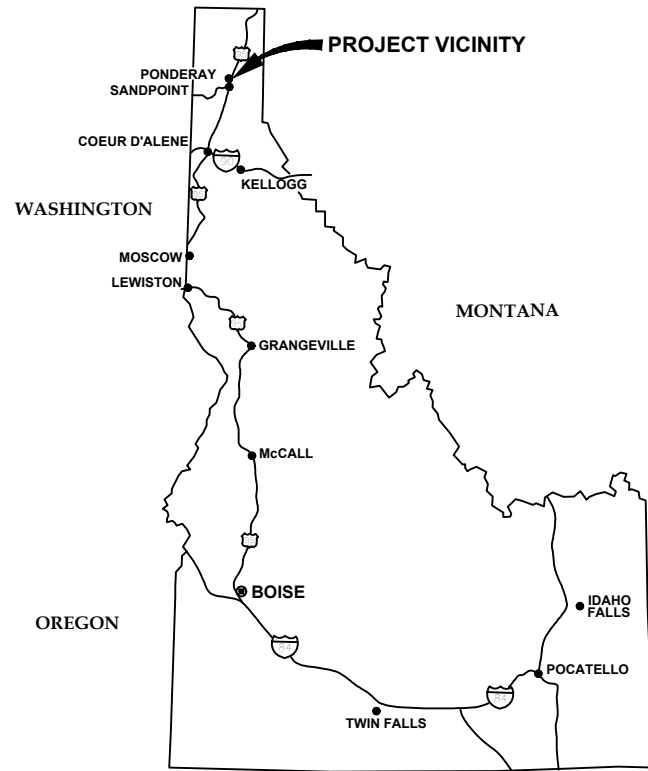
**Idaho Department  
of Environmental Quality**  
1005 WEST MCKINLEY AVENUE  
KELLOGG, IDAHO 83837

**USEPA Region 10**  
1200 6TH AVENUE  
SUITE 155  
SEATTLE, WASHINGTON 98101

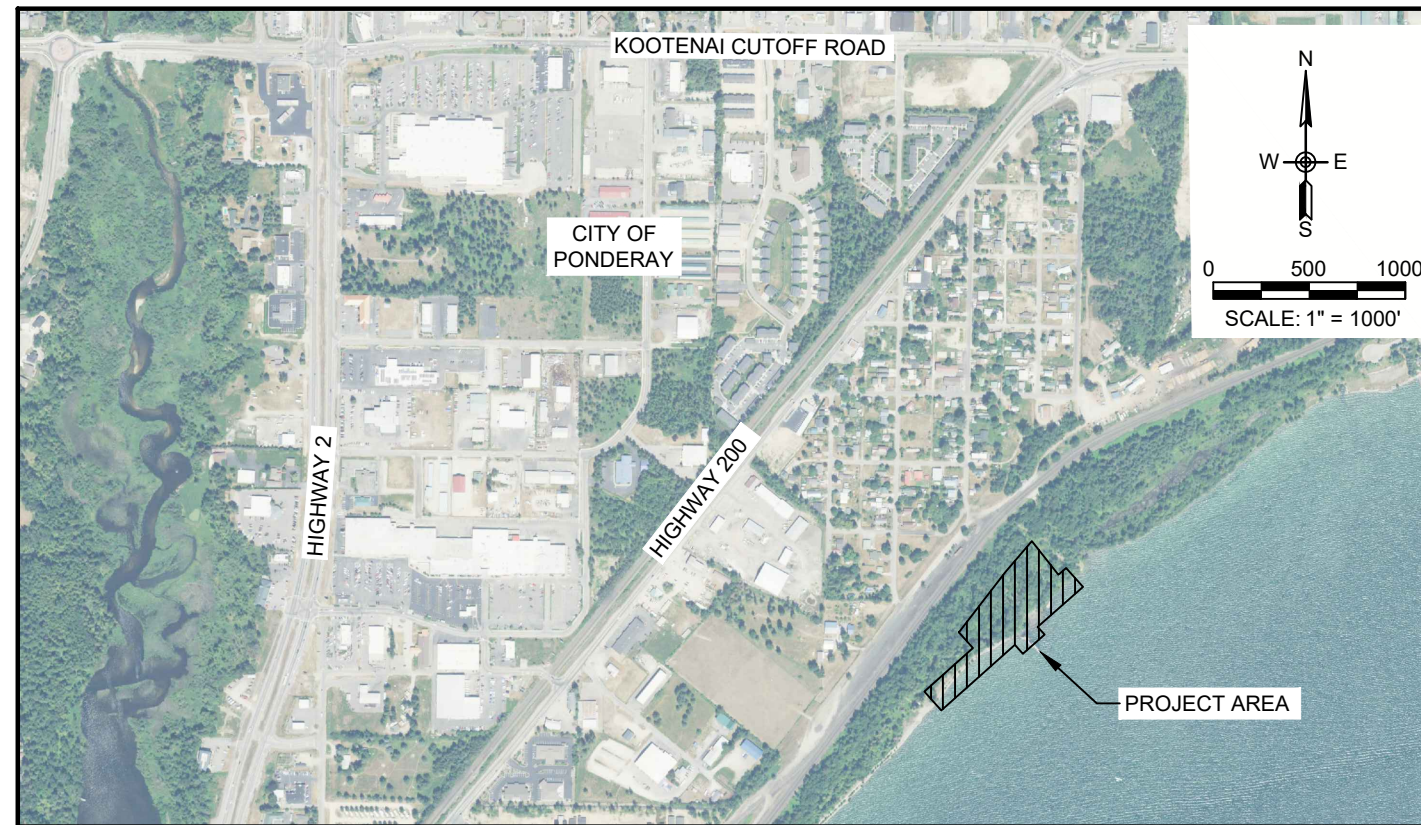


Though this project has been funded, wholly or in part, by EPA, the contents of this document do not necessarily reflect the views and policies of EPA

**ENGINEER:**  
**ALTA SCIENCE & ENGINEERING, INC.**  
1220 BIG CREEK RD.  
KELLOGG, IDAHO 83837  
TELEPHONE: (208) 786-1206



**LOCATION MAP**  
SCALE: NTS



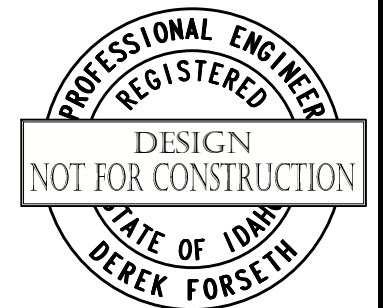
**LOCATION MAP**  
SCALE: 1" = 1000'

**COVER & GENERAL SHEETS**

| SHEET # | SHEET NAME  | SHEET INDEX |
|---------|---|-------------|
| 1       | COVER SHEET   | CS          |
| 2-3     | GENERAL PLAN SET INFORMATION & NOTES                    | G1 - G2     |
| 4       | SURVEY INFORMATION                                      | G3          |
| 5       | ACCESS/HAUL ROUTE OVERVIEW MAP                          | O1          |
| 6       | PROJECT OVERVIEW MAP                                    | O2          |
| 7       | PROJECT HISTORY OVERVIEW MAP                            | O3          |
| 8       | CONTAMINATED SOIL DEPTHS & HISTORIC FEATURES            | O4          |
| 9       | SCHEDULES A & B - PRESERVE AND PROTECT HISTORICAL ITEMS | C1          |
| 10      | SCHEDULES A & B - CLEARING AND GRUBBING                 | C2          |
| 11      | SCHEDULE A - CONSTRUCTION ACCESS/ROAD                   | C3          |
| 12      | SCHEDULE A - SLAG CAP                                   | C4          |

**SHEET INDEX**

| SHEET # | SHEET NAME  | SHEET INDEX |
|---------|---|-------------|
| 13      | SCHEDULE B - REMEDIATION DESIGN REMOVAL DEPTHS              | C5          |
| 14      | SCHEDULE B - REMEDIATION DESIGN GRADING INFORMATION         | C6          |
| 15      | SCHEDULE B - REPOSITORY EXCAVATION, FILL, GRADING AND COVER | C7          |
| 16      | SCHEDULE B - REPOSITORY DRAINAGE SYSTEM                     | C8          |
| 17      | SCHEDULE B - SHORELINE WORK                                 | C9          |
| 18      | SCHEDULES A & B - EROSION CONTROL & RE-VEGETATION PLAN      | C10         |
| 19      | SCHEDULE C - SHORELINE ENCROACHMENT (POSSIBLE FUTURE)       | C11         |
| 20 - 28 | DETAIL SHEETS   | D1 - D9     |
| 29      | TABLE - CLEARING & GRUBBING BOUNDARY POINTS                 | T1          |
| 30      | TABLE - QUANTITIES  | T2          |



V:\Engineering\City of Ponderay\POBT\_Smelter-Beach Remediation\02\_CAD\DESIGN\_100\_PERC\_POBT\_20240618.dwg 6/27/2024

|              |      |           |    |                            |   |
|--------------|------|-----------|----|----------------------------|---|
| (A) XX/XX/XX | XXXX | XX        | XX | DRAFTER:<br>B. ROLLINS     | COORDINATE SYSTEM:<br>ISPW NAD83 (2011) US FT |
|              |      |           |    | DESIGNER:<br>C. MACPHERSON | SCALE:<br>AS NOTED                            |
|              |      |           |    | CHECKED:<br>D. FORSETH     | APPROVED:<br>D. FORSETH                       |
| NO.          | DATE | REVISIONS | BY | CHK                        | DATE:<br>06/27/2024                           |



PONDERAY REMEDIATION AND  
LAKESHORE ENHANCEMENT

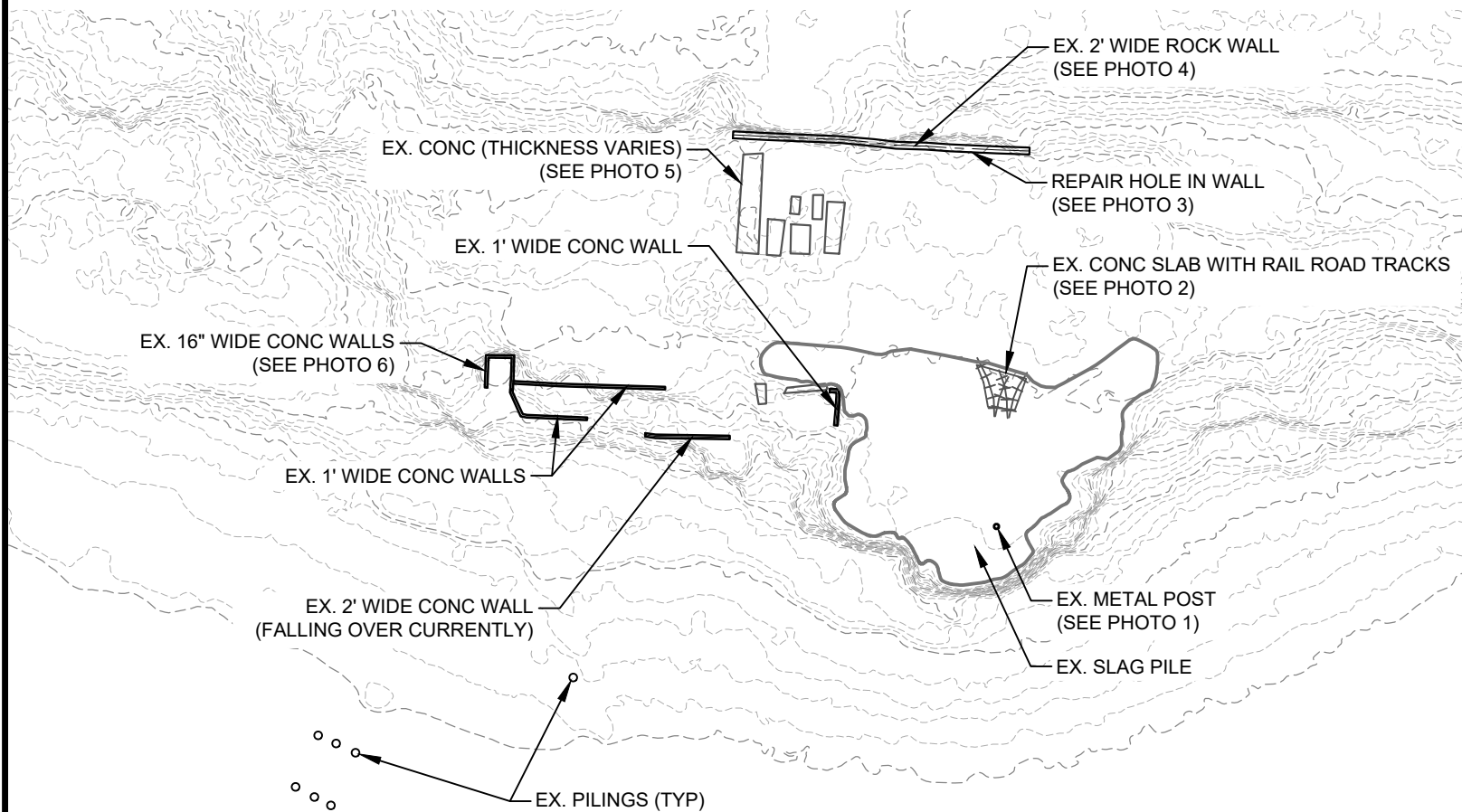
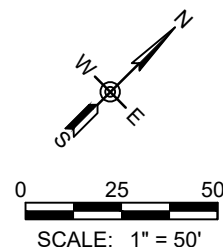
BONNER COUNTY, ID

COVER SHEET

|              |           |
|--------------|-----------|
| SHEET:       | CS        |
| DATE:        | 6/27/2024 |
| PROJECT NO.: | 22148-50  |
| SHEET NO.:   | 1 OF 30   |

**GENERAL NOTES:**

- 1.) HAND DIG AROUND ALL WALLS, CONC, ANY OTHER PRESERVE AND PROTECT FEATURES.
- 2.) EX. CONC SLABS. EXCAVATE 24" OR TO THE TOP OF THE EX. CONC SLAB.



1.) PRESERVE AND PROTECT. FORM CONCRETE AROUND POSTS. SEE SHEET C4



2.) PRESERVE AND PROTECT. CLEAN OUT AND EXCAVATE SOIL AROUND THE EXISTING SLAB AND METAL RAIL IN PREPARATION FOR NEW BLACK ROCK CONC SLAB. FORM CONCRETE AROUND EX. SLAB AND RAILROAD TRACKS. SEE SHEET C4



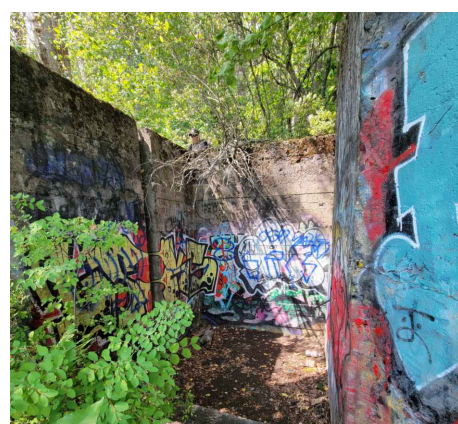
3.) REPAIR EXISTING HOLE IN 2' WIDE ROCK WALL. REMOVE LOOSE MATERIAL AND DIRT BEFORE REPAIRING. USE EXISTING ROCKS IN SITE AREA TO REPAIR WALL. USE TYPE "N" MORTAR.



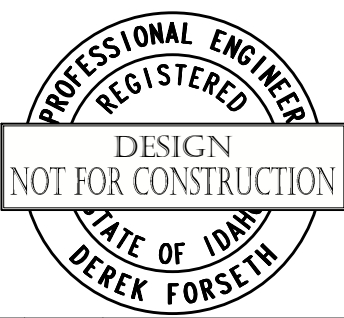
4.) CAREFULLY REMOVE VEGETATION GROWING ON AND AROUND ROCK WALL. EXCAVATE SOIL ON THE NW SIDE OF THE WALL UNTIL 42" OF THE LOWEST POINT ON THE WALL IS EXPOSED. SEE SHEET C8-B FOR GRADING PLAN. SEE SHEET C6 FOR TRAIL AND FRENCH MATTRESS DETAILS.



5.) CAREFULLY REMOVE VEGETATION GROWING ON AND AROUND EX. CONC STRUCTURES. REMOVE AS MUCH SOIL/MATERIAL AS POSSIBLE WITHOUT DISTURBING THE PHYSICAL STRUCTURES. POWER WASH CONC AFTER ALL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED. SEE SHEET C5 FOR EXCAVATION PLAN AND SHEET C6 FOR GRADING PLAN.



6.) CAREFULLY REMOVE VEGETATION GROWING ON AND AROUND EX CONC WALLS. SEE SHEET C6 FOR GRADING PLAN.



V:\Engineering\City of Ponderay\POBT\_Smelter-Beach Remediation\02\_CAD\DESIGN\_100\_PERC\_POBT\_20240618.dwg 6/27/2024

|     |          |           |    |     |           |               |                    |                         |
|-----|----------|-----------|----|-----|-----------|---------------|--------------------|-------------------------|
| (A) | XX/XX/XX | XXXX      | XX | XX  | DRAFTER:  | B. ROLLINS    | COORDINATE SYSTEM: | ISPW NAD83 (2011) US FT |
|     |          |           |    |     | DESIGNER: | C. MACPHERSON | SCALE:             | 1" = 50'                |
|     |          |           |    |     | CHECKED:  | D. FORSETH    | APPROVED:          | D. FORSETH              |
| NO. | DATE     | REVISIONS | BY | CHK | DATE:     | 06/27/2024    | DATE:              | 06/27/2024              |



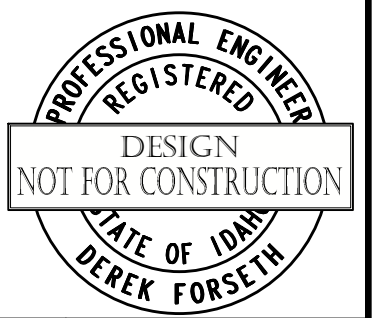
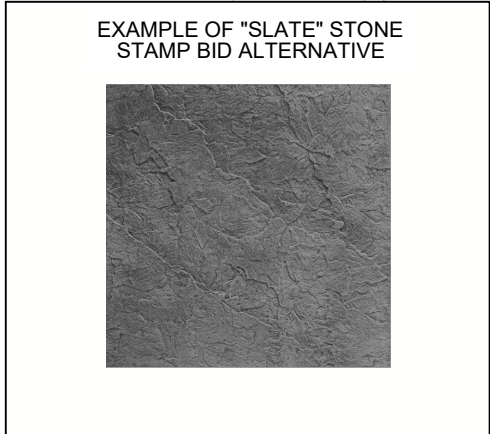
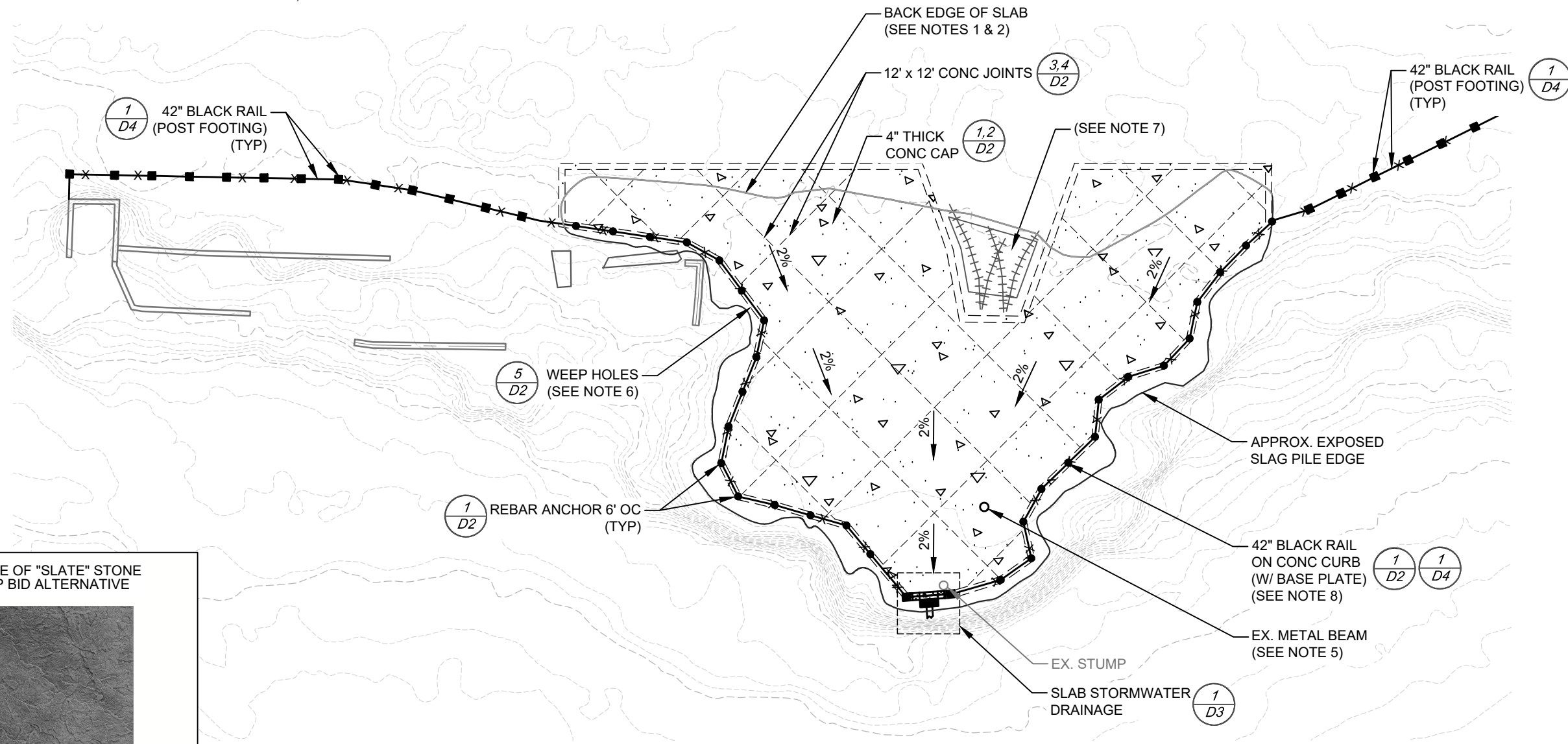
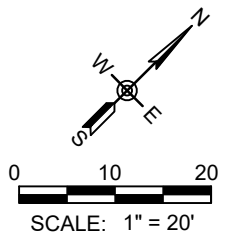
PONDERAY REMEDIATION AND LAKESHORE ENHANCEMENT  
BONNER COUNTY, ID

SCHEDULES A & B  
PRESERVE & PROTECT  
HISTORICAL ITEMS

|              |           |
|--------------|-----------|
| SHEET:       | C1        |
| DATE:        | 6/27/2024 |
| PROJECT NO.: | 22148-50  |
| SHEET NO.:   | 9 OF 30   |

**NOTES:**

- 1.) CLEAR AND GRUB AREA IN PREPARATION FOR DESIGN CONC SLAB (SEE SHEET C2).
- 2.) EXCAVATE AND PREPARE SUBGRADE FOR BACK EDGE OF THE DESIGN CONC SLAB PER SPECIFICATIONS. IT IS UNKNOWN WHERE THE BACK (LAND SIDE) EDGE IS LOCATED. EXPLORATORY FIELD WORK WILL BE REQUIRED IN ORDER TO LOCATE GROUND SUITABLE FOR THE BACK EDGE OF THE DESIGN CONC SLAB.
- 3.) CONCRETE IS TO BE DYED BLACK USING IRON-OXIDE PIGMENT. REFERENCE SPECIFICATIONS FOR DETAILS.
- 4.) SLAB FINISH TO BE BROOMED OR STONE STAMPED. TO BE DETERMINED BY OWNER AFTER BIDDING.
- 5.) EXISTING METAL BEAM IS TO BE RETAINED AND PROTECTED. FORM REBAR AND CAST CONCRETE AROUND METAL BEAM.
- 6.) WEEP HOLES ARE TO BE PLACED EVERY 6' ALONG CONC CURB ON CAP (SEE SHEET D2).
- 7.) RETAIN & PROTECT EX. RAILROAD TRACKS AND SLAB (SEE SHEET C1).
- 8.) RAILING IS TO BE INSTALLED AFTER SCHEDULE B ACTIVITIES, AND IS CONSIDERED TO BE A PART OF SCHEDULE B.



V:\Engineering\City of Ponderay\POBT\_Smelter-Beach Remediation\02\_CAD\DESIGN\_100\_PERC\_POBT\_20240618.dwg 6/27/2024

|     |          |           |    |     |           |               |                    |                         |
|-----|----------|-----------|----|-----|-----------|---------------|--------------------|-------------------------|
| (A) | XX/XX/XX | XXXX      | XX | XX  | DRAFTER:  | B. ROLLINS    | COORDINATE SYSTEM: | ISPW NAD83 (2011) US FT |
|     |          |           |    |     | DESIGNER: | C. MACPHERSON | SCALE:             | 1" = 20'                |
|     |          |           |    |     | CHECKED:  | D. FORSETH    | APPROVED:          | D. FORSETH              |
| NO. | DATE     | REVISIONS | BY | CHK | DATE:     | 06/27/2024    | DATE:              | 06/27/2024              |



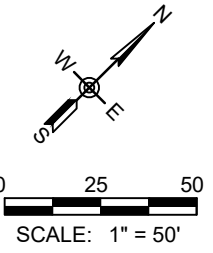
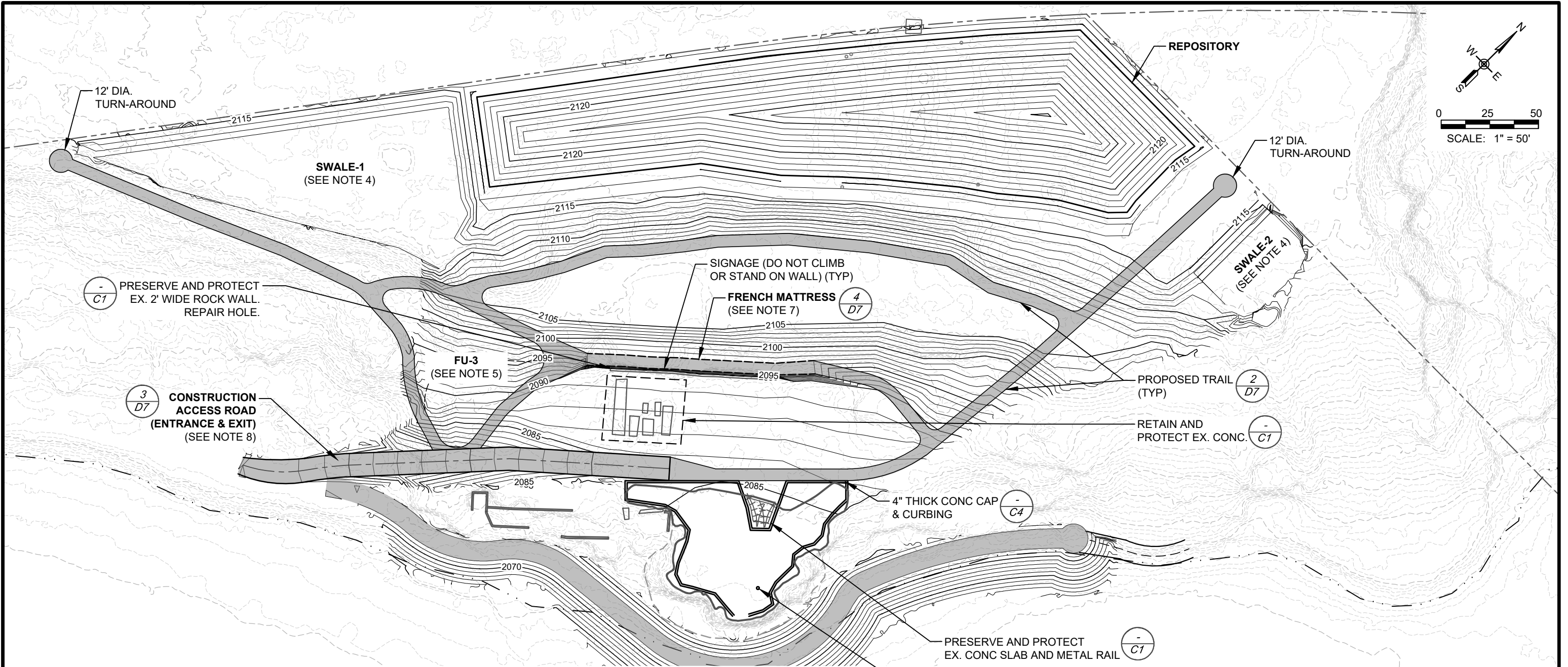
PONDERAY REMEDIATION AND  
LAKESHORE ENHANCEMENT

BONNER COUNTY, ID

SCHEDULE A  
SLAG CAP

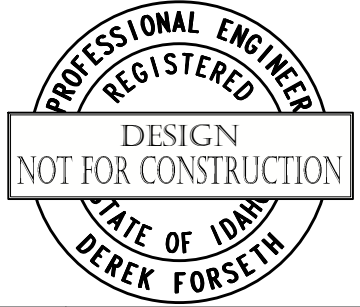
|              |           |
|--------------|-----------|
| SHEET:       | C4        |
| DATE:        | 6/27/2024 |
| PROJECT NO.: | 22148-50  |
| SHEET NO.:   | 12 OF 30  |

V:\Engineering\City of Ponderay\POBT\_Smelter-Beach Remediation\02\_CAD\DESIGN\_100\_PERC\_POBT\_20240618.dwg 6/27/2024



**NOTES:**

- 1.) GRADING LIMITS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD.
- 2.) **SLOPES:** SLOPES VARY. GRADE AT A MAX 2:1 SLOPE.
- 3.) **GRADED AREAS:** PROVIDE AT LEAST 1' COVER AND GRADE/FLATTEN AREA TO TIE INTO SURROUNDING GRADES SMOOTHLY. ENSURE THAT THERE ARE NO AREAS IN WHICH STORM WATER CAN POOL.
- 4.) **SWALES:** FLATTEN AND GRADE AREA TO ELEVATION 2111.5' ON THE NW EDGE OF PROPERTY AND NE END OF REPOSITORY. GRADE 3:1 SLOPE UP TO ELEVATION 2115'. ENSURE THAT THERE ARE NO AREAS IN WHICH STORM WATER CAN POOL.
- 5.) **FU-3:** NO COVER REQUIRED. GRADE AND FLATTEN AREA TO TIE INTO SURROUNDING GRADES SMOOTHLY.
- 6.) **TRAIL (TYP):** ENSURE THAT TRAIL(S) SMOOTHLY TRANSITIONS TO SURROUNDING GRADES.
- 7.) **FRENCH MATTRESS:** DO NOT DISTURB EXISTING ROCK WALL WHILE INSTALLING MATERIALS.
- 8.) **CONSTRUCTION ENTRANCE/EXIT & ACCESS ROAD:** REFINISH WITH NEW GRAVEL AND TIE INTO NEW TRAIL SYSTEM AT END OF PROJECT.



|     |          |           |    |     |                            |   |
|-----|----------|-----------|----|-----|----------------------------|---|
| (A) | XX/XX/XX | XXXX      | XX | XX  | DRAFTER:<br>B. ROLLINS     | COORDINATE SYSTEM:<br>ISPW NAD83 (2011) US FT |
|     |          |           |    |     | DESIGNER:<br>C. MACPHERSON | SCALE:<br>1" = 50'                            |
|     |          |           |    |     | CHECKED:<br>D. FORSETH     | APPROVED:<br>D. FORSETH                       |
| NO. | DATE     | REVISIONS | BY | CHK | DATE:<br>06/27/2024        | DATE:<br>06/27/2024                           |



PONDERAY REMEDIATION AND  
LAKESHORE ENHANCEMENT  
  
BONNER COUNTY, ID

SCHEDULE A  
REMEDATION DESIGN  
GRADING INFORMATION  
PLAN VIEW

|              |           |
|--------------|-----------|
| SHEET:       | C6        |
| DATE:        | 6/27/2024 |
| PROJECT NO.: | 22148-50  |
| SHEET NO.:   | 14 OF 30  |