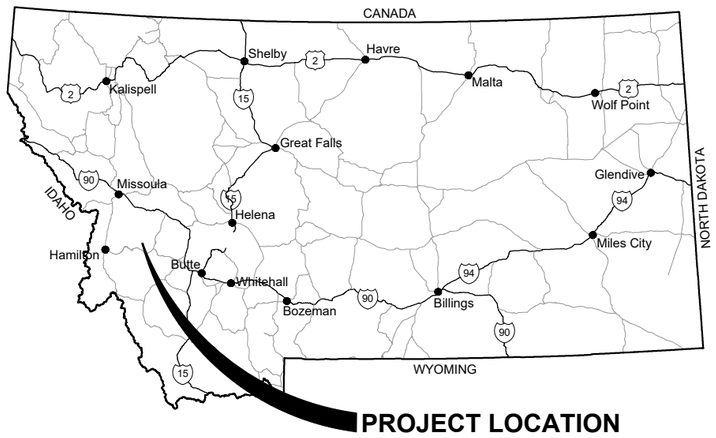
West Slope Fishing Access Site

Montana Fish, Wildlife & Parks
Near Philipsburg, Montana
December 2024



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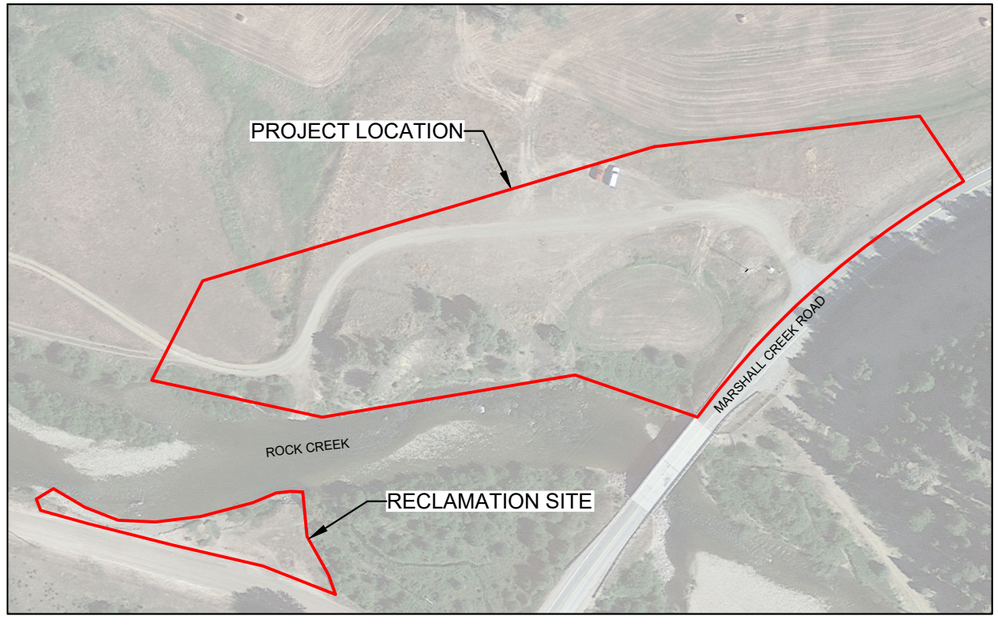
(GRANITE COUNTY, MONTANA)



BASIS OF SURVEY

ALL CONTOURS, ELEVATIONS, AND COORDINATES FOR THE PROJECT ARE BASED ON NAD 83 LOCAL SYSTEM

CERTIFICATION

I HEREBY CERTIFY THAT THE ATTACHED PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MONTANA.

Bradley Koon
BRAD KOON, P.E.

MONTANA
BRADLEY J. KOON
No. 14124 PE
LICENSED PROFESSIONAL ENGINEER
12/9/2024

Montana811.org
Tap - Click - Call
811 Before you dig!

TRIPLE TREE ENGINEERING
800 N Last Chance Gulch No. 101
Helena, MT 59601

GENERAL NOTES

1. THESE NOTES ARE FOR GENERAL REFERENCE IN CONJUNCTION WITH, AND AS A SUPPLEMENT TO THE WRITTEN NOTES AND DETAILS INCLUDED ON INDIVIDUAL DRAWINGS. ALL WORK FOR THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS (MPWSS 7TH EDITION). REFERENCE THE FOLLOWING SECTIONS OF MPWSS:
   - **DIVISION I - GENERAL REQUIREMENTS**
     - SECTION 01570: CONSTRUCTION TRAFFIC CONTROL
   - **DIVISION 2- SITE CONSTRUCTION**
     - 02100 SITE PREPARATION
       - SECTION 02110: GEOTEXTILES
     - 02200 EARTHWORK
       - SECTION 02230: STREET EXCAVATION, BACKFILL, AND COMPACTION
       - SECTION 02235: CRUSHED BASE COURSE
     - 02500 PAVING AND SURFACING
       - SECTION 02529: CONCRETE SIDEWALKS, DRIVEWAYS, APPROACHES, CURB TURN FILLETS, VALLEY GUTTERS, AND MISCELLANEOUS NEW CONCRETE CONSTRUCTION
     - 02900 LANDSCAPING
       - SECTION 02910: SEEDING
   - **DIVISION 3- CONCRETE**
     - SECTION 03210: REINFORCING STEEL
     - SECTION 03310: STRUCTURAL CONCRETE

2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND PAYING ASSOCIATED FEES.

3. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. UNDERGROUND LOCATES SHALL BE MADE USING THE "ONE CALL" NUMBER 1-800-424-5555. ALL EXISTING UTILITIES WHICH NEED TO BE REMOVED, RELOCATED AND/OR ADJUSTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

4. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IF THE SITE IS FOUND TO BE DIFFERENT THAN THE CONSTRUCTION PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE DISCREPANCY.

5. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS TO SURFACING (ASPHALT, CONCRETE, GRAVEL, LANDSCAPING, ETC.) BEYOND THE CONSTRUCTION LIMITS THAT HAS BEEN DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES; THIS INCLUDES SURFACING REPAIR ON HAUL ROUTES. ANY DAMAGE SUSTAINED TO HAUL ROADS AND PROPERTY SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER AT THE EXPENSE OF THE CONTRACTOR. REMEDIATION OF THE DAMAGE WILL BE ALLOWED AFTER THE MAJORITY OF HAULING ACTIVITIES HAVE BEEN COMPLETED, UNLESS OTHERWISE DIRECTED BY THE OWNER, ENGINEER OR GOVERNING AUTHORITY. IF THE DAMAGE POSES A SAFETY RISK, IT SHALL BE REPAIRED IMMEDIATELY.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL TO ASSURE THAT ALL ASPECTS OF THE PROJECT ARE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

7. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASPHALT, CONCRETE, GRAVEL AND REFUSE MATERIAL OFFSITE.

8. SIGN MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE MUTCD MANUAL AND MDT DETAILED DRAWINGS 619-00, 619-02, 619-16, 619-20, AND 619-21. SIGNS SHALL BE MOUNTED ON EITHER STEEL OR TREATED WOOD POSTS.

9. ALL EXCAVATION AND EMBANKMENT ON THIS PROJECT SHALL MEET THE REQUIREMENTS OF MPWSS SPECIFICATION 02230 STREET EXCAVATION, BACKFILL AND COMPACTION.

10. CONCRETE SHALL BE M-4500 AS DEFINED BY MPWSS SPECIFICATION 03310 STRUCTURAL CONCRETE. REINFORCING STEEL SHALL BE ASTM 615, GRADE 60.

11. CONCRETE SLABS AND SIDEWALKS SHALL BE CROSS SLOPED AT 1.5% OR AS INDICATED ON THE PLANS. CONCRETE SLABS AND SIDEWALKS SHALL BE BROOM FINISH.

12. IMPORT MATERIAL REQUIRED TO COMPLETE EARTHWORK SHALL BE IMPORTED FROM OFF-SITE. IMPORT SHALL BE CLEAN MATERIAL, WITH OUT EXCESSIVE CLAY OR FINES, SUITABLE FOR STRUCTURAL FILL MATERIAL AND FREE OF DELETERIOUS MATERIALS.

13. TREES AND BRUSH IN CONFLICT WITH IMPROVEMENTS AND 5.0' BEYOND EDGE OF EARTHWORK SHALL BE COMPLETELY REMOVED INCLUDE ROOT SYSTEMS. MATERIAL CREATED BY TREE AND SHRUB REMOVAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ENGINEER APPROVED LANDFILL.

14. PROVIDE AND PLACE PLANT MIX SURFACING PER MDT STANDARDS AND SPECIFICATIONS.

15. THE CONTRACTOR SHALL AVOID DISTURBING AREAS OF DELINEATED WETLANDS, EXCEPT WHERE SPECIFICALLY SHOWN AS DISTURBED BY CONSTRUCTION. FENCING AND EROSION CONTROL WORK IS ALLOWED, BUT CARE SHALL BY TAKEN TO MINIMIZE IMPACTS.

16. THE CONTRACTOR SHALL PREPARE, SUBMIT AND OBTAIN APPROVAL OF A TRAFFIC CONTROL PLAN FROM BOTH THE ENGINEER AND THE MDT MISSOULA DISTRICT OFFICE PRIOR TO ENTERING MDT RIGHT-OF-WAY FOR CONSTRUCTION.

17. BARRIER ROCK TO BE 2' IN DIAMETER OR LARGER.

18. BOULDER ROCK TO BE APPROXIMATELY 5'H x 6'W x 13'L.

QUALITY CONTROL TESTING REQUIREMENTS

19. ALL TESTING OF CONCRETE REQUIRED BY MPWSS SHALL BE PROVIDED BY AN INDEPENDENT TESTING FIRM AT THE EXPENSE OF THE CONTRACTOR. A MINIMUM OF TWO SETS OF CONCRETE TESTS SHALL BE PROVIDED FOR THE BOAT RAMP, ONE FOR EACH RAMP TYPE.

20. ALL REQUIRED COMPACTION TESTING SHALL BE PROVIDED BY AN INDEPENDENT TESTING FIRM AT THE EXPENSE OF THE CONTRACTOR. COMPACTION TESTING FREQUENCIES ARE AS FOLLOWS:

LOCATION/ MATERIAL	# OF TESTS
APPROACH SUBGRADE/BASE COURSE	4
PARKING AREA SUBGRADE/BASE COURSE/SURFACING	10 (EVERY 1800 SQFT)
ACCESS ROAD SUBGRADE/BASE COURSE/SURFACING	7 (EVERY 50')
ROUND-A-BOUT SUBGRADE/BASE COURSE/SURFACING	6
BOAT RAMP SUBGRADE	4

GRADING & EROSION CONTROL

21. THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), AS WELL AS SUBMITTING THE NOTICE OF INTENT (NOI) AND SWPPP TO THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). ASSOCIATED FEES WILL BE PAID FOR AT THE CONTRACTOR'S EXPENSE.

    21.1 THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL ELEMENTS AND BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH THE APPROVED SWPPP.

    21.2 THE CONTRACTOR SHALL INSPECT EROSION CONTROL ELEMENTS AT THE TIME INTERVAL SPECIFIED IN THE SWPPP AND DOCUMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE NOTICE OF INTENT AND THE SWPPP.

22. ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED IN A LOGICAL SEQUENCE SO AS TO MINIMIZE THE AMOUNT OF BARE SOIL EXPOSED AT ANY ONE TIME. THE CONTRACTOR SHALL MAINTAIN EXISTING SITE VEGETATION OR GROUND COVER TO THE EXTENT AND LONGEST TIME POSSIBLE.

23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING TRACKING OF SOIL AND DEBRIS ONTO ADJACENT PROPERTIES AND ROADWAYS. TRACKING MUST BE RESTORED BY THE END OF EACH DAY.

24. ALL WASTE AND UNUSED MATERIALS SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF SITE BY RUNOFF OR WIND.

25. ALL DISTURBED AREAS AND AREAS DESIGNATED IN THE PLANS FOR SEEDING SHALL BE TOPSOILED, SEEDED, MULCHED, AND FERTILIZED (SEE MPWSS SEEDING SPECIFICATIONS. SALVAGED TOPSOIL SHALL BE SPREAD EVENLY OVER DISTURBED AREAS. SEED MIX SHALL BE NATIVE DRYLAND MIX AS FOLLOWS:

PLANT SPECIES	LBS/ACRE
WESTERN WHEATGRASS	4.8 LBS
STREAMBANK WHEATGRASS	3.2 LBS
HARD FESCUE	3.2 LBS
SLENDER WHEATGRASS	2.4 LBS
GREEN NEEDLEGRASS	2.4 LBS
TOTALS	16.0 LBS

ABBREVIATIONS

26. THE FOLLOWING WORDS MAY BE ABBREVIATED THROUGHOUT THE PLAN SET:

- ℄ = CENTERLINE
- CONC = CONCRETE
- CY = CUBIC YARD
- EA = EACH
- EG = EXISTING GROUND
- EX = EXISTING
- FG = FINISH GRADE
- LF = LINEAL FOOT
- LT = LEFT
- MPWSS = MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS
- PROP = PROPOSED
- RT = RIGHT
- SF = SQUARE FOOT
- SY = SQUARE YARD
- TYP = TYPICAL

SURVEY INFORMATION

27. ALL CONTOURS, ELEVATIONS, AND COORDINATES FOR THE PROJECT ARE BASED ON A LOCAL COORDINATE SYSTEM.

28. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING.

29. THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR STAKES THAT ARE DISTURBED OR DESTROYED. MARK AND PROTECT EXISTING PROPERTY PINS AND/OR STREET MONUMENTS. HIRE A LICENSED LAND SURVEYOR TO REPLACE ALL PROPERTY CORNERS OR OTHER MONUMENTS THAT ARE DESTROYED

GRADING & SITE QUANTITIES

ITEM NAME	QUANTITY	UNIT	COMMENTS
CLEAR & GRUBBING	0.74	AC	
TOPSOIL STIRPPING	595	CY	ASSUMED 6" OF TOPSOIL PRESENT. DOES NOT INCLUDE EXISTING ROAD.
UNCLASSIFIED EXCAVATION	1153	CY	
COMPACTED FILL	978	CY	ASSUMES 10% EXPANSION FACTOR
SOIL SEPERATION FABRIC	3779	SY	
CLASS II RIPRAP	26	CY	BOAT RAMP AND CULVERT ARMOR
CATTLE GUARDS	2	EA	
PRECAST VAULT LATRINE	1	EA	
14' DOUBLE PANEL GATE	1	EA	
16' SINGLE PANEL GATE	2	EA	
BARBED-WIRE FENCE	432	LF	MDT R/W & SOUTH RECLAMATION AREA
SMOOTH-WIRE FENCE	1039	LF	PROPOSED SITE FENCE.
PRECAST PARKING STOP	19	EA	

SURFACING

ITEM NAME	QUANTITY	UNIT	COMMENTS
ASPHALT SURFACING	163	SY	3" THICK
SITE CRUSHED GRAVEL SURFACING	3222	SY	INCLUDES ACCESS ROAD, PARKING, AND ROUND-A-BOUT
CONCRETE SIDEWALK	25	LF	4" THICK, 5' WIDE
CONCRETE ADA PARKING	280	SF	6" THICK
CONCRETE BOAT RAMP	980	SF	INCLUDES PUSH-IN AND CAST-IN-PLACE & PUSH-IN

LANDSCAPE & REVEGETATION QUANITITIES

ITEM NAME	QUANTITY	UNIT	COMMENTS
REVEGETATION	1.24	AC	SEE SEEDING NOTES. INCLUDE SOUTHERN RECLAMATION AREA
EROSION CONTROL MAT	434	SF	PROPEX LANKLOK C2 OR APPROVED EQUAL
BARRIER ROCKS	42	EA	2' MIN. ANY DIRECTION
BOULDER	1	EA	5'H x 6'W x 13'L
EROSION CONTROL BARRIER	1516	LF	

TRIPLE TREE ENGINEERING

DATE	DESCRIPTION	REVISIONS

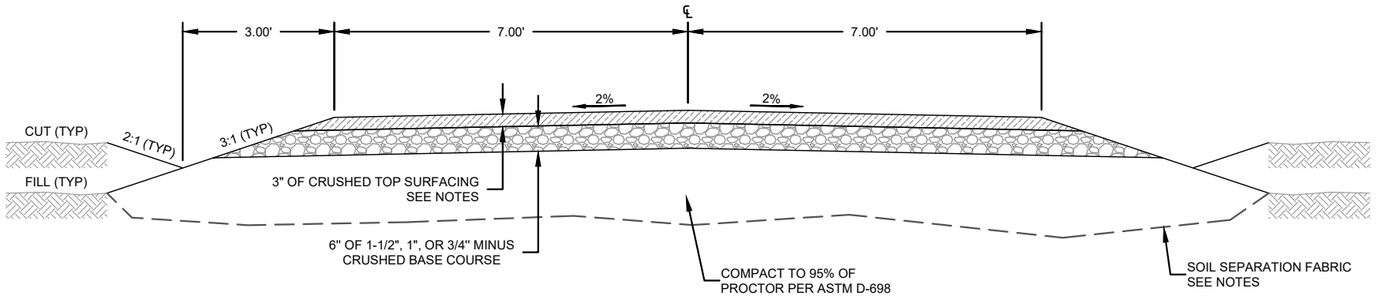
WEST SLOPE FISHING ACCESS SITE
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

GENERAL NOTES

PROJECT #:	22-04
DRAFTED BY:	AP
CHECKED BY:	BK
DATE:	12/09/2024

SHEET 2

Dec 09, 2024 - 10:17am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_NOTES.dwg



ACCESS ROAD TYPICAL SECTION

NOT TO SCALE

NOTES:

SOIL SEPARATION FABRIC SHALL BE INSTALLED OVER THE ENTIRE BOAT RAMP SITE WITHIN THE CONSTRUCTION LIMITS AFTER TOPSOIL IS REMOVED IN FILL AREAS. SOIL SEPARATION FABRIC WILL ALSO BE PRESENT IN CUTS, WHERE FABRIC SHALL BE PLACED ON TOP OF SUBGRADE UNDER THE GRAVEL SURFACING SECTION

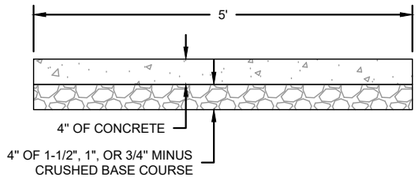
CRUSHED SURFACE COURSE FOR GRAVEL SURFACING SHALL MEET THE FOLLOWING SPECIFICATIONS INCLUDING BINDER OR BLENDING MATERIAL:

SIEVE SIZE	% PASSING
3/4" SIEVE	100%
NO. 4 SIEVE	40-80%
NO. 10 SIEVE	25-60%
NO. 200 SIEVE	8-20%

IN ADDITION, THE PORTION PASSING THE NO. 200 SIEVE CANNOT EXCEED $\frac{2}{3}$ OF THE PORTION PASSING THE NO. 40 SIEVE; THE MAXIMUM LIQUID LIMIT FOR THE MATERIAL PASSING THE NO. 40 SIEVE SHALL NOT EXCEED 35%, WHILE THE PLASTICITY INDEX CAN VARY BETWEEN 3 AND 10; THE WEAR FACTOR SHALL NOT EXCEED 50% AT 500 REVOLUTIONS; AND AT LEAST 20% OF THE AGGREGATE RETAINED ON

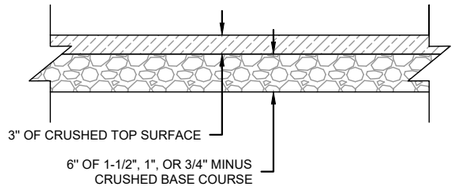
NO. 4 SIEVE SHALL HAVE A FRACTURED FACE.

HANDICAP PARKING SPACE CONCRETE TO HAVE LONGITUDINAL AND TRANSVERSE #4 REBAR 2FT ON CENTER.



SIDEWALK SECTION

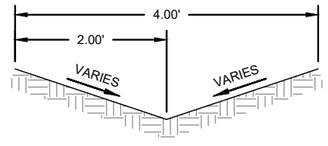
NOT TO SCALE



PARKING LOT / ROUND-A-BOUT SECTION

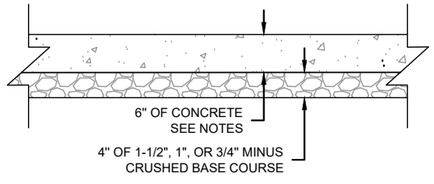
NOT TO SCALE

DITCH NOTE:
STORM WATER DITCH SLOPES
VARY FROM 3:1 AND 2:1. SEE
SHEET 7 FOR GRADING DETAILS.



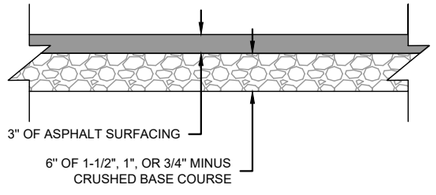
STORMWATER DITCH SECTION

NOT TO SCALE



HANDICAP PARKING SPACE SECTION

NOT TO SCALE



APPROACH SECTION

NOT TO SCALE

TRIPLE TREE ENGINEERING

REVISIONS	DESCRIPTION	DATE

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS

NEAR PHILIPSBURG, MT

SECTIONS

PROJECT #:	22-04
DRAFTED BY:	AP
CHECKED BY:	BK
DATE:	12/09/2024

SHEET 3

Dec 09, 2024 - 10:17am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_TYPICAL SECTIONS.dwg

BOWDINO LAND LLC

EXISTING FIELD
(TO REMAIN UNDISTURBED)

EXISTING GATE
(TO REMAIN UNDISTURBED)

EXISTING SURVEY MONUMENT
(TO REMAIN UNDISTURBED)

EXISTING FENCE
(TO REMAIN UNDISTURBED)

211.90' FENCE REMOVAL

BOWDINO LAND LLC

EXISTING ROAD
(TO BE RECLAIMED
AND RELOCATED)

EDGE OF EASEMENT

163.90' FENCE REMOVAL

EDGE OF EASEMENT

2
CP2

20.00'

EXISTING ELECTRICAL BOXES
(TO REMAIN UNDISTURBED)

4
CP4

EXISTING FIELD
(TO REMAIN UNDISTURBED)

EXISTING APPROACH
(TO BE ABANDONED & RECLAIMED)

10
CP

1
CP1

MARSHALL CREEK ROAD

3
CP3

ROCK CREEK

EXISTING FISHING ACCESS LOCATION

EXISTING TREES
(TO REMAIN UNDISTURBED)

SOUTH RECLAMATION AREA

EXISTING FENCE SECTIONS
TO BE REMOVED AND REPLACED

UPPER ROCK CREEK ROAD

E(O)

FO

POINT NORTHING/EASTING DATA

POINT NUMBER	ELEVATION	NORTHING	EASTING
1	100.00	10000.0000	5000.0000
2	94.39	10107.6441	5170.1503
3	96.60	9949.5916	5150.2056
4	90.90	10062.2230	4759.5499
10	113.65	10012.9150	4906.1610

N

30 0 30 60
SCALE FEET

TRIPLE TREE
ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

EXISTING SITE

PROJECT #:	22-04
DRAFTED BY:	AP
CHECKED BY:	BK
DATE:	12/09/2024

SHEET
4

Dec 09, 2024 - 10:17am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_EXIST-SITE.dwg

NOTES:
1. CONTRACTOR TO SEED ALL DISTURBED AREAS WITH AN APPROVED SEED MIXTURE.
2. PLACE EROSION CONTROL BARRIERS AROUND ALL SOIL STOCKPILES DURING CONSTRUCTION.

LEGEND

- PROPOSED ASPHALT
- CRUSHED TOP SURFACING
- CONCRETE
- RE-SEED AREA

EXISTING FENCE
EXISTING GATE
TIE PROPOSED FENCE TO EXISTING FENCE
PROPOSED 14' DOUBLE PANEL GATE (SEE DETAILS SHEET 15)
RECLAIM AREA (SEE GENERAL NOTES FOR SEEDING DETAILS)
PROPOSED 16' SINGLE PANEL GATE (SEE DETAILS SHEET 15)
PROPOSED FENCE
20.00' EASEMENT
PROPOSED EROSION CONTROL BARRIER (SEE DETAILS SHEET 15)
PROPOSED ACCESS ROAD (SEE SHEET 10)
PROPOSED PARKING AREA (SEE SHEETS 6, 7)
PROPOSED LATRINE
PARKING AREA
PROPOSED APPROACH W/ CATTLE GUARD
PROPOSED BOAT RAMP (SEE SHEETS 8, 9)
PROPOSED 16' SINGLE PANEL GATE (SEE DETAILS SHEET 15)
PROPOSED EROSION CONTROL BARRIER (SEE DETAILS SHEET 15)
PROPOSED BOAT RAMP
SOUTHERN RECLAMATION AREA (SEE SHEET 11)
PROPOSED FENCE
SOUTHERN RECLAMATION AREA
UPPER ROCK CREEK ROAD
ROCK CREEK
MARSHALL CREEK ROAD
BMP
E(O)
FO

N

30 0 30 60
SCALE FEET

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

PROPOSED SITE LAYOUT & BMP PLAN

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
DATE:	12/09/2024		

SHEET 5

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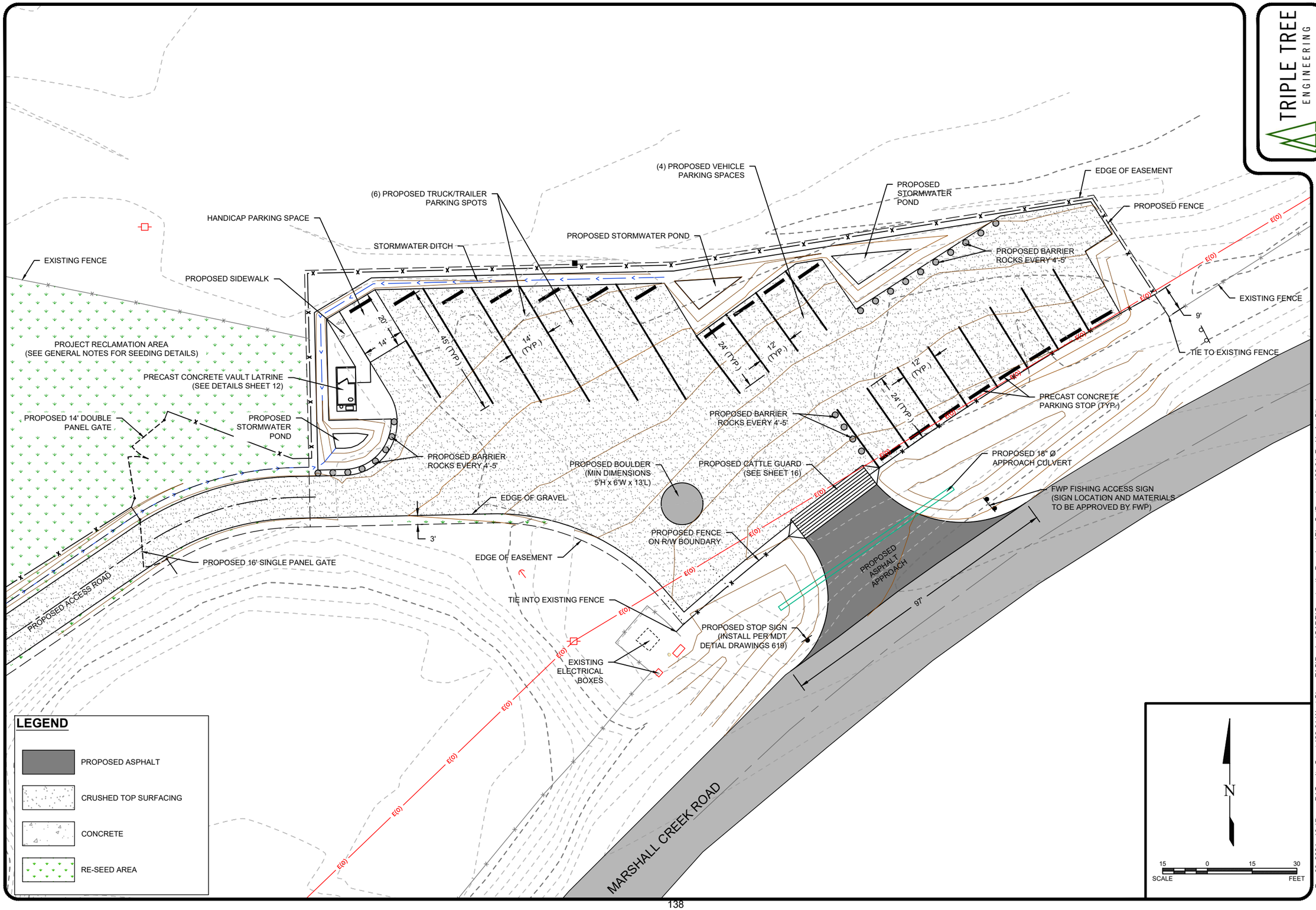

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

PROPOSED PARKING LAYOUT

PROJECT #:	22-04		
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DATE:	12/09/2024		

SHEET 6

Dec 09, 2024 - 10:17am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_ParkingLotSite.dwg

LEGEND

- PROPOSED ASPHALT
- CRUSHED TOP SURFACING
- CONCRETE
- RE-SEED AREA

PROJECT RECLAMATION AREA
(SEE GENERAL NOTES FOR SEEDING DETAILS)

SIDEWALK ELEV. = 93.17
SIDEWALK ELEV. = 93.25
SIDEWALK ELEV. = 93.47
SIDEWALK ELEV. = 93.53
SIDEWALK ELEV. = 93.53
DITCH INVERT ELEV. = 91.93
BOTTOM OF POND ELEV. = 91.43
F.G. = 94.05
TIE TO ACCESS ROAD (SEE SHEET 10)
F.G. = 94.05
PROPOSED ACCESS ROAD
SIDEWALK ELEV. = 93.45
E.O.C. = 93.17
E.O.C. = 93.47
DITCH SLOPE = -1.00%
DITCH INVERT ELEV. = 93.47
BOTTOM OF POND ELEV. = 92.97
BOTTOM OF POND ELEV. = 94.46
F.G. = 94.00
F.G. = 95.18
F.G. = 95.45
F.G. = 95.51
F.G. = 96.63
F.G. = 95.78
F.G. = 95.89
F.G. = 96.92
F.G. = 96.92
F.G. = 98.84
F.G. = 95.87
F.G. = 97.90
F.G. = 98.19
F.G. = 99.59
F.G. = 99.59
F.G. = 99.59
96.00'
R=854.79
Δ=006°26'05"
18" ∅ CULVERT
70.8 LF
INV. IN 97.25
INV. OUT 96.45
TIE TO EXISTING ASPHALT
ELEV. = 100.96
TIE TO EXISTING ASPHALT
ELEV. = 99.54
MARSHALL CREEK ROAD
R18'
R75'
R30'
R38'
E(O)
-4%
-4.5%
-5%
-5.5%
-7%
-2.50%

N

SCALE 15 0 15 30 FEET

TRIPLE TREE ENGINEERING

REVISIONS	DESCRIPTION	DATE

WEST SLOPE FISHING ACCESS SITE
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

PARKING LOT GRADING PLAN

PROJECT #:	22-04
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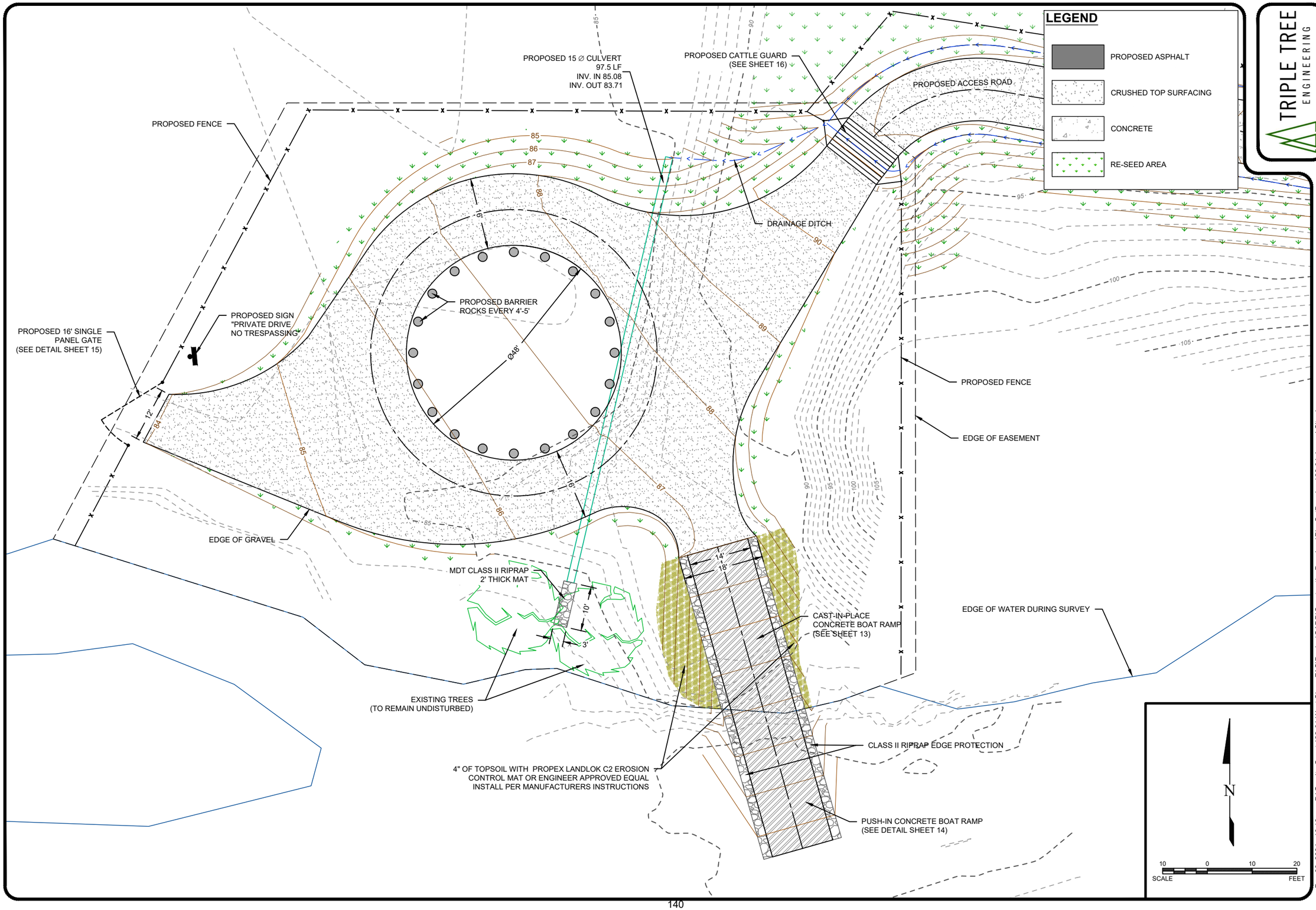
SHEET 7

Dec 09, 2024 - 10:18am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_ParkingLotGrad.dwg



TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

BOAT LAUNCH LAYOUT

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
DATE:	12/09/2024		

SHEET
8

Dec 09, 2024 - 10:18am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_LaunchSite.dwg

PROPOSED 15 ⌀ CULVERT
97.5 LF
INV. IN 85.08
INV. OUT 83.71

F.G. = 90.87

BEGIN ACCESS ROAD
(SEE SHEET 10)

F.G. = 90.76

F.G. = 90.87

F.G. = 90.76

F.G. = 88.54

R40'

R41'

F.G. = 86.26

F.G. = 85.38

TIE TO EXISTING ROAD
ELEV. = 83.97

R39'

Ø48'

F.G. = 88.54

TIE TO EXISTING ROAD
ELEV. = 83.98

F.G. = 86.43

F.G. = 85.07

F.G. = 86.38

F.G. = 86.72

R70'

R35'

F.G. = 87.32

R14'

F.G. = 87.00

R15'

R11'

F.G. = 87.00

TOP OF BOAT RAMP
ELEV. = 87.00

RAMP SLOPE -10.81%

BOTTOM OF BOAT RAMP
ELEV. = 79.43

LEGEND

- PROPOSED ASPHALT
- CRUSHED TOP SURFACING
- CONCRETE
- RE-SEED AREA

SCALE 10 0 10 20 FEET

N

TRIPLE TREE
ENGINEERING

DATE	DESCRIPTION	REVISIONS

WEST SLOPE FISHING ACCESS SITE

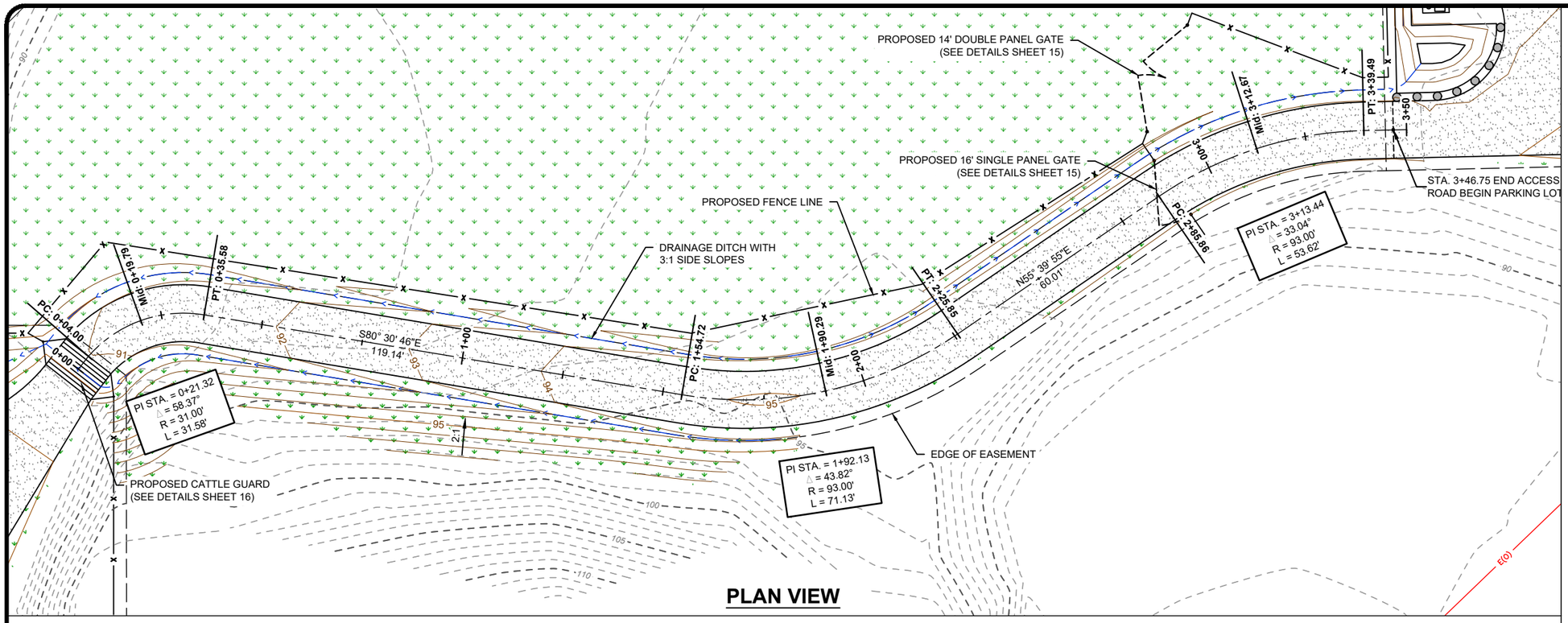
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

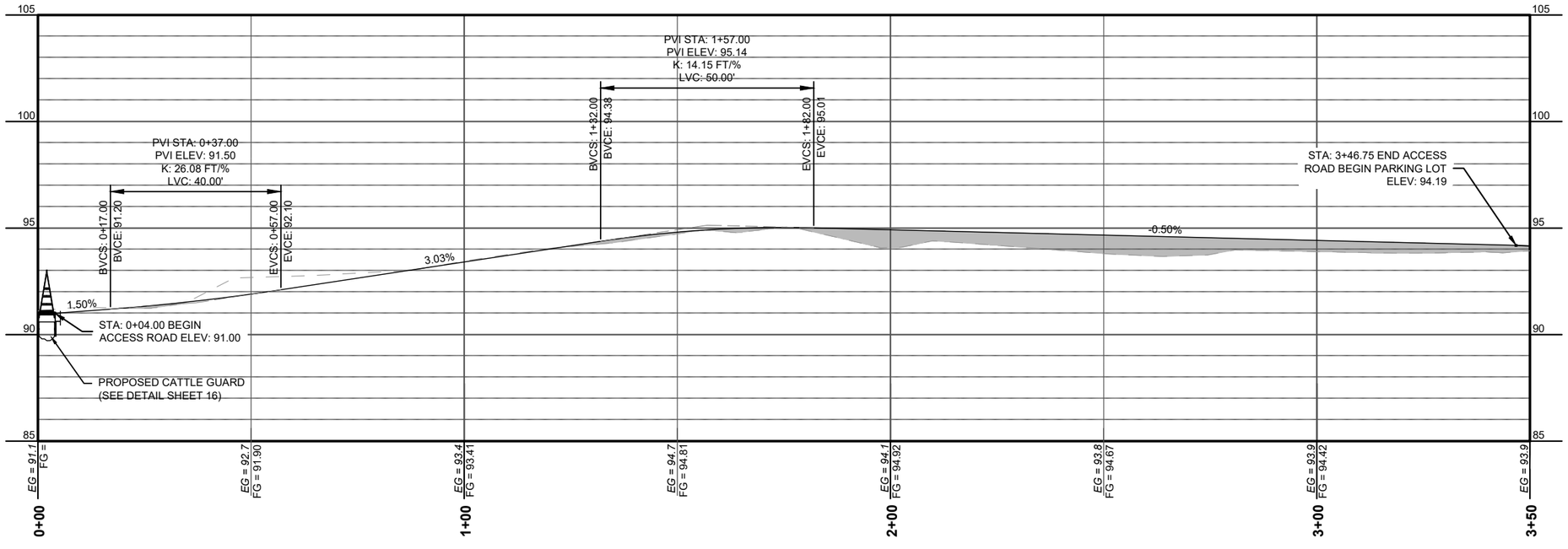
BOAT LAUNCH GRADING

PROJECT #:	22-04
DRAFTED BY:	AP
CHECKED BY:	BK
DATE:	12/09/2024

SHEET
9

Dec 09, 2024 - 10:18am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_LaunchGrad.dwg





PROFILE VIEW

PROFILE NOTE: PROFILE VERTICALLY EXAGGERATED 5:1

15 0 15 30
SCALE FEET

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

ACCESS ROAD PLAN & PROFILE

PROJECT #:	22-04
DRAFTED BY:	AP
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DATE:	12/09/2024

SHEET 10

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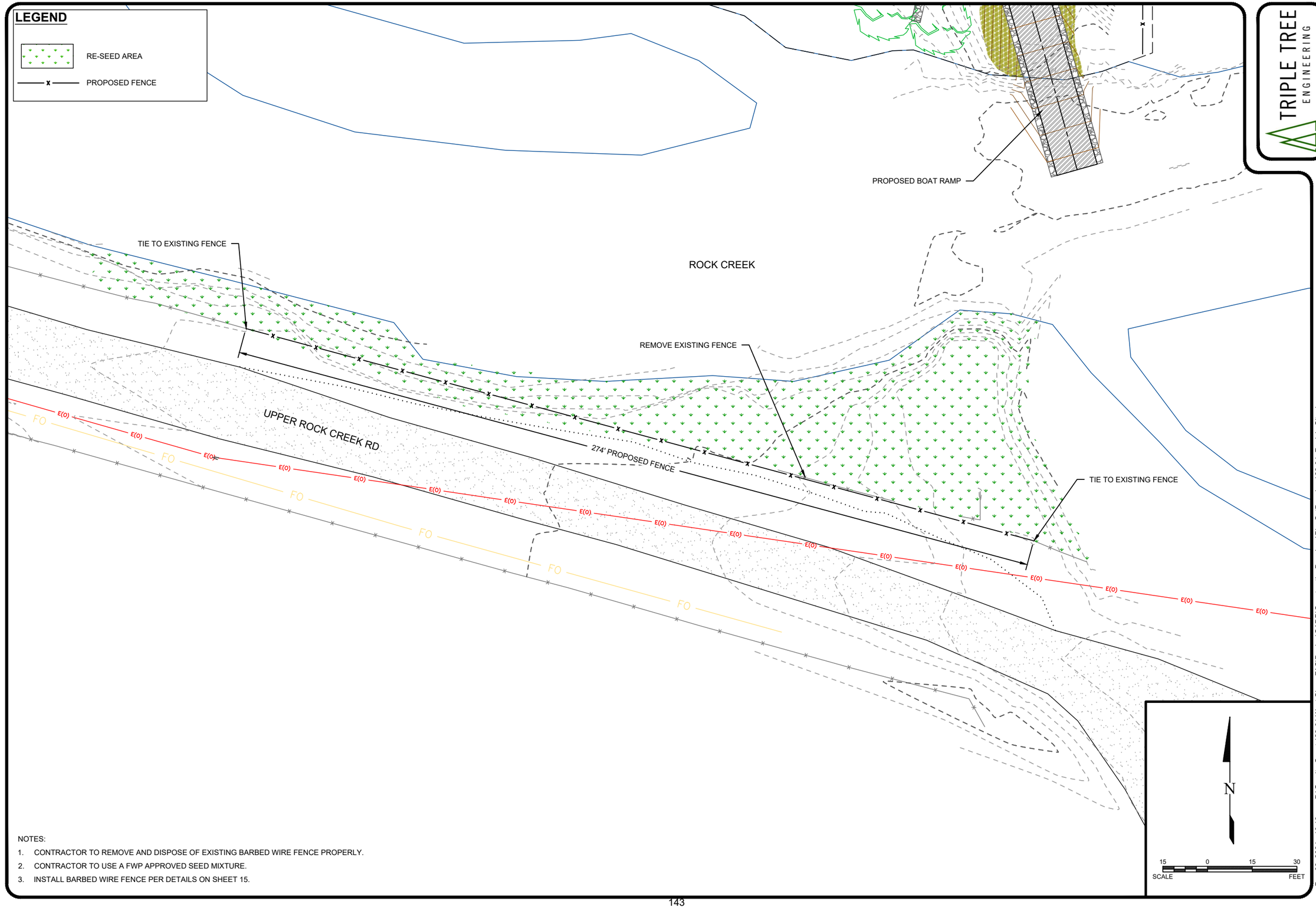

NOTES:

1. CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING BARBED WIRE FENCE PROPERLY.
2. CONTRACTOR TO USE A FWP APPROVED SEED MIXTURE.
3. INSTALL BARBED WIRE FENCE PER DETAILS ON SHEET 15.

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

RECLAMATION SITE

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
DATE:	12/09/2024		

SHEET 11

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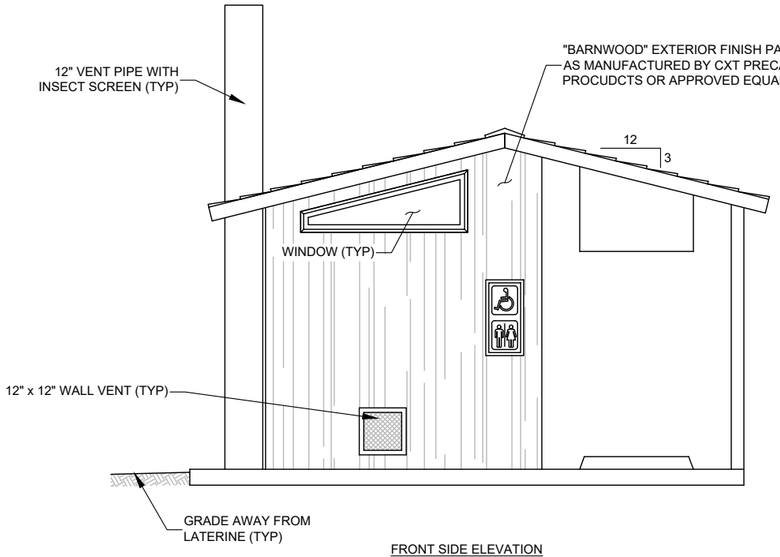
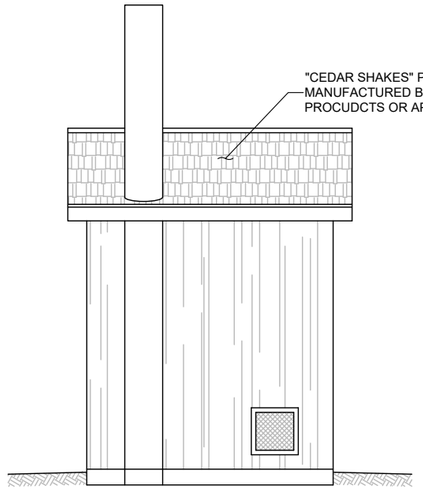
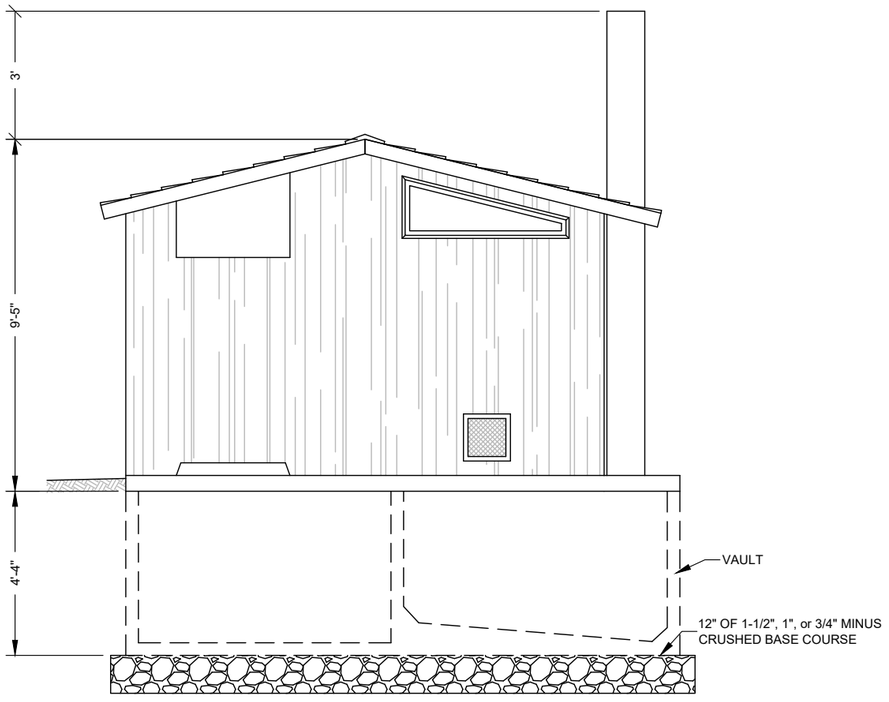


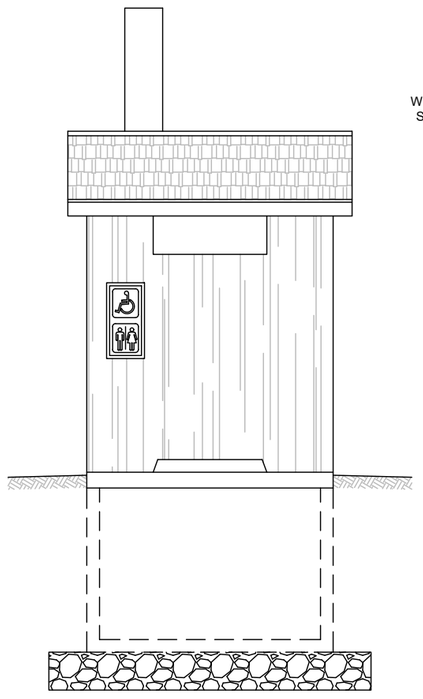
FRONT SIDE ELEVATION



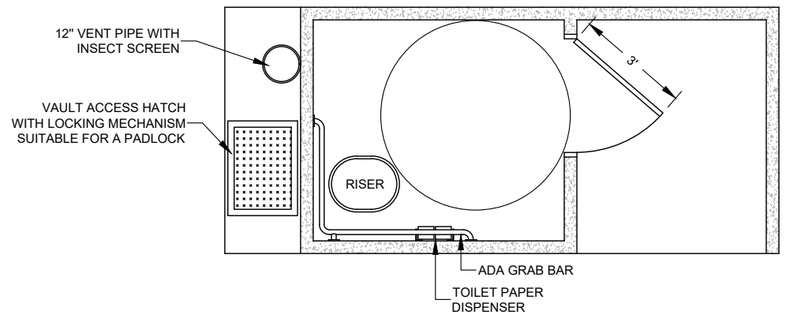
LEFT SIDE ELEVATION



BACK SIDE ELEVATION



RIGHT SIDE ELEVATION



PLAN VIEW

NOTES:

1. PRECAST VAULT LATRINE SHALL BE CXT GUNNISON OR APPROVED EQUAL.
2. THE PRECAST CONCRETE LATRINE SHALL BE CONSTRUCTED WITH A MINIMUM FLOOR THICKNESS OF 5", A MINIMUM WALL THICKNESS OF 4", AND MINIMUM ROOF PANEL THICKNESS OF 4-1/2".
3. CONTRACTOR TO CONTACT TRI-COUNTY HEALTH DEPARTMENT PRIOR TO COVERING ANY UNDERGROUND PARTS OF THE LATRINE SYSTEM FOR INSPECTION. ANY FEES OR ADDITIONAL WORK DUE TO LACK OF INSPECTION AND APPROVAL WILL BE AT CONTRACTOR'S EXPENSE.
4. AS-BUILTS OF THE INSTALLED LATRINE ARE TO BE SUBMITTED TO TRI-COUNTY ENVIRONMENTAL HEALTH DEPARTMENT WITHIN 30 DAYS OF COMPLETION. CONTRACTOR TO NOTIFY ENGINEER AND SUPPLY AS-BUILTS ONCE LATRINE CONSTRUCTION IS COMPLETE.

PRECAST CONCRETE VAULT LATRINE

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

LATRINE DETAILS

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
DATE:	12/09/2024		

SHEET 12

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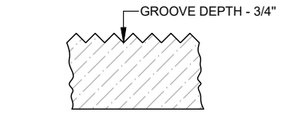
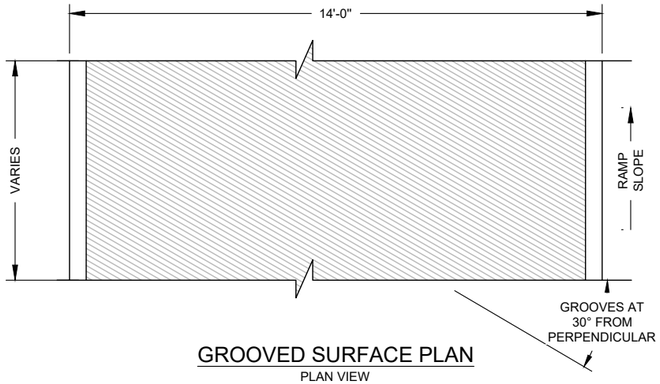


NOTE:

MFW&P WILL PROVIDE GROOVING TOOL

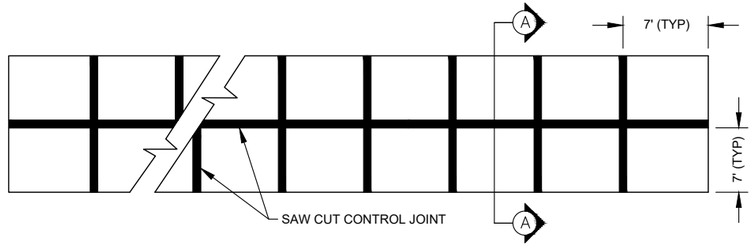


GROOVED SURFACE PLAN

PLAN VIEW

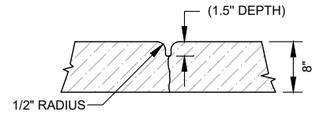
NOTES:

1. CONCRETE FOR NEW RAMP SHALL BE M-4500 CONCRETE AS SPECIFIED BY MPWSS.
2. SCREED CONCRETE FOLLOWED BY GROOVING THE SURFACE.
3. SAW CUT CONTRACTION JOINTS AFTER THE RAMP IS GROOVED.



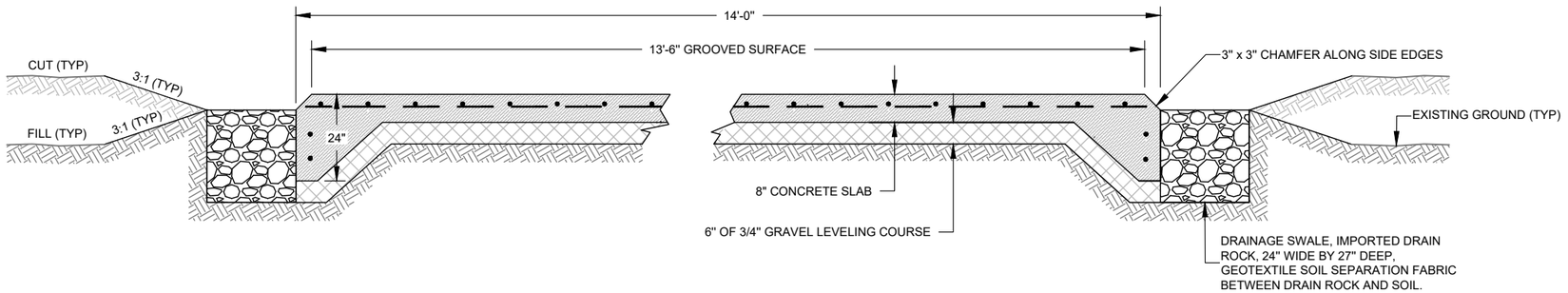
GROOVED SURFACE PLAN

PLAN VIEW



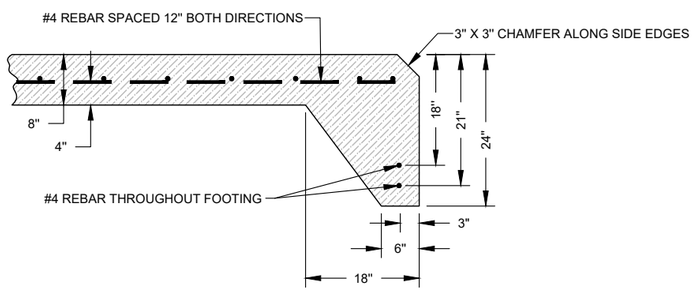
CONTRACTION CONTROL JOINT

SECTION A-A



CAST-IN-PLACE BOAT RAMP

SECTION VIEW



CAST-IN-PLACE BOAT RAMP THICKENED EDGE

SECTION VIEW

NOTES:

THICKENED EDGE TO CONTINUE AROUND ENTIRE PERIMETER OF CAST-IN-PLACE BOAT RAMP EXCEPT AT TIE IN POINT WITH PUSH-IN BOAT RAM (SEE SHEET 13)

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS

NEAR PHILIPSBURG, MT

CAST-IN-PLACE BOAT RAMP DETAILS

PROJECT #:	22-04
DRAFTED BY:	AP
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DATE:	12/09/2024

SHEET 13

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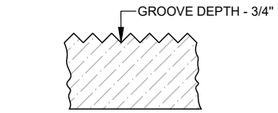
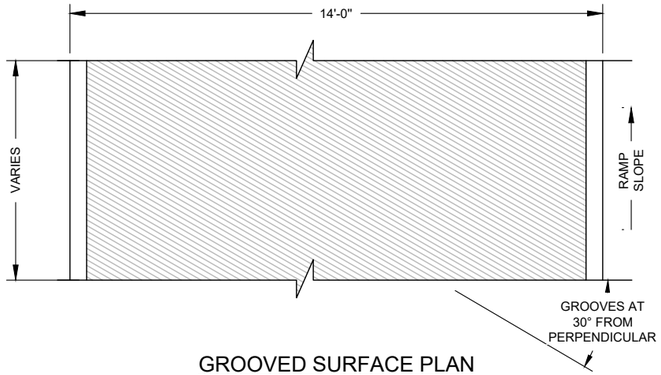


NOTE:

MFW&P WILL PROVIDE GROOVING TOOL

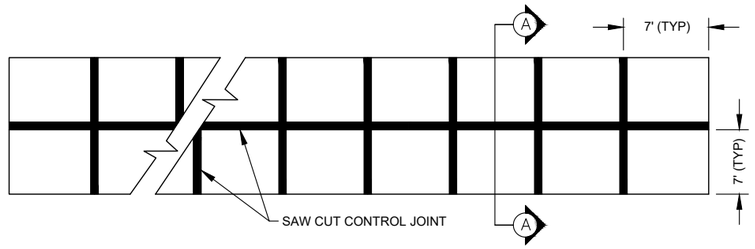


GROOVED SURFACE PLAN

PLAN VIEW

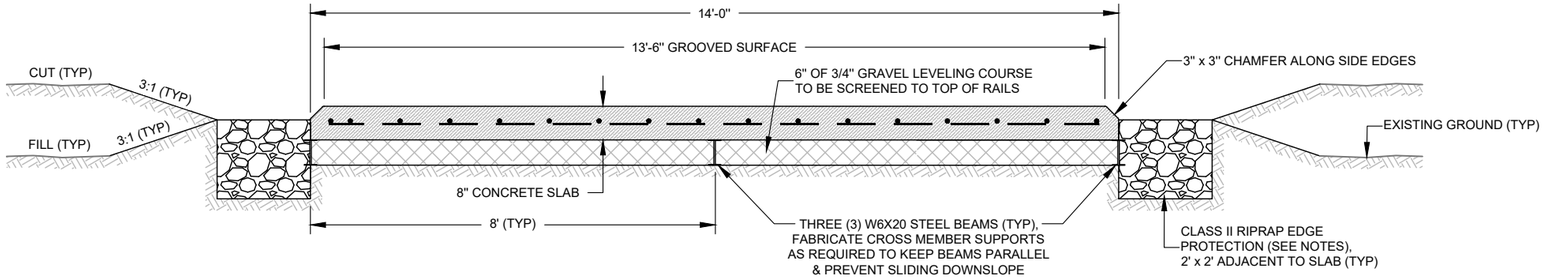
NOTES:

1. CONCRETE FOR NEW RAMP SHALL BE M-4500 CONCRETE AS SPECIFIED BY MPWSS.
2. SCREED CONCRETE FOLLOWED BY GROOVING THE SURFACE.
3. SAW CUT CONTRACTION JOINTS AFTER THE RAMP IS GROOVED.



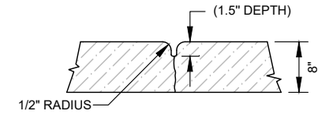
GROOVED SURFACE PLAN

PLAN VIEW



PUSH-IN BOAT RAMP

SECTION VIEW

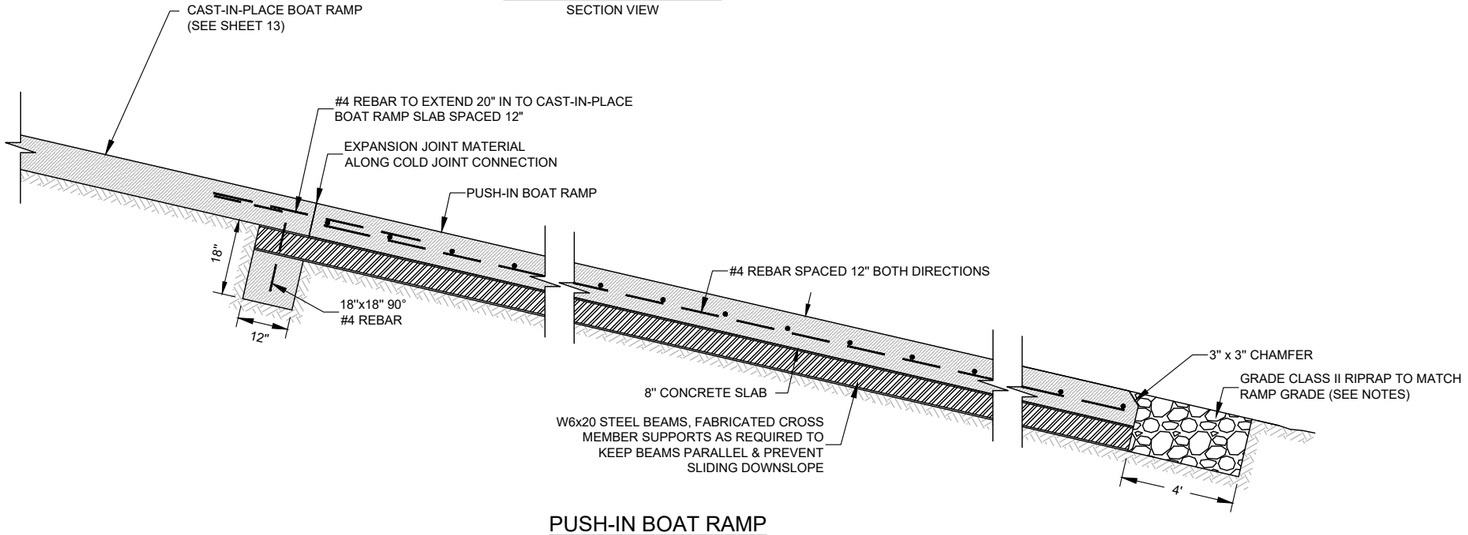


CONTRACTION CONTROL JOINT

SECTION A-A

NOTES:

1. FORM PUSH-IN SLAB ON BOAT RAMP GRADE ABOVE WATER LEVEL. ALL PUSH-IN SLAB SECTIONS SHALL BE CAST AT APPROXIMATELY THE SAME SLOPE AS THEY ARE TO BE PLACED.
2. ALL PUSH-IN SECTIONS SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 14 DAYS.
3. ALL PUSH-IN SECTIONS SHALL BE CAST ON A SMOOTH 4" LAYER OF COMPACTED AGGREGATE.
4. PLACE 2 LAYERS OF 4 MIL PLASTIC ON GRADE BEFORE PLACING CONCRETE TO PROVIDE SEPARATION BETWEEN WET CONCRETE AND SUBGRADE AND PROVIDE A SLIP PLANE WHEN MOVING THE SLAB INTO POSITION.
5. DEPENDING ON CONSTRUCTION EQUIPMENT OR WORKING AREA LIMITATIONS, CONTRACTOR MAY HAVE TO MAKE MULTIPLE PUSH-IN SLAB POURS PRIOR TO FINAL INSTALLATION. ALL SEPARATE POURS WILL REQUIRE REBAR PLACEMENT AS DESCRIBED IN NOTE 6.
6. REBAR SHALL BE EPOXIED OR CAST INTO THE FIRST SLAB AND EXTENDED A MINIMUM OF 20" INTO SUBSEQUENT SLAB(S).
7. CONTRACTOR MAY ELECT TO FABRICATE ANGLE IRON ALONG EDGE OF OUTER STEEL SUPPORT BEAMS TO HELP DIRECT PUSH-IN SLAB DURING INSTALLATION.
8. PROVIDE 3" CLEAR FOR ALL REBAR REINFORCEMENT FROM CONCRETE SURFACES IN CONTACT WITH EARTH. PROVIDE 2" CLEAR FROM ALL OTHER CONCRETE SURFACES.
9. PLACE RIPRAP EDGE PROTECTION AT THE SAME GRADE AS PUSH-IN SLAB. KEY IN RIPRAP BY MECHANICAL TAMPING METHODS TO PROVIDE FLUSH SURFACE.
10. USE CLASS II RIPRAP IN ACCORDANCE WITH TABLE 701-21 IN THE MDT STANDARD SPECIFICATIONS
11. THE ABOVE WATER CAST-IN PLACE SLAB SHALL BE CONSTRUCTED AFTER THE PUSH-IN SLAB HAS BEEN MOVE INTO POSITION.
12. A TURBIDITY CURTAIN SHALL BE INSTALLED PRIOR TO COMMENCING ANY EXCAVATION WORK IN THE RIVER AND SHALL BE MAINTAINED THROUGH THE PERFORMANCE OF ALL WORK WITHIN THE RIVER.
13. CONTRACTOR TO SUBMIT CROSS MEMBER SHOP DRAWINGS TO ENGINEER FOR APPROVAL.



PUSH-IN BOAT RAMP

ELEVATION VIEW

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE

MONTANA FISH, WILDLIFE & PARKS

NEAR PHILIPSBURG, MT

PUSH-IN BOAT RAMP DETAILS

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
DATE:	12/09/2024		

SHEET

14

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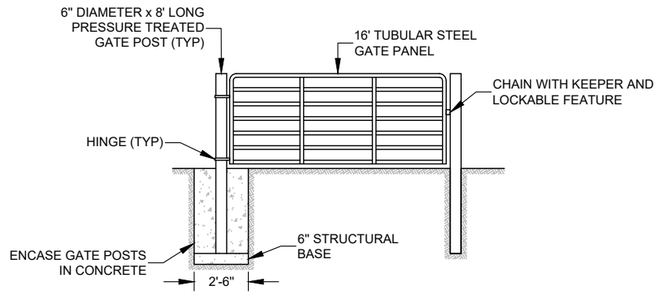
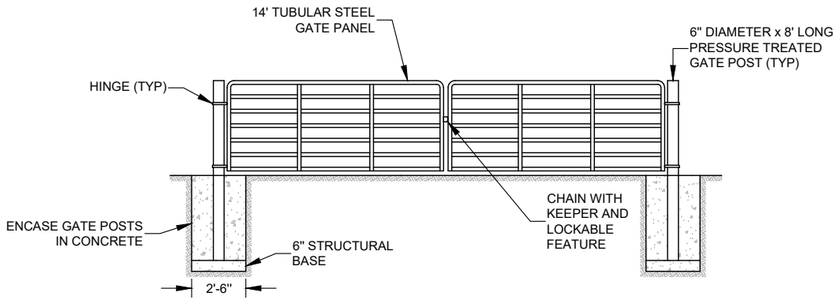
NOTE:

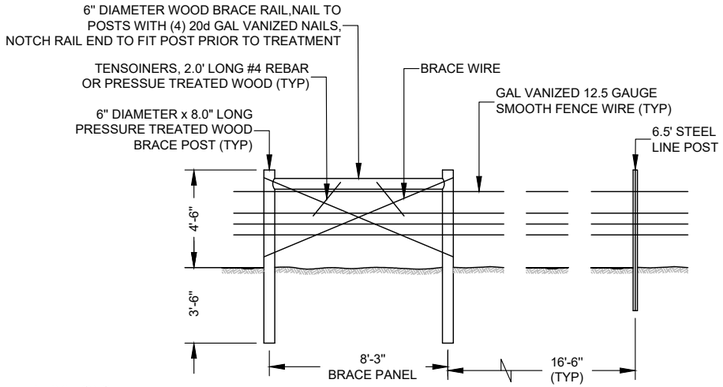
INSTALL (2) 6" DIA. x 6; PRESSURE TREATED WOOD POSTS 18" BEYOND THE EDGE OF THE ROAD ALONG THE SWING ARC OF THE GATE PANELS. THE GATE WILL BE SECURED TO THIS POST TO KEEP IT OPEN. SET POST TO HAVE 30" EXPOSED ABOVE GROUND.



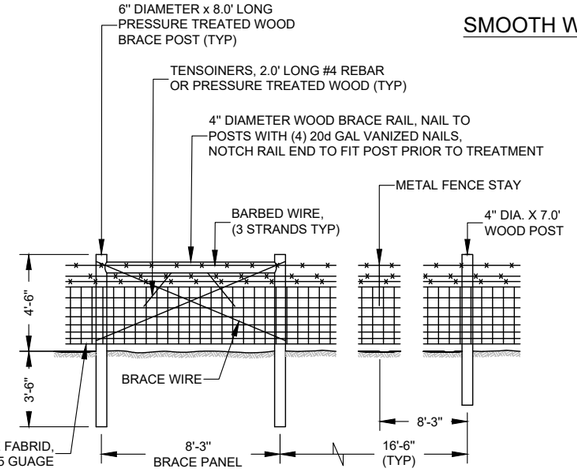
SINGLE PANEL METAL GATE



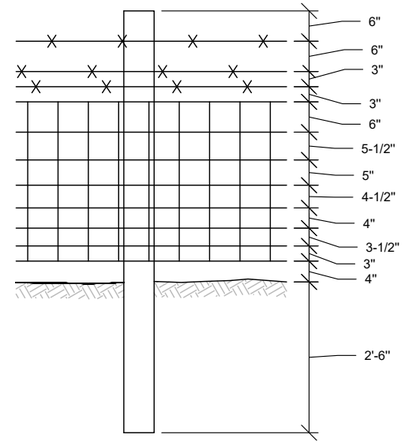
DOUBLE PANEL METAL GATE



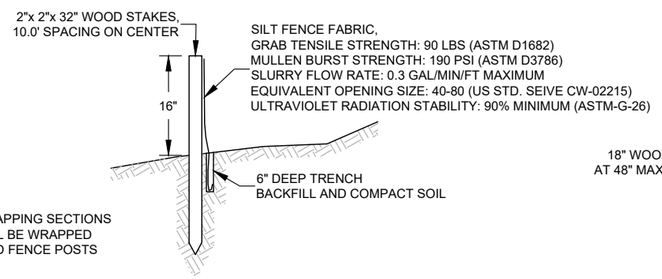
SMOOTH WIRE FENCE (SITE)



BARBED WIRE FENCE (MDT)



BARBED WIRE FENCE WIRE SPACING DETAIL (MDT)



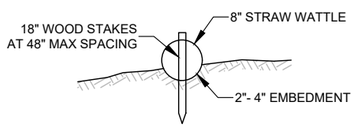
NOTES:

ENDS OF OVERLAPPING SECTIONS OF FABRIC SHALL BE WRAPPED AROUND SHARED FENCE POSTS UNTIL SECURE.

SILT FENCE

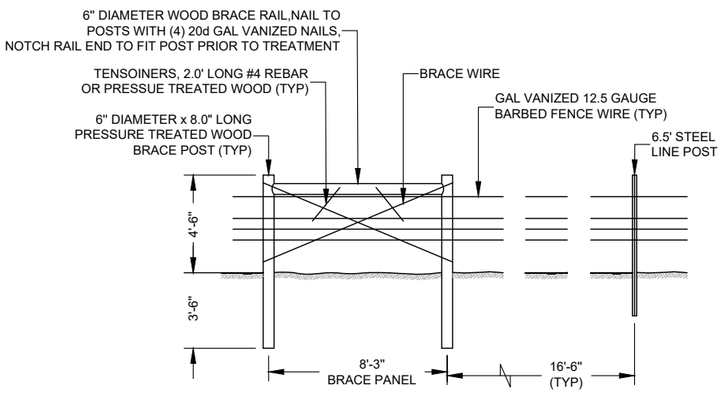
NOTES:

EITHER SILT FENCE OR FIBER ROLL MAY BE USED AT THE CONTRACTORS OPTION.



FIBER ROLL

EROSION CONTROL BARRIER



BARBED-WIRE WIRE FENCE
(RECLAMATION SITE)

TRIPLE TREE ENGINEERING

REVISIONS		
DATE	DESCRIPTION	

WEST SLOPE FISHING ACCESS SITE
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

BARRIER DETAILS

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
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SHEET
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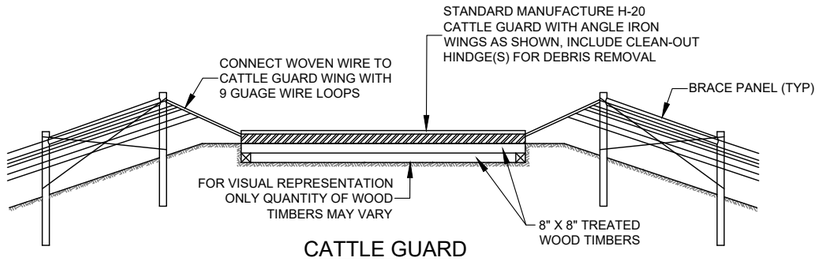
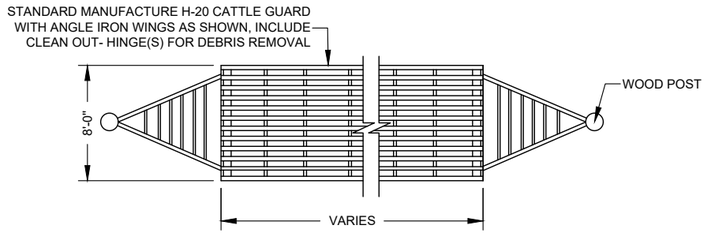
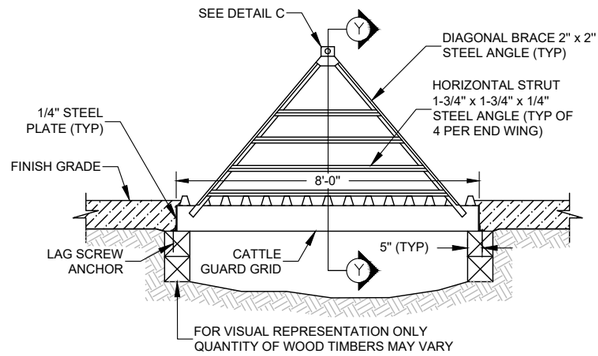


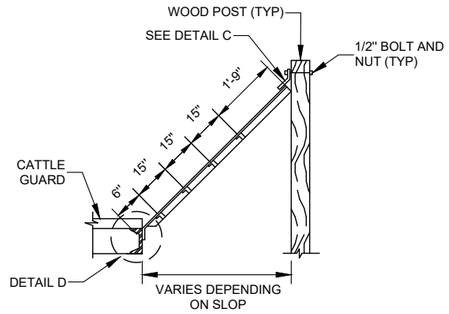
CATTLE GUARD
ELEVATION VIEW



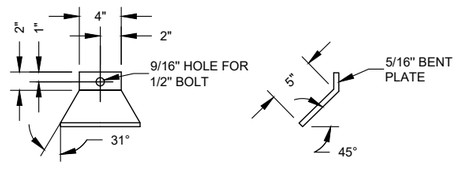
CATTLE GUARD
PLAN VIEW



END WING AND CATTLE GUARD
SECTION

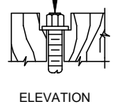


END WING
SECTION Y-Y



FRONT VIEW SIDE VIEW

DETAIL C
END WING TOP BRACKET

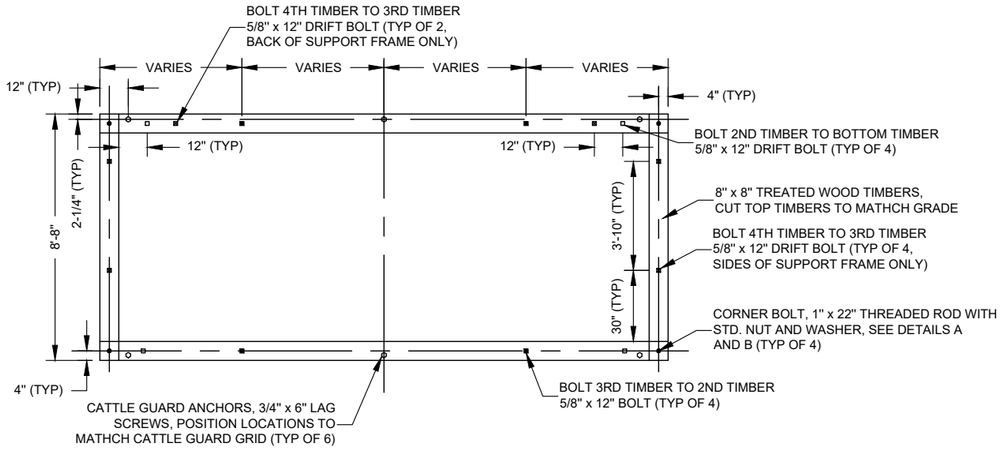


ELEVATION

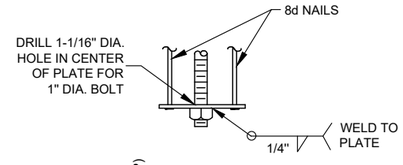
DETAIL A
(TYP FOR 1" X 22" CORNER BOLT)

FRONT VIEW SIDE VIEW

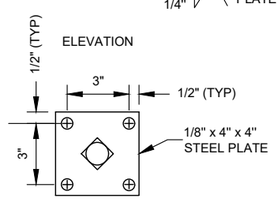
DETAIL D
END WING CONNECTION TO CATTLE GUARD



CATTLE GUARD SUPPORT FRAME
PLAN VIEW

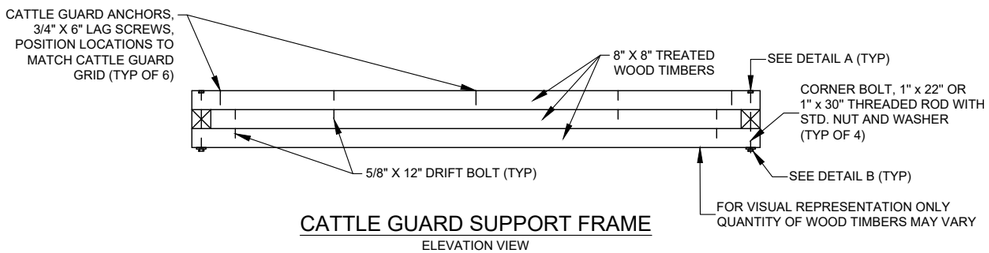


ELEVATION



PLAN VIEW

DETAIL B
(TYP FOR 1" X 22" CORNER BOLT)



CATTLE GUARD SUPPORT FRAME
ELEVATION VIEW

TRIPLE TREE ENGINEERING

REVISIONS		
DESCRIPTION		
DATE		

WEST SLOPE FISHING ACCESS SITE
MONTANA FISH, WILDLIFE & PARKS
NEAR PHILIPSBURG, MT

CATTLE GUARD DETAILS

Dec 09, 2024 - 10:18am - P:\Granite County\22-04 West Slope FAS\Design\CADD\ConstructionDrawings\PlanSetDrawings\22-04_DETAILS.dwg

PROJECT #:	22-04		
DRAFTED BY:	AP	CHECKED BY:	BK
DATE:	12/09/2024		

SHEET
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