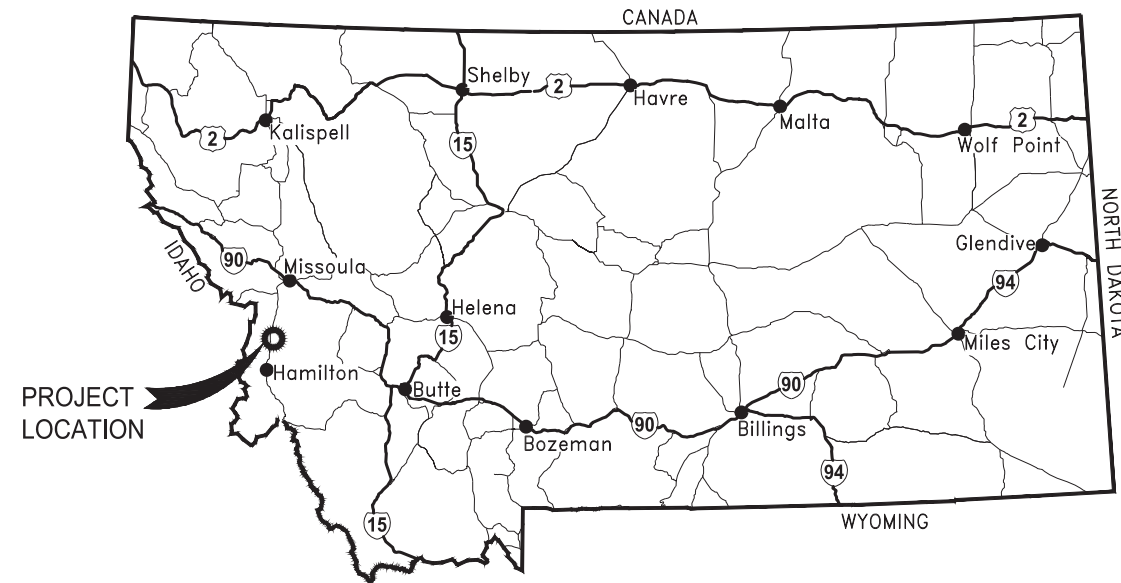
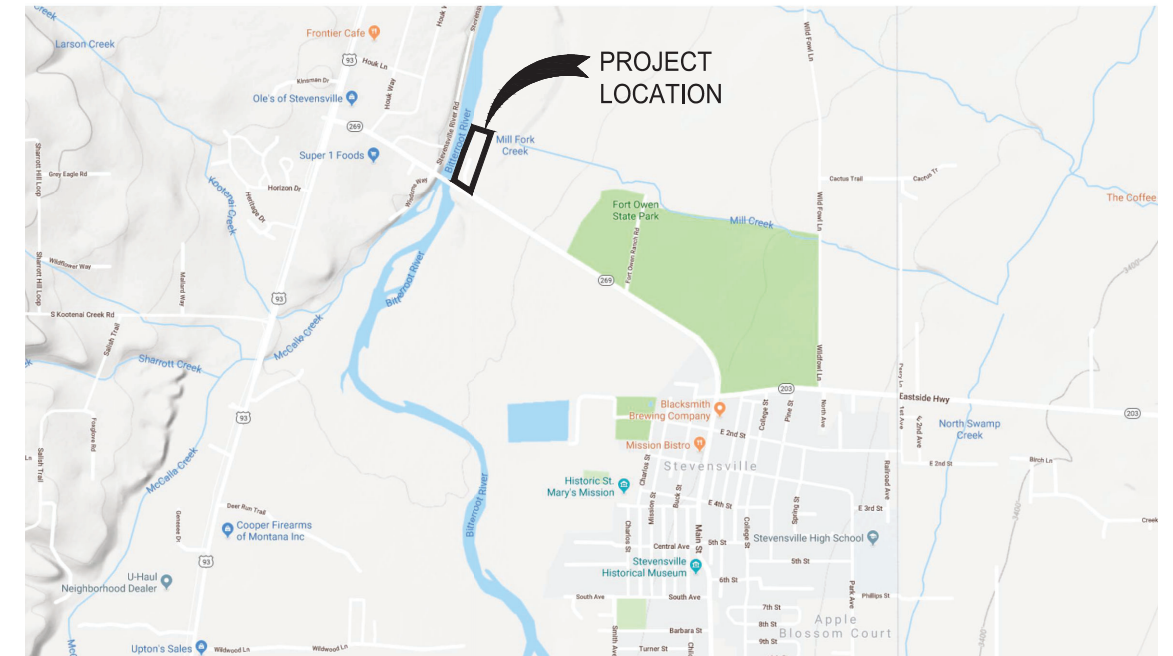


CONSTRUCTION PLANS FOR: JOHN OWEN FAS FWP #7173727

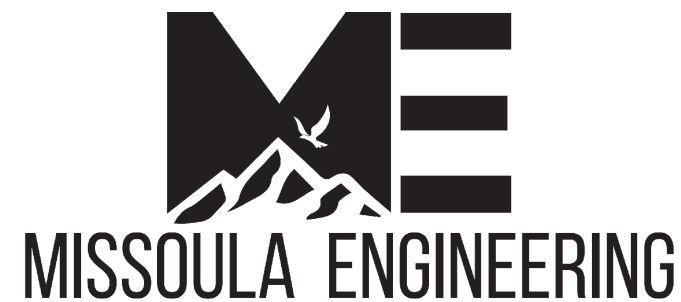


LOCATION MAP



VICINITY MAP

PREPARED BY:



PO Box 2833 Missoula, Montana 59806
Phone # (406) 215-1555

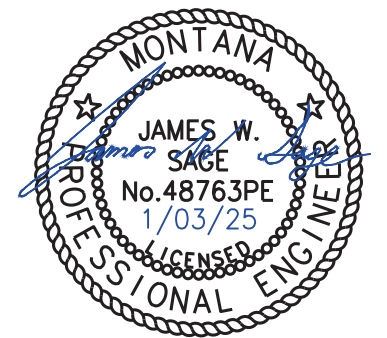
PREPARED FOR:



PO Box 200701 Helena, Montana 59620
Phone # (406) 841-4000

SHEET INDEX

SHEET NO.	DRAWING DESCRIPTION
1	Cover Sheet
2	General Notes and Legend
3	Quantities and Abbreviations
4	Existing Conditions
5	Overall Site Plan
6	Tree Removal Plan
7	Demolition Plan
8	Site Plan (1 of 2)
9	Site Plan (2 of 2)
10	Grading Plan (1 of 2)
11	Grading Plan (2 of 2)
12	Plan and Profile
13	Typical Sections Details
14	Sign and Parking Details
15	Latrine Details
16	Fencing Details
17	Gate Details
18	Right of Way Details
19	Erosion Control Plan
20	Erosion Control Details



Know what's below.
Call before you dig.

CALL UTILITY NOTIFICATION
CENTER OF MONTANA
1-800-424-5555

CALL FOR THE MARKING OF
UNDERGROUND UTILITIES
2 BUSINESS DAYS BEFORE
YOU DIG, GRADE, OR EXCAVATE

JLS
DRAWN BY: 01/03/25
DATE: 01/03/25
JWS
CHECKED BY: 01/03/25
DATE: 01/03/25

JLS
REVISED BY: 01/03/25
DATE: 01/03/25
JWS
APPROVED BY: 01/03/25
DATE: 01/03/25

APPROVED BY: DATE:
APPROVED BY: DATE:



**MONTANA FISH,
WILDLIFE & PARKS**
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COVER SHEET

JOHN OWEN FAS FWP #7173727



SHEET: 1 of 20

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY CONFLICTS EXIST BETWEEN THE PLANS AND WHAT IS FOUND IN THE FIELD.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND PROTECT ALL UTILITY LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ONE CALL UTILITY LOCATION CENTER AT 1-800-424-5555 AT LEAST 2 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS, (AT THEIR EXPENSE) REQUIRED TO PERFORM THE WORK. THESE PERMITS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: RAVALLI COUNTY AND STATE OF MONTANA PERMITS.
4. ALL WORK SHALL BE COMPLETED IN A SAFE MANNER AND CONSISTENT WITH O.S.H.A GUIDELINES.
5. CONTRACTOR SHALL PROTECT ALL ADJACENT IMPROVEMENTS FROM DAMAGE AND EROSION. DISTURBED AREAS SHALL BE RESTORED TO THE ORIGINAL CONDITION OR TO THE PROPOSED DESIGN GRADE AS INDICATED ON THE PLANS.
6. ALL CIVIL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AS APPLICABLE: MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS 6TH EDITION AND INTERNATIONAL BUILDING CODE. IN INSTANCES WHERE A CONFLICT EXISTS BETWEEN THE REFERENCED CODES CONTACT THE ENGINEER. THE MOST STRINGENT CODE SHALL RULE.
7. ALL REQUIRED COMPACTION TESTING SHALL BE PROVIDED BY AN INDEPENDENT TESTING FIRM AT THE EXPENSE OF THE CONTRACTOR.
8. IMPORT MATERIAL REQUIRED TO COMPLETE EARTHWORK SHALL BE IMPORTED FROM OFF-SITE OR DETERMINED TO BE SUITABLE BY SUPPLYING INDEPENDENT TESTING OF MATERIAL AND AFTER INSPECTION BY ENGINEER AND WRITTEN APPROVAL BY THE OWNER. CONTRACTOR IS RESPONSIBLE FOR SOURCING AND DELIVERY OF ALL IMPORTED FILL MATERIAL AND SHALL BE CONSIDERED INCIDENTAL TO THE WORK. ALL IMPORT MATERIAL SHALL BE CLEAN MATERIAL FREE OF DEBRIS AND SUITABLE FOR USE AS STRUCTURAL FILL.
9. ALL WORK WITHIN THE MDT ROW SHALL BE IN CONFORMANCE WITH MDT STANDARDS AND REGULATIONS INCLUDING BUT NOT LIMITED TO RE-VEGETATION.
10. WATER NECESSARY FOR CONSTRUCTION ACTIVITIES SHALL BE PROVIDED BY THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THE WORK. ALL PERMITTING FOR USE OF ANY ON-SITE WATER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

SURVEY NOTES:

1. SURVEY DATUM:
HORIZONTAL - STATE PLANE, NAD 83
VERTICAL - NAVD 88
2. SURVEY INFORMATION SHOWN ON DRAWINGS ARE BASED UPON LIMITED SURVEY DATA. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL MAINTAIN OR REPLACE ANY EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKING. REPLACEMENT COSTS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED BY A LICENSED SURVEYOR IN THE STATE OF MONTANA.

CONSTRUCTION STAKING NOTES:

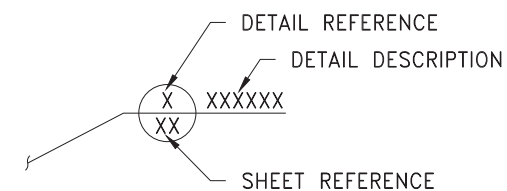
1. STAKING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR SCHEDULING AND PAYMENT

LEGEND

EXISTING		PROPOSED			EXISTING	PROPOSED	
				PROPERTY LINE			BOLLARD
				EASEMENT			SIGN
				CENTERLINE			MAILBOX
				EDGE OF ROAD			WATER VALVE
				MAJOR CONTOUR			WATER METER
				MINOR CONTOUR			FIRE HYDRANT
				WATER MAIN			MONITORING WELL
				WATER SERVICE			POTABLE WATER WELL
				SEWER MAIN			BLOW-OFF ASSEMBLY
				SEWER SERVICE			SEWER MANHOLE
				SEWER FORCE MAIN			SEWER CLEAN-OUT
				CURB			SEPTIC TANK
				FENCE			STORMWATER SUMP
				OVERHEAD POWER LINE			TEST PIT
				UNDERGROUND POWER LINE			ELECTRIC METER
				UNDERGROUND GAS LINE			TELEPHONE RISER
				UNDERGROUND TELEVISION LINE			TELEPHONE MANHOLE
				UNDERGROUND TELEPHONE LINE			LIGHT POLE
				UNDERGROUND FIBER OPTIC LINE			CATV RISER
				UNDERGROUND IRRIGATION LINE			GAS METER
				STORMWATER SWALE			GAS VALVE

* THIS IS A STANDARD LEGEND, NOT ALL SYMBOLS MAY BE USED OR SHOWN ON THIS PROJECT *

DETAIL CALLOUT



HATCH LEGEND

	TYPICAL GRAVEL SECTION
	ROAD RECONDITIONING
	BANK RESTORATION
	RIVER ACCESS

JLS 01/03/25
DRAWN BY: DATE:
JWS 01/03/25
CHECKED BY: DATE:

JLS 01/03/25
REVISED BY: DATE:
JWS 01/03/25
APPROVED BY: DATE:

APPROVED BY: DATE:
APPROVED BY: DATE:



**MONTANA FISH,
WILDLIFE & PARKS**
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GENERAL NOTES AND LEGEND
JOHN OWEN FAS FWP #7173727



SHEET: 2 of 20

ABBREVIATIONS

A.C.I.	AMERICAN CONCRETE INSTITUTE	GA	GAUGE	R/W	RIGHT OF WAY
AC	ASBESTOS CONCRETE	GAL	GALLON	RAD	RADIUS
AFF	ABOVE FINISHED FLOOR	GALV	GALVANIZED	RCP	REINFORCED CONCRETE PIPE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	GND	GROUND	RD	ROOF DRAIN
ARCH	ARCHITECTURAL	GVL	GRAVEL	REQD	REQUIRED
ASPH	ASPHALT	GW	GROUNDWATER	RM	REFERENCE MARK
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS			RR	RAILROAD
AVE	AVENUE	HDPE	HIGH DENSITY POLYETHYLENE	RT	RIGHT
		HORIZ	HORIZONTAL		
BFV	BUTTERFLY VALVE	HWY	HIGHWAY	S	SOUTH
BLDG	BUILDING	HYD	HYDRANT	SCH	SCHEDULE
BLK	BLOCK			SD	STORM DRAIN
BLVD	BOULEVARD	IBC	INTERNATIONAL BUILDING CODE	SDI	STORM DRAIN INLET
BM	BENCHMARK	ID	INSIDE DIAMETER	SDWK	SIDEWALK
BSMT	BASEMENT	IE	INVERT ELEVATION	SE	SOUTHEAST
BVCE	BEGIN VERTICAL CURVE ELEVATION	INV	INVERT	SF	SQUARE FEET
BVCS	BEGIN VERTICAL CURVE STATION			SHT	SHEET
BW	BOTTOM OF WALL	K	RATE OF VERTICAL CURVE	SS	SANITARY SEWER
				SSTL	STAINLESS STEEL
CB	CATCH BASIN	LBS	POUNDS	ST	STREET
CCJ	CONCRETE CONTROL JOINT	LF	LINEAR FOOT	STA	STATION
CEJ	CONCRETE EXPANSION JOINT	LPG	LIQUID PROPANE GAS	SW	SOUTHWEST
CF	CUBIC FEET	LT	LEFT	SY	SQUARE YARD
CIP	CAST IRON PIPE	LVC	LENGTH OF VERTICAL CURVE		
CL, ϵ	CENTERLINE			TA	TOP OF ASPHALT
CLR	CLEAR	MAX	MAXIMUM	TBC	TOP BACK OF CURB
CMP	CORRUGATED METAL PIPE	MDT	MONTANA DEPARTMENT OF TRANSPORTATION	TC	TOP OF CONCRETE
CMU	CONCRETE MASONRY UNIT	MECH	MECHANICAL	TEL	TELEPHONE
CO	CLEAN OUT	MFD	MANUFACTURED	TMB	TEMPORARY BENCH MARK
CONC	CONCRETE	MFR	MANUFACTURER	TS	TOP OF SLAB
CP	CONTROL PANEL, CONTROL POINT	MH	MANHOLE	TW	TOP OF WALL
CULV	CULVERT	MIN	MINIMUM	TYP	TYPICAL
CY	CUBIC YARD	MISC	MISCELLANEOUS		
		MJ	MECHANICAL JOINT	UG	UNDERGROUND
DET	DETAIL	MJ	MECHANICAL JOINT	UTIL	UTILITY
DIA, ϕ	DIAMETER	MPWSS	MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS		
DIM	DIMENSION			V	VALVE, VOLTAGE
DIP	DUCTILE IRON PIPE			VB	VALVE BOX
DRWY	DRIVEWAY	N	NORTH	VERT	VERTICAL
DWG	DRAWING	N:	NORTHING	VOL	VOLUME
		NG	NATURAL GAS		
(E)	EXISTING	NIC	NOT IN CONTRACT	W	WEST
E	EAST	NO	NUMBER	W/	WITH
E:	EASTING	NOM	NOMINAL	W/O	WITHOUT
EA	EACH	NTS	NOT TO SCALE	WD	WOOD
EG	EXISTING GRADE/ELEVATION	NW	NORTHWEST	WM	WATER METER
EL	ELEVATION			WTR	WATER
ELEC	ELECTRIC, ELECTRICAL	OC	ON CENTER	WWF	WELDED WIRE FABRIC
EOP	EDGE OF PAVEMENT	OD	OUTSIDE DIAMETER	WWM	WELDED WIRE MESH
EVCE	END VERTICAL CURVE ELEVATION	OHP	OVER HEAD POWER		
EVCS	END VERTICAL CURVE STATION			XS	CROSS SECTION
EX	EXISTING	(P)	PROPOSED	YD	YARD
EXC	EXCAVATE	P.U.E.	PUBLIC/PRIVATE UTILITY EASEMENT		
		PC	POINT OF CURVATURE		
(F)	FUTURE	PE	POLYETHYLENE		
FC	FACE OF CURB	PERP	PERPENDICULAR		
FCV	FLOW CONTROL VALVE	PI	POINT OF INTERSECTION		
FD	FOUNDATION DRAIN	PL, ϵ	PROPERTY LINE		
FDN	FOUNDATION	PRELIM	PRELIMINARY		
FF	FINISHED FLOOR	PRV	PRESSURE REDUCING VALVE		
FG	FINISHED GRADE/ELEVATION	PSF	POUNDS PER SQUARE FOOT		
FL	FLOWLINE	PSI	POUNDS PER SQUARE INCH		
FLG	FLANGE	PT	POINT OF TANGENT		
FO	FIBER OPTIC	PVC	POLYVINYL CHLORIDE		
FTG	FOOTING	PVI	POINT OF VERTICAL INTERSECTION		

SYMBOLS

@	AT
Δ	ANGLE OF DEFLECTION

* THIS IS A STANDARD ABBREVIATION LIST, NOT ALL ABBREVIATIONS MAY BE USED OR SHOWN ON THIS PROJECT *

JLS 01/03/25
DRAWN BY: DATE:
JWS 01/03/25
CHECKED BY: DATE:

JLS 01/03/25
REVISED BY: DATE:
JWS 01/03/25
APPROVED BY: DATE:

APPROVED BY: DATE:
APPROVED BY: DATE:

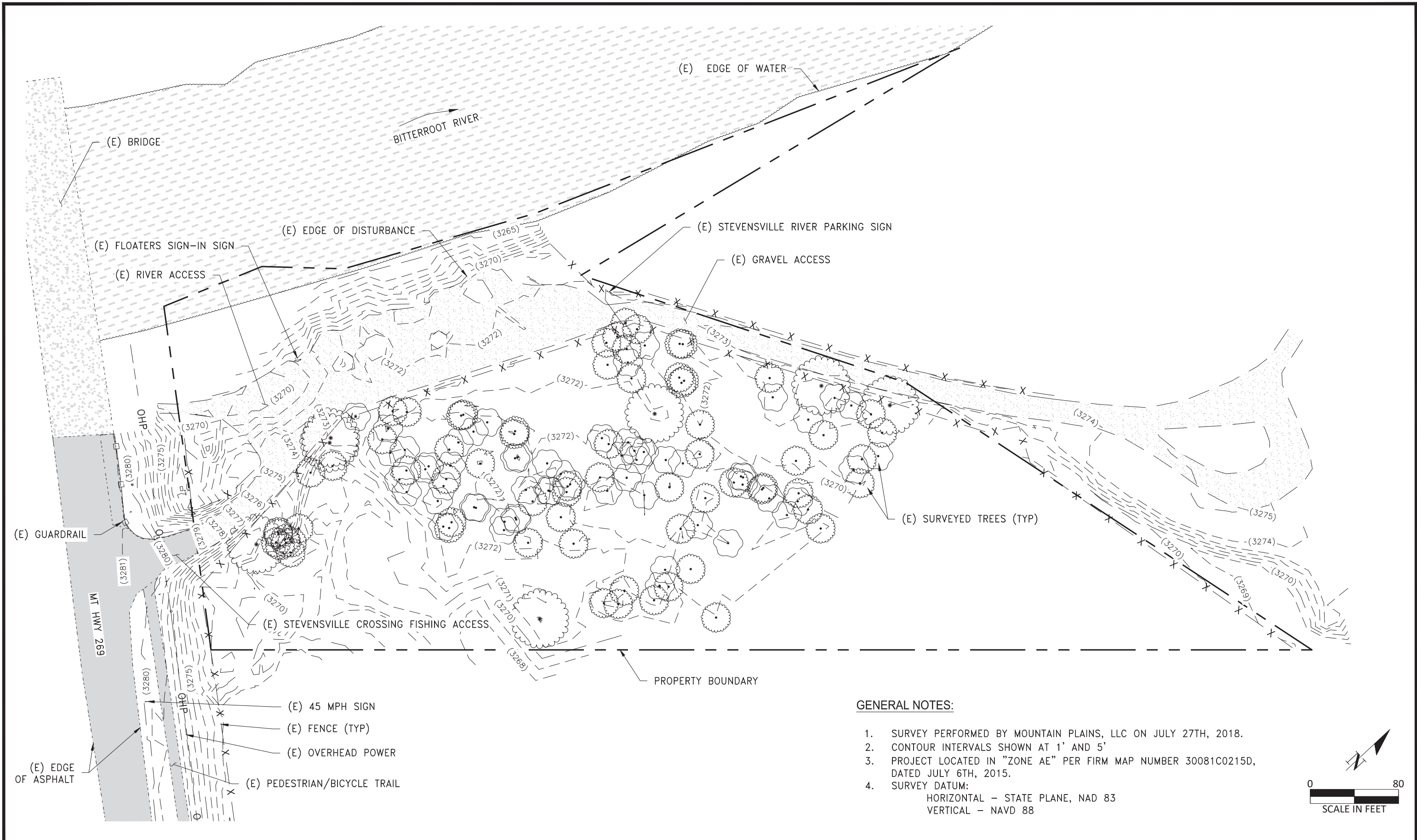


**MONTANA FISH,
WILDLIFE & PARKS**
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QUANTITIES AND ABBREVIATIONS
JOHN OWEN FAS FWP #7173727



SHEET: 3 of 20



GENERAL NOTES:

1. SURVEY PERFORMED BY MOUNTAIN PLAINS, LLC ON JULY 27TH, 2018.
2. CONTOUR INTERVALS SHOWN AT 1' AND 5'
3. PROJECT LOCATED IN "ZONE AE" PER FIRM MAP NUMBER 30081C0215D, DATED JULY 6TH, 2015.
4. SURVEY DATUM:
 HORIZONTAL - STATE PLANE, NAD 83
 VERTICAL - NAVD 88

JLS 01/03/25
 DRAWN BY: DATE:
 JWS 01/03/25
 CHECKED BY: DATE:

JLS 01/03/25
 REVISED BY: DATE:
 JWS 01/03/25
 APPROVED BY: DATE:

APPROVED BY: DATE:
 APPROVED BY: DATE:

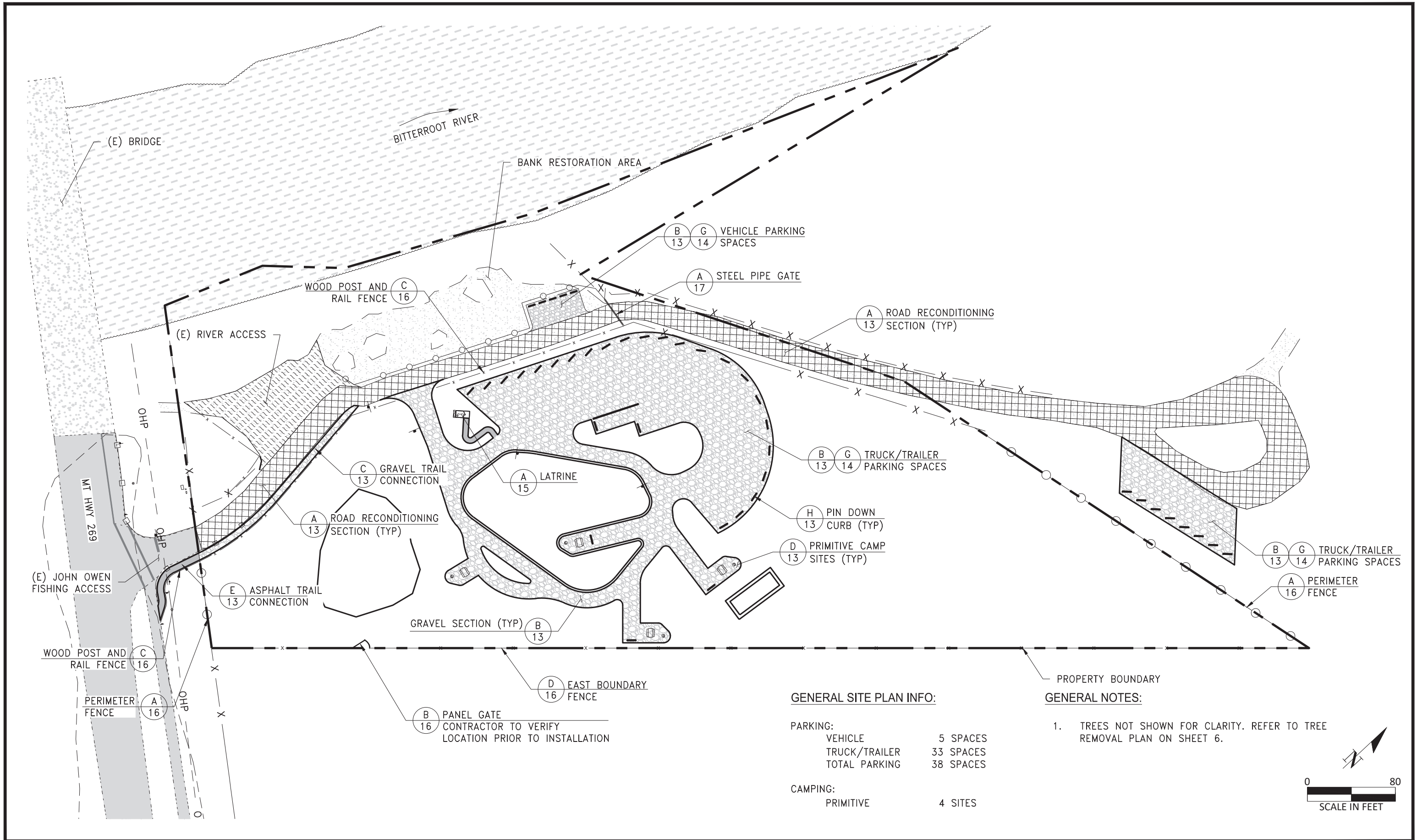


**MONTANA FISH,
 WILDLIFE & PARKS**
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EXISTING CONDITIONS
 JOHN OWEN FAS FWP #7173727



SHEET: 4
 of 20

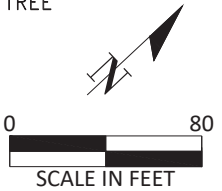


GENERAL SITE PLAN INFO:

PARKING:	
VEHICLE	5 SPACES
TRUCK/TRAILER	33 SPACES
TOTAL PARKING	38 SPACES
CAMPING:	
PRIMITIVE	4 SITES

GENERAL NOTES:

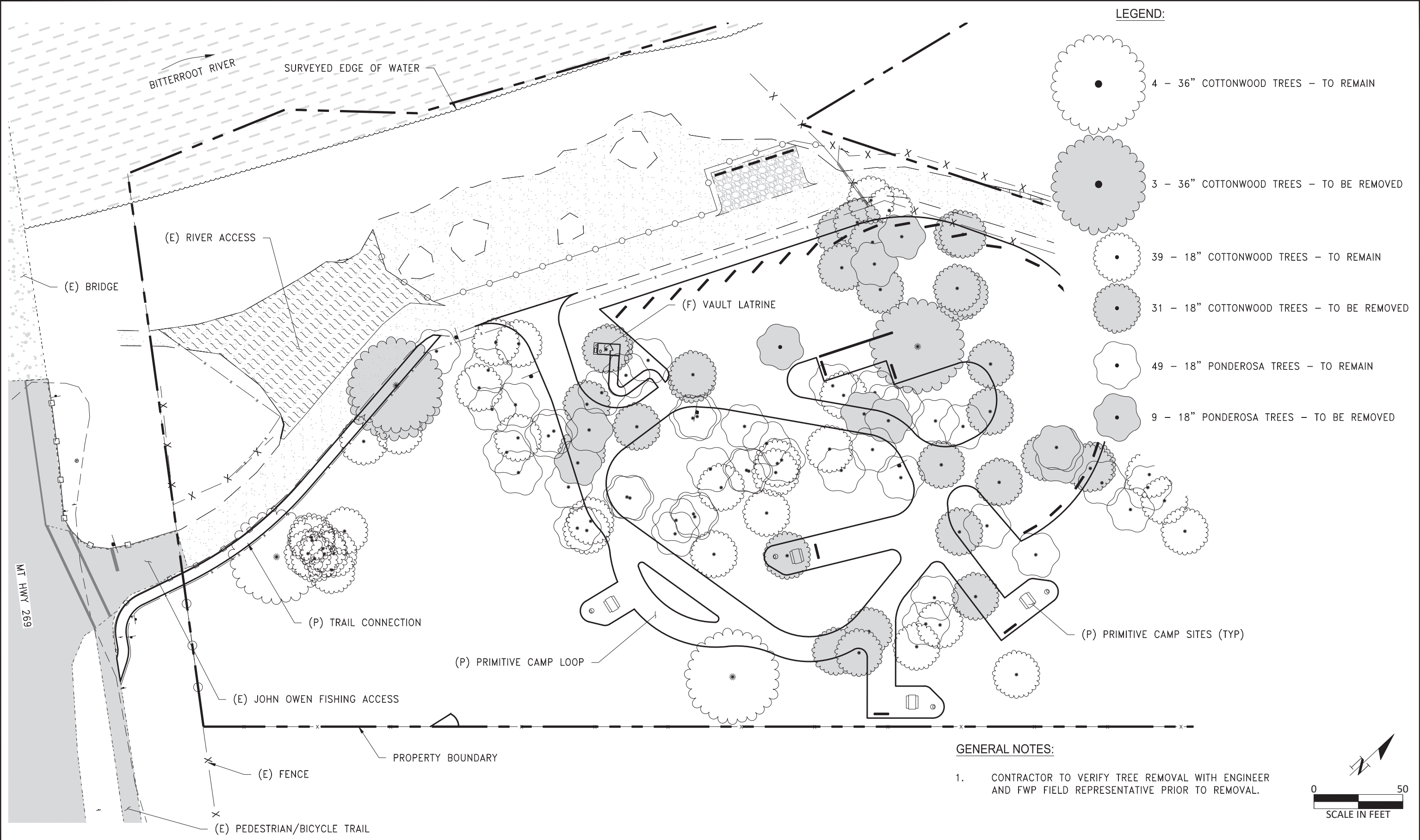
- TREES NOT SHOWN FOR CLARITY. REFER TO TREE REMOVAL PLAN ON SHEET 6.



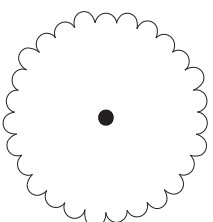
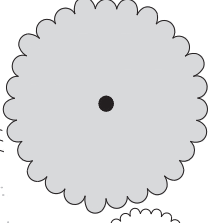
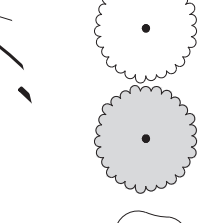
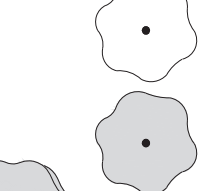

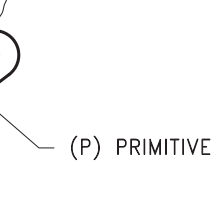
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JWS CHECKED BY:	01/03/25 DATE:	JWS APPROVED BY:	01/03/25 DATE:	APPROVED BY:	DATE:



OVERALL SITE PLAN
JOHN OWEN FAS FWP #7173727

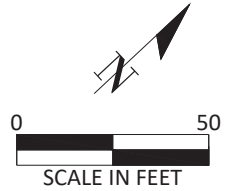


LEGEND:

-  4 - 36" COTTONWOOD TREES - TO REMAIN
-  3 - 36" COTTONWOOD TREES - TO BE REMOVED
-  39 - 18" COTTONWOOD TREES - TO REMAIN
-  31 - 18" COTTONWOOD TREES - TO BE REMOVED
-  49 - 18" PONDEROSA TREES - TO REMAIN
-  9 - 18" PONDEROSA TREES - TO BE REMOVED

GENERAL NOTES:

1. CONTRACTOR TO VERIFY TREE REMOVAL WITH ENGINEER AND FWP FIELD REPRESENTATIVE PRIOR TO REMOVAL.



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DRAWN BY:
DATE: 01/03/25

JLS
REVISED BY:
DATE: 01/03/25

APPROVED BY: _____ DATE: _____

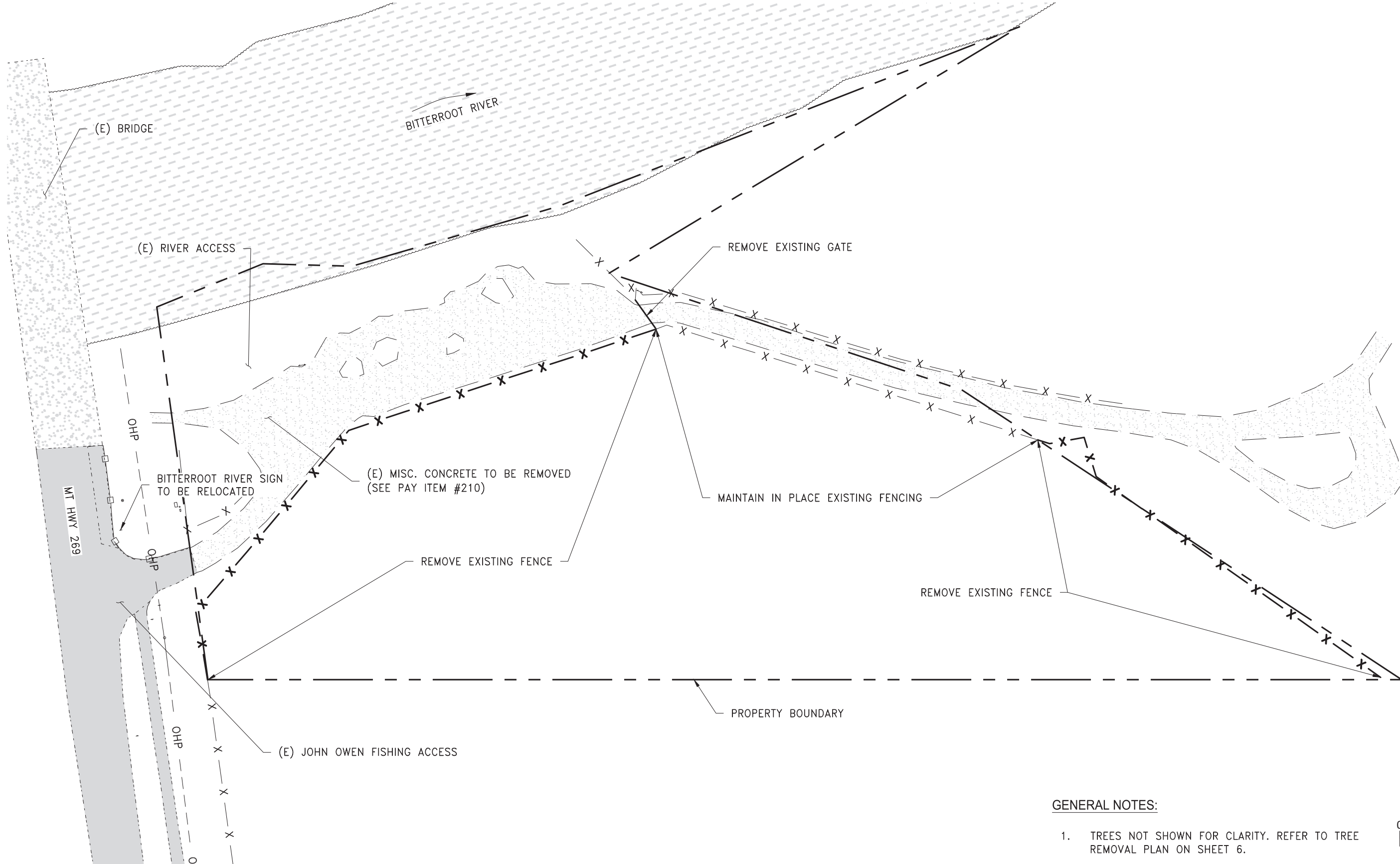
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DATE: 01/03/25

JWS
APPROVED BY:
DATE: 01/03/25

APPROVED BY: _____ DATE: _____

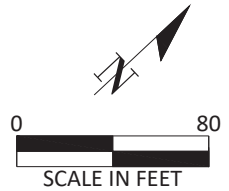


TREE REMOVAL PLAN
JOHN OWEN FAS FWP #7173727



GENERAL NOTES:

1. TREES NOT SHOWN FOR CLARITY. REFER TO TREE REMOVAL PLAN ON SHEET 6.



JLS
DRAWN BY:
DATE: 01/03/25

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REVISED BY:
DATE: 01/03/25

APPROVED BY: DATE:
APPROVED BY: DATE:

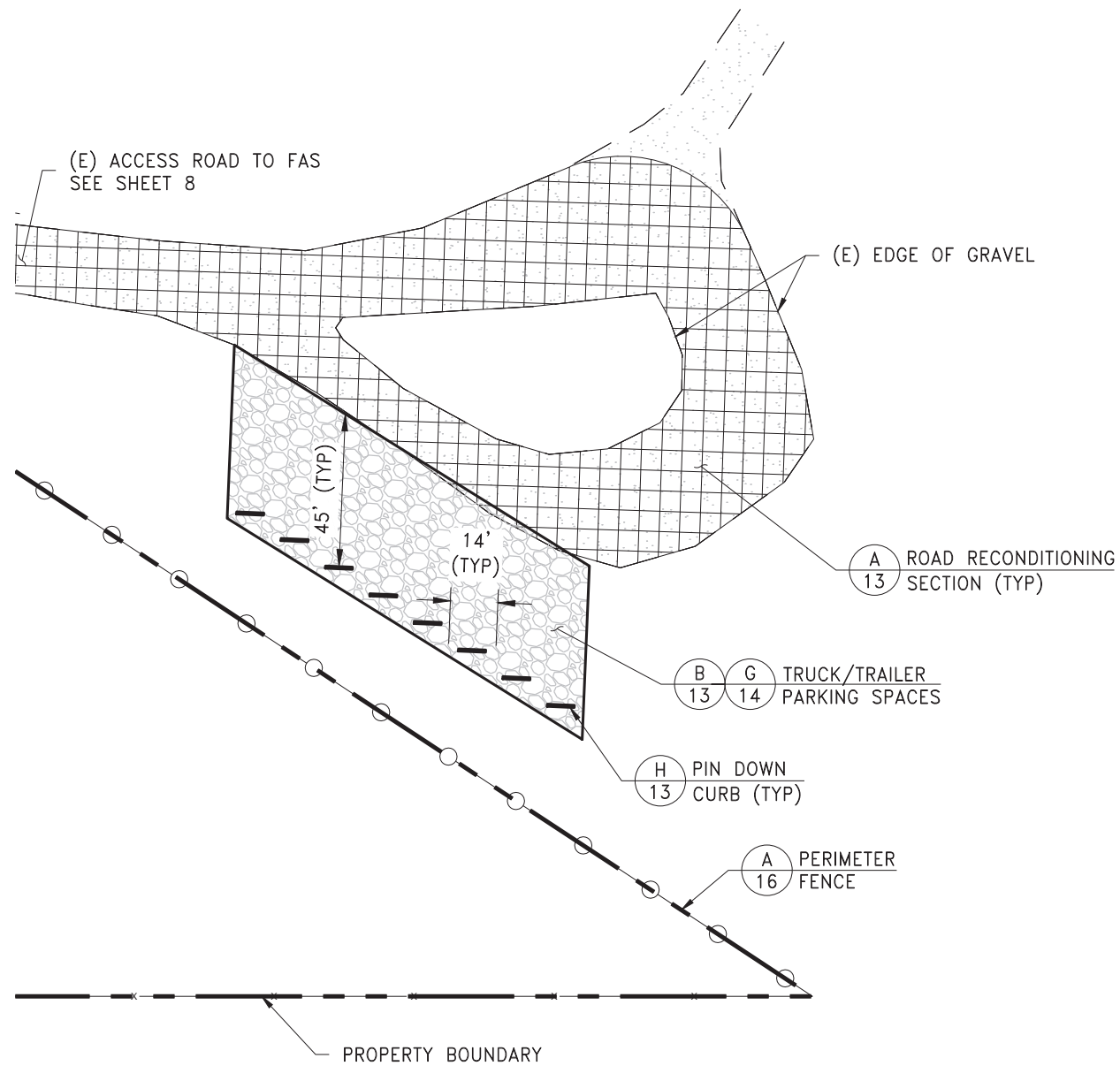


**MONTANA FISH,
WILDLIFE & PARKS**
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DEMOLITION PLAN
JOHN OWEN FAS FWP #7173727

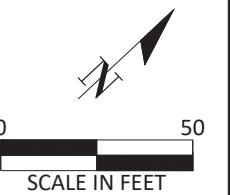


SHEET: 7 of 20



GENERAL NOTES:

1. TREES NOT SHOWN FOR CLARITY. REFER TO TREE REMOVAL PLAN ON SHEET 6.



JLS 01/03/25
DRAWN BY: DATE:
JWS 01/03/25
CHECKED BY: DATE:

JLS 01/03/25
REVISED BY: DATE:
JWS 01/03/25
APPROVED BY: DATE:

APPROVED BY: DATE:
APPROVED BY: DATE:

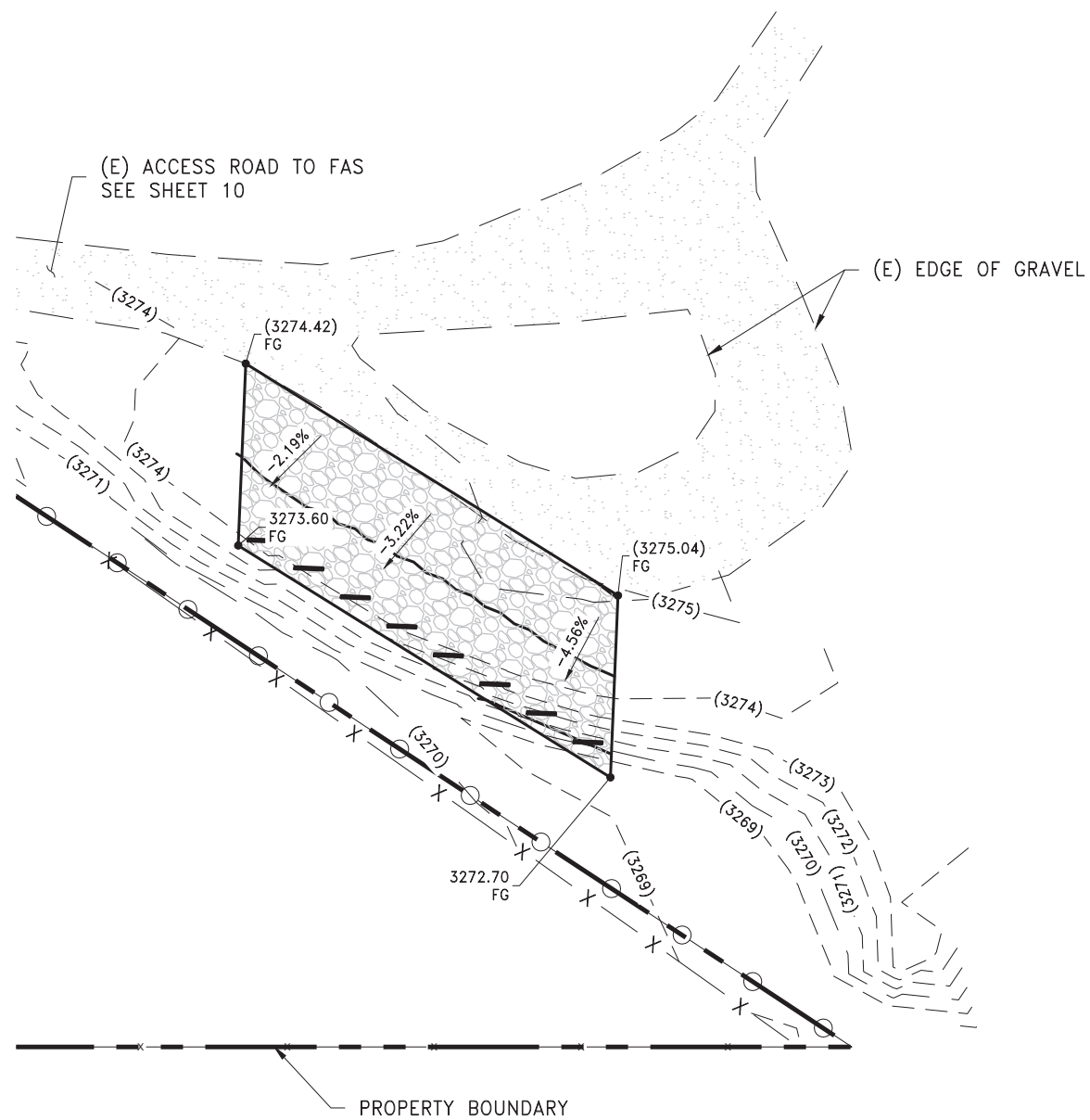


**MONTANA FISH,
WILDLIFE & PARKS**
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SITE PLAN (2 OF 2)
JOHN OWEN FAS FWP #7173727

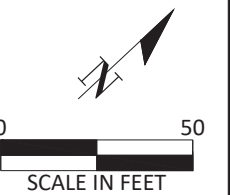


SHEET: 9
of 20



GENERAL NOTES:

1. TREES NOT SHOWN FOR CLARITY. REFER TO TREE REMOVAL PLAN ON SHEET 6.



JLS
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DATE: 01/03/25

JLS
REVISED BY:
DATE: 01/03/25

APPROVED BY: _____ DATE: _____

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CHECKED BY:
DATE: 01/03/25

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APPROVED BY:
DATE: 01/03/25

APPROVED BY: _____ DATE: _____

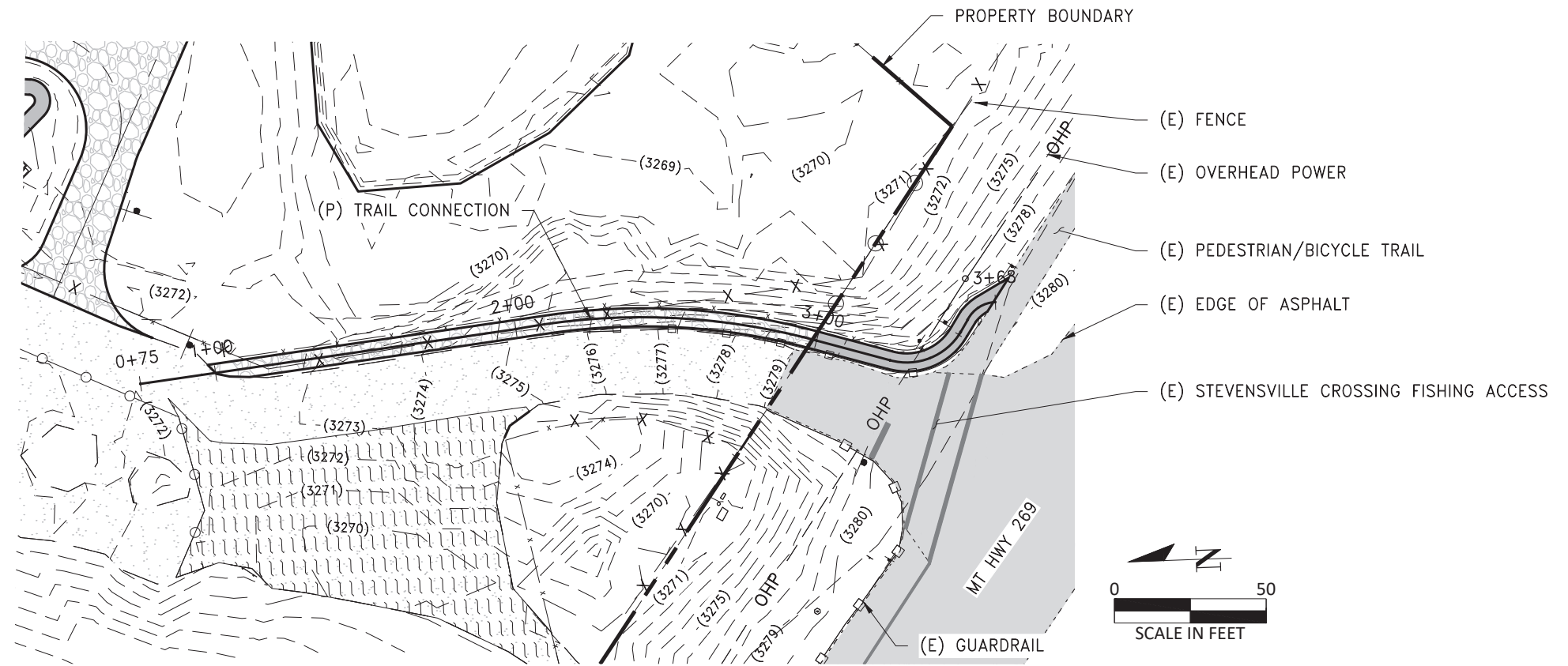


**MONTANA FISH,
WILDLIFE & PARKS**
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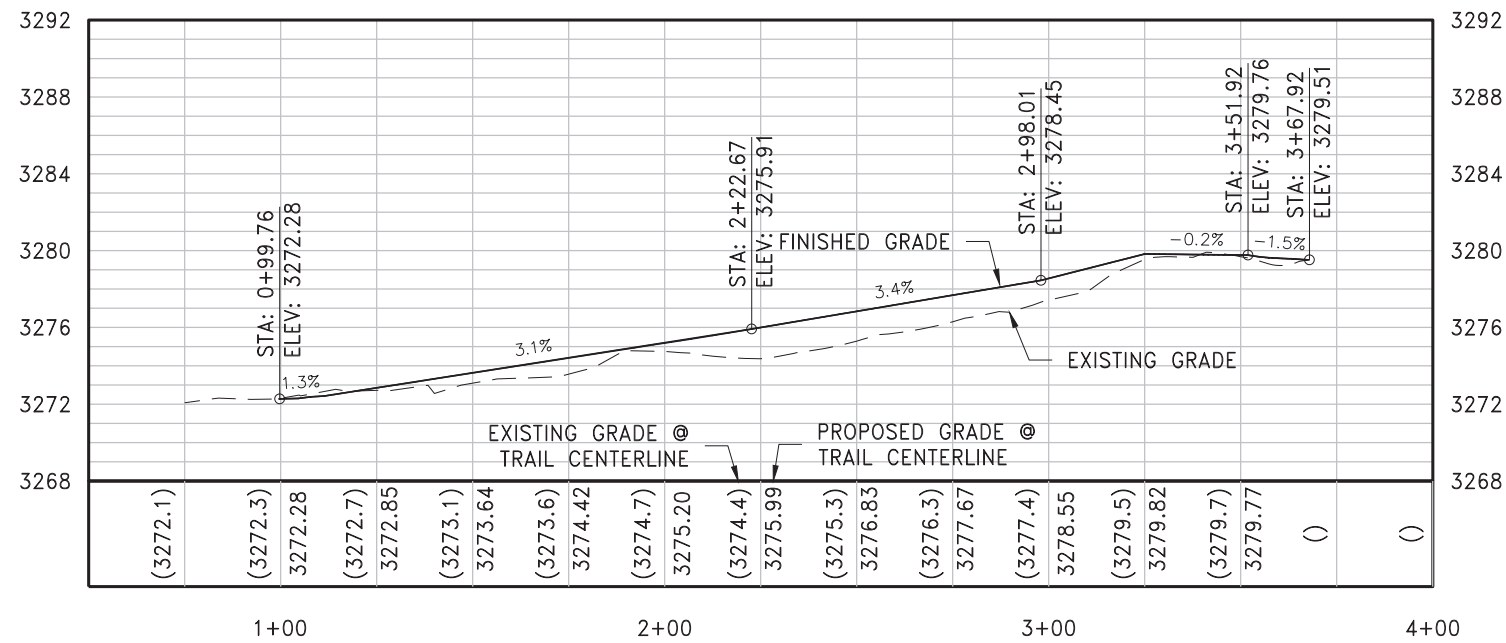
GRADING PLAN (2 OF 2)
JOHN OWEN FAS FWP #7173727



SHEET: 11
of 20



PLAN VIEW



PROFILE VIEW

GENERAL NOTES:

- TREES NOT SHOWN FOR CLARITY. REFER TO TREE REMOVAL PLAN ON SHEET 6.

JLS
DRAWN BY:
DATE: 01/03/25

JWS
CHECKED BY:
DATE: 01/03/25

JLS
REVISED BY:
DATE: 01/03/25

JWS
APPROVED BY:
DATE: 01/03/25

APPROVED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____

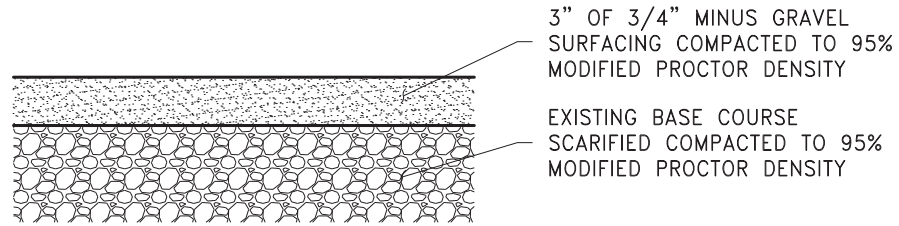


**MONTANA FISH,
WILDLIFE & PARKS**

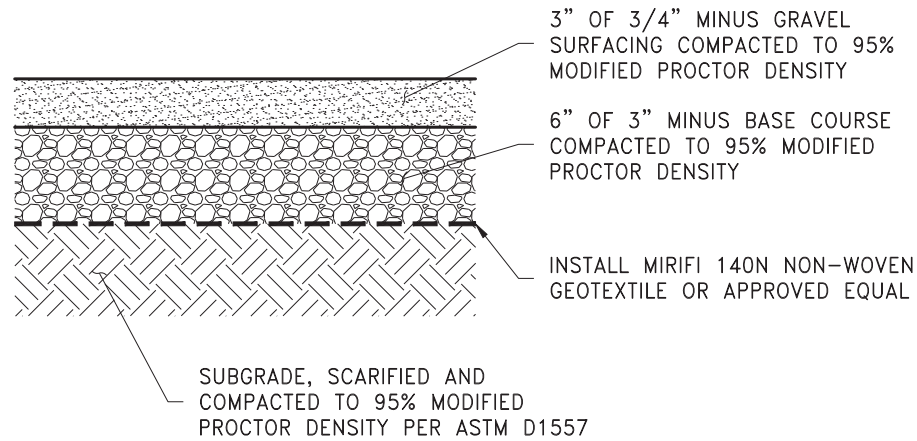
PEDESTRIAN PATH PLAN & PROFILE
JOHN OWEN FAS FWP #7173727



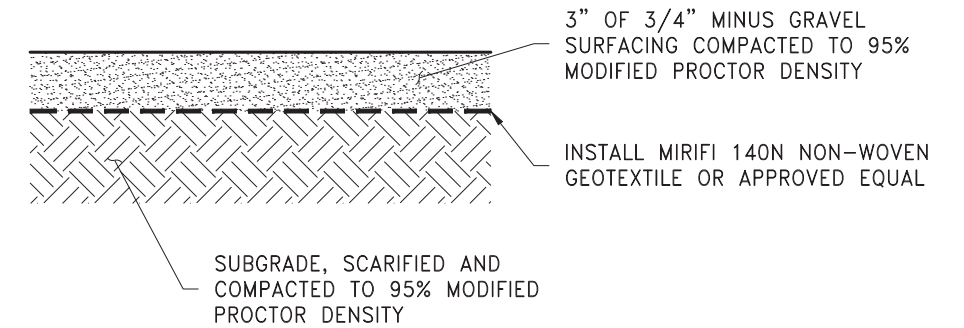
SHEET: 12 of 20



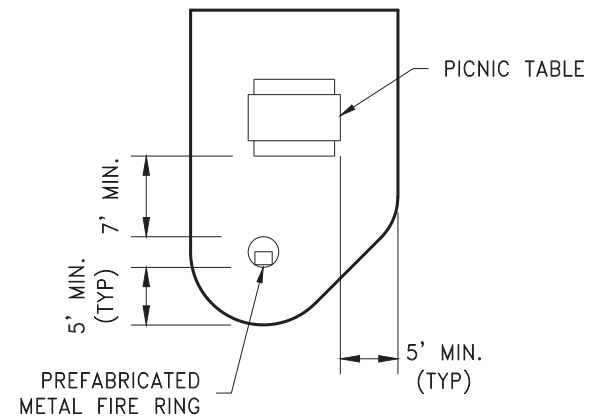
A TYPICAL ROAD RECONDITIONING SECTION
 13 NOTE: 1. PLEASE SEE TABLE A-1 FOR MATERIAL SPECIFICATIONS. NOT TO SCALE



B TYPICAL GRAVEL SECTION
 13 NOTE: 1. PLEASE SEE TABLE A-1 FOR MATERIAL SPECIFICATIONS. NOT TO SCALE



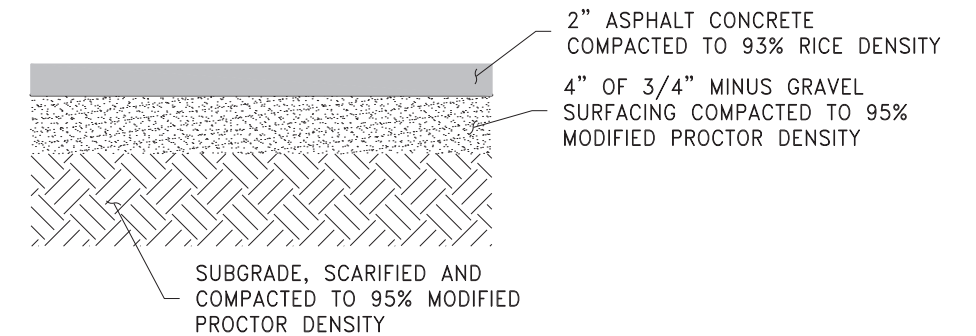
C GRAVEL TRAIL SECTION
 13 NOTE: 1. PLEASE SEE TABLE A-1 FOR MATERIAL SPECIFICATIONS. NOT TO SCALE



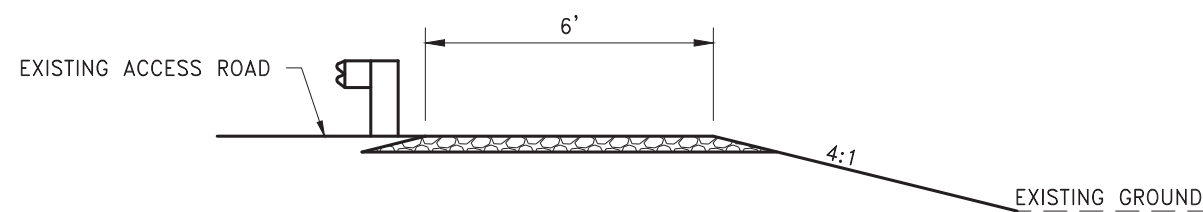
D CAMPSITE LIVING AREA DETAIL
 13 NOT TO SCALE

TABLE A-1

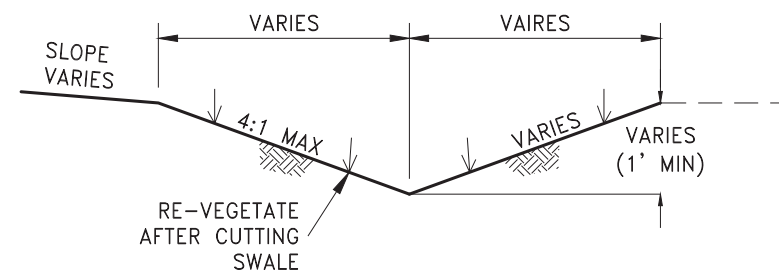
GRADATION SPECIFICATIONS		
SIEVE SIZE	GRAVEL SURFACING % SPECIFICATION	BASE COURSE % SPECIFICATION
3" (75 MM)		100
2" (50 MM)		
1" (25 MM)		
3/4" (19 MM)	100	
1/2" (12.5 MM)		
3/8" (9.5 MM)		
#4 (4.75 MM)	40-70	25-60
#8 (2.36 MM)		
#10 (2 MM)	25-55	
#40 (425 μm)		
#200 (75 μm)	2-10*	12



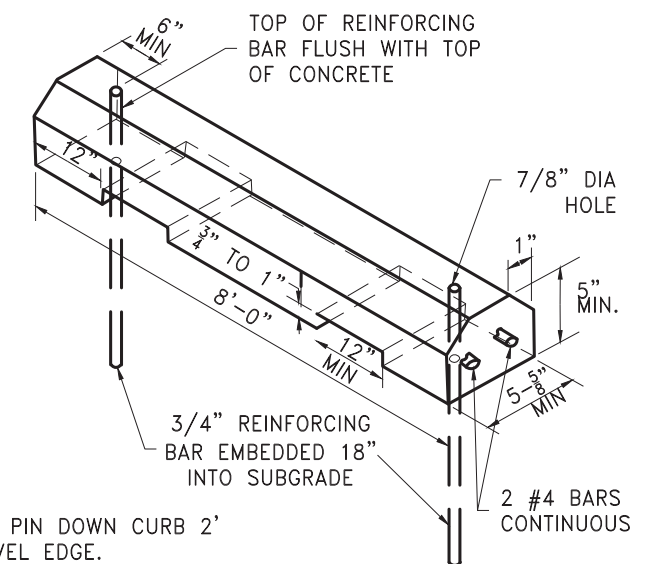
E ASPHALT TRAIL SECTION
 13 NOTE: 1. PLEASE SEE TABLE A-1 FOR MATERIAL SPECIFICATIONS. NOT TO SCALE



F PEDESTRIAN TRAIL SECTION
 13 NOT TO SCALE



G TYPICAL SWALE DETAIL
 13 NOT TO SCALE



NOTE:
 1. INSTALL PIN DOWN CURB 2' FROM GRAVEL EDGE.

H PIN DOWN CURB DETAIL
 13 NOT TO SCALE

JLS 01/03/25
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 JWS 01/03/25
 CHECKED BY: DATE:

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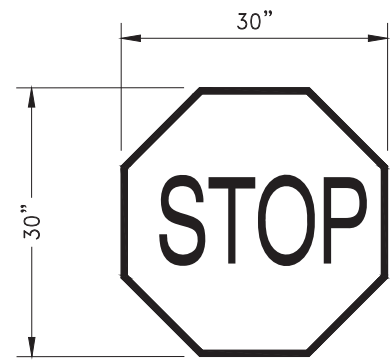


**MONTANA FISH,
 WILDLIFE & PARKS**
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TYPICAL SECTIONS DETAILS
 JOHN OWEN FAS FWP #7173727

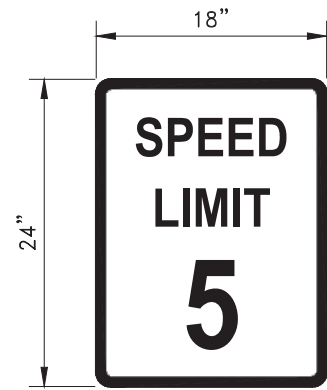


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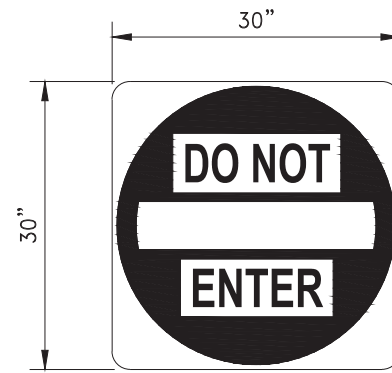
MUTCD - R1-1
TEXT - WHITE
BACKGROUND - RED
BORDER - WHITE

A STOP SIGN
14 NOT TO SCALE



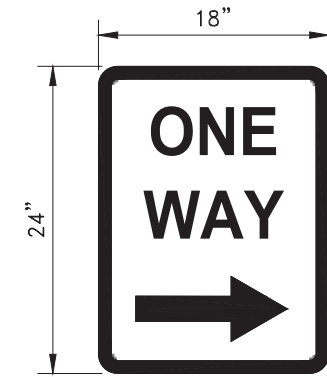
MUTCD - R2-1
TEXT - BLACK
BACKGROUND - WHITE
BORDER - BLACK

B 5 M.P.H. SPEED LIMIT SIGN
14 NOT TO SCALE



MUTCD - R5-1
TEXT - RED
BACKGROUND - WHITE
BORDER - BLACK

C DO NOT ENTER SIGN
14 NOT TO SCALE



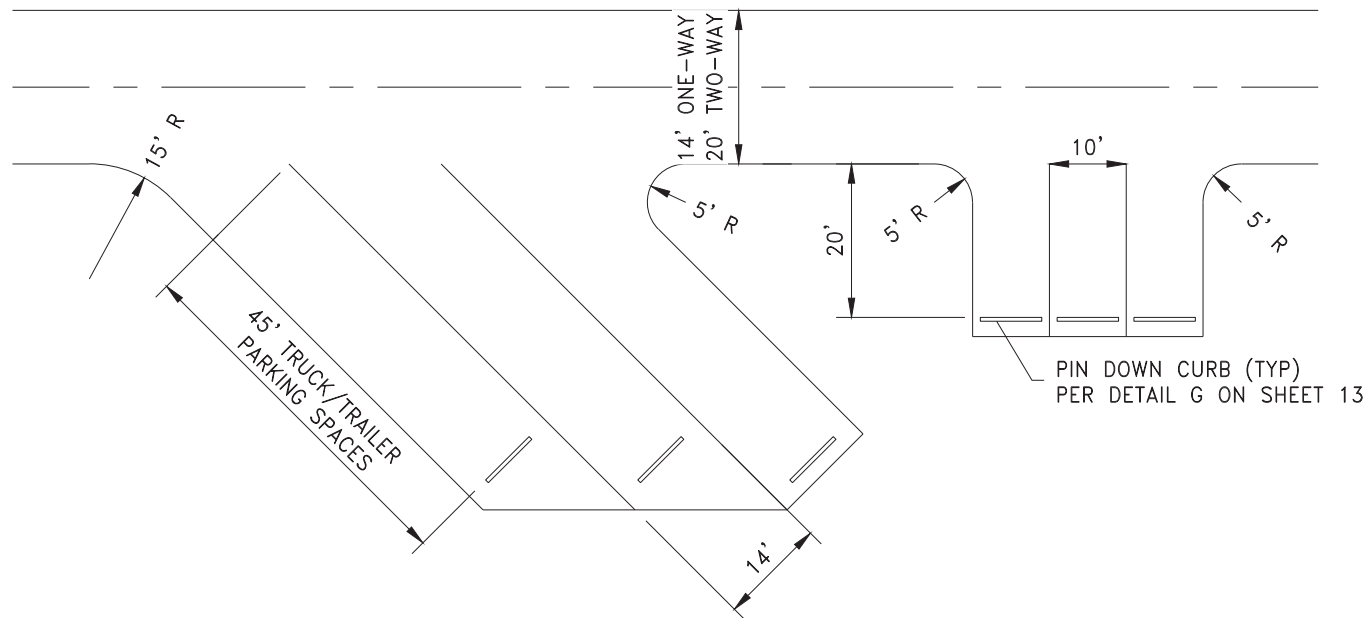
MUTCD - R6-2R
TEXT - BLACK
BACKGROUND - WHITE
BORDER - BLACK

D ONE WAY SIGN
14 NOT TO SCALE

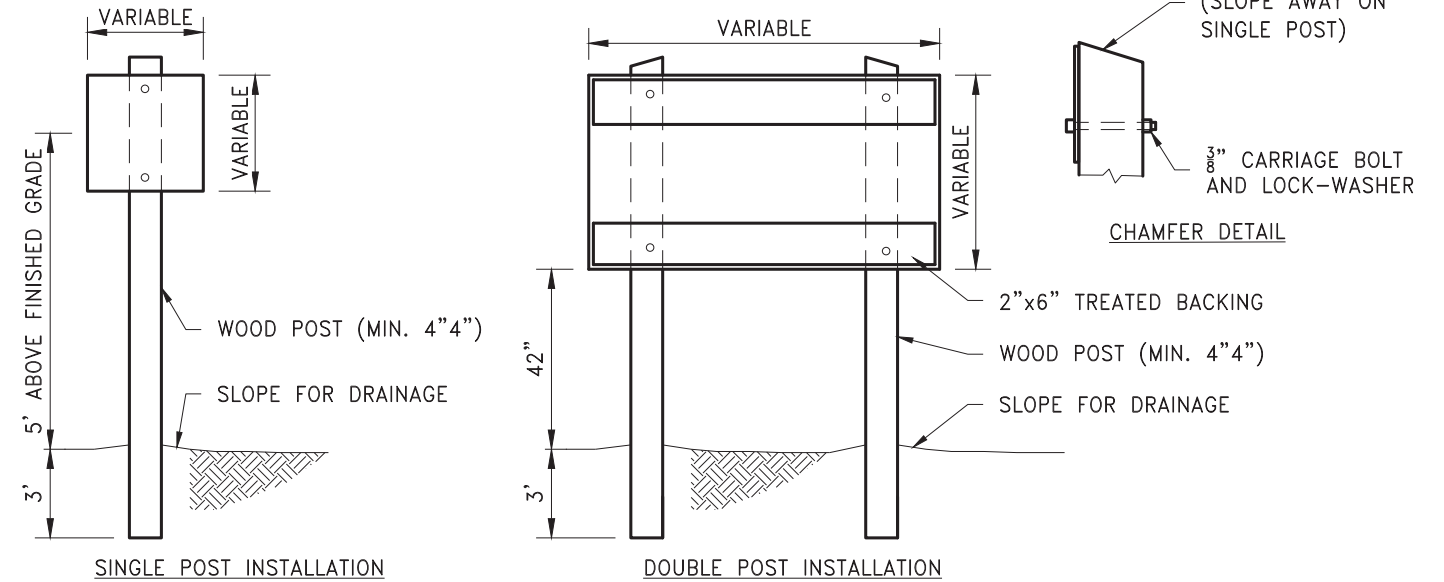


MUTCD - W11-2
IMAGE - BLACK
BACKGROUND - YELLOW
BORDER - BLACK

E PEDESTRIAN CROSSING SIGN
14 NOT TO SCALE



G GENERAL PARKING LAYOUT DIMENSIONS
14 NOT TO SCALE



- NOTES:
1. USE PRESSURE TREATED TIMBERS FOR ALL SIGN POSTS. NEED BREAK-AWAY HOLES (OR DEVICE) FOR LARGER POSTS.
 2. COAT ALL POSTS WITH PRESERVATIVE FOR ALL DRILLED HOLES AND CUT SURFACES.
 3. USE CADMIUM PLATED OR GALVANIZED STEEL FOR ALL BOLTS, NUTS & WASHERS.
 4. PLACE BOLTS TO NOT INTERFERE WITH SIGN LETTERING. PAINT BOLT HEADS TO MATCH SIGN.
 5. CENTER SINGLE POST PANELS TO POST, OVERHANG PANELS 3" BEYOND POSTS FOR DOUBLE POST INSTALLATIONS. EXTEND ALL POSTS 3" ABOVE SIGN PANELS.

H SIGN INSTALLATION DETAIL
14 NOT TO SCALE

JLS 01/03/25
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JWS 01/03/25
CHECKED BY: DATE:

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JWS 01/03/25
APPROVED BY: DATE:

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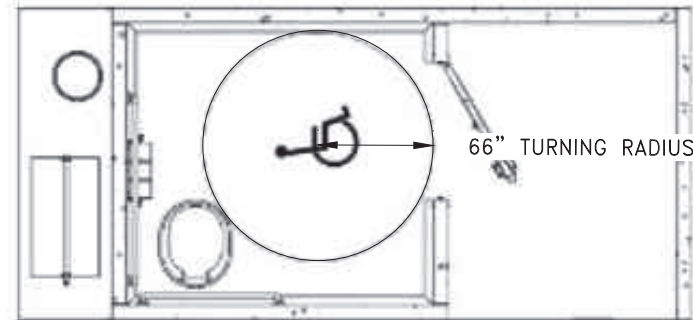
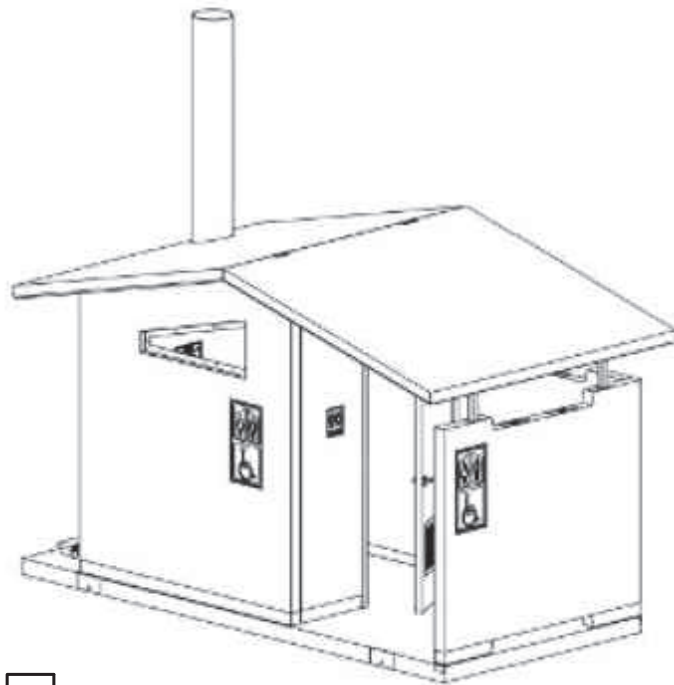


**MONTANA FISH,
WILDLIFE & PARKS**
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SIGN AND PARKING DETAILS
JOHN OWEN FAS FWP #7173727



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GENERAL

THE LATRINE WILL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

INSTALLATION

GENERAL INSTALLATION INVOLVES EXCAVATION, LEVELING BOTTOM OF HOLE WITH DRAIN AGGREGATE, INSTALLING LATRINE, BACKFILLING AROUND LATRINE AND LANDSCAPING.

EXCAVATION:

- A. EXCAVATE SUBSOIL TO A POINT 12 INCHES DEEPER THAN REQUIRED FOR LATRINE INSTALLATION.
 - 1. DEPTH OF EXCAVATION IS 5.75' FOR THE PRECAST LATRINES MANUFACTURED BY MISSOULA CONCRETE.
 - 2. FINISH FLOOR ELEVATION IS SHOWN ON THE SITE PLAN.
- B. MINIMIZE OVER EXCAVATION. STOCKPILE EXCAVATED MATERIAL FOR LATER BACKFILLING AND LANDSCAPING.
- C. COMPACT BOTTOM OF HOLE WITH THREE PASSES OF WHACKER OR SKID PLATE COMPACTION DEVICE.

LEVELING:

- A. USE SMALL GRAVEL, 3/8 INCH MINUS CRUSHED OR SCREENED GRAVEL, AND PLACE ENOUGH IN BOTTOM OF HOLE SUCH THAT WHEN COMPACTED, IT WILL BE 12 INCHES DEEP.
- B. COMPACT LEVELING MATERIAL WITH THREE PASSES OF COMPACTION DEVICE.
- C. LEVEL BASE FOR INSTALLATION OF LATRINE.

LATRINE INSTALLATION:

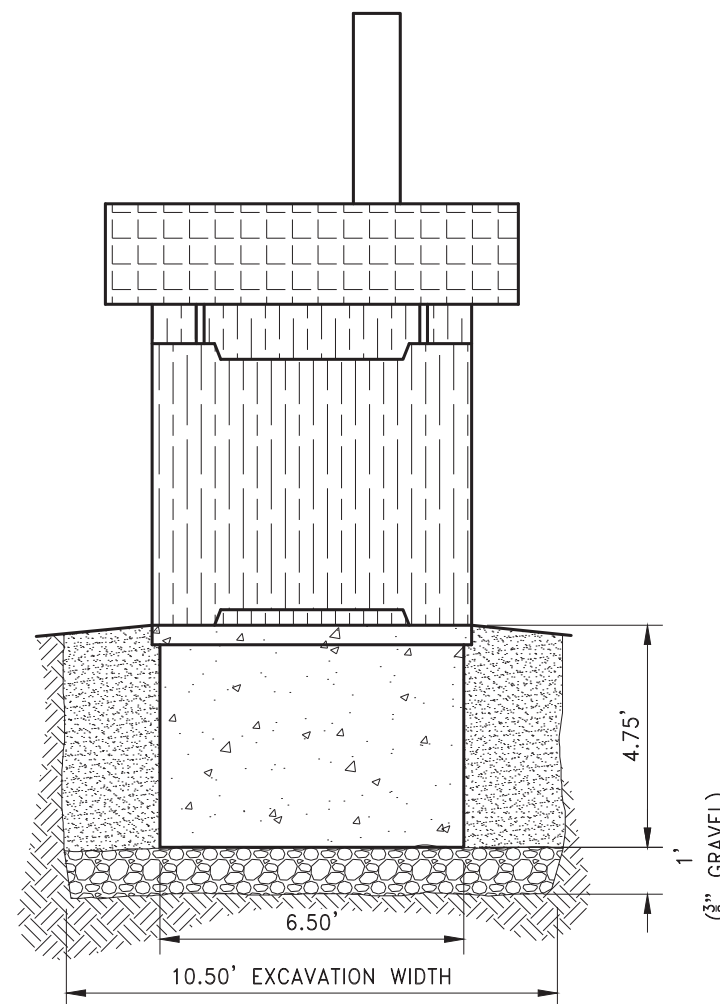
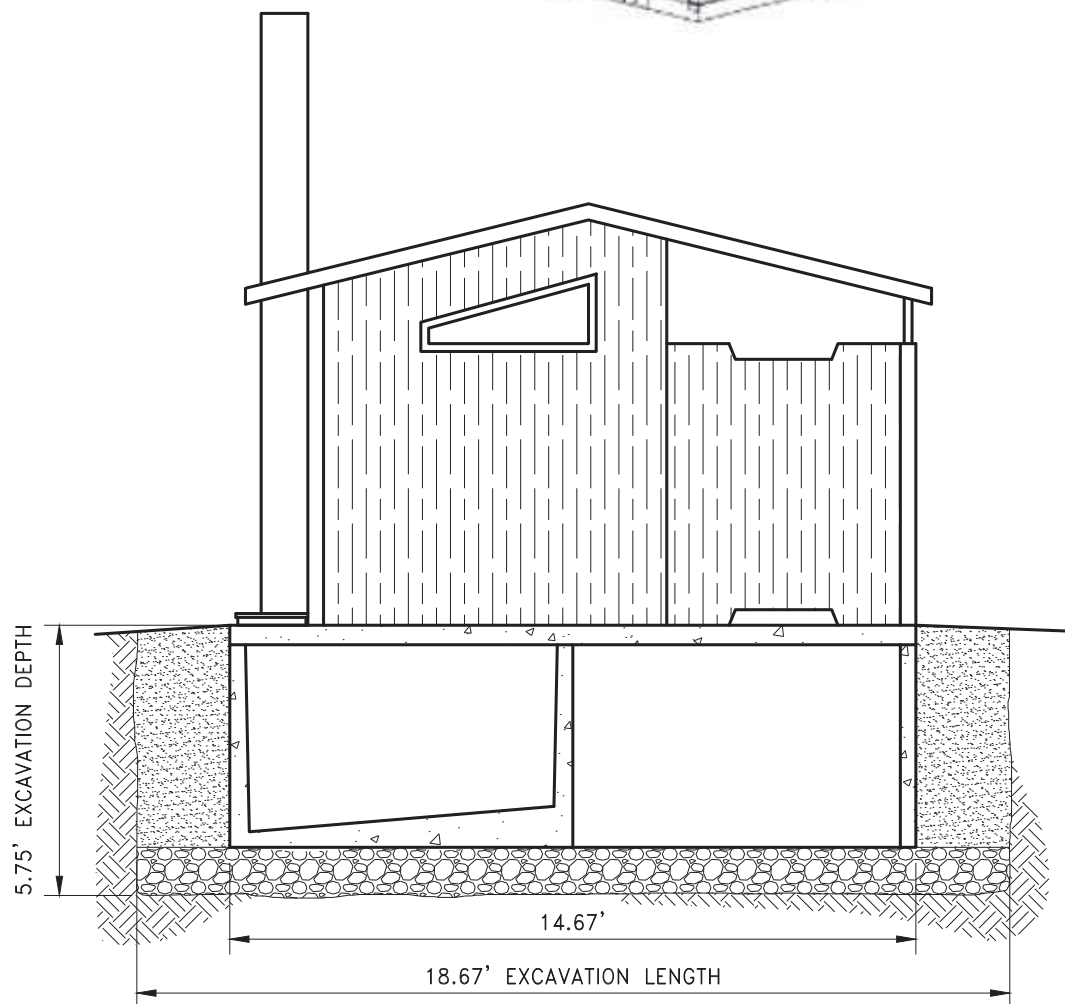
- A. THE PRECAST LATRINE WILL BE SET BY THE SUPPLIER.
- B. INSURE THAT LATRINE SITS LEVEL AND PLUMB WHEN DONE INSTALLING.

BACKFILLING:

- A. PLACE IN SUCCESSIVE 8 INCH LAYERS MATERIAL PREVIOUSLY EXCAVATED FROM HOLE AND COMPACT.
 - 1. REMOVE ROCKS LARGER THAN 6 INCHES IN DIAMETER FROM THE FILL.
 - 2. REMOVE BRANCHES, ROOTS AND OTHER OR ORGANIC DEBRIS IN FILL.

LANDSCAPING:

- A. SLOPE GRADE AWAY FROM LATRINE.
- B. BLEND FILL SLOPE INTO SURROUNDING TERRAIN.
- C. REMOVE SURPLUS FILL MATERIAL.
- D. REMOVE SOIL TO A DEPTH OF 2 INCHES BENEATH LOCATION FOR ENTRANCE SLAB AND COMPACT.
- E. PLACE TWO INCHES OF 3/4 INCH PEA GRAVEL FOR BEDDING, LEVEL AND COMPACT.



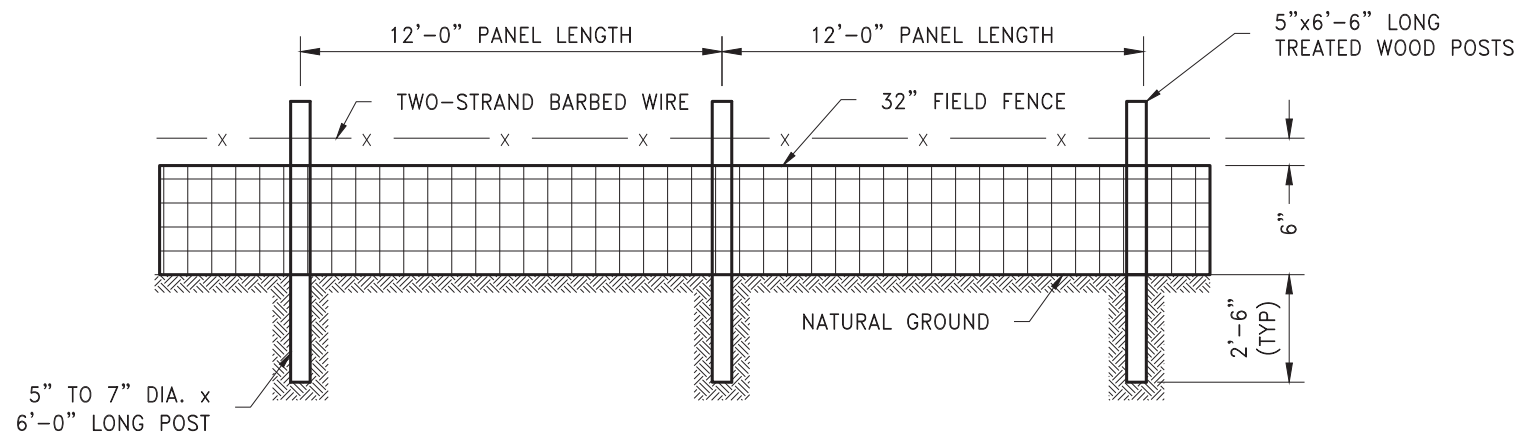
A LATRINE INSTALLATION DETAIL
15

NOT TO SCALE

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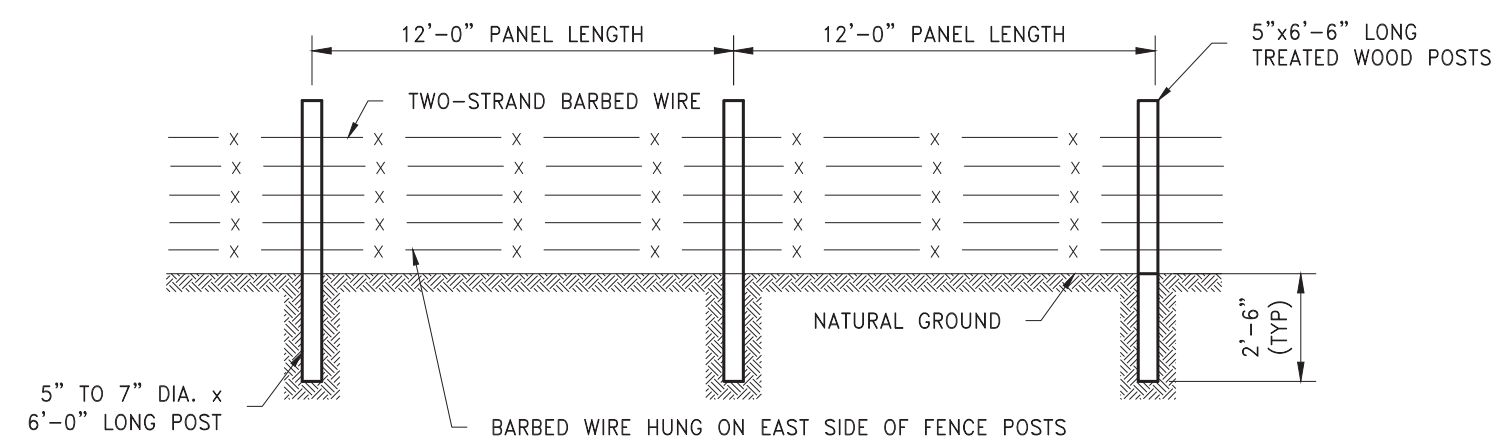


LATRINE DETAILS
JOHN OWEN FAS FWP #7173727



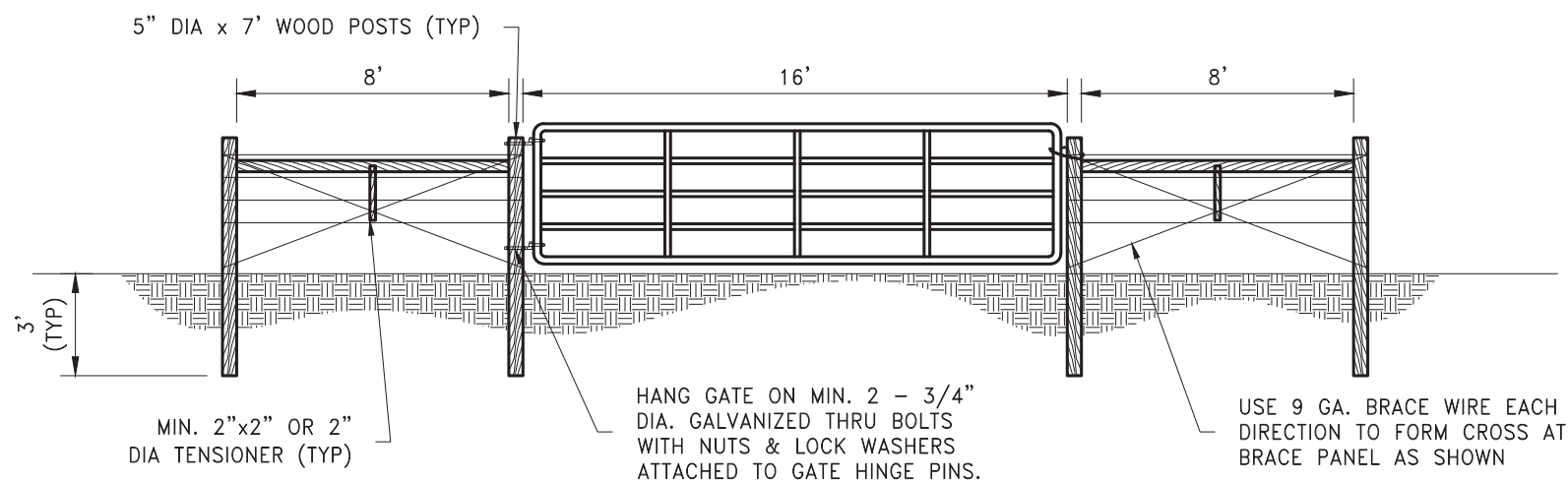
A
16
PERIMETER FENCE DETAIL

NOT TO SCALE



D
16
EAST BOUNDARY FENCE DETAIL

NOT TO SCALE

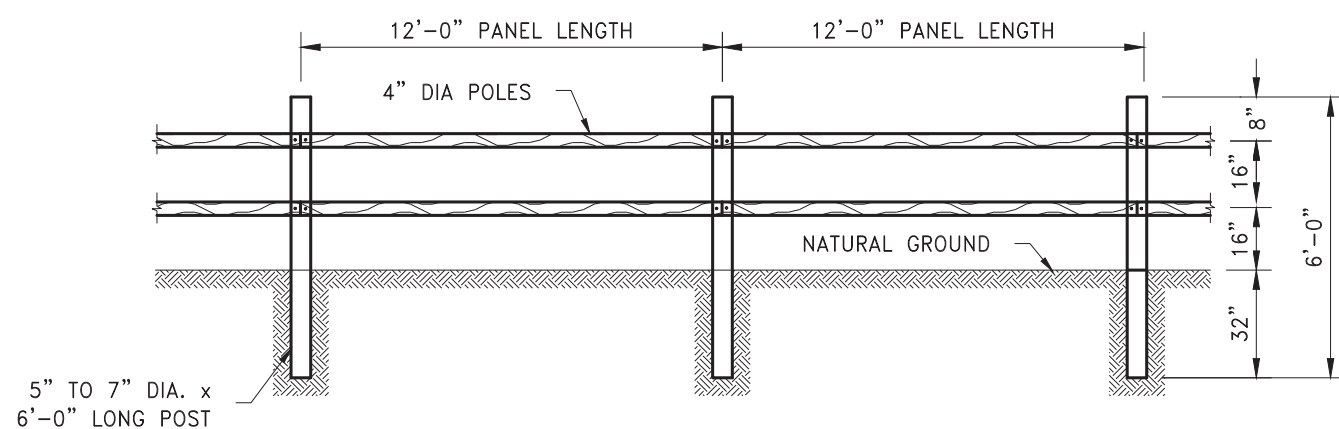


B
16
PANEL GATE DETAIL

NOT TO SCALE

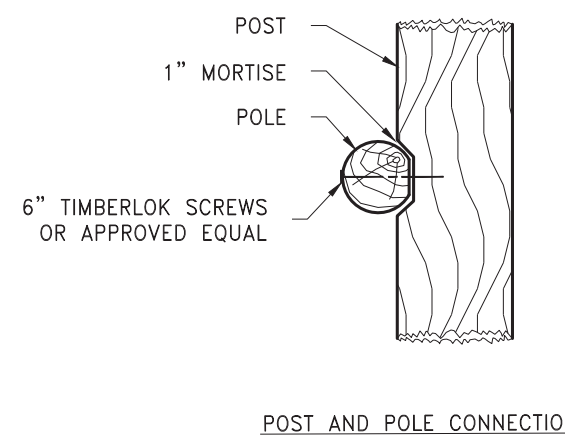
GENERAL NOTES:

1. ALL WIRE TO BE TWO-STRAND BARBLESS WIRE



C
16
WOOD POST AND RAIL FENCE DETAIL

NOT TO SCALE



GENERAL NOTES:

1. BEVEL POLE @ POST TO ACHIEVE 3" THICKNESS
2. POST AND POLES TO BE FULLY TREATED, SEE SECTION 02820

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DRAWN BY: 01/03/25
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DATE: 01/03/25

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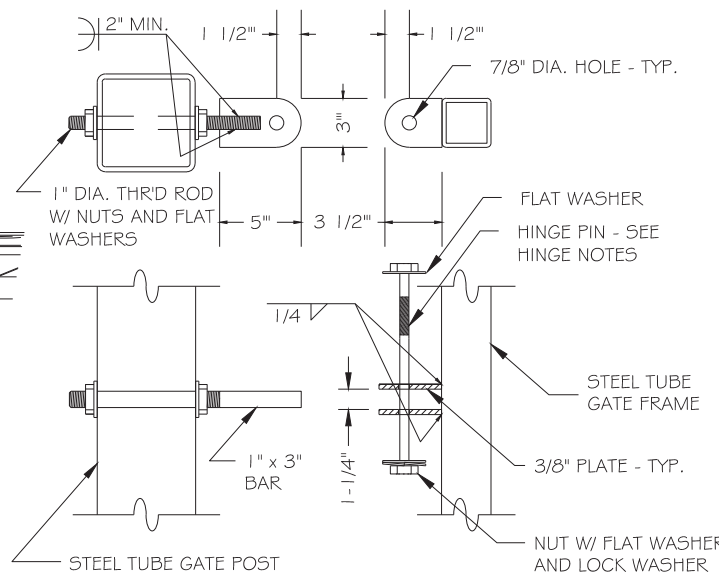
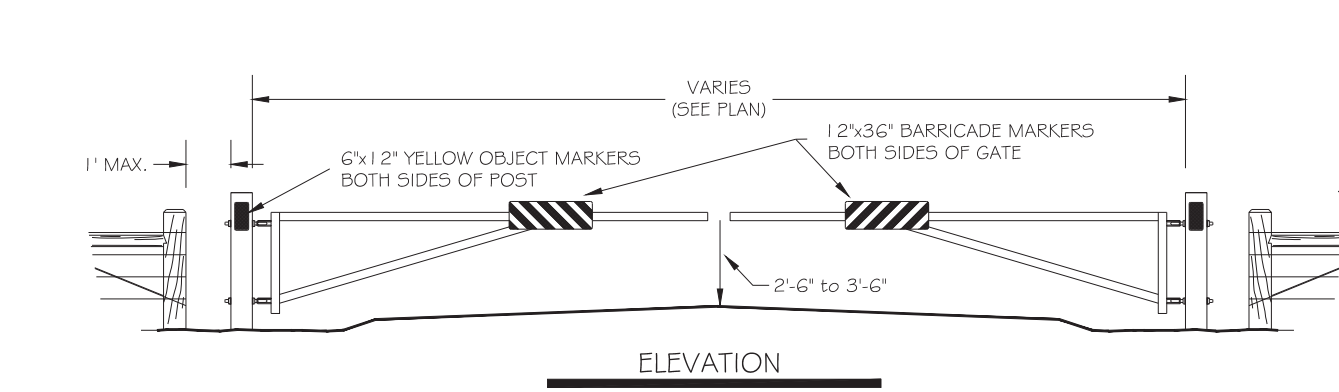


**MONTANA FISH,
WILDLIFE & PARKS**
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FENCING DETAILS
JOHN OWEN FAS FWP #7173727



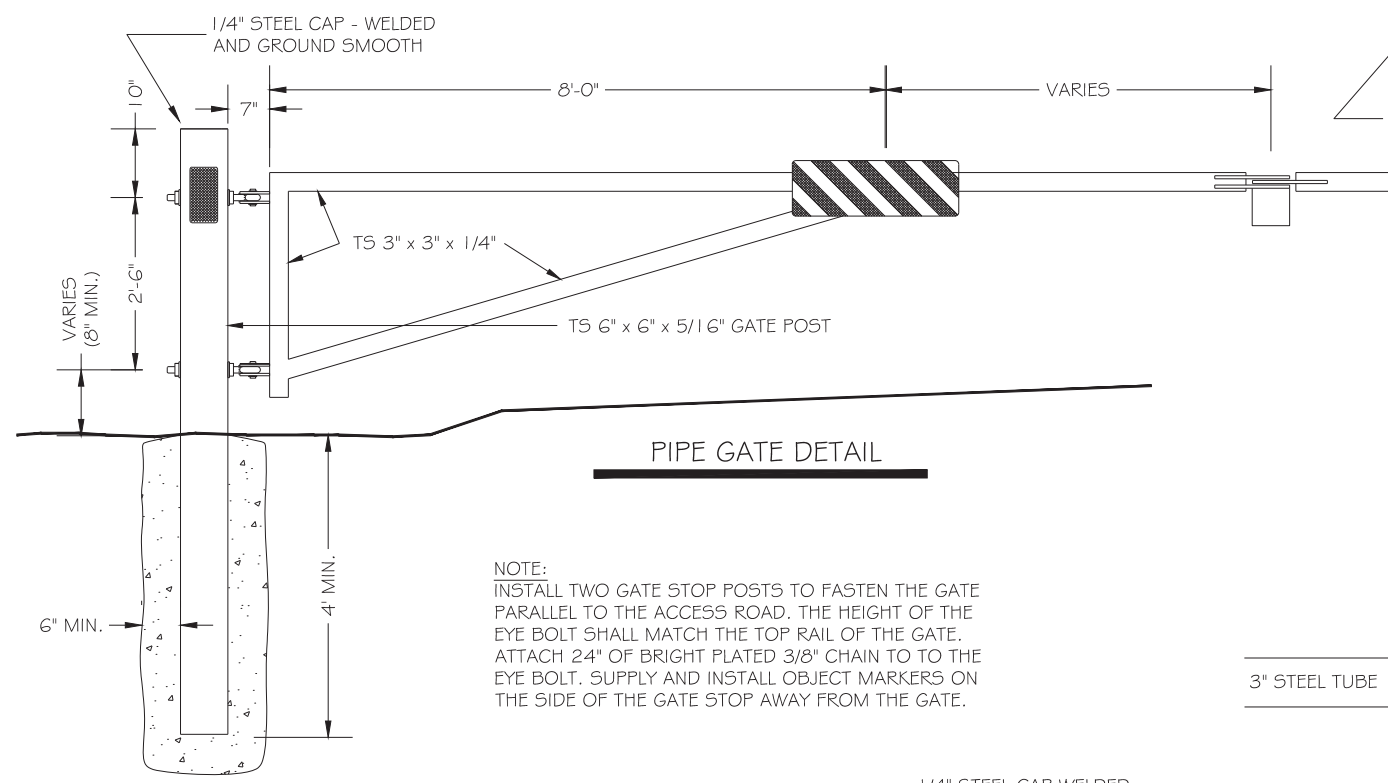
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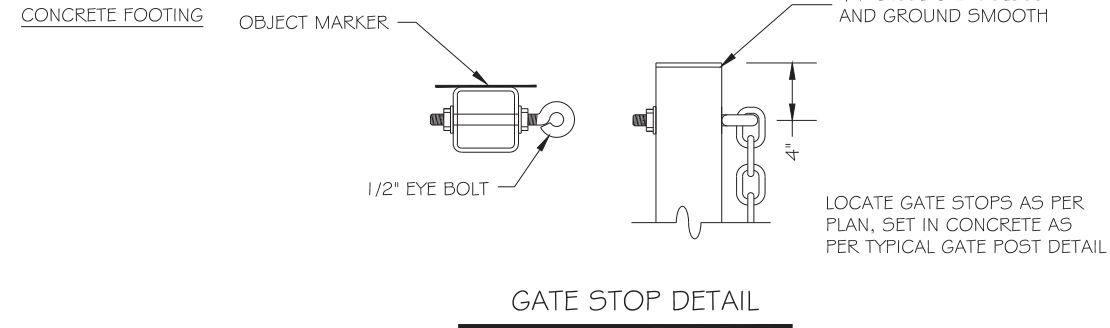
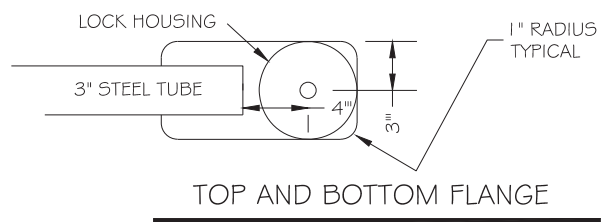
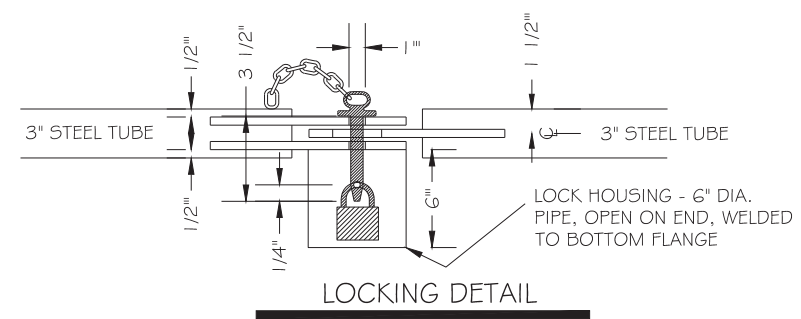
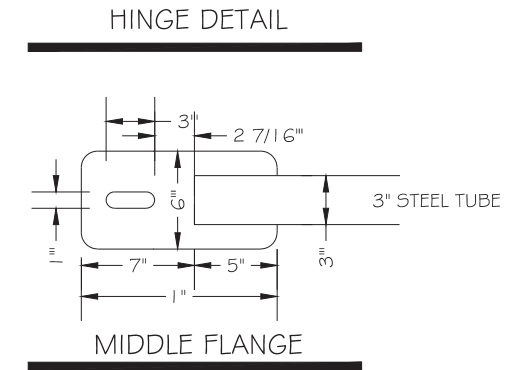
- GENERAL NOTES:**
1. TUBE STEEL TO BE ASTM A500 GRADE B
 2. BOLTS TO BE ASTM A325, GRADE A
 3. LENGTHS OF GATE AND STOP POSTS VARY DEPENDING ON TERRAIN. FIELD VERIFY REQUIRED LENGTH PRIOR TO CONSTRUCTION TO ENSURE MINIMUM BURY DEPTH.
 4. ALL WELDS TO BE GROUND SMOOTH.
 5. ALL STEEL TO BE FINISHED W/ INDUSTRIAL ACRYLIC POLYURETHANE, SEMI-GLOSS FINISH, COLOR TO BE SELECTED BY OWNER.

- HINGE NOTES:**
1. HINGE BOLT THREADS TO BE EXPOSED 1" MINIMUM BEYOND NUTS ON EITHER SIDE OF GATE POST TO ALLOW ADJUSTMENT.
 2. PROVIDE 3/4" DIA. X 3" HINGE PINS AT EACH HINGE.
 3. GREASE THREADS OF HINGE BOLTS BEFORE INSTALLATION.

- LOCK NOTES:**
1. PROVIDE 7/8" DIA. X 3 1/2" HITCH PIN. BEVEL END OF PIN AND DRILL HOLE TO ACCEPT 3/8" DIA. PADLOCK HASP.
 2. ATTACH PIN TO GATE WITH 24" BRIGHT PLATED 3/8" CHAIN.
 3. IF THE CONTRACTOR CHOOSES TO USE THEIR OWN LOCK DURING CONSTRUCTION, A KEY MUST BE PROVIDED TO FWP PROJECT MANAGER AND REGIONAL STAFF. INSTALL FWP LOCK #2661 AT FINAL ACCEPTANCE.



NOTE:
 INSTALL TWO GATE STOP POSTS TO FASTEN THE GATE PARALLEL TO THE ACCESS ROAD. THE HEIGHT OF THE EYE BOLT SHALL MATCH THE TOP RAIL OF THE GATE. ATTACH 24" OF BRIGHT PLATED 3/8" CHAIN TO TO THE EYE BOLT. SUPPLY AND INSTALL OBJECT MARKERS ON THE SIDE OF THE GATE STOP AWAY FROM THE GATE.



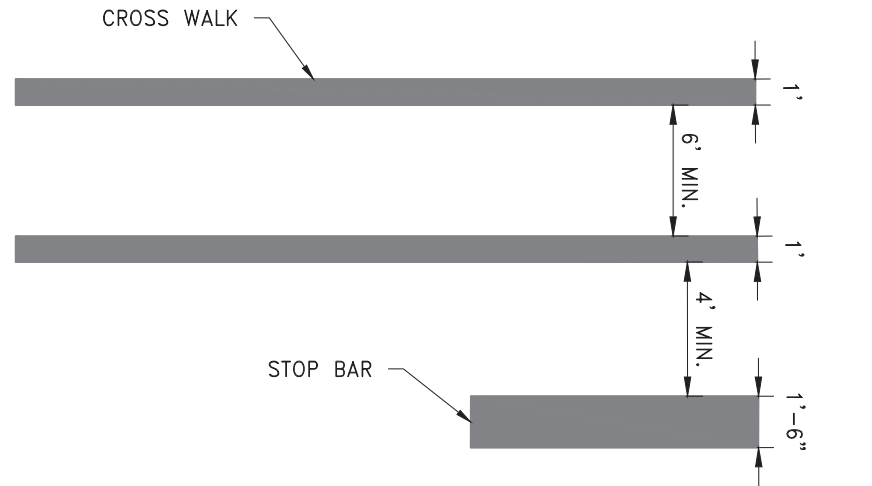
A STEEL PIPE GATE INSTALLATION DETAIL
 17

NOT TO SCALE

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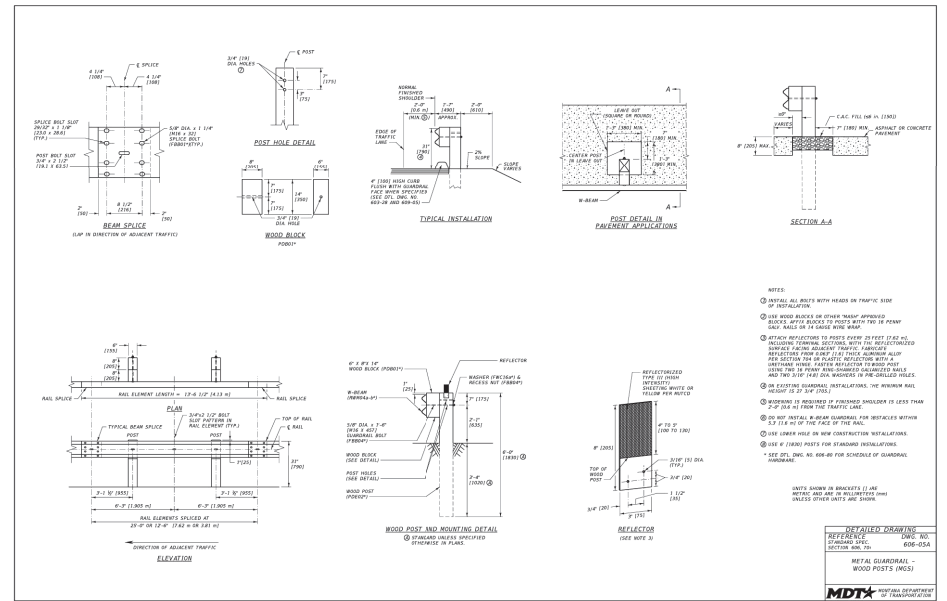


GATE DETAILS
 JOHN OWEN FAS FWP #7173727



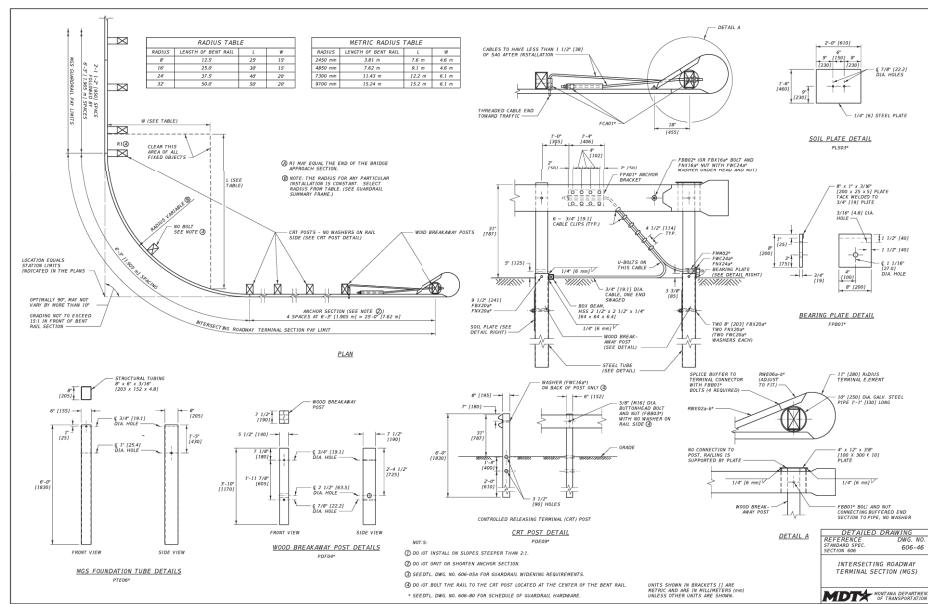
A CROSS WALK DETAIL
18

NOT TO SCALE



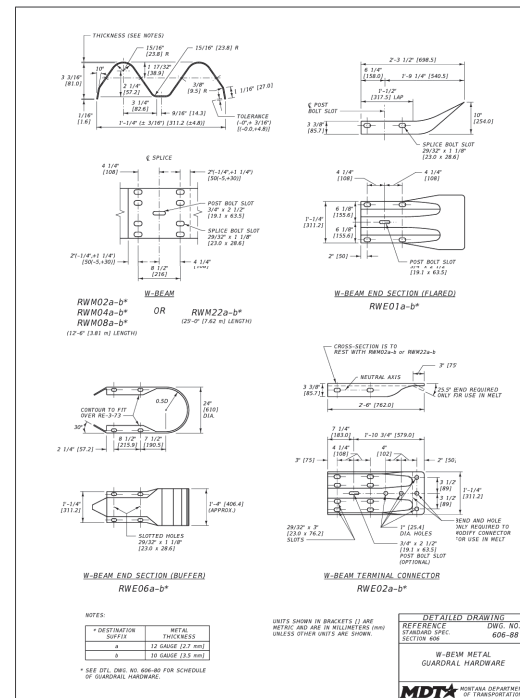
B METAL GUARDRAIL WITH WOOD POSTS DETAIL
18

NOT TO SCALE



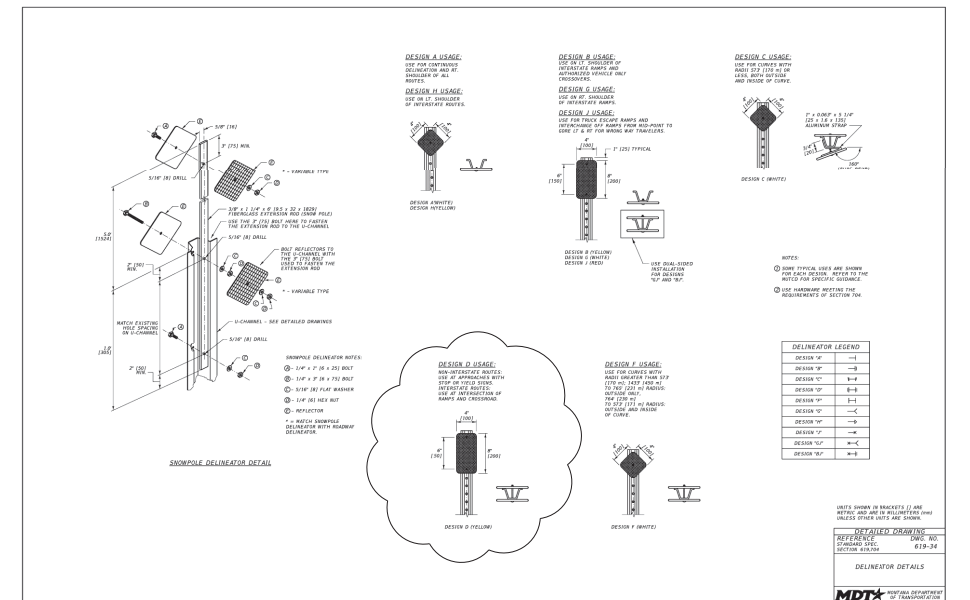
C GUARDRAIL TERMINAL DETAIL
18

NOT TO SCALE



D W-BEAM RUB RAIL DETAIL
18

NOT TO SCALE



E TYPE D REFLECTORS DETAIL
18

NOT TO SCALE

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DATE: 01/03/25

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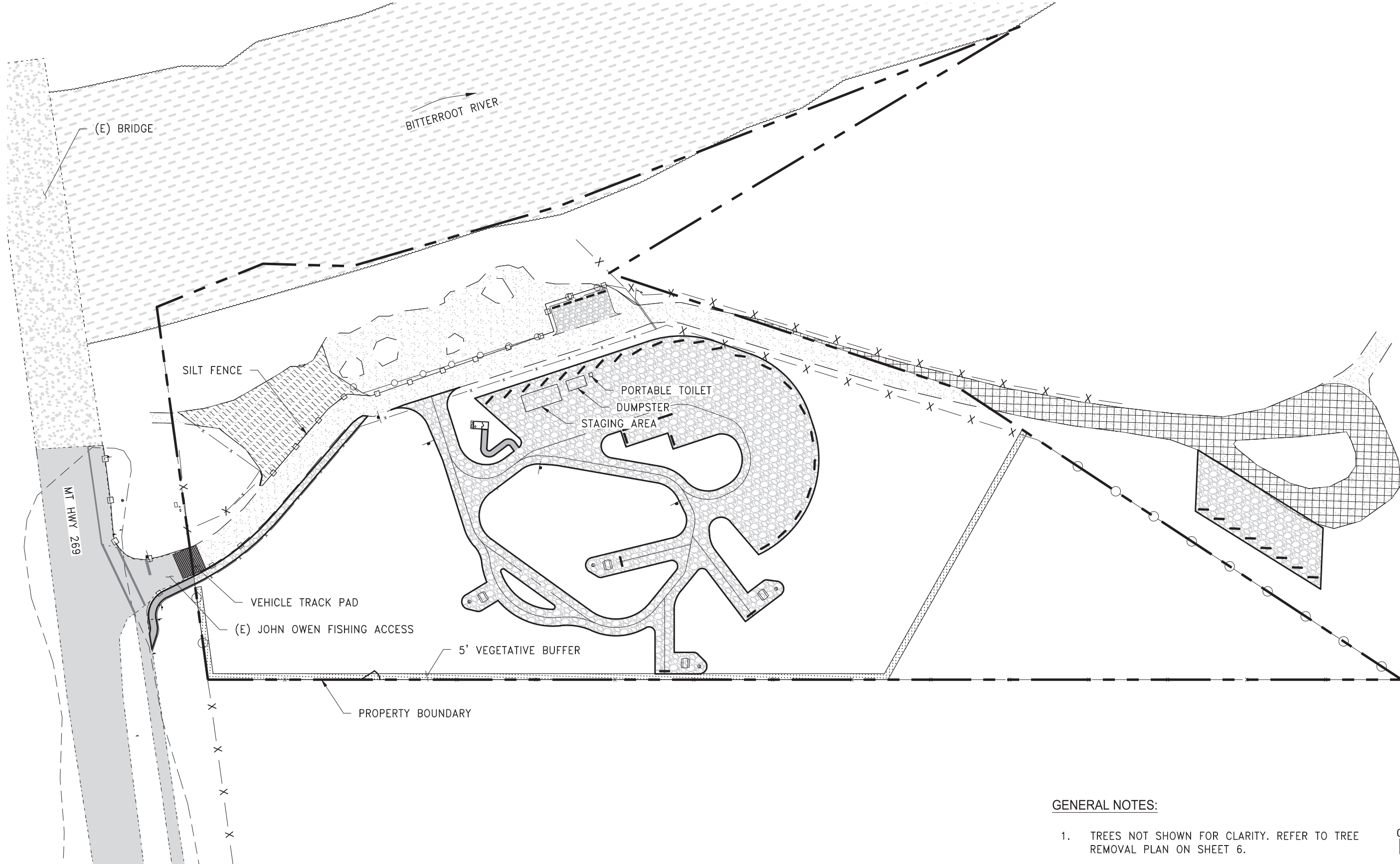


**MONTANA FISH,
WILDLIFE & PARKS**
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RIGHT OF WAY DETAILS
JOHN OWEN FAS FWP #7173727

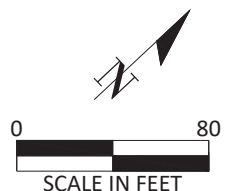


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GENERAL NOTES:

- 1. TREES NOT SHOWN FOR CLARITY. REFER TO TREE REMOVAL PLAN ON SHEET 6.



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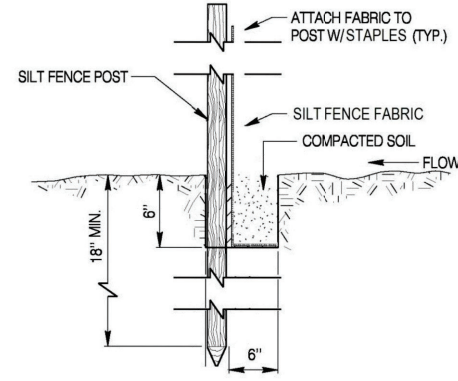
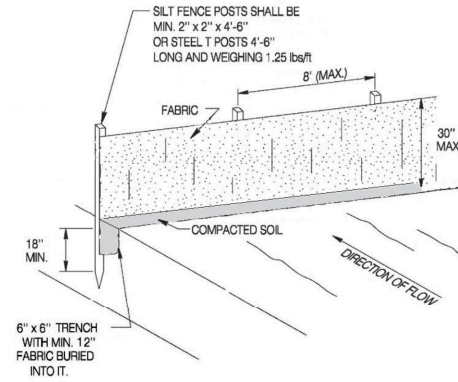
**MONTANA FISH,
WILDLIFE & PARKS**
213

EROSION CONTROL PLAN
JOHN OWEN FAS FWP #7173727

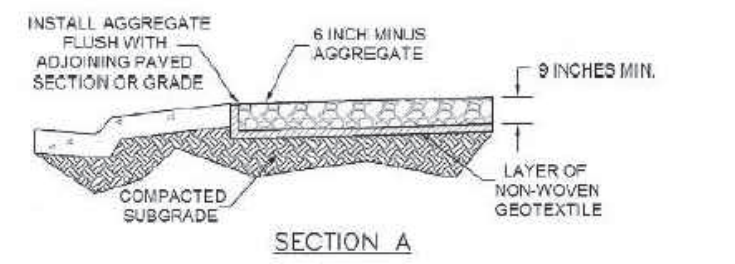
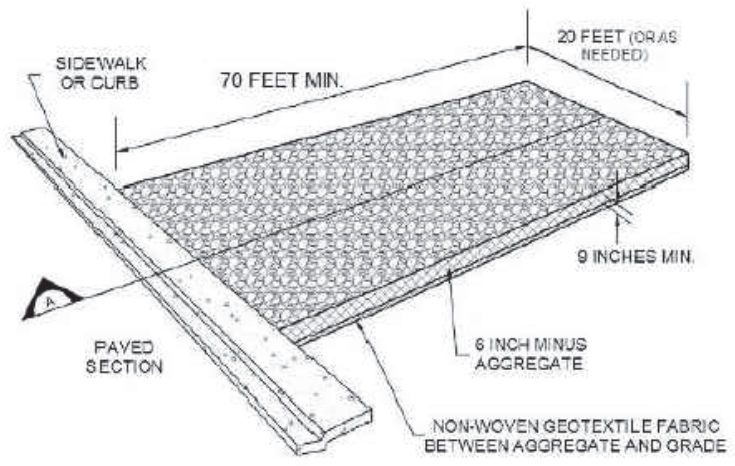


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SILT FENCE (con.)



Adapted from WYDOT Temp. Erosion Control Measures



VEHICLE TRACK PAD
Not to Scale

A SILT FENCE DETAIL
19 NOT TO SCALE

B VEHICLE TRACK PAD DETAIL
19 NOT TO SCALE

NOTE:
1. VEHICLE TRACK PAD IS TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION.

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EROSION CONTROL DETAILS
JOHN OWEN FAS FWP #7173727