

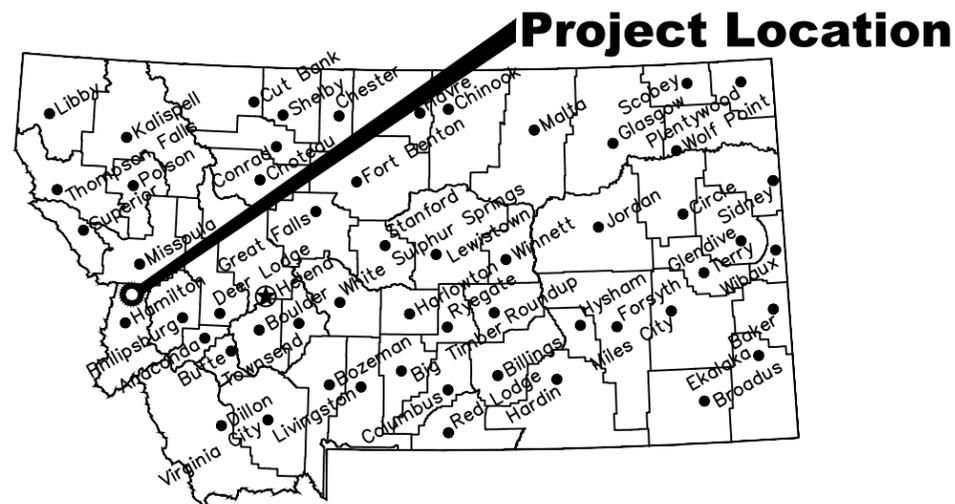
# MONTANA FISH, WILDLIFE & PARKS

## Fort Owen State Park

### Historic Structure Roofing

Stevensville, MT

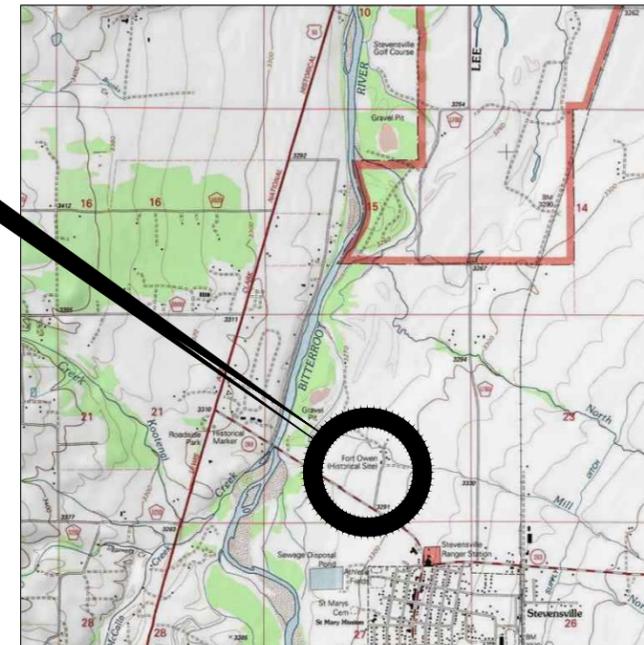
FWP# 7136356



**Location Map**

No Scale

**Project Location**



**Vicinity Map**

No Scale

North

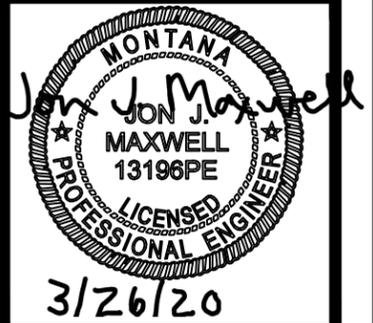


MONTANA FISH, WILDLIFE AND PARKS  
DESIGN AND CONSTRUCTION

MAILING ADDRESS: PO BOX 200701  
HELENA, MT 59620-0701  
TEL 406.841.4000  
FAX 406.841.4004  
fwp.mt.gov/Doing Business/Design&Construction

PHYSICAL ADDRESS:  
1522 9th AVENUE  
HELENA, MT 59601

Sheet Number	Sheet Title
1	PROJECT LOCATION AND SHEET INDEX
2	EXISTING EAST BARRACKS ROOF
3	NEW EAST BARRACKS ROOF - DETAILS
4	WAGNER CABIN ROOF
5	WAGNER CABIN ROOF - DETAILS



J. MAXWELL 3/23/20  
DRAWN BY: DATE:  
P. JAGODA 3/23/20  
CHECKED BY: DATE:

APPROVED BY: DATE:  
APPROVED BY: DATE:

APPROVED BY: DATE:  
APPROVED BY: DATE:



MONTANA FISH,  
WILDLIFE & PARKS

PROJECT LOCATION AND SHEET INDEX

SHEET: 1 of 5

EXISTING CONDITIONS\*\*:

- A. MEASUREMENTS SHOWN ARE APPROXIMATE. CONFIRM DIMENSIONS AND LAYOUT FOR QUANTIFYING MATERIALS. SLOPE FACTOR, WASTE, AND OVERLAP IS INCIDENTAL TO THE PROJECT.
- B. ROOF SUPPORT: 2X4 TRUSSES W/2X6 TOP CHORD SPACED @ 24" O.C. W/PLYWOOD DECKING.
- C. PLYWOOD IS OVERLAIN WITH ASPHALT ROLLED ROOFING.
- D. FALSE ROOF STRUCTURE CONSISTS OF 1X4 ROUGH-CUT FURRING STRIPS @ APPROX. 42" O.C. INSTALLED PARALLEL TO ROOF SLOPE, ON TOP OF ROLLED ROOFING.
- E. SUPPORT FOR BOARDS/BATTENS CONSISTS OF 2X4 ROUGH CUT PURLINS @ APPROX. 48" O.C. INSTALLED PERPENDICULAR TO ROOF SLOPE, ON TOP OF 1X4 FURRING STRIPS.
- F. OUTER ROOFING CONSISTS OF 1X12 ROUGH-CUT BOARDS SPACED APPROX. 2" APART COVERED BY 1X6 ROUGH-CUT BATTENS.

\*\*PRESUMED CONSTRUCTION IS FOR ENTIRE LENGTH, ONLY 1 BATTEN WAS REMOVED FOR INSPECTION.



VIEW LOOKING EAST



VIEW OF BOARDS/BATTENS AND EXISTING BRICK CHIMNEYS



VIEW OF TRUSSES AND UNDERSIDE OF SHEATHING



VIEW LOOKING NORTHWEST



VIEW LOOKING SOUTHWEST

J. MAXWELL	3/23/20
DRAWN BY:	DATE:
P. JAGODA	3/23/20
CHECKED BY:	DATE:

REVISED BY:	DATE:
APPROVED BY:	DATE:

APPROVED BY:	DATE:
APPROVED BY:	DATE:



**MONTANA FISH,  
WILDLIFE & PARKS**

**EXISTING EAST BARRACKS ROOF**  
Fort Owen State Park - Historic Structure Roofing

SHEET: **2**  
of  
**5**

**GENERAL NOTES:**

1. CONFIRM DIMENSIONS AND LAYOUT FOR QUANTIFYING MATERIALS. SLOPE FACTOR, WASTE, AND OVERLAP IS INCIDENTAL TO THE PROJECT.
2. PROVIDE SUBMITTAL FOR ALL MATERIALS TO OWNER FOR APPROVAL PRIOR TO PROCUREMENT.
3. OBTAIN ALL PERMITS NECESSARY FOR WORK.
4. CONDUCT WORK MONDAY THROUGH FRIDAY, 8:00AM TO 5:00 PM. ADDITIONAL HOURS AND WEEKEND WORK IS SUBJECT TO OWNER APPROVAL.
5. STAGE ALL EQUIPMENT AND MATERIALS AT NORTH END OF PROPERTY.
6. PROVIDE DUMPSTERS AND PORTABLE BATHROOM FACILITIES FOR CONTRACTOR USE. ALL REFUSE, REMNANTS, FASTENERS, ETC. MUST BE CLEANED UP AND IS SUBJECT TO OWNER APPROVAL PRIOR TO FINAL PAYMENT.

**CONSTRUCTION NOTES:**

1. REMOVE EXISTING BOARDS, BATTENS AND OUTER FACIA/GABLE TRIM. DISPOSE OFF-SITE AT LOCATION DETERMINED BY CONTRACTOR.
2. PRESERVE EXISTING FALSE ROOF STRUCTURE (PURLINS, FURRING STRIPS, ETC.) AND UNDERLYING ASPHALT ROOFING MATERIALS.
3. RE-FLASH EXISTING CHIMNEYS TO ELIMINATE LEAKS. EXISTING FLASHING CONFIGURATION IS UNKNOWN - PROVIDE FLASHING PLAN TO ENGINEER FOR APPROVAL AFTER EXISTING CONDITION IS ASSESSED.
4. PROVIDE AND INSTALL NEW BOARDS, BATTENS AND OUTER FACIA/GABLE TRIM (SEE DETAILS).
5. LUMBER SHALL BE FULL-DIMENSION (ROUGH CUT), KILN-DRIED #2 COMMON (WWPA GRADED) OR SELECT MERCHANTABLE (WCLIB GRADED) DOUGLAS FIR.
6. TREAT ALL SIDES OF LUMBER WITH U.S.F.S - FOREST PRODUCTS LABORATORY (FPL) WATER REPELLENT LOG OIL. SEE SPECIFICATIONS.
7. ANY SPLITTING, INCORRECT NAIL DEPTH, OR RELATED DAMAGE FROM THE NAILING PROCESS SHALL BE CORRECTED AT CONTRACTOR EXPENSE. SEE DETAILS FOR RECOMMENDED NAILING PATTERN.

EXISTING 1X4 FURRING STRIPS  
INSTALLED BETWEEN ROLLED  
ROOFING AND PURLINS (TYP.)  
(HIDDEN FROM VIEW)

EXISTING 2X4 PURLIN  
(TYP.)



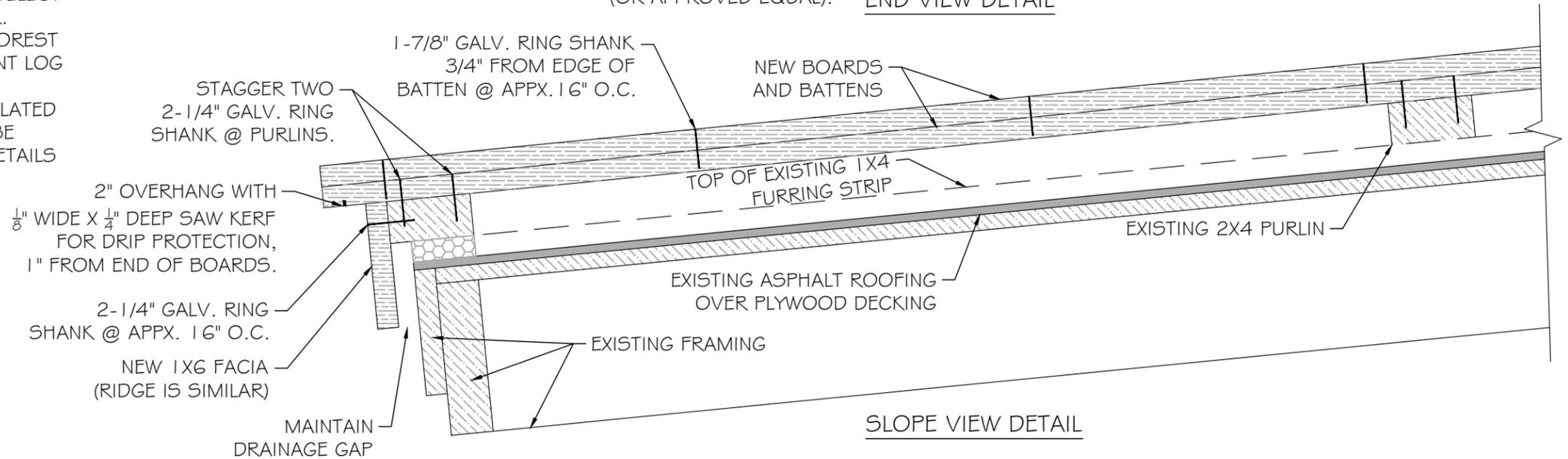
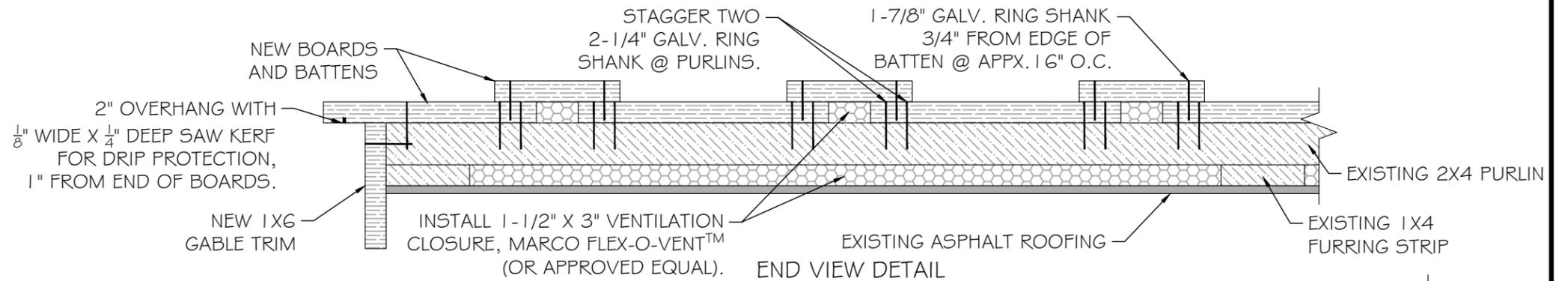
INSTALL NEW 1X6  
FACIA AND GABLE  
TRIM

INSTALL NEW 1X6  
BATTENS

INSTALL NEW 1X12  
BOARDS



EXISTING ASPHALT  
ROLLED ROOFING



Scale:



NOT TO SCALE

J. MAXWELL 3/23/20  
DRAWN BY: DATE:  
P. JAGODA 3/23/20  
CHECKED BY: DATE:

REVISED BY: DATE:  
APPROVED BY: DATE:

APPROVED BY: DATE:  
APPROVED BY: DATE:



**MONTANA FISH,  
WILDLIFE & PARKS**

**NEW EAST BARRACKS ROOF - DETAILS**  
Fort Owen State Park - Historic Structure Roofing

SHEET: 3  
of 5

EXISTING CONDITIONS:

- A. MEASUREMENTS SHOWN ARE APPROXIMATE. CONFIRM DIMENSIONS AND LAYOUT FOR QUANTIFYING MATERIALS. SLOPE FACTOR, WASTE, AND OVERLAP IS INCIDENTAL TO THE PROJECT.
- B. ROOF SUPPORT: 1X10 ROUGH CUT PLANK DECKING SPACED APPROX. 2" APART.
- C. OUTER ROOFING CONSISTS OF 1X12 ROUGH-CUT BOARDS COVERED BY 1X6 ROUGH-CUT BATTENS.
- D. RIDGE CAP IS 1X6 ROUGH-CUT BOARDS W/CONCEALED GALVANIZED FLASHING.

CONSTRUCTION NOTES:

- 1. REFER TO 'GENERAL NOTES' ON SHEET 3 AND DETAILS SHEET 5.
- 2. REMOVE EXISTING RIDGE CAP, BOARDS, AND BATTENS. DISPOSE OFF-SITE AT LOCATION DETERMINED BY CONTRACTOR.
- 3. PRESERVE EXISTING PLANK DECKING.
- 4. PROVIDE AND INSTALL  $\frac{3}{8}$ " or  $\frac{1}{2}$ " ROUGH-SAWN PLYWOOD FACE DOWN OVER EXISTING PLANK DECKING, FOLLOWED BY 1 LAYER OF 40 MIL (MIN.) ICE AND WATER BARRIER MEMBRANE IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. OVERLAP RIDGE JOINT 6" MIN. WITH MEMBRANE.
- 5. INSTALL LAYER OF PLASTIC OR FIBERGLASS LATH OVER ICE AND WATER BARRIER TO SERVE AS DRAINAGE LAYER BENEATH BOARDS. UTILIZE  $\frac{1}{8}$ " ULTRA-LATH® MANUFACTURED BY PLASTIC COMPONENTS, INC. (OR APPROVED EQUAL).
- 6. PROVIDE AND INSTALL NEW BOARDS, BATTENS, AND RIDGE CAP WITH CONCEALED GALVANIZED FLASHING.
- 7. LUMBER SHALL BE FULL-DIMENSION (ROUGH CUT), KILN-DRIED #2 COMMON (WWPA GRADED) OR SELECT MERCHANTABLE (WCLIB GRADED) DOUGLAS FIR.
- 8. TREAT ALL SIDES OF NEW LUMBER WITH U.S.F.S - FOREST PRODUCTS LABORATORY (FPL) WATER REPELLENT LOG OIL. SEE SPECIFICATIONS.
- 9. DO NOT DRIVE FASTENERS THROUGH PLANK DECKING. ANY SPLITTING, INCORRECT NAIL DEPTH, OR RELATED DAMAGE FROM THE NAILING PROCESS SHALL BE CORRECTED AT CONTRACTOR EXPENSE. SEE DETAIL SHEET 5 FOR RECOMMENDED NAILING PATTERN.



VIEW LOOKING NORTH



VIEW OF UNDERSIDE OF ROOF  
(PLANK DECKING)



BOARDS & BATTENS



END VIEW OF GABLE AND RIDGE

J. MAXWELL	3/23/20
DRAWN BY:	DATE:
P. JAGODA	3/23/20
CHECKED BY:	DATE:

REVISED BY:	DATE:
APPROVED BY:	DATE:

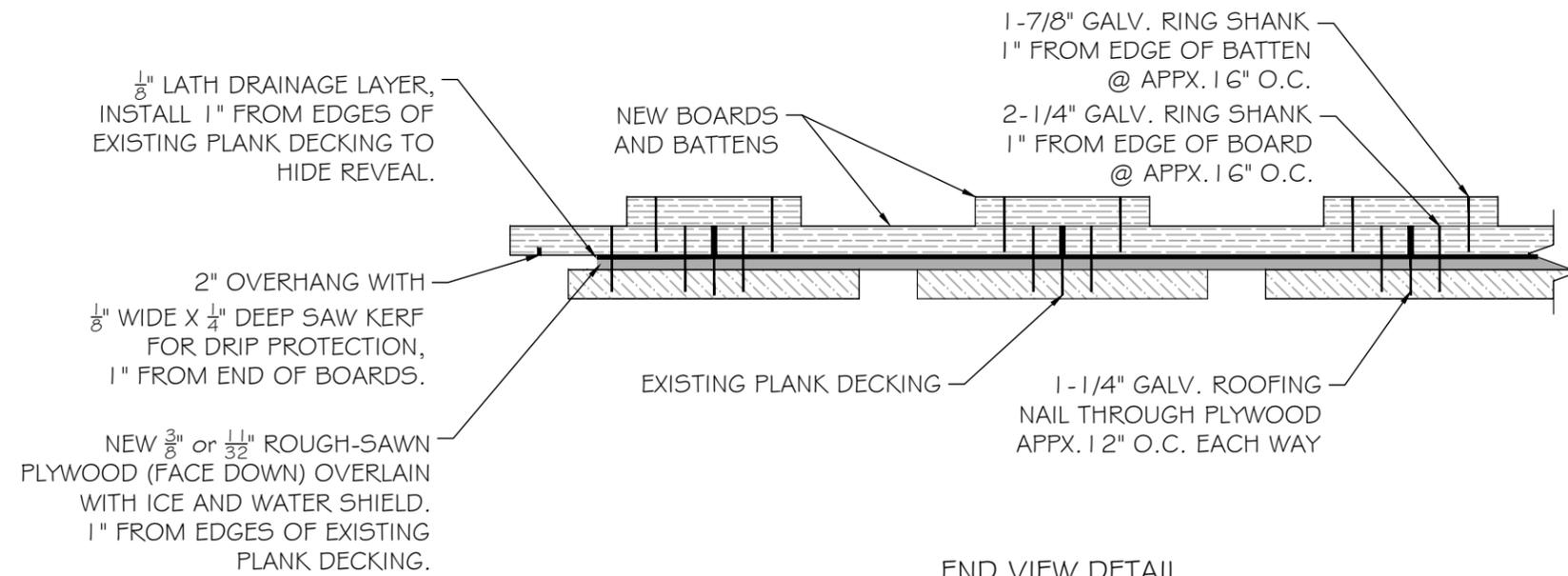
APPROVED BY:	DATE:
APPROVED BY:	DATE:



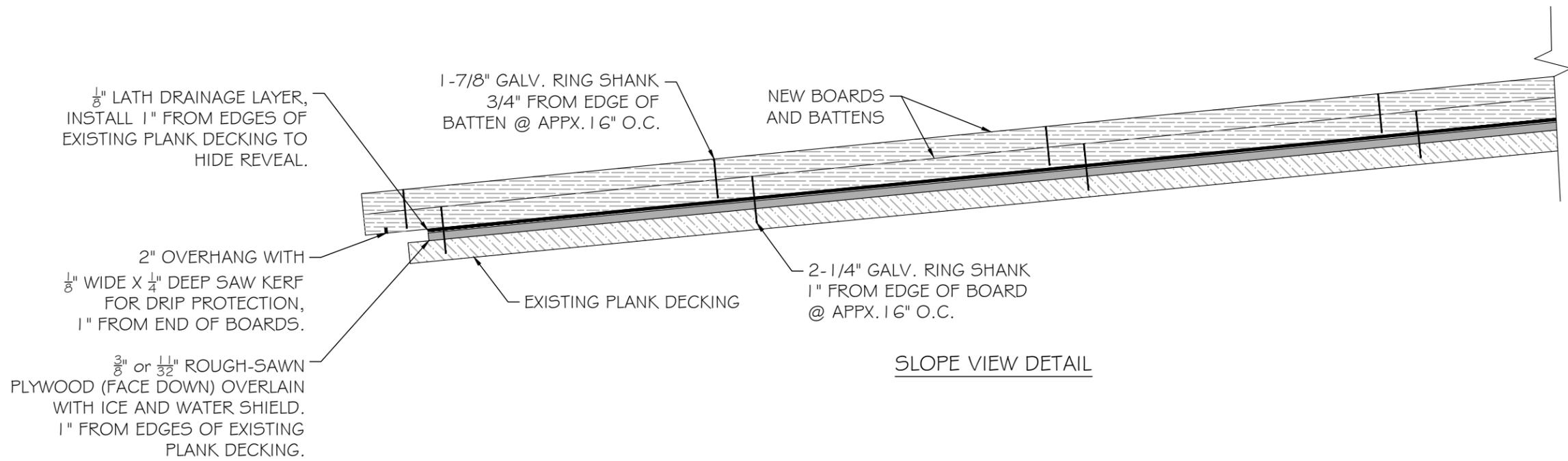
**MONTANA FISH,  
WILDLIFE & PARKS**

**WAGNER CABIN ROOF**  
Fort Owen State Park - Historic Structure Roofing

SHEET: 4  
of 5



END VIEW DETAIL



SLOPE VIEW DETAIL

J. MAXWELL	3/23/20
DRAWN BY:	DATE:
P. JAGODA	3/23/20
CHECKED BY:	DATE:

REVISED BY:	DATE:
APPROVED BY:	DATE:

APPROVED BY:	DATE:
APPROVED BY:	DATE:



**MONTANA FISH,  
WILDLIFE & PARKS**

**WAGNER CABIN ROOF - DETAILS**  
Fort Owen State Park - Historic Structure Roofing

SHEET: 5 of 5