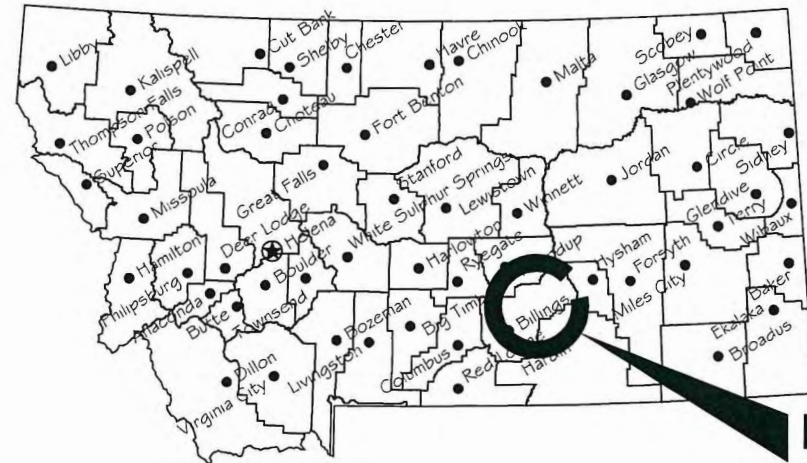


Yellowstone WMA

2022 Access Road Repairs

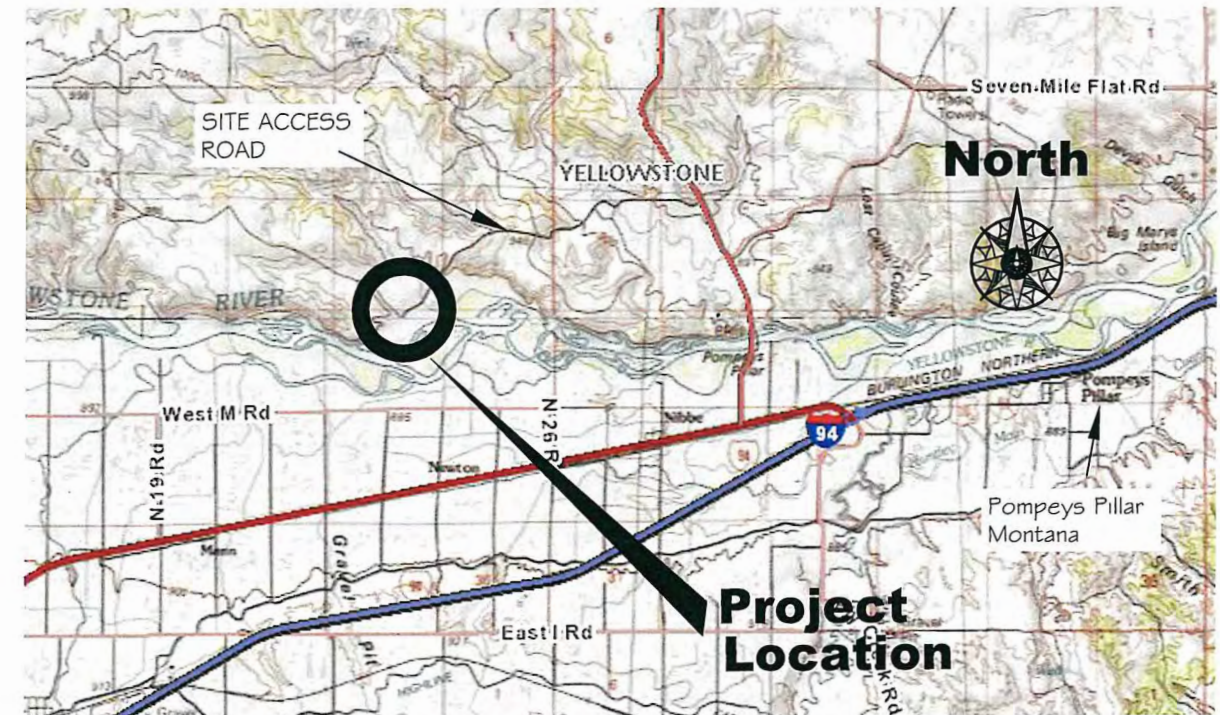
FWP Project # 7215502



Project Location

Location Map

No Scale



Project Location

Vicinity Map

No Scale

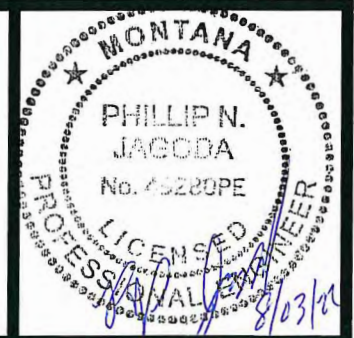
MONTANA FISH, WILDLIFE AND PARKS
DESIGN AND CONSTRUCTION

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

DRAWING INDEX

Sheet No.	Description
1	Cover
2	Site Plan
3-22	Sheet 3 through 22 (Road Plan Sheets)
23	Detail Sheet



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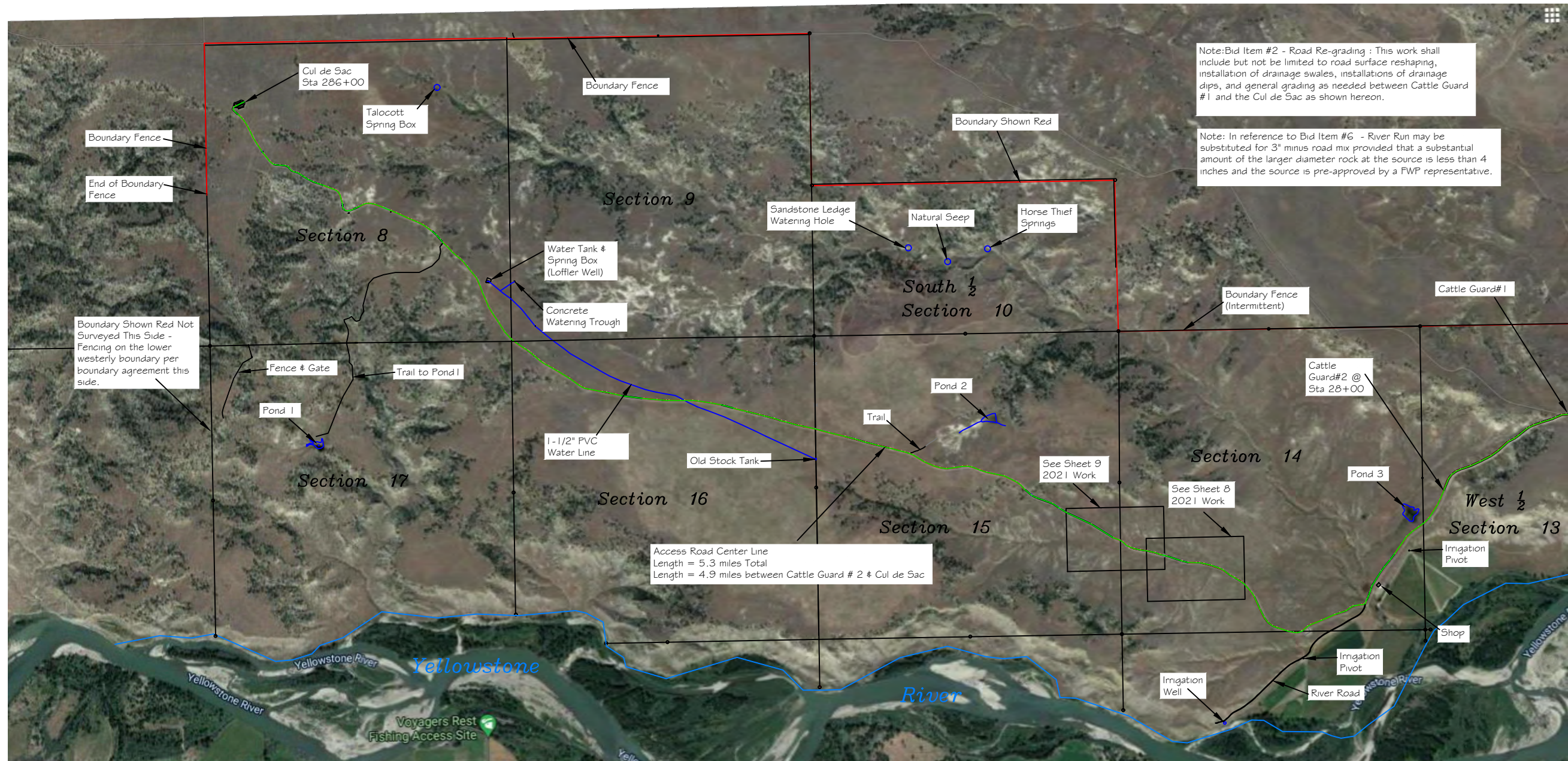
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**MONTANA FISH,
WILDLIFE & PARKS**

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Cover Sheet

SHEET: 1 of 23



Note: Bid Item #2 - Road Re-grading : This work shall include but not be limited to road surface reshaping, installation of drainage swales, installations of drainage dips, and general grading as needed between Cattle Guard #1 and the Cul de Sac as shown hereon.

Note: In reference to Bid Item #6 - River Run may be substituted for 3\"/>

Access Road Center Line
 Length = 5.3 miles Total
 Length = 4.9 miles between Cattle Guard # 2 & Cul de Sac

Scale: 1" = 2000'

North



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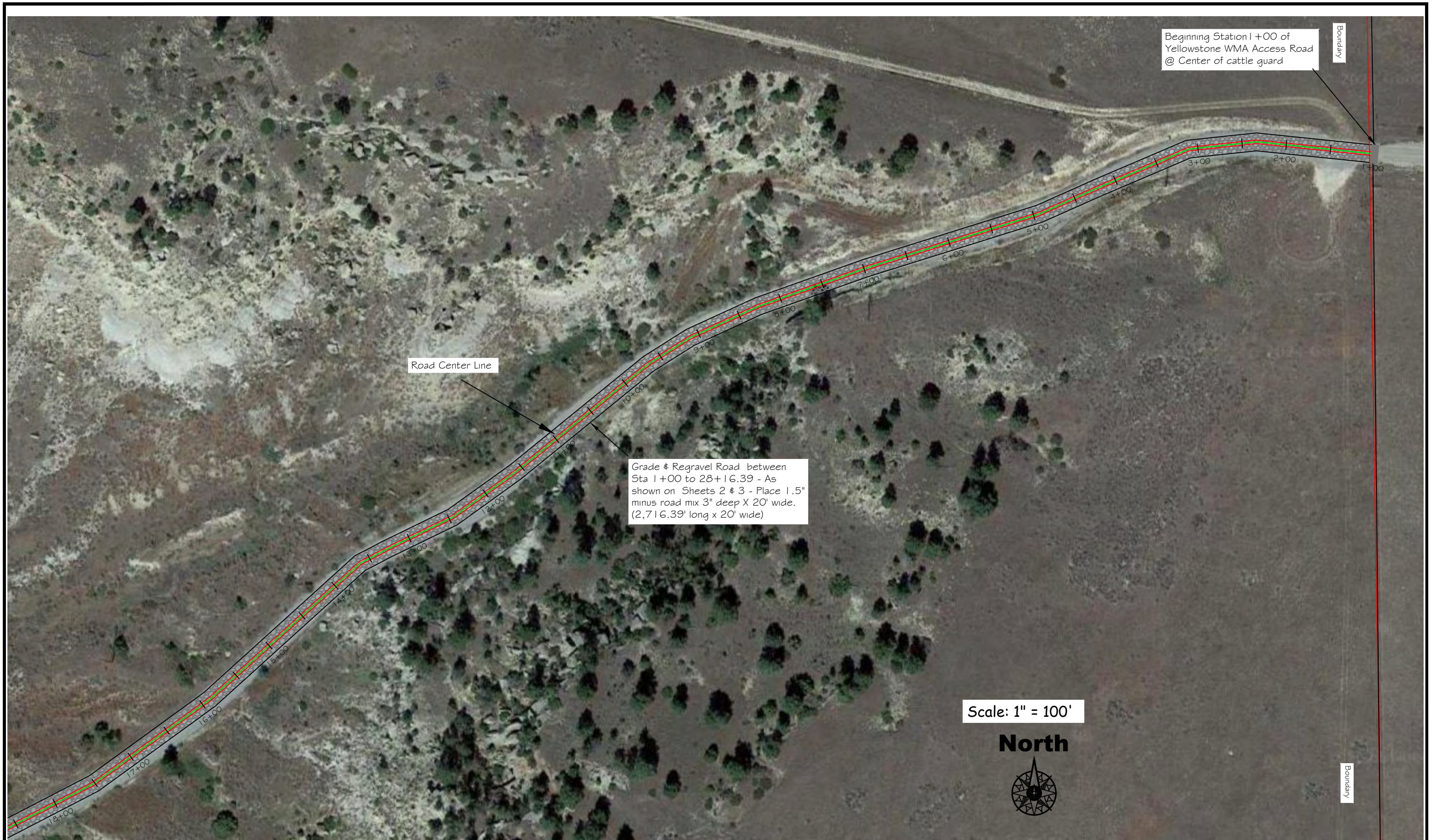


**MONTANA FISH,
 WILDLIFE & PARKS**

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Yellowstone WMA

2022 Access Road Repairs – Site Plan



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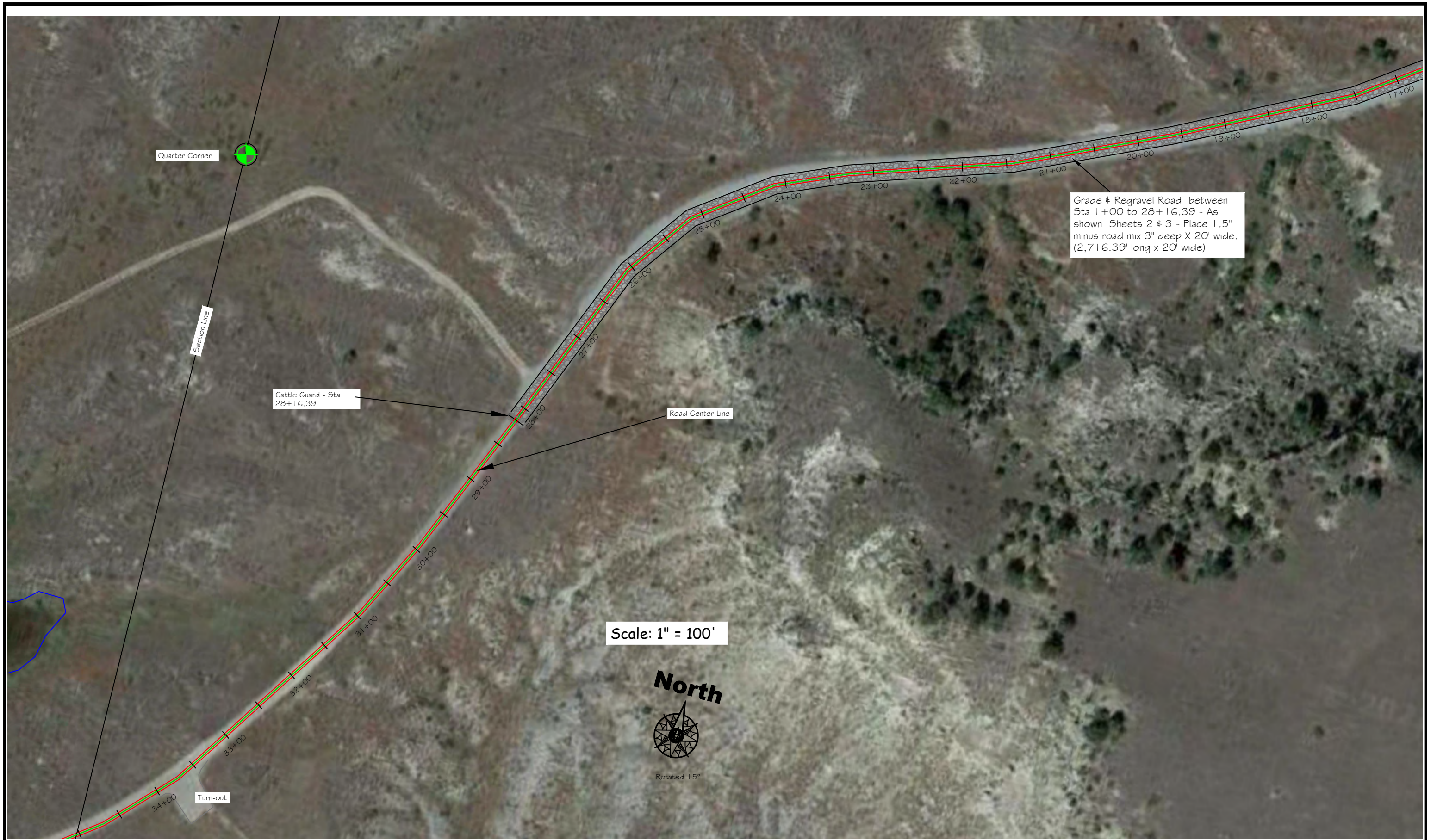
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**MONTANA FISH,
WILDLIFE & PARKS**

Yellowstone WMA
2022 Access Road Repairs – Sheet 3



Grade & Regravel Road between Sta 1+00 to 28+16.39 - As shown Sheets 2 & 3 - Place 1.5" minus road mix 3" deep X 20' wide. (2,716.39' long x 20' wide)

Scale: 1" = 100'



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**MONTANA FISH,
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2022 Access Road Repairs – Sheet 4

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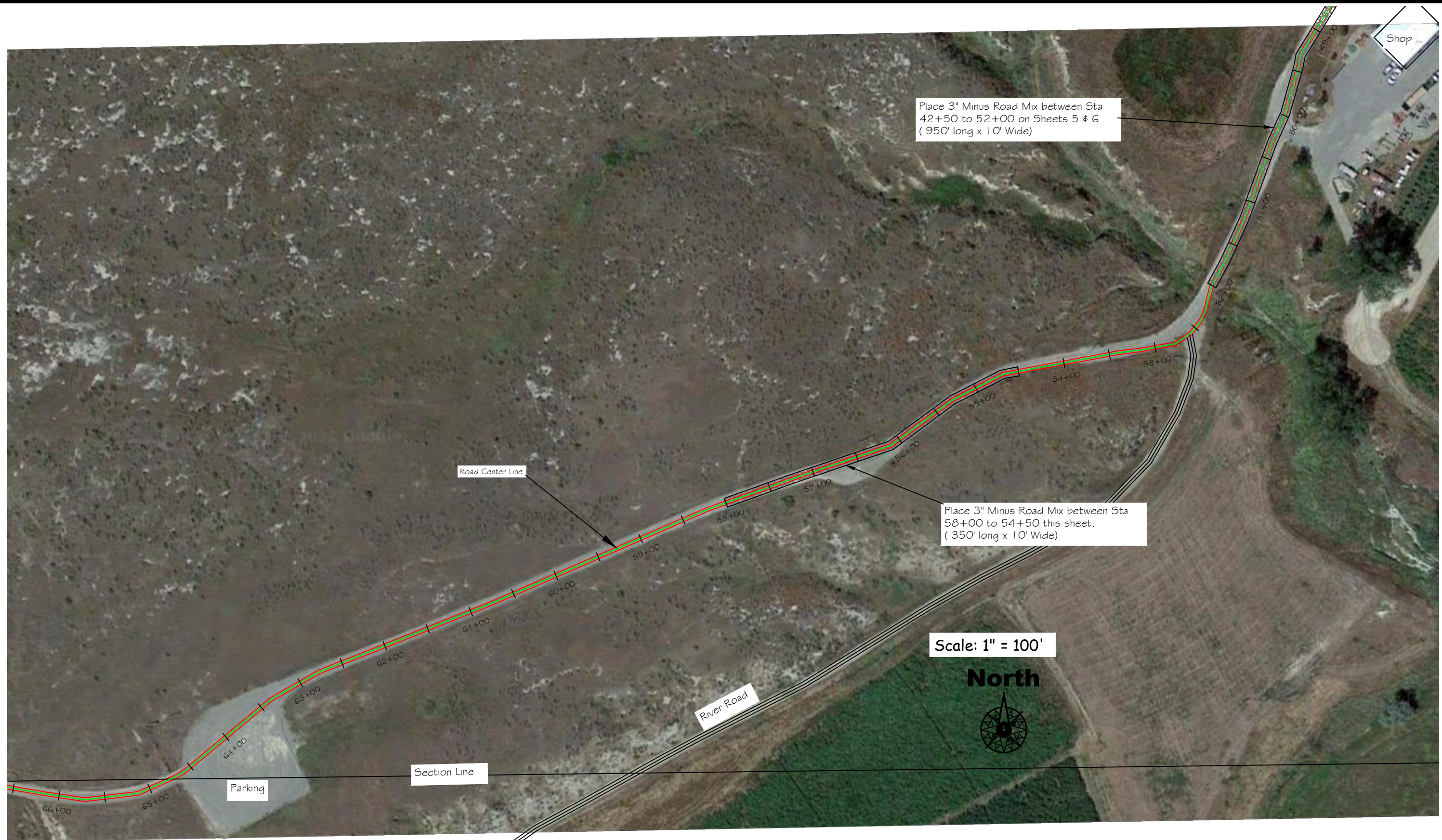


**MONTANA FISH,
 WILDLIFE & PARKS**

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 2022 Access Road Repairs – Sheet 5

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**MONTANA FISH,
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 2022 Access Road Repairs – Sheet 6

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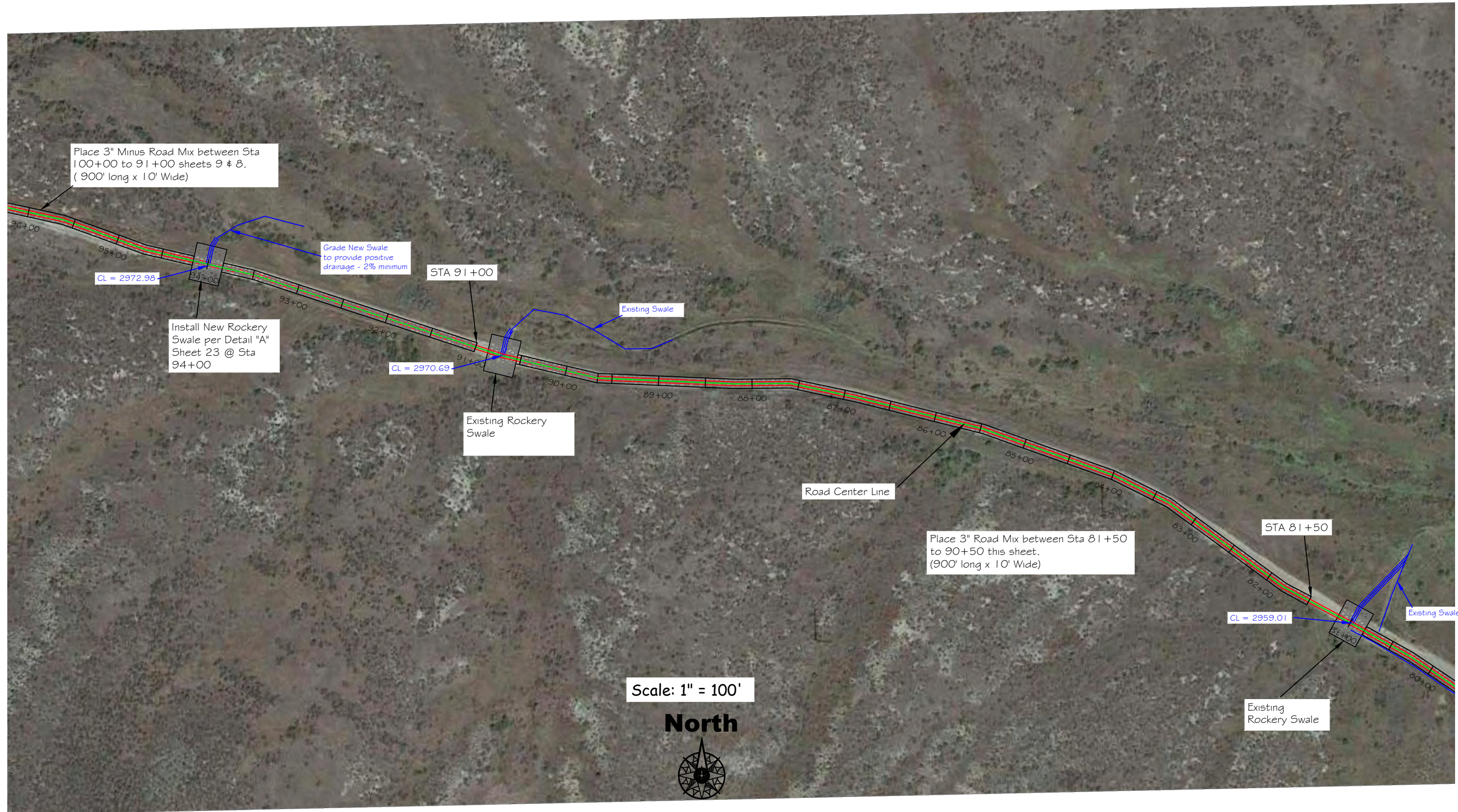
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**MONTANA FISH,
WILDLIFE & PARKS**

Yellowstone WMA
2022 Access Road Repairs – Sheet 7



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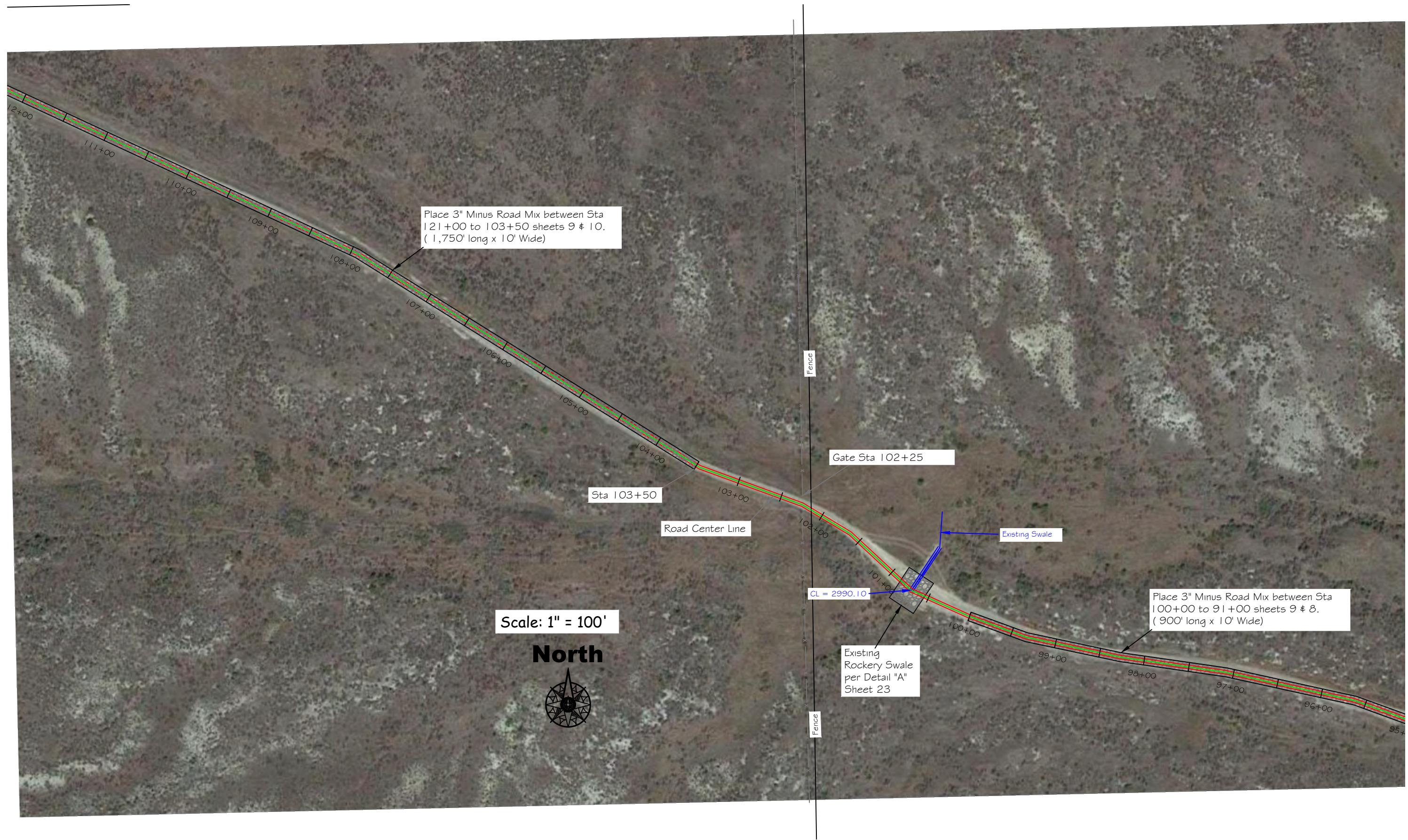


**MONTANA FISH,
 WILDLIFE & PARKS**

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 2022 Access Road Repairs – Sheet 8

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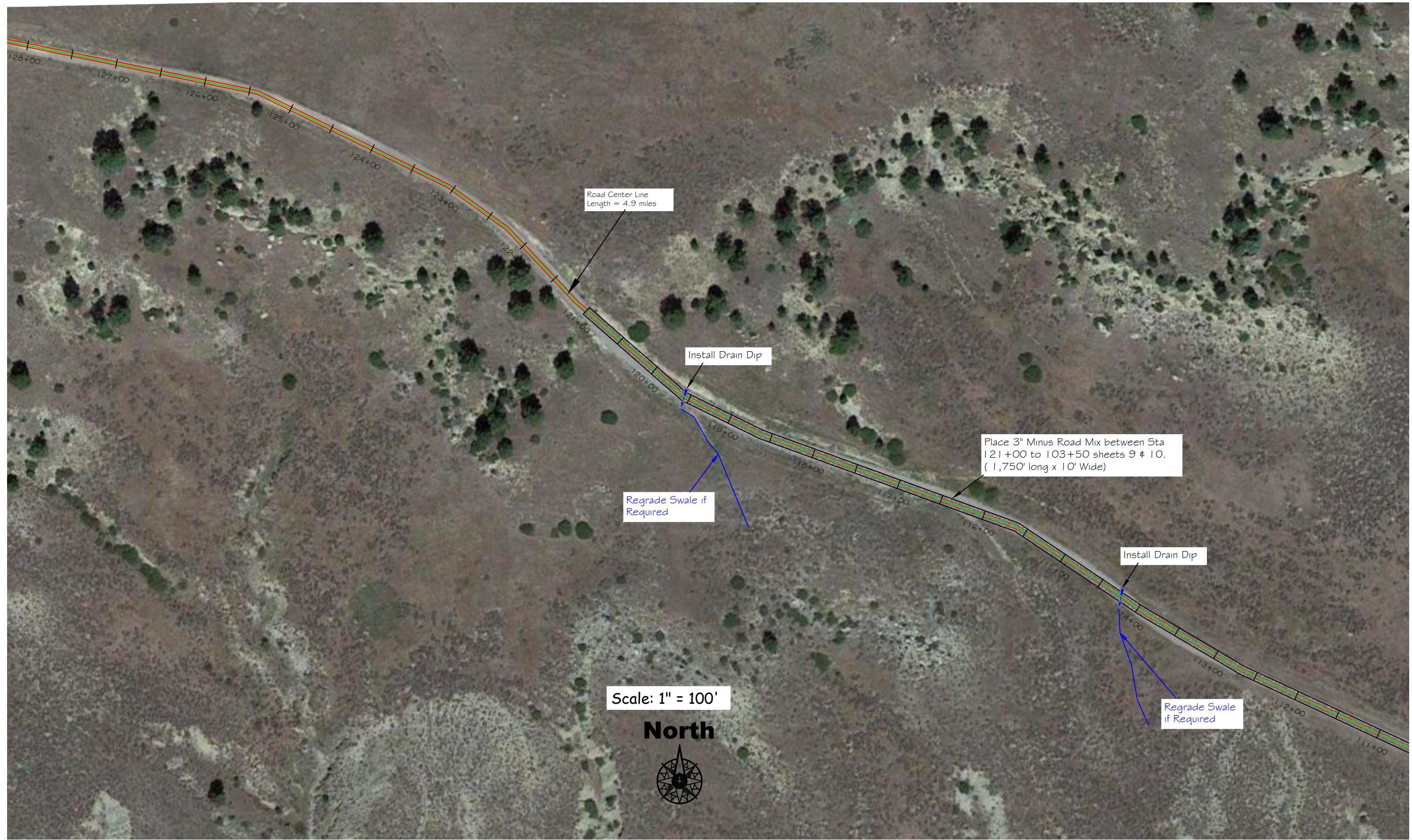


**MONTANA FISH,
 WILDLIFE & PARKS**

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 2022 Access Road Repairs – Sheet 9

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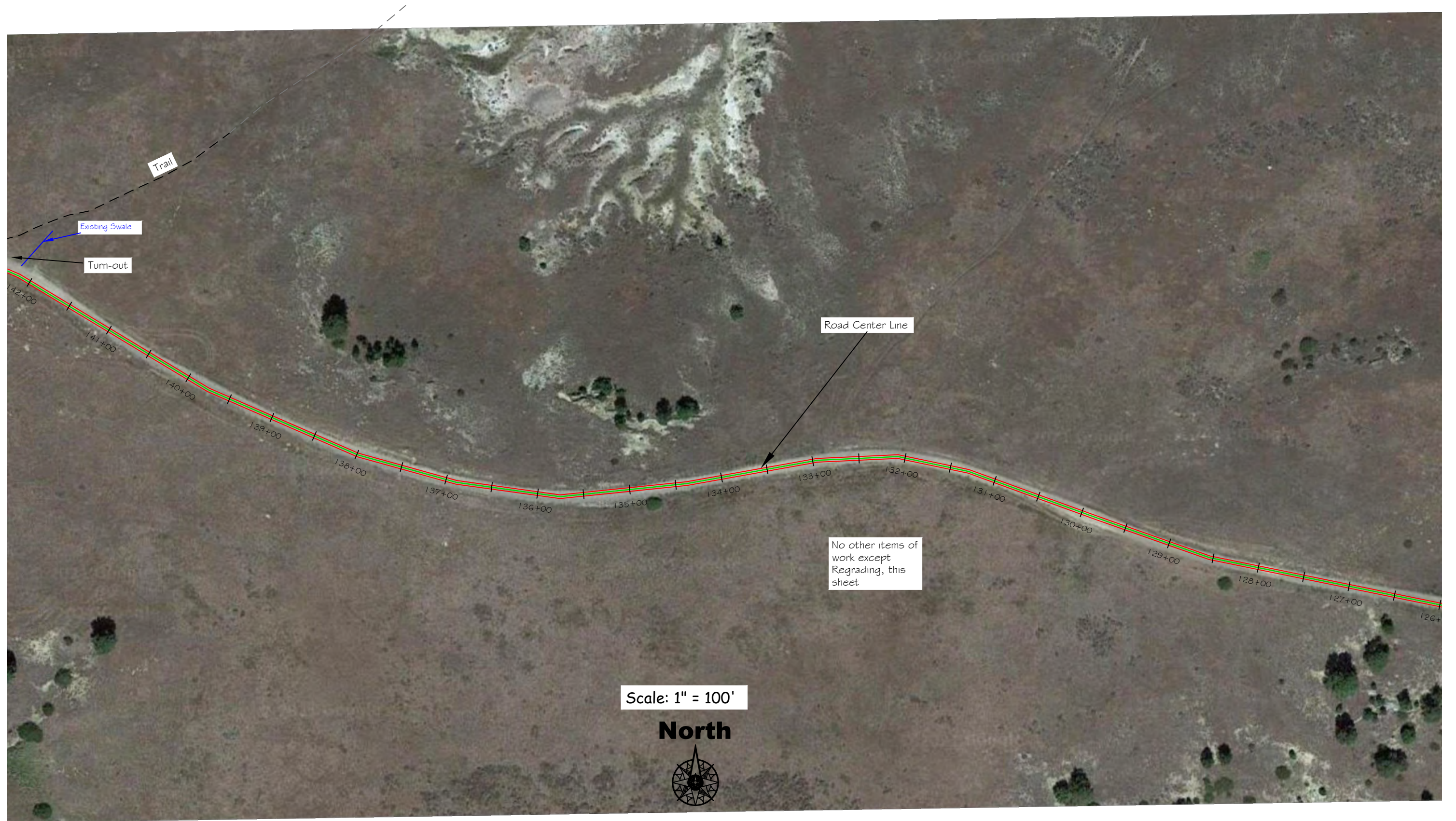
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**MONTANA FISH,
 WILDLIFE & PARKS**

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 2022 Access Road Repairs – Sheet 10



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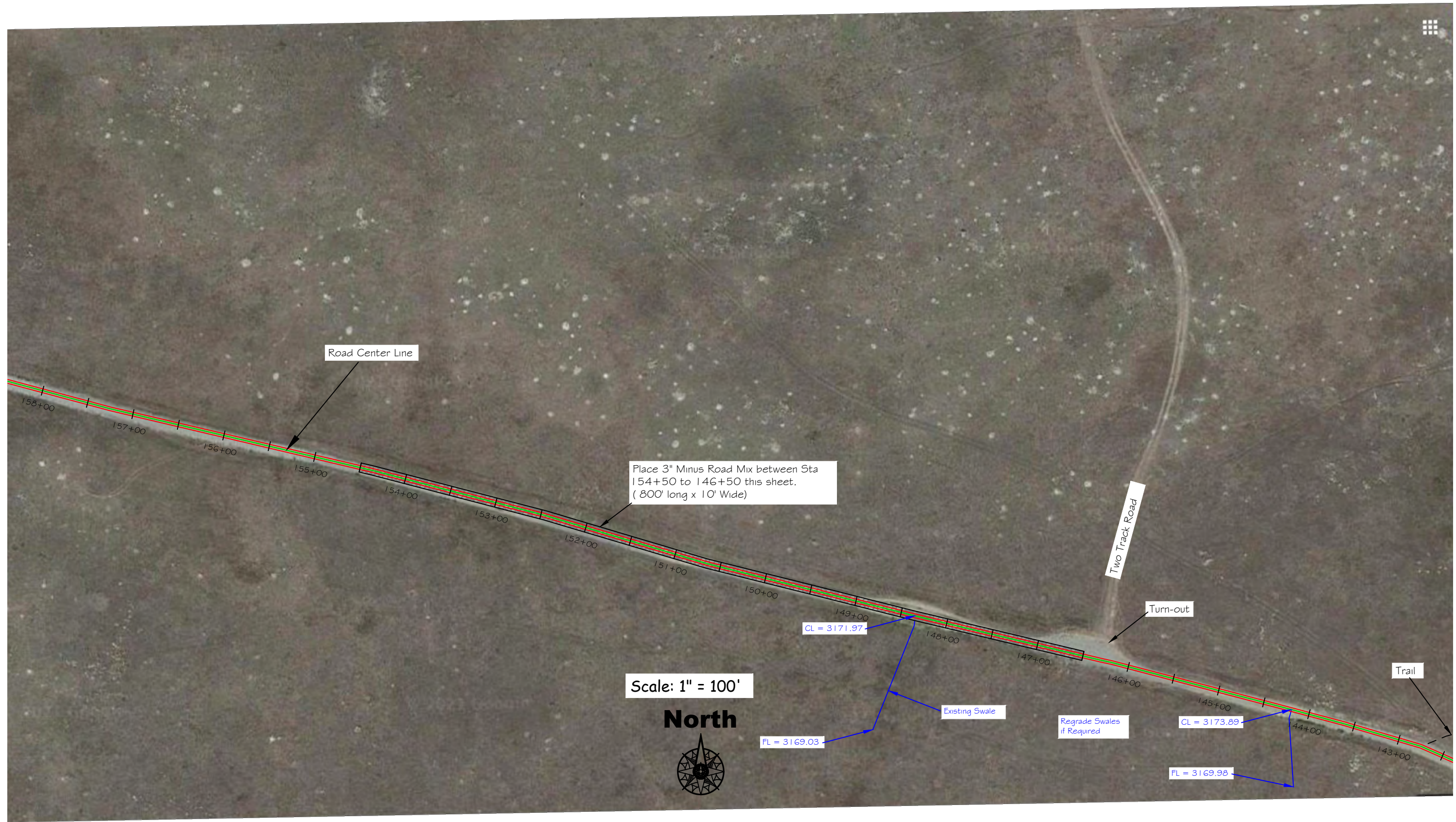
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**MONTANA FISH,
 WILDLIFE & PARKS**

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 2022 Access Road Repairs – Sheet 11

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**MONTANA FISH,
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 2022 Access Road Repairs - Sheet 12

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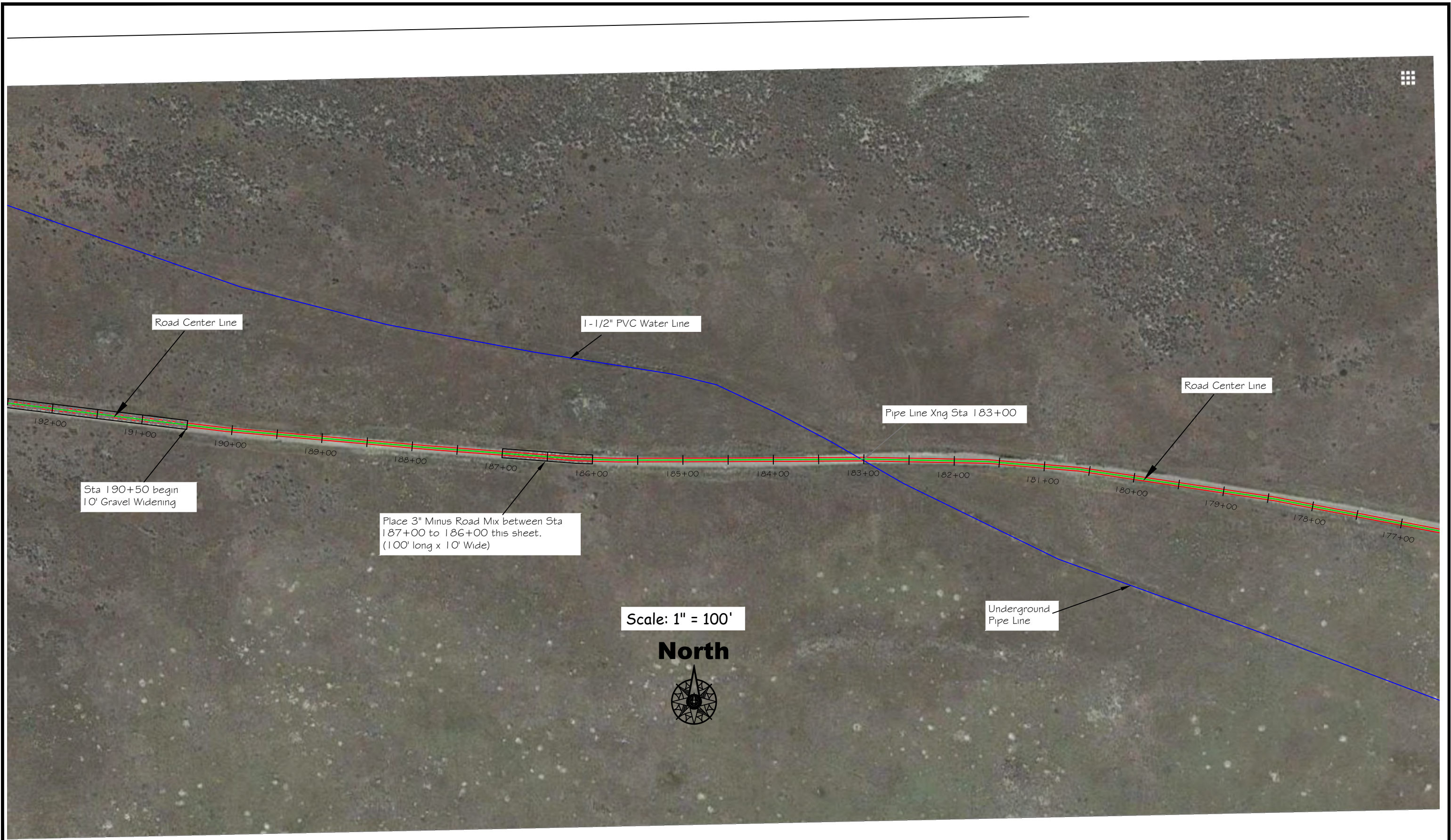
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**MONTANA FISH,
WILDLIFE & PARKS**

Yellowstone WMA
2022 Access Road Repairs – Sheet 13



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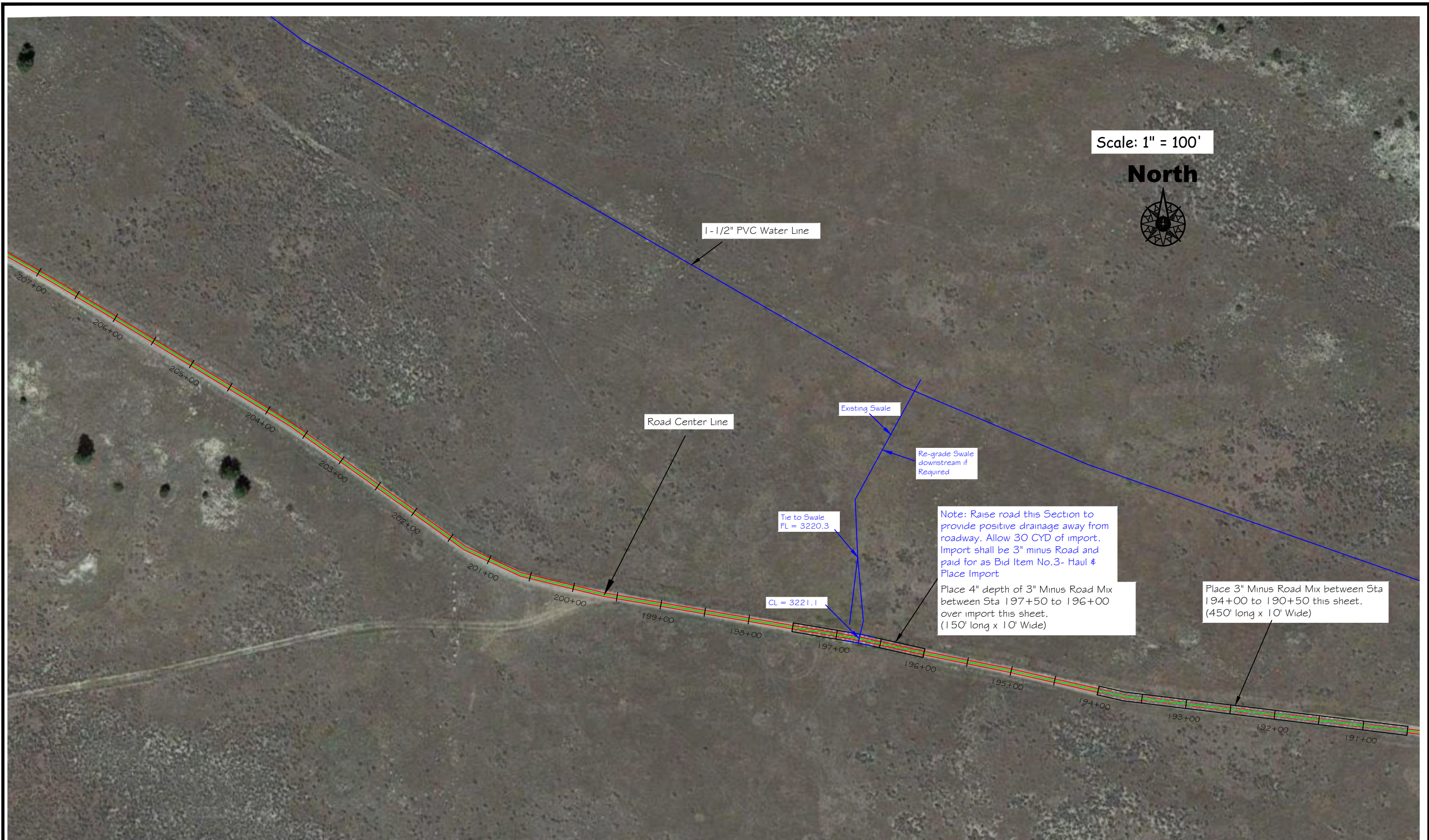
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**MONTANA FISH,
 WILDLIFE & PARKS**

Yellowstone WMA
 2022 Access Road Repairs – Sheet 14

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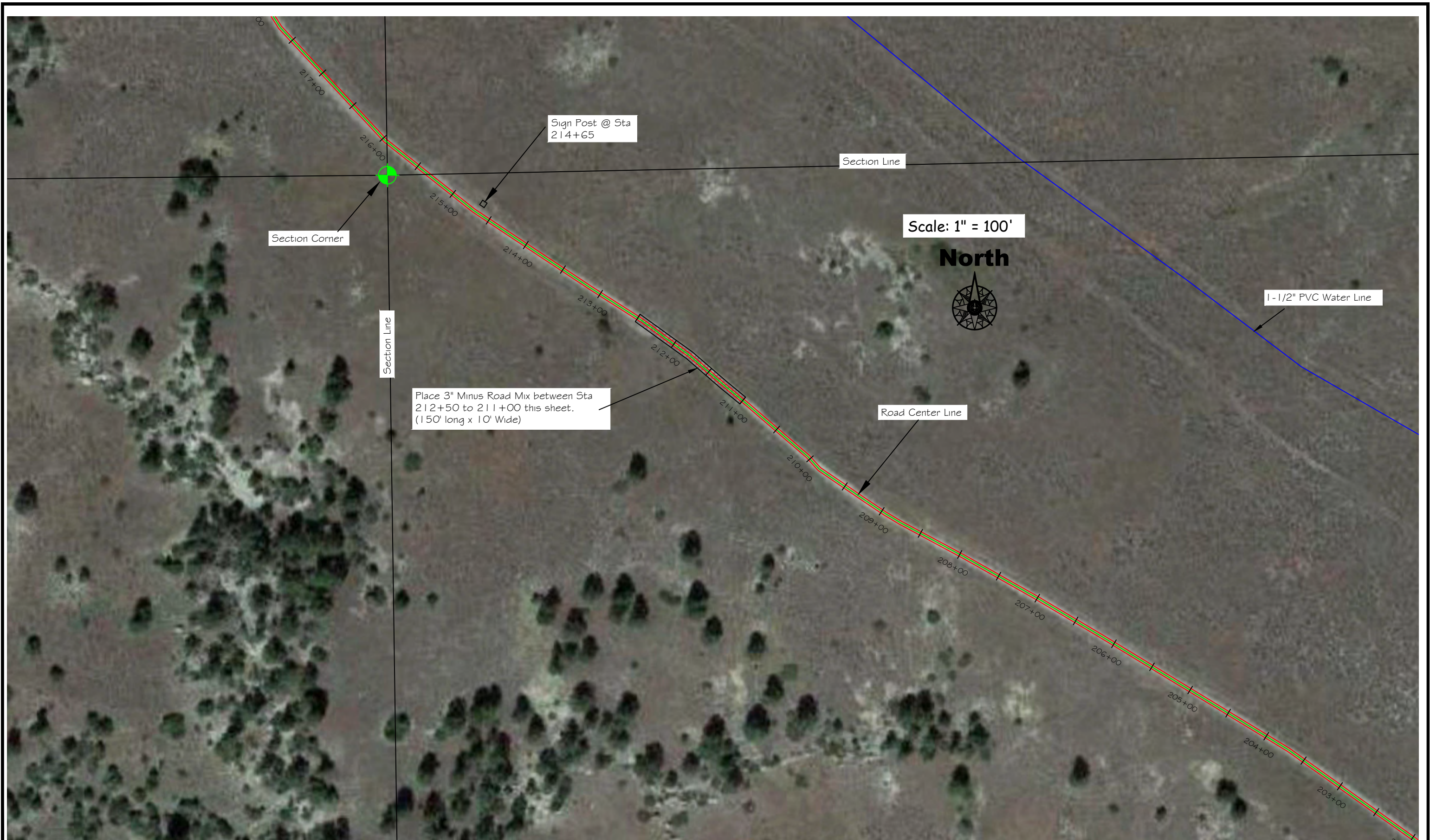
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**MONTANA FISH,
 WILDLIFE & PARKS**

Yellowstone WMA
 2022 Access Road Repairs – Sheet 15

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**MONTANA FISH,
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**MONTANA FISH,
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**MONTANA FISH,
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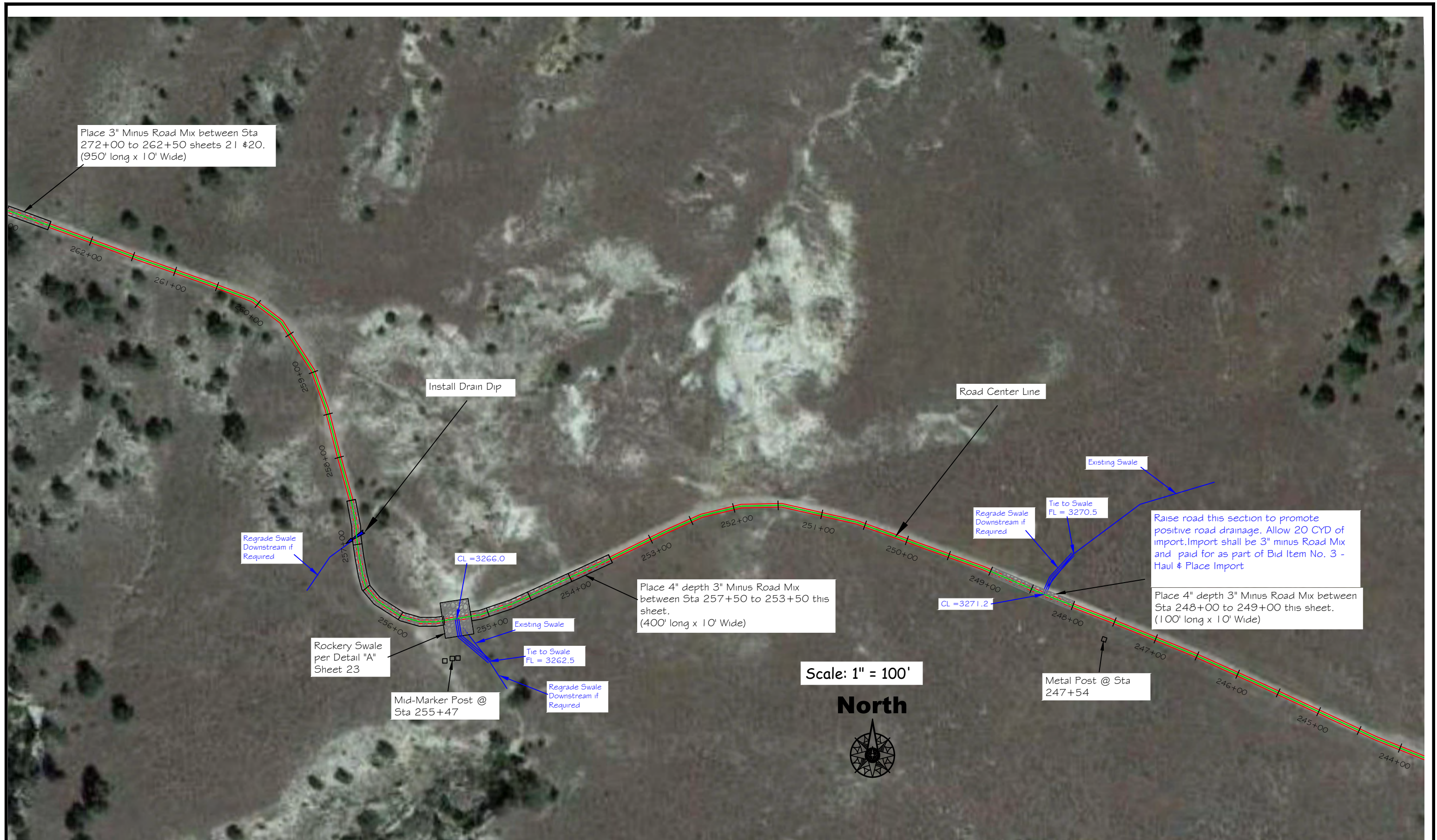
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**MONTANA FISH,
 WILDLIFE & PARKS**

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 2022 Access Road Repairs - Sheet 20



Scale: 1" = 100'

North



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**MONTANA FISH,
WILDLIFE & PARKS**

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2022 Access Road Repairs – Sheet 21

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No other items of work except
Regrading, this sheet

Boundary Fence

Road Center Line

Road Turn Around

Scale: 1" = 100'

North



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**MONTANA FISH,
 WILDLIFE & PARKS**

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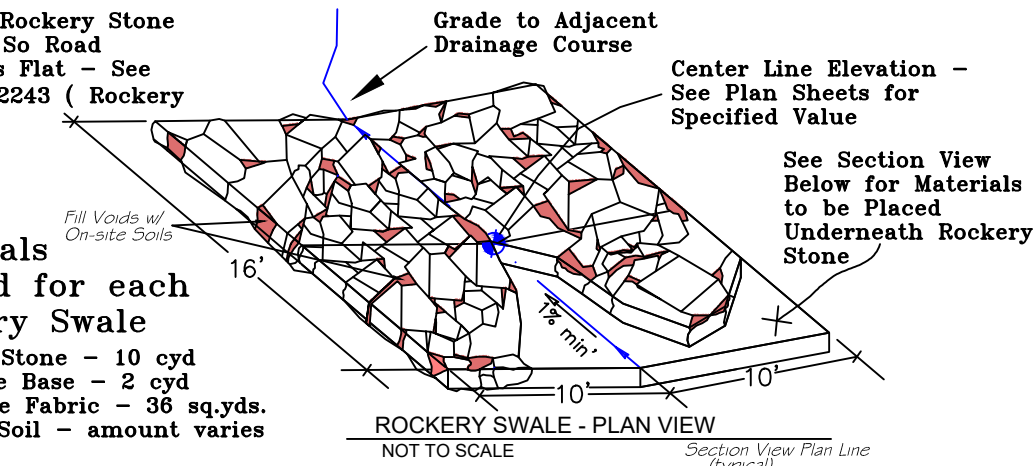
Yellowstone WMA
 2022 Access Road Repairs – Sheet 22

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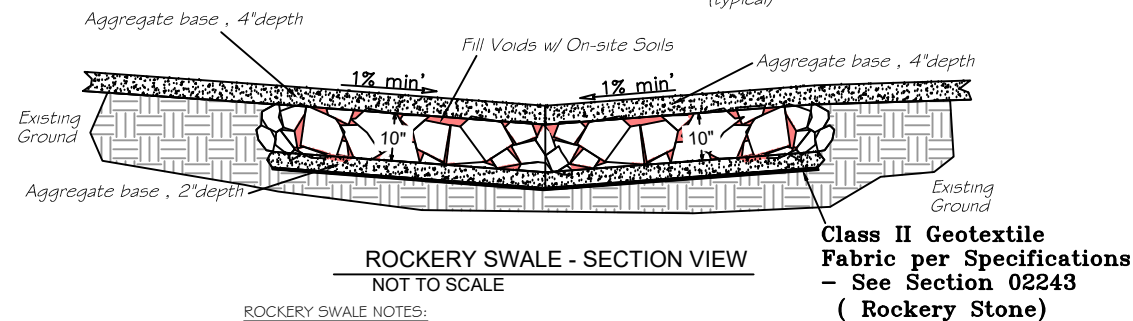
2" to 9" Rockery Stone
- Placed So Road
Surface Is Flat - See
Section 02243 (Rockery
Stone)

**Materials
needed for each
Rockery Swale**

Rockery Stone - 10 cyd
Aggregate Base - 2 cyd
Geotextile Fabric - 36 sq.yds.
On-site Soil - amount varies



ROCKERY SWALE - PLAN VIEW
NOT TO SCALE



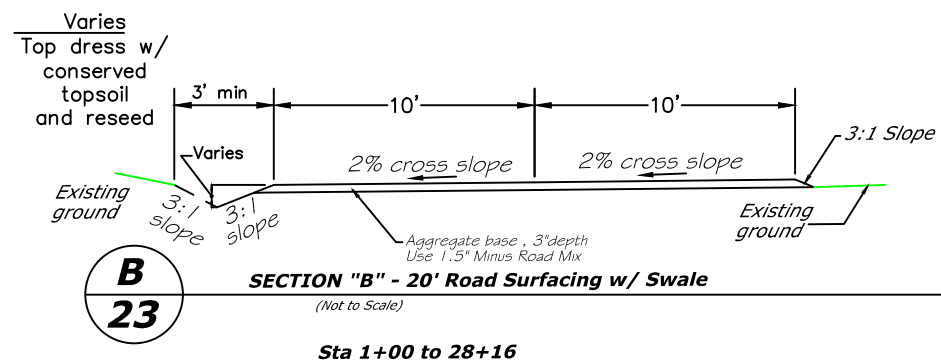
ROCKERY SWALE - SECTION VIEW
NOT TO SCALE

ROCKERY SWALE NOTES:

1. Provide stone that is hard, durable and angular in shape, resistant to water action and weathering, free from overburden, spoil, shale, structural defects and organic material.
2. Angular faces of stones shall inter-lock to provide a stable surface.
3. Place Rockery Stone so road surface is flat and in no case exceeds the section view plan line by more than 1/2 inch. Hand place stones as required to achieve a uniform distribution of rock and a smooth roadway surface.
4. Installed Thickness: 10" inches minimum.
5. Fill voids with top soil stored from site excavation.

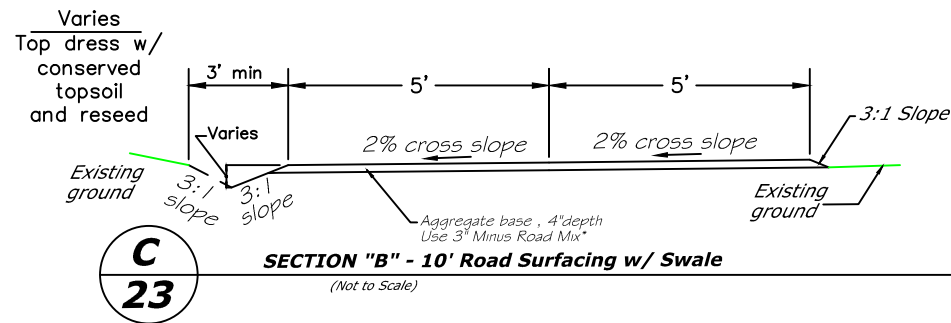


ROCKERY SWALE
(Not to Scale)

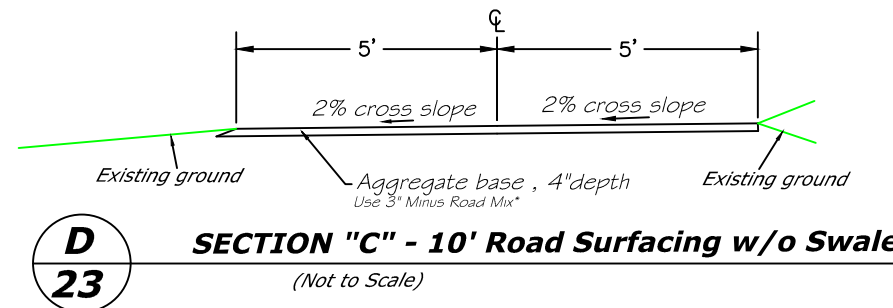


SECTION "B" - 20' Road Surfacing w/ Swale
(Not to Scale)

Sta 1+00 to 28+16

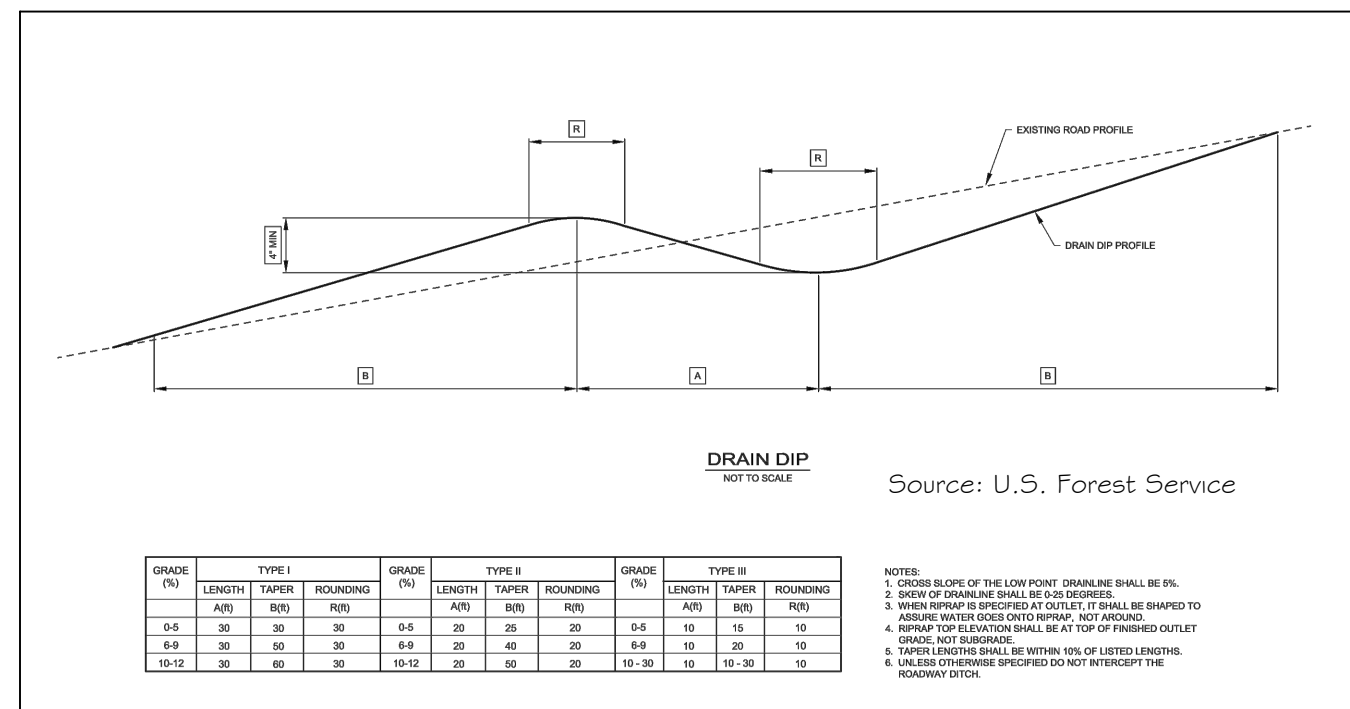


SECTION "C" - 10' Road Surfacing w/ Swale
(Not to Scale)



SECTION "D" - 10' Road Surfacing w/o Swale
(Not to Scale)

* Note: Pit Run Aggregate may be substituted for 3" Minus road mix provided a substantial amount of the large diameter rock is less than 4" and the source is pre-approved by a FWP Representative.



Source: U.S. Forest Service

GRADE (%)	TYPE I			GRADE (%)	TYPE II			GRADE (%)	TYPE III		
	LENGTH	TAPER	ROUNDING		LENGTH	TAPER	ROUNDING		LENGTH	TAPER	ROUNDING
0-5	30	30	30	0-5	20	25	20	0-5	10	15	10
6-9	30	50	30	6-9	20	40	20	6-9	10	20	10
10-12	30	60	30	10-12	20	50	20	10-30	10	10-30	10

- NOTES:
1. CROSS SLOPE OF THE LOW POINT DRAINLINE SHALL BE 5%.
 2. SKEW OF DRAINLINE SHALL BE 0-25 DEGREES.
 3. WHEN RIPRAP IS SPECIFIED AT OUTLET, IT SHALL BE SHAPED TO ASSURE WATER GOES ONTO RIPRAP, NOT AROUND.
 4. RIPRAP TOP ELEVATION SHALL BE AT TOP OF FINISHED OUTLET GRADE, NOT SUBGRADE.
 5. TAPER LENGTHS SHALL BE WITHIN 10% OF LISTED LENGTHS.
 6. UNLESS OTHERWISE SPECIFIED DO NOT INTERCEPT THE ROADWAY DITCH.



Drain Dip Detail
(Not to Scale)

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MONTANA FISH,
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2022 Access Road Repairs - Details

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