

Sheet D.06
#309111; Bartlett I-29
Site 5

Sheet D.07
#309111; Bartlett I-29
Site 1 & 3

Sheet D.11
#309117; Scott I-29
Site 1 - 2

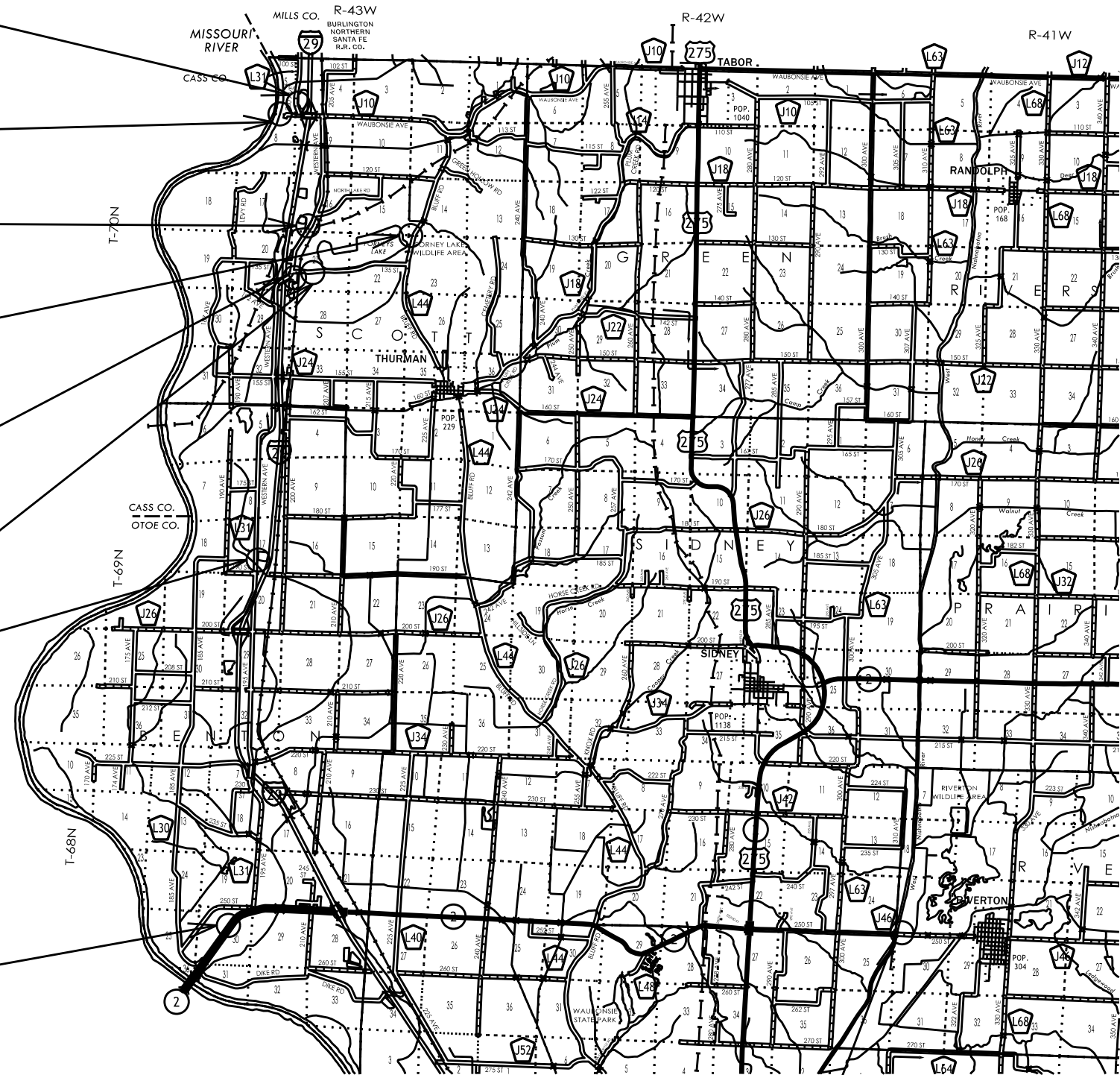
Sheet D.10
#309115; Forney Lake
Site 3 - 4

Sheet D.09
#309116; McPaul I-29
Site 1 - 5

Sheet D.09
#309115; Forney Lake
Site 1 - 2

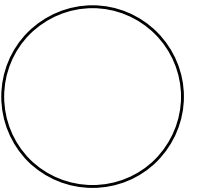
Sheet D.08
#309113; Percival I-29

Sheet D.12
#309118; Waubonsie Access
Site 1 - 4



Sheet D.02
#309083: Riverton - Johnson Tract Parking Lot
Site 2

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROJECT LOCATION MAP

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

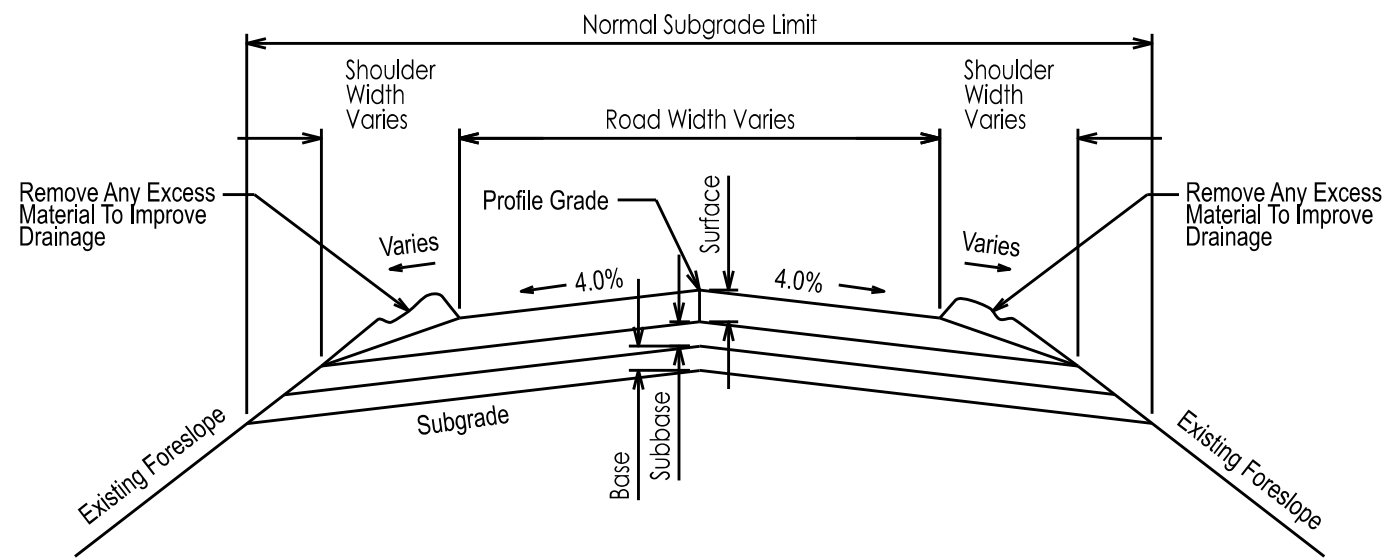
FREMONT COUNTY

NO.	BY	REVISION

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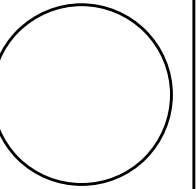
SHEET No:
A.02



Typical Gravel Roadway Section - Center Crown

Note:
 Normal sections shown may be appropriately modified for areas specifically designated by the Engineer.

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



TYPICAL CROSS SECTIONS AND DETAILS

2019 FLOOD DAMAGE REPAIRS FOR:
NISHNABOTNA WILDLIFE UNIT
 FREMONT COUNTY

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SHEET NO.:

B.01

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
#309083 Riverton			
1	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309083 Riverton Site 2)	TON	56
2	Mobilization (#309083 Riverton)	LS	1
#309111 Bartlett I-29			
3	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309111 Bartlett I-29 Site 1)	TON	28
4	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309111 Bartlett I-29 Site 3)	TON	56
5	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309111 Bartlett I-29 Site 5)	TON	140
6	Mobilization (#309111 Bartlett I-29)	LS	1
#309113 Percival I-29			
7	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309113 Percival I-29)	TON	98
8	Mobilization (#309113 Percival I-29)	LS	1
#309115 Forney Lake			
9	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 1)	TON	28
10	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 2)	TON	42
11	Base Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 2)	TON	56
12	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 3)	TON	70
13	Base Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 3)	TON	98
14	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 4)	TON	70
15	Base Hauled and Placed, 1 1/2" Crushed Stone (#309115 Forney Lake Site 4)	TON	98
16	Mobilization (#309115 Forney Lake)	LS	1
#309116 McPaul I-29			
17	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 1)	TON	182
18	Base Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 1)	TON	280
19	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 2)	TON	14
20	Base Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 2)	TON	14
21	Base Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 3)	TON	14
22	Base Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 4)	TON	28
23	Subbase Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 2)	TON	14
24	Earthwork, Fill Hauled and Placed, Unclassified (#309116 McPaul I-29 Site 2)	CY	18.6
25	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 5)	TON	42
26	Base Hauled and Placed, 1 1/2" Crushed Stone (#309116 McPaul I-29 Site 5)	TON	70
27	Mobilization (#309116 McPaul I-29)	LS	1
#309117 Scott I-29			
28	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309117 Scott I-29 Site 1)	TON	266
29	Base Hauled and Placed, 1 1/2" Crushed Stone (#309117 Scott I-29 Site 1)	TON	406
30	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309117 Scott I-29 Site 2)	TON	14
31	Base Hauled and Placed, 1 1/2" Crushed Stone (#309117 Scott I-29 Site 2)	TON	14
32	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309117 Scott I-29 Site 3)	TON	42
33	Base Hauled and Placed, 1 1/2" Crushed Stone (#309117 Scott I-29 Site 3)	TON	56
34	Mobilization (#309117 Scott I-29)	LS	1
#309118 Waubonsie Access			
35	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 1)	TON	14
36	Base Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 1)	TON	14
37	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 2)	TON	42
38	Base Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 2)	TON	70
39	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 3)	TON	42
40	Base Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 3)	TON	56
41	Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 4)	TON	14
42	Base Hauled and Placed, 1 1/2" Crushed Stone (#309118 Waubonsie Access Site 4)	TON	28
43	Mobilization (#309118 Waubonsie Access)	LS	1

ESTIMATE REFERENCE INFORMATION

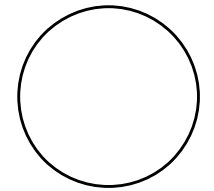
ITEM NO.	DESCRIPTION
	<p>Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone (All sites) Base Hauled and Placed, 1 1/2" Crushed Stone (All Sites) Subbase Hauled and Placed, 1 1/2" Crushed Stone (All Sites) A. Removal of vegetative debris shall be incidental. B. Clearing and grubbing shall be incidental. C. Blading and shaping shall be incidental. D. Seeding and mulching shall be incidental. E. Final leveling of surface aggregate after being dumped is required. F. The quantity of materials specified will be measured as indicated in the contract documents. G. Payment for material placed will be the contract unit price per ton.</p> <p>Earthwork, Fill Hauled and Placed, Unclassified (All Sites) A. Borrow material shall be contractor furnished. B. All borrow or fill material must come from pre-existing stockpiles or commercially procured material from a source existing prior to the event, March 12, 2019 (i.e. an existing quarry that has been licensed prior to the event).</p> <p>For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g. a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a subrecipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding.</p> <p>Documentation of borrow sources required prior to construction and subject to approval by Engineer. C. Place fill as directed by the DNR Inspector. D. Clearing and grubbing shall be incidental. E. Removal of vegetative debris shall be incidental. F. No payment for overhaul will be allowed. G. Seeding and fertilizing shall be incidental. H. Dimensions of fill areas shown are approximate from the FEMA Project Worksheet. It is the responsibility of the contractor to verify bidding.</p>

SEEDING NOTES

Late fall completion:
 A. Seed with a cover crop of winter (cereal) rye seeded at 2 bushels per acre immediately upon completion of earthwork.
 B. After November 15, use the following dormant seeding mix:
 Smooth Brome 40 lbs/ac
 Perennial Rye 16 lbs/ac
 Red Clover 24 lbs/ac.

Summer completion:
 A. Seed with a cover crop of oats seeded at 1 bushels per acre immediately upon completion of earthwork.
 B. Seed mix below to be planted between August 1 - September 30.
 Smooth Brome 66 lbs/ac
 Perennial Rye 6 lbs/ac
 Red Clover 4 lbs/ac

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



QUANTITIES AND GENERAL INFORMATION

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

NO.	BY	DATE	REVISION

DRAWN BY: PROJECT NUMBER:
 22-04-36-01

CHK'D BY: DATE:

SHEET NO:

C.01

GENERAL NOTES

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances.

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and the start of work. Failure to visit the project site shall not relieve the contractor from performing the work in accordance to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

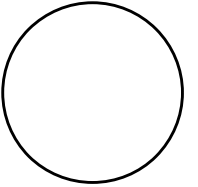
Unless otherwise directed by the Plans, Specifications, or the DNR Engineer, all trees with a trunk diameter of three inches or greater when measured at breast height, shall be felled between October 1st and March 31st. Brush and debris removal is not restricted by this note.

Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins or silt dikes.

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QUANTITIES AND GENERAL INFORMATION

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

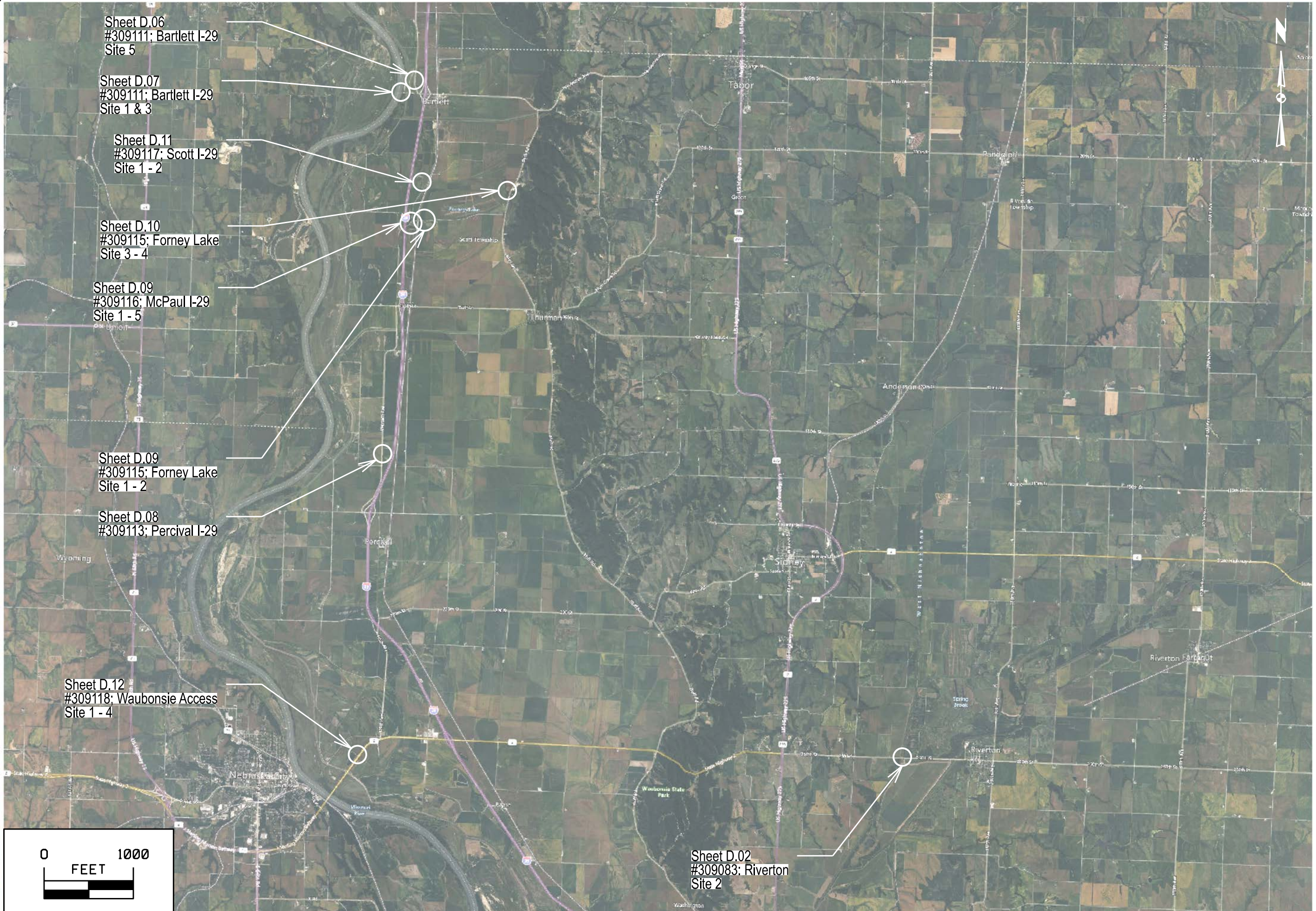
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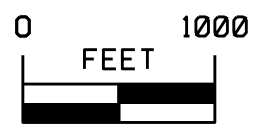
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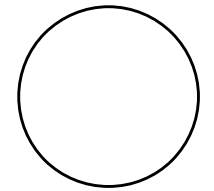
C.02



- Sheet D.06
#309111; Bartlett I-29
Site 5
- Sheet D.07
#309111; Bartlett I-29
Site 1 & 3
- Sheet D.11
#309117; Scott I-29
Site 1 - 2
- Sheet D.10
#309115; Forney Lake
Site 3 - 4
- Sheet D.09
#309116; McPaul I-29
Site 1 - 5
- Sheet D.09
#309115; Forney Lake
Site 1 - 2
- Sheet D.08
#309113; Percival I-29
- Sheet D.12
#309118; Waubonsie Access
Site 1 - 4
- Sheet D.02
#309083; Riverton
Site 2



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

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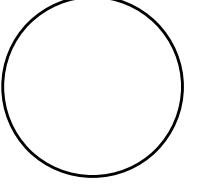
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SHEET NO:

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CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

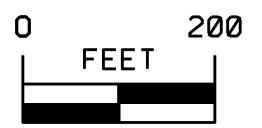
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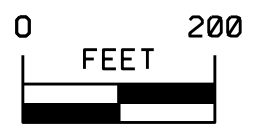
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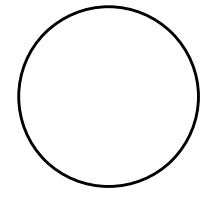


#309111; Bartlett I-29
 Site 5 Parking Lot 117'x65'
 3" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 Large rocks border the north side of parking lot.
 Clear and grub and remove vegetation to reclaim over grown parking lot,
 access road, and boat ramp.

Missouri
River



CONSULTANT:



**IOWA DEPARTMENT OF
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 ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN
 2019 FLOOD DAMAGE REPAIRS FOR:
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 FREMONT COUNTY

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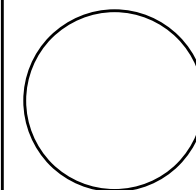
D.03

#309111: Bartlett I-29
 Site 3 Parking Lot 80'x60'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone

#309111: Bartlett I-29
 Site 1 Boat Ramp 135'x15'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone



CONSULTANT:



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SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

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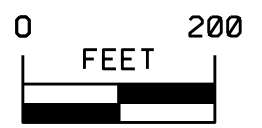
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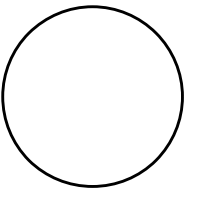
D.04



#309113; Percival I-29
 Parking Lot 66'x76'
 3" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 Clear and grub and remove vegetation to reclaim over grown parking lot,
 access road, and boat ramp.



CONSULTANT:



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SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

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SHEET NO:

D.05



#309115: Forney Lake
 Site 1 Access Road 90'x15'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Site 2 Parking Lot 100'x95' Partially Complete, Finish Remaining 3200 sf
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Clear and grub and remove vegetation to reclaim over grown parking lot and access road.

#309116: McPaul I-29
 Site 2 Scour Hole 100'x6'
 2" Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" Base Hauled and Placed, 1 1/2" Crushed Stone

#309116: McPaul I-29
 Site 3 Scour Hole 18'x12'
 3" Base Hauled and Placed, 1 1/2" Crushed Stone

#309116: McPaul I-29
 Site 1 Access Road 1342'x12'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

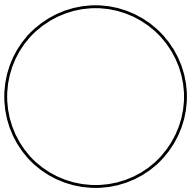
Blade and shape, clear and grub and remove vegetation to reclaim over grown access road.

#309116: McPaul I-29
 Site 5 Parking Lot 70'x50'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Clear and grub and remove vegetation to reclaim over grown parking lot. Wood post at corner of lot.

#309116: McPaul I-29
 Site 4 Scour Hole 60'x20'
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone
 3" of Subbase Hauled and Placed, 1 1/2" Crushed Stone
 10" of Earthwork, Fill Hauled and Placed, Unclassified

CONSULTANT:



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SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

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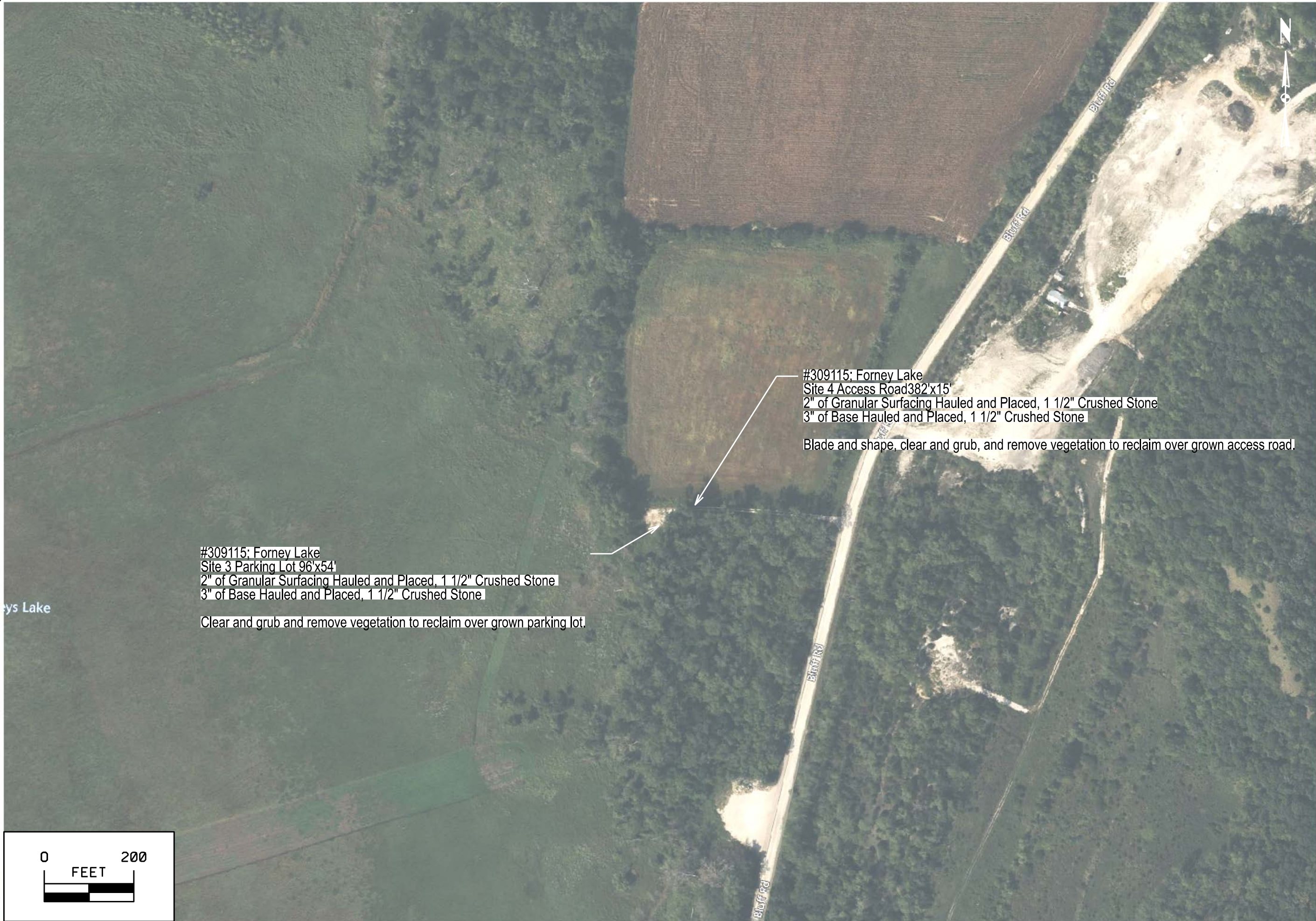
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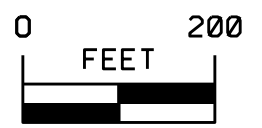
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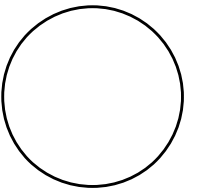


#309115: Forney Lake
 Site 3 Parking Lot 96'x54'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone
 Clear and grub and remove vegetation to reclaim over grown parking lot.

#309115: Forney Lake
 Site 4 Access Road 382'x15'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone
 Blade and shape, clear and grub, and remove vegetation to reclaim over grown access road.



CONSULTANT:



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SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:
NISHNABOTNA WILDLIFE UNIT
 FREMONT COUNTY

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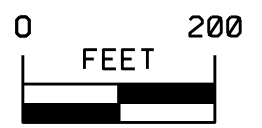
#309117: Scott I-29
 Site 1 Access Road 1390'x17'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Blade and shape, clear and grub, and remove vegetation to reclaim over grown access road.

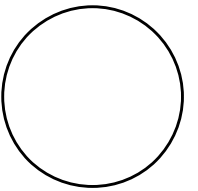
#309117: Scott I-29
 Site 2 Boat Ramp 30'x18'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Site 3 Parking Lot 40'x75'
 2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
 3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Clear and grub and remove vegetation to reclaim over grown access parking lot.



CONSULTANT:



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SITE PLAN

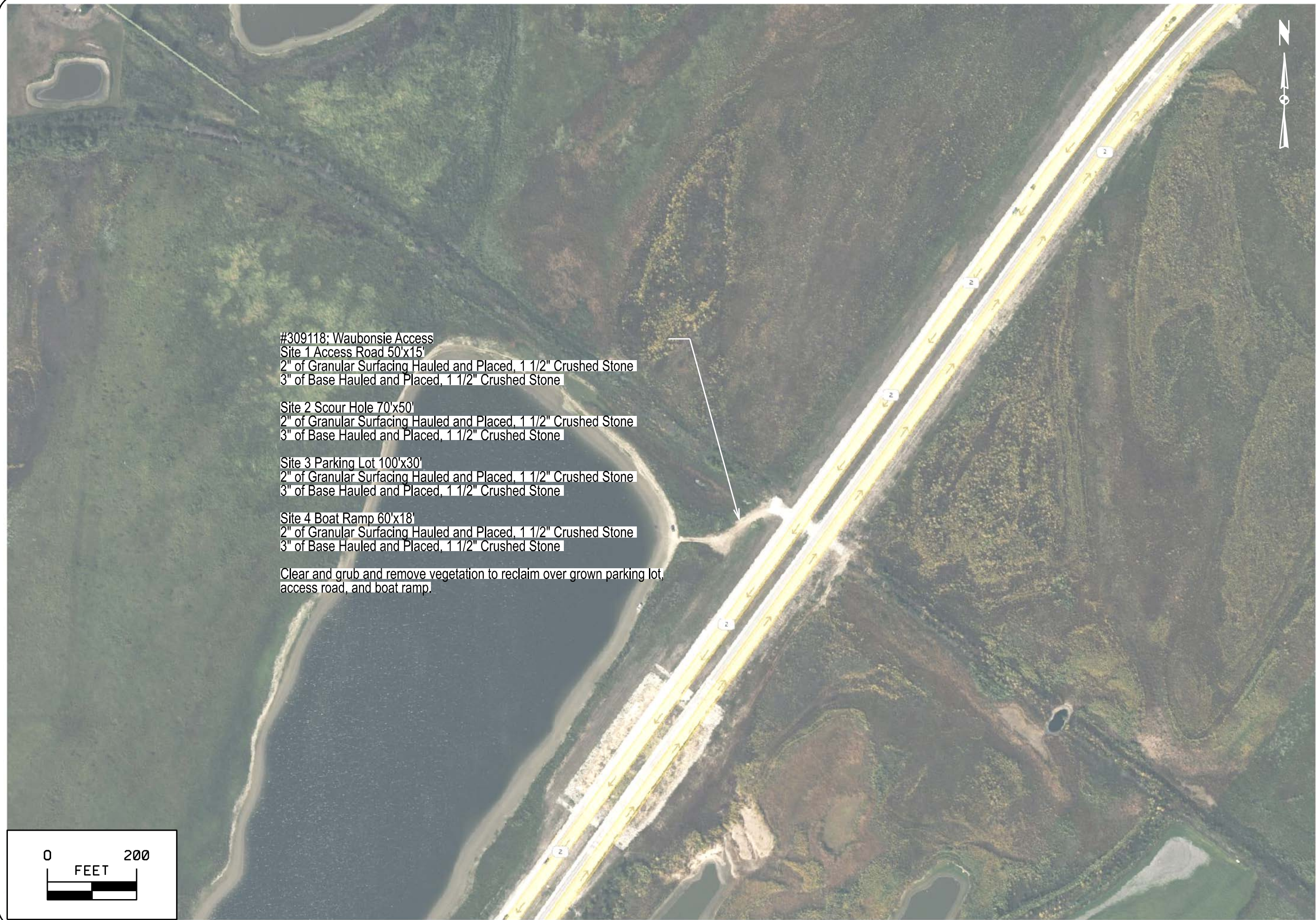
2019 FLOOD DAMAGE REPAIRS FOR:

NISHNABOTNA WILDLIFE UNIT

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 CHK'D BY: DATE: SHEET NO: D.08



#309118; Waubonsie Access
Site 1 Access Road 50'x15'
2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Site 2 Scour Hole 70'x50'
2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
3" of Base Hauled and Placed, 1 1/2" Crushed Stone

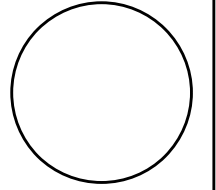
Site 3 Parking Lot 100'x30'
2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Site 4 Boat Ramp 60'x18'
2" of Granular Surfacing Hauled and Placed, 1 1/2" Crushed Stone
3" of Base Hauled and Placed, 1 1/2" Crushed Stone

Clear and grub and remove vegetation to reclaim over grown parking lot,
access road, and boat ramp.



CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN

2019 FLOOD DAMAGE REPAIRS FOR:
NISHNABOTNA WILDLIFE UNIT

FREMONT COUNTY

NO.	BY	REVISION

SHEET NO: **D.09**