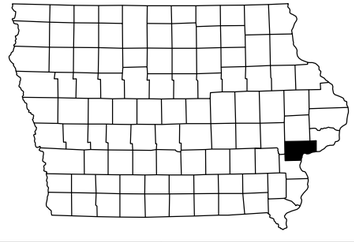
IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DOCUMENTS FOR WILDCAT DEN STATE PARK PAVEMENT MAINTENANCE

MUSCATINE COUNTY, IOWA

PROJECT # 22-06-70-02
IDOT PROJECT # SP-00SP(6)--7C-00



LICENSED PROFESSIONAL ENGINEER
MANDI L. ALDRICH PETERS
14439
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED UNDER MY SUPERVISION AND THAT ENGINEERING DECISIONS WITH REGARD TO THE DESIGN WERE MADE BY ME UNDER THE LAWS OF THE STATE OF IOWA.

Mandi Lu Aldrich Peters
Digitally signed by Mandi Lu Aldrich Peters
Date: 2023.11.07 09:36:47 -06'00'

SIGNATURE DATE

MANDI L. ALDRICH PETERS
PRINTED OR TYPED NAME

MY LICENCE RENEWAL DATE IS DECEMBER 31, 2023
PAGES COVERED BY THIS SEAL: X

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811
Know what's below. Call before you dig.

DIRECTORY

PROJECT MANAGER		CONSTRUCTION INSPECTOR	
COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES	COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
ADDRESS	502 EAST 9TH STREET	ADDRESS	
CITY,STATE,ZIP	DES MOINES, IA, 50319	CITY,STATE,ZIP	
CONTACT	MANDI L. ALDRICH PETERS	CONTACT	MARK MOELLER
TELEPHONE	515-205-1698	TELEPHONE	515-214-9532
FAX		FAX	
EMAIL	Mandi.Aldrich-Peters@dnr.iowa.gov	EMAIL	mark.moeller@dnr.iowa.gov

PROJECT DESCRIPTION

This project consists of cleaning existing culverts, reshaping ditches, placing rock on shoulders and rock roads, placing revetment and erosion stone, rock check dams, patching, cleaning and filling cracks and fog sealing approximately 1.64 miles of HMA pavement of varying widths.

AUTHORIZATION TO BID

Seth Moore
Digitally signed by Seth Moore
Date: 2023.11.06 17:32:43 -06'00'

AUTHORIZATION - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT | FORESTRY DATE

Travis Baker
Digitally signed by Travis Baker
Date: 2023.11.07 09:14:10 -06'00'

ENGINEERING BUREAU CHIEF DATE

SHEET INDEX

CONSULTANT:

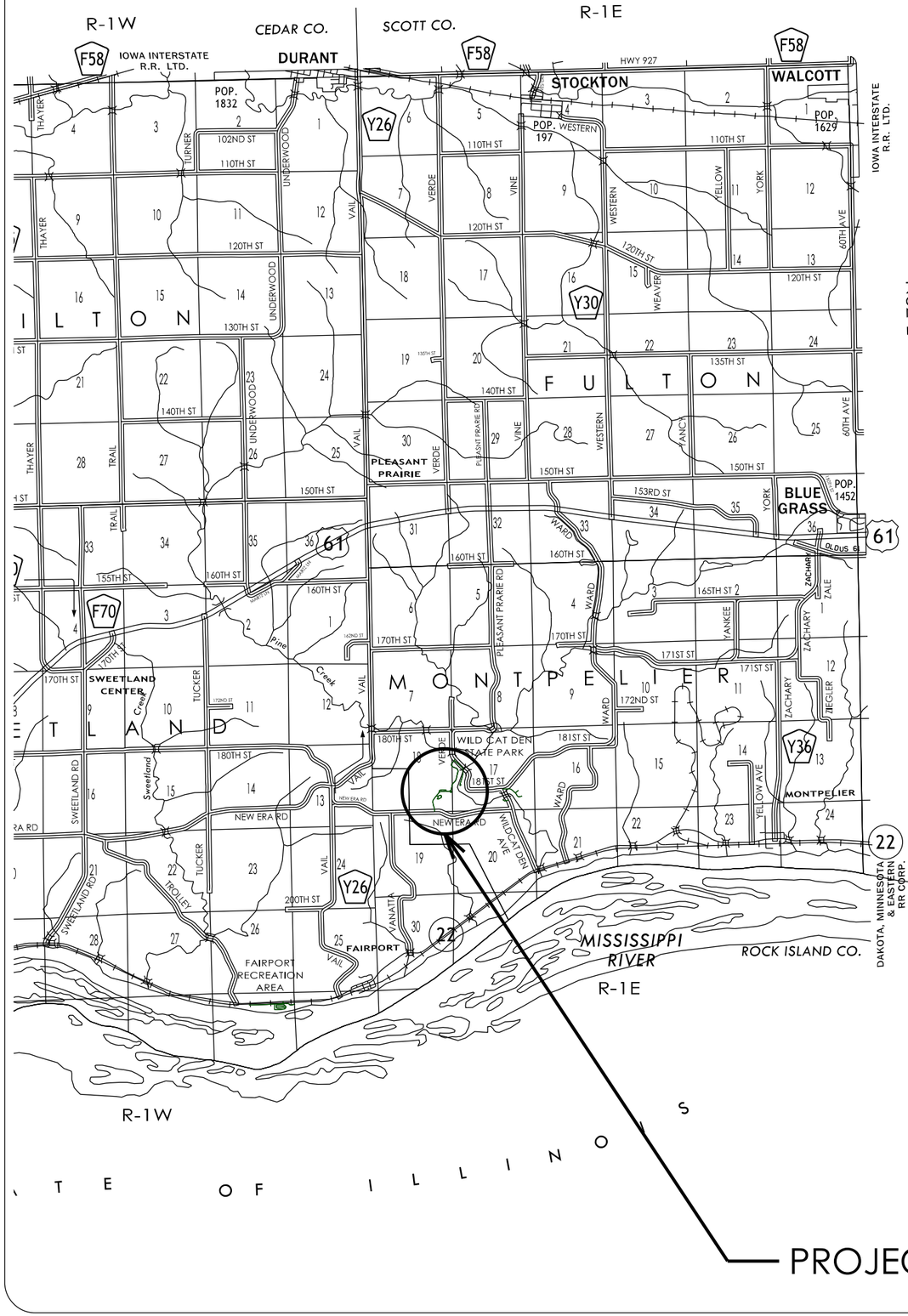
IOWA DEPARTMENT OF NATURAL RESOURCES
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

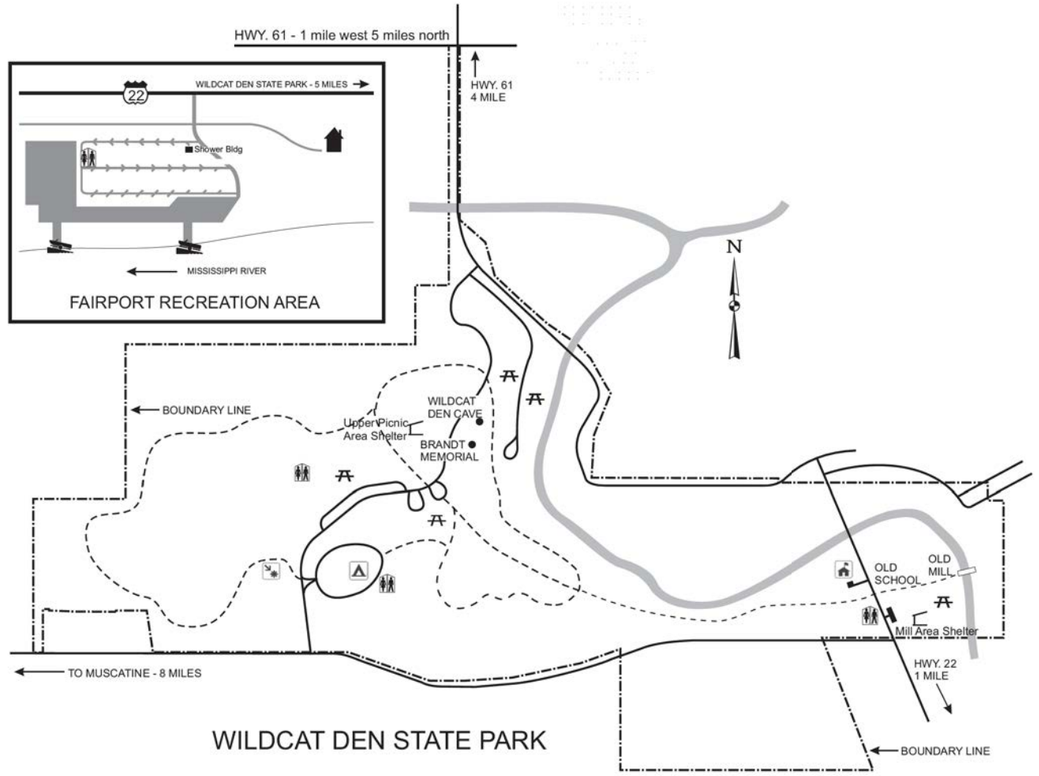
COVER SHEET

PAVEMENT MAINTENANCE FOR:
WILDCAT DEN STATE PARK
MUSCATINE COUNTY

NO.	BY DATE	REVISION

DRAWN BY:
PROJECT NUMBER: 22-06-70-02
CHK'D BY:
DATE:
SHEET No: A.01





CONSULTANT:

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

PROJECT LOCATION MAP

PAVEMENT MAINTENANCE FOR:

WILDCAT DEN STATE PARK

MUSCATINE COUNTY

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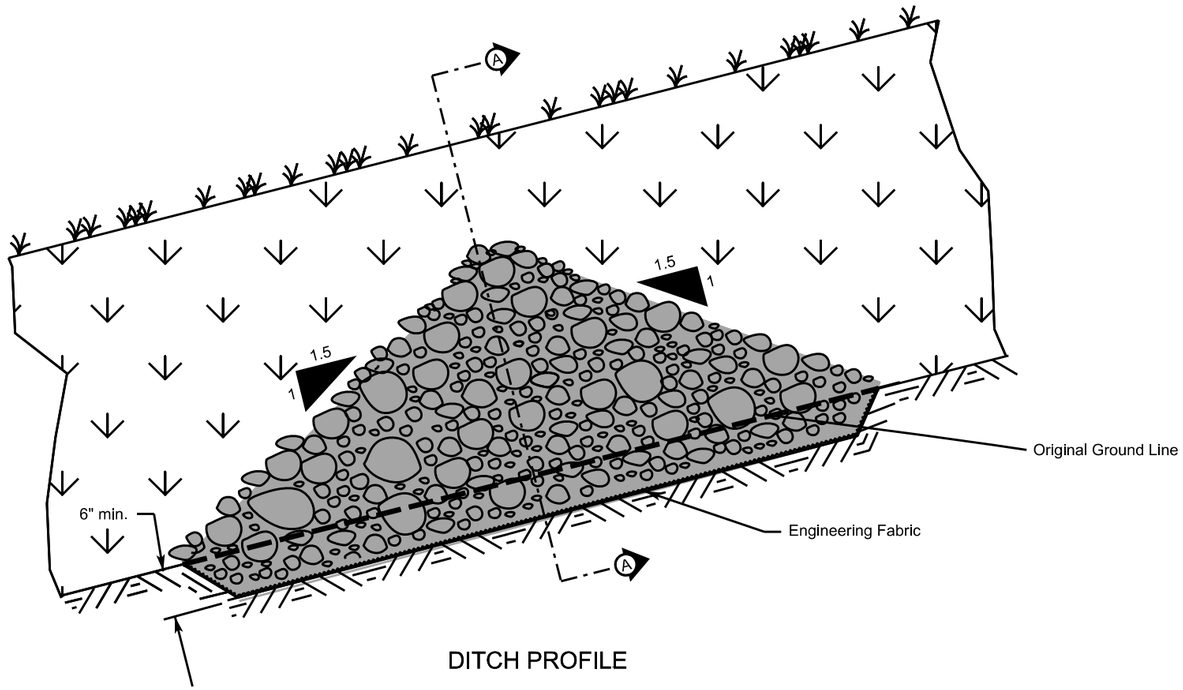
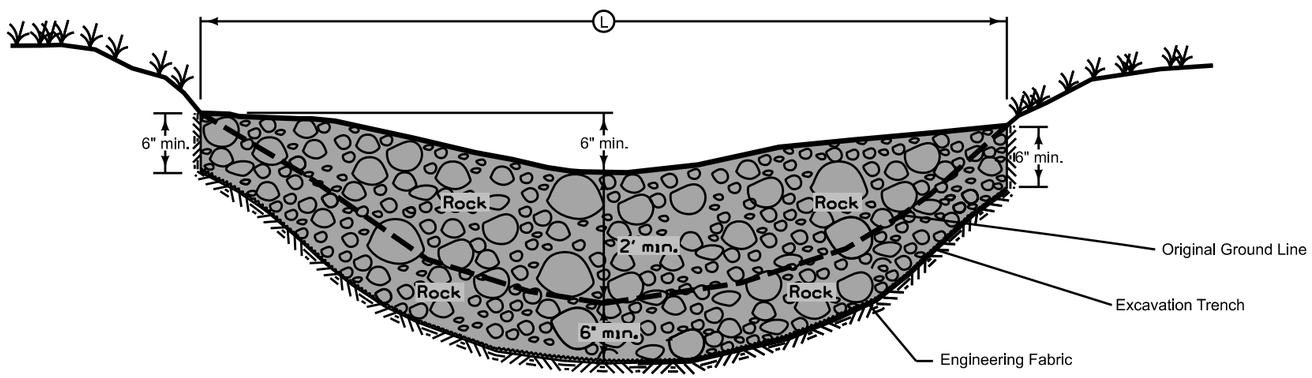


DITCH PROFILE

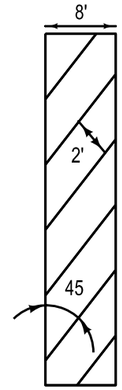


SECTION A-A

Use Erosion Stone to construct Rock Check Dam.

Use fabric for Embankment Erosion Control complying with Section 4196 of the Standard Specification.

ROCK CHECK DAM



Painted Pavement Markings,
Waterborne/Solvent - White, 6"

CROSSWALK PAINTING DETAIL

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502 E. 9TH ST., DES MOINES, IA 50319-0034

TYPICAL CROSS SECTIONS AND DETAILS

PAVEMENT MAINTENANCE FOR:

WILDCAT DEN STATE PARK

MUSCATINE COUNTY

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B.01

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	Clearing and Grubbing	LS	1
2	Removal of Pavement	SY	6.7
3	Asphalt Emulsion-Fog Seal (Pavement)	GAL	982
4	Patches, Full-Depth Finish, 6-inch, By Area, HMA	SY	68.1
5	Patches, Full-Depth Finish, 6-inch, By Count, HMA	EACH	5
6	Subbase (Patches)	CY	14.5
7	Transverse Joint Repair	TON	44
8	Crack and Joint Cleaning and Sealing (HMA Surfaces)	MILES	1.64
9	Sealer Material (HMA Surfaces)	LBS	820
10	Longitudinal Joint Repair (HMA)	LF	3332
11	Paved Shoulder, HMA, 6"	SY	6.7
12	Granular Surface On Road, 1"	TON	418
13	Granular Shoulder, 1 1/2" Minus	TON	5
14	Revetment, Class E	TON	38
15	Erosion Stone	TON	13
16	Reshaping Ditch	STA	0.92
17	Clean-Out Pipe Culvert	LF	50
18	Clean-Out Intake	EACH	1
19	Rock Check Dam	LF	18
20	Painted Pavement Marking, High-Build Waterborne, 6" Crosswalk Line, White	STA	0.88
21	Seeding and Fertilizing	ACRE	0.1
22	Stabilizing Crop - Seeding and Fertilizing	ACRE	0.1
23	Traffic Control	LS	1
24	Mobilization	LS	1

ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
14	Revetment, Class E A. Grading is incidental to rock placement. Spoil of the excess material as directed by the Field Engineer.
16	Reshaping Ditch A. Spoil of the excess material as directed by the Field Engineer.
19	Rock Check Dam A. Spoil of the excess material as directed by the Field Engineer.
20	Painted Pavement Marking, High-Build Waterborne, 6" Crosswalk Line, White A. A minimum of 30-day waiting period after paving shall be observed and the pavement surface must be power washed before painting.
21 22	Seed, Fertilize and Mulch Stabilizing Crop - Seed and Fertilize A. Contractor shall seed, fertilize, and mulch all disturbed areas. B. All seeding shall be completed per Statewide Urban Standard Design Specifications for Public Improvements (SUDAS) Section 9010. C. Urban seeding shall be Type 1 (Permanent Lawn Mixture) and placed in mowed areas. D. Rural seeding shall be either Type 2 (Permanent Cool Season Mixture for Slopes and Ditches) or Type 3 (Permanent Warm-Season Slope and Ditch Mixture) and placed in unmowed areas. E. Stabilizing Crop seeding, if needed, shall be either Type 4 (Urban Temporary Erosion Control Mixture) or Type 5 (Rural Temporary Erosion Control Mixture).

ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
1	Clearing and Grubbing A. Includes the removal and disposal of trees as shown in the plans and as directed by the DNR Field Engineer. B. Off site disposal is the responsibility of the contractor. No burning or burying is allowed in the park. C. Trunks and roots shall be grubbed to a depth of at least 12 inches below the ground surface.
2	Removal of Pavement A. The contractor shall remove the existing pavement and base as indicated in the plan sheets. B. All saw cuts shall be incidental. C. Off site disposal is the responsibility of the contractor. D. No payment for overhaul will be allowed.
3	Asphalt Emulsion-Fog Seal (Pavement) A. Dilute with water - 2 parts water, 1 part emulsion. Apply at 0.15 gal/sy
4 5	Patches, Full-Depth Finish, 6-inch, By Area, HMA Patches, Full-Depth Finish, 6-inch, By Count, HMA A. Class C Mix. B. Minimum 48-hour notice to DNR Field Engineer before pouring.
6	Subbase (Patches) A. Contractor shall install 6" Modified Subbase under all patches. B. Contractor shall install 6" Modified Subbase under the shoulder. C. Preparation of subgrade shall be incidental.
7	Transverse Joint Repair A. Nominal size of transverse joint repair will be 2' wide by 3 inches deep. B. All millings shall be placed and spread in rock parking areas along the roadway as directed in the plans or by the DNR Field Engineer.
10	Longitudinal Joint Repair (HMA) A. Nominal size of longitudinal joint repair will be 6" wide.
12	Granular Surface On Road, 1" A. Shall be placed at 3" depth.
13	Granular Shoulder, 1 1/2" Minus A. Shall be placed at 2" depth.

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.

CONSULTANT:

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

QUANTITIES AND GENERAL INFORMATION

PAVEMENT MAINTENANCE FOR:

WILDCAT DEN STATE PARK

MUSCATINE COUNTY

NO.	BY / DATE	REVISION

DRAWN BY:

PROJECT NUMBER: 22-06-70-02

CHK'D BY:

DATE:

SHEET No:

C.01

PAVEMENT PRESERVATION

LOCATION	LENGTH (FT)	WIDTH (FT)	AREA (SY)	TJ REPAIRS (COUNT)	TJ REPAIRS ASPHALT (TON)	MILES	FULL DEPTH PATCH COUNT	FULL DEPTH PATCH (SY)	PARTIAL DEPTH PATCH (SY)	HMA (PARTIAL DEPTH PATCH MATERIAL) (TON)	FOG SEAL (GALS)	LONGITUDINAL JOINT REPAIR (FT)
0 Stationing	4569.74	22	11170.5	22	17.6	0.87	3	37.4			558.6	2285
100 Stationing	926.93	14	1441.9	18	9.2	0.18					72.1	
150 Stationing	71.18	14	110.8			0.01					5.6	
200 Stationing	2092.30	22	5114.6	11	8.8	0.40					255.8	1047
300 Stationing	672.00	14	1045.4	14	7.2	0.13	2	30.7			52.3	
600 Stationing	328.58	16	739.1	1	0.6	0.06					37.0	
			19622.3	66	43.4	1.64	5	68.1			981.4	3332

ROCK ROAD

LOCATION	LENGTH (FT)	WIDTH (FT)	TON
400 Stationing	155.0	17	46.2
500 Stationing	281.0	16	78.7
700 Stationing	62.0	28	30.4
800 Stationing	396.6	30	208.3
900 Stationing	59.5	15	15.7
1000 Stationing	145.0	15	38.1
			417.4

SHOULDER ROCK

LOCATION	LENGTH (FT)	WIDTH (FT)	TON
18+40	12.0	3	0.5
19+35	12.0	3	0.5
21+00	10.0	3	0.4
21+65	10.0	3	0.4
103+00	40.0	3	1.4
107+00	25.0	3	0.9
306+00	10.0	3	0.4
			4.5

REVETMENT

LOCATION	LENGTH (FT)	WIDTH (FT)	TON
18+00	20	12	37.8
			37.8

EROSION STONE

LOCATION	LENGTH (FT)	WIDTH (FT)	TONS
18+50	2	3.5	0.3
31+75	70	6.0	12.6
			12.9

ROCK CHECK DAM

LOCATION	L (FT)	NOTES
27+25	6.0	100' before pipe crossing
29+30	6.0	170' uphill from existing pipe inlet
30+30	6.0	270' uphill from existing pipe inlet
	18.0	

RESHAPE DITCH

LOCATION	LENGTH (FT)	
16+30	12.0	
28+10	10.0	
31+60	70.0	
	92.0	

CLEAN-OUT PIPE CULVERT

LOCATION	LENGTH (FT)	SIZE (IN)
16+30	50	18" CMP

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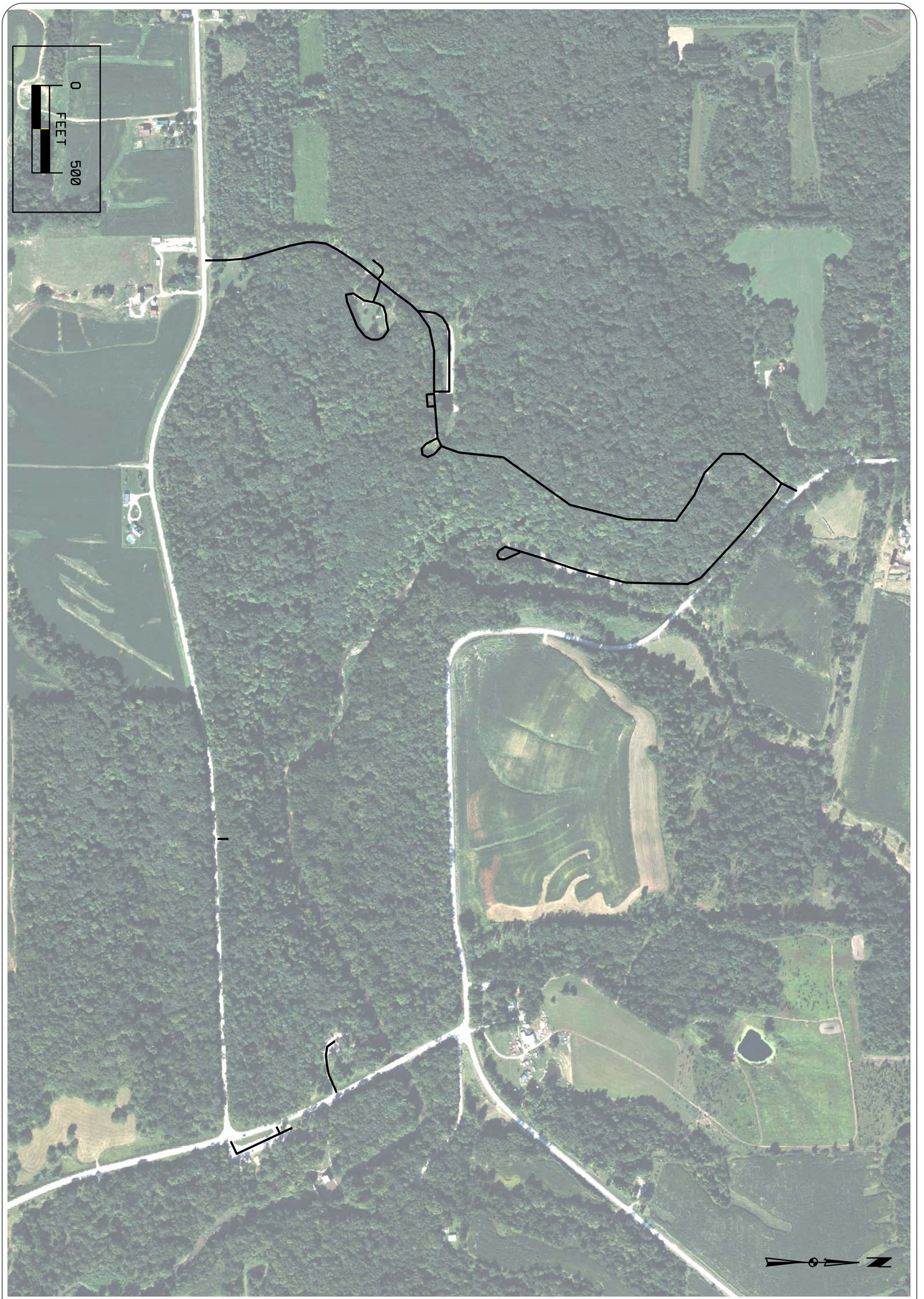
C.02



SITE PLAN

PAVEMENT MAINTENANCE FOR:

WILDCAT DEN STATE PARK

MUSCATINE COUNTY

IOWA DEPARTMENT OF NATURAL RESOURCES

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

CONSULTANT:

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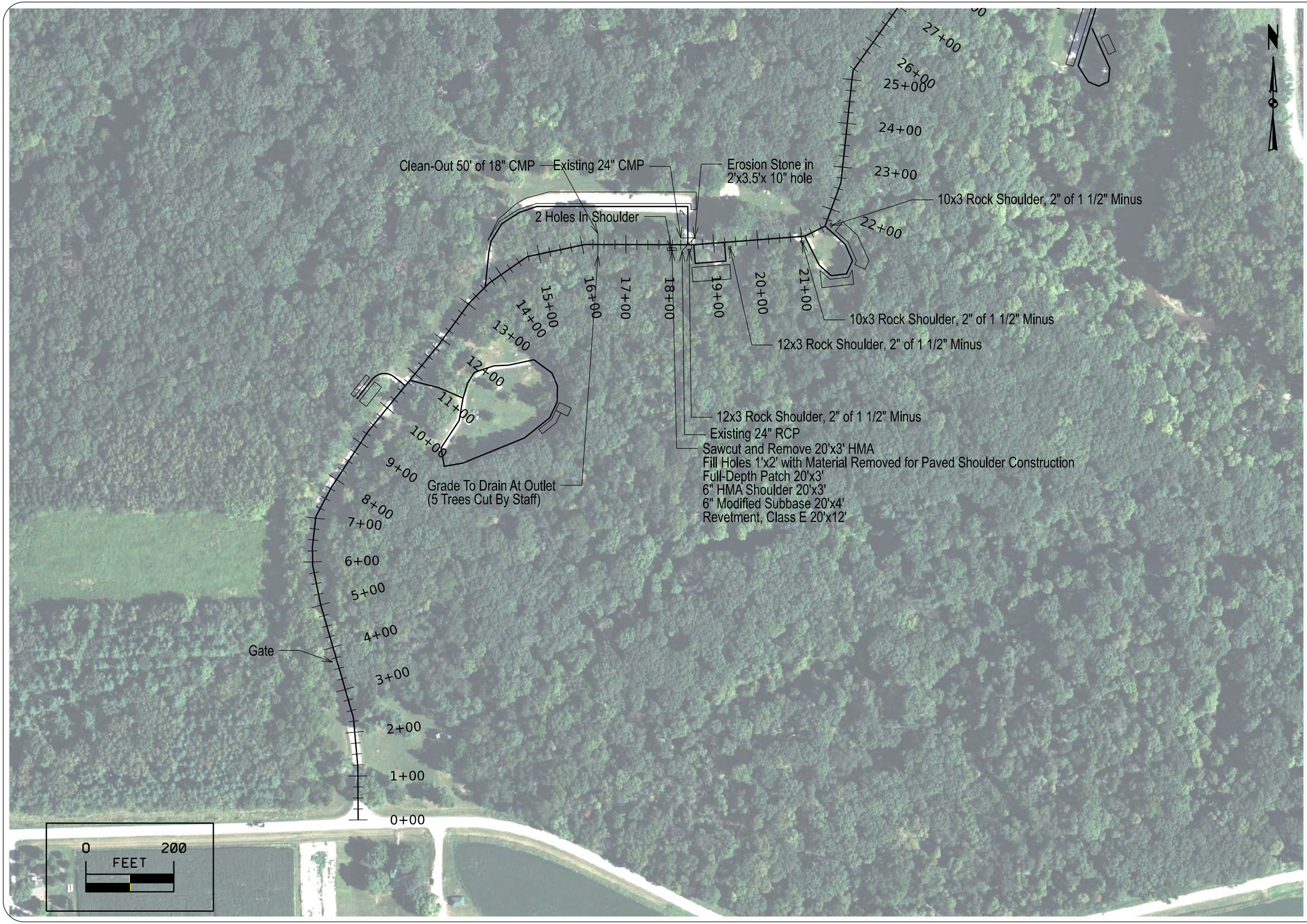

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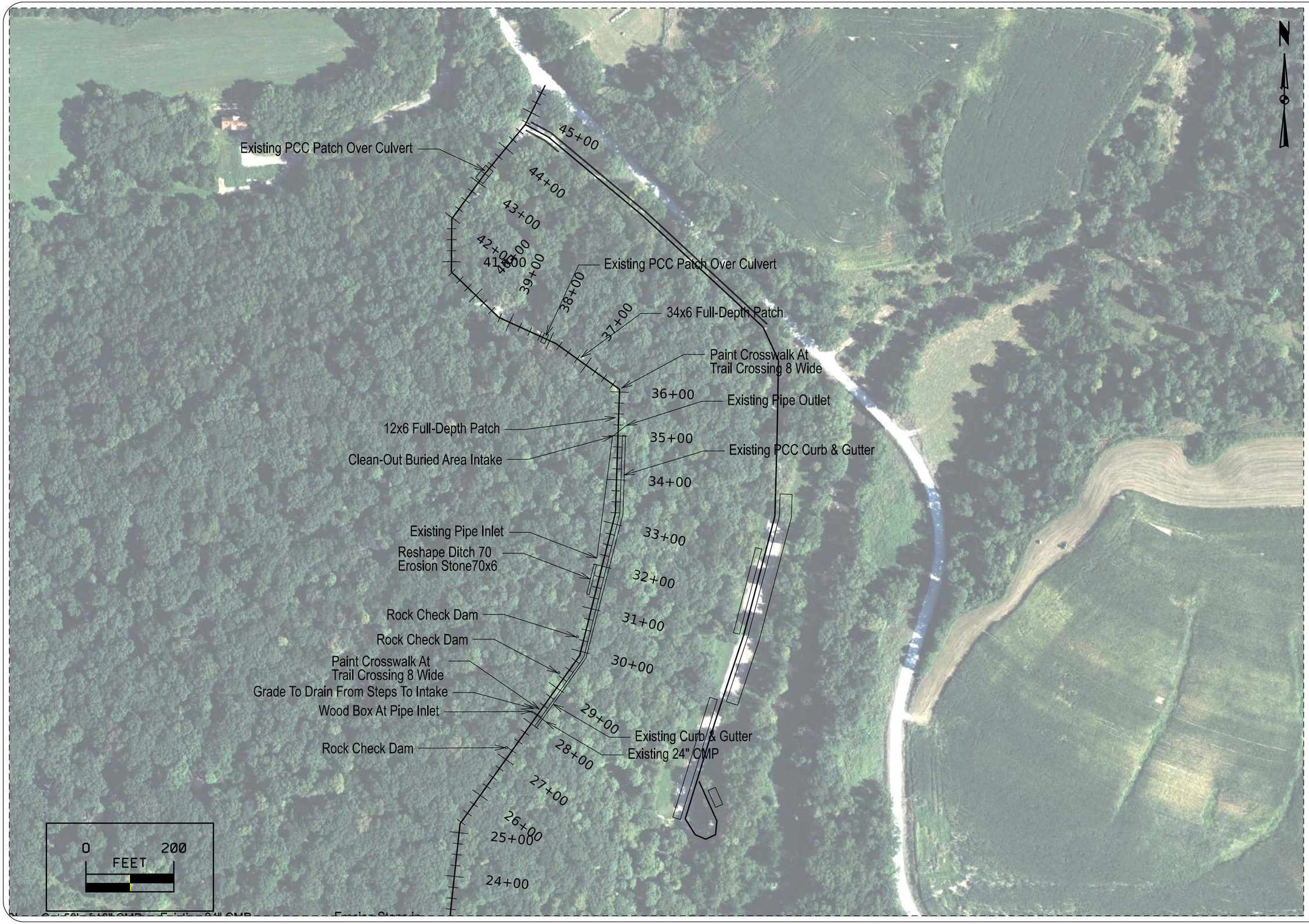

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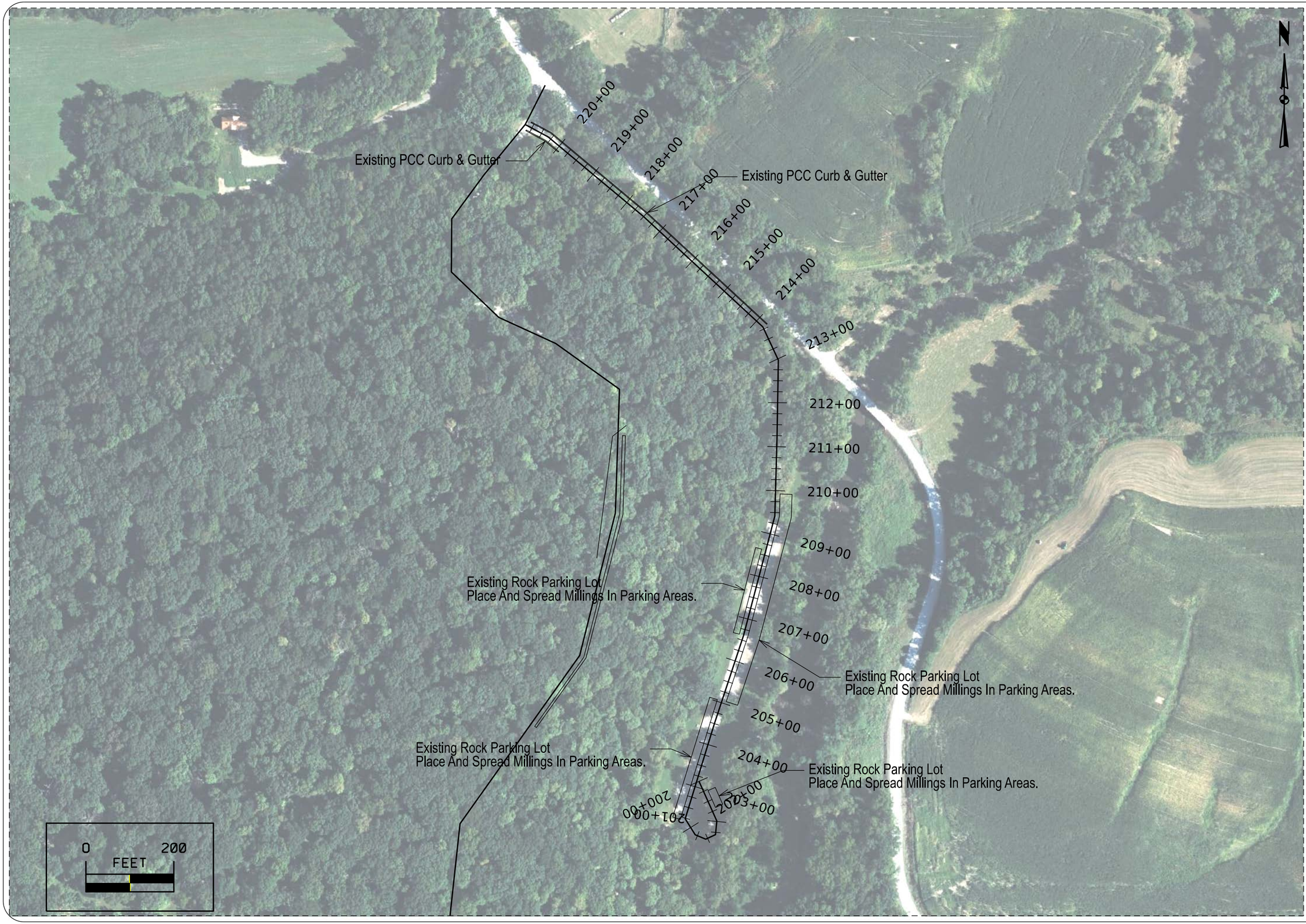
D.03



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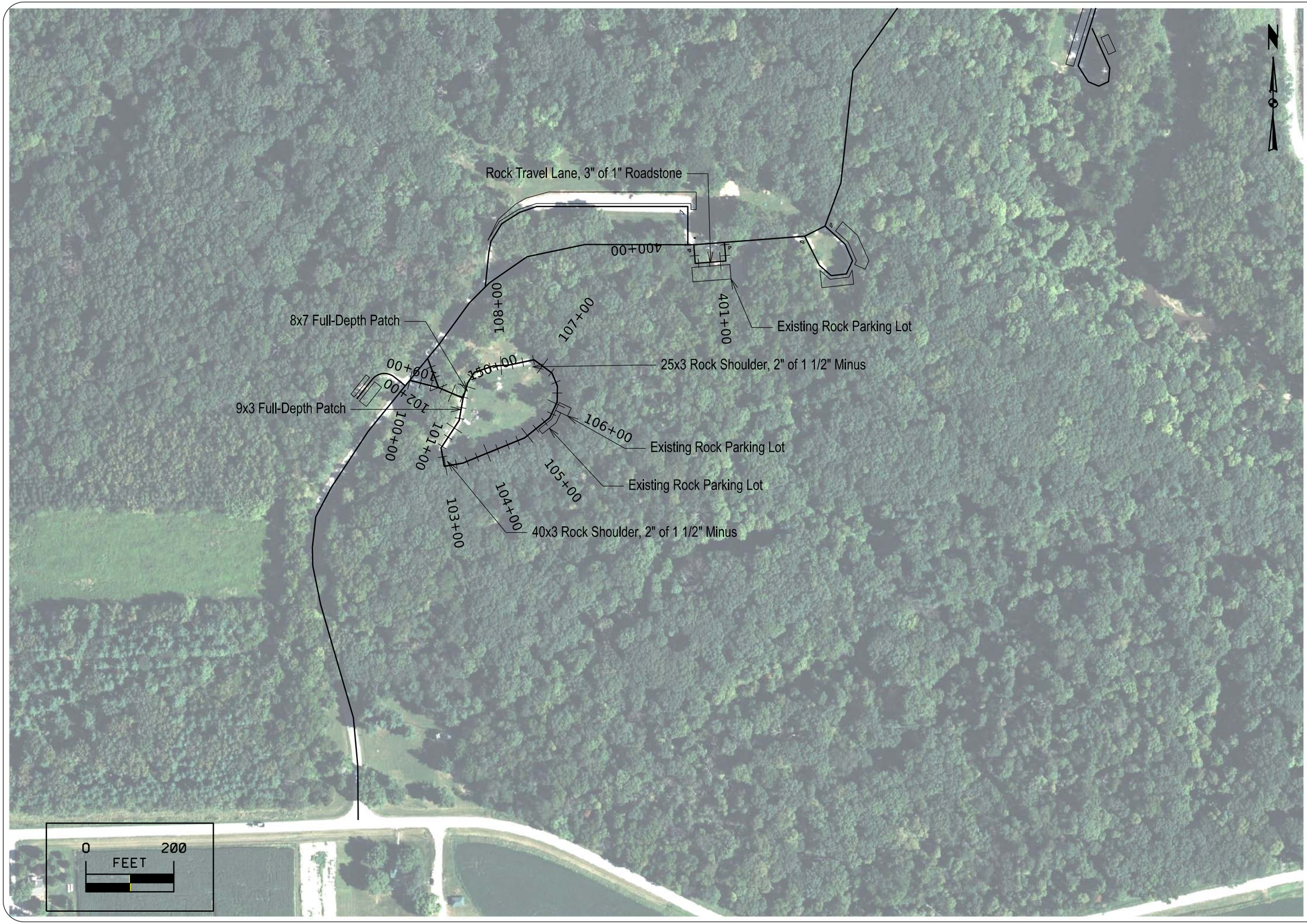

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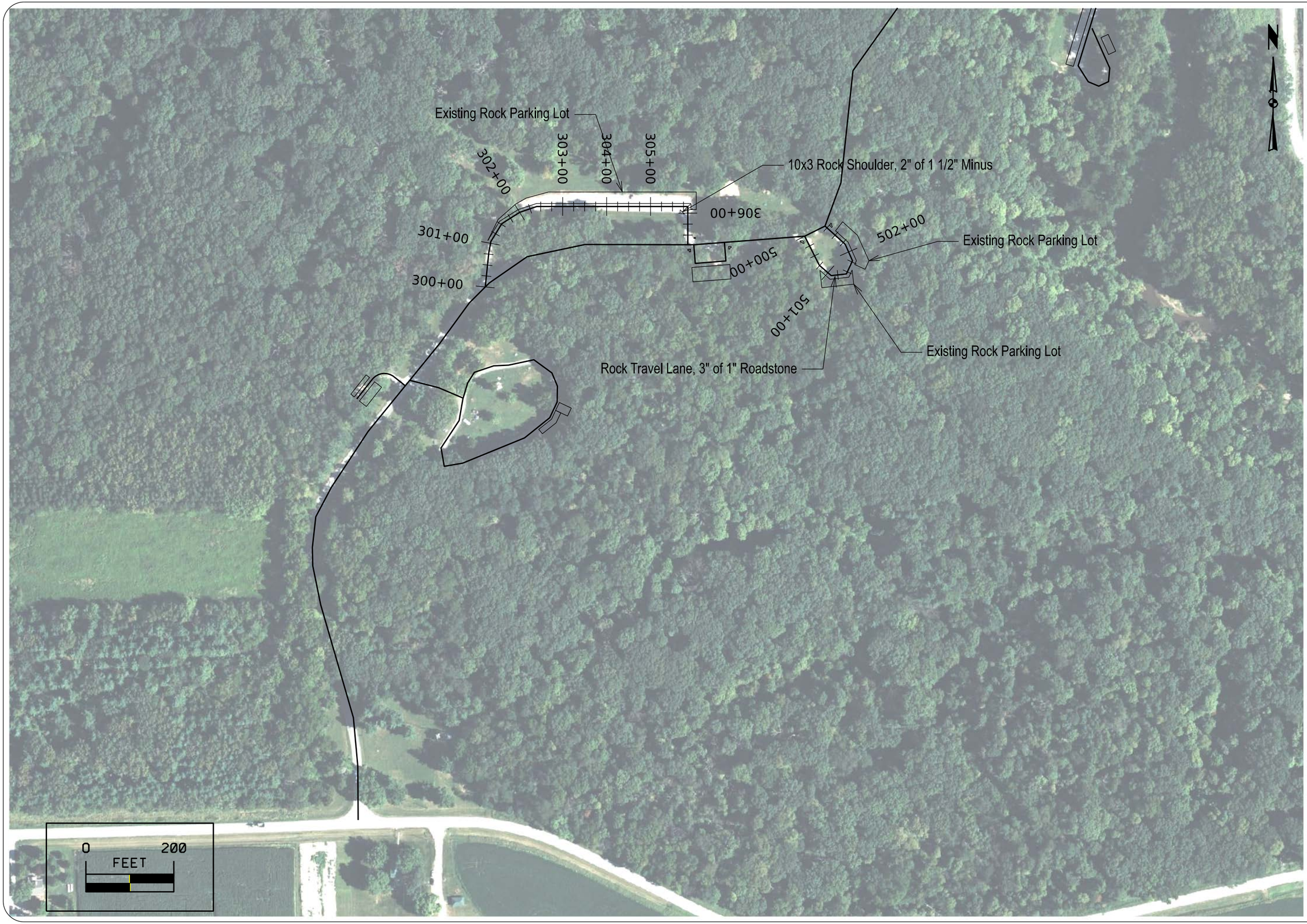

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D.06

Existing PCC Parking Lot
HMA Turn Around
Existing HMA Parking Lot
600+00
Existing Rock Parking Lot
601+00
602+00
603+00
900+00
Existing PCC Sidewalk with Curb & Gutter
803+00
Existing Rock Parking Lot
802+00
Rock Travel Lane, 3" of 1" Roadstone
801+00
Existing Rock Parking Lot
Existing Rock Parking Lot
Rock Travel Lane, 3" of 1" Roadstone
700+00
800+00
0
200
FEET

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