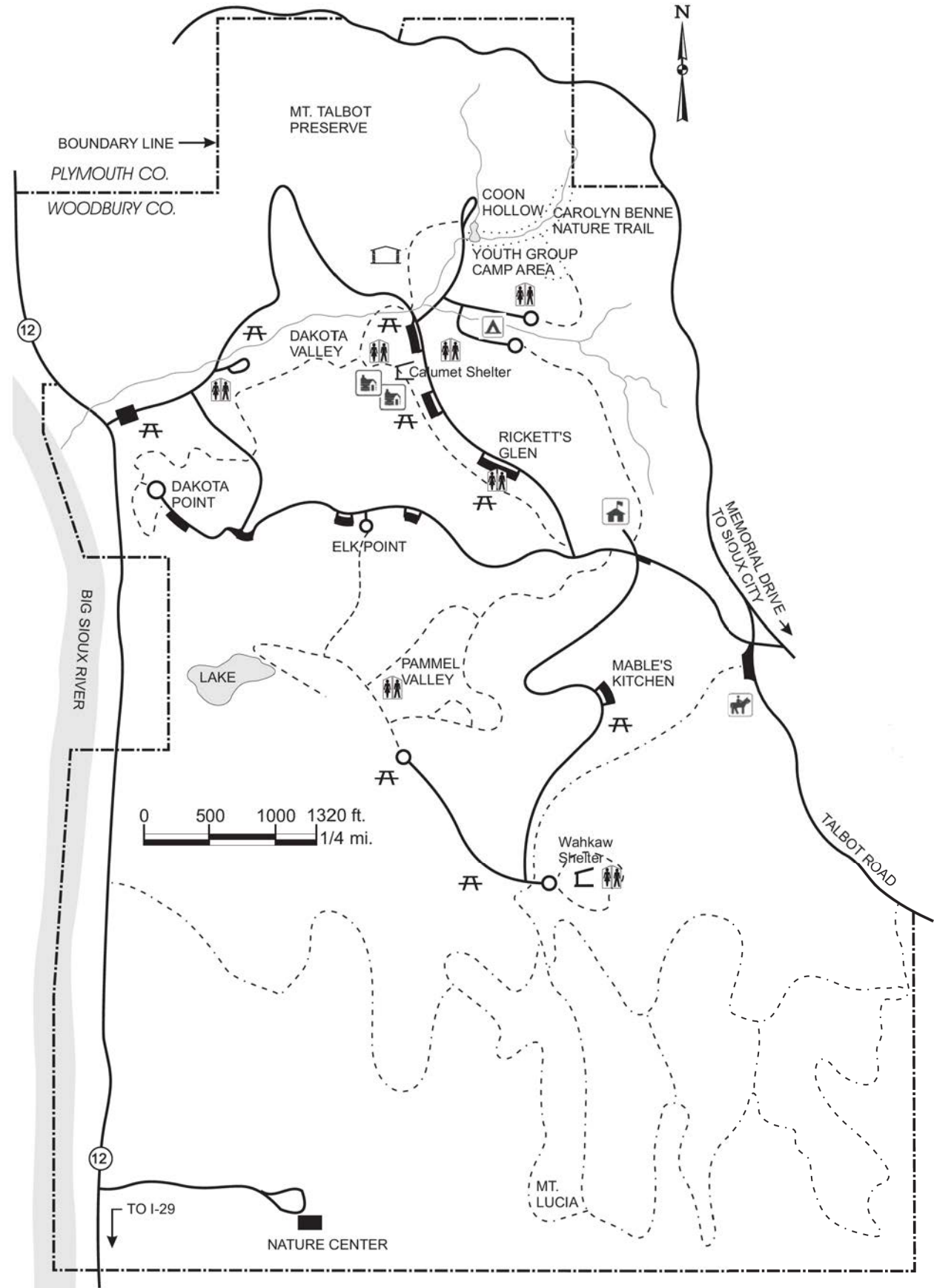
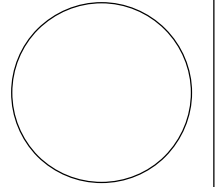


PROJECT LOCATION

STONE STATE PARK



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



PROJECT LOCATION MAP

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

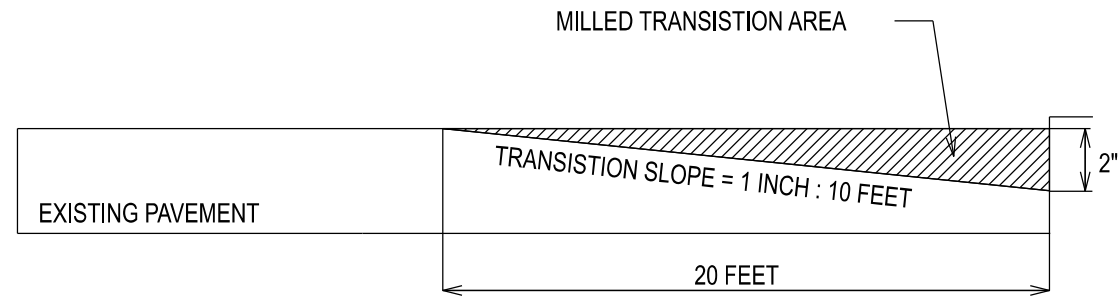
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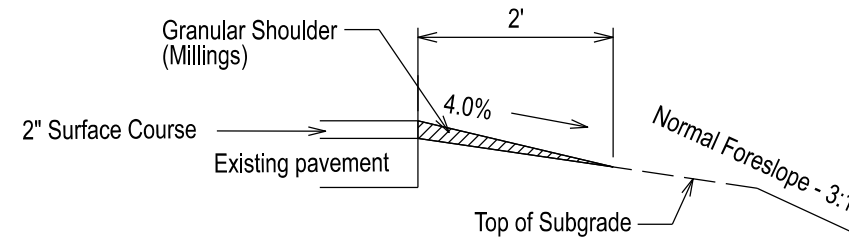
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A.02

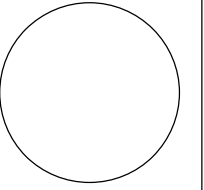


MILLED HEADER DIMENSIONS AND DETAILS



RESURFACING GRANULAR SHOULDER SECTION

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

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



TYPICAL CROSS SECTIONS AND DETAILS

PAVEMENT MAINTENANCE FOR:
STONE STATE PARK

WOODBURY COUNTY

NO.	BY	REVISION

DRAWN BY:	PROJECT NUMBER: 22-01-97-01
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CHK'D BY:	DATE:
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SHEET No:

B.01

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	Bituminous Fog Seal (HMA Pavement)	GAL	6,693
2	Patches, Full-Depth Finish, 6-inch, By Area, HMA	SY	988
3	Patches, Full-Depth Finish, 6-inch, By Count, HMA	EACH	26
4	Patches, Partial-Depth Repair, HMA	SY	95
5	HMA (Partial Depth Patch Material)	TON	4
6	Modified Subbase	CY	165
7	Pavement Scarification	SY	911
8	Hot Mix Asphalt High Traffic, Surface Course, 1/2 In. Mix, No Special Friction Requirement	TON	111
9	Asphalt Binder, PG 58-28H, High Traffic	TON	6
10	Transverse Joint Repair	TON	111
11	Cleaning and Filling Cracks (HMA Surfaces)	MILES	4.30
12	Sealer Material (HMA Surfaces)	LBS	4,300
13	Granular Surface On Road, 1 1/2"	TON	242
14	Granular Shoulder, 1 1/2" Minus	TON	25
15	Revetment, Class E	TON	174
16	Erosion Stone	TON	5
17	Seeding (Rural)	ACRE	0.10
18	Rolled Erosion Control Product	SY	34
19	Culvert, CMP Roadway, 24"	LF	104
20	Apron, Metal, 24"	EACH	4
21	Pipe Apron Guard	EACH	4
22	Ditch Cleaning	LF	150
23	Curb and Gutter Repair, HMA	LF	15
24	Clean Out Intakes and Outlet Pipes	EACH	2
25	Traffic Control	LS	1
26	Mobilization	LS	1

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.

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.

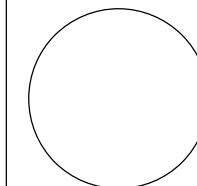
The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

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.

ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
1	Bituminous Fog Seal (HMA Pavement) (2306) A. Dilute with water - 2 parts water, 1 part emulsion. Apply at 0.15 gal/sy
5	HMA (Partial Depth Patch Material) A. Assumed 2" depth. B. All millings are to be placed and spread in rock parking areas along the roadway as directed by the Field Engineer.
6	Modified Subbase (2115) A. Contractor shall install 6" special backfill under all patches. Patches with existing subbase removal and replacement shall be determined by the Field Engineer. B. Preparation of subgrade shall be incidental.
7	Pavement Scarification A. Quantity includes milled headers at the parking lots. B. All millings are to be placed and spread in rock parking areas along the roadway as directed by the Field Engineer.
10	Transverse Joint Repair (2543) A. Nominal size of transverse joint repair will be 2' wide by 3 inches deep. All millings are to be placed and spread in rock parking areas along the roadway as directed by the Field Engineer.
13	Granular Surface On Road, 1 1/2"
14	Granular Shoulder, 1 1/2" Minus A. Shall be place at 2" depth.
15	Revetment, Class E A. Grading is incidental to rock placement. Spoil of the excess material as directed by the Field Engineer.
16	Erosion Stone A. Grading is incidental to rock placement. Spoil of the excess material as directed by the Field Engineer.
17	Seeding (Rural) A. Use DOT rural seed mix. B. Exclude fertilizer.
18	Rolled Erosion Control Product A. Use SUDAS Type 1.B: Netless rolled erosion control blankets.
19	Culvert, CMP Roadway, 24" A. Excavation shall be incidental. B. Pipe Bedding shall be incidnetal.
22	Ditch Cleaning A. Clean ditch to create a 1' wide bottom located 6" below the shoulder.
23	Curb and Gutter Repair, HMA A. Repair in kind.

CONSULTANT:



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



QUANTITIES AND GENERAL INFORMATION

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

NO.	BY	DATE	REVISION

DRAWN BY: PROJECT NUMBER:
22-01-97-01

CHK'D BY: DATE:

SHEET No:

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PAVEMENT PRESERVATION

ROAD	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)	COMMENTS
0+00 - 65+89.50	6589.5	16	105432.0	33	33	1.25	10	284	17	1.0	1757.3	
100+00 - 153+92	5392.0	16	86272.0	32	32	1.02	7	96			1437.9	
200+13.6 - 238+06.5	3792.9	16	60686.4	30	30	0.72	3	557			1011.5	
300+00 - 319+63.3	1963.3	25	49082.5	7	11	0.37	2	25			818.1	
400+08.3 - 412+61.9	1253.6	17	21311.2	4	5	0.24	2	19	78	3.0	355.2	
500+10 - 511+03.8	1093.8	22	24063.6			0.21					401.1	
600+11 - 604+84.6	473.6	16	7577.6			0.09					126.3	
700+06.5 - 701+68.2	161.7	14	2263.8			0.03	1	2			37.8	
800+10.5 - 808+09.8	799.3	20	15986.0			0.15					266.5	
900+11 - 902+47.9	236.9	10	2369.0			0.04	1	5			39.5	
1000+09.0 - 1004+53	444.0	14	6216.0			0.08					103.7	
1100+13 - 1102+47.8	234.8	14	3287.2			0.04					54.8	
1200+12.4 - 1202+78.7	266.3	33	8787.9			0.05					146.5	
Parking Lots												
5+11	30.0	20	66.7			0.01					10.1	
56+50	230.0	20	511.2			0.04					76.7	
3+65 RT	75.0	20	166.7			0.01					25.1	
3+65 LT	75.0	20	166.7			0.01					25.1	

ROCK ROAD

ROAD	LENGTH (FT)	WIDTH (FT)	TON
604+84.6 - 608+56.5	371.9	12	53
1300+09 - 1302+00.2	191.2	8	18
1400+00 - 1403+94.3	394.3	8	37
1500+07 - 1507+20.7	713.7	16	134

EROSION STONE

ROAD	LENGTH (FT)	WIDTH (FT)	TONS
310+95 - 311+45	10	30	5

SHOULDER ROCK

ROAD	LENGTH (FT)	WIDTH (FT)	TON
52+30 - 53+30	100	2.0	3
136+20 - 138+70 RT	250	1.5	5
136+70 - 137+70 LT	100	1.5	2
144+65 - 145+25	60	1.5	2
150+50 - 151+00	50	1.0	1
408+70 - 409+20	50	1.5	1
404+10 - 406+60	250	1.5	5
400+08.3 - 402+08.3	200	2.0	5
700+30 - 700+80	50	1.5	1

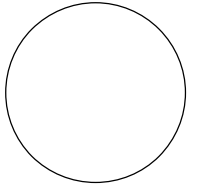
REVTMENT

ROAD	LENGTH (FT)	WIDTH (FT)	TON
26+00 - 26+15	15	20	32
34+25 - 34+30	5	10	6
130+25 - 130+28	3	10	4
150+50 - 151+00	50	10	53
209+10 - 209+20	10	10	11
302+00 - 302+10	50	10	53
700+30 - 700+80	50	10	53

RESURFACING

ROAD & STATIONING	LENGTH (FT)	WIDTH (FT)	AREA (SY)	MILES	1" INTERLAYER (TON)	1.5" INTERMEDIATE (TON)	2" SURFACE (TON)	COMMENTS
1+30 - 4+15	285	16	507	0.05			56	
400+10 - 402+60	250	18	500	0.05			55	

CONSULTANT:



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



QUANTITIES AND GENERAL INFORMATION

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

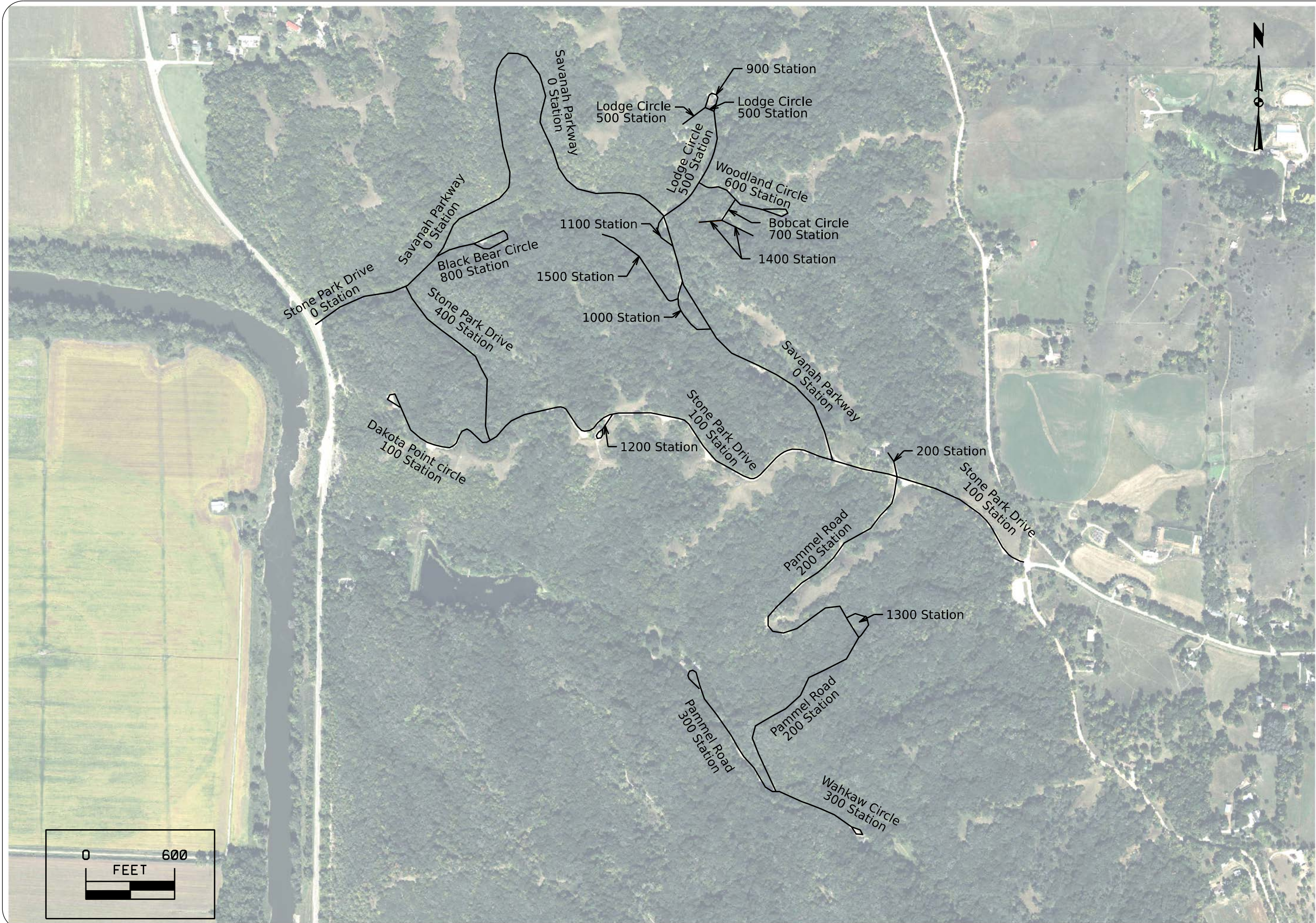
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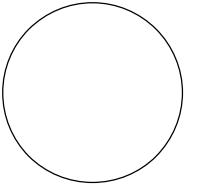
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SITE PLAN

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

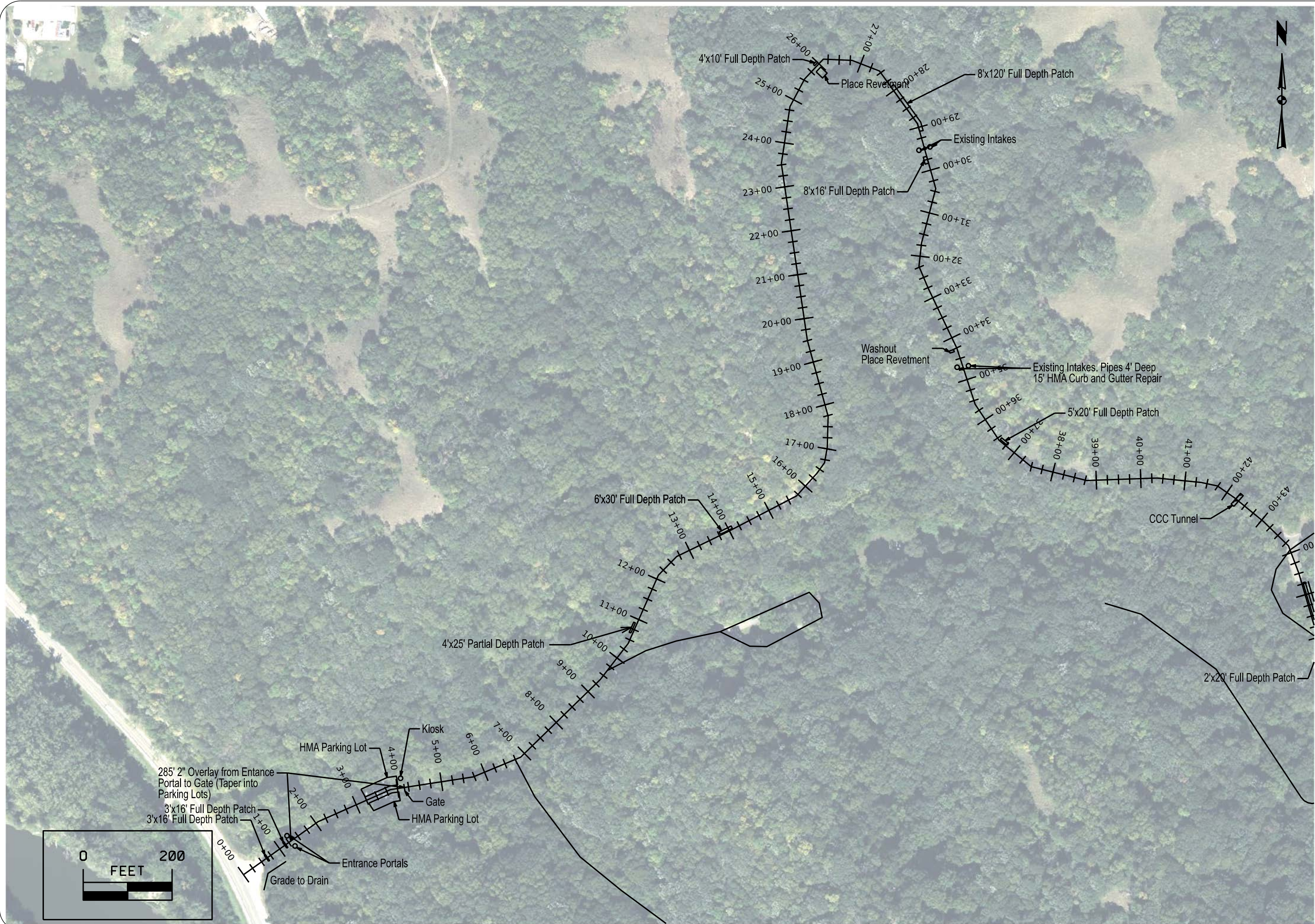
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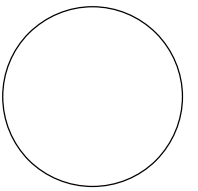
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SITE PLAN

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

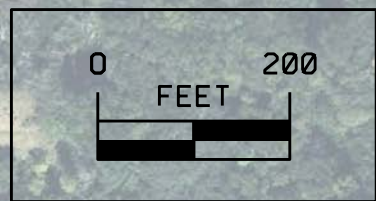
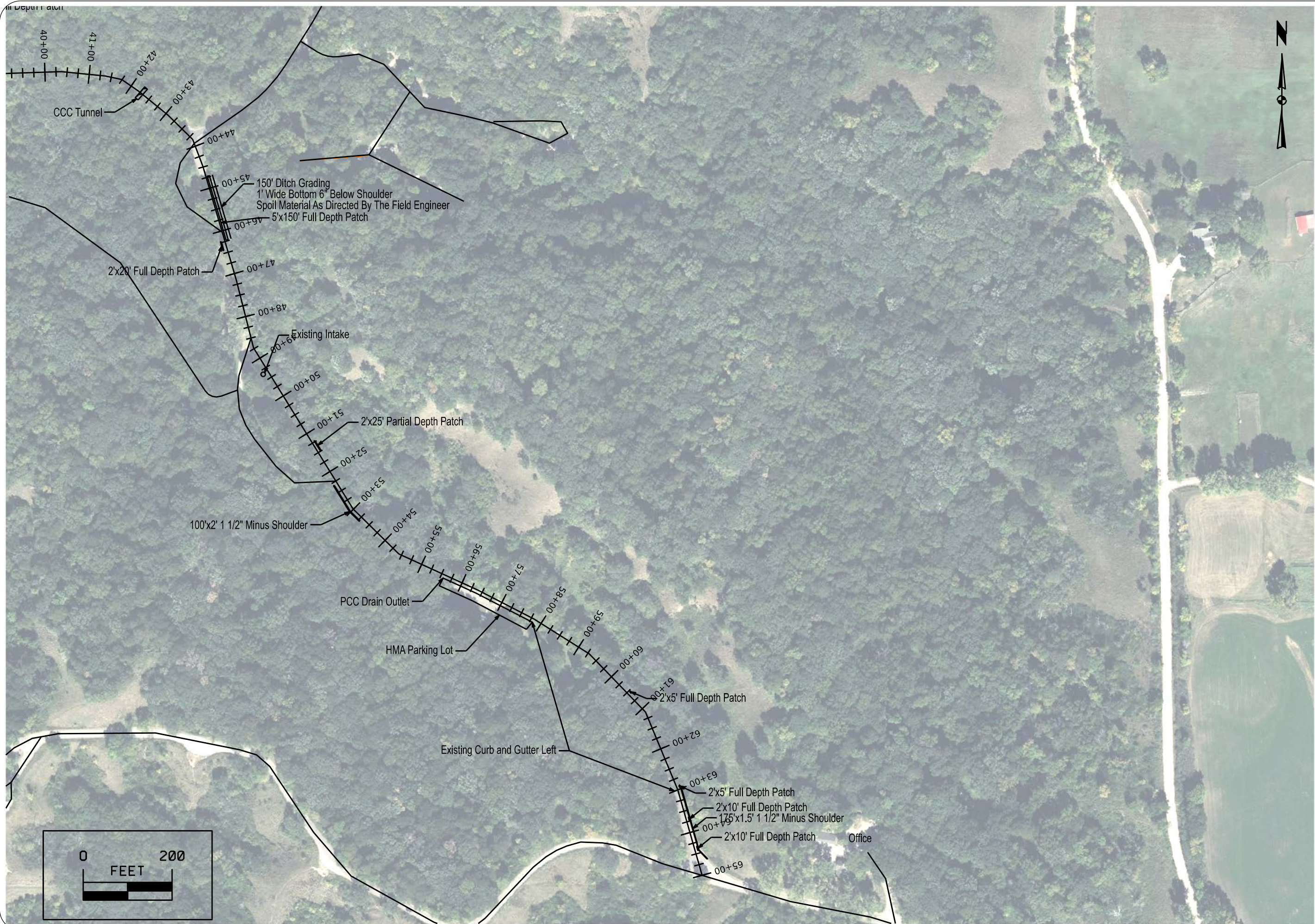
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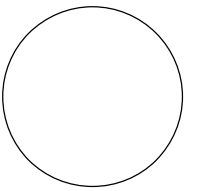
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SITE PLAN

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

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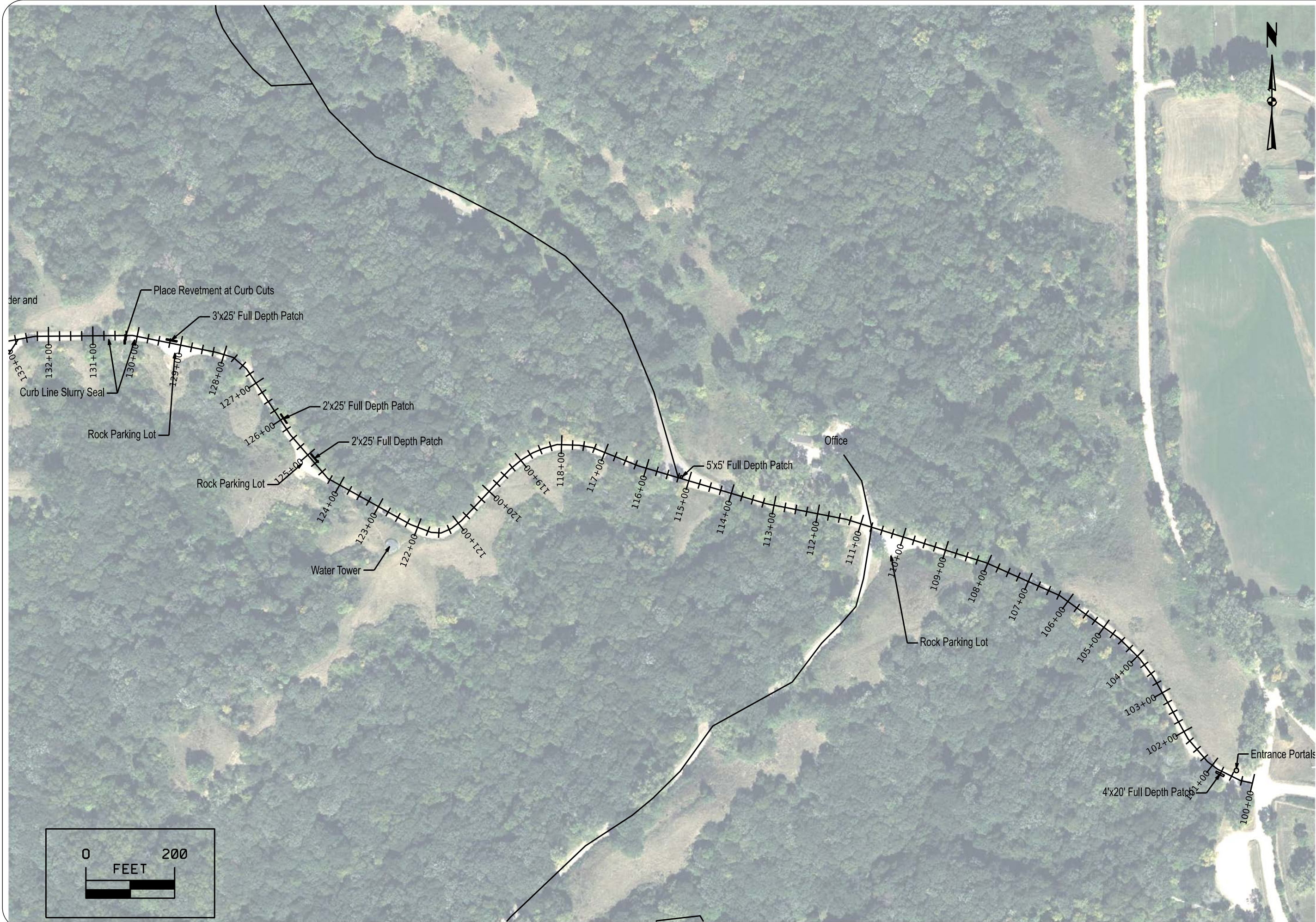
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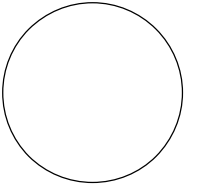
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SITE PLAN

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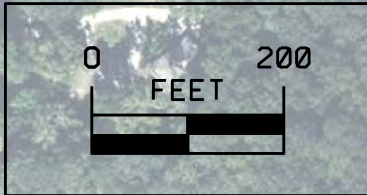
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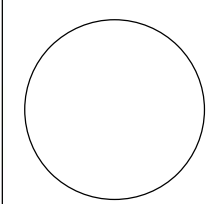
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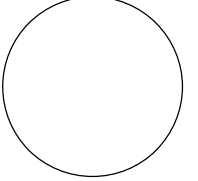
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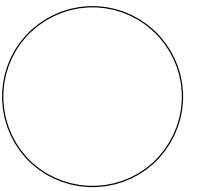
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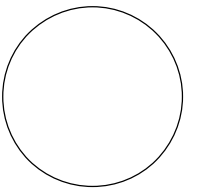
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SITE PLAN

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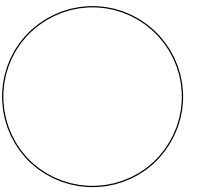
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SITE PLAN

PAVEMENT MAINTENANCE FOR:
STONE STATE PARK

WOODBURY COUNTY

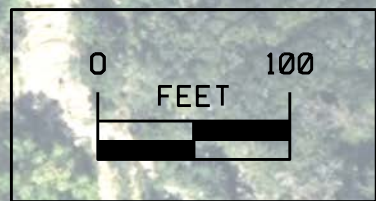
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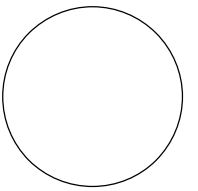
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SITE PLAN

PAVEMENT MAINTENANCE FOR:
STONE STATE PARK

WOODBURY COUNTY

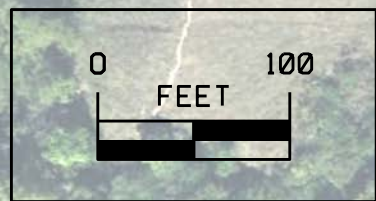
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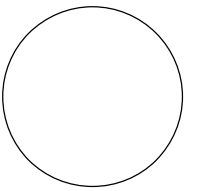
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ENGINEERING SERVICES - WALLACE BUILDING
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SITE PLAN

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

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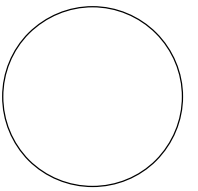
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ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

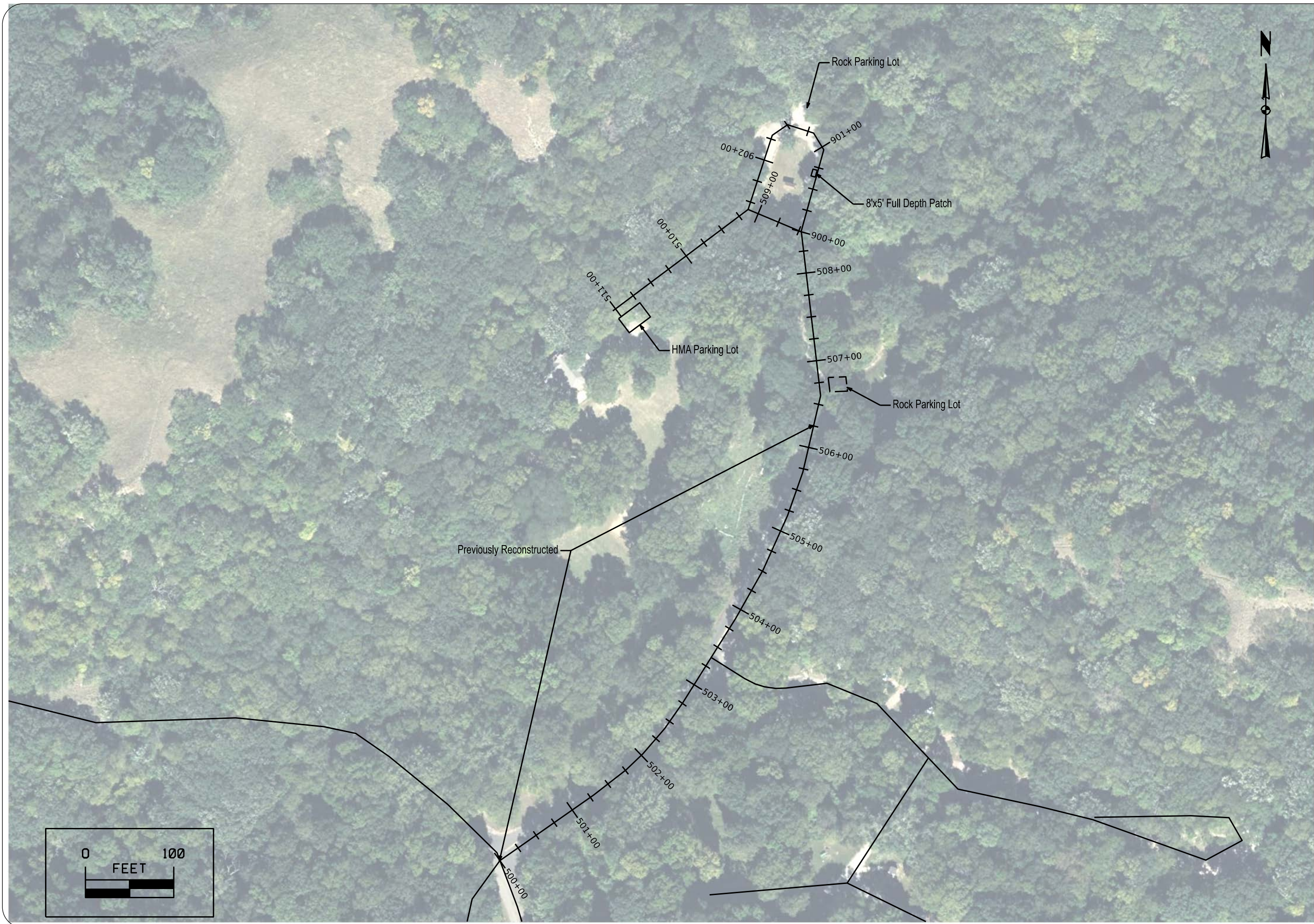
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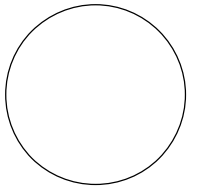
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CONSULTANT:



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NATURAL RESOURCES**

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



SITE PLAN

PAVEMENT MAINTENANCE FOR:

STONE STATE PARK

WOODBURY COUNTY

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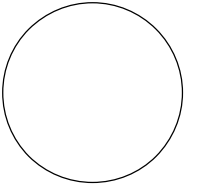
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CONSULTANT:



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



SITE PLAN

PAVEMENT MAINTENANCE FOR:
STONE STATE PARK

WOODBURY COUNTY

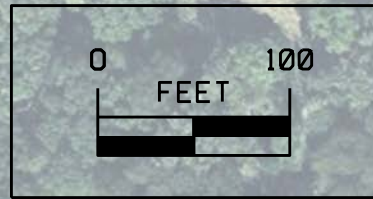
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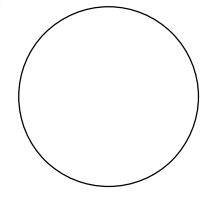
D.14



Place 2" of 1 1/2" Roadstone



CONSULTANT:



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



SITE PLAN

PAVEMENT MAINTENANCE FOR:
STONE STATE PARK

WOODBURY COUNTY

NO.	BY	REVISION

DRAWN BY: PROJECT NUMBER:
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