



BACKBONE STATE PARK

CONSULTANT:

IOWA DEPARTMENT OF NATURAL RESOURCES



PROJECT LOCATION MAP

PAVEMENT PRESERVATION FOR:
BACKBONE STATE PARK

DELAWARE COUNTY

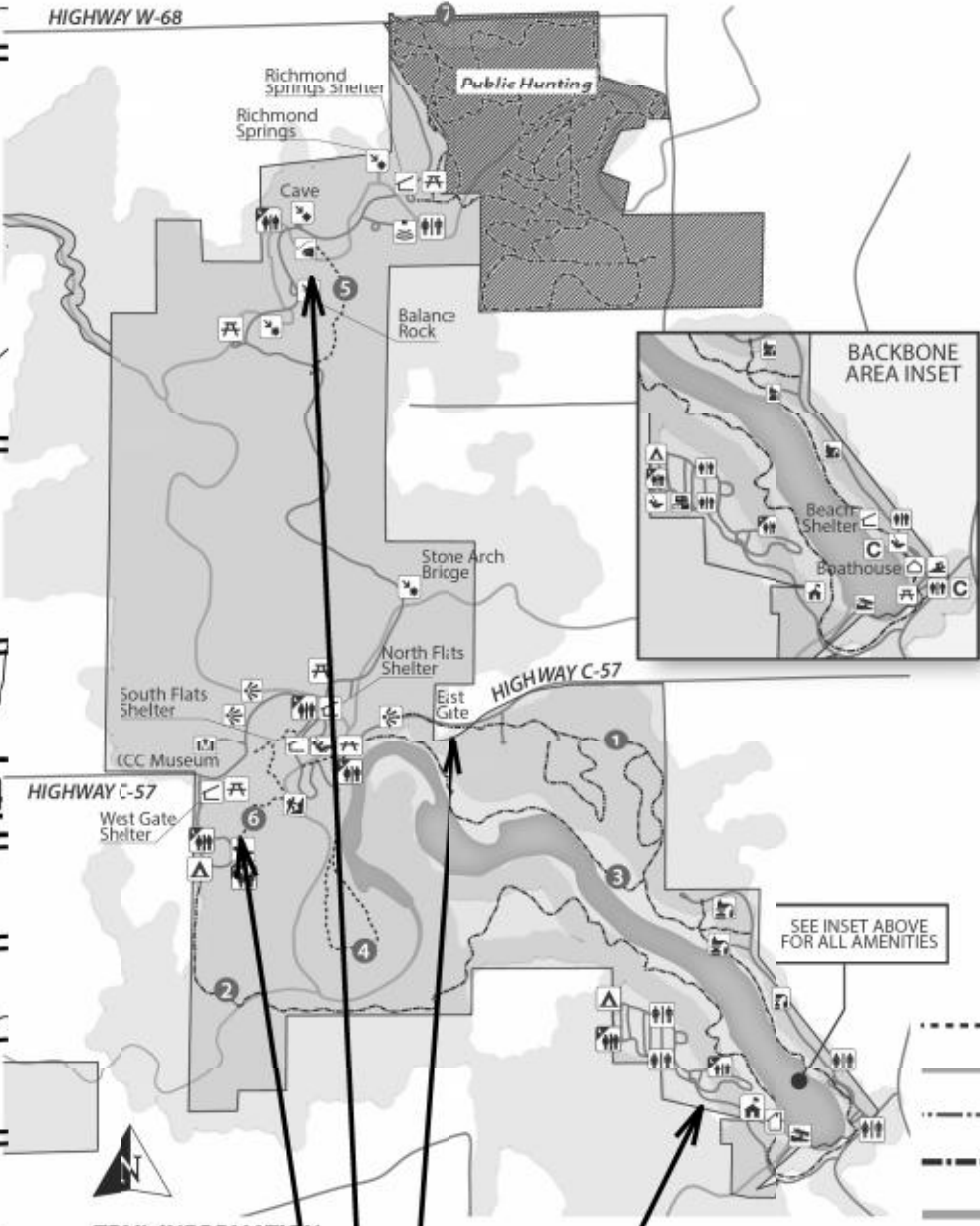
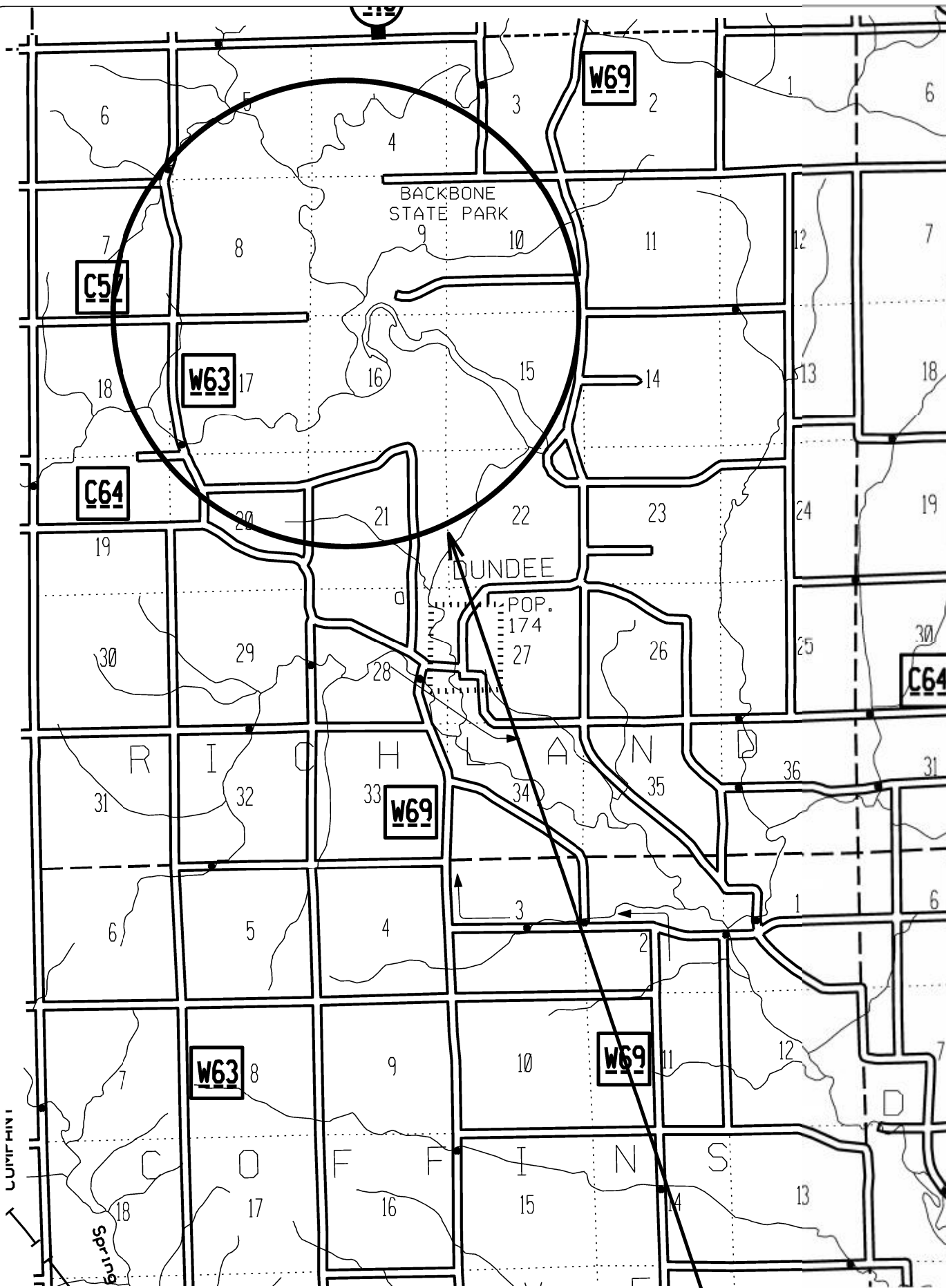
NO.	REV.	REVISION

DRAWN BY: BLF PROJECT NUMBER: 21-03-28-01

CHKD BY: DATE: JEFF 2020

SHEET No.

A.02



- ### MAP KEY
- Beach Area
 - Overlook
 - Rock Climbing
 - Museum
 - Dump Station
 - Point of Interest
 - Auditorium
 - Boat Ramp
 - Cabins
 - Concession
 - Shelter
 - ADA Fishing
 - Campground
 - Day-Use Lodge
 - Park Residence
 - Picnic Area
 - Park Office
 - Playground
 - Restroom - Modern
 - Restroom - Nonmodern
 - Trail
 - Road
 - Park Boundary
 - Multiuse Trails
 - Water

TRAIL INFORMATION

Trail Name	Trail Activity	Length	Level of Difficulty	Estimated Hike Time
1 Bluebird Trail	Hike, Bke, Snowmobile	2.2 mi	Easy	1-1.25 hr
2 West Lake Trail	Hike, Bke, Snowmobile	3 mi	Moderate	1.25-1.5 hr
3 East Lake Trail	Hike, Bke, Snowmobile	2.4 mi	Moderate	1-1.25 hr
4 Backbone	Hike	0.8 mi	Moderate	30-45 min
5 Barred Owl	Hike	.4 mi	Moderate	10-15 min
6 Six Pines	Hike	.6 mi	Difficult	10-15 min
7 Forest	Hike, Bke, Equestrian, Cross-country Ski	7.39 mi	Moderate	3-3.5 hr

Walking times are figured at a rate of 2 mph.
www.iowadnr.gov/Places-to-Go/State-Parks

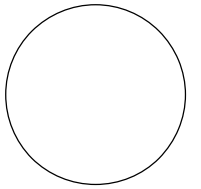
PROJECT LOCATION

ESTIMATED PROJECT QUANTITIES			
ITEM NO.	ITEM	UNIT	TOTAL
1	2102 - SPECIAL BACKFILL	TONS	129
2	2102 - EXCAVATION, CLASS 10, ROADWAY AND BORROW	C.Y.	135
3	2121 - GRANULAR SHLD	TONS	45
4	2123 - SHOULDER FINISHING, EARTH	STA	52
5	2214 - PAVEMENT SCARIFICATION	S.Y.	3080
6	2301 - STD/S-F PCC PAV'T, CL C CL 3, 6"	S.Y.	33.3
7	2303 - HOT MIX ASPHALT MIXTURE, COMMERCIAL MIX (INCLUDES ASPHALT BINDER), WIDENING, AS PER PLAN	TONS	114
8	2303 - HOT MIX ASPHALT HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, NO SPECIAL FRICTION REQUIREMENT.	TONS	319
9	2303 - ASPHALT BINDER, PG 58-28H, HIGH TRAFFIC.	TONS	17
10	2306 - BITUMINOUS FOG SEAL (HMA PAVEMENT)	GAL	3231
11	2416 - CULV, CONC RDWY PIPE, 18"	L.F.	30
12	2506 - FLOWABLE MORTAR	C.Y.	8
13	2507 - REVETMENT, CLASS E	TONS	40
14	2508 - REVETMENT, CLASS E, DITCH CHECK	TONS	90
15	2507 - EROSION STONE	TONS	15
16	2507 - MACADAM STONE	TONS	10
17	2528 - TRAFFIC CONTROL	L.S.	1
18	2529 - PATCH, FULL-DEPTH FINISH, BY AREA, PCC	S.Y.	33.3
19	2529 - PATCH, FULL-DEPTH FINISH, BY COUNT, PCC	EACH	10
20	2529 - PATCH, FULL-DEPTH FINISH, BY AREA, HMA	S.Y.	502
21	2529 - PATCH, FULL-DEPTH FINISH, BY COUNT, HMA	EACH	10
22	2533 - MOBILIZATION	L.S.	1
23	2540 - LONGITUDINAL JOINT REPAIR	L.F.	100
24	2543 - TRANSVERSE JOINT REPAIR	TONS	14
25	2544 - CRACK AND JOINT CLEANING AND SEALING (PAVEMENT MAINTENANCE)	MILE	5.9
26	2544 - HOT MIX ASPHALT FOR CRACK FILLING	TONS	1
27	2544 - SEALER MATERIAL (PAVEMENT MAINTENANCE)	LBS	2950
28	2601 - SEED+FERTILIZE (RURAL)	ACRE	2

ESTIMATE REFERENCE INFORMATION	
ITEM NO.	DESCRIPTION
1	A. 6" of rock at HMA and PCC patches.
2	A. Overexcavate 6" of existing base under HMA and PCC repairs.
3	A. DOT approved source.
4	A. Blade existing shoulder material down to drain water away from road.
5	A. Mill 2-inches off existing surface. Place milling in Park at DNR Field Engineers direction.
6,7	A. DOT approved source.
8	A. Submit Job mix to Engineer for approval.
9	A. DOT approved source.
10	A. Dilute with water - 2 parts water: 1 part emulsion. Apply at 0.15 GAL/SY.
11	A. DOT approved source. Remove old culvert from project.
12	A. Use to plug existing culverts.
13-16	A. DOT approved source.
17,19	A. DOT approved source. Dispose of removal off site.
23	A. 2-foot wide, 3 - inches deep.
25	A. Seed and fertilize all disturbed areas. DOT approved source.

GENERAL NOTES	
<p>Verify actual locations and elevations with DNR Engineer.</p> <p>All work shall conform to and be performed in accordance with all applicable codes and ordinances.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.</p> <p>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.</p> <p>NO WORK FROM 12 NOON FRIDAYS, UNTIL THE FOLLOWING MONDAY.</p>	

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**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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

QUANTITIES AND GENERAL INFORMATION

PAVEMENT PRESERVATION FOR:

BACKBONE STATE PARK

DELAWARE COUNTY

NO.	BY	REVISION

DRAWN BY:	PROJECT NUMBER:
BLF	21-03-28-01

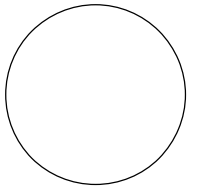
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	SEPT 2020

SHEET NO:

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SPECIAL BACKFILL	EXCAVATION, CLASS 10	SHOULDER FINISHING	WIDENING, HMA	FLOWABLE MORTAR	PATCH, HMA , 5"
7+25	7+25	1015+00 - 1067+00	7+25	10+00	2+50
9 TON	7.1 CY	52 STA	5.8 TON	2 C.Y.	5' x 75'
16+00	16+00		16+00	12+50	41.7 S.Y.
4.7 TON	5 CY	PAVEMENT SCARIFICATION	4.1 TON	2 C.Y.	3+00
100+00	100+00		100+00	13+75	16' x 60'
5.1 TON	4.7 CY	900+00 - 902+40	4.4 TON	2 C.Y.	106.7 S.Y.
105+16	105+16	640 SY	105+16	14+75	11+00
4.7 TON	5 CY	903+71 - 912+86	4.1 TON	2 C.Y.	15' x 60'
200+00	200+00	2440 SY	200+00	REVETMENT, CLASS E	100 S.Y.
7.9 TON	8.3 CY		6.8 TON	7+00	12+75
204+64	204+64	HOT MIX ASPHALT HIGH	204+64	40 TON	15' x 100'
5.3 TON	6.7 CY	TRAFFIC, SURFACE	5.4 TON	1232+50	166.7 S.Y.
300+00R	300+00R	COURSE, 1/2 IN. MIX,	300+00R	15 TON	17+50
7.7 TON	5 CY	900+00 - 902+40	4.1 TON	1235+00	6' x 6'
300+00L	300+00L	66 TON	300+00L	15 TON	4.0 S.Y.
6.2 TON	5.7 CY	903+71 - 912+86	5.4 TON	1237+50	18+00
306+31	306+31	252 TON	306+31	15 TON	8' x 8'
5.7 TON	6 CY		4.9 TON	1240+00	7.1 S.Y.
400+00R	400+00R	ASPHALT BINDER, PG 58	400+00R	15 TON	18+50
1.6 TON	1.7 CY	28H, HIGH TRAFFIC	1.4 TON	1245+00	4' x 4'
400+00L	400+00L	900+00 - 902+40	400+00L	15 TON	1.8 S.Y.
1.6 TON	1.7 CY	3.5 TON	1.4 TON		20+00
405+68	405+68	903+71 - 912+86	405+68	EROSION STONE	3' x 90'
6.3 TON	6.7 CY	13.3 TON	5.4 TON	7+00	30 S.Y.
500+00R	500+00R		500+00R	15 TON	20+50
2.5 TON	2.2 CY	FOG SEAL	1.8 TON		15' x 20'
500+00L	500+00L	0+00 36+12	500+00L	MACADAM STONE	33.3 S.Y.
5.8 TON	6.1 CY	100+00 105+16	5.0 TON	605+00	25+10
504+75	504+75	200+00 204+64	504+75	10 TON	3' x 30'
7.9 TON	8.3 CY	300+00 306+31	6.8 TON		10.0 S.Y.
700+00	700+00	400+00 405+68	700+00	PATCH, PCC, 6"	
11 TON	11.7 CY	500+00 504+75	9.5 TON	800+75	PATCH COUNT, HMA , 5"
702+50	702+50	600+00 608+56	702+50	33.3 S.Y.	
6.3 TON	6.7 CY	700+00 716+94	5.4 TON		10 EACH
704+75	704+75	800+00 802+06	704+75	PATCH COUNT, PCC, 6"	
6.3 TON	6.7 CY	1000+00 1067+64	5.4 TON	800+75	TRANSVERSE JOINT REPAIR
706+00	706+00	1100+00 1123+16	706+00	1 EACH	
9.9 TON	10.5 CY	1200+00 1352+85	8.6 TON		714+00
710+75	710+75	3231 GAL	710+75	TRANSVERSE JOINT	715+00
18.4 TON	19.4 CY		15.9 TON	REPAIR	4 TON
800+00R	800+00R	18" CMP	800+00R	703+00	
2.1 TON	2.2 CY	21+00	2.2 TON	709+00	GRANULAR SHLD
800+00L	800+00L	30 L.f.	800+00L	709+50	608+00 - 608+56
8.8 TON	9.3 CY		9.1 TON	10 TON	45 TON

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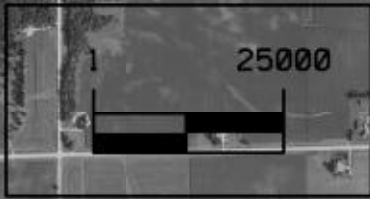
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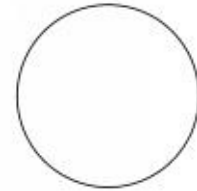
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BACKBONE STATE PARK PROJECT OVERVIEW



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SITE PLAN

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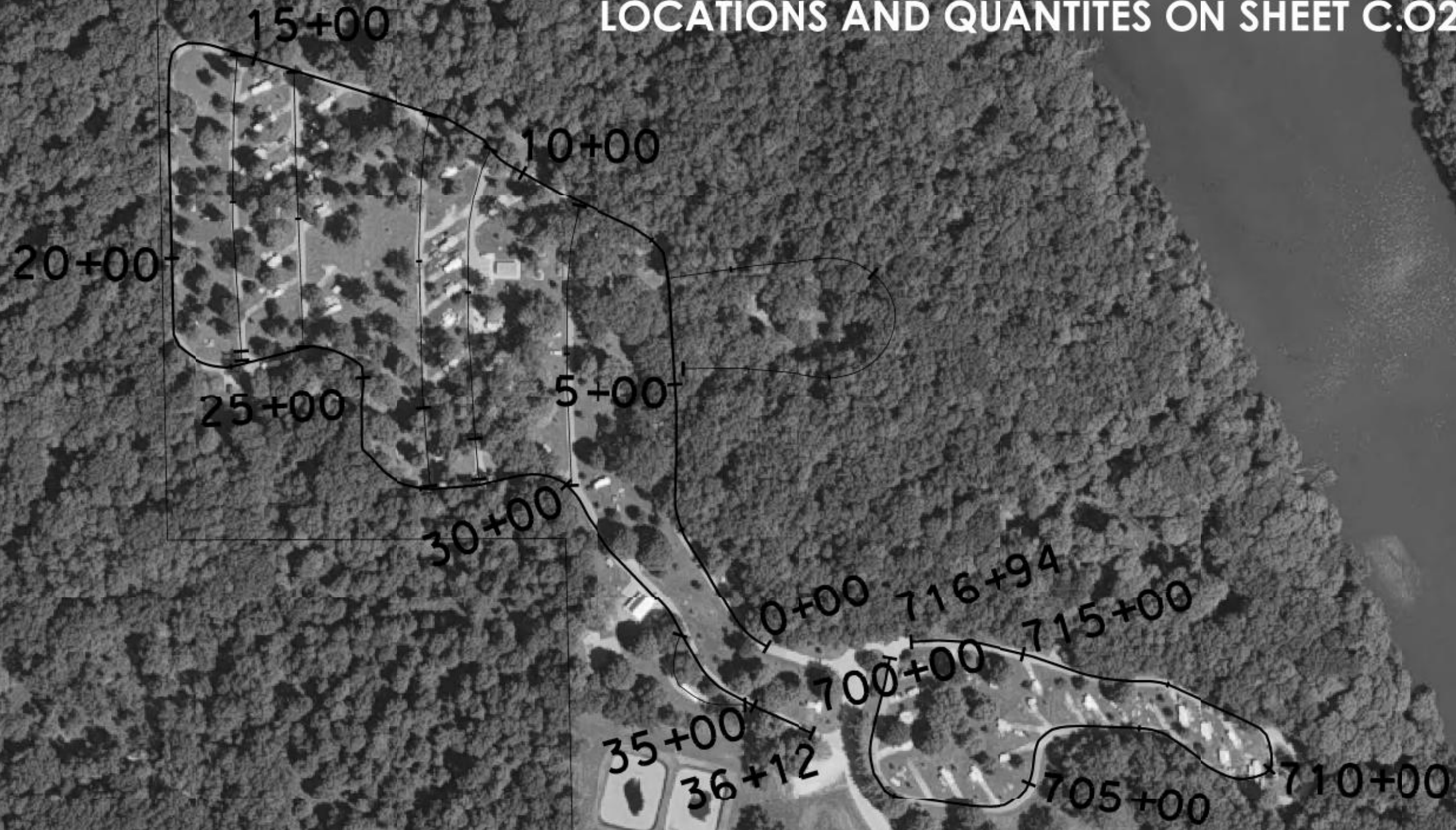
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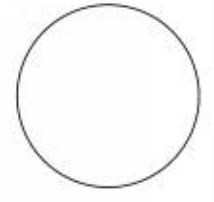
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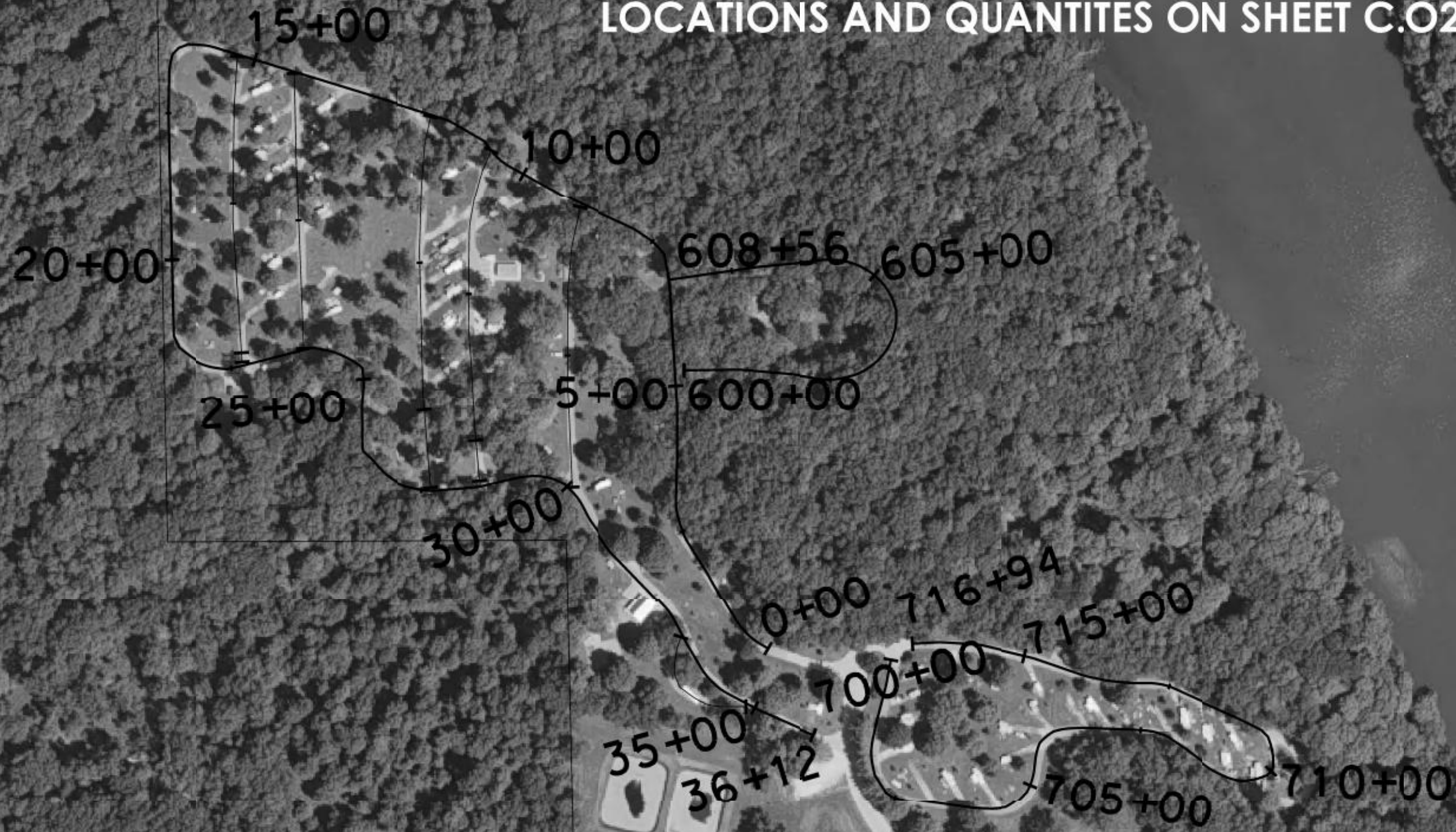
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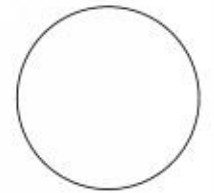
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D.03

STATIONING FOR REFERENCE LOCATIONS AND QUANTITIES ON SHEET C.02

100+00

300+00

608+56

605+00

105+00

105+16

305+00

600+00

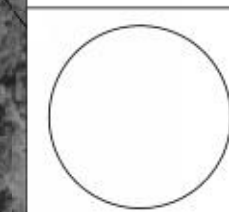
306+31

800+00

802+06



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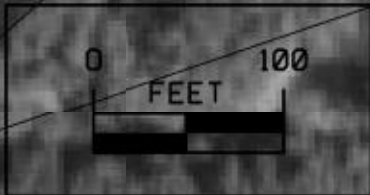
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900+00

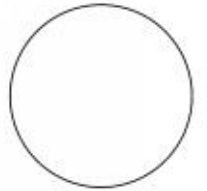
910+00

912+86

905+00



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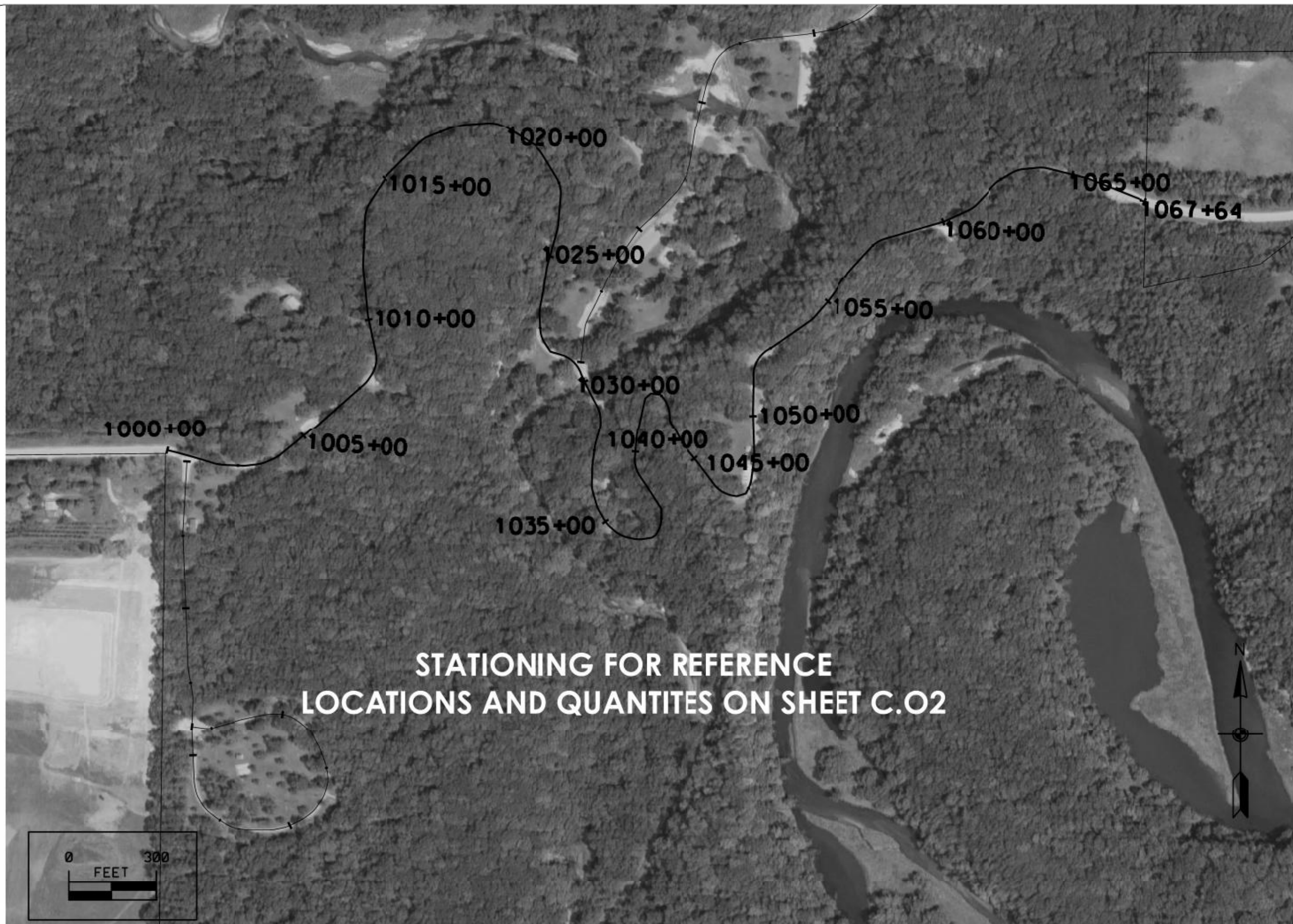
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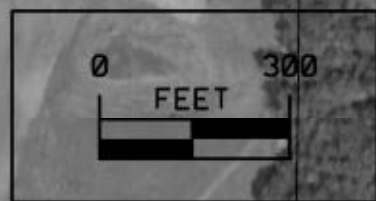
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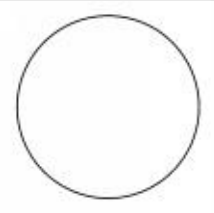
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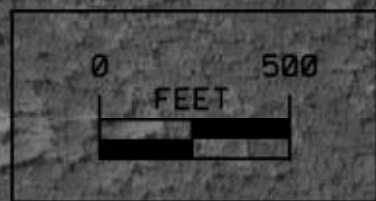
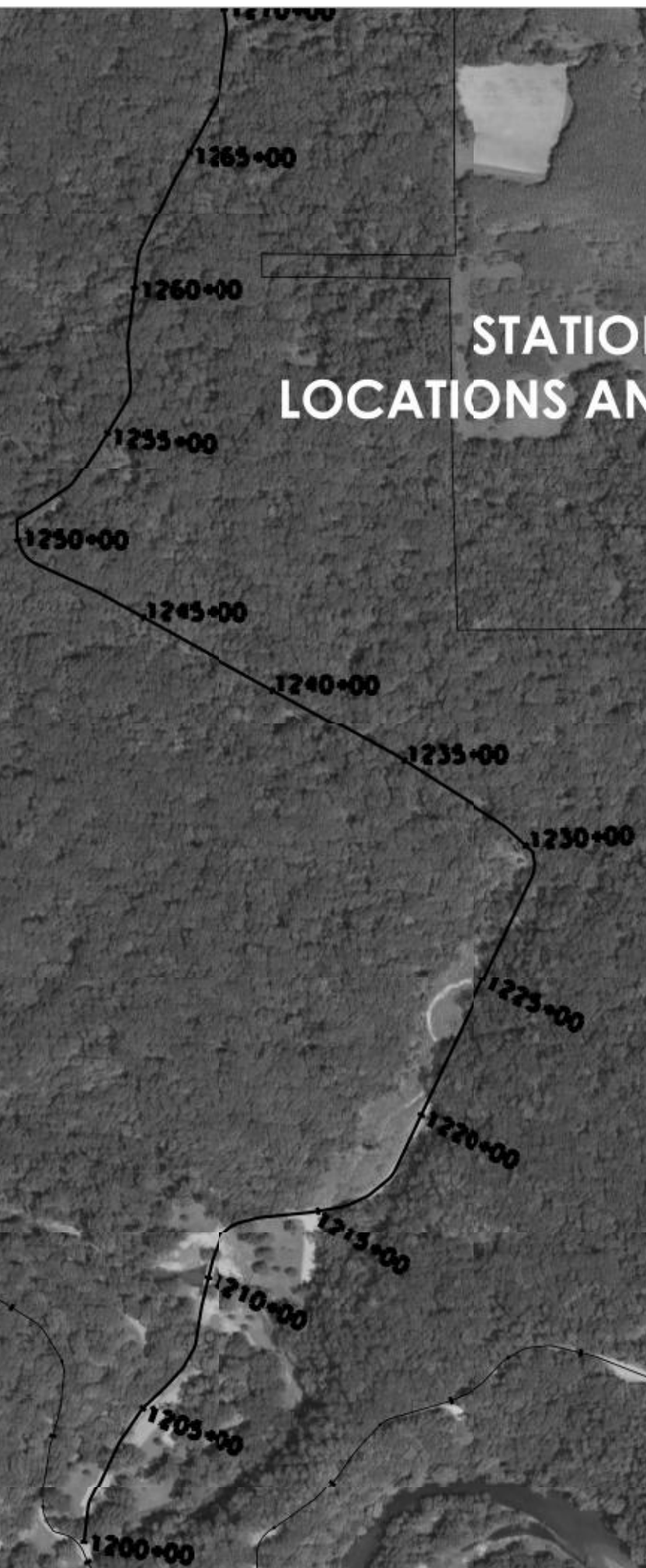
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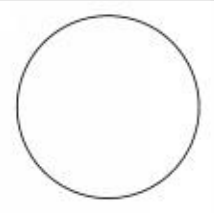
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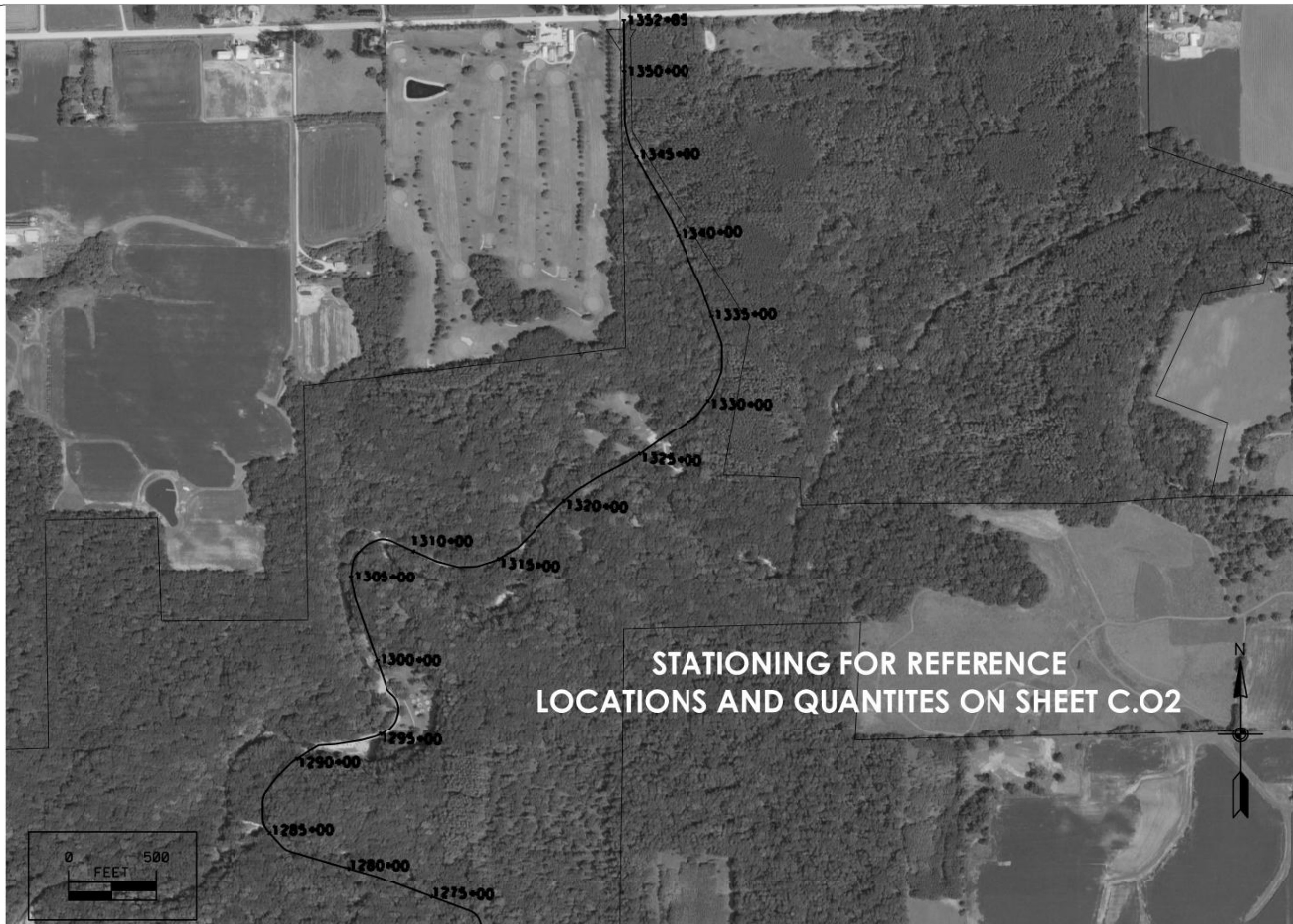
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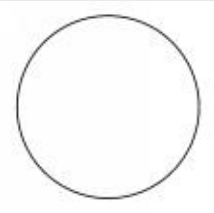
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