Paradise Lake
Development Plan
Appendices

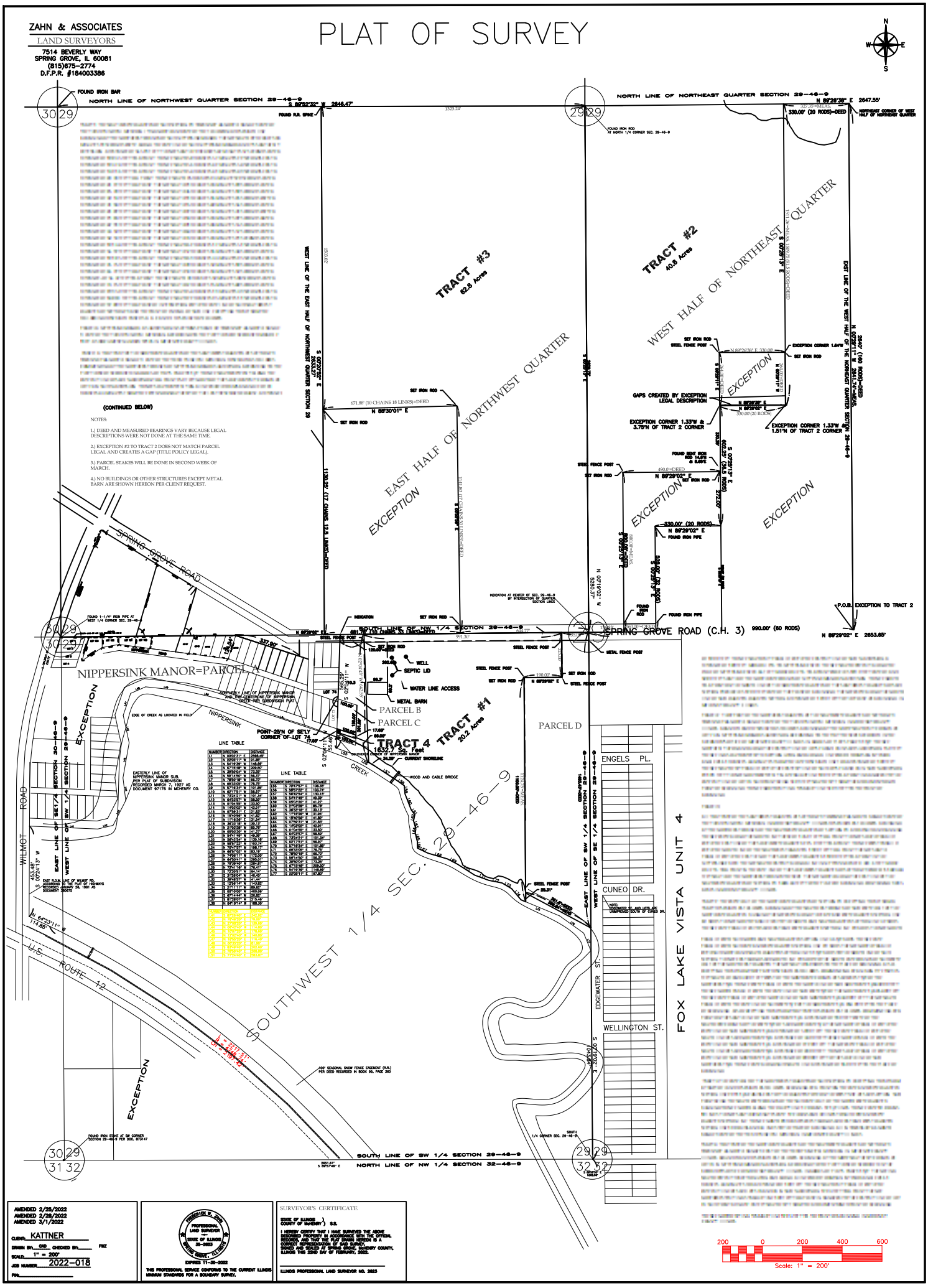
Prepared By:
Super Aggregates
5435 Bull Valley Road Suite 330 McHenry, IL 60050
Office: 815-385-8000

November 2025

Appendices

Appendix A – Plat of Survey

APPENDIX A

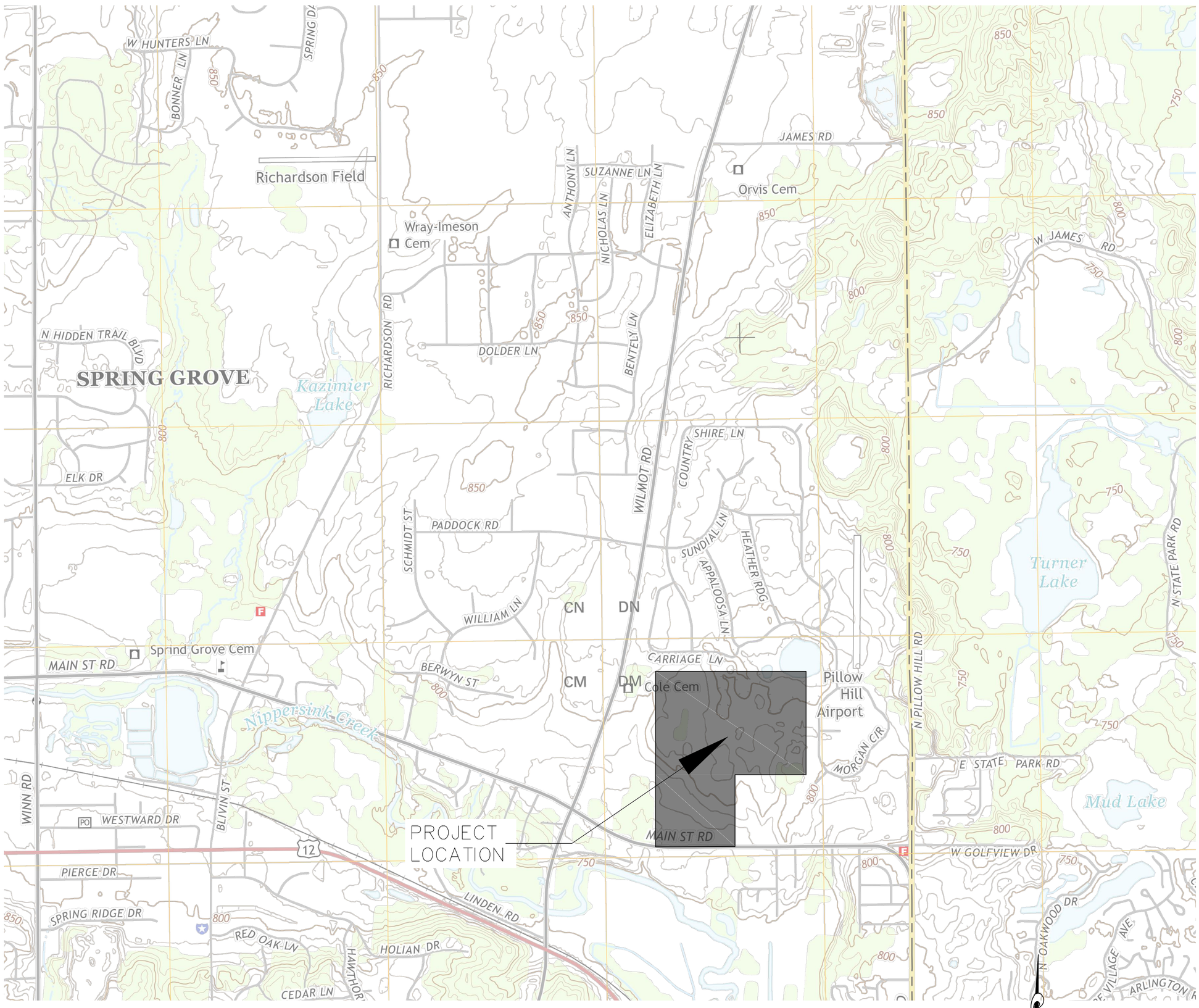

ZAHN & ASSOCIATES
LAND SURVEYORS
7514 BEVERLY WAY
SPRING GROVE, IL 60081
(815)675-2774
D.F.P.R. #184003386
PLAT OF SURVEY
NORTH LINE OF NORTHWEST QUARTER SECTION 29-46-9
NORTH LINE OF NORTHEAST QUARTER SECTION 29-46-9
WEST LINE OF THE EAST HALF OF NORTHWEST QUARTER SECTION 29
EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER SECTION 29-46-9
TRACT #3
62.8 Acres
TRACT #2
40.8 Acres
TRACT #1
202 Acres
TRACT 4
16,327 Sq. Feet
WEST HALF OF NORTHEAST QUARTER
EAST HALF OF NORTHWEST QUARTER
EXCEPTION
GAPS CREATED BY EXCEPTION LEGAL DESCRIPTION
EXCEPTION CORNER 1.33'W & 3.75'N OF TRACT 2 CORNER
EXCEPTION CORNER 1.33'W & 1.51'N OF TRACT 2 CORNER
P.O.B. EXCEPTION TO TRACT 2
N 89°29'02" E 2653.65'
SPRING GROVE ROAD
SPRING GROVE ROAD (C.H. 3)
990.00' (60 RODS)
SOUTH LINE OF NW 1/4 SECTION 29-46-9
NIPPERSINK MANOR=PARCEL A
PARCEL B
PARCEL C
PARCEL D
WELL
SEPTIC LID
WATER LINE ACCESS
METAL BARN
NIPPERSINK
CREEK
WOOD AND CABLE BRIDGE
CURRENT SHORELINE
WILMOT ROAD
U.S. ROUTE 12
SOUTHWEST 1/4 SEC. 29-46-9
ENGELS PL.
CUNEO DR.
EDGEWATER ST.
WELLINGTON ST.
FOX LAKE VISTA UNIT 4
SOUTH LINE OF SW 1/4 SECTION 29-46-9
NORTH LINE OF NW 1/4 SECTION 32-46-9
LINE TABLE
(CONTINUED BELOW)
NOTES:
1.) DEED AND MEASURED BEARINGS VARY BECAUSE LEGAL DESCRIPTIONS WERE NOT DONE AT THE SAME TIME.
2.) EXCEPTION #2 TO TRACT 2 DOES NOT MATCH PARCEL LEGAL AND CREATES A GAP (TITLE POLICY LEGAL).
3.) PARCEL STAKES WILL BE DONE IN SECOND WEEK OF MARCH.
4.) NO BUILDINGS OR OTHER STRUCTURES EXCEPT METAL BARN ARE SHOWN HEREON PER CLIENT REQUEST.
AMENDED 2/25/2022
AMENDED 2/28/2022
AMENDED 3/1/2022
CLIENT: KATTNER
DRAWN BY: CAD CHECKED BY: FRZ
SCALE: 1" = 200'
JOB NUMBER: 2022-018
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
EXPIRES 11-30-2022
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.
SURVEYOR'S CERTIFICATE
STATE OF ILLINOIS)
COUNTY OF MCHENRY) S.S.
I HEREBY CERTIFY THAT I HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY IN ACCORDANCE WITH THE OFFICIAL RECORDS AND THAT THIS PLAT DRAWN HEREON IS A CORRECT REPRESENTATION OF SAID SURVEY. GIVEN UNDER MY SEAL AT SPRING GROVE, MCHENRY COUNTY, ILLINOIS THIS 22ND DAY OF FEBRUARY, 2022.
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2823
200 0 200 400 600
Scale: 1" = 200'

Appendix B – Schmitt Engineering Plans

ENGINEERING PLANS FOR

PARADISE LAKE DEVELOPMENT

SPRING GROVE, ILLINOIS



NORTH

GRAPHIC SCALE

0 20 30 40 60

(IN FEET)
1"=20 FT.

INDEX OF SHEETS:

SURVEY BENCHMARK:

LOCAL BENCHMARK
MCHENRY COUNTY DESIGNATION NIPPER LOCAL
USGS QUAD FOX LAKE LOCATED ON MEYER ROAD IN SPRING GROVE IL, 60071
LAT: 42°25'31.18"N LONG: 88°14'15.99"W
ELEVATION: 891.70 (NAVD88)

SITE BENCHMARK
FOUND-IRON-PIPE (F.I.P.) 1/2" AT NORTHEAST CORNER OF TRACT 2 BEFORE THE WETLAND BUFFER
ELEVATION: 786.81 (NAVD88)

TOPOGRAPHY
TOPOGRAPHY TAKE FROM ELEVATIONS SHOT BY SCHMITT ENGINEERING ON 11/17/2022

UTILITIES AND MUNICIPAL CONTACTS:

AT&T - WWW.ATT.COM
CUSTOMER SERVICE PHONE: (800) 288-2020
REPAIR: (888) 611-4466

COMCAST - WWW.COMCAST.COM
PHONE: (800)-COMCAST

COMED
- WWW.EXELONCORP.COM/OURCOMPANIES/COMED/COMEDRES
PHONE: (800)-EDISON-1

NICOR - WWW.NICOR.COM
EMERGENCY PHONE: (888) 642-6748

CALL "J.U.L.I.E." @ 1-(800) 892-0123 BEFORE DIGGING

CONTRACTOR NOTES:

THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES.

EXISTING UTILITIES TO BE UNCOVERED AND VERIFIED FOR DEPTH PRIOR TO ANY TRENCHING, SETTING OF GRADES OR DRILLING TO AVOID DAMAGE TO EXISTING PIPES.

SCHMITT ENGINEERING AND ASSOC. INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITIES, OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF SCHMITT ENGINEERING & ASSOC. INC.

STORM WATER CONTROL STATEMENT:

I, ALBERT M. SCHMITT, OWNER OF SCHMITT ENGINEERING & ASSOCIATES, INC., LIC. NO. 062-046261, PROFESSIONAL ENGINEER OF THE STATE OF ILLINOIS, DO HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF THIS PROJECT OR ANY PART THEREOF, OR, IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE PROJECT OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE PROJECT. THE DETENTION BASIN AND BERM DO NOT MEET THE ILLINOIS DEPARTMENT OF NATURAL RESOURCES OFFICE OF WATER RESOURCES (IDNR-OWR) DEFINITION OF A DAM. FURTHERMORE, THESE DEVELOPMENT PLANS HAVE MET THE MINIMUM REQUIREMENTS OF THE STORM WATER MANAGEMENT ORDINANCE OF McHENRY COUNTY WITH LATEST AMENDMENTS SEPTEMBER 15, 2020.

GENERAL LEGEND			
○	MONUMENT	▭	STORM INLET
~→	PROPOSED FLOW DIRECTION	◉	STORM MANHOLE
+885.52	EXISTING GRADE	——)——	EXISTING STORM SEWER UTILITY
+885.8	PROPOSED GRADE	——)——	PROPOSED STORM SEWER UTILITY
○□	LIGHT POLE	⬟	SANITARY MANHOLE
●—	UTILITY POLE	——▷——	EXISTING SANITARY SEWER UTILITY
UE	EXISTING UNDERGROUND ELECTRIC UTILITY	——▷——	PROPOSED SANITARY SEWER UTILITY
UE	PROPOSED UNDERGROUND ELECTRIC UTILITY	WS	WATER SERVICE BOX
OE	EXISTING OVERHEAD ELECTRIC UTILITY	WV	WATER VALVE
OE	PROPOSED OVERHEAD ELECTRIC UTILITY	W	EXISTING WATER UTILITY
◑	DOWNGUY	W	PROPOSED WATER UTILITY
TV	EXISTING TV UTILITY	●	FIRE HYDRANT
TV	PROPOSED TV UTILITY	●	EXISTING FIRE HYDRANT
E	ELECTRIC CONNECTION	W	WATER CONNECTION
T	TELECOMMUNICATION CONNECTION	x	EXISTING FENCE
AC	AIR CONDITIONING UNIT	x	PROPOSED FENCE
GV	GAS VALVE	DS	DOWNSPOUT
GAS	EXISTING GAS UTILITY	GEN	GENERATOR
GAS	PROPOSED GAS UTILITY	P.U.E.	PUBLIC UTILITY EASEMENT
G	GAS CONNECTION	B.S.L.	BUILDING SETBACK LINE
◁	FLARED END SECTION	D.E.	DRAINAGE EASEMENT
◎	STORM INLET	V.I.F.	VERIFY IN FIELD

Drawn By: ACT
Checked By: AMS
Date: 06/10/2024
Scale: 1" = 60 Ft.
Job Number: 220907

SCHMITT ENGINEERING
215 West Calhoun Street, Woodstock, Illinois 60098
Phone (815) 337-7810 Fax (815) 337-7812
www.alschmittengineering.com

PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

COVER SHEET

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-046261
STATE OF ILLINOIS
EXPIRES 11-30-2025

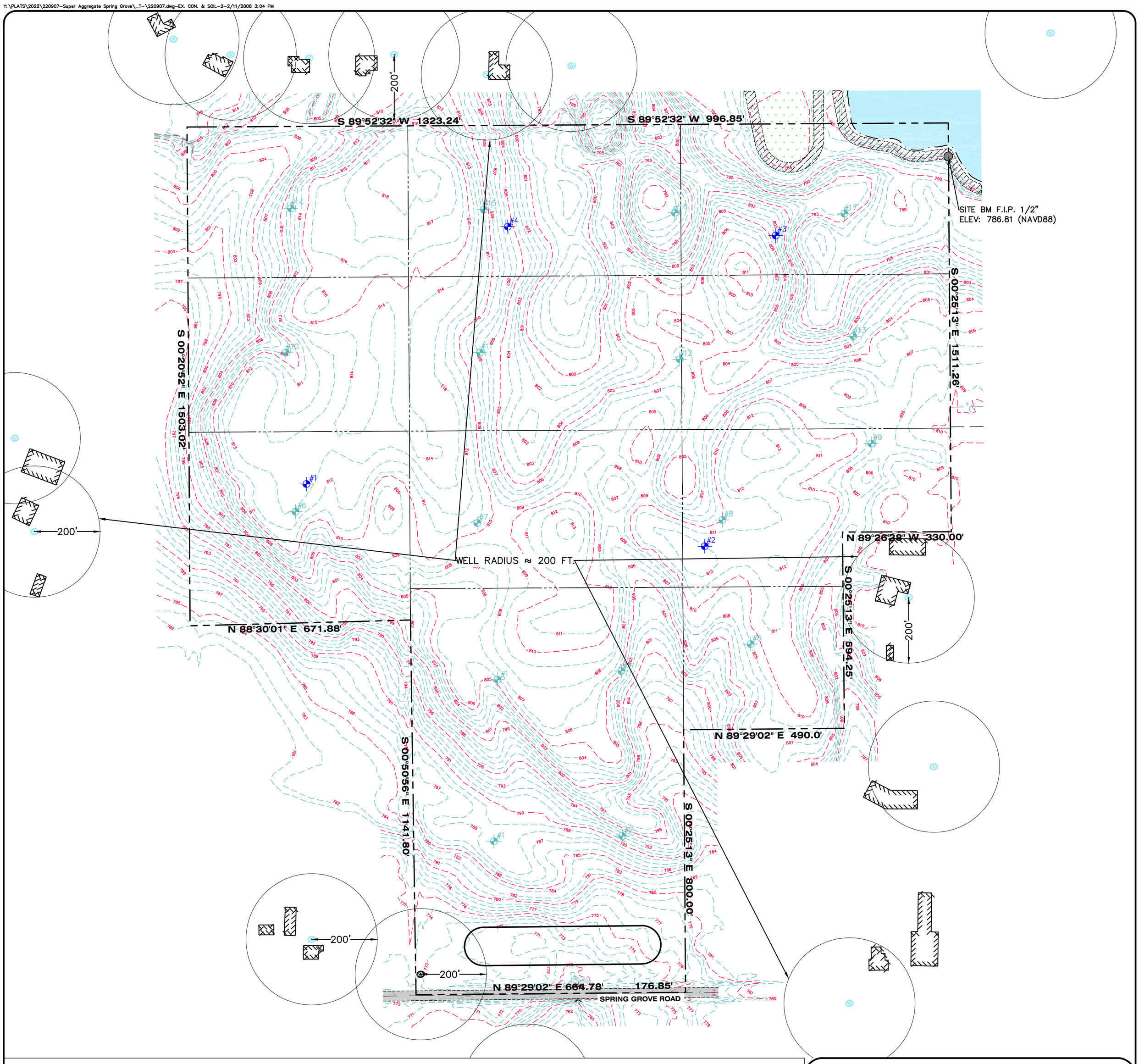
Permit Number PLANNING —
Permit Number HEALTH —

REVISIONS	
DATE	DESCRIPTION

SHEET 1 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21



Spring Grove - 102.8 Acres
801 Main Street, Spring Grove
Hole Detail
11/12/2021

Test #	Depth (Ft.)	Composition
Hole 1	0-1'	Topsoil
	1-3'	Clay
	4-8'	FBR
	8-20'	Sand
Hole 2	0-1'	Topsoil
	1-2'	Clay
	2-20'	MBR
Hole 3	0-1'	Topsoil
	2-8'	FBR
	8-20'	Mason Sand
Hole 4	0-1'	Topsoil
	1-2'	Clay
	2-20'	MBR
Hole 5	0-2'	Topsoil
	2-4'	Clay
	4-8'	FBR
	8-20'	Sand
Hole 6	0-2'	Topsoil
	3-4'	Clay
	4-20'	FBR
Hole 7	0-1'	Topsoil
	1-4'	Clay
	4-20'	FBR
Hole 8	0-2'	Topsoil
	2-3'	Clay
	3-20'	MBR
Hole 9	0-2'	Topsoil
	2-7'	Clay
	8-20'	MBR
Hole 10	0-1'	Topsoil
	1-3'	Clay
	3-20'	CBR
Hole 11	0-3'	Topsoil
	3-6'	Clay
	6-20'	FBR
Hole 12	0-1'	Topsoil
	1-3'	Clay
	3-20'	MBR
Hole 13	0-2'	Topsoil
	2-3'	Clay
	3-20'	CBR
Hole 14	0-1'	Topsoil
	1-20'	CBR
Hole 15	0-1'	Topsoil
	1-4'	Clay
	4-20'	MBR
Hole 16	0-1'	Topsoil
	1-3'	Clay
	3-20'	MBR
Hole 17	0-2'	Topsoil
	2-20'	MBR
Hole 18 South	0-1'	Topsoil
	1-3'	Clay
	3-4'	FBR
	4-20'	Clay
Hole 19 South	0-1'	Topsoil
	1-3'	Clay
	3-6'	FBR
	6-20'	Clay

FBR - Fine Bank Run
MBR - Medium Bank Run
CBR - Coarse Bank Run

Boring Data - Hueman Well Drilling 10/12/22

Bore 1	2-48'	Sand & Gravel
Bore 2	2-56'	Sand & Gravel
Bore 3	3-34'	Sand & Gravel
Bore 4	4-38'	Sand & Gravel

Test Hole Data

Test Hole	Overburden Thickness	Max. Gravel Thickness	Surface Elevation	Top of Gravel Elevation	Hole Depth
1	4	16	785	781	20
2	2	18	785	783	20
3	1	19	805	804	20
4	2	18	805	803	20
5	4	16	810	806	20
6	4	16	810	806	20
7	4	16	810	806	20
8	3	17	810	807	20
9	8	12	810	802	20
10	3	17	810	807	20
11	6	14	810	804	20
12	3	17	810	807	20
13	3	17	810	807	20
14	1	19	810	809	20
15	4	16	810	806	20
16	3	17	800	797	20
17	3	17	800	797	20
18 South	3	1	765	762	20
19 South	3	3	765	762	20

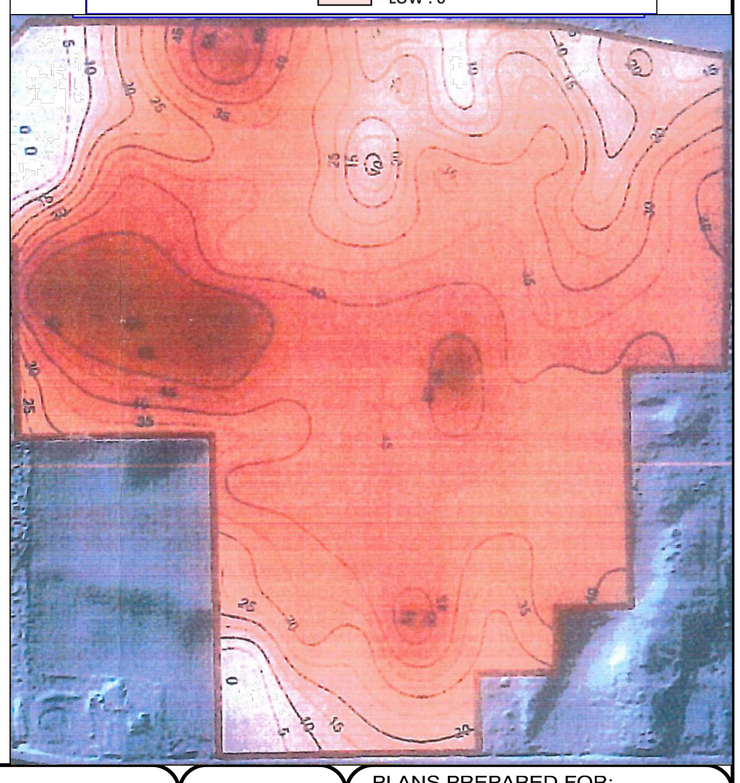
Boring Data

Boring	Overburden Thickness	Max. Gravel Thickness	Surface Elevation	Top of Gravel Elevation	Boring Depth
1	2	48	810	808	50
2	2	56	810	808	60
3	3	34	810	807	60
4	4	38	810	806	60

EXISTING CONDITIONS NOTES:

- NO FARM TILES EXIST ON THE PROPERTY
- NO WATER WELLS EXIST ON THE PROPERTY
- ALL EXCAVATIONS LOCATED MINIMUM 200' FROM ADJACENT PROPERTY WELLS
- PROCESS WATER PONDS LOCATED MINIMUM 25' FROM ADJACENT PROPERTY WELLS AND 50' FROM ADJACENT PROPERTY SEPTIC SYSTEMS

LEGEND
Approximate Thickness of High Resistivity Layer
HIGH : 65
LOW : 0



Drawn By: ACT
Checked By: AMS
Date: 06/10/2024
Scale: 1" = 150 Ft.
Job Number: 220907

SCHMITT ENGINEERING
215 West Calhoun Street, Woodstock, Illinois 60098
Phone (815) 337-7810 Fax (815) 337-7812
www.alschmittengineering.com

PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

EX. CONDITIONS & SOIL DATA

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-068281
STATE OF ILLINOIS
EXPIRES 11-30-2025

Permit Number PLANNING
Permit Number HEALTH

REVISIONS	
DATE	DESCRIPTION

SHEET 2 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21

Y:\PLATS\2022\220907-Super Aggregate Spring Grove_T-\220907.dwg-EX. CON. & AERIAL-3-2/11/2008 3:04 PM

EXISTING CONDITIONS NOTES:

- NO FARM TILES EXIST ON THE PROPERTY
- NO WATER WELLS EXIST ON THE PROPERTY
- ALL EXCAVATIONS LOCATED MINIMUM 200' FROM ADJACENT PROPERTY WELLS
- PROCESS WATER PONDS LOCATED MINIMUM 25' FROM ADJACENT PROPERTY WELLS AND 50' FROM ADJACENT PROPERTY SEPTIC SYSTEMS

Drawn By: ACT
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PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

EX. CONDITIONS & AERIAL VIEW

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-046281
STATE OF ILLINOIS
EXPIRES 11-30-2025

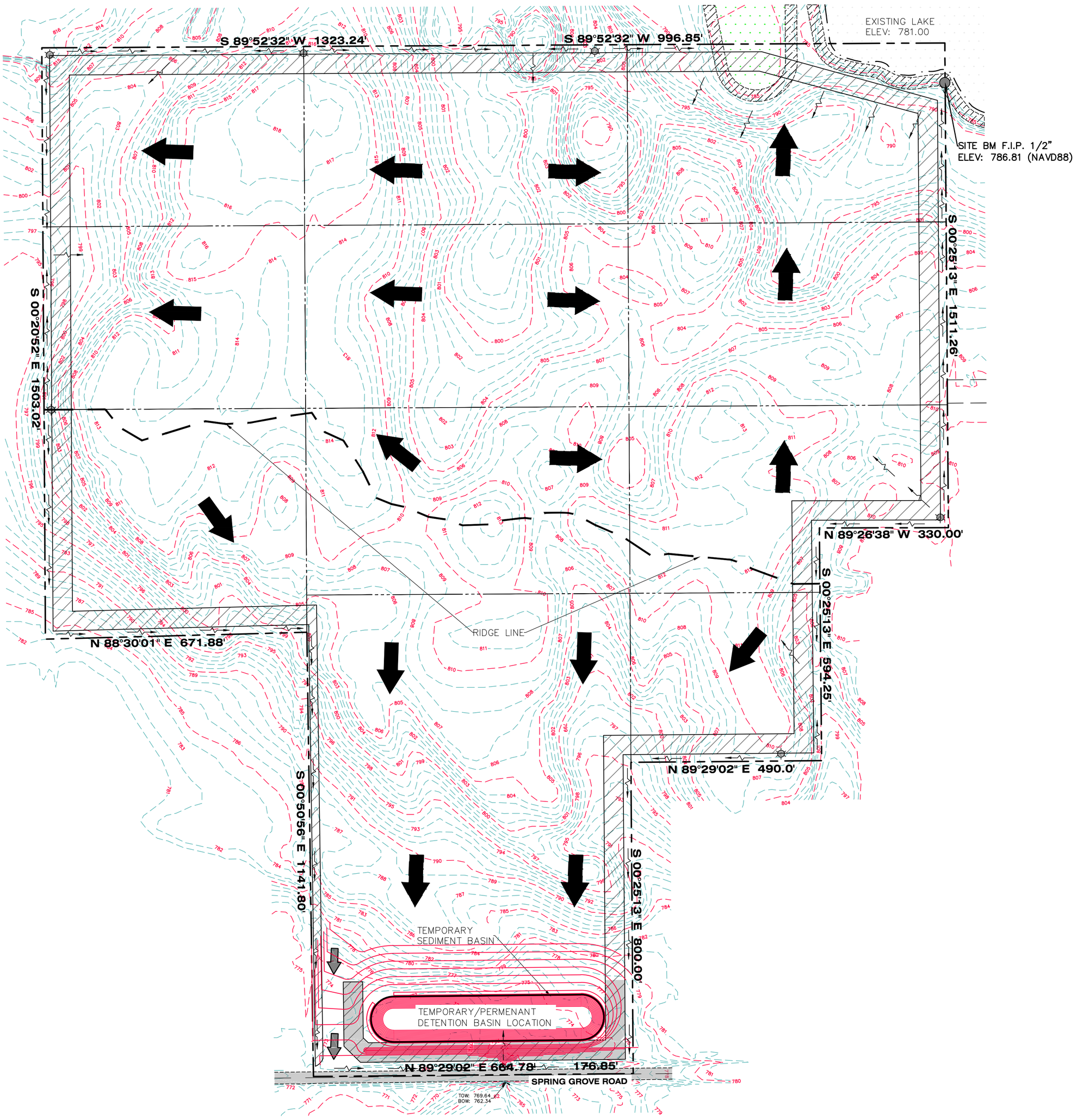
Permit Number PLANNING
Permit Number HEALTH

REVISIONS	
DATE	DESCRIPTION

SHEET
3 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21



NOTES:

- TEMPORARY SWALES ARE TO BE CONSTRUCTED TO DIRECT STORMWATER DURING OVERBURDEN STRIPPING. THESE ARE TO BE ELIMINATED WHEN STRIPPED AREAS DRAIN TO INTERNAL DEPRESSIONS.
- FLOW ARROWS DEPICT ALL PRIOR SURFACE WATER LEAVING THE SITE PER ARROW DIRECTIONS. AS MINING OPERATIONS BEGIN IN EACH AREA. THAT SURFACE WATER THEN DRAINS INTO MINED AREAS THEREAFTER.
- NO FARM TILES EXIST ON PROPERTY

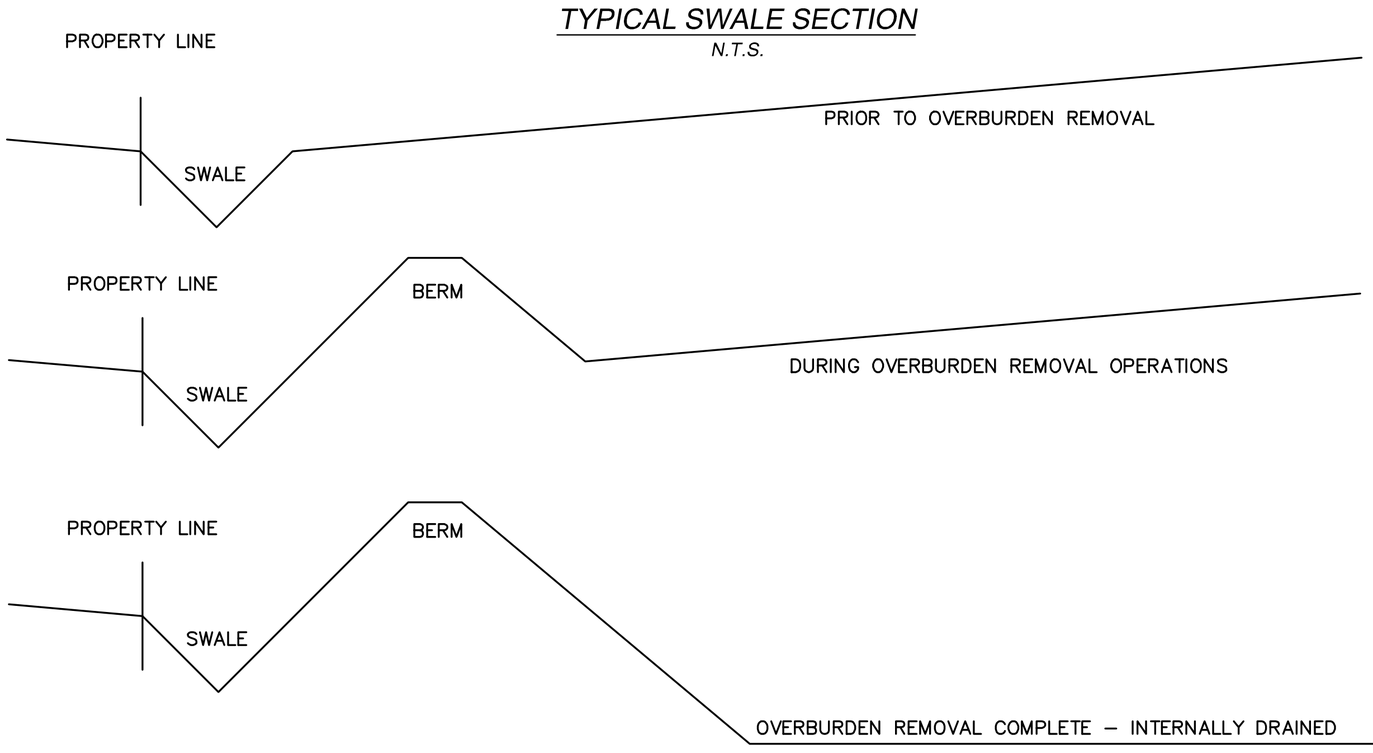
DETENTION BASIN NOTES:

- TOP OF BASIN: 770.00
- BOTTOM OF BASIN: 765.00
- 100-YR H.W.L.: 768.43
- 2-YR H.W.L.: 765.18
- TOTAL STORAGE: 8.86 AC-FT

LEGEND	
	PROPOSED SWALE FLOW DIRECTION
☼	HIGHPOINT
	EXISTING OVERLAND FLOW ARROW
	BERM
	PROPOSED 100-YEAR OVERLAND FLOW ROUTE

TYPICAL SWALE SECTION

N.T.S.



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PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

TEMPORARY DRAINAGE PLAN

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-063281
STATE OF ILLINOIS
EXPIRES 11-30-2025

Permit Number PLANNING
Permit Number HEALTH

REVISIONS	
DATE	DESCRIPTION

SHEET 4 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21

EROSION CONTROL SPECIFICATIONS & NOTES:

This plan has been prepared to comply with the provisions of the NPDES Permit, which is issued by the Illinois Environmental Protection Agency for Stormwater Discharges from Construction Site Activities.

SITE DESCRIPTION

a. The following is a description of the construction activity, which is the subject of this plan:

The proposed development consists mining gravel, sand, and other materials for construction purposes. After mining operations and reclamation are complete, a lake and subdivision will be constructed. These construction activities will include: mining, grading, soil erosion and sedimentation control measures.

b. The following is a description of the intended sequence of major activities, which will disturb soils for major portions of the construction site such as site clearing, excavation and grading.

The sequence of the construction activities may be as follows:

1. Install silt (barrier filter) fence and stabilized construction entrance
2. Site clearing
3. Mass grading
4. Operations and Reclamation
5. Fine grade swales and place seed disturbed areas
6. Remove sediment from silt fences and traps as necessary
7. Stabilize erosion areas with seeding & silt fence as necessary

The soil erosion and sedimentation control items will be constructed as needed during the above construction activities.

c. The site contains approximately 123.80 acres. 115.00 acres of this site will be disturbed by construction activities.

d. The existing site is comprised of a vacant lot, and is boarded by farmland and subdivisions. Spring Grove Road runs between the project.

e. This property is within the Fox River Watershed.

2. CONTROLS

This plan addresses the various controls that will be implemented for each of the major construction activities described in 1b above. For each measure discussed, the contractors will be responsible for its implementation as indicated. The general contractor has signed the required certification on forms, which are attached to, and are a part of, this plan.

a) Erosion and Sediment Controls

I. STABILIZATION PRACTICES

Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a (i) (A) and 2.b. stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 10 days after the construction activity in that portions of the site where construction activity will not occur for a period of 21 or more calendar days.

A. Where the initiation of stabilization measures by the 10th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

1. Permanent seeding

2. Temporary seeding, mulch, erosion mat, etc

EROSION CONTROL SPECIFICATIONS & NOTES (CONTINUED):

B. Erosion control structures must be inspected weekly and after every rainstorm of one-half inch of rainfall or greater. Any repairs or replacements needed to ensure adequate erosion control must be made immediately. Items D-I will be repeated for each phase.

Construction shall be scheduled in the following order:

1. Install construction access entrances and silt fencing as located on plan
2. Grade Site
3. Seed topsoil stockpiles
4. Rough grade roadways
5. Rough grade building pads and yards
6. Final grade areas that will not be disturbed by building construction. These areas will then be covered with topsoil, seeded and stabilized with excelsior blanket where directed on erosion control plan sheet.
7. Temporary seed any areas that cannot be permanently seeded, including building pads that will not commence foundation construction for more than 21 days.
8. Install storm sewers including filter fabric between frame and grate, and riprap at the downstream end of flared end sections
9. Building construction
10. Finalize roadway grading
11. Finalize grading around buildings, re-spread topsoil, spread seed, and put excelsior blanket down.
12. Proof roll road sub-base
13. Construct gravel road sub-base and base surface course
14. Place topsoil in all disturbed areas along the right-of-way and seed

Any situation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor on a weekly basis, until the seeding has taken hold. All washouts, gullies, etc. will be re-graded and reseeded by the contractor, at the Contractor's expense. Sediment on public roads from the site shall not be flushed off with water.

The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project.

All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction", by the Illinois Department of Transportation and with the Illinois Environmental Protection Agency's "Illinois Urban Manual".

II. STRUCTURAL PRACTICES.

Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed area of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Storm sewer system
2. Inlet protection using filter fabric
3. Silt filter fence - M288-00

b. Stormwater Management

I. Provided below is a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Specifications. The stormwater pollutant control measures shall include:

1. Silt filter fence
2. Storm sewers
3. Inlet protection - M288-00

II. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydro period and hydrodynamics present prior to the initiation of construction activities).

Stormwater Management Control includes:

1. Inlet protection using filter fabric

EROSION CONTROL SPECIFICATIONS & NOTES (CONTINUED):

c. Other Controls

I. Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off-site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building Materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

II. The provision of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

d. Approved State or Local Plans

The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, use latest version. Requirements specified in sediment and erosion control site plans or site permits or stormwater management or surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

3. MAINTENANCE

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications.

Vegetative or erosion control measures: The vegetative growth or temporary and permanent seeding, sodding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering. The vegetative cover shall be reseeded as necessary.

Sedimentation basins/traps: The sediments shall be removed when the sediment occupies 40-50 percent of the total original capacity. In no case shall the sediment be built up to within 1 foot of the crest elevation. At this stage, the basin shall be cleaned out to restore its original volume. Sediment Basins shall be removed at end of construction; at the time the final surface course has been placed.

Silt filter fence: The damaged silt filter fence shall be restored to meet the Original Design Standards. Removed and replaced as needed.

Straw bale barrier filters: The straw bale barrier filter shall be inspected frequently and shall be repaired or removed and replaced as needed.

Riprap outlet protection: It shall be inspected after high flows for any scour beneath the riprap or for stones that have been dislodged. It shall be repaired immediately.

4. INSPECTIONS

Qualified personnel shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.50 inches or greater or equivalent snowfall.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in accordance with the Site Description of this permit and pollution prevention measures identified in the plan shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall provide for timely implementation of any change to the plan within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, the name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at lease 3 years after the date of inspection. The report shall be signed in accordance with Signatory Requirements of this permit.

d. The permitee shall complete and submit within 5 days an "Incidence of noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during an inspection conducted, including those not required by the Plan. Submission shall be on forms provided by the Agency and include specific information of the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environment impact, which may have resulted from the noncompliance.

e. All reports of noncompliance shall be signed by a responsible authority as defined in General Permit ILR10, Part VI, G (Signatory Requirements).

f. All reports of noncompliance shall be mailed to the Agency at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand East
PO Box 19276
Springfield, IL 62794-9276

EROSION CONTROL SPECIFICATIONS & NOTES (CONTINUED):

5. NON-STORMWATER DISCHARGES

Except for flows from fire fighting activities, sources of non-stormwater that may be combined with stormwater discharges associated with the construction activity address in this plan are described below:

a. Watering for dust control
b. Irrigation drainage for vegetative growth for seeding, etc.

The pollution prevention measures, as described below, will be implemented for non-stormwater components of the discharge.

The erosion due to irrigation of seeding shall be considered minor.

Contractor to provide the above non-stormwater discharges control to the standard specification required by the Village or the approved equal.

c. End of construction season/winter construction:

The grading contractor shall submit to the inspecting engineer, between September 1 and September 15, a 8 1/2" x 11" (or 11" x 17") reduced size grading sheet (unmarked sheet to be provided by the design engineer) marked to show areas to be disturbed and stabilized through the remainder of the year. This will include proposed schedule dates for grading activities and for placement of topsoil, seed, and excelsior blanket. The contractor shall not propose to disturb new areas that cannot be reasonably expected to be stabilized before the end of the year. This plan shall be updated and resubmitted the first week of each month as long as grading continues up to and including February. Each update will account for weather conditions, work completed, and available manpower.

In general, unless altered by unseasonably warm or cold conditions, no seeding shall be placed between October 15 and November 15. Dormant seeding shall be placed on any un-stabilized areas remaining after November 15 (where active grading has ceased). Dormant seeding shall be of the appropriate mixture for temporary or permanent seeding, but shall be placed at 150% of the normal rate. Dormant seeding shall also be covered with excelsior mat (where specified on the erosion control sheet) or with straw mulch at a rate of 2 ton/acre. If straw is placed, it shall be crimped into the soil by running over it with a tractor/bulldozer or similar tracked machine. All unfinished areas should be so stabilized before the first measurable and lasting snowfall. Any areas not stabilized shall be stabilized as soon as the snow melts.

Underground utility work may continue at the contractor's discretion. After November 15, once a portion of a trench is backfilled, it shall immediately be treated with dormant seeding as described above. Any grading that continues past December 15 shall be phased to minimize the amount of area being actively disturbed. Ongoing grading and stockpiles shall be surrounded with silt fence on the downhill edge and along curbs until grass is established.

Standard Soil Erosion and Sediment Control Notes

1. Control measures shall meet the minimum standards and specifications of the Illinois Urban Manual (www.aiswcd.org/IUM) unless stated otherwise.
2. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
3. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
4. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
5. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
6. Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
7. Sediment control measures shall be installed prior to the disturbance of tributary areas.
8. If dewatering services are used, discharges shall be routed through an effective sediment control measure (e.g., sediment trap or an equivalent control measure). The Enforcement Officer shall be notified prior to the commencement of dewatering activities.
9. All temporary soil erosion and sediment control measures shall be removed within 30 days after final stabilization of the development site is achieved or after the temporary measures are no longer necessary. Trapped sediment shall be removed and disturbed areas shall be permanently stabilized.
10. Stockpiled soil and materials shall be removed from flood hazard areas at the end of each work day. Soil and materials stockpiled in IWMC or buffer areas shall be placed on timber mats, or an equivalent control measure.
11. Effective control measures shall be utilized to minimize the discharge of pollutants from the development site. At a minimum, control measures shall be implemented in order to:
    - 11.1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash water; and
    - 11.2. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, vehicle fluids, sanitary waste, and other materials present on the development site to precipitation and to stormwater.
12. Adequate receptacles shall be provided for the depositing of all construction material debris generated during the development process. The applicant shall not cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of construction material debris upon or into any development site, channel, or IWMC. The development site shall be maintained free of construction material debris.
13. The Enforcement Officer may require additional or alternate soil erosion and sediment control measures, based on development site specific considerations and the effectiveness of the installed control measures.

Standard Drain Tile Notes

14. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
15. All abandoned drain tiles within disturbed areas shall be removed in their entirety.
16. Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

Standard Soil Erosion and Sediment Control Notes

1. Control measures shall meet the minimum standards and specifications of the *Illinois Urban Manual* (www.aiswcd.org/IUM) unless stated otherwise.
2. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
3. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
4. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
5. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
6. Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
7. Sediment control measures shall be installed prior to the disturbance of tributary areas.
8. Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the development site, or temporarily ceased on any portion of the development site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas shall be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible, but not later than 14 calendar days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below:
   a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable; and
   b. In areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method may be used.
9. Disturbance of steep slopes shall be minimized. Areas or embankments having slopes steeper than 3:1 shall be stabilized with staked in place sod, erosion control blanket in combination with seeding, or an equivalent control measure.
10. Perimeter control measures shall be provided downslope and perpendicular to the flow of runoff from disturbed areas, where the tributary area is greater than 5,000 square feet, and where runoff will flow in a sheet flow manner. Perimeter erosion control shall also be provided at the base of soil stockpiles.
11. The stormwater management system shall be protected from erosion and sedimentation downslope from disturbed areas. Inlet protection that reduces sediment loading, while allowing runoff to enter the inlet shall be required for all storm sewers. Check dams, or an equivalent control measure, shall be required for all channels. Filter fabric inlet protection and straw bale ditch checks are not acceptable control measures.
12. If dewatering services are used, discharges shall be routed through an effective sediment control measure (e.g., sediment trap or an equivalent control measure). The Enforcement Officer shall be notified prior to the commencement of dewatering activities.
13. All temporary soil erosion and sediment control measures shall be removed within 30 days after final stabilization of the development site is achieved or after the temporary measures are no longer necessary. Trapped sediment shall be removed and disturbed areas shall be permanently stabilized.
14. Stockpiled soil and materials shall be removed from flood hazard areas at the end of each work day. Soil and materials stockpiled in IWMC or buffer areas shall be placed on timber mats, or an equivalent control measure.
15. Effective control measures shall be utilized to minimize the discharge of pollutants from the development site. At a minimum, control measures shall be implemented in order to:
    a. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash water; and
    b. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, vehicle fluids, sanitary waste, and other materials present on the development site to precipitation and to stormwater.
16. Adequate receptacles shall be provided for the depositing of all construction material debris generated during the development process. The applicant shall not cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of construction material debris upon or into any development site, channel, or IWMC. The development site shall be maintained free of construction material debris.
17. The Enforcement Officer may require additional or alternate soil erosion and sediment control measures, based on development site specific considerations and the effectiveness of the installed control measures.

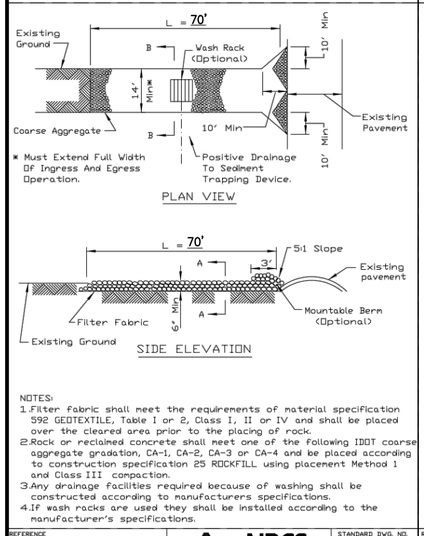
Standard Drain Tile Notes

1. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
2. All abandoned drain tiles within disturbed areas shall be removed in their entirety.
3. Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

CONTRACTOR NOTES

- CONSTRUCTION ENTRANCES (AS DETAILED OR ACCEPTABLE ALTERNATIVE) SHALL BE PLACED AT MINE ENTRANCE UNTIL SUCH TIME AS THE PROPOSED ASPHALT ROAD HAS BEEN ESTABLISHED. AT WHICH TIME THE TEMPORARY CONSTRUCTION ENTRANCE SHALL BE REMOVED.
- EROSION BLANKET SHALL BE PLACED ON ALL DISTURBED AREAS WITH SLOPES GREATER THAN 5 TO 1 UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- SILT FNECE SHALL TEMPORARILY BE PLACED ALONG ALL PROPERTY LINES WHERE NEWLY CONSTRUCTED BERMS DO NOT HAVE ESTABLISHED VEGETATION TO PREVENT EROSION. SILT FENCE SHOULD BE REMOVED ONCE VEGETATION IS ESTABLISHED

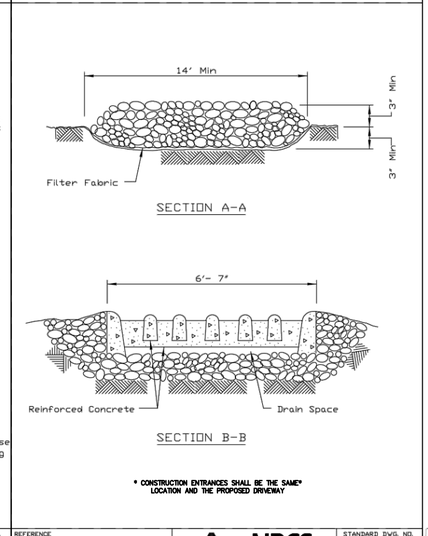
STABILIZED CONSTRUCTION ENTRANCE PLAN



NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE			STANDARD DWG. NO.
Project			IL-630
Designed	Date	NRCS Natural Resources Conservation Service	SHEET 1 OF 2
Checked	Date		DATE 8-18-94
Approved	Date		

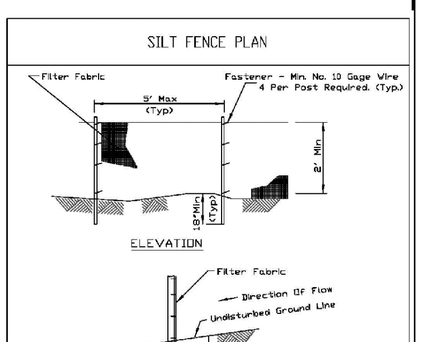
STABILIZED CONSTRUCTION ENTRANCE PLAN



* CONSTRUCTION ENTRANCES SHALL BE THE SAME* LOCATION AND THE PROPOSED DRIVEWAY

REFERENCE			STANDARD DWG. NO.
Project			IL-630
Designed	Date	NRCS Natural Resources Conservation Service	SHEET 2 OF 2
Checked	Date		DATE 8-18-94
Approved	Date		

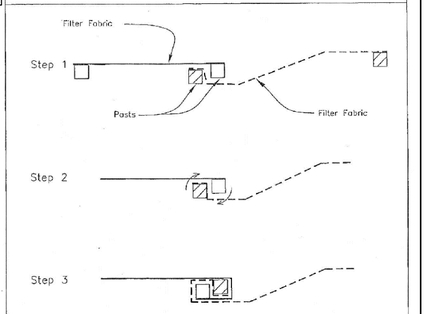
SILT FENCE PLAN



NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table I or 2, Class I with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE			STANDARD DWG. NO.
Project			IUM-620A
Designed	Date		SHEET 1 OF 2
Checked	Date		DATE 3-16-12
Approved	Date		

SILT FENCE



NOTES:
1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a light seal with the fabric material.
3. Drive both posts a minimum of 18 inches into the ground and bury the flap.

REFERENCE			STANDARD DWG. NO.
Project			IL-620(W)
Designed	Date	NRCS Natural Resources Conservation Service	SHEET 2 OF 2
Checked	Date		DATE 1-29-99
Approved	Date		

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	OCT.	NOV.
PERMANENT SEEDING			A,B,C, D			*	*				
SODDING				G**							
TEMPORARY SEEDING			E								
DORMANT SEEDING											

STANDARD LAWN MIXTURE
A (1) KENTUCKY BLUEGRASS 50 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE AND CREEPING RED FESCUE 20 LBS/ACRE

SALT TOLERANT MIXTURE B
(1A) BLUE GRASS 30 LBS/ACRE PERENNIAL RYEGRASS 10 LBS/ACRE DAWSONS RED FESCUE 10 LBS ACRE SCALDIS HARD FESCUE 10 LBS/ACRE FULTS SALT GRASS 30 LBS/ACRE

LOW PROFILE NATIVE GRASS MIXTURE
C ANDROPOGON SCOPARIUS (LITTLE BLUE STEM) 5 LBS/ACRE BOUTELOVA CURTIPENDULA (SIDE OATS GRAMA) 5 LBS/ACRE ELYMUS CANADENENSIS (WILD RYE) 1 LBS/ACRE SPOROBOLUS HETEROLEPSIS (PRAIRIE DROPSEED) 0.5 LBS/ACRE ANNUAL RYE GRASS 25 LBS/ACRE OATS, SPRING 25 LBS/ACRE PERENNAL RYE GRASS 15 LBS/ACRE

WETLAND GRASS AND SEDGE MIXTURE.
D (4B) ANNUAL RYE GRASS 25 LBS/ACRE OATS, SPRING 25 LBS/ACRE
(E) CEREAL RYE 90 LBS/ACRE, OR WHEAT 90 LBS/ACRE, OR PERENNIAL RYEGRASS 25 LBS/ACRE
(G) SOD
(*) IRRIGATION NEEDED DURING JUNE AND JULY
(**) IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.
( ) IDOT STANDARD

PROJECT SEEDING SCHEME:
1. ALL AREAS NEXT TO PAVEMENT AND EXISTING ROADWAYS
   1.1. SALT TOLERANT MIXTURE B
2. ALL AREAS NEAR WETLANDS (30' BUFFER)
   2.1. WETLAND GRASS AND SEDGE MIXTURE D

MEASURE GROUP	CONTROL MEASURE	APPL.	CONTROL MEASURE CHARACTERISTICS X	TEMP.	PRMNNT.
VEGETATIVE SOIL COVER	TEMPORARY SEEDING		PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.	X	
	PERMANENT SEEDING		PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER. MAY BE PART OF FINAL LANDSCAPE PLAN.		X
	DORMANT SEEDING		SAME AS PERMANENT SEEDING EXCEPT IS DONE DURING DORMANT SEASON. HIGHER RATES OF SEED APPLICATION ARE REQUIRED.		
	SODDING		QUICK PERMANENT COVER TO CONTROL EROSION. QUICK WAY TO ESTABLISH VEGETATION FILTER STRIP. CAN BE USED ON STEEP SLOPES OR IN DRAINAGEWAYS WHERE SEEDING MAY BE DIFFICULT.		
	GROUND COVER		PROVIDES GROUND COVER, SHRUBS AND TREES IN ADDITION TO PERMANENT VEGETATION. MAY BE USED AS PART OF A FINAL LANDSCAPE PLAN ALONG WITH SHRUBS AND TREES.		
NON VEGETATIVE SOIL COVER	MULCHING		ADDED INSURANCE OF A SUCCESSFUL TEMPORARY OR PERMANENT SEEDING. CONTROLS UNWANTED VEGETATION AND PRESERVES MOISTURE. PROVIDES COVER WHERE VEGETATION CANNOT BE ESTABLISHED		
	AGGREGATE COVER		PROVIDES SOIL COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.		
	PAVING		PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS OR OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	EROSION BLANKET		PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING TIME OF YEAR IS INAPPROPRIATE AND IN SLOPED AREAS.	X	
DIVERSIONS	RIDGE DIVERSION		TYPICALLY USED ABOVE SLOPES. USED WHERE AN EXCESS OF SOIL IS AVAILABLE.		
	CHANNEL DIVERSION		TYPICALLY USED AT TOP OR BASE OF SLOPES. USED WHEN EXCESS SOIL IS NOT AVAILABLE.		
	COMBINATION DIVERSION		TYPICALLY USED ANYWHERE ON A SLOPE. SOIL TAKEN OUT OF CHANNEL IS USED TO BUILD THE RIDGE.		
	CURB AND GUTTER		SPECIAL CASE OF DIVERSION USED IN CONJUNCTION WITH A STREET TO DIVERT WATER FROM AN AREA NEEDING PROTECTION.		X
	BENCHES		SPECIAL CASE OF DIVERSION CONSTRUCTED WHEN WORKING ON CUT SLOPES TO SHORTEN LENGTH OF SLOPE AND ADD SLOPE STABILITY.		
SEDIMENT BASINS	BARE CHANNEL		PROVIDES MEANS OF CONVEYING RUNOFF TO DESIRED LOCATION. MAY BE USED TO DRAIN DEPRESSIONAL AREAS. ONLY APPLICABLE WHEN VELOCITY OF FLOW IS VERY LOW.		
	VEGETATIVE CHANNEL		PROVIDES ADDED STABILITY TO CHANNEL. USED WHEN VELOCITY OF FLOW IS NOT EXTREMELY FAST.		
	SEDIMENTATION POND		A WET OR DRY DETENTION BASIN SIZED FOR THE POST DEVELOPMENT 100 YEAR STORM TEMPORARILY MODIFIED TO ENHANCE SEDIMENT REMOVAL DURING CONSTRUCTION.		
SEDIMENT FILTERS	BARRIER FILTER		USED FOR SINGLE LOTS OR DRAINAGE AREAS LESS THAN 1/2 ACRE TO FILTER SEDIMENT FROM RUNOFF.		
	VEGETATIVE FILTER		USED ALONG DRAINAGEWAYS OR PROPERTY LINES TO FILTER SEDIMENT FROM RUNOFF. SIZE MUST BE INCREASED IN PROPORTION TO DRAINAGE AREA.		
	FILTER FABRIC		USED FOR FILTERING SEDIMENT WITHIN THE ROADWAY BEFORE ENTERING THE STORM SEWER.	X	
	INLET PROTECTION		USED FOR FILTERING SEDIMENT WITHIN GRASS AREAS BEFORE WATER ENTERS THE STORM SEWER.	X	
MUD AND DUST CONTROL	CONST. ENTRANCE		PREVENT MUD FROM BEING PICKED UP AND CARRIED OFF-SITE. (SEDIMENT ON PUBLIC ROADS IS NOT TO BE FLUSHED OFF WITH WATER).	X	
	DUST AND TRAFFIC CONTROL		PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.		

CONTRACTOR CERTIFICATION STATEMENT

"I certify under the penalty of law that I understand this storm water pollution prevention plan and the terms of the National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification"

Date

Signature

Title

Name of Firm

Address

City State Zip Code

Phone Number

OWNER CERTIFICATION STATEMENT

"I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Date

Signature

Title

Name of Firm

Address

Drawn By: ACT
Checked By: AMS
Date: 06/10/2024
Scale: 1" = 60 Ft.
Job Number: 220907

SCHMITT ENGINEERING
215 West Calhoun Street, Woodstock, Illinois 60098
Phone (815) 337-7810 Fax (815) 337-7812
www.alschmittengineering.com

PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.)

LICENSED PROFESSIONAL ENGINEER — ALBERT M SCHMITT 062-063281 — STATE OF ILLINOIS
EXPIRES 11-30-2025

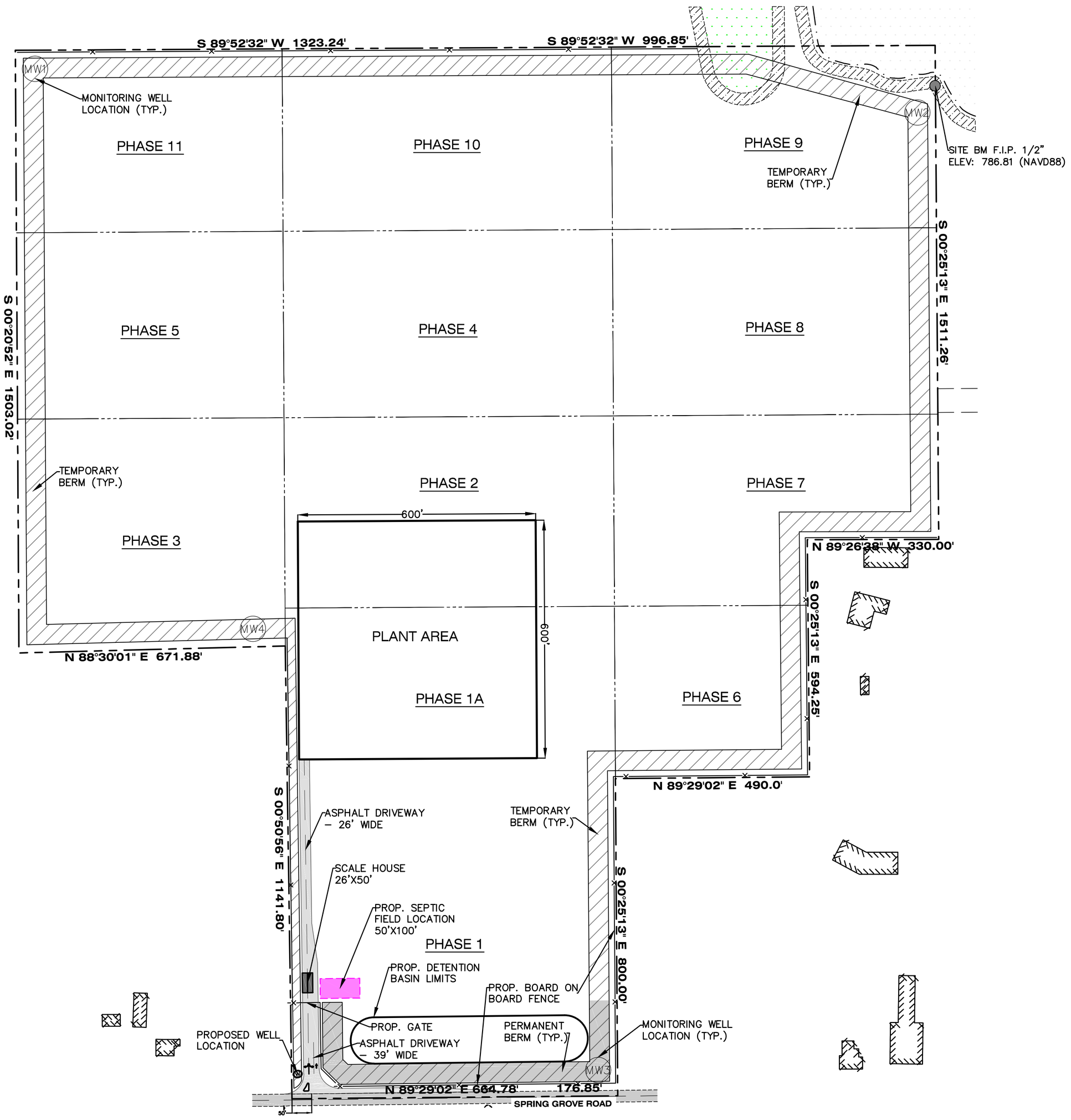
Permit Number PLANNING —-—
Permit Number HEALTH —-—

REVISIONS	
DATE	DESCRIPTION

SHEET 5 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21



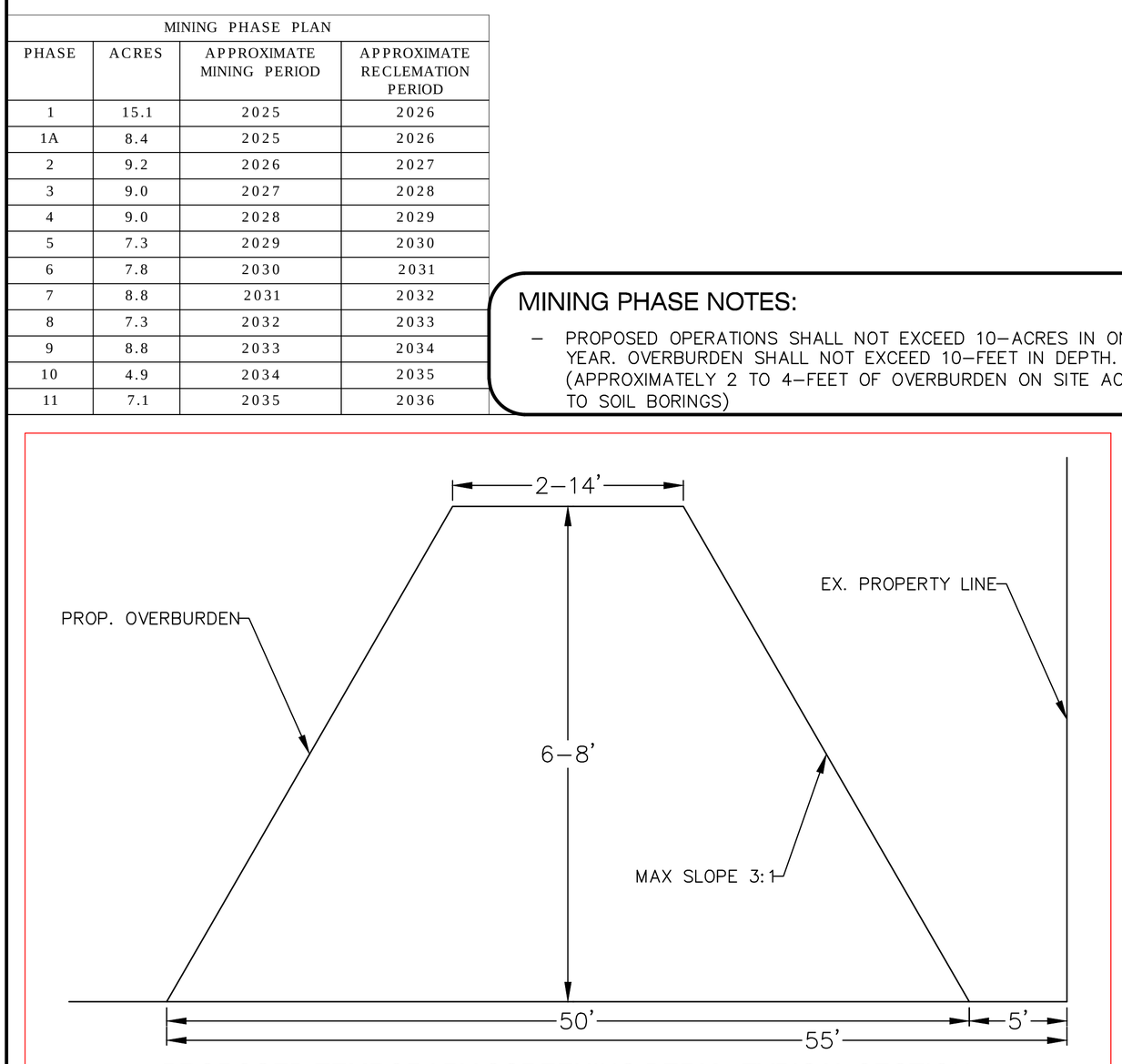
MINING PHASE PLAN			
PHASE	ACRES	APPROXIMATE MINING PERIOD	APPROXIMATE RECLEMATION PERIOD
1	15.1	2025	2026
1A	8.4	2025	2026
2	9.2	2026	2027
3	9.0	2027	2028
4	9.0	2028	2029
5	7.3	2029	2030
6	7.8	2030	2031
7	8.8	2031	2032
8	7.3	2032	2033
9	8.8	2033	2034
10	4.9	2034	2035
11	7.1	2035	2036

MINING PHASE NOTES:

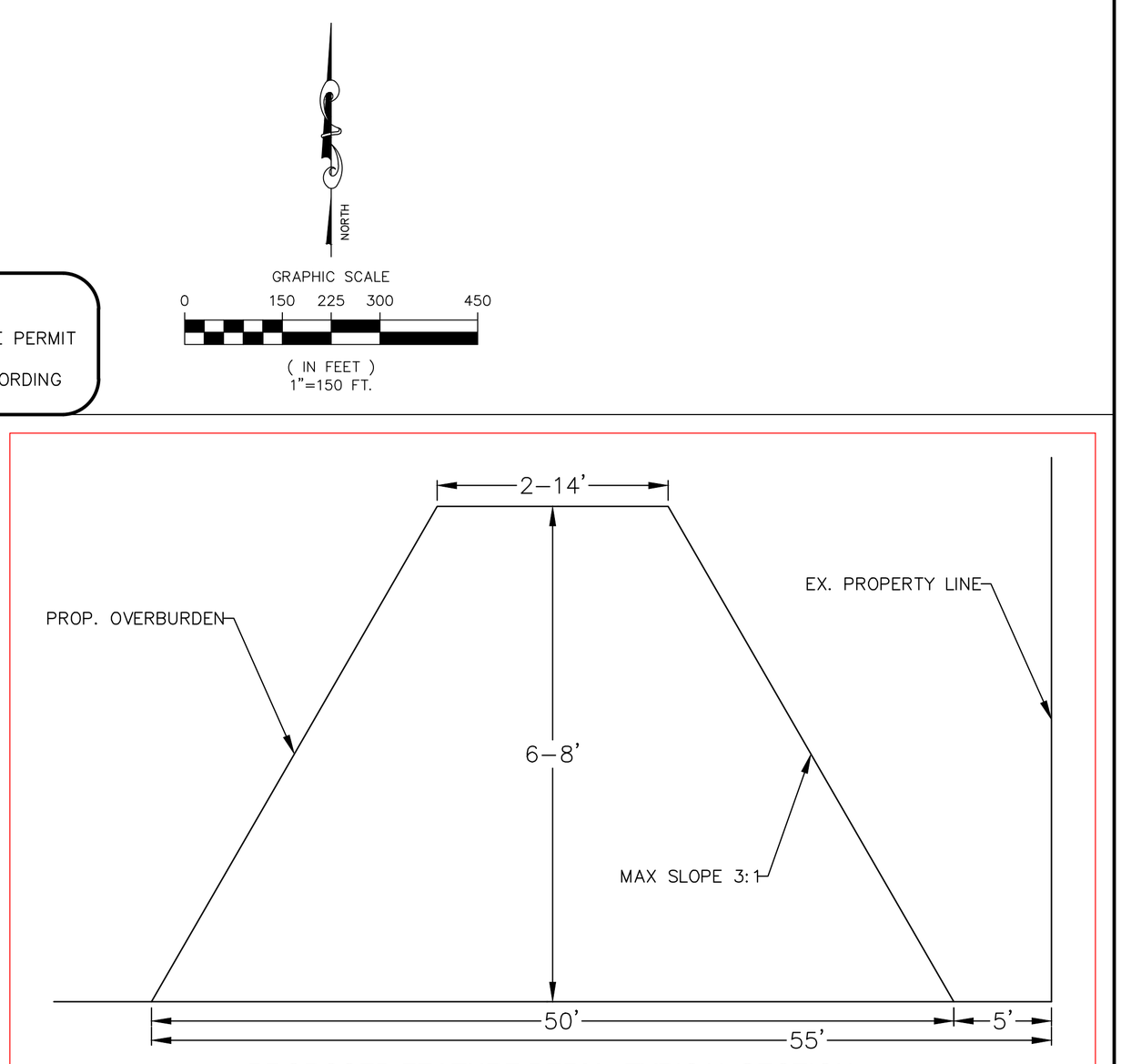
- PROPOSED OPERATIONS SHALL NOT EXCEED 10-ACRES IN ONE PERMIT YEAR. OVERBURDEN SHALL NOT EXCEED 10-FEET IN DEPTH. (APPROXIMATELY 2 TO 4-FEET OF OVERBURDEN ON SITE ACCORDING TO SOIL BORINGS)

NORTH

GRAPHIC SCALE
0 150 225 300 450
(IN FEET)
1"=150 FT.



PROPOSED TEMPORARY SCREENING BERM - TYPICAL SECTION
N.T.S.



PROPOSED FEATURE BERM - TYPICAL SECTION
N.T.S.

Drawn By: ACT
Checked By: AMS
Date: 06/10/2024
Scale: 1" = 60 Ft.
Job Number: 220907

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www.alschmittengineering.com

PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

MINE PHASING & OPERATIONS PLAN

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-046281
STATE OF ILLINOIS
EXPIRES 11-30-2025

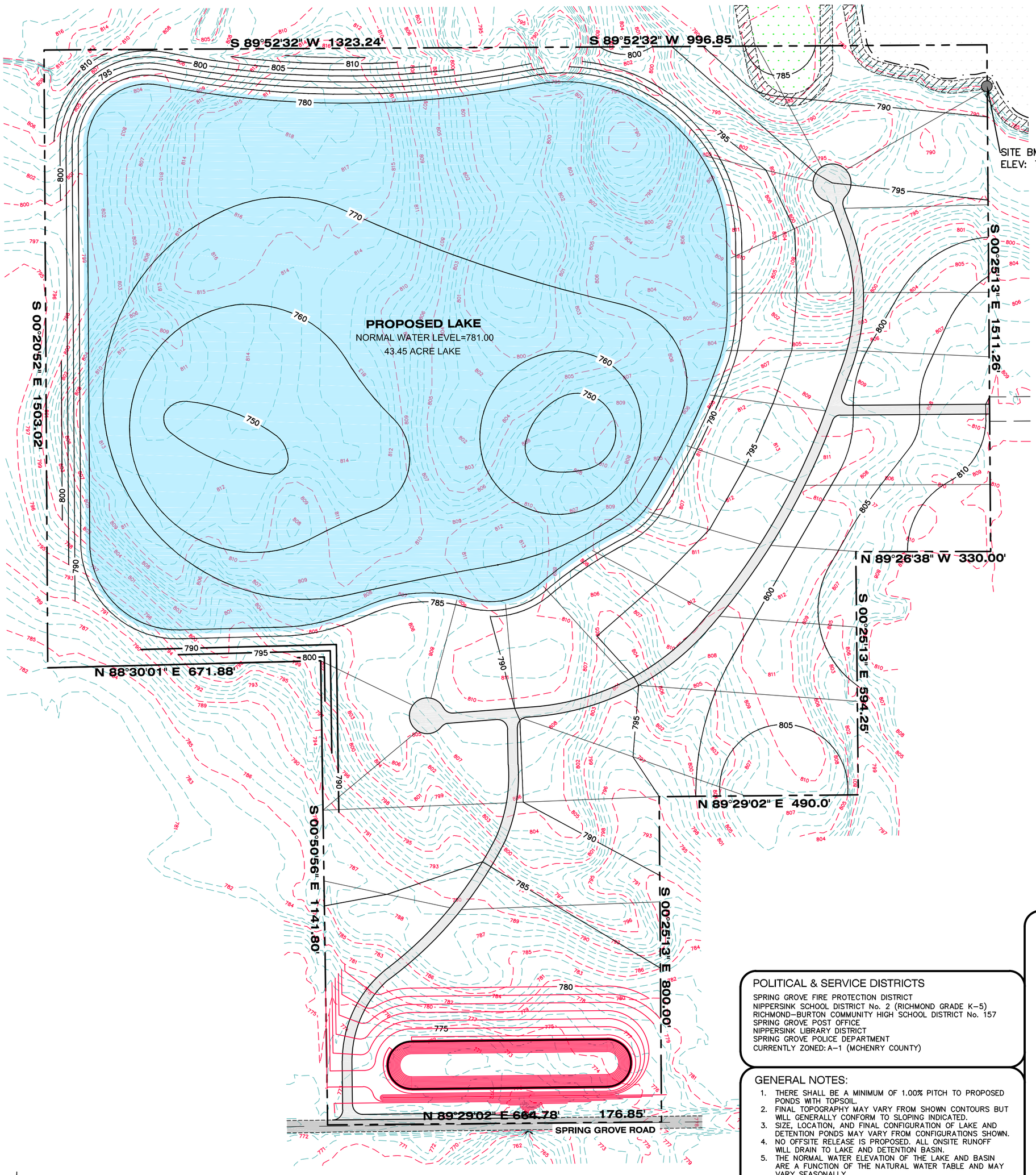
Permit Number PLANNING
Permit Number HEALTH

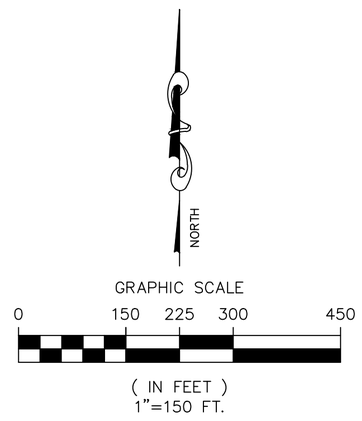
REVISIONS	
DATE	DESCRIPTION

SHEET 6 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21





POLITICAL & SERVICE DISTRICTS

SPRING GROVE FIRE PROTECTION DISTRICT
NIPPERSINK SCHOOL DISTRICT No. 2 (RICHMOND GRADE K-5)
RICHMOND-BURTON COMMUNITY HIGH SCHOOL DISTRICT No. 157
SPRING GROVE POST OFFICE
NIPPERSINK LIBRARY DISTRICT
SPRING GROVE POLICE DEPARTMENT
CURRENTLY ZONED: A-1 (MCHENRY COUNTY)

GENERAL NOTES:

1. THERE SHALL BE A MINIMUM OF 1.00% PITCH TO PROPOSED PONDS WITH TOPSOIL.
2. FINAL TOPOGRAPHY MAY VARY FROM SHOWN CONTOURS BUT WILL GENERALLY CONFORM TO SLOPING INDICATED.
3. SIZE, LOCATION, AND FINAL CONFIGURATION OF LAKE AND DETENTION PONDS MAY VARY FROM CONFIGURATIONS SHOWN.
4. NO OFFSITE RELEASE IS PROPOSED. ALL ONSITE RUNOFF WILL DRAIN TO LAKE AND DETENTION BASIN.
5. THE NORMAL WATER ELEVATION OF THE LAKE AND BASIN ARE A FUNCTION OF THE NATURAL WATER TABLE AND MAY VARY SEASONALLY.
6. THE RECLAMATION PLAN REPRESENTS A REASONABLE ESTIMATION OF THE FUTURE DEVELOPMENT OF THE PROPERTY BASED ON THE BEST AVAILABLE DATA AT THE TIME OF CREATION OF THIS PLAN. RESULTANT SOIL CONDITIONS UPON THE COMPLETION OF THE MINING PHASE MAY NECESSITATE CHANGES TO THE PROPOSED RECLAMATION PLAN.
7. WATER SUPPLY WILL BE SERVED BY INDIVIDUAL WELLS.
8. SEWAGE DISPOSAL SYSTEMS WILL BE BY INDIVIDUAL SEPTIC SYSTEMS OR MUNICIPAL SANITARY TREATMENT SYSTEM.
9. ALL INTERSECTION ROAD CURB RADII TO BE 40' BACK OF CURB.
10. ALL ROAD RIGHT-OF-WAYS SHALL BE 60'
11. DK ENVIRONMENTAL SERVICES, INC. PROVIDED WETLAND & WATERBODY DELINEATION REPORT.
12. ALL UTILITY EASEMENTS ARE SEPTIC RESTRICTED.
13. BASED UPON FIRM MAP, COMMUNITY PANEL No. 170732 0112 J, MAP REVISED NOVEMBER 16, 2006. 100 YEAR FLOOD PLAIN EXISTS.
14. REFER TO HOMEOWNERS ASSOCIATION COVENANTS AND RESTRICTIONS FOR MAINTENANCE OF STORM WATER AREA & CONTROL SYSTEMS. A DORMANT & SPECIAL SERVICE AREA (SSA) WILL BE CREATED TO ENSURE THE MAINTENANCE OF THE STORMWATER DRAINAGE AREAS. THIS SSA WILL BE RECORDED PRIOR TO RECORDING OF FINAL PLAT.
15. BOUNDARY INFORMATION PROVIDED BY ZAHN & ASSOCIATES LAND SURVEYORS FIRM NO. 184003386 DATED MARCH 3, 2022.
16. TOPOGRAPHY TAKEN FROM ELEVATIONS SHOT BY SHMITT ENGINEERING ON NOVEMBER, 17 2022

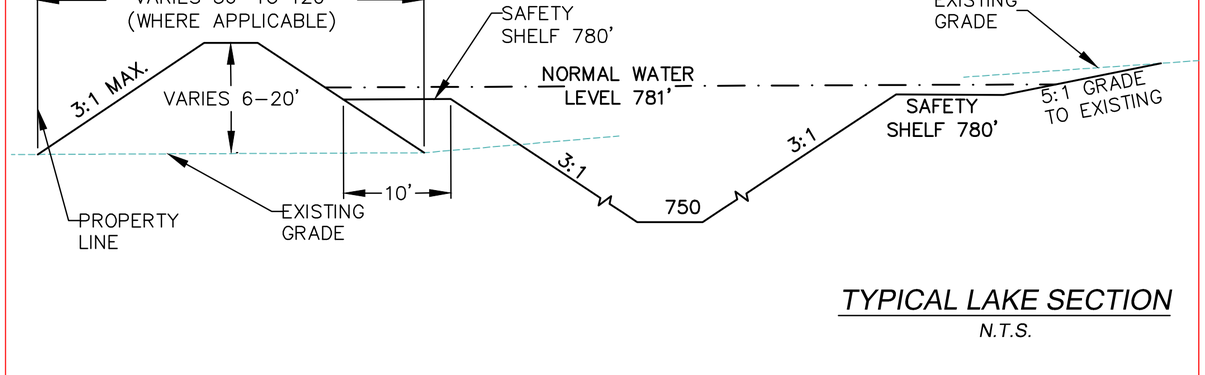
LEGAL DESCRIPTION

TRACT 2:

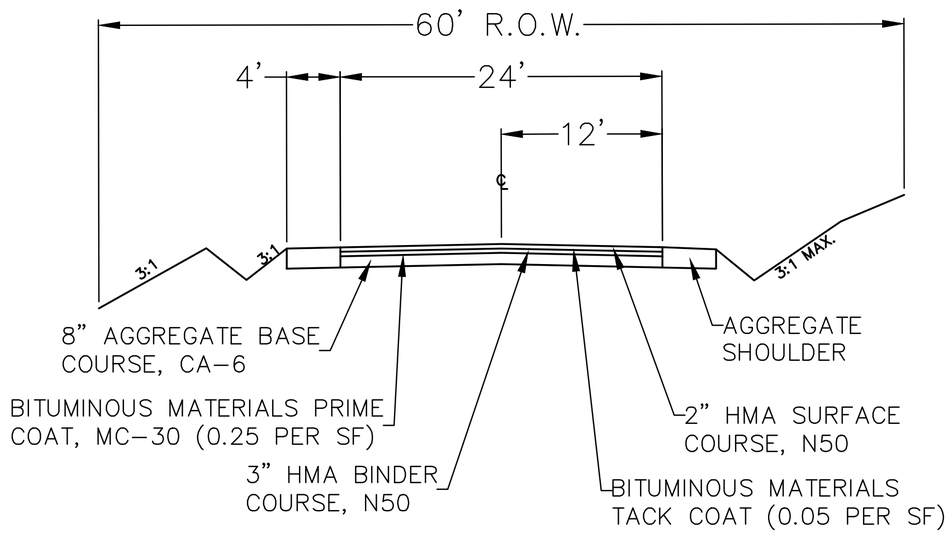
THE WEST HALF OF THE NORTH EAST QUARTER OF SECTION 29, EXCEPTING THEREFROM A TRACT DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID WEST HALF OF THE NORTH EAST QUARTER; RUNNING THENCE WEST ALONG THE EAST AND WEST QUARTER SECTION LINE 60 RODS; THENCE NORTH PARALLEL WITH THE NORTH AND SOUTH QUARTER SECTION LINE, 32 RODS; THENCE EAST PARALLEL WITH SAID EAST AND WEST QUARTER SECTION LINE, 20 RODS; THENCE NORTH PARALLEL WITH SAID NORTH AND SOUTH QUARTER SECTION LINE, 36 1/2 RODS; THENCE EAST PARALLEL WITH SAID EAST AND WEST QUARTER SECTION LINE, 20 RODS; THENCE NORTH PARALLEL WITH SAID NORTH AND SOUTH QUARTER SECTION LINE, 91 1/2 RODS TO THE NORTH LINE OF SAID SECTION; THENCE EAST ALONG SAID NORTH LINE, 20 RODS TO THE NORTH EAST CORNER OF SAID WEST HALF OF THE NORTH EAST QUARTER; THENCE SOUTH 160 RODS TO THE PLACE OF BEGINNING; ALSO EXCEPTING THEREFROM THAT PART DESCRIBED AS FOLLOWS: COMMENCING AT AN IRON PIPE 1509.75 FEET SOUTH OF AND 330.0 FEET WEST OF THE NORTHEAST CORNER OF SAID WEST 1/2 OF THE NORTHEAST 1/4; THENCE WEST PARALLEL WITH THE NORTH LINE OF SAID NORTHEAST 1/4330.00 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE NORTHEAST 1/4 264.00 FEET; THENCE EAST PARALLEL WITH THE NORTH LINE OF SAID NORTHEAST 1/4 330.00 FEET; THENCE SOUTH PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE NORTHEAST 1/4, 264.00 FEET TO THE PLACE OF BEGINNING; ALSO EXCEPTING THEREFROM THAT PART DESCRIBED AS FOLLOWS: COMMENCING AT A POINT ON THE SOUTH LINE OF SAID NORTHEAST 1/4, A DISTANCE OF 990 FEET WEST OF THE SOUTHEAST CORNER OF THE WEST 1/2 OF SAID NORTHEAST 1/4; THENCE NORTH PARALLEL WITH THE WEST LINE OF SAID NORTHEAST 1/4 A DISTANCE OF 528.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST 1/4 A DISTANCE OF 330.0 FEETTHENCE NORTH PARALLEL WITH THE WEST LINE OF SAID NORTHEAST 1/4, A DISTANCE OF 272.00 FEET; THENCE WEST PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST 1/4 A DISTANCE OF 490.0 FEET; THENCE SOUTH PARALLEL WITH THE WEST LINE OF SAID NORTHEAST 1/4, A DISTANCE OF 800.08 FEET TO THE SOUTH LINE OF SAID NORTHEAST 1/4; THENCE EAST ALONG SAID SOUTH LINE A DISTANCE OF 160.0 FEET TO THE PLACE OF BEGINNING;

TRACT 3:

THE EAST HALF OF THE NORTH WEST QUARTER OF SAID SECTION 29, EXCEPTING THEREFROM A TRACT OF LAND DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST AND WEST QUARTER SECTION LINE 20.11 1/4 CHAINS EAST OF THE QUARTER POST ON THE WEST SIDE OF SAID SECTION, SAID POINT BEING THE SOUTH WEST CORNER OF THE SAID EAST HALF OF THE NORTH WEST QUARTER; RUNNING THENCE NORTH ALONG THE EIGHTY LINE, 17 CHAINS, 12 1/2 LINKS; THENCE EAST 10 CHAINS, 18 LINKS; THENCE SOUTH 30 MINUTES EAST, 17 CHAINS AND 30 LINKS TO SAID EAST AND WEST QUARTER SECTION LINE; THENCE NORTH 89 DEGREES WEST ALONG SAID EAST AND WEST QUARTER SECTION LINE 10 CHAINS AND 33 LINKS TO THE PLACE OF BEGINNING; ALL IN TOWNSHIP 46 NORTH, RANGE 9 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN MCHENRY COUNTY, ILLINOIS.



TYPICAL LAKE SECTION
N.T.S.



TYPICAL ROAD SECTION FOR FUTURE SUBDIVISION
N.T.S.

Drawn By	ACT
Checked By	AMS
Date	06/10/2024
Scale	1" = 150 Ft.
Job Number	220907

SCHMITT ENGINEERING
215 West Calhoun Street, Woodstock, Illinois 60098
Phone (815) 337-7810 Fax (815) 337-7812
www.alschmittengineering.com

PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

RECLAMATION PLAN

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-046281
STATE OF ILLINOIS
EXPIRES 11-30-2025

Permit Number PLANNING

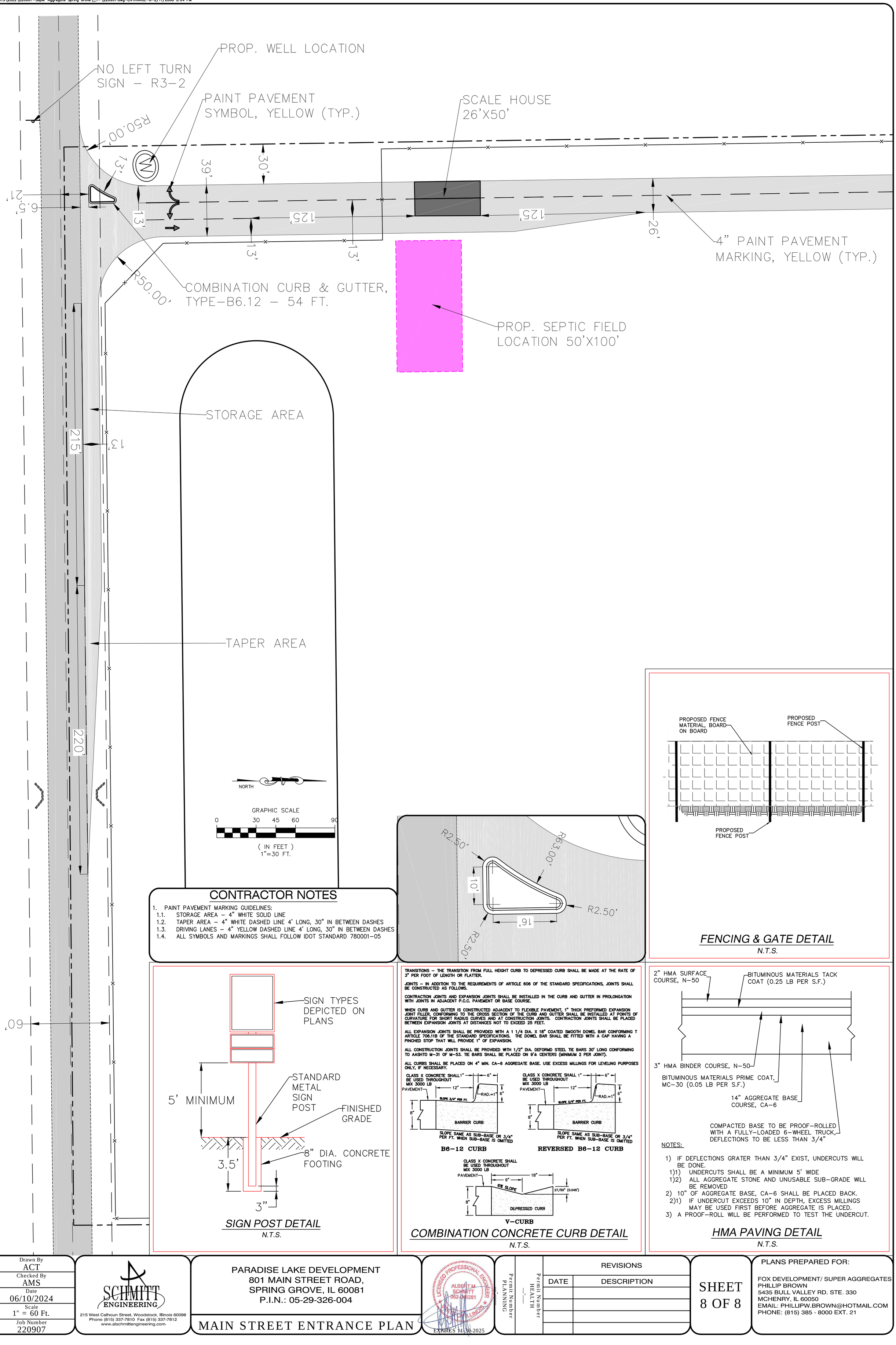
Permit Number HEALTH

REVISIONS	
DATE	DESCRIPTION

SHEET
7 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21



CONTRACTOR NOTES

1. PAINT PAVEMENT MARKING GUIDELINES:
   - 1.1. STORAGE AREA – 4" WHITE SOLID LINE
   - 1.2. TAPER AREA – 4" WHITE DASHED LINE 4' LONG, 30" IN BETWEEN DASHES
   - 1.3. DRIVING LANES – 4" YELLOW DASHED LINE 4' LONG, 30" IN BETWEEN DASHES
   - 1.4. ALL SYMBOLS AND MARKINGS SHALL FOLLOW IDOT STANDARD 780001-05

FENCING & GATE DETAIL
N.T.S.

SIGN POST DETAIL
N.T.S.

TRANSITIONS – THE TRANSITION FROM FULL HEIGHT CURB TO DEPRESSED CURB SHALL BE MADE AT THE RATE OF 3" PER FOOT OF LENGTH OR FLATTER.

JOINTS – IN ADDITION TO THE REQUIREMENTS OF ARTICLE 606 OF THE STANDARD SPECIFICATIONS, JOINTS SHALL BE CONSTRUCTED AS FOLLOWS.

CONTRACTION JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB AND GUTTER IN PROLONGATION WITH JOINTS IN ADJACENT P.C.C. PAVEMENT OR BASE COURSE.

WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, 1" THICK PREFORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTION OF THE CURB AND GUTTER SHALL BE INSTALLED AT POINTS OF CURVATURE FOR SHORT RADIUS CURVES AND AT CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT TO EXCEED 25 FEET.

ALL EXPANSION JOINTS SHALL BE PROVIDED WITH A 1 1/4 DIA. X 18" COATED SMOOTH DOWEL BAR CONFORMING T ARTICLE 706.11B OF THE STANDARD SPECIFICATIONS. THE DOWEL BAR SHALL BE FITTED WITH A CAP HAVING A PINCHED STOP THAT WILL PROVIDE 1" OF EXPANSION.

ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH 1/2" DIA. DEFORMD STEEL TIE BARS 30' LONG CONFORMING TO AASHTO M-31 OF M-53. TIE BARS SHALL BE PLACED ON 9'± CENTERS (MINIMUM 2 PER JOINT).

ALL CURBS SHALL BE PLACED ON 4" MIN. CA-6 AGGREGATE BASE. USE EXCESS MILLINGS FOR LEVELING PURPOSES ONLY, IF NECESSARY.

COMBINATION CONCRETE CURB DETAIL
N.T.S.

NOTES:

1) IF DEFLECTIONS GRATER THAN 3/4" EXIST, UNDERCUTS WILL BE DONE.
   - 1)1) UNDERCUTS SHALL BE A MINIMUM 5' WIDE
   - 1)2) ALL AGGREGATE STONE AND UNUSABLE SUB-GRADE WILL BE REMOVED
2) 10" OF AGGREGATE BASE, CA-6 SHALL BE PLACED BACK.
   - 2)1) IF UNDERCUT EXCEEDS 10" IN DEPTH, EXCESS MILLINGS MAY BE USED FIRST BEFORE AGGREGATE IS PLACED.
3) A PROOF-ROLL WILL BE PERFORMED TO TEST THE UNDERCUT.

HMA PAVING DETAIL
N.T.S.

Drawn By	ACT
Checked By	AMS
Date	06/10/2024
Scale	1" = 60 Ft.
Job Number	220907

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PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

MAIN STREET ENTRANCE PLAN

LICENSED PROFESSIONAL ENGINEER
ALBERT M SCHMITT
062-046281
STATE OF ILLINOIS
EXPIRES 11-30-2025

Permit Number PLANNING
Permit Number HEALTH

REVISIONS

DATE	DESCRIPTION

SHEET 8 OF 8

PLANS PREPARED FOR:

FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@HOTMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21

Appendix C – Illinois Department of Natural Resources EcoCAT

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

JB Pritzker, Governor

Natalie Phelps Finnie, Director

March 20, 2024

Phil Brown
Jack Pease
5435 Bull Valley Rd
Ste. 330
McHenry, IL 60050

RE: Paradise Lake
Project Number(s): 2411714
County: McHenry

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

However, be advised that the state-listed Blanding's Turtle may occur in the project vicinity. All on-site personnel be educated about this species and be instructed to contact the Department immediately if they are encountered in the project area. Additionally, if tree clearing is necessary, the Department recommends removing trees between November 1st and March 31st to avoid impacts to bats and birds.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Bradley Hayes
Division of Ecosystems and Environment
217-785-5500

Appendix D – McHenry-Lake Soil & Water District NRI Report

McHENRY-LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT

NATURAL RESOURCES INFORMATION REPORT

24-055-4611

June 5, 2024

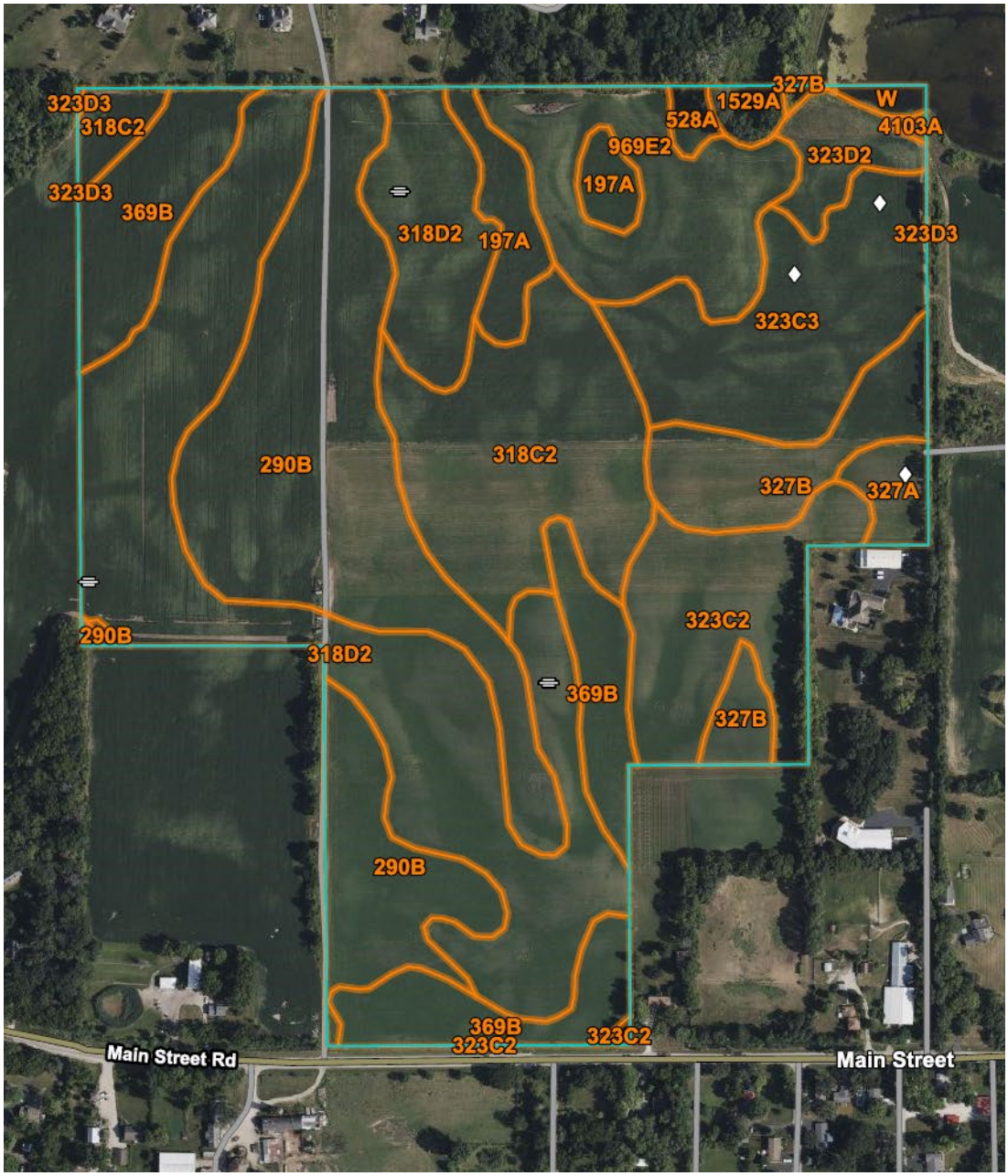
This report has been prepared for:
Jack Pease

Contact Person:
Phil Brown

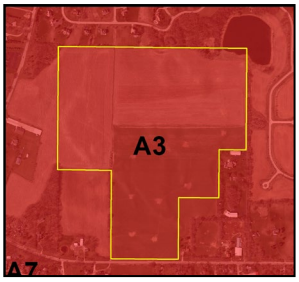
PREPARED BY:
McHENRY-LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
1648 S. EASTWOOD DR.
WOODSTOCK, IL 60098
PHONE: (815) 338-0444
www.mchenryswcd.org

EXECUTIVE SUMMARY OF NRI REPORT #24-055-4611

It is the opinion of the McHenry-Lake County Soil and Water Conservation District Board of Directors that this report as summarized on these pages are pertinent to the requested zoning change.

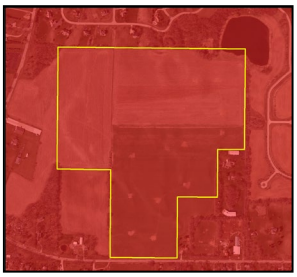


Groundwater Contamination Potential and Recharge Areas:

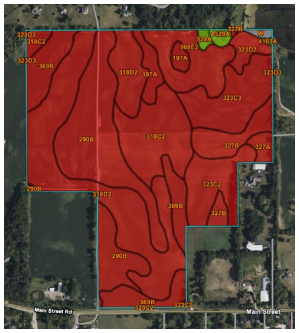


Aquifer Sensitivity Map (*This is the area beneath the soil profile down to bedrock)
The Geologic features map indicates the parcel is comprised of A3 geologic limitations. A3 has a high aquifer contamination potential.

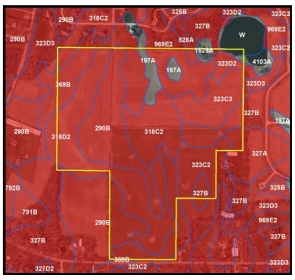
*Information provided by the applicant indicates groundwater monitoring will occur and a Spill Prevention, Containment and Control Plan has been developed and will be implemented to minimize impacts resulting from spills of fuels, petroleum products or other regulated substances.



Sensitive Aquifer Recharge Areas (Includes the soil profile and underlying geology).
The Sensitive Aquifer Recharge Map indicates the entire parcel is within an area designated as Sensitive Aquifer Recharge.



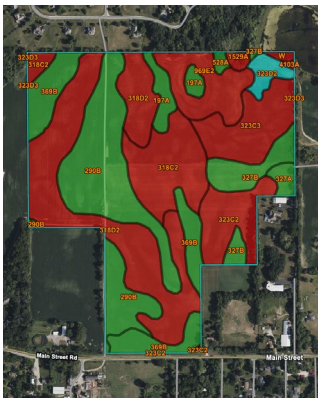
Soil Leachability Map (This is only the soil profile within the parcel from the surface down to approx. 5 feet).
The Soil Leachability Index indicates 98.4% or 101.1 acres of the parcel has a high leaching potential (red areas of map) for nitrates.



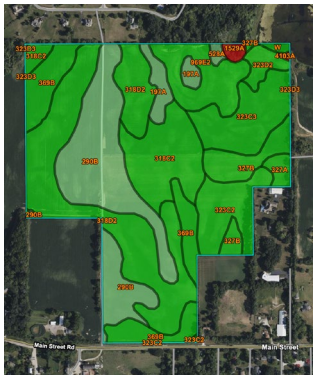
Soil Permeability Map (This is only the soil profile within the parcel from the surface down to approx. 5 feet. Soil permeability is a reflection of the speed in which water (with or without pollutants) can move through the soil profile.)
The USDA-NRCS Soil Survey Map of the area indicates 96.2% or 98.8 acres of the parcel has soils which are highly permeable, allowing water to rapidly move through the soil profile. Highly permeable areas are identified in red.

Soil Limitations (This evaluates the parcel from the surface down to approximately 5 feet.):

Erosion Ratings
The NRCS Soils Survey indicates that 61.4 acres or 59.8% of the parcel have a severe erosion rating. The McHenry SWCD can help the petitioner by reviewing erosion control plans.



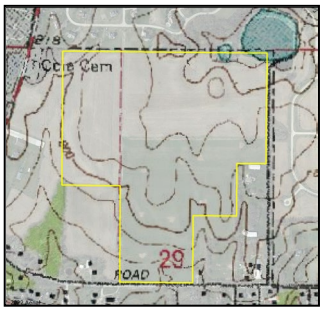
Prime Farmland Soils
The Natural Resources Conservation Service (NRCS) Soil Survey indicates that approximately 40.3 acres or 39.2% of the parcel are composed of prime farmland soils (identified in green).



Hydric Soils
The NRCS Soil Survey indicates 0.7 acres or 0.7% of the parcel are comprised of hydric soils (identified in red).

Floodplain Information:

The Flood Insurance Rate Map
Indicates 100-year floodplain is present on 0% of this parcel.

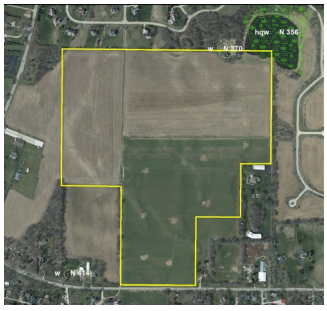


Flood of Record Map (Hydrologic Atlas)
The Flood of Record Map for this area indicates previous flooding on 0 acres of the parcel.

*The Mine Phasing & Operations Plan, prepared by Schmitt Engineering, dated 5/1/2024, indicate the flood of record area will not be impacted.

Wetland Information:

USDA-NRCS Wetland Inventory
The NRCS Wetlands Inventory identifies 0 acres of wetlands on the parcel.



ADID Wetland Inventory
The ADID Wetland Study identifies 0.24 acres of wetland N370 and 0.24 acres of High Quality Wetland N356 on the parcel in question.

*The Wetland and Waterbody Delineation Report, prepared by DKES Inc., dated November 2022, delineated the two

areas identified in the ADID study. The Mine Phasing & Operations Plan, prepared by Schmitt Engineering, dated 5/1/2024, indicate the wetland areas will not be impacted.

Cultural Resources: None identified

Woodlands: The parcel contains mature trees within the northeast corner of the parcel.

Agricultural Areas: Office Maps indicate there are no State designated agricultural areas on the parcel in question.

Land Evaluation Site Assessment (LESA)
The Land Evaluation Score for the parcel is 71.05. A Site Assessment was not completed due to the remaining agricultural zoning.

CONCERNS OF THE MLCSWCD BOARD

Concerns regarding wetlands, floodplain and groundwater contamination, have been addressed by the applicant (see comments above). The McHenry-Lake County Soil & Water Conservation District Board of directors, have no additional concerns at this time.

NATURAL RESOURCE INFORMATION REPORT (NRI)

NRI Report Number	24-055-4611
Date District Board Reviews Application	June 4, 2024
Applicant's Name	Jack Pease
Size of Parcel	104 acres
Zoning Change	A-1 Conditional Use (Earth Extraction/Mining & Site Reclamation)
Parcel Index Number(s)	05-29-126-001, 05-29-200-015
Common Location	Undefined
Contact Person	Phil Brown

Copies of this report or notification of the proposed land-use change were provided to:	***yes***	***no***
The Applicant	x	
The Applicant's Legal Representation		x
The Village/City/County Planning and Zoning Department or Appropriate Agency	x	

Report Prepared By: *Spring M. Duffey* Position: *Executive Director*

Contents *Page*

PURPOSE AND INTENT

The purpose of this report is to inform officials of the local governing body and other decision-makers with natural resource information. This information may be useful when undertaking land use decisions concerning variations, amendments or relief of local zoning ordinances, proposed subdivision of vacant or agricultural lands and the subsequent development of these lands. This report is a requirement under Section 22.02a of the Illinois Soil and Water Conservation Districts Act.

The intent of this report is to present the most current natural resource information available in a readily understandable manner. It contains a description of the present site conditions, the present resources, and the potential impacts that the proposed change may have on the site and its resources. The natural resource information was gathered from standardized data, on-site investigations and information furnished by the petitioner. This report must be read in its entirety so that the relationship between the natural resource factors and the proposed land use change can be fully understood.

Due to the limitations of scale encountered with the various resource maps, the property boundaries depicted in the various exhibits in this report provide a generalized representation of the property location and may not precisely reflect the legal description of the PIQ (Parcel in Question).

This report, when used properly, will provide the basis for proper land use change decisions and development while protecting the natural resource base of the county. It should not be used in place of detailed environmental and/or engineering studies that are warranted under most circumstances, but in conjunction with those studies.

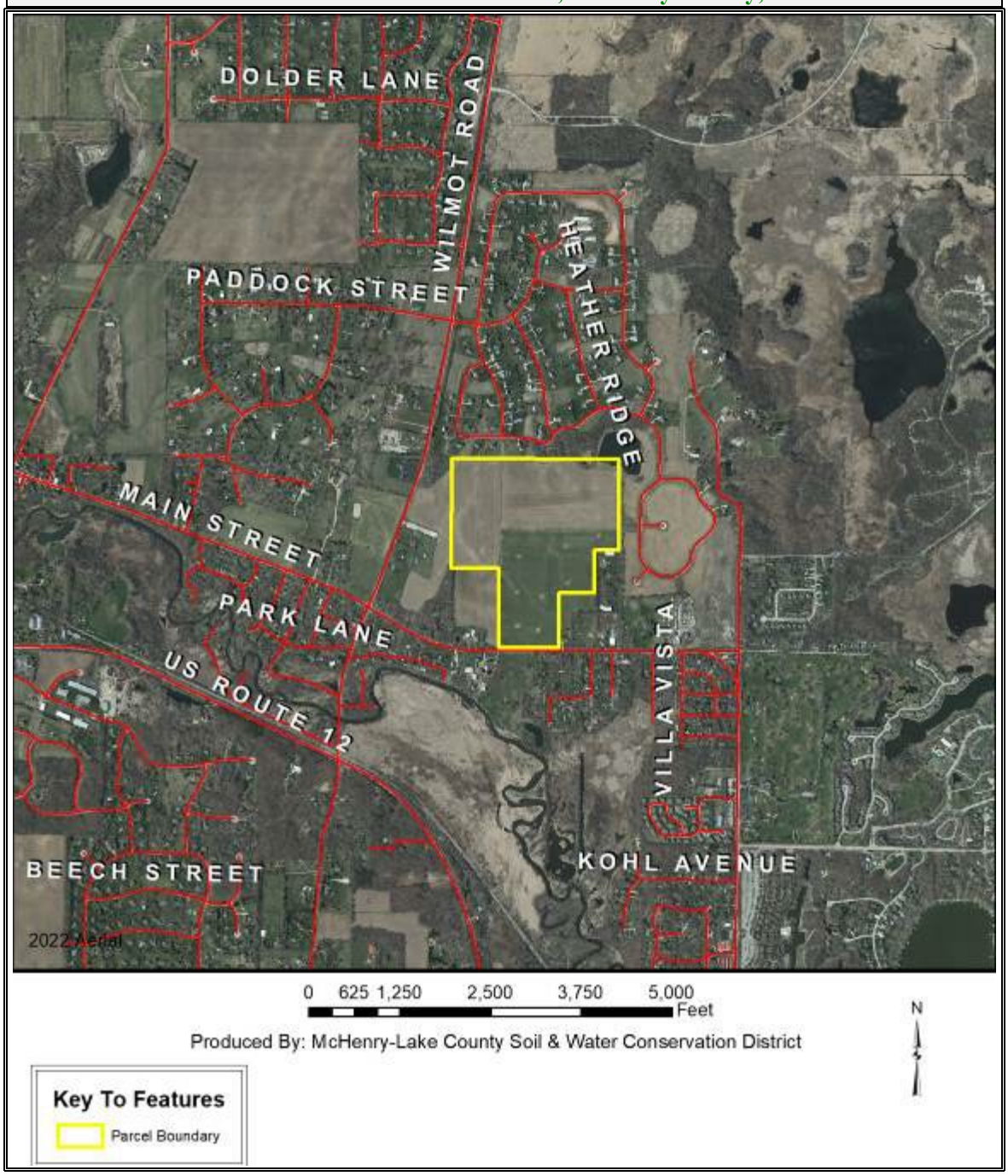
The conclusions of this report in no way indicate that a certain land use is not possible, but it should alert the reader to possible problems that may occur if the capabilities of the land are ignored. Any questions on the technical data supplied in this report or if anyone feels that they would like to see more additional specific information to make the report more effective, please contact:

McHenry-Lake County Soil & Water Conservation District
1648 S. Eastwood Dr.
Woodstock, IL 60098
Phone: (815) 338-0444 ext. 3
www.mchenryswcd.org
E-mail: Spring.Duffey@il.nacdnet.net

PARCEL LOCATION

Location Map for Natural Resources Information Report # 24-055-4611

In the Northwest and Northeast Quarter of Section 29, Township 46 North, Range 9 East, on 104 acres. This parcel is located on the north side of Main Street, east of the intersection of Main Street and Wilmot Road, McHenry County, IL.



ARCHAEOLOGIC/CULTURAL RESOURCES

Simply stated, cultural resources are all the past activities and accomplishments of people. They include the following: buildings; objects made or used by people; locations; and less tangible resources, such as stories, dance forms, and holiday traditions. The Soil and Water Conservation District most often encounters cultural resources as historical properties. These may be prehistoric or historical sites, buildings, structures, features, or objects. The most common type of historical property that the Soil and Water Conservation District may encounter is non-structural archaeological sites. These sites often extend below the soil surface, and must be protected against disruption by development or other earth moving activity if possible. Cultural resources are *non-renewable* because there is no way to "grow" a site to replace a disrupted site.

Landowners with historical properties on their land have ownership of that historical property. However, the State of Illinois owns all of the following: human remains, grave markers, burial mounds, and artifacts associated with graves and human remains.
Non-grave artifacts from archaeological sites and historical buildings are the property of the landowner. The landowner may choose to disturb a historical property, but may not receive federal or state assistance to do so. If an earth moving activity disturbs human remains, the landowner must contact the county coroner within 48 hours.

Office maps do not indicate historical features on the parcel in question. (PIQ)

ECOLOGICALLY SENSITIVE AREAS

What is Biological Diversity and Why Should it be Conserved?[1]

Biological diversity, or biodiversity, is the range of life on our planet. A more thorough definition is presented by botanist Peter H. Raven: "At the simplest level, biodiversity is the sum total of all the plants, animals, fungi and microorganisms in the world, or in a particular area; all of their individual variation; and all of the interactions between them. It is the set of living organisms that make up the fabric of the planet Earth and allow it to function as it does, by capturing energy from the sun and using it to drive all of life's processes; by forming communities of organisms that have, through the several billion years of life's history on Earth, altered the nature of the atmosphere, the soil and the water of our Planet; and by making possible the sustainability of our planet through their life activities now." (Raven 1994)

[1]Taken from *The Conservation of Biological Diversity in the Great Lakes Ecosystem: Issues and Opportunities*, prepared by the Nature Conservancy Great Lakes Program 79W. Monroe Street, Suite 1309, Chicago, IL 60603, January 1994

It is not known how many species occur on our planet. Presently, about 1.4 million species have been named. It has been estimated that there are perhaps 9 million more that have not been identified. What is known is that they are vanishing at an unprecedented rate. Reliable estimates show extinction occurring at a rate several orders of magnitude above "background" in some ecological systems. (Wilson 1992, Hoose 1981)

The reasons for protecting biological diversity are complex, but they fall into four major categories.

First, loss of diversity generally weakens entire natural systems. Healthy ecosystems tend to have many natural checks and balances. Every species plays a role in maintaining this system. When simplified by the loss of diversity, the system becomes more susceptible to natural and artificial perturbations. The chances of a system-wide collapse increase. In parts of the midwestem United States, for example, it was only the remnant areas of natural prairies that kept soil intact during the dust bowl years of the 1930s. (Roush 1982)

Simplified ecosystems are almost always expensive to maintain. For example, when synthetic chemicals are relied upon to

control pests, the target species are not the only ones affected. Their predators are almost always killed or driven away, exasperating the pest problem. In the meantime, people are unintentionally breeding pesticide-resistant pests. A process has begun where people become perpetual guardians of the affected area, which requires the expenditure of financial resources and human ingenuity to keep the system going.

A second reason for protecting biological diversity is that it represents one of our greatest untapped resources. Great benefits can be reaped from a single species. About 20 species provide 90% of the world's food. Of these 20, just three, wheat, maize and rice-supply over one half of that food. American wheat farmers need new varieties every five to 15 years to compete with pests and diseases. Wild strains of wheat are critical genetic reservoirs for these new varieties.

Further, every species is a potential source of human medicine. In 1980, a published report identified the market value of prescription drugs from higher plants at over $3 billion. Organic alkaloids, a class of chemical compounds used in medicines, are found in an estimated 20% of plant species. Yet only 2% of plant species have been screened for these compounds. (Hoose 1981)

The third reason for protecting diversity is that humans benefit from natural areas and depend on healthy ecosystems. The natural world supplies our air, our water, our food and supports human economic activity. Further, humans are creatures that evolved in a diverse natural environment between forest and grasslands. People need to be reassured that such places remain. When people speak of "going to the country," they generally mean more than getting out of town. For reasons of their own sanity and well being, they need a holistic, organic experience. Prolonged exposure to urban monotony produces neuroses, for which cultural and natural diversity cure.

Historically, the lack of attention to biological diversity, and the ecological processes it supports, has resulted in economic hardships for segments of the basin's human population.

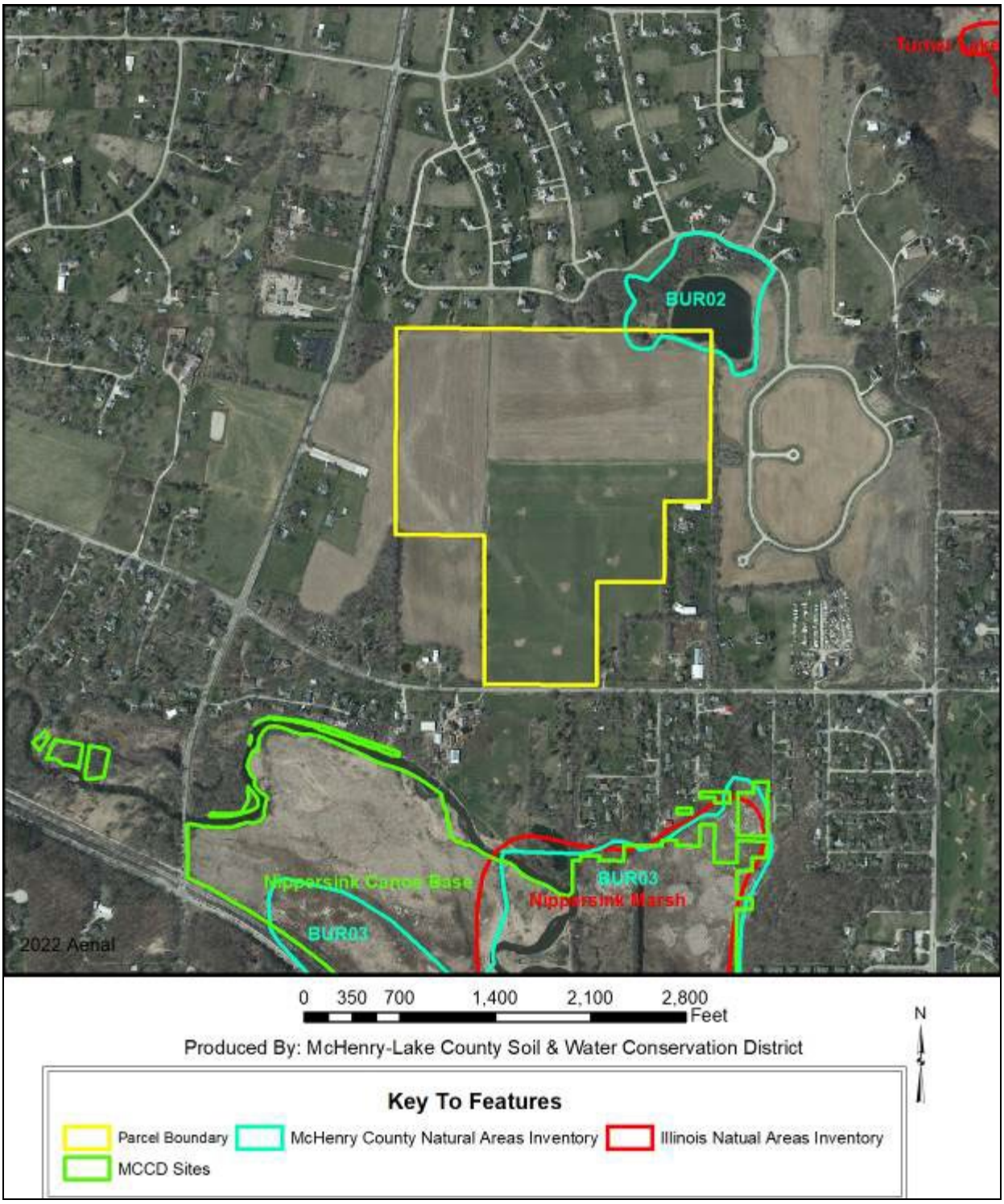
The final reason for protecting biological diversity is that species and natural systems are intrinsically valuable. The above reasons have focused on the benefits of the natural world to humans. All things possess intrinsic value simply because they exist.

Biological Resources Concerning the Subject Parcel

As part of the Natural Resources Information Report, staff checks office maps to determine if any nature preserves are within 500 feet of the parcel in question. If there is a nature preserve in the area, then that resource will be identified as part of the report. The SWCD recommends that every effort be made to protect that resource. Such efforts should include, but are not limited to erosion control, sediment control, stormwater management, and groundwater monitoring.

Office maps indicate McHenry County Natural Areas Inventory Site BUR02 – Lotus Pond is located within the northeast corner of the parcel. This site has been previously destroyed.

Additionally, office maps indicate Illinois Natural Areas Inventory Site and McHenry County Natural Areas Inventory Site BUR03 – Nippersink Canoe Base Wetlands, is located south of the parcel. This McHenry County Conservation District Site contains a Bluff/Ravine, Mid Order Low Gradient Stream, Graminoid Fen, Sedge Meadows, Streamside Marshes, and Mesic Silt Loam Woodland. The site is threatened by artificial ponding, bank erosion, water table alteration, brush encroachment, Purple Loosestrife, Reed Canary Grass, and grazing.


BUR02
Nippersink Canoe Base
BUR03
BUR03
Nippersink Marsh
2022 Aerial
0 350 700 1,400 2,100 2,800
Feet
N
Produced By: McHenry-Lake County Soil & Water Conservation District
Key To Features
Parcel Boundary
McHenry County Natural Areas Inventory
Illinois Natual Areas Inventory
MCCD Sites

M.C.N.A.I. 2005

Lotus Pond-STATION DESTROYED

BUR02

MCCD-NRM
Base map: 2001 aerial photo
Site last visited: 2004-destroyed
Map Date: 1/31/05

Feet
0 200 400 600
Meters
0 50 100 150 200

Township: Burton
Sections: 20, 29
Former ID: N356

Nippersink Canoe Base Wetlands

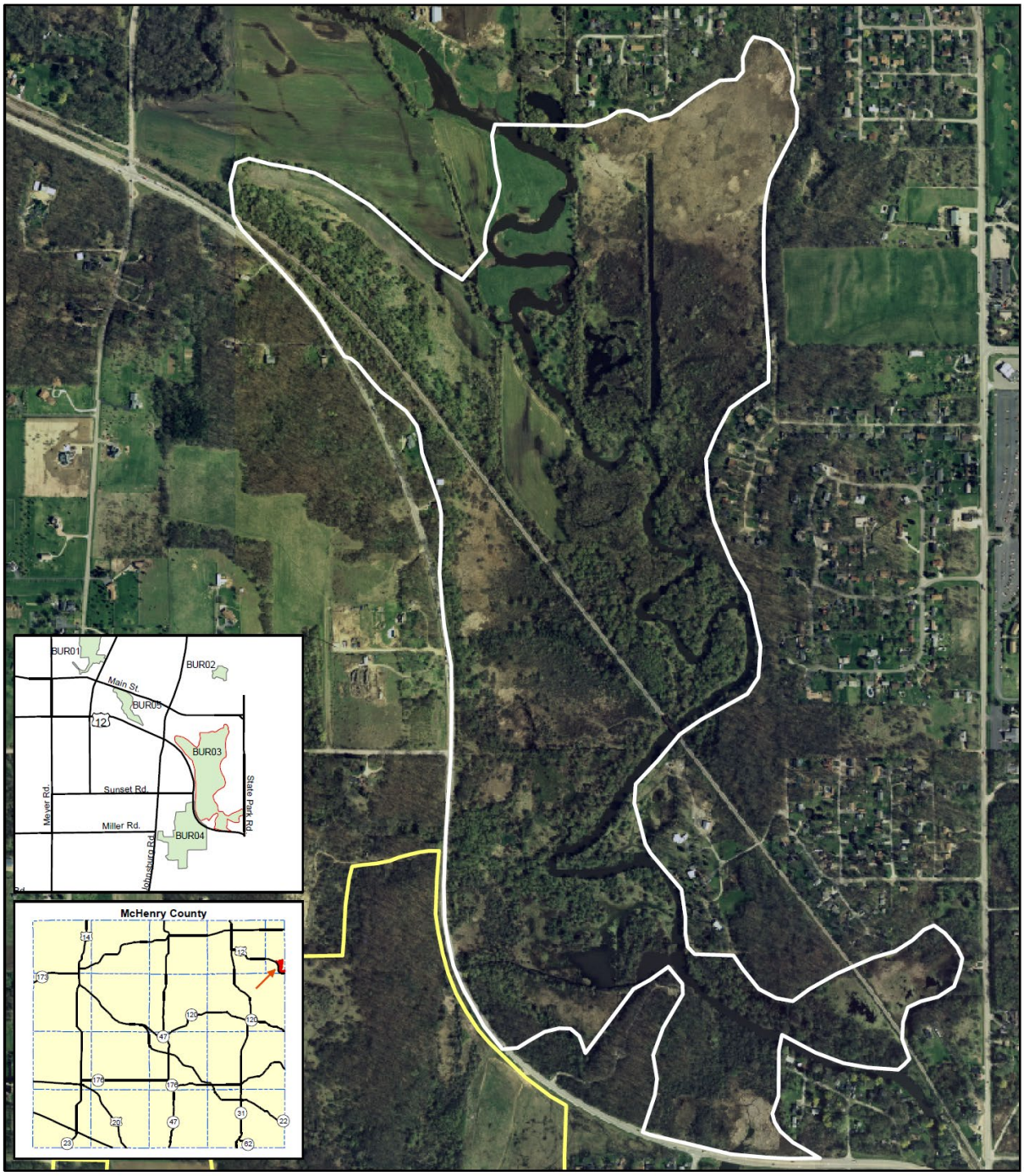
BUR03

M.C.N.A.I. 2005

MCCD-NRM
Base map: 2001 aerial photo
Site last visited: 2005
Map Date: 1/31/05

Feet
0 500 1,000 1,500
Meters
0 100 200 300 400 500

Township: Burton
Sections: 29, 32
Former ID: N428



WOODLANDS

Existing mature trees should be preserved whenever possible. Woodlands provide a large number of benefits such as wildlife habitat, erosion control, air and water quality improvements, as well as aesthetic values. Construction activities can indirectly destroy trees. Oak trees are particularly susceptible to long term, permanent damage caused by construction activities and require special consideration. It is also recommended that invasive non-native species be removed whenever possible.

Native woodlands are no longer a common occurrence throughout much of McHenry County. Although forests originally covered nearly 40% of Illinois, today only about 12% of the state is forested, with most of this being secondary growth (Ill. Natural History Survey Reports, Nov/Dec 1993, No. 324). The composition of Illinois forests has changed markedly over the past three decades. 97% of the timberland is classified as hardwood forest. The forest acreage continues to increase from 4.2 million acres in 1985 to 4.3 million acres in 1998. (IL Forest Development Council News, IL DNR, Winter 2001/Volume 2, No. 1). Oak-hickory forests, which had made up half of the acreage, have declined by 14%, and make up 2.1 million acres. This decline is largely a result of wildfire suppression that allows maples to take over. Thus, the acres of maple-beech forest have risen more than 40-fold from 1962 to 1985, to one quarter of the total forest area, 696 thousand acres. Dutch elm disease and the conversion of forested bottomlands to agriculture have resulted in huge declines in the elm-ash-cottonwood forests, 906 thousand acres, falling from one third - one sixth of the Illinois forest area. Elm accounts for the greatest number of individual trees – 412 million. Other species groups with more than 100 million trees include hickory, red oak, sugar/black maple, ash, hackberry, and black cherry.

Woodlands provide many benefits such as wildlife habitat, erosion control, air and water quality improvements, and aesthetic values. Forests are responsible for much of the biological diversity in the state. Many species are dependent upon forests for food & shelter, including threatened/endangered species.

One of the most serious problems facing Illinois forests is the invasion of exotic plants and animals. Some of the most damaging plants includes European buckthorn, multiflora rose, honeysuckle, purple loosestrife, and garlic mustard.

Many trees, particularly hardwoods (especially oaks) are extremely sensitive to construction-induced disturbances. The area most susceptible to damage is within the "drip radius," the ground surface directly beneath the leafy canopy of the tree. Many trees have an extensive system of feeder roots, located within one foot of the surface, and supply the tree with the majority of its moisture and nutrient needs.

Construction activities can negatively impact trees in several different ways. Earth-moving activities that stockpile soil near trees can suffocate tree roots that, although buried, require oxygen. Vehicle traffic can compact the soil to a point where the roots no longer function effectively. Grading activities for road cuts and foundations can cause a localized drop in the water table, placing the trees under stress. The placement of pavement or stormwater management facilities near established trees can also radically change soil moisture. The removal of the accumulated organic materials normally present on a woodland floor, and the subsequent establishment of turf lawns, can drastically affect the soil temperature and nutrient balance. Injury to the bark of a tree can increase the chance of the tree being subjected to a potentially harmful disease.

If existing trees are to be maintained in a healthy state, the appropriate planning is necessary. Someone with a working knowledge of forestry should assess existing trees to determine which trees should be protected. Some tree species are not considered desirable due to their aggressive growth, behavior, and limited value to local wildlife. Proper management of woodlands and open space includes the selective elimination of such trees and replacement by more desirable species. **Trees that are to be saved should be marked and protected with snow fencing or similar material, installed around the drip radius, to prevent root damage,** and vehicle traffic should

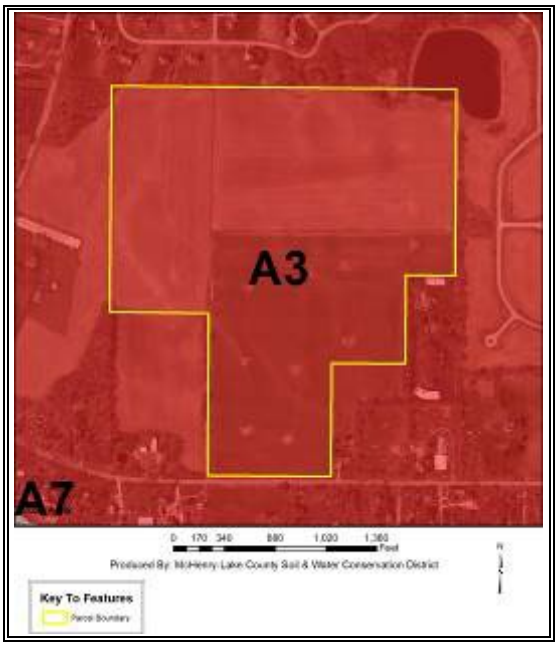
be minimized around the drip line. Contractors should be informed of the intention to preserve trees and be expected to conduct their work accordingly.

Tree damage resulting from construction activities may not be apparent for a number of years. While it is recognized that some tree loss is unavoidable, this should be minimized to the extent possible. It is highly recommended that trees lost to development activity be replaced by younger specimens of the native trees now found on the PIQ.

GEOLOGIC INFORMATION

Geology and the Proposed Land Use

As density of septic systems increases, the concern for pollution potential of local groundwater rises. Local geology plays an important role in determining the pollution potential. Groundwater pollution potential is an important factor when determining a specific area's suitability for a given land use. The local geology, is an important element of the natural resource base. This information, when compared to soils information, gives a clearer picture of conditions on this parcel.



Aquifer Sensitivity, McHenry County, Illinois (e.g., septic systems) (Vaiden et al.)

Geological data comes from the Illinois State Geological Survey Circular 559, *Geologic Mapping for Environmental Planning, McHenry County, Illinois.*

The Geologic features map indicates the parcel is comprised of A3 geologic limitations.

A3: Geologic limitations. The potential for contaminating shallow aquifers is high. In these areas, contaminants from any source can move rapidly through these sand and gravel deposits to wells or nearby streams. In addition, this thick surficial aquifer is commonly hydraulically connected to underlying aquifers (Berg 1994). Land-use practices should be very conservative in all areas mapped as unit A. (Curran et al 1997) (Contains 20 –50 feet Henry sand and gravel at surface).

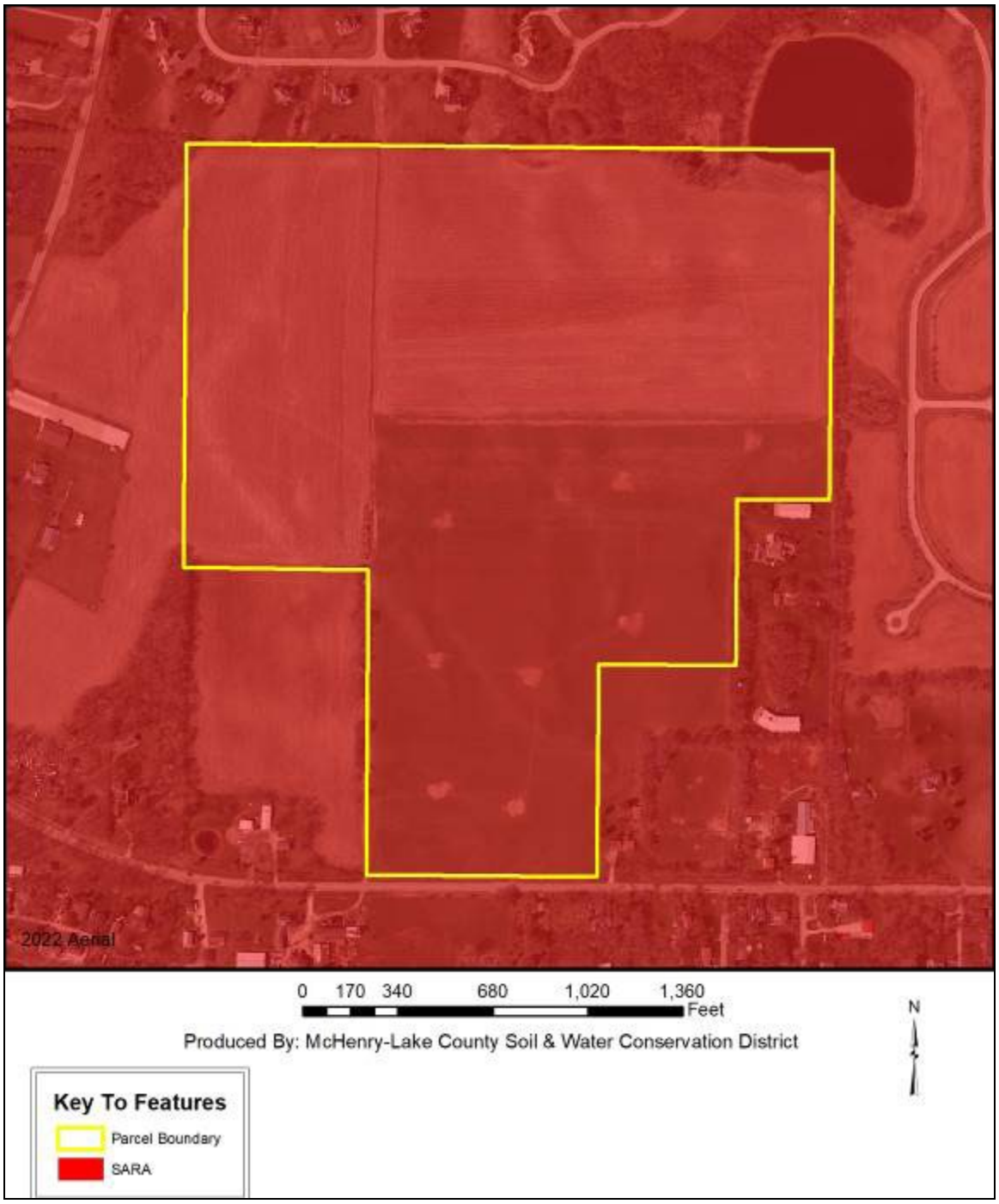
SENSITIVE AQUIFER RECHARGE AREAS

Developed for McHenry County in 2008 and revised in 2018 is the "McHenry County Sensitive Aquifer Recharge Areas" map. Because McHenry County is 100% reliant on groundwater and has been experiencing groundwater quantity/quality issues, the county board in 1995 authorized a groundwater investigation/report titled "County of McHenry Groundwater Resources Management Plan". Many facts in that report startled decision makers. For example, the report found that in 2000, one township was withdrawing groundwater at unsustainable rates and by 2030 if status-quo, three townships would be doing the same and that three other townships would be approaching that un-sustainability. In 2007, the County Board hired a full time Water Resources Manager and authorized the creation of the McHenry County Groundwater Task Force. The Recharge Subcommittee of the Groundwater Task Force was charged with identifying areas within the county that could be considered to have high potential for recharge of shallow groundwater and develop recommendations for protecting those areas in terms of both quantity and quality. The original main basis for the map identifying recharge is areas of high or moderately high potential for aquifer contamination as identified in the Illinois State Geological Survey's Circular 559, "Geologic Mapping for Environmental Planning, McHenry County, IL". In a meeting of the recharge subcommittee, Illinois State Geological Survey and Illinois State Water Survey, it was determined that the areas of high or moderately high potential for aquifer contamination could be qualified by using soil properties. The plan was to remove from the high and moderately high areas those soils with slow permeability, steep slopes and hydric soils that discharge groundwater. Using Table 6 of the Soil Survey of McHenry County a digital layer was developed of soil properties:

- Restricted permeability
- Slopes 4% or greater (except if the soil had excessive permeability, it was not included)

Also digitized were groundwater discharge hydric soils. NRCS Illinois Area 3 Resource Soil Scientists in 2002 developed a hydric soil recharge/flow through/discharge guide to use when designing wetland restoration. Because recharge/flow through/discharge is very complex and changes depending on the year only soils that were thought to be generally only groundwater discharge were used.

Subsequent to the original map development, 3D groundwater modeling has occurred and provided more precise groundwater flow data and thus was the basis for the 2018 map update. *(Information Courtesy of the McHenry County Groundwater Taskforce – Recharge Subcommittee.)*



The map indicates the entire parcel is within a Sensitive Aquifer Recharge Area.

SOILS INFORMATION

Importance of Soils Information

Soils information comes from Natural Resources Conservation Service Soil Maps and Descriptions for McHenry County. This information is important to all parties involved in determining the suitability of the proposed land use change.

Each soil polygon is given a number, which represents its soil type. The letter found after the soil type number indicates the soils slope class.

Each soil map unit has limitations for a variety of land uses such as septic systems, buildings with basements, and buildings without basements. It is important to remember that soils do not function independently of each other. The behavior of a soil depends upon the physical properties of adjacent soil types, the presence of artificial drainage, soil compaction, and its position in the local landscape.

The limitation categories (slight, moderate or severe) indicate the potential for difficulty in using that soil unit for the proposed activity and, thus, the degree of need for thorough soil borings and engineering studies. A limitation does not necessarily mean that the proposed activity cannot be done on that soil type. It does mean that the reasons for the limitation need to be thoroughly understood and dealt with in order to complete the proposed activity successfully. A severe limitation indicates that the proposed activity will be more difficult and costly to do on that soil type than on a soil type with a moderate or slight rating.

Soil survey interpretations are predictions of soil behavior for specified land uses and specified management practices. They are based on the soil properties that directly influence the specified use of the soil. Soil survey interpretations allow users of soil surveys to plan reasonable alternatives for the use and management of soils.

Soil interpretations do not eliminate the need for on-site study and testing of specific sites for the design and construction for specific uses. They can be used as a guide for planning more detailed investigations and for avoiding undesirable sites for an intended use. The scale of the maps and the range of error limit the use of the soil delineations.


Soil Map—McHenry County, Illinois
(ParcelBoundary)
88° 12' 51" W
88° 12' 14" W
42° 26' 45" N
42° 26' 9" N
400200
400300
400400
400500
400600
400700
400800
400900
4700000
4699900
4699800
4699700
4699600
4699500
4699400
4699300
4699200
4699100
4699000
4698900
4698800
323D3
318C2
323D3
369B
318D2
197A
969E2
197A
528A
1529A
327B
W
4103A
323D2
323D3
323C3
290B
318C2
327B
327A
290B
318D2
323C2
369B
327B
290B
369B
323C2
323C2
Main Street Rd
Main Street
Soil Map may not be valid at this scale.
Map Scale: 1:5,460 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0
50
100
200
300
Feet
0
250
500
1000
1500
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Soil Map Unit Descriptions

Map Unit Symbol	Map Unit Name	Acres	Percent
197A	Troxel silt loam, 0 to 2 percent slopes	2.8	2.7%
290B	Warsaw loam, 2 to 4 percent slopes	20.7	20.2%
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	11.3	11.0%
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	25.6	24.9%
323C2	Casco loam, 4 to 6 percent slopes, eroded	6.9	6.7%
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	8.6	8.4%
323D2	Casco loam, 6 to 12 percent slopes, eroded	1.9	1.9%
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	0.0	0.0%
327A	Fox silt loam, 0 to 2 percent slopes	1.2	1.2%
327B	Fox silt loam, 2 to 4 percent slopes	5.3	5.1%
369B	Waupecan silt loam, 2 to 4 percent slopes	9.8	9.5%
528A	Lahoguess loam, 0 to 2 percent slopes	0.5	0.5%
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	7.1	6.9%
1529A	Selmass loam, 0 to 2 percent slopes, undrained	0.6	0.6%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	0.1	0.1%
W	Water	0.4	0.4%
Totals for Area of Interest		**102.7**	**100.0%**

*SOURCE: National Cooperative Soil Survey

Soil Interpretations Explanation

Nonagricultural

General

These interpretative ratings help engineers, planners, and others to understand how soil properties influence behavior when used for nonagricultural uses such as building site development or construction materials. This report gives ratings for proposed uses in terms of limitations and restrictive features. The tables list only the most restrictive features. Other features may need treatment to overcome soil limitations for a specific purpose.

Ratings come from the soil's "natural" state, that is, no unusual modification occurs other than that which is considered normal practice for the rated use. Even though soils may have limitations, an engineer may alter soil features or adjust building plans for a structure to compensate for most degrees of limitations. Most of these practices, however, are costly. The final decision in selecting a site for a particular use generally involves weighing the costs for site preparation and maintenance.

Soil properties influence development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Soil limitation ratings of slight, moderate, and severe are given for the types of proposed improvements that are listed or inferred by the petitioner as entered on the report application and/or zoning petition. The most common types of building limitation that this report gives limitations ratings for is: septic systems. It is understood that engineering practices can overcome most limitations for buildings with and without basements, and small commercial buildings. Limitation ratings for these types of buildings are not commonly provided. Organic soils, when present on the parcel, are referenced in the hydric soils section of the report. This type of soil is considered to be unsuitable for all types of construction.

Limitations Ratings

1. ***Slight*** - This soil has favorable properties for the use. The degree of limitation is minor. The people involved can expect good performance and low maintenance.
2. ***Moderate*** - This soil has moderately favorable properties for the use. Special planning, design, or maintenance can overcome this degree of limitation. During some part of the year, the expected performance is less desirable than for soils rated slight.
3. ***Severe or Very Severe***- This soil has one or more properties that are unfavorable for the rated use. These may include the following: steep slopes, bedrock near the surface, flooding, high shrink-swell potential, a seasonal high water table, or low strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance, which in most situations is difficult and costly.

SOIL LEACHABILITY

This interpretation is designed to evaluate the potential for nitrate-nitrogen to be transmitted through the soil profile below the root zone by percolating water under nonirrigated conditions. Leaching nitrates have the potential to contaminate shallow and deep aquifers used for drinking water. The ratings are based on inherent soil and climate properties that affect nitrate leaching and do not account for management practices, such as crop rotation and rates and timing of nitrogen fertilizer applications.

The following soil and climate factors are used in the interpretation criteria:

1. Mean annual precipitation minus potential evapotranspiration - This factor provides an estimate of the amount of water that is available to move through the soil profile on an annual basis. Potential evaporation is estimated from mean annual air temperature using an algorithm (developed by the National Soil Survey Center) that employs the Hamon potential evapotranspiration method.

2. Water travel time through the entire soil profile - This factor uses the saturated hydraulic conductivity (Ksat) and thickness of each soil horizon to estimate the number of hours that would be required for a given volume of water to move through the entire soil profile. One advantage of this method for estimating the rate of water movement is that the properties and thickness of each soil horizon are accounted for instead of using an average saturated hydraulic conductivity for the entire profile. This method accounts for subtle differences between soils in texture, structure, horizon thickness, and depth to water-restricting layers.

3. Available water capacity - This factor accounts for the cumulative amount of water available to plants that the entire soil profile can hold at field capacity to a depth of 150 cm. The more water the soil profile can hold, the less water is available for deep leaching.

4. Depth to and duration of a water table - This factor uses a water table index based on the minimum average depth to a water table and the number of months that the water table is present during the period from April through October. The factor is used to account for the loss of nitrates to the atmosphere as nitrous oxide or nitrogen gas due to denitrification under anaerobic conditions caused by water saturation. The higher the water table and the longer its duration, the larger the quantity of nitrates that would potentially be lost to the atmosphere and therefore would not be available for deep leaching.

5. Slope gradient adjusted for hydrologic soil group - The steeper the slope gradient, the higher the potential for surface runoff and the lower the amount of water available to move through the soil profile. The following adjustments are made to the slope gradient by hydrologic group to account for differences in potential for surface runoff:

Hydrologic group A-slope % x 0.75

Hydrologic group B-slope % x 0.85

Hydrologic group C-slope % x 0.95

Hydrologic group D-no adjustment

The ratings are both verbal and numerical. The ratings for Nitrate Leaching Potential, Nonirrigated Areas, are calculated as follows:

- The Mean Annual Precipitation minus Potential Evapotranspiration subrule is weighted by multiplying by 0.60.
- The Water Travel Time subrule is weighted by multiplying by 0.25.
- The Available Water Capacity subrule is weighted by multiplying by 0.15.
- The sum of these three weighted subrules results in a value between 0.00 and 1.00.
- Adjustments are then made for water table depth and duration and for slope gradient adjusted for hydrologic group. The sum of the values from these subrules is subtracted from the sum in step 4 above. The maximum reduction is0.50 for the water table index subrule and 0.30 for the slope gradient subrule.

The following rating classes for Nitrate Leaching Potential, Nonirrigated Areas, are assigned based on the final calculation from the factors above:

Low: 0.00 to 0.25

Moderate: 0.26 to 0.50

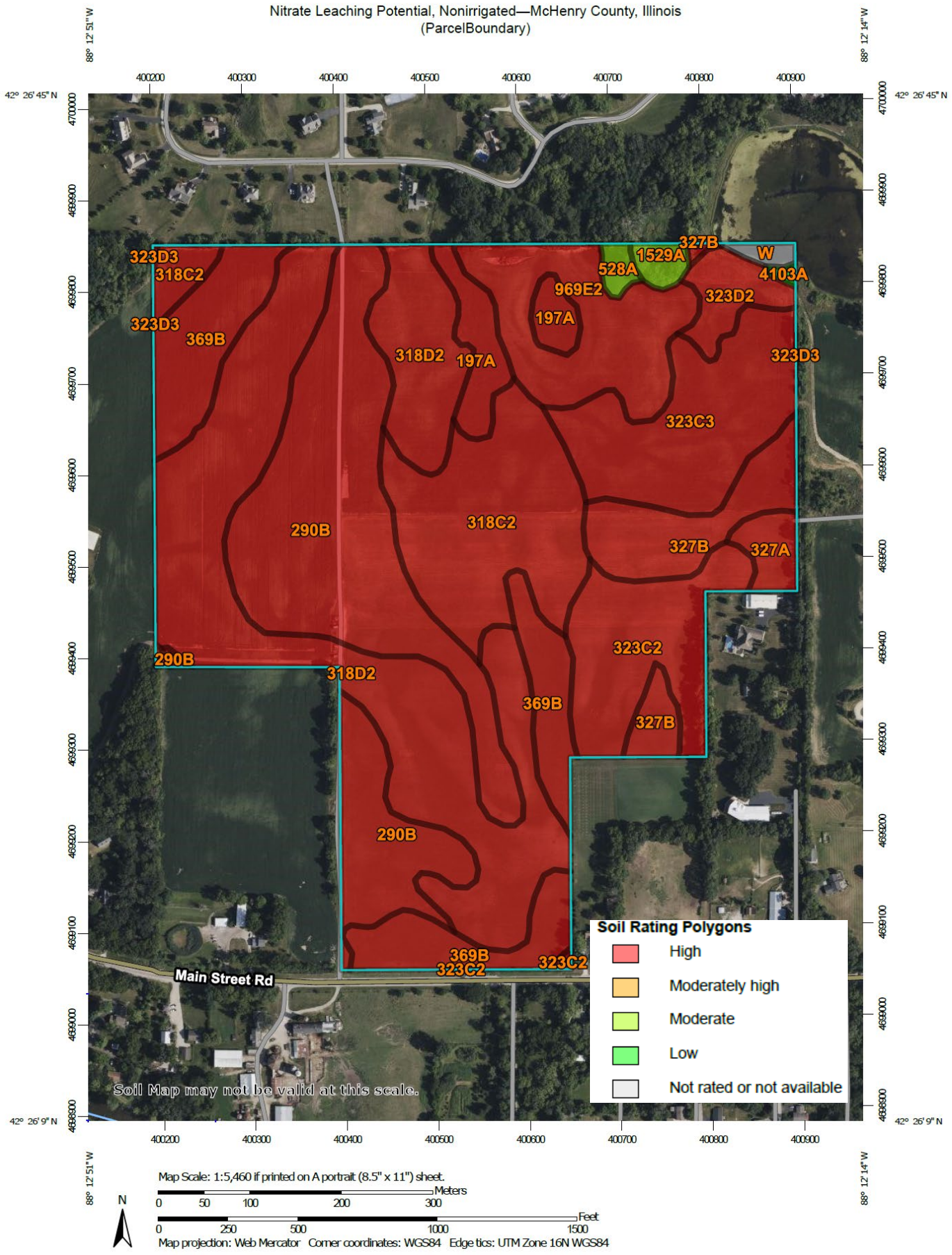
Moderately high: 0.51 to 0.75

High: 0.76 to 1.00

The ratings indicate the potential for nitrate leaching below the root zone, based on inherent soil and climate properties. A "low" rating indicates a low potential for leaching of nitrates below the root zone. A "high" rating indicates a high potential for leaching of nitrates below the root zone. The "moderate" and "moderately high" ratings indicate intermediate potential.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.


Nitrate Leaching Potential, Nonirrigated—McHenry County, Illinois
(ParcelBoundary)
88° 12' 51" W
88° 12' 14" W
42° 26' 45" N
42° 26' 9" N
400200
400300
400400
400500
400600
400700
400800
400900
4700000
4699900
4699800
4699700
4699600
4699500
4699400
4699300
4699200
4699100
4699000
4698900
4698800
323D3
318C2
323D3
369B
318D2
197A
969E2
528A
1529A
327B
W
4103A
323D2
197A
323D3
323C3
290B
318C2
327B
327A
323C2
290B
318D2
369B
327B
290B
369B
323C2
323C2
Main Street Rd
Soil Map may not be valid at this scale.
Soil Rating Polygons
High
Moderately high
Moderate
Low
Not rated or not available
N
Map Scale: 1:5,460 if printed on A portrait (8.5" x 11") sheet.
Meters
0
50
100
200
300
Feet
0
250
500
1000
1500
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Nitrate Leaching Potential, Nonirrigated

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
197A	Troxel silt loam, 0 to 2 percent slopes	High	Troxel (85%)	Water quantity available for leaching (1.00) Water travel time (0.82)	2.8	2.7%
290B	Warsaw loam, 2 to 4 percent slopes	High	Warsaw (90%)	Water quantity available for leaching (1.00) Water travel time (1.00) Water holding capacity (0.83)	20.7	20.2%
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	High	Lorenzo (85%)	Water travel time (1.00) Water holding capacity (0.97) Water quantity available for leaching (0.90)	11.3	11.0%
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	High	Lorenzo (85%)	Water travel time (1.00) Water holding capacity (0.97) Water quantity available for leaching (0.90)	25.6	24.9%
323C2	Casco loam, 4 to 6 percent slopes, eroded	High	Casco (85%)	Water travel time (1.00) Water holding capacity (0.98) Water quantity available for leaching (0.90)	6.9	6.7%
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	High	Casco (85%)	Water travel time (1.00) Water holding capacity (0.97) Water quantity available for leaching (0.90)	8.6	8.4%
323D2	Casco loam, 6 to 12 percent slopes, eroded	High	Casco, eroded (85%)	Water travel time (1.00)	1.9	1.9%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Water quantity available for leaching (0.99)		
				Water holding capacity (0.94)		
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	High	Casco (85%)	Water travel time (1.00)	0.0	0.0%
				Water quantity available for leaching (0.99)		
				Water holding capacity (0.96)		
327A	Fox silt loam, 0 to 2 percent slopes	High	Fox (90%)	Water quantity available for leaching (0.99)	1.2	1.2%
				Water travel time (0.99)		
				Water holding capacity (0.79)		
			St. Charles, gravelly substratum (5%)	Water quantity available for leaching (0.99)		
				Water travel time (0.87)		
327B	Fox silt loam, 2 to 4 percent slopes	High	Fox (90%)	Water quantity available for leaching (1.00)	5.3	5.1%
				Water travel time (1.00)		
				Water holding capacity (0.82)		
			Casco (5%)	Water quantity available for leaching (1.00)		
				Water travel time (1.00)		
				Water holding capacity (0.95)		
369B	Waupecan silt loam, 2 to 4 percent slopes	High	Waupecan (85%)	Water travel time (0.92)	9.8	9.5%
				Water quantity available for leaching (0.90)		
528A	Lahoguess loam, 0 to 2 percent slopes	Moderate	Lahoguess (85%)	Water quantity available for leaching (0.99)	0.5	0.5%
				Water travel time (0.93)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.19)		
			Selmass (8%)	Water quantity available for leaching (0.99)		
				Water travel time (0.92)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.14)		
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	High	Casco, eroded (53%)	Water travel time (1.00)	7.1	6.9%
				Water quantity available for leaching (0.99)		
				Water holding capacity (0.94)		
				Slope (0.04)		
			Rodman, eroded (37%)	Water travel time (1.00)		
				Water quantity available for leaching (0.99)		
				Water holding capacity (0.98)		
				Slope (0.02)		
1529A	Selmass loam, 0 to 2 percent slopes, undrained	Moderate	Selmass (90%)	Water quantity available for leaching (0.99)	0.6	0.6%
				Water travel time (0.93)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.02)		
			Houghton (10%)	Water travel time (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Water quantity available for leaching (0.99)		
				Denitrification due to saturation (0.50)		
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Low	Houghton, muck, ponded (95%)	Water travel time (1.00)	0.1	0.1%
				Water quantity available for leaching (1.00)		
				Denitrification due to saturation (0.50)		
				Anion exhange capacity (0.20)		
			Houghton, muck (3%)	Water travel time (1.00)		
				Water quantity available for leaching (1.00)		
				Denitrification due to saturation (0.50)		
				Anion exhange capacity (0.20)		
W	Water	Not rated	Water (100%)		0.4	0.4%
Totals for Area of Interest					**102.7**	**100.0%**

Rating	Acres	Percent
High	101.1	98.4%
Moderate	1.1	1.1%
Low	0.1	0.1%
Null or Not Rated	0.4	0.4%
Totals for Area of Interest	**102.7**	**100.0%**

SOIL PERMEABILITY

Soil permeability is the quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality.

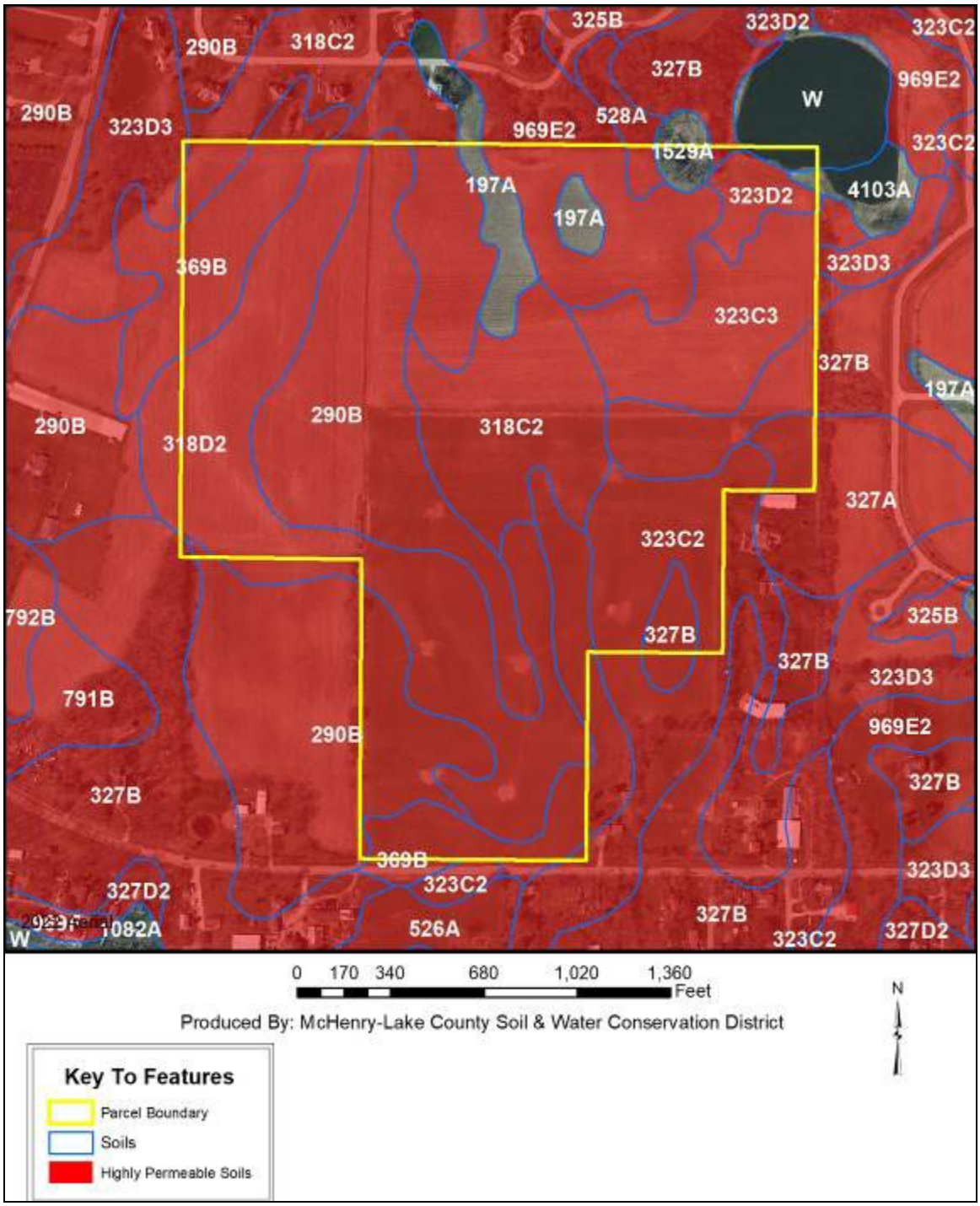
For the purposed of the NRI Report, those soils which have “rapid” to “very rapid” permeability, have been identified as “highly permeable.”

Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow ..... 0.0 to 0.01 inch
Very slow ..... 0.01 to 0.06 inch
Slow ..... 0.06 to 0.2 inch
Moderately slow ..... 0.2 to 0.6 inch
Moderate ..... 0.6 inch to 2.0 inches
Moderately rapid ..... 2.0 to 6.0 inches
Rapid ..... 6.0 to 20 inches
Very rapid ..... more than 20 inches

Highly Permeable Soils

Map Unit Symbol	Highly Permeable	Acres	Percent
197A	No	2.8	2.7%
290B	Yes	20.7	20.2%
318C2	Yes	11.3	11.0%
318D2	Yes	25.6	24.9%
323C2	Yes	6.9	6.7%
323C3	Yes	8.6	8.4%
323D2	Yes	1.9	1.9%
323D3	Yes	0.0	0.0%
327A	Yes	1.2	1.2%
327B	Yes	5.3	5.1%
369B	Yes	9.8	9.5%
528A	Yes	0.5	0.5%
969E2	Yes	7.1	6.9%
1529A	No	0.6	0.6%
4103A	No	0.1	0.1%
W	No	0.4	0.4%
Total Highly Permeable		**98.8**	**96.2%**


290B
318C2
325B
323D2
323C2
327B
969E2
W
290B
323D3
969E2
528A
323C2
1529A
197A
323D2
4103A
197A
369B
323D3
323C3
327B
197A
290B
290B
318C2
318D2
327A
323C2
792B
325B
327B
327B
323D3
791B
290B
969E2
327B
327B
369B
323D3
327D2
323C2
W
1082A
526A
327B
323C2
327D2
0 170 340 680 1,020 1,360
Feet
N
Produced By: McHenry-Lake County Soil & Water Conservation District
Key To Features
Parcel Boundary
Soils
Highly Permeable Soils

SOIL EROSION & SEDIMENT CONTROL

Erosion is the wearing away of the soil by water, wind, and other forces. Soil erosion threatens the Nation's soil productivity and contributes the most pollutants in our waterways. Water causes about two thirds of erosion on agricultural land. Four properties, mainly, determine a soil's erodibility:

1. Texture 2. Slope 3. Structure
4. Organic matter content

Slope has the most influence on soil erosion potential when the site is under construction. Erosivity and runoff increase as slope grade increases. The runoff then exerts more force on the particles, breaking their bonds more readily and carrying them farther before deposition. The longer water flows along a slope before reaching a major waterway, the greater the potential for erosion.

Soil erosion during and after this proposed construction can be a primary non-point source of water pollution. Eroded soil during the construction phase can create unsafe conditions on roadways, decrease the storage capacity of lakes, clog streams and drainage channels, cause deterioration of aquatic habitats, and increase water treatment costs. Soil erosion also increases the risk of flooding by choking culverts, ditches and storm sewers, and by reducing the capacity of natural and man-made detention facilities.

The general principles of erosion and sedimentation control measures include:

- reducing or diverting flow from exposed areas, storing flows or limiting runoff from exposed areas,
- staging construction in order to keep disturbed areas to a minimum,
- establishing or maintaining or temporary or permanent groundcover,
- retaining sediment on site and
- properly installing, inspecting and maintaining control measures.

Erosion control practices are useful controls only if they are properly located, installed, inspected and maintained.

The SWCD recommends an erosion control plan for all building sites, especially if there is a wetland or stream nearby.

Highly Erodible Soils (HEL)

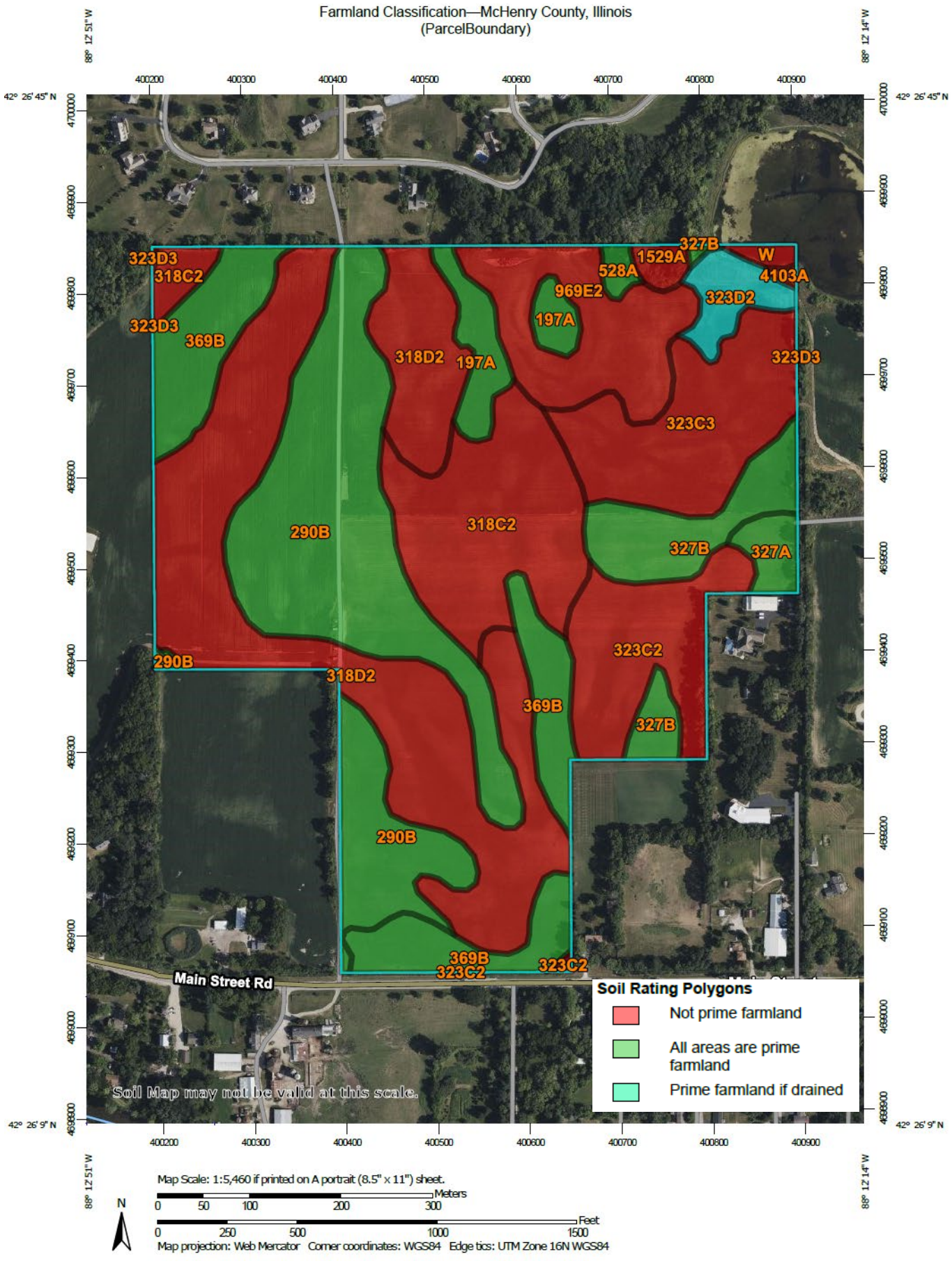
Map Unit Symbol	Map Unit Name	Acres	Percent
197A	Troxel silt loam, 0 to 2 percent slopes – non-HEL	2.8	2.7%
290B	Warsaw loam, 2 to 4 percent slopes – non-HEL	20.7	20.2%
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded - HEL	11.3	11.0%
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded- HEL	25.6	24.9%
323C2	Casco loam, 4 to 6 percent slopes, eroded - HEL	6.9	6.7%
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded - HEL	8.6	8.4%
323D2	Casco loam, 6 to 12 percent slopes, eroded - HEL	1.9	1.9%
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded - HEL	0.0	0.0%

327A	Fox silt loam, 0 to 2 percent slopes – non-HEL	1.2	1.2%
327B	Fox silt loam, 2 to 4 percent slopes – non-HEL	5.3	5.1%
369B	Waupecan silt loam, 2 to 4 percent slopes – non-HEL	9.8	9.5%
528A	Lahoguess loam, 0 to 2 percent slopes – non-HEL	0.5	0.5%
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded - HEL	7.1	6.9%
1529A	Selmass loam, 0 to 2 percent slopes, undrained -non-HEL	0.6	0.6%
4103A	Houghton muck, ponded, 0 to 2 percent slopes – non-HEL	0.1	0.1%
W	Water – non-HEL	0.4	0.4%
Total Highly Erodible Soils		**61.4**	**59.8%**

PRIME FARMLAND SOILS

Prime farmland soils are an important resource to McHenry County. Some of the most productive soils in the United States occur locally. Each soil map unit in the United States is assigned a prime or non-prime rating. Prime agricultural land does not need to be in the production of food & fiber.

Section 310 of the NRCS general manual states that urban or built-up land on prime farmland soils is not prime farmland. The percentages of soils map units on the parcel reflect the determination that urban or built up land on prime farmland soils is not prime farmland.


Farmland Classification—McHenry County, Illinois
(ParcelBoundary)
88° 12' 51" W
88° 12' 14" W
42° 26' 45" N
42° 26' 9" N
400200
400300
400400
400500
400600
400700
400800
400900
4700000
4699900
4699800
4699700
4699600
4699500
4699400
4699300
4699200
4699100
4699000
4698900
4698800
323D3
318C2
323D3
369B
318D2
197A
969E2
528A
1529A
327B
W
4103A
323D2
197A
323D3
323C3
290B
318C2
327B
327A
323C2
290B
318D2
369B
327B
290B
369B
323C2
323C2
Main Street Rd
Soil Map may not be valid at this scale.
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Map Scale: 1:5,460 if printed on A portrait (8.5" x 11") sheet.
Meters
0 50 100 200 300
Feet
0 250 500 1000 1500
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres	Percent
197A	Troxel silt loam, 0 to 2 percent slopes	All areas are prime farmland	2.8	2.7%
290B	Warsaw loam, 2 to 4 percent slopes	All areas are prime farmland	20.7	20.2%
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	Not prime farmland	11.3	11.0%
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	Not prime farmland	25.6	24.9%
323C2	Casco loam, 4 to 6 percent slopes, eroded	Not prime farmland	6.9	6.7%
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	Not prime farmland	8.6	8.4%
323D2	Casco loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance	1.9	1.9%
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	Not prime farmland	0.0	0.0%
327A	Fox silt loam, 0 to 2 percent slopes	All areas are prime farmland	1.2	1.2%
327B	Fox silt loam, 2 to 4 percent slopes	All areas are prime farmland	5.3	5.1%
369B	Waupecan silt loam, 2 to 4 percent slopes	All areas are prime farmland	9.8	9.5%
528A	Lahoguess loam, 0 to 2 percent slopes	All areas are prime farmland	0.5	0.5%
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	Not prime farmland	7.1	6.9%
1529A	Selmass loam, 0 to 2 percent slopes, undrained	Not prime farmland	0.6	0.6%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Not prime farmland	0.1	0.1%
W	Water	Not prime farmland	0.4	0.4%
Total Prime Farmland			**40.3**	**39.2%**
Total Farmland of Statewide Importance			**1.9**	**1.9%**

AGRICULTURAL AREAS

The Agricultural Areas Conservation and Protect Act became effective July 1, 1980. The purpose of the Act is to provide a means by which agricultural land may be protected and enhanced as a viable segment of the State's economy and as an economic and environmental resource of major importance. Established Ag Areas tend to influence adjacent and surrounding land use changes since they are voluntary in nature and petitioned before the County Board for approval. Ag Areas are considered a high commitment to agriculture. Designated Ag Areas limit land utilization to specified agricultural uses within their designated boundaries. Ag Areas allow landowners limited benefits such as immunity form locally enacted ordinances, which would limit farming operations and immunity from special tax assessments from local units of government.

Office Maps indicate there are no State designated agricultural areas on or adjacent to the parcel in question.

LAND EVALUATION & SITE ASSESSMENT (LESA)

The Land Evaluation and Site Assessment system is a tool designed to evaluate the viability of agricultural lands where changes in land-use are proposed. LESA was developed as a decision-making tool used by the Zoning Board of Appeals, City Councils or County Boards to help make unbiased decisions of proper land-use. The LESA system was developed by the USDA-NRCS and takes into consideration local conditions such as physical characteristics of the land, compatibility of surrounding land-uses, urban growth factors, and land-use policies determined by local government. LESA was designed to be used in conjunction with the county's land-use plan, zoning ordinances, and other policies being used to decide land-use changes.

Decision makers use the Land Evaluation and Site Assessment (LESA) System to determine the suitability of a land use change and/or a zoning request as it relates to agricultural land. The LESA System is a two step procedure that includes:

- Land Evaluation (LE), soils value
- Site Assessment (SA), land use

Land Evaluation (**LE**) encompasses information regarding soils found on the site and their suitability for agricultural purposes. McHenry County soils consist of 73 different soil series ranging from gravely loams to wet muck soils and from highly productive agricultural soils to high quality gravel deposits. For purposes of the Land Evaluation portion of the LESA system, each soil is assigned a relative value number, from 0 to 100, a 0 being the worst soils for crop production, 100 the best. Parcels containing higher percentages of higher valued soils will rate higher on the overall LESA score while those containing higher percentages lowered value soils will rate lower in the overall LESA score. McHenry County SWCD provides a weighted average of the soils using a simple, mechanical, unbiased method of determining agricultural suitability of soils on site.

Site Assessment (**SA**) identifies and weighs 10 criteria, other than soils information, that contributes to the quality of a site for agricultural uses. The determination to include the specific site assessment factors directly resulted from the following:

- McHenry County Zoning Ordinance,
- 2030 Land Use Plan,
- Other adopted county policies.

In summary, the LESA evaluation addresses all factors, including soils information, together to provide a rational, consistent, and unbiased determination of the impact to agriculture from the proposed land use and zoning changes.

Land Evaluation Score

Map unit symbol	LE Score	Weighted Average	Acres	Percent
197A	97	2.67	2.8	2.7%
290B	82	16.59	20.7	20.2%
318C2	67	7.35	11.3	11.0%
318D2	63	15.68	25.6	24.9%
323C2	66	4.36	6.9	6.7%
323C3	54	4.51	8.6	8.4%
323D2	62	1.16	1.9	1.9%
323D3	52	0.02	0.0	0.0%
327A	76	0.88	1.2	1.2%
327B	75	3.84	5.3	5.1%
369B	96	9.09	9.8	9.5%
528A	84	0.38	0.5	0.5%
969E2	65	4.51	7.1	6.9%
1529A	0	0	0.6	0.6%
4103A	0	0	0.1	0.1%
W	0	0	0.4	0.4%
Total Land Evaluation Score		**71.05**		

Explanation of the LE Worksheet:

Symbol: is the soil type of the polygon on the soils map.
Percentage and Acreage: the percentages of the parcel, and the area that the soil polygon represents.
LE Score: the numeric value from 0 - 100 that is assigned that soil unit
Weighted Ave: The acreage multiplied by the value of that soil unit.

LAND USE PLANS

Many counties, municipalities, villages and townships have developed land-use plans. These plans are intended to reflect the existing and future land-use needs of a give community.

This parcel is within the McHenry County 2030 Land Use Plan Map and is identified as Residential and the very northwest corner is identified as Environmentally Sensitive.

DRAINAGE, RUNOFF AND FLOOD INFORMATION

U.S.G.S Topographic maps give information on elevations, which are important mostly to determine slopes, drainage directions, and watershed information.

Elevations determine the area of impact of floods of record. Slope information determines steepness and erosion potential. Drainage directions determine where water leaves the PIQ, possibly impacting surrounding natural resources.

Watershed information is given for changing land use to a subdivision type of development on parcels greater than 10 acres.

What is a watershed?

Simply stated, a watershed is the area of land that contributes water to a certain point. The point that we use on these reports is usually the point where water exits the parcel. The point is marked with a "O." The watershed boundary is drawn in using the following marking: (— • • —). Often times, water will flow off the parcel in two or more directions. In that case, there is a watershed break on the parcel. (— • • —), and there are two or more watersheds on the parcel.

The watershed boundary is important because the area of land in the watershed can now be calculated using an irregular shape area calculator such as a dot counter or planimiter.

Using regional storm event information, and site specific soils and land use information, the peak stormwater flow through the point marked "O" for a specified storm event can be calculated. This value is called a "Q" value (for the given storm event), and is measured in cubic feet per second (CFS).

When construction occurs, the Q value naturally increases because of the increase in impermeable surfaces. This process decreases the ability of soils to accept and temporarily hold water. Therefore, more water runs off and increases the Q value.

Theoretically, if each development, no matter how large or small, maintains their preconstruction Q value after construction by the installation of stormwater management systems, the streams and wetlands and lakes will not suffer damage from excessive urban stormwater.

For this reason, the McHenry County SWCD recommends that the developer for intense uses such as a subdivision calculate the preconstruction Q value for the exit point(s). A stormwater management system should be designed, installed, and maintained to limit the postconstruction Q value to be at or below the preconstruction value.

Importance of Flood Information

A floodplain is defined as land adjoining a watercourse (riverine) or an inland depression (non-riverine) that is subject to periodic inundation by high water. Floodplains are important areas demanding protection since they have water storage and conveyance functions which affect upstream and down stream flows, water quality and quantity, and suitability of the land for human activity. Since floodplains play distinct and vital roles in the hydrologic cycle, development that interferes with their hydrologic and biologic functions should be carefully considered.

Flooding is both dangerous to people and destructive to their properties. The following maps, when combined with wetland and topographic information, can help developers and future homeowners to "sidestep" potential flooding or ponding problems.

FIRM is the acronym for the Flood Insurance Rate Map, produced by the Federal Emergency Management Agency. These maps define flood elevation adjacent to tributaries and major bodies of water, and superimpose that onto a simplified USGS topographic map. The scale of the FIRM maps is generally dependent on the size and density of parcels in that area. (This is to correctly determine the parcel location and flood plain location.) The FIRM map has three (3)

zones. A is the zone of 100 year flood, zone B is the 100 to 500 year flood, and zone C is outside the flood plain.

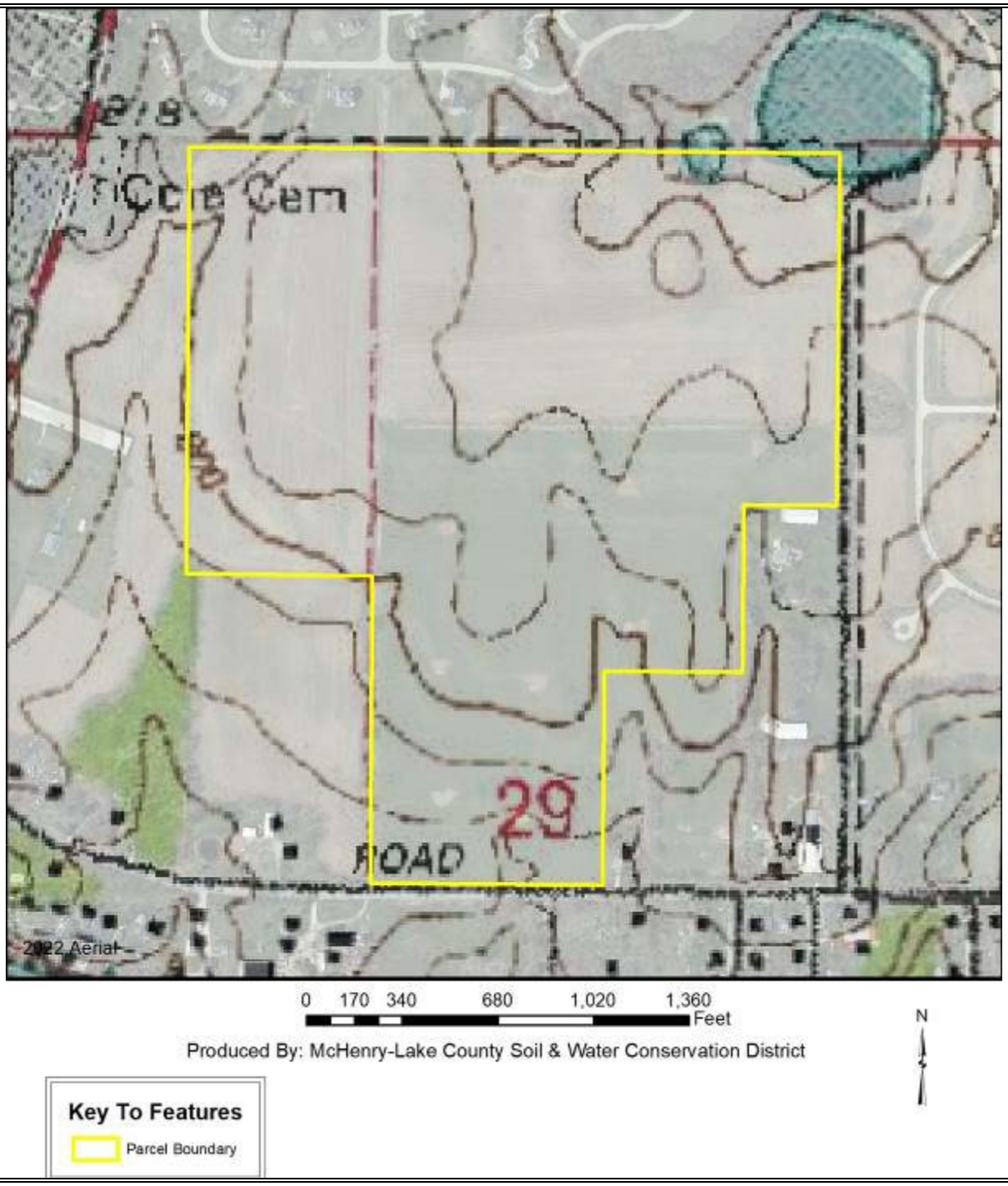
The Hydrologic Atlas (H.A.) Series of the Flood of Record Map is also used for the topographic information. This map is different from the FIRM map mainly because it will show isolated, or pocketed flooded areas. McHenry County uses both these maps in conjunction with each other for flooded area determinations. The Flood of Record maps, show the areas of flood for various years. Both of these maps stress that the recurrence of flooding is merely statistical. That is to say a 100-year flood may occur twice in one year, or twice in one week, for that matter.

It should be noted that greater floods than those shown on the two maps are possible. The flood boundaries indicated provide a historic record only until the map publication date. Additionally, these flood boundaries are a function of the watershed conditions existing when the maps were produced. Cumulative changes in runoff characteristics caused by urbanization can result in an increase in flood height of future flood episodes.

Floodplains play a vital role in reducing the flood damage potential associated with an urbanizing area and, when left in an undisturbed state, also provide valuable wildlife habitat benefits. If it is the petitioner's intent to conduct floodplain filling or modification activities, the petitioner and the Unit of Government responsible need to consider the potentially adverse effects this type of action could have on adjacent properties. The change or loss of natural floodplain storage often increases the frequency and severity of flooding on adjacent property.

If the available maps indicate the presence of a floodplain on the PIQ, the petitioner should contact the IDOT-DWR and FEMA to delineate a floodplain elevation for the parcel. If a portion of the property is indeed floodplain, applicable state, county and local regulations will need to be reflected in the site plans.

Another indication of flooding potential can be found in the soils information. Hydric soils indicate the presence of drainageways, areas subject to ponding, or a naturally occurring high water table. These need to be considered along with the floodplain information when developing the site plan and the stormwater management plan. If the site does include these hydric soils and development occurs, thus raising the concerns of the loss of water storage in these soils and the potential for increased flooding in the area.

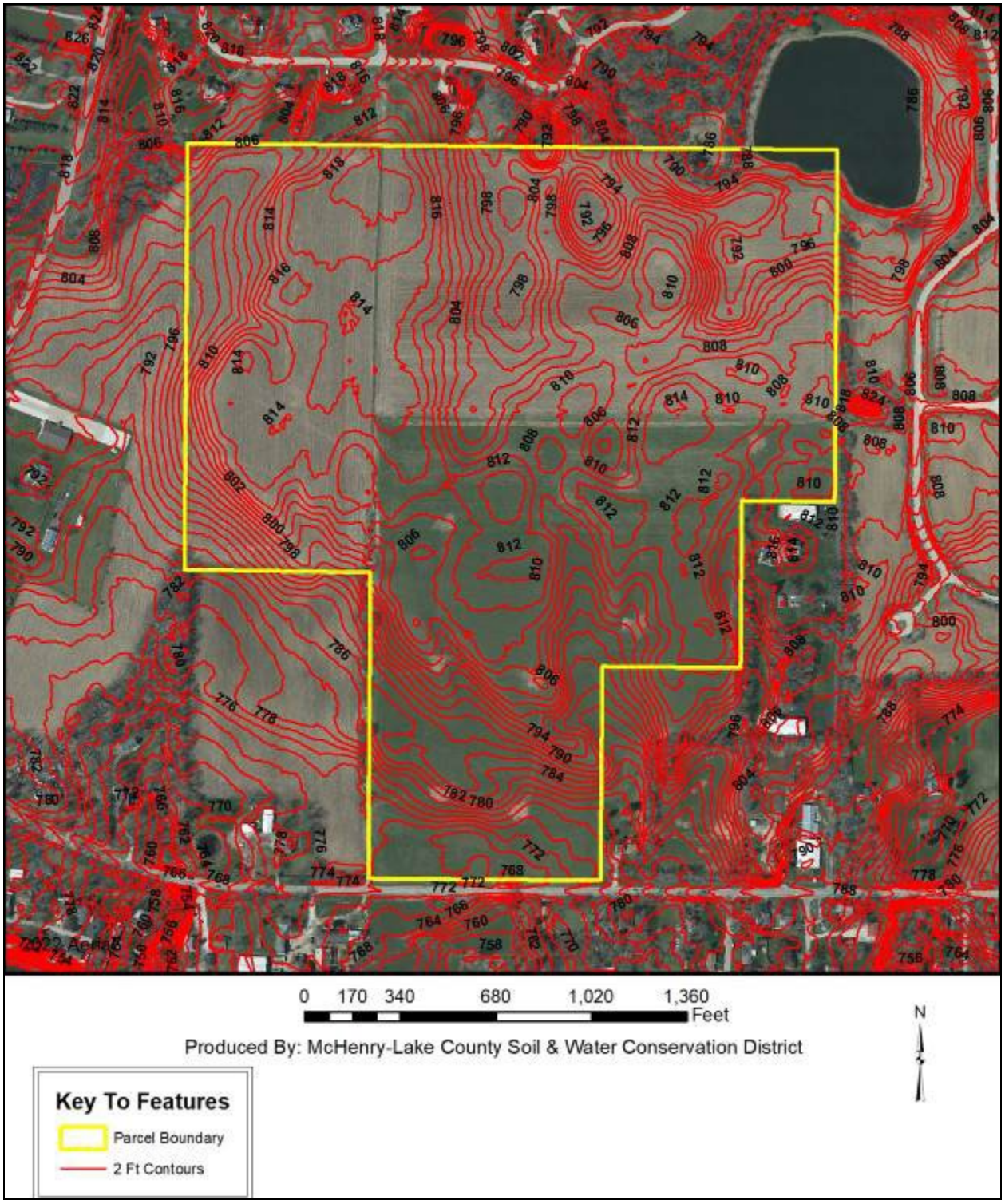


Flood of Record Map Showing Topographic Information

This parcel is located on rolling topography (slopes 0 to 20%) involving high and low areas (elevation ranges from 768' above sea level to 818' above sea level).

During construction, temporary vegetation can decrease erosion on the slopes if the area is to be mass graded.

Also, the flood of record for this area indicates previous flooding on 0.52 acres of the parcel.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Feet
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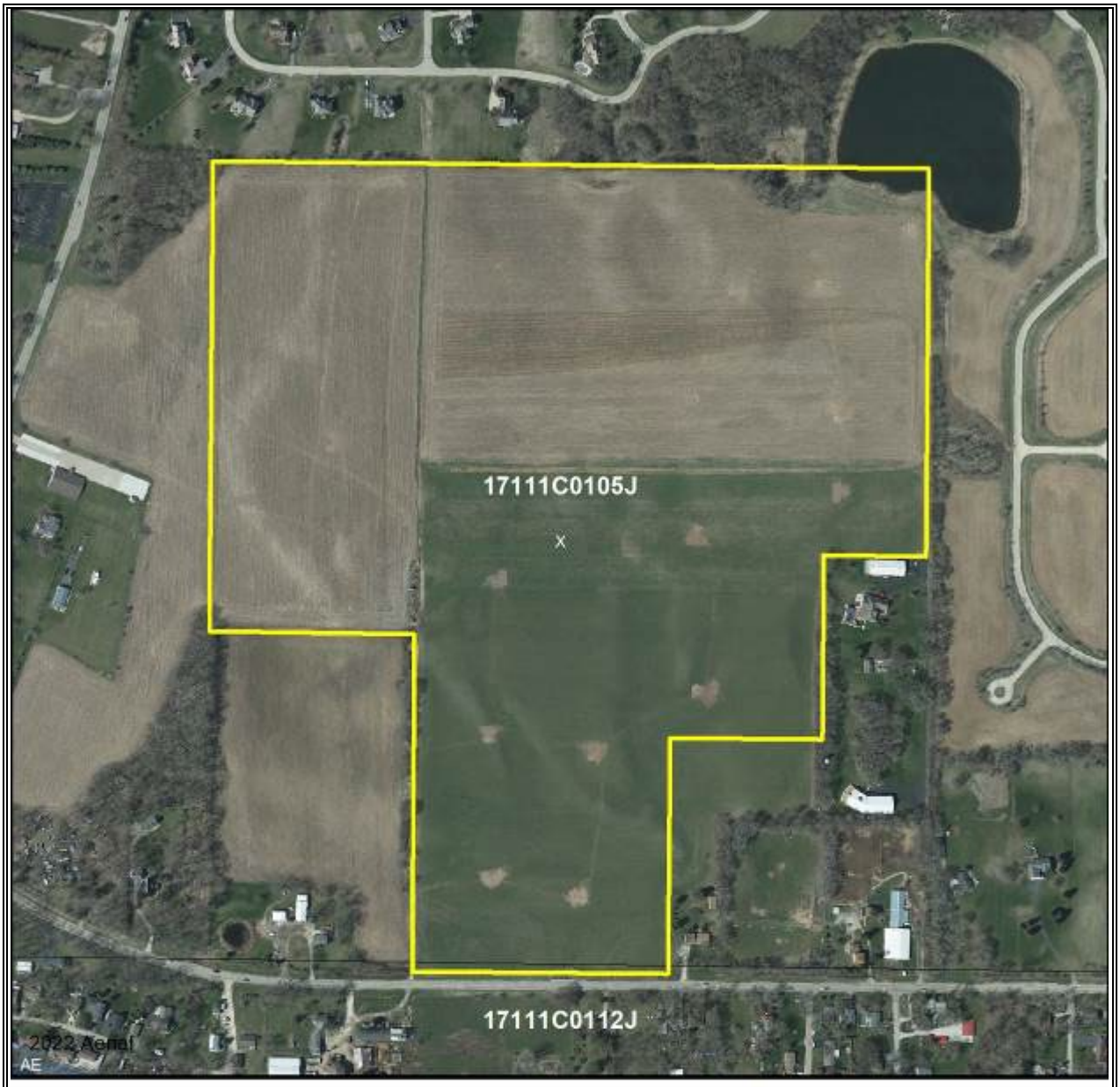
Produced By: McHenry-Lake County Soil & Water Conservation District
Key To Features
Parcel Boundary
2 Ft Contours



0 170 340 680 1,020 1,360
Feet

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Produced By: McHenry-Lake County Soil & Water Conservation District

Key To Features

Parcel Boundary
FEMA Panel
FEMA Floodplain
Flood Zone
0.2 PCT ANNUAL CHANCE FLOOD HAZARD
100 yr
100 yr with base flood elevations determined
100 yr with 1-3 ft. flood depths
100 yr usually sheet flow

Federal Emergency Management Agency: Flood Insurance Rate Map Panel 17111C0105J

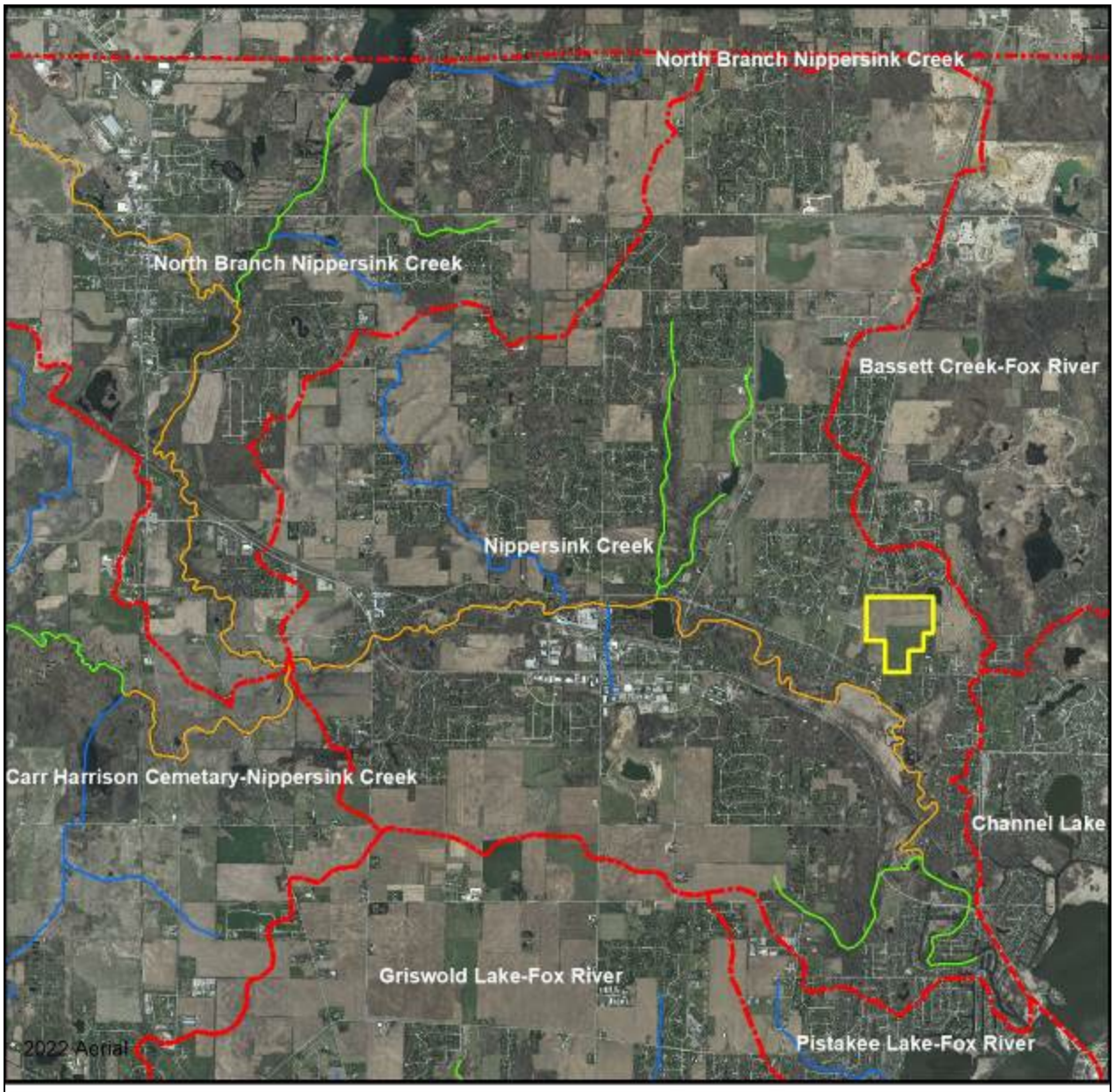
The map indicates the parcel is outside of the 100-year floodplain.

WATERSHED PLANS

Watershed and Subwatershed Information

A watershed is the area of land that drains into a specific point including a stream, lake or other body of water. High points on the Earth's surface, such as hills and ridges define watersheds. When rain falls in the watershed, it flows across the ground towards a stream or lake. Rainwater carries any pollutants it comes in contact with such as oils, pesticides, and soil. Everyone lives in a watershed. Their actions can impact natural resources and people living downstream. Residents can minimize this impact by being aware of their environment and implications of their activities, implementing practices recommended in watershed plans and educating others about their watershed.

The parcel is located within the Nippersink Creek Watershed (HUC 12 – 071200060907). The Nippersink Creek Watershed comprises 97,551.80 acres of McHenry County. In 2008 the Nippersink Creek Watershed Committee updated their Watershed Plan (originally developed in 1998) which outlines general watershed management objectives and subwatershed site specific objectives. According to the report, "Without questions, the biggest threat to the health and sustainability of the Nippersink Watershed is the rapid development of agricultural land into suburban land uses. This change in land use continues to be performed using land development methods which do not preserve the interception, infiltration, storage, and slow release of accumulated rainfall to the underlying shallow aquifers and adjacent wetlands and streams." Future impacts and impairments include: degraded water quality from development, additional channel hydromodification, loss of natural wetlands and stream corridor, and reduced groundwater recharge. Their watershed plan can be accessed on their website: http://nippersink.org/plan.htm.



0 1,8003,600 7,200 10,800 14,400
Feet

N

Produced By: McHenry-Lake County Soil & Water Conservation District

Key To Features

Parcel Boundary
HUC 12 Watersheds
Rivers & Streams
High Quality Streams
Stream
High Quality Aerial Score
High Quality IBI
High Quality T&E Species

WETLAND INFORMATION

Importance of Wetland Information

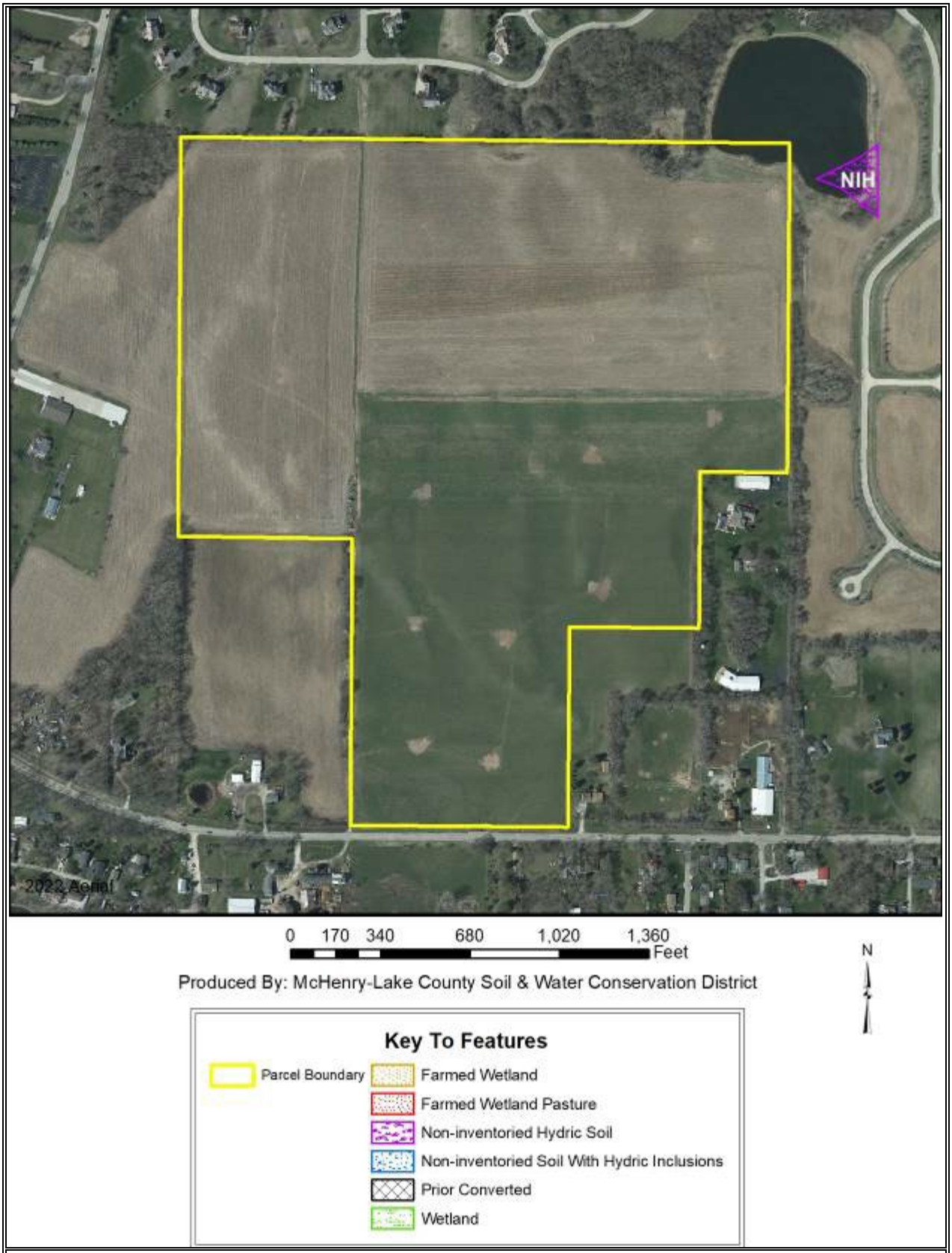
Wetlands function in many ways to provide numerous benefits to society. They control flooding by offering a slow release of excess water downstream or through the soil. They cleanse water by filtering out sediment and some pollutants, and can function as rechargers of our valuable groundwater. They also are essential breeding, rearing, and feeding grounds for many species of wildlife.

These benefits are particularly valuable in urbanizing areas as development activity typically adversely affects water quality, increases the volume of stormwater runoff, and increases the demand for groundwater. In an area where many individual homes rely on shallow groundwater wells for domestic water supplies, activities that threaten potential groundwater recharge areas are contrary to the public good. The conversion of wetlands, with their sediment trapping and nutrient absorbing vegetation, to biologically barren stormwater detention ponds can cause additional degradation of water quality in downstream or adjacent areas.

It has been estimated that over 95% of the wetlands that were historically present in Illinois have been destroyed while only recently has the true environmental significance of wetlands been fully recognized. America is losing 100,000 acres of wetland a year, and has saved 5 million acres total (since 1934). One acre of wetland can filter 7.3 million gallons of water a year. These are reasons why our wetlands are high quality and important.

This section contains the NRCS (Natural Resources Conservation Service) Wetlands Inventory, which is the most comprehensive inventory to date. The NRCS Wetlands Inventory is reproduced from an aerial photo at a scale of 1" equals 660 feet. The NRCS developed these maps in cooperation with U.S. EPA (Environmental Protection Agency,) and the U.S. Fish and Wildlife Service, using the National Food Security Act Manual, 3rd Edition. The main purpose of these maps is to determine wetland areas on agricultural fields and areas that may be wetlands but are in a non-agriculture setting.

The NRCS Wetlands Inventory in no way gives an exact delineation of the wetlands, but merely an outline, or the determination that there is a wetland within the outline. For the final, most accurate wetland **determination** of a specific wetland, a wetland ***delineation*** must be certified by NRCS staff using the National Food Security Act Manual (on agricultural land.) On urban land, a certified wetland delineator must perform the delineation using the ACOE 1987 Manual. *See the glossary section for the definitions of "delineation" and "determination."*



Natural Resources Conservation Service: Wetland Inventory Map.

The map indicates there are no wetlands on the parcel.

ADID (ADVANCED IDENTIFICATION OF AQUATIC RESOURCES)

Wetlands are some of the most productive and diverse ecological systems on Earth. The unique characteristics of plants, soils, and water distinguish these systems. Marshes, wet meadows, fens and bogs are some of the common wetland types found within McHenry County. There are also various streams scattered throughout the county, including several that rank among the highest quality in Illinois.

These wetlands, lakes and streams provide needed habitat and food for fish and wildlife. Diverse plants both common and rare are can be found in wetlands, and over 40 percent of Illinois' threatened and endangered plant and animal species rely on wetlands.

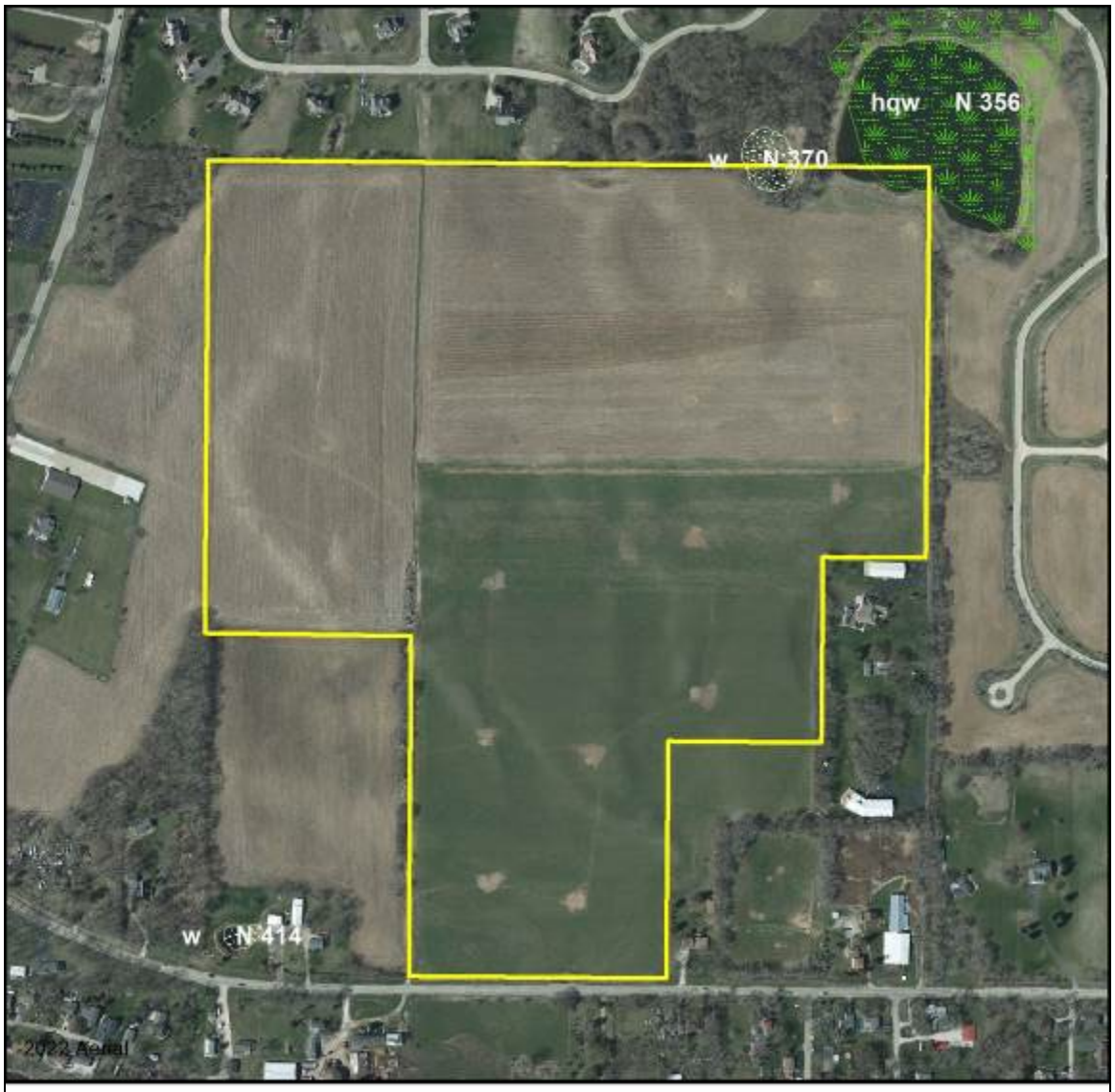
Wetlands have many other roles. They are critical to the control of flooding by storing vast quantities of runoff water during floods, and releasing it slowly to rivers and srteams as the floodwater recedes. This in turn helps to prevent erosion in downstream channels, aids in groundwater recharge, and stabilizes the baseflow in streams and rivers. Wetlands are also crucial in protecting water quality. Wetlands that border lakes and streams prevent erosion by holding soil in place and deflecting erosive flows and waves. They also remove sediment, nutrients, and toxic chemicals from runoff water.

Other benefits include groundwater recharge, discharge of clean water, recreation, enhancement of natural aesthetics and serve as buffers between adjacent developments.

This program designed by the EPA (Environmental Protection Agency), is intended to improve awareness of the functions and values of wetlands and other U.S. waters. It is also intended to inform landowners and developers that high quality sites may not be unsuitable for the disposal of dredged or fill material. These ADID projects can also provide guidance on the long-term protection and management of aquatic resources.

The wetland boundaries shown are not jurisdictional delineations. Any proposed drainage work in wet areas requires a certified wetland determination.

The ADID study identifies 0.24 acres of wetland N370 and 0.24 acres of High Quality Wetland N356 on the parcel in question. (Map shown on next page.)



0 170 340 680 1,020 1,360
Feet

N

Produced By: McHenry-Lake County Soil & Water Conservation District

Key To Features

- Parcel Boundary
- farmed wetland
- high functional wetland
- high quality lake
- high quality wetland
- lake
- wetland

Hydric Soils

Soils information gives another indication of flooding potential. The soils map on this page indicates the soil(s) on the parcel that the Natural Resources Conservation Service indicates as hydric. Hydric soils by definition have seasonal high water at or near the soil surface and/or have potential flooding or ponding problems. All hydric soils range from poorly suited to unsuitable for building. One group of the hydric soils, are the organic soils, which formed from dead organic material. Organic soils are unsuitable for building because of not only the high water table, but also their subsidence problems.

It is also important to add the possibility of hydric inclusions in a soil type. An inclusion is a soil polygon that is too small to appear on these maps. While relatively insignificant for agricultural use, hydric soil inclusions become more important to more intense uses such as a residential subdivision.
While considering hydric soils and hydric inclusions, it is noteworthy to mention that subsurface agriculture drainage tile occurs in almost all poorly drained and somewhat poorly drained soils. Drainage tile expedites drainage and facilitates farming. It is imperative that these drainage tiles remain undisturbed. A damaged subsurface drainage tile may return original hydrologic conditions to all of the areas that drained through the tile (ranging from less than one acre to many square miles.)

For an intense land use, such as a subdivision, the McHenry County SWCD recommends the following:

1. A topographical survey with 1 foot contour intervals to accurately define the flood area on the parcel.
2. An intensive soil survey to define most accurately the locations of the hydric soils and inclusions
3. A drainage tile survey on the area to locate the tiles that must be preserved.

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

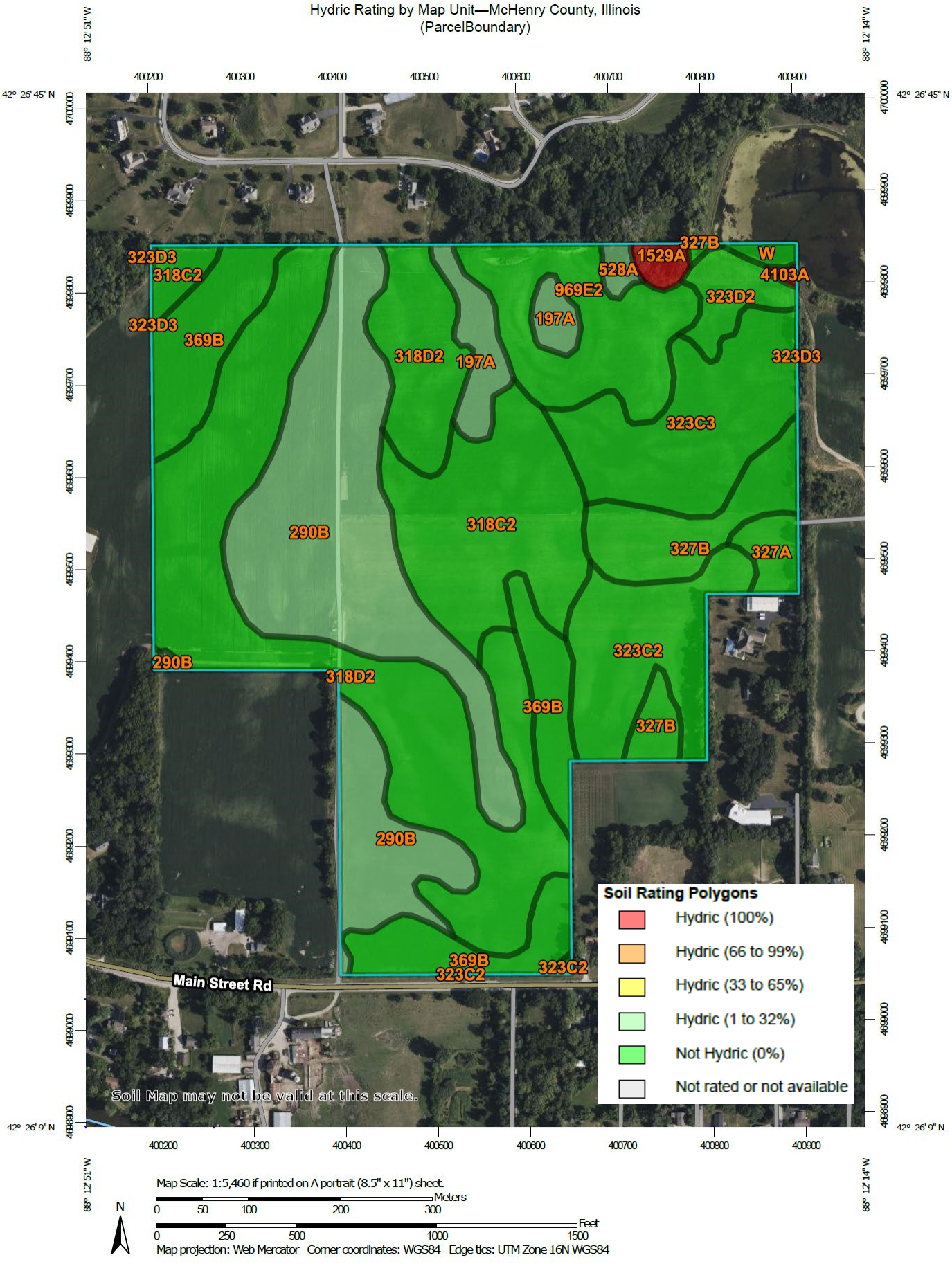
Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify

those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field.

These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).


Hydric Rating by Map Unit—McHenry County, Illinois
(ParcelBoundary)
88° 12' 51" W
88° 12' 14" W
42° 26' 45" N
42° 26' 9" N
400200
400300
400400
400500
400600
400700
400800
400900
4700000
4699900
4699800
4699700
4699600
4699500
4699400
4699300
4699200
4699100
4699000
4698900
323D3
318C2
327B
1529A
W
528A
4103A
969E2
323D2
197A
369B
318D2
323C3
290B
327A
323C2
Main Street Rd
Soil Map may not be valid at this scale.
Soil Rating Polygons
Hydric (100%)
Hydric (66 to 99%)
Hydric (33 to 65%)
Hydric (1 to 32%)
Not Hydric (0%)
Not rated or not available
Map Scale: 1:5,460 if printed on A portrait (8.5" x 11") sheet.
Meters
0 50 100 200 300
Feet
0 250 500 1000 1500
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
197A	Troxel silt loam, 0 to 2 percent slopes	15	2.8	2.7%
290B	Warsaw loam, 2 to 4 percent slopes	5	20.7	20.2%
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	0	11.3	11.0%
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	0	25.6	24.9%
323C2	Casco loam, 4 to 6 percent slopes, eroded	0	6.9	6.7%
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	0	8.6	8.4%
323D2	Casco loam, 6 to 12 percent slopes, eroded	0	1.9	1.9%
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	4	0.0	0.0%
327A	Fox silt loam, 0 to 2 percent slopes	0	1.2	1.2%
327B	Fox silt loam, 2 to 4 percent slopes	0	5.3	5.1%
369B	Waupecan silt loam, 2 to 4 percent slopes	0	9.8	9.5%
528A	Lahoguess loam, 0 to 2 percent slopes	8	0.5	0.5%
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	0	7.1	6.9%
1529A	Selmass loam, 0 to 2 percent slopes, undrained	100 - Hydric	0.6	0.6%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	100 - Hydric	0.1	0.1%
W	Water	0	0.4	0.4%
Totals for Area of Interest			**0.7**	**0.7%**

WETLAND AND FLOODPLAIN REGULATIONS

PLEASE READ THE FOLLOWING IF YOU ARE PLANNING TO DO ANY WORK NEAR A STREAM (THIS INCLUDES SMALL UNNAMED STREAMS), LAKE, WETLAND OR FLOODWAY.

The laws of the United States and the State of Illinois assign certain agencies specific and different regulatory roles to protect the waters within the State's boundaries. These roles, when considered together, include protection of navigation channels and harbors, protection against flood way encroachments, maintenance and enhancement of water quality, protection of fish and wildlife habitat and recreational resources, and, in general, the protection of total public interest. Unregulated use of the waters within the State of Illinois could permanently destroy or alter the character of these valuable resources and adversely impact the public. Therefore, please contact the proper regulatory authorities when planning any work associated with Illinois waters so that proper consideration and approval can be obtained.

WHO MUST APPLY

Anyone proposing to dredge, fill, rip rap, or otherwise alter the banks or beds of, or construct, operate, or maintain any dock, pier, wharf, sluice, dam, piling, wall, fence, utility, flood plain or flood way subject to County, State or Federal regulatory jurisdiction should apply for agency approvals.

REGULATORY AGENCIES:

- **Wetlands or U.S. Waters: U.S. Army Corps of Engineers**, Chicago District,
  231 S. LaSalle St., Suite 1500
  Chicago, IL 60604
  Phone: (312) 846-5330
- **Isolated Wetlands and Floodplain: McHenry County Department of Planning & Development Stormwater Division,**
  2200 N. Seminary Ave., Woodstock, IL 60098
  Phone: (815) 334-4560
- **Flood plains: Illinois Department of Natural Resources \ Office of Water Resources**, 201 W. Center Court, Schaumburg, IL 60196-1096, phone (847).705.
- **Water Quality \ Erosion Control: Illinois Environmental Protection Agency**, Division of Water Pollution Control, Permit Section, Watershed Unit, 2200 Churchill Road, Springfield, IL 62706, phone (217).782.0610.

COORDINATION

We recommend Early coordination with the regulatory agencies BEFORE finalizing work plans. This allows the agencies to recommend measures to mitigate or compensate for adverse impacts. Also, the agency can make possible environmental enhancement provisions early in the project planning stages. This could reduce time required to process necessary approvals.

CAUTION: Contact with the United States Army Corps of Engineers is strongly advised before commencement of any work in or near a water of the United States. This could save considerable time and expense. Persons responsible for willful and direct violation of Section 10 of the River And Harbor Act of 1899 or Section 404 of the Federal Water Pollution Control Act are subject to fines ranging up to $27,500 per day of violation and imprisonment for up to one year or both.

THREATENED & ENDANGERED SPECIES

The State of Illinois provides habitat for 500 threatened and endangered species, including 356 plants and 144 animals. Twelve counties in Illinois have 50 or more endangered species, 5 of which are in northeastern Illinois. ("Endangered Species of Illinois," by the U.S. Fish & Wildlife Service, IDOC Division of Natural Heritage & Endangered Species Protection Board).

Approximately 40% of the state's listed species depend on wetlands for survival. The two main causes for species decline are the loss of habitat and the degradation of habitat. While habitat loss is the primary reason species become endangered, the effects of habitat change are not always seen overnight. It is seldom simply a case of individual animals or plants being killed. More often, habitat loss and the resulting species declines are indirectly caused and are the result of cumulative impacts over a period of time.

It is because of this slow encroachment of habitat degradation, fragmentation and loss that wildlife habitat must be looked at on a greater scale than just the site. Cumulative impacts occur because a small amount of damage is being done over here and little over there and no one is looking at the whole picture. Thus, the villages and county are strongly encouraged to look at habitat management on a regional scale.

THERE IS A POSSIBILITY FOR ENDANGERED SPECIES ON THE SITE. IF A REQUEST HAS NOT ALREADY BEEN SUBMITTED, THE PETITIONER SHOULD ASK THE ILLINOIS DEPARTMENT OF NATURAL RESOURCES TO CHECK THIS PARCEL FOR THE PRESENCE OF THREATENED OR ENDANGERED SPECIES. SHOULD ANY SUCH SPECIES BE IDENTIFIED AS UTILIZING THIS PARCEL, THE PETITIONER WILL BE NOTIFIED ACCORDINGLY. FOR MORE INFORMATION ON HOW TO REQUEST AN ENDANGERED SPECIES CHECK ON THIS PARCEL, PLEASE VISIT
www.dnrecocat.state.il.us/ecopublic.

GLOSSARY

AGRICULTURAL PROTECTION AREAS (AG AREAS) - Allowed by P.A. 81-1173. An AG AREA consists of a minimum of 350 acres of farmland, as contiguous and compact as possible. Petitioned by landowners, AG AREAS protect for a period of ten years initially, then reviewed every eight years thereafter. AG AREA establishment exempts landowners from local nuisance ordinances directed at farming operations, and designated land can not receive special tax assessments on public improvements that do not benefit the land, e.g. water and sewer lines.

AGRICULTURE - The growing, harvesting and storing of crops including legumes, hay, grain, fruit and truck or vegetable including dairying, poultry, swine, sheep, beef cattle, pony and horse production, fur farms, and fish and wildlife farms; farm buildings used for growing, harvesting and preparing crop products for market, or for use on the farm; roadside stands, farm buildings for storing and protecting farm machinery and equipment from the elements, for housing livestock or poultry and for preparing livestock or poultry products for market; farm dwellings occupied by farm owners, operators, tenants or seasonal or year around hired farm workers.

B.G. - Below Grade. Under the surface of the Earth.

BEDROCK - Indicates depth at which bedrock occurs. Also lists hardness as rippable or hard.

FLOODING - Indicates frequency, duration, and period during year when floods are likely to occur.

HIGH LEVEL MANAGEMENT - The application of effective practices adapted to different crops, soils, and climatic conditions. Such practices include providing for adequate soil drainage, protection from flooding, erosion and runoff control, near optimum tillage, and planting the correct kind and amount of high quality seed. Weeds, diseases, and harmful insects are controlled. Favorable soil reaction and near optimum levels of available nitrogen, phosphorus, and potassium for individual crops are maintained. Efficient use is made of available crop residues, barnyard manure, and/or green manure crops. All operations, when combined efficiently and timely, can create favorable growing conditions and reduce harvesting losses -- within limits imposed by weather.

HIGH WATER TABLE - A seasonal high water table is a zone of saturation at the highest average depth during the wettest part of the year. May be apparent, perched, or artesian kinds of water tables.

Water Table, Apparent - A thick zone of free water in the soil. An apparent water table is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil.

Water Table, Artesian - A water table under hydrostatic head, generally beneath an impermeable layer. When this layer is penetrated, the water level rises in an uncased borehole.

Water Table, Perched - A water table standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

DELINEATION - For Wetlands: A series of orange flags placed on the ground by a certified professional that outlines the wetland boundary on a parcel.

DETERMINATION - A polygon drawn on a map using map information that gives an outline of a wetland.

HYDRIC SOIL - This type of soil is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (USDA Natural Resources Conservation Service 1987)

INTENSIVE SOIL MAPPING - Mapping done on a smaller more intensive scale than a modern soil survey to determine soil properties of a specific site, e.g. mapping for septic suitability.

LAND EVALUATION AND SITE ASSESSMENT (L.E.S.A.) - LESA is a systematic approach for evaluating a parcel of land and to determine a numerical value for the parcel for farmland preservation purposes.

MODERN SOIL SURVEY - A soil survey is a field investigation of the soils of a specific area, supported by information from other sources. The kinds of soil in the survey area are identified and their extent shown on a map, and an accompanying report describes, defines, classifies, and interprets the soils. Interpretations predict the behavior of the soils under different used and the soils' response to management. Predictions are made for areas of soil at specific places. Soils information collected in a soil survey is useful in developing land-use plans and alternatives involving soil management systems and in evaluating and predicting the effects of land use.

PALUSTRINE - Name given to inland fresh water wetlands

PERMEABILITY - Values listed estimate the range (in rate and time) it takes for downward movement of water in the major soil layers when saturated, but

allowed to drain freely. The estimates are based on soil texture, soil structure, available data on permeability and infiltration tests, and observation of water movement through soils or other geologic materials.

PIQ - Parcel in question

POTENTIAL FROST ACTION - Damage that may occur to structures and roads due to ice lens formation causing upward and lateral soil movement. Based primarily on soil texture and wetness.

PRIME FARMLAND - Prime farmland soils are lands that are best suited to food, feed, forage, fiber and oilseed crops. It may be cropland, pasture, woodland, or other land, but it is not urban and built up land or water areas. It either is used for food or fiber or is available for those uses. The soil qualities, growing season, and moisture supply are those needed for a well managed soil economically to produce a sustained high yield of crops. Prime farmland produces in highest yields with minimum inputs of energy and economic resources, and farming the land results in the least damage to the environment.

Prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The level of acidity or alkalinity is acceptable. Prime farmland has few or no rocks and is permeable to water and air. It is not excessively erodible or saturated with water for long periods and is not frequently flooded during the growing season. The slope ranges mainly from 0 to 5 percent. (Source USDA Natural Resources Conservation Service)

PRODUCTIVITY INDEXES - Productivity indexes for grain crops express the estimated yields of the major grain crops grown in Illinois as a single percentage of the average yields obtained under basic management from several of the more productive soils in the state. This group of soils is composed of the Muscatine, Ipava, Sable, Lisbon, Drummer, Flanagan, Littleton, Elburn and Joy soils. Each of the 425 soils found in Illinois are found in Circular 1156 from the Illinois Cooperative Extension Service.

SEASONAL - When used in reference to wetlands indicates that the area is flooded only during a portion of the year.

SHRINK-SWELL POTENTIAL - Indicates volume changes to be expected for the specific soil material with changes in moisture content.

SOIL MAPPING UNIT - A map unit is a collection of soil areas of miscellaneous areas delineated in mapping. A map unit is generally an aggregate of the delineations of many different bodies of a kind of soil or miscellaneous area but may consist of only one delineated body. Taxonomic class names and accompanying phase terms are used to name soil map units. They are described in terms of ranges of soil properties within the limits defined for taxa and in terms of ranges of taxadjuncts and inclusions.

SOIL SERIES - A group of soils, formed from a particular type of parent material, having horizons that, except for texture of the A or surface horizon, are similar in all profile characteristics and in arrangement in the soil profile. Among these characteristics are color, texture, structure, reaction, consistence, and mineralogical and chemical composition.

SUBSIDENCE - Applies mainly to organic soils after drainage. Soil material subsides due to shrinkage and oxidation.

TERRAIN - The area or surface over which a particular rock or group of rocks is prevalent.

TOPSOIL - That portion of the soil profile where higher concentrations of organic material, fertility, bacterial activity and plant growth take place. Depths of topsoil vary between soil types.

WATERSHED - An area of land that drains to an associated water resource such as a wetland, river or lake. Depending on the size and topography, watersheds can contain numerous tributaries, such as streams and ditches, and ponding areas such as detention structures, natural ponds and wetlands.

WETLAND - An area that has a predominance of hydric soils and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

REFERENCES

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McHenry County Soil & Water Conservation District

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Land Evaluation and Site Assessment System. 2005. The McHenry County Department of Planning and McHenry County Soil and Water Conservation District. In cooperation with: USDS, Natural Resources Conservation Service

McHenry County Advanced Identification of Wetlands (ADID)
Northeastern Illinois Planning Commission

McHenry County Health Code relating to septic system suitability

McHenry County 2030 Land Use Plan
McHenry County Dept. of Planning and Development

McHenry County Natural Areas Inventory
McHenry County Conservation District

McHenry County, Illinois Fire Protection Districts
McHenry County Dept. of Planning and Development

McHenry County, Illinois Historic Landmarks
McHenry County Historic Preservation Committee

Natural Resources Conservation Service Wetland Inventory Map. United States Department of Agriculture

The Conservation of Biological Diversity in the Great Lakes Ecosystem: Issues and Opportunities, prepared by the Nature Conservancy Great Lakes Program 79W. Monroe Street, Suite 1309, Chicago, IL 60603, January 1994

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Soil Erosion by Water - United States Department of Agriculture Natural Resources Conservation Service. Agriculture Information Bulletin 513.

Soil Survey of McHenry County, Illinois Part 1 and Part 2
Natural Resources Conservation Service, United States Department of Agriculture.

Appendix E – Wetland Delineation Report

DKES INC.

WETLAND AND WATERBODY DELINEATION REPORT
MAIN STREET ROAD FARM, SPRING GROVE
MCHENRY COUNTY, ILLINOIS

Prepared for

FOX DEVELOPMENT, INC.
J. Pease Inc.
Super Aggregates
5435 Bull Valley Rd.
Suite 330
McHenry, IL 60050

Prepared by

DK ENVIRONMENTAL SERVICES, INC.
110 WOODLAND ROAD
LIBERTYVILLE, IL 60048

DKES Project No. 099-2022

November, 2022

CONTENTS

Appendices

Tables

Figures

1 INTRODUCTION

On behalf of Fox Development, Inc., DK Environmental Services (DKES) has prepared this wetland and waterbody delineation report for the Main Street Road Farm Project (project) located in Spring Grove, McHenry County, Illinois. The Study Area is approximately 138 acres (Figures 1 and 2).

This report provides the methodology, results, and conclusions of a wetland and waterbody delineation following our field reconnaissance conducted on November 25, 2022. The objectives of this study were to identify and evaluate potentially jurisdictional wetlands and other waters within the study area that may be subject to U.S. Army Corps of Engineers (USACE) and McHenry County jurisdiction under Section 404 of the Clean Water Act and/or other local county regulations. Fieldwork was performed by Daniel J. Krill Certified Wetland Specialist.

2 METHODOLOGY

In accordance with the USACE methodology outlined in the *Corps of Engineers Wetlands Delineation Manual* (1987 Manual) (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region* (Regional Supplement) (USACE 2010), the location and extent of wetlands and other waters within the study area were identified and approximated through the combined use of existing publicly available baseline data and on-site field delineation described below:

2.1 Desktop Analysis

The following publicly available data sources were used to complete a desktop analysis of the study area to assess the likelihood of wetlands and other waters being present:

- US Army Corps of Engineers – Illinois Regulatory Program
- McHenry County Stormwater Management Ordinance
- Current and historical aerial imagery
- Federal Emergency Management Agency (FEMA) National Flood Hazard Layer mapping (FEMA 2022)
- National Land Cover Database (Multi-Resolution Land Characteristics Consortium 2019)
- Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2022)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping (USFWS 2022)
- McHenry County GIS Wetland Inventory (Athena)
- McHenry County Advanced Identification of Wetlands (ADID map)
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) (USGS 2020)

The results of the desktop analysis were used to identify the likely locations of wetlands and waterbodies for the field delineation prior to and following the on-site field reconnaissance.

McHenry County Stormwater Management Ordinance (SMO)
Regulations and Permitting Considerations (*last amended April 5, 2016*)

The five categories of wetland impacts regulated under the McHenry County Watershed Development Ordinance (WDO) as follows:

(1) Category I: IWMC impacts with a cumulative impact area less than or equal to 1 acre and not impacting HQAR, HFVW, or HQHS;
(2) Category II: IWMC impacts with a cumulative impact area greater than 1 acre and less than or equal to 2 acres and not impacting HQAR, HFVW, or HQHS;
(3) Category III: IWMC impacts with a cumulative impact area greater than 2 acres or impacting HQAR, HFVW, or HQHS;
(4) Category IV: IWMC impacts necessary for wetland restoration, wetland creation and/or wetland enhancement, including streambank and shoreline stabilization projects that utilize appropriate bioengineered practices; or
(5) Category V: Temporary IWMC impacts

The SMO requires mitigation for wetland impacts greater than or equal to 0.10 acre of Isolated Waters of Lake County (IWLC). Mitigation shall provide replacement of the wetland environment lost to development at the following proportional rates (i.e., creation acreage to wetland impact acreage):

(1) 1.5:1 ratio for IWMC impacts under Categories I, II and III that are not designated as HQAR, HQHS, or HFVW, or a minimum 1:1 ratio for USACE certified wetland mitigation bank credits;
(2) 3:1 ratio is required for IWMC impacts that are designated as HFVW;
(3) 5:1 ratio is required for IWMC impacts that are designated as HQHS or HQAR;
(4) 5:1 ratio is required for IWMC impacts prior to issuance of a stormwater management permit, if the Enforcement Officer determines that IWMC mitigation is an acceptable alternative to wetland restoration; and
(5) 1:1 ratio is required for IWMC impacts under Categories IV and V; or
(6) 1:1 ratio may be allowed for IWMC impacts under Categories I, II and III including HQAR, HQHS, an HFVW, provided that IWMC mitigation occurs onsite according to the requirements of this Ordinance.

Mitigation credit may also be obtained for wetland enhancement. For example, the enhancement of existing wetlands may be credited up to 25% of the enhanced wetland acreage completed, provided the wetland impacted acreage created on-site is a minimum 1:1 ratio.

McHenry County Buffer width requirements for wetland (non-linear) water bodies are as follows:

- Total surface area greater than 1/4 acre and less than ½ acre; the minimum buffer width shall be 30 feet.
- Total surface area is greater than ½ acre, the buffer shall be a minimum of 50 feet.
- For high quality aquatic resources, the minimum buffer shall be 100 feet.

Linear buffers shall be designated along both sides of all channels meeting the definition of Waters of McHenry County. The buffer width shall be determined as follows:

- For channels with a watershed greater than 20-acres, but less than one square mile, the minimum buffer shall be 50 feet on each side of the channel;
- For high quality aquatic resources, the minimum buffer shall be 100 feet.

U.S. Army Corps of Engineers Regulations and Permitting Considerations

The USACE regulates the discharge of dredged or fill material into jurisdictional wetlands and "waters of the U.S." under Section 404 of the Clean Water Act (Act). Jurisdictional areas covered by the Act are navigable waterways, tributaries to navigable waterways, and wetlands adjacent thereto. Isolated wetlands are exempt from federal regulations following the January 2001 Supreme Court decision (SWANCC v. USACE).

The USACE (USACE Federal Register 1982) and the U.S. Environmental Protection Agency (EPA Federal Register1980) jointly define wetlands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions". Identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology, originally set forth by the USACE in the 1987 Environmental Laboratory publication entitled "Corps of Engineers Wetlands Delineation Manual: Technical Report Y-87-1", commonly referred to as the1987 Wetlands Delineation Manual.

The Midwest Region supplement to the 1987 Wetlands Delineation Manual was released in 2010 outlining updated technical guidance and procedures for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act (CWA) or Section 10 of the Rivers and Harbors Act.

This wetland delineation was conducted using methodology presented in the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (2010 U SACE Midwest Region Manual)." On May 27, 2015, the EPA and the USACE finalized the Clean Water Rule (CWR), which clarifies protection of "Waters of the U.S." (WOUS) under the CWA. The CWR went into effect on August 28, 2015; however, the US Court of Appeals for the Sixth Circuit issued a nationwide stay of the CWR on October 9,2015 while the CWR is being challenged. WOUS are generally open water areas such as rivers and lakes including wetlands that are connected to navigable waterways and their tributaries.

Under current USACE regulations (USACE 2012), to prevent a net loss of wetland, any disturbance of wetlands/waters of the U.S. area requires a permit application. Filling 0.10 acre or more of jurisdictional wetland/waters of the U.S. requires a permit with mitigation at a 1.5:1 replacement ratio. The mitigation ratio increases if an area is considered a High-Quality Aquatic Resource (HQAR).

Areas of wetland/waters of the U.S. fill less than 0.10 acre also require a permit. However, mitigation may or may not be required depending on USACE discretion. This discretionary judgment is determined by the overall quality of the wetland and what impact the loss of wetland would have on the surrounding area. USACE regulations require an upland buffer of native plants adjacent to all created, restored, enhanced, and preserved wetlands 0.10 acre or larger.

Buffer width requirements are as follows:

- For a linear body of water (e.g., river, stream, creek, etc.), the buffer shall be a minimum of 50 feet from the Ordinary High-Water Mark (OHWM) on both sides of the linear water body.
- For any other "waters of the U.S.", including wetlands from 0.25 acres up to 0.50 acres, the buffer shall be a minimum of 30 feet.
- For any "waters of the U.S.", including wetland over 0.50 acres, the buffer shall be minimum of 50 feet.
- For any area determined to be a HQAR, the buffer shall be 100 feet wide (80 foot minimum).

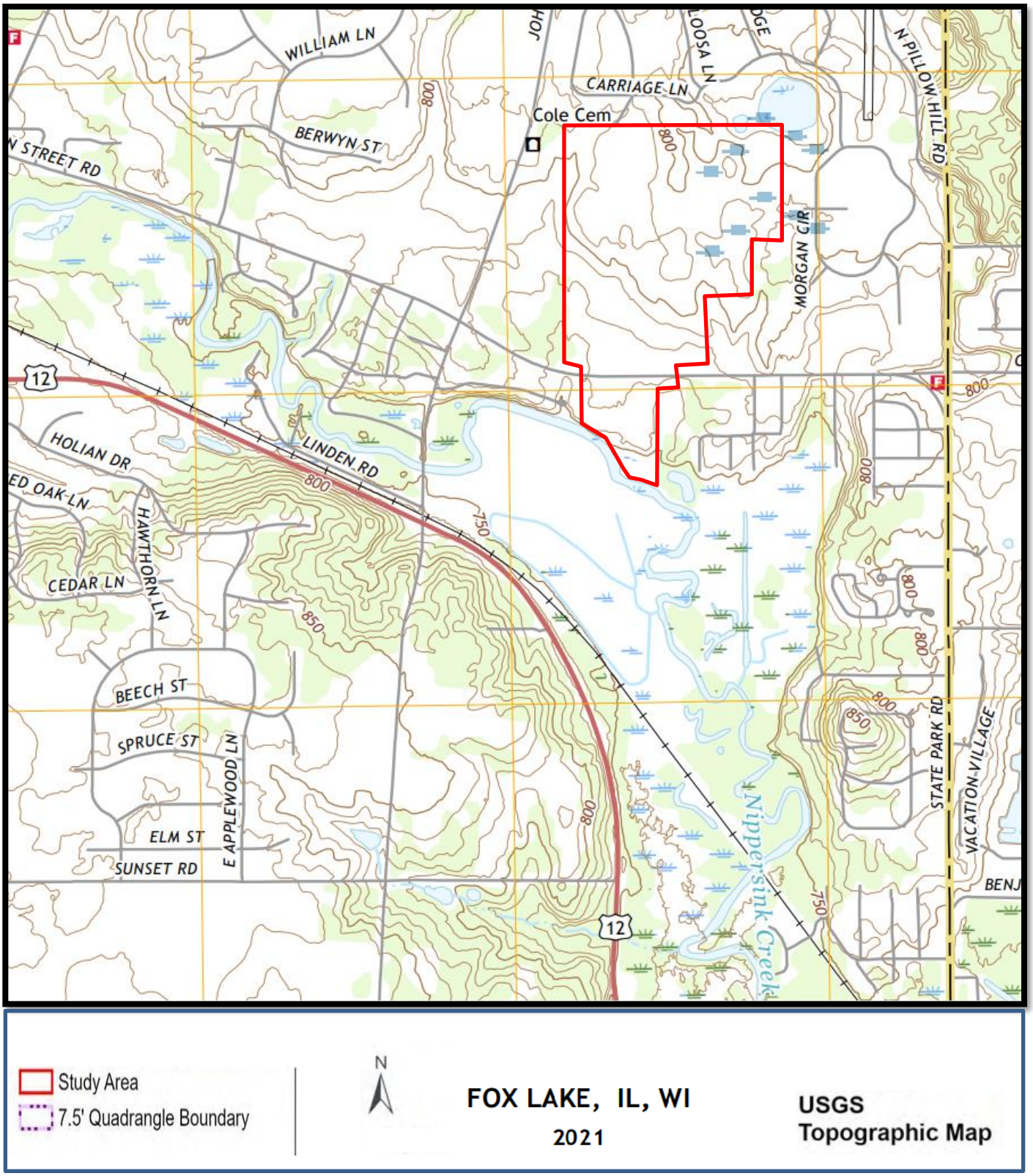


Figure 1. Location map for the Main Street Road Farm, Spring Grove McHenry County, Illinois.

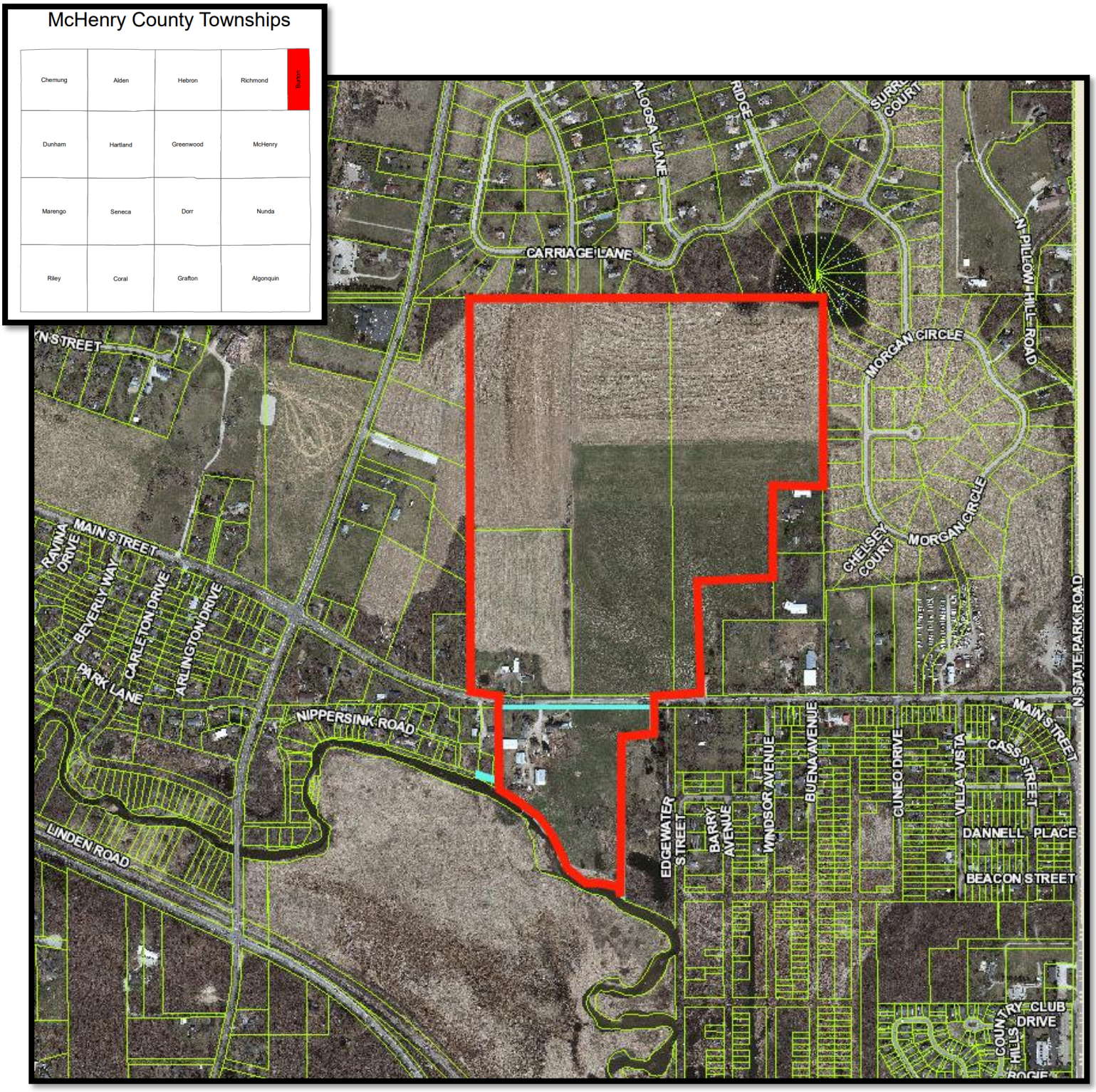


Figure 2. 2021 Aerial location map for the Main Street Road Farm, Spring Grove McHenry County, Illinois.

Pin#'s: 05-29-176-001, 05-29-126-001, 05-29-200-015, 05-29-326-004
NE and SW ¼ of Section 29-T.46-R.9E
Reference address: 801 / 802 Main St. Road
Approx. 138 acre site in Spring Grove, Burton Township, McHenry County IL 60081-8970

2.2 Field Delineation Methodology

DKES conducted a field delineation on November 25, 2022, to determine the presence or absence of wetlands and other waters in accordance with guidance and information available from the following sources:

- 1987 Manual (USACE 1987)
- Regional Supplement (USACE 2010)
- *Field Indicators of Hydric Soils in the United States* (Version 8.2) (NRCS 2018)
- *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in* Rapanos v. United States *and* Carabell v. United States (U.S. Environmental Protection Agency 2008)
- USACE Regulatory Guidance Letter 05-05: Ordinary High Water Mark Identification (USACE 2005)

The presence or absence of wetlands was determined in the field using routine determination methods outlined in the 1987 Manual and Regional Supplement (USACE 1987, 2010). Wetlands were identified by positive indicators of hydrology, hydrophytic vegetation, and hydric soils. Under normal conditions, all three parameters must be present for an area to be considered a wetland in accordance with Section 404 of the Clean Water Act. Wetland indicator data were collected at specified data points within the Study Area, which were used to approximate the wetland boundary and were recorded on USACE Midwest Region wetland determination data forms. Wetland boundaries were flagged using pink, fluorescent ribbon and/or wire pin flags labeled "wetland delineation" and numbered at the outer limit of each water feature for survey by others.

For each identified wetland area, a Floristic Quality Assessment was conducted to determine the quality of the plant community and whether any wetlands within the study area meet the definition of a high-quality aquatic resource according to McHenry County or USACE standards. Plant species in each wetland were noted to obtain the Floristic Quality Index (FQI) and native mean coefficient of conservatism (C- value). C-values ranging from 0 to 10 were assigned to native plants as listed in *Flora of the Chicago Region* (Wilhelm and Rericha 2017).

A native mean C-value was calculated using the Chicago Region Floristic Quality Assessment Calculator to assess native vegetative quality (Herman et al. 2017). A native species FQI was calculated by multiplying the native mean C-value by the square root of the number of observed native species. Native FQI values range from 0 to 60. Wetlands with a FQI of 20 or greater or native mean C-value of 3.5 or greater are considered high quality aquatic resources, which warrant special protection under the 2017 USACE Chicago District Regional Permit Program and the Lake County Watershed Development Ordinance.

Wetland hydrology was primarily determined in the field by considering the frequency and duration of inundation, visual observation of saturation in the upper pedon sampled (upper 12-16 inches of the soil profile), and the presence of primary wetland hydrologic indicators (e.g., oxidized rhizospheres on living roots, water-stained leaves, water marks, sediment deposits, or algal matting). Secondary indicators used to determine wetland hydrology include, but are not limited to, surface soil cracks, crayfish burrows, geomorphic position, and drainage patterns.

Evidence of these secondary indicators is present even during dry periods, and therefore they are useful indicators of a wetland. If the area sampled displayed one or more primary hydrologic indicators or two or more secondary hydrologic indicators as listed in the 1987 Manual and Regional Supplement, a positive wetland hydrology determination was made (USACE 1987, 2010).

Rainfall has substantial influence on maintaining wetland hydrology. Therefore, it is important to accurately evaluate the normality of rainfall with respect to its influence on wetland hydrology.

Using the Applied Climate Information System Wetland Evaluation Tables (WETs) (Applied Climate Information System 2022) as a baseline of normal rainfall, local area rainfall data was assessed by considering the 3-month period prior to the month of the field delineation. Evaluation under these methods classified the condition of the site at the time of the delineation as either drier than normal, normal, or wetter than normal, and is noted on the USACE data forms.

Wetland hydrology indictors for the Midwest Region are summarized below:

Indicator	Category	
	Primary	Secondary
Group A - Observation of Surface Water or Saturated Soils		
A1 - Surface water	X	
A2 - High water table	X	
A3 - Saturation	X	
Group B - Evidence of Recent Inundation		
B1 - Water marks	X	
B2 - Sediment deposits	X	
B3 - Drift deposits	X	
B4 - Algal mat or crust	X	
B5 - Iron deposits	X	
B6 - Surface soil cracks		X
B7 - Inundation visible on aerial imagery	X	
B8 - Sparsely vegetated concave surface	X	
B9 - Water-stained leaves	X	
B10 - Drainage patterns		X
B13 - Aquatic fauna	X	
B14 - True aquatic plants	X	
Group C - Evidence of Current or Recent Soil Saturation		
C1 - Hydrogen sulfide odor	X	
C2 - Dry-season water table		X
C3 - Oxidized rhizospheres along living roots	X	
C4 - Presence of reduced iron	X	
C6 - Recent iron reduction in tilled soils	X	
C7 - Thin muck surface	X	
C8 - Crayfish burrows		X
C9 - Saturation visible on aerial imagery		X
Group D - Evidence from Other Site Conditions or Data		
D1 - Stunted or stressed plants		X
D2 - Geomorphic position		X
D5 - FAC-neutral test		X
D9 - Gauge or well data	X	

Vegetation within each sample plot was identified to the species level when possible, to identify the plant communities present. Hydrophytic vegetation is defined as a plant community with over 50% of the dominant plant species with wetland indicator statuses of obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC) as recorded in the National Wetland Plant List: Midwest Region (USACE 2020). The appropriate wetland indicator status was noted for each plant species.

The absolute cover of each plant species within the plot area (i.e., 2-meter [m] radius for the herbaceous vegetation stratum, 5-m radius for shrub/vine strata, and 15-m radius for the tree stratum) was visually estimated, and then the absolute percent cover was calculated (e.g., each species may be rated up to 100% and the total can be over 100% cover). Then, either the rapid test (i.e., all dominant species across all strata are OBL or FACW), the dominance test (i.e., 50/20 test; >50% of the total cover represented by plant species combined and including any species >20% of cover by itself across all strata are rated OBL, FACW, or FAC), or the prevalence index (i.e., average value of wetland indicator statuses [OBL = 1…UPL = 5] of all species in the plot, weighted by percent cover, is less than or equal to 3.0) was used to determine the presence or absence of hydrophytic vegetation.

Stratum	Description	Plot and Sample Size Standards*
Trees	Woody plants 3 inches (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	30 feet (9.1 m) radius
Saplings/Shrubs	Woody plants less than 3 inches DBH and greater than 3.28 feet (1 m) tall.	15 feet (4.6 m) radius
Herbaceous	Herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 feet tall.	5 feet (1.5 m) radius or 3.28 by 3.28 feet square (1 m^2) quadrat
Woody Vines	Woody vines greater than 3.28 feet in height.	30 feet (9.1 m) radius

*Plot size may vary based on site conditions and vegetative cover

For each data point recorded, a soil test pit was excavated by hand to determine the presence or absence of hydric soil conditions. As defined by the National Technical Committee of Hydric Soils, a hydric soil is a "soil that formed under the conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (NRCS 2015). There are 23 hydric soil indicators and if one is present, it is considered a hydric soil. A detailed description of the hydric soil indicators can be found in *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*, dated August 2010.

The hydric soil indicators include:

- Histosol
- Histic Epipedon
- Black Histic
- Hydrogen Sulfide
- Stratified Layers
- 2 cm Muck
- Depleted Below Dark Surface
- Thick Dark Surface
- Sandy Mucky Mineral
- 5 cm Mucky Peat or Peat
- Sandy Gleyed Matrix
- Sandy Redox
- Stripped Matrix
- Loamy Mucky Mineral
- Loamy Gleyed Matrix
- Depleted Matrix
- Redox Dark Surface
- Depleted Dark Surface
- Redox Depressions
- Coast Prairie Redox
- Dark Surface
- Iron-Manganese Masses
- Very Shallow Dark Surface

Common indicators for non-sandy soils as per the USACE's manuals (USACE 1987, 2010) include the presence of organic soils, histic epipedon, hydrogen sulfide odor, reduced soil conditions, gleyed soils, or listing on the national hydric soils lists. Hydric soil determinations were made according to criteria listed in the Regional Supplement and *Field Indicators of Hydric Soils in the United States* (Version 8.2) (NRCS 2018).

Areas sampled that tested positive and meet all indicators of hydrology, hydrophytic vegetation, and hydric soils were then classified according to the Cowardin system, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). This is a hierarchical system based on the topographic position and vegetation type of a wetland, which aids resource managers and others by providing uniformity of concepts and terms used to define wetlands according to hydrologic, geomorphologic, chemical, and biological factors.

Waterbodies (e.g., creeks, rivers, ditches, ponds) were identified by the presence of an ordinary high- water mark (OHWM), which is usually identifiable by indicators such as the level of water present, scouring of the channel, or a vegetation line within the channel (USACE 2005). The OHWM is a defining element for identifying the lateral jurisdictional limits of non-wetland waters. The OHWMs of waterbodies encountered during the wetland delineation were recorded using GPS units capable of submeter accuracy. Streams were further classified as perennial, intermittent, or ephemeral based on field observations.

Due to the nature of open water lakes and well-defined drainage channels for example, waterways may only have one or two of the wetland criteria listed above. The USACE defines the ordinary high watermark (OHWM) as the boundary of waterways. The OHWM is the observed line on the shore established by fluctuations of water and is indicated by physical characteristics such as:

- a clear, natural line impressed on the bank;
- shelving;
- changes in the character of the soil;
- destruction/damage of terrestrial vegetation;
- the presence of litter and debris accumulation; or
- other appropriate means that consider the characteristics of the surrounding areas.

During low stream flow or drought conditions, the OHWM is used to determine the boundary of a waterway. During extremely high stream flow conditions or flood conditions the boundaries of waterways cannot typically be accurately determined. Therefore, waterway boundaries are best delineated when normal stream flow conditions are present.

To differentiate boundaries between waterways and adjacent wetlands, evidence of the OHWM is utilized. Changes in vegetation can also be evaluated to determine where true hydrophytic (FAC and FACW) plant species are present versus aquatic or OBL species; however, it should be noted that in many cases vegetation is not present within the channels of waterways.

Vegetation adjacent to waterways may be limited to species overhanging the banks and channel. If the presence of a waterway is questionable, a review of historic aerial photographs and historic U.S. Geological Survey (USGS) topographic maps can be conducted to confirm the current or historic presence of a waterway. This can include segments of streams that are entirely enclosed.

2.3 *Farmed Wetland Determination Methodology*

Agricultural Land includes cropland, pastureland, orchards, vineyards, and nurseries, confined feeding operations and equestrian facilities. The study area consists primarily of agricultural land (row crops) on the north side of Main Street Road, and pastureland / feeding operations to the south. Farmed Wetlands are wetlands that are farmed currently or have been farmed within five (5) years of the date of the investigation.

Agricultural land wetland determinations are performed following standard USDA-Natural Resources Conservation Service (NRCS) procedures. Due to the proximity of the site to Lake County, and the availability of best and most current guidance regarding agricultural wetlands, a farmed wetland determination was conducted using methodologies outlined in the Lake County Stormwater Management Commission Regulatory Guidance Memorandum #2022-01 – *Revised SMC Guidance for Agricultural Land Wetland Determinations ("Farmed Wetlands") in Lake County, Illinois* (LCSMC 2022).

The NRCS procedures require a review of various inventories to identify wetland signatures3 on a development site, including but not limited to the U.S. Fish & Wildlife Service's National Wetland Inventory (NWI) maps and a *minimum* of five (5) years of aerial imagery for designated years with approximate "normal precipitation" during the early growing season period (April-June), based on long-term precipitation averages.

DKES reviewed aerial imagery on a total of eight (8) slides purchased through the NRCS (2001, 2003, 2006, 2007, 2011, 2012, 2014) and available on Google Earth (2016). Two slides were available for review during years with "WET" indicator imagery first, then slides and aerial photos were analyzed for the indicated five (5) years of approximate "Normal" precipitation, as listed in the LCSMC guidance for the Antioch climate station, to determine if wetland signatures were consistently present within the study area for at least 3 normal precipitation years.

Designation of an area on the NWI map or LCWI map also constitutes 1 year of wetland signature. As a result of this desktop review, only one potential area was identified on the Wet year imagery with a defined signature, but the wet signature was absent during normal precipitation years. DKES identified no areas of potential farmed wetland (PFW) requiring field confirmation of the presence of hydric soils (Appendix A).

Field confirmation is required for wetland signatures identified on over 50% of normal precipitation aerial imagery. While no areas were identified resulting in >50% signatures, a representative photo was taken in one area to ground truth and document an eroded hill slope that was not historically farmed and appeared on aerial slides to be aberrant, and in another area a photo was collected at the low point of a potential farmed wetland area observed on the Wet primary indicator slide (2014 only) in Appendix A.

From on-site inspections of these areas, a review of topographic survey information, and discussion of the site drainage with the property owner, DKES confirmed that the areas identified do not constitute farmed wetlands, but rather an eroded slope and a well-drained depressional area within the study area (Table 3; see Appendix A).

Additionally, the property owner was interviewed on the date of the field investigation and stated that the farm has been in his family for over 100 years, and that no field tiles were installed in the farm field due to the gravel substrate and well-drained characteristics of the landscape.

3 SOURCE MATERIALS REVIEW

The following sections summarize the vegetative communities, soils, hydrology, and classification of wetlands and waterbodies within the study area, as identified in publicly available data sources. These source materials were reviewed throughout the wetland delineation process involving desktop analysis, field reconnaissance, and summary report.

3.1 Site Characteristics

3.1.1 *Landscape Setting*

Topography within the study area at the north of Main Street Road is rolling, and at the northern portion of the agricultural field the site generally slopes northeast, with the elevations ranging from approximately 815 (high point) to 785 feet above mean sea level. From the ridge of the high point the field also falls off to the southwest and southeast. At Main Street the landscape drops to elevation 765 and continues to drop to the southwest off-site. South of Main Street is the cow pasture and barns, overlooking Nippersink Creek at the far south property line. The low point of the site is found along the creek bank at approximately el. 745.0. A review of the FEMA National Flood Hazard mapping (FEMA 2022) indicates that the study area at the far south is located within a floodplain and contains floodway. The Base Flood Elevation that defines the ZONE AE special flood hazard area along Nippersink Creek is 750.3 (see Figure 6). Below is the topographic exhibit for the northern portion of the site:

Below is the topographic exhibit for the southern portion of the site:

3.1.2 *Vegetation*

A review historical aerial photos indicates that land cover within the study area consists primarily of cultivated crops at the northern portion of the site, north of Main Street Road. During the time of the inspection the field was unvegetated following the harvesting of soy crops earlier in the fall. South of the road is the cow pasture and agricultural barns, feed lot, accessory buildings, and residence.

3.1.3 *Soils*

A total of twelve (12) soil map units are present within the Study Area (Figure 4, Table 1) according to the NRCS (2022). A total of three (3) of the soils mapped on the site are designated as poorly drained hydric soils.

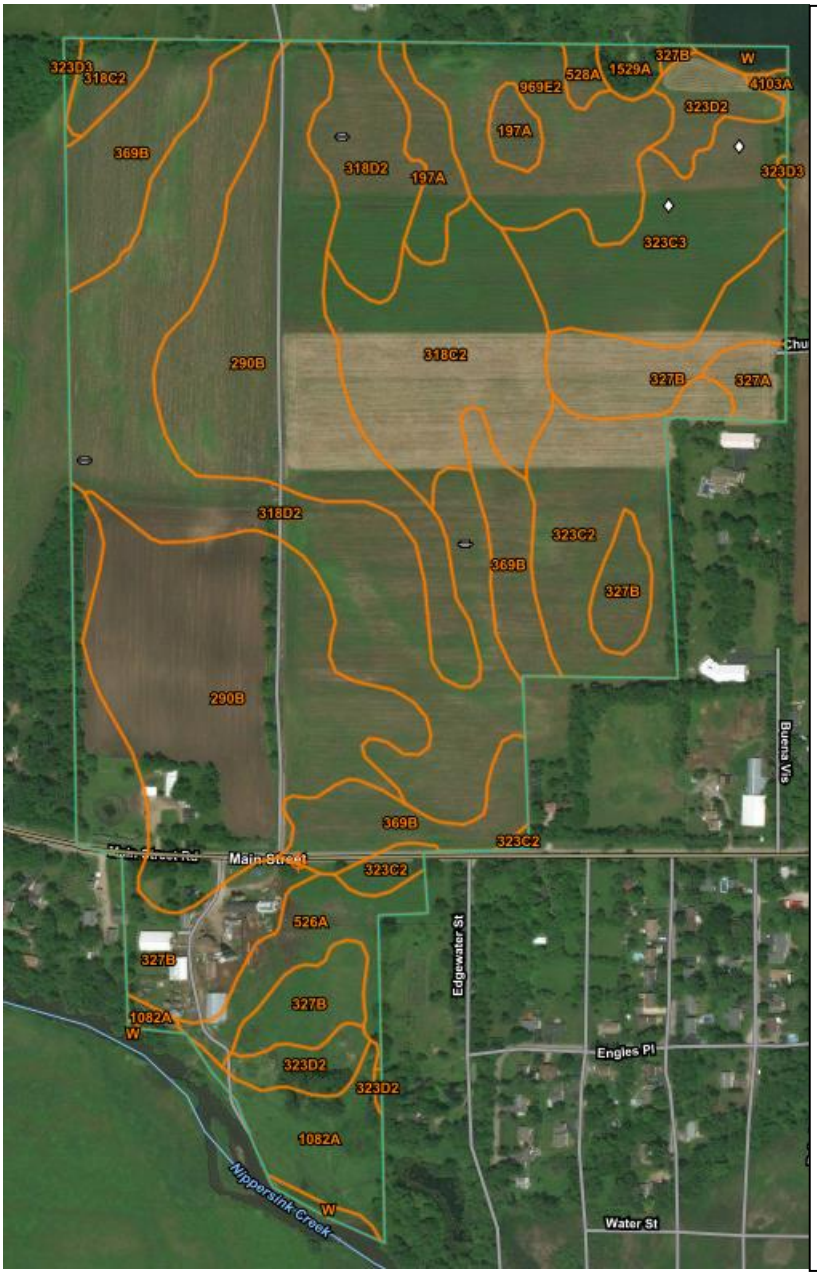
Water (W) is also designated on the site where permanently or semi-permanently inundated areas exist.

Table 1. Soil Map Units within the study area, McHenry County, Illinois

Map Unit Legend

Map Unit Symbol	Map Unit Name	HYDRIC STATUS
197A	Troxel silt loam, 0 to 2 percent slopes	197A - well drained
290B	Warsaw loam, 2 to 4 percent slopes	290B - well drained
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	318C2/D2 well drained
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	
323C2	Casco loam, 4 to 6 percent slopes, eroded	323C2/C3/D2/D3 somewhat excessively drained
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	
323D2	Casco loam, 6 to 12 percent slopes, eroded	
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	
327A	Fox silt loam, 0 to 2 percent slopes	327A/B well drained
327B	Fox silt loam, 2 to 4 percent slopes	
369B	Waupecan silt loam, 2 to 4 percent slopes	369B – well drained
526A	Grundelein silt loam, 0 to 2 percent slopes	526A – somewhat poorly drained
528A	Lahoguess loam, 0 to 2 percent slopes	528A - somewhat poorly drained
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	969E2 – somewhat excessively drained
1082A	Millington silt loam, 0 to 2 percent slopes, undrained, occasionally flooded	1082A – poorly drained **HYDRIC – floodplains**
1529A	Selmass loam, 0 to 2 percent slopes, undrained	1529A – poorly drained **HYDRIC**
4103A	Houghton muck, ponded, 0 to 2 percent slopes	4103A – very poorly drained **HYDRIC**
W	Water	

Source: NRCS (2022).



Map Unit	Map Unit Name
197A	Troxel silt loam, 0 to 2 percent slopes
290B	Warsaw loam, 2 to 4 percent slopes
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded
323C2	Casco loam, 4 to 6 percent slopes, eroded
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded
323D2	Casco loam, 6 to 12 percent slopes, eroded
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded
327A	Fox silt loam, 0 to 2 percent slopes
327B	Fox silt loam, 2 to 4 percent slopes
369B	Waupecan silt loam, 2 to 4 percent slopes
526A	Grundelein silt loam, 0 to 2 percent slopes
528A	Lahoguess loam, 0 to 2 percent slopes
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded
1082A	Millington silt loam, 0 to 2 percent slopes, undrained, occasionally flooded
1529A	Selmass loam, 0 to 2 percent slopes, undrained
4103A	Houghton muck, ponded, 0 to 2 percent slopes
W	Water

Figure 3. NRCS soil locations within the Main Street Road Farm, Spring Grove McHenry County, Illinois, 2022.

3.1.4 *Hydrology*

Precipitation data from the National Weather Service's Antioch, Illinois, Station 110203, which is approximately 7 miles northeast of the study area, was used to determine the baseline of normal rainfall. According to the National Oceanic and Atmospheric Administration, the 30-year average of a particular variable (e.g., precipitation or temperature) is called the "normal."

This was compared with precipitation recorded over the site in the past ±60 days before the date of the field investigation (Table 2). Based on these calculations, the 2-month period prior to the field survey on November 25, 2022, was found to have below normal precipitation patterns.

Table 2. Rainfall Summary Antioch, IL 2022

	WETS Rainfall Percentile (inches)		**Pre-investigation rainfall**
	NCDC Normals 1981-2010		**Accumulated Precipitation Oct. 31 – Nov 29, 2022**
October	2.83		
November	2.75		
Average:	2.79		1.5"
		Description: **Below Normal**	

Source: National Weather Service's Antioch, Illinois, Station 110203

3.1.5 *McHenry County ADID Map, USFWS National Wetland Inventory (NWI) Map*

DKES reviewed the McHenry County ADID Map and USFWS NWI mapping data to determine the potential presence of potential wetland features, wetland types and their quality designation within the study area (USFWS 2022).

McHenry, Illinois Advanced Identification of Aquatic Resources (ADID, 2005)
Advanced Identification, or ADID, is an EPA program designed to provide improved awareness of the locations, values, and special functions including biological, water quality, and stormwater storage of wetlands and other waters of the U.S. More specifically, it is intended to inform landowners, developers, and local governments that it may not be appropriate to fill or drain certain high quality wetland sites.
ADID projects also can provide guidance on strategies for long-term protection and management of aquatic resources in an area. (see Figure 4).

NWI wetlands are classified according to the Cowardin system, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). NWI data depicts the presence of wetlands and describes the wetland types within the study area (see Figure 5).

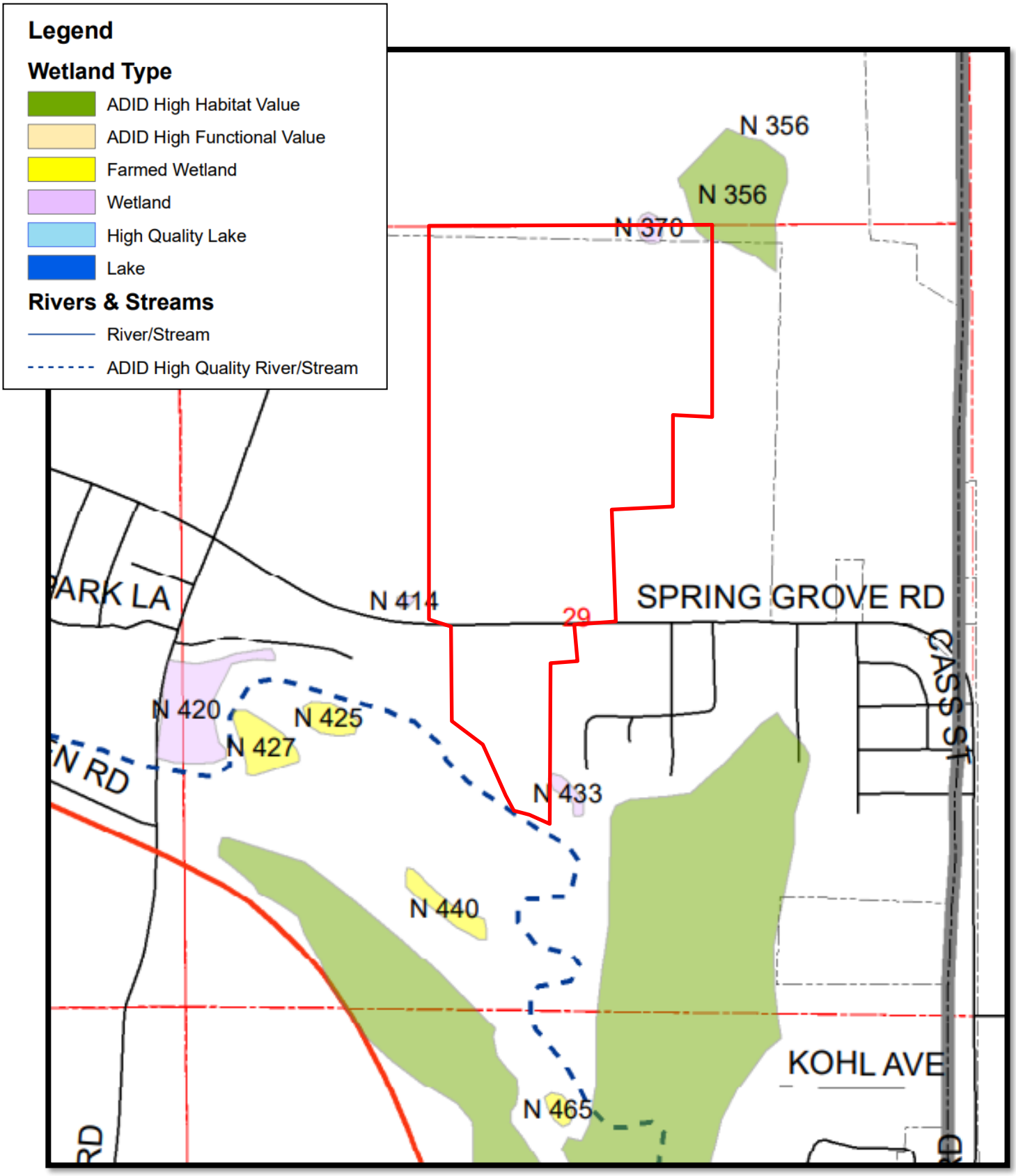


Figure 4. McHenry County ADID Map - Main Street Road Farm, Spring Grove McHenry County, Illinois.

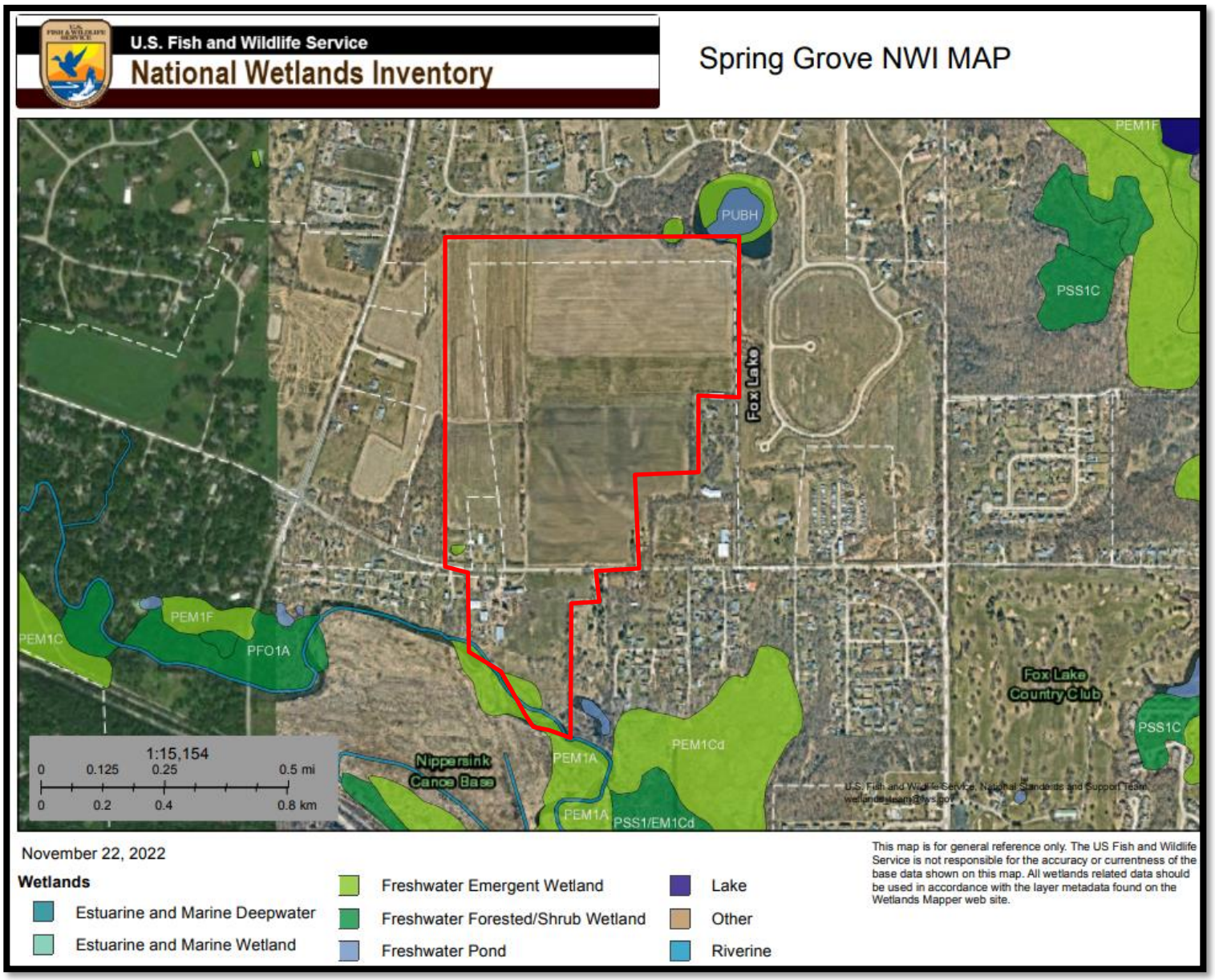


Figure 5. National Wetland Inventory Map - Main Street Road Farm, Spring Grove McHenry County, Illinois.

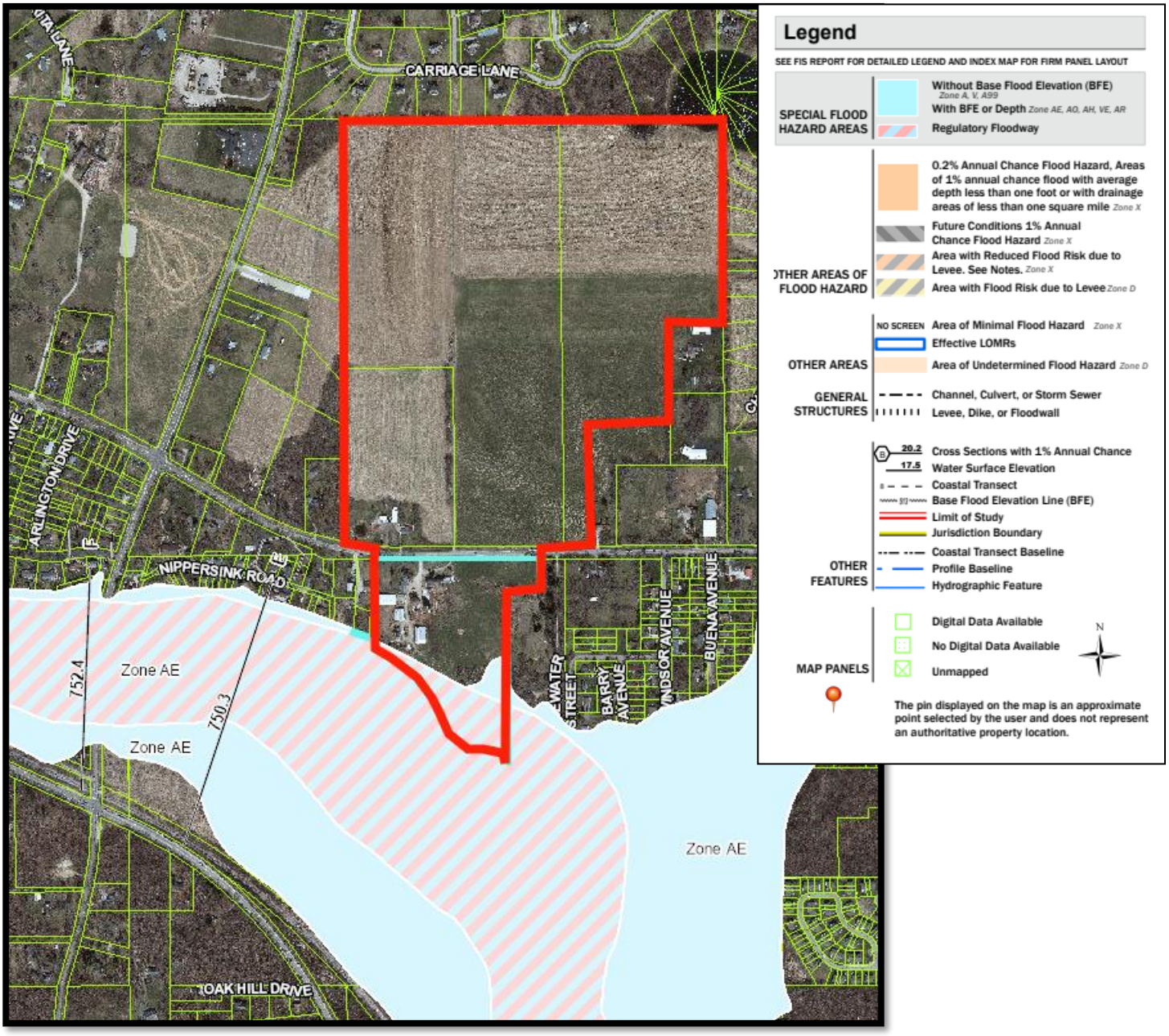


Figure 6. FEMA Flood Hazard Map - Main Street Road Farm, Spring Grove McHenry County, Illinois.

3.2 Field Delineation

DKES conducted the field delineation on November 25, 2022, to assess the general site characteristics, ground truth any potential mapped features identified (or otherwise undetermined and needing clarity) during the desktop analysis, assess the likelihood of wetland presence in areas mapped as hydric soils, and delineate the boundaries of all features determined to be present.

Wetland delineation data sheets are provided in Appendix B. The FQI for each wetland is provided in Appendix C. Representative photographs of the delineated features are provided in Appendix D.

3.2.1 *Wetlands Identified On Site*

DKES delineated a total of 4 wetland/water body features on the study site (Table 3; see Figure 5):

- Two (2) wetlands are palustrine emergent (PEM) wetlands;
- One (1) wetland is a permanently inundated pond, unconsolidated bottom
- One (1) wetland is a wetland complex that includes a riverine waterbody (Nippersink Creek), with a spring-fed channel tributary and portions that are palustrine emergent and temporarily flooded

Table 3. Wetlands Identified within the Study Area, McHenry County, Illinois

Notes: PEM = palustrine emergent; R=Riverine, PPI = pond, permanently inundated; HQAR=High Quality Aquatic Resource

MC = McHenry County; USACE = US Army Corps of Engineers, Chicago District

* This determination is the professional opinion of DKES.
A formal jurisdictional determination request from the USACE-Chicago District office will be required to determine the official jurisdictional status of each water feature identified.

† Source: McHenry County SMO and USACE Illinois Regulatory Program. In areas where high quality resources and/or federally or state-listed threatened and endangered species are present, buffer widths may be modified by the USACE and/or McHenry County.

†† Approximated acreage of wetlands includes an estimate of off-site area

Feature ID	Preliminary Jurisdictional Status*	Classification	Approximate Acreage††	Native Mean C-Value	Native FQI	Wetland Buffer (feet)†	HQAR
WL A	MC	PEM	0.60	1.80	6.97	50	No
WL B	MC	PPI	7.00	1.77	6.38	100 (ADID)	YES
WL C	MC	PEM	0.20	1.60	5.06	N/A	No
WL D	USACE	R / PEM	>10	2.42	10.55	50	No

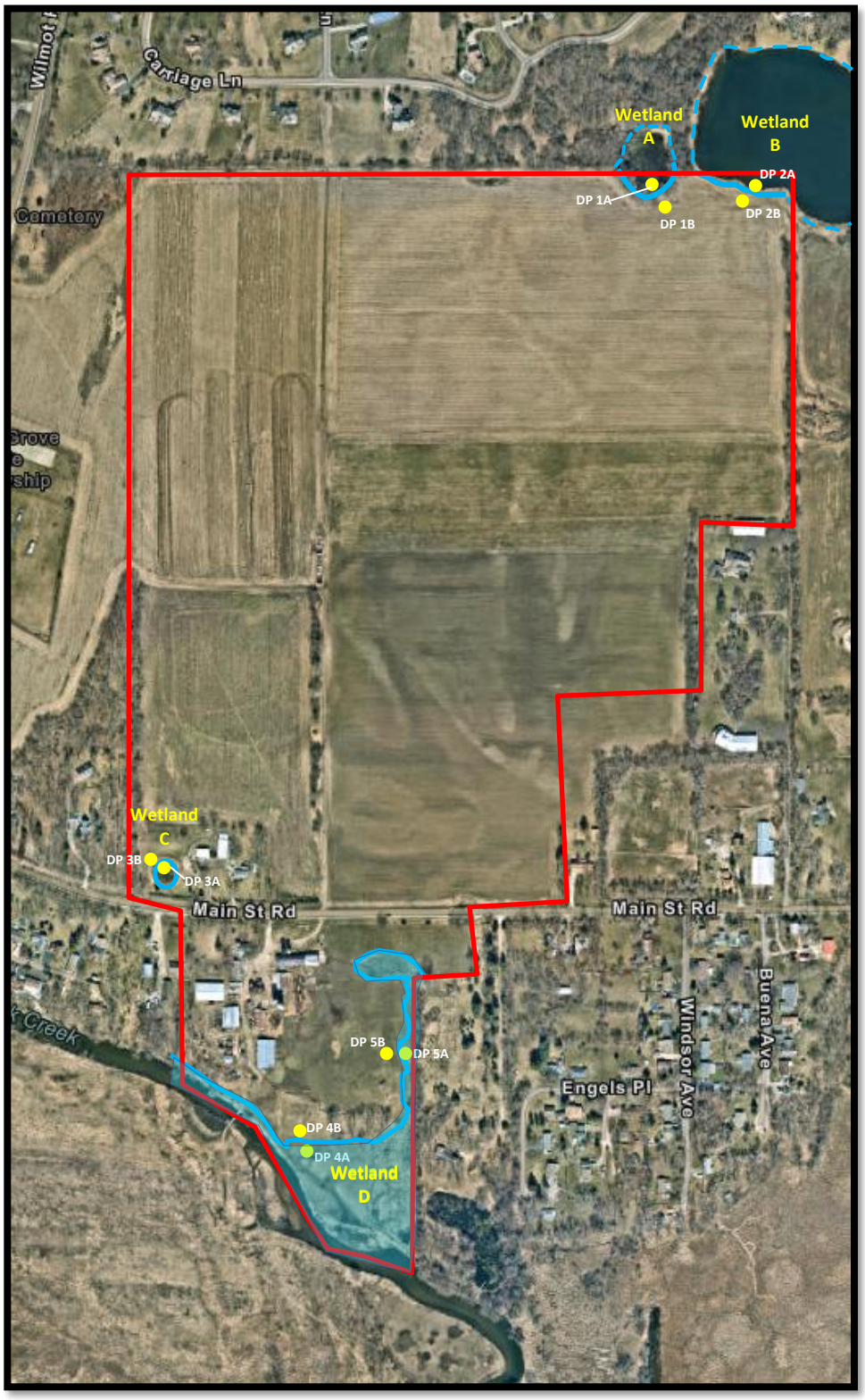


Figure 7. Approximate Wetland Boundary Delineation with Data Point Locations Main Street Road Farm, Spring Grove McHenry County, Illinois.

3.2.1.1 VEGETATIVE COMMUNITIES OBSERVED

DKES observed six (6) total vegetation community types within the study area including three (3) wetland communities, i.e., Palustrine Emergent (PEM), Riverine (R) and Ponded – Palustrine Unconsolidated Bottom (PUBH). Three (3) non-wetland/upland communities (i.e., herbaceous pastureland and lawn, agricultural cropland, and woodland) were also identified bordering the wetland areas identified.

The species identified at each data point along with their areal coverage are recorded on the data forms in Appendix B. A representative photographic log of the vegetative cover observed within the study area is provided in Appendix D. The dominant species identified within each vegetation community type are listed in the following sections.

3.2.1.1.1 Palustrine Emergent Wetland

The PEM wetland communities consist of a prevalence of hydrophytic non-woody vegetation and woody plants less than 1 m in height. Dominant herbaceous species observed include common invasive grasses including common reed (*Phragmites australis*), reed canary grass (*Phragmites australis)* and narrow leaved cattail *(Typha angustifolia)*. In addition, river bulrush (Schoenoplectus fluviatilis) was also prevalent.

3.2.1.1.2 Agricultural Upland

The agricultural upland community consists of cultivated cropland and pastureland. The dominant herbaceous species is soybean.

3.2.1.1.3 Herbaceous Upland

The herbaceous upland community consists of non-wetland areas dominated by non-woody vegetation. Dominant species include orchard grass (*Dactylis glomerata*), lesser burdock (*Arctium minus*), bull thistle (*Cirsium vulgare*), field sow-thistle (*Sonchus arvensis*), Canadian thistle (*Cirsium arvense*), Queen Anne's-lace (*Daucus carota*), clover (*Trifolium pratense*) Kentucky blue grass (*Poa pratensis*) and tall goldenrod (*Solidago altissima*).

3.2.1.1.4 Wooded Upland

The wooded upland community consists of non-wetland areas dominated by woody vegetation with a diameter at breast height of 3 inches or greater, regardless of height. This cover was present outside the depressional area bordering of Wetland A. Dominant tree species include ash-leaf maple (*Acer negundo*), silver maple (*Acer saccharinum*) and black willow (*Salix nigra*). At the south bluff overlooking Nippersink Creek, a mature oak hillside is dominant. Dominant herbaceous species in the forested upland community at this location include orchard grass (*Dactylis glomerata*), Queen Anne's-lace, and tall goldenrod.

3.2.1.2 HYDROLOGY

Primary wetland hydrology indicators observed in the study area include Oxidized Rhizospheres on Living Roots (C3). Secondary wetland hydrology indicators observed in the Study Area include Inundation and Saturation Visible on Aerial Imagery (B7,C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), and a positive FAC-Neutral Test (D5) (see Appendix B).

3.2.1.3 HYDRIC SOIL INDICATORS

Hydric soil indicators observed in the Study Area include Depleted Matrix (F3), Thick Dark Surface (A12) and Redox Dark Surface (F6) (see Appendix B).

4 RESULTS and CONCLUSIONS

DKES conducted a wetland field delineation and farmed wetland assessment of the study area on November 25, 2022. Field ecologists identified a total of four (4) wetland/waters of the US located on the subject property. There were no farmed wetlands identified on site.

Wetlands A, B, and **C** were identified on the northern portion of the site and appear to be Isolated Waters of McHenry County, under local jurisdiction.

Wetland/Waters of the US-D (Wetland WOUS-D) is a spring-fed wetland originating south of Main Street Road and flows overland through the site along the eastern property line. The wetland is a tributary of the Nippersink Creek located at the far southern portion of the site. Nippersink Creek Nippersink Creek is a freshwater tributary that flows for 23 miles in the Illinois River / Fox River watershed, mostly in McHenry County, Illinois, within the Glacial Park Conservation Area, but also enters the Fox River / Chain O'Lakes area in Lake County, Illinois. Since the spring fed wetland is hydrologically connected to Nippersink Creek, a traditionally navigable waters, Wetland/WOUS-D is likely under the jurisdiction of the US Army Corps of Engineers, Chicago District.

Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

A summary of likely wetland jurisdiction status and buffer requirements for identified features is provided in Table 3 above.

Any areas not meeting the definition of jurisdictional waters of the U.S. will be considered Isolated Waters of McHenry County, as defined in the Lake County Watershed Development Ordinance (McHenry County SMO Sept 15, 2020 as amended).

The USACE Chicago District and McHenry County have final authority in determining the presence, status, extent and quality of regulated waters and the extent of their boundaries.

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APPENDIX A

Farmed Wetland Evaluation

Agricultural Land Wetland Determination Summary Table

Site Name: Main Street Road Farm, Spring Grove

Date: 11/26/2022

Prepared by: D. Krilll

Location: McHenry County

CWS #: C-002

Imagery Date	Source[1]	Type of Year[2]	Wetland Signature Assessment[3] **PWA 1**
2016	Google Earth	Normal, Primary	
2014	FSA	Wet, Primary	X
2011	FSA	Wet, Secondary	
2012	FSA	Normal, Primary	X
2007	FSA	Normal, Primary	
2006	FSA	Normal, Primary	
2003	FSA	Normal, Primary	
2001	FSA	Normal, Secondary	

ID on NWI or ADID (Y/N)[4]	N
Potential Farmed Wetland (Y/N)	N
Field Verified Hydric Soil (Y/N)[5]	Y – 10YR 3/1
Qualifies as Farmed Wetland (Y/N)[6]	N

NOTES:

1. i.e., FSA imagery or Lake County methodology approved Google Earth 2016 imagery.

2. Wet Year, Normal Year, or Dry Year designation for the Antioch climate station, as determined by Lake County. Station climate data is not publicly available.

3. If wetland signatures are identified on 3 or more of the 5 normal precipitation years of aerial imagery reviewed (50%), the area is a potential farmed Wetland, subject to field confirmation.

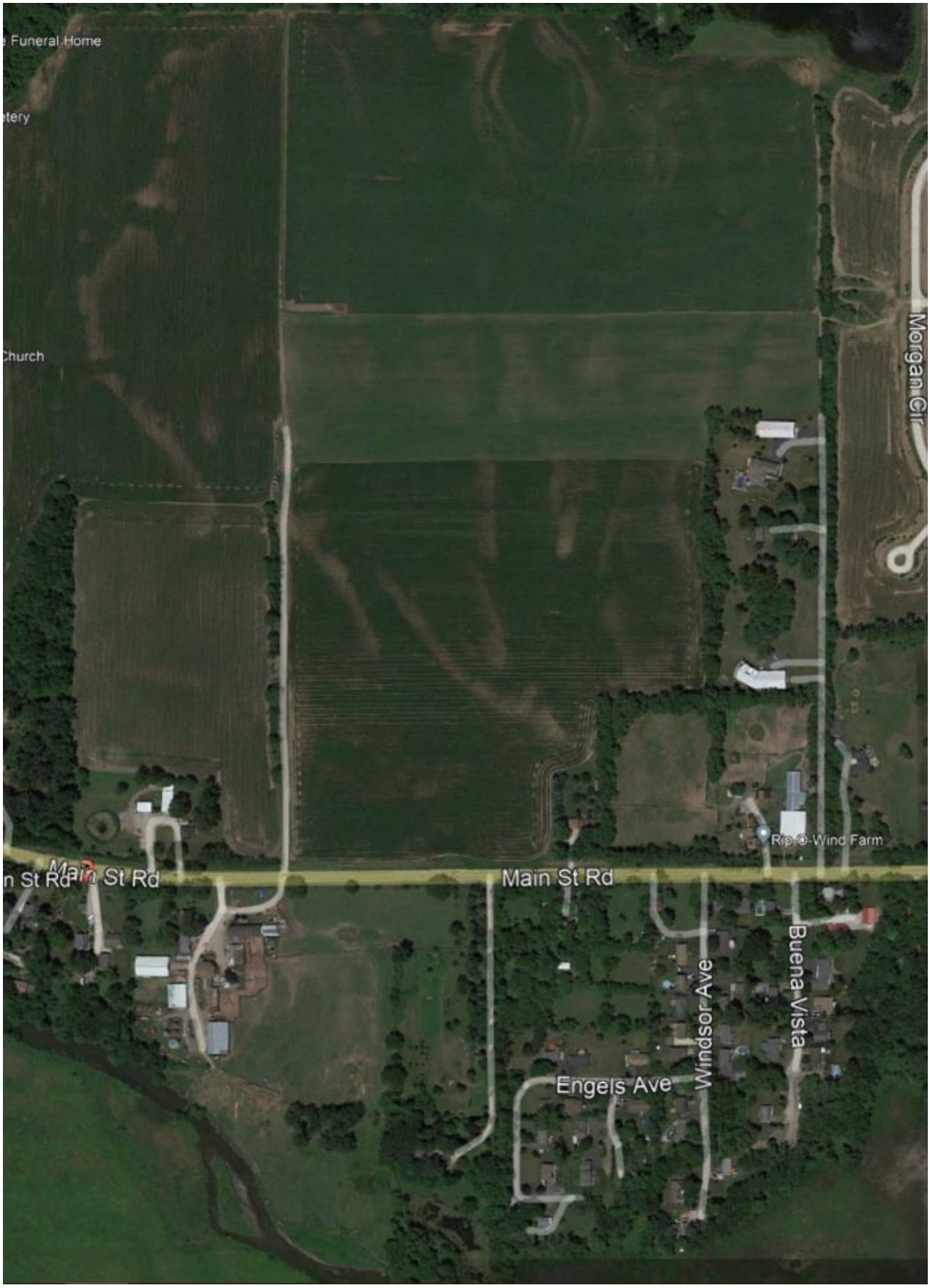
4. Designation of an area as a wetland/farmed wetland on the NWI map or the LCWI map constitutes one year of wetland signature.

5. See wetland determination data forms.

6. If farmed wetlands are identified, the average size for each qualifying signature should be plotted on a recent aerial image for the Agricultural Land Wetland Determination exhibit.

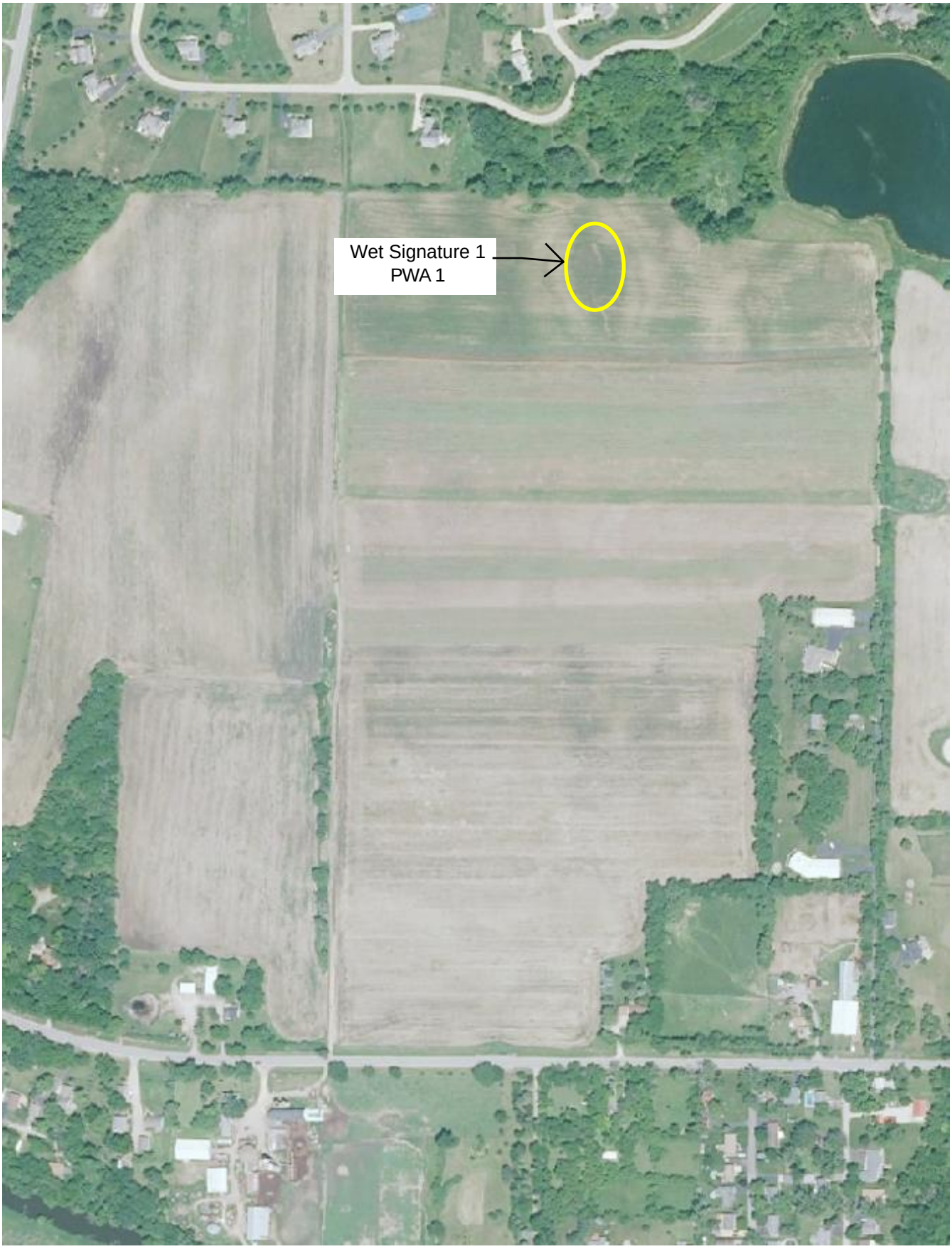
MAIN STREET ROAD FARM

GOOGLE EARTH 6.20.16 AERIAL (normal, primary)



MAIN STREET ROAD FARM

FSA 2014 Imagery (wet, primary)

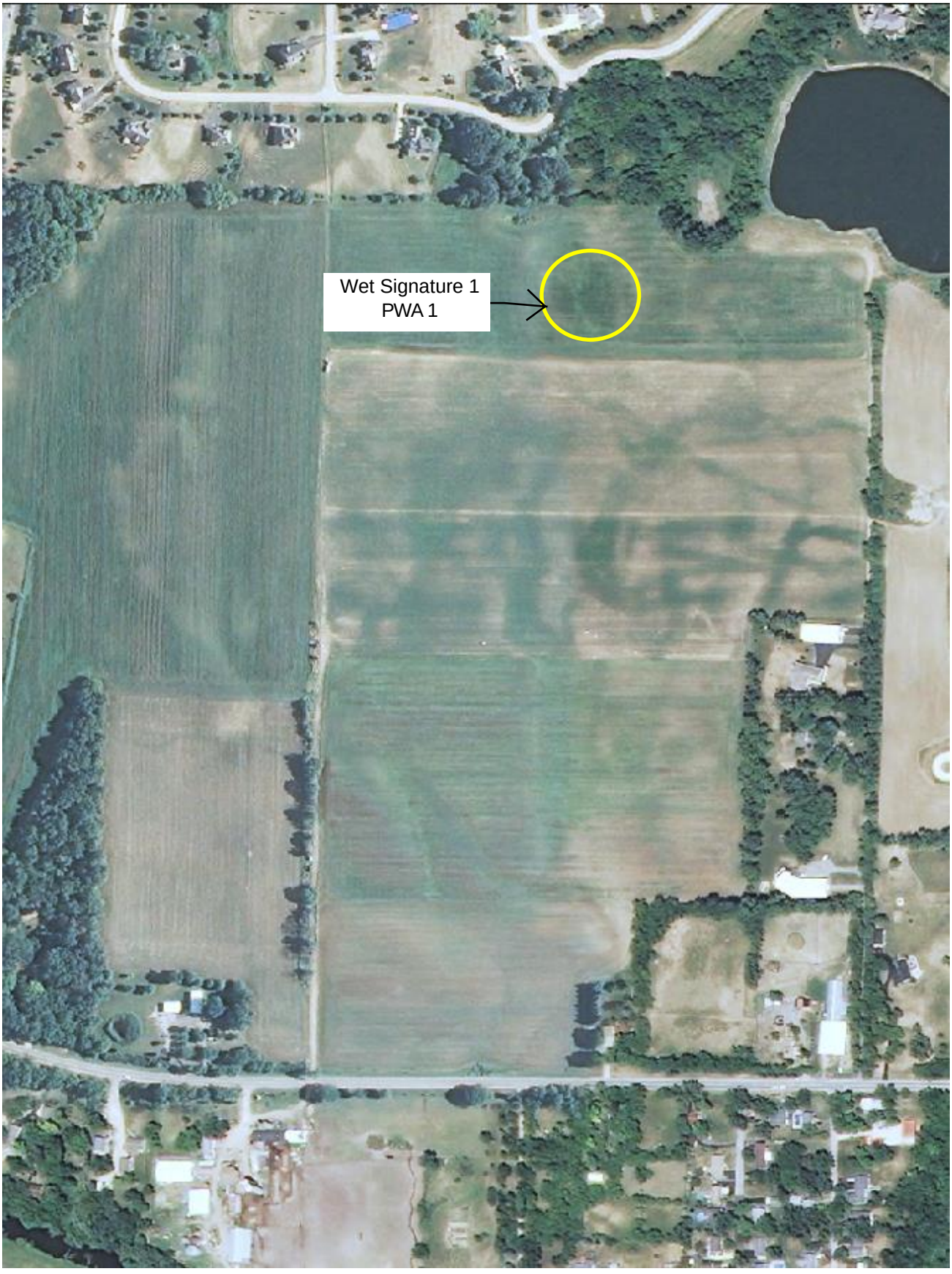


MAIN STREET ROAD FARM

FSA 2011 Imagery (wet, secondary)

MAIN STREET ROAD FARM

FSA 2012 Imagery (normal, primary)



MAIN STREET ROAD FARM

FSA 2007 Imagery (normal, primary)

MAIN STREET ROAD FARM

FSA 2006 Imagery (normal, primary)

MAIN STREET ROAD FARM

FSA 2003 Imagery (normal, primary)

MAIN STREET ROAD FARM

FSA 2001 Imagery **(normal, seconday)**

APPENDIX B

USACE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 1A - WL A

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none): concave

Slope (%): 0 | Lat: 42.444385 | Long: -88.206730 | Datum: n/a

Soil Map Unit Name: 1529A - Selmass Loam, 0-2% slopes | NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Phalaris arundinacea	80	Y	FACW
2. Schoenoplectus fluviatilus	20	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	10YR 3/1	80	10YR 3/4	20	C	M	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- _X_ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- _X_ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes _X_ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- _X_ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- _X_ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- _X_ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- _X_ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- _X_ Geomorphic Position (D2)
- _X_ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No _X_ Depth (inches): ___

Water Table Present? Yes ___ No _X_ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes _X_ No ___ Depth (inches): surface

Wetland Hydrology Present? Yes _X_ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 1B - UPL

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): convex

Slope (%): 1-2 | Lat: 42.444232 | Long: -88.206778 | Datum: n/a

Soil Map Unit Name: 1529A Selamss loam, 0-2% slopes | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Phalaris arundiancea	50	Y	FACW
2. Arctium minus	20	Y	FACU
3. Solidago altissima	20	Y	FACU
4. Daucus carota	10	N	UPL
5. Taraxacum officinale	10	N	FACU
6. Hackelia virginiana	5	N	FACU
7.			
8.			
9.			
10.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	50	x 2 =	100
FAC species		x 3 =	
FACU species	55	x 4 =	220
UPL species	10	x 5 =	50
Column Totals:	115 (A)		370 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					silt loam	
4-22	10YR 3/3	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 2A - WL B

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): pond shoreline | Local relief (concave, convex, none): concave

Slope (%): 0 | Lat: 42.44461 | Long: -88.205699 | Datum: n/a

Soil Map Unit Name: W - Water | NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes X No ___	
Wetland Hydrology Present?	Yes X No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Phalaris arundinacea	100	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 34/2	100					scl	
8-22	Gley1 5/0 5G	90	10YR 3/4	20	C	M	scl	gley

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

clay - gleyed matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1"

Water Table Present? Yes X No ___ Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): surface

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 2B - UPL

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): upper pond shoreline / terrace | Local relief (concave, convex, none): convex

Slope (%): 2 | Lat: 42.444320 | Long: -88.205391 | Datum: n/a

Soil Map Unit Name: 323D2 Casco loam, 6-12% slopes | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	
Hydric Soil Present?	Yes ___	No X	Is the Sampled Area within a Wetland? Yes ___ No X
Wetland Hydrology Present?	Yes ___	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Phalaris arundiancea	30	Y	FACW
2. Daucus carota	20	Y	UPL
3. Solidago altissima	20	Y	FACU
4. Bromus inermis	20	Y	FACU
5. Cirsium arvense	10	N	FACU
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	30	x 2 =	60
FAC species		x 3 =	
FACU species	50	x 4 =	200
UPL species	20	x 5 =	100
Column Totals:	100 (A)		360 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-22	10YR 4/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 3A - WL C

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave

Slope (%): 0 | Lat: 42.437834 | Long: -88.213228 | Datum: n/a

Soil Map Unit Name: 327B Fox silt loam, 2-4% slopes | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes X No ___
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Phragmites australis	100	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-22	N2.5/0	100					muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No ___

Remarks:

excavated pond in mapped UPL (non-hyric) soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1"

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): surface

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

excavated pond in mapped UPL (non-hyric) soils

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 3B - UPL

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): upper pond shoreline / terrace | Local relief (concave, convex, none): convex

Slope (%): 2 | Lat: 42.437869 | Long: -88.213260 | Datum: n/a

Soil Map Unit Name: 327B Fox silt loam, 2-4% slopes | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Phragmites australis	30	Y	FACW
2. Hackelia virginiana	30	Y	FACU
3. Arctium minus	30	Y	FACU
4. Taraxacum officinale	10	N	FACU
5. Glechoma hederacea	10	N	FACU
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	30	x 2 =	60
FAC species		x 3 =	
FACU species	80	x 4 =	320
UPL species		x 5 =	
Column Totals:	110 (A)		380 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					silt loam	
8-22	10YR 4/4	100					scl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 4A - WL D

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): floodplain terrace | Local relief (concave, convex, none): flat

Slope (%): 0-1 | Lat: 42.434774 | Long: -88.211143 | Datum: n/a

Soil Map Unit Name: 1082A Millington silt loam, 0-2% slopes, occasionally flooded | NWI classification: Riverine / PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes X	No ___	
Wetland Hydrology Present?	Yes X	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Agrostis alba	80	Y	FACW
2. Verbena hastata	10	N	FACW
3. Phalaris arundiancea	10	N	FACW
4. Lysimachia nummulara	10	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	100					silt loam	
16-22	10YR 4/1	90	10YR 4/4	10	C	M	scl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches):

Water Table Present? Yes ___ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 16

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 4B - UPL

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex

Slope (%): 2 | Lat: 42.434871, | Long: -88.211113 | Datum: n/a

Soil Map Unit Name: 1082A Millington silt loam, 0-2% slopes, occasionally flooded | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Dactylis glomerata	90	Y	FACU
2. Cirsium vulgare	10	Y	FACU
3. Arctium minus	10	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species	110	x 4 =	440
UPL species		x 5 =	
Column Totals:	110 (A)		440 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-22	10YR 6/4	100					loam	sand/gravel mix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 5A - WL D

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): stream | Local relief (concave, convex, none): convex

Slope (%): 0-1 | Lat: 42.436182 | Long: -88.209988 | Datum: n/a

Soil Map Unit Name: 526A Grundelein silt loam, 0-2% slopes | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	Is the Sampled Area within a Wetland? Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Agrostis alba	40	Y	FACW
2. Phalaris arundiancea	20	Y	FACW
3. Ranunculus flabellaris	10	N	OBL
4. Lysimachia nummulara	10	N	FACW
5. Polygonum pennsylvanicum	10	N	FACW
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 5A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-22	10YR 3/1	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): at surface

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

spring fed perennial stream

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Main Street Road Farm | City/County: Spring Grove, McHenry | Sampling Date: 11.25.2022

Applicant/Owner: Fox Development, Inc. | State: IL | Sampling Point: 5B - UPL

Investigator(s): D. Krill | Section, Township, Range: 29-46-9

Landform (hillslope, terrace, etc.): stream terrace | Local relief (concave, convex, none): convex

Slope (%): 2 | Lat: 42.436192 | Long: -88.210038 | Datum: n/a

Soil Map Unit Name: 327B Fox silt loam, 2-4% slopes, | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	
Hydric Soil Present?	Yes ___	No X	Is the Sampled Area within a Wetland? Yes ___ No X
Wetland Hydrology Present?	Yes ___	No X	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Poa pratensis	50	Y	FAC
2. Trifolium pratense	30	Y	FACU
3. Cirsium vulgaris	10	N	FACU
4. Plantago lanceolata	10	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	50	x 3 =	150
FACU species	50	x 4 =	200
UPL species		x 5 =	
Column Totals:	100 (A)		350 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 5B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	10YR 5/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches):

Water Table Present? Yes ____ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches):

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX C

Floristic Quality Index – Wetlands A through D

SITE:	Main Street Road Farm
LOCALE:	Spring Grove, IL
BY:	D. Krill
NOTES:	WETLAND A

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	1.80	SPECIES RICHNESS (ALL)	19
MEAN C (ALL SPECIES)	1.42	SPECIES RICHNESS (NATIVE)	15
MEAN C (NATIVE TREES)	1.50	% NON-NATIVE	0.21
MEAN C (NATIVE SHRUBS)	0.00	WET INDICATOR (ALL)	-0.74
MEAN C (NATIVE HERBACEOUS)	2.00	WET INDICATOR (NATIVE)	-0.87
FQAI (NATIVE SPECIES)	6.97	% HYDROPHYTE (MIDWEST)	1.00
FQAI (ALL SPECIES)	6.19	% NATIVE PERENNIAL	0.63
ADJUSTED FQAI	15.99	% NATIVE ANNUAL	0.16
% C VALUE 0	0.42	% ANNUAL	0.16
% C VALUE 1-3	0.42	% PERENNIAL	0.79
% C VALUE 4-6	0.16		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple		0 FAC	FAC	0	Tree	Perennial	Native
acesai	Acer saccharinum	Acer saccharinum	Silver Maple		1 FACW	FACW	-1	Tree	Perennial	Native
ambtri	Ambrosia trifida	Ambrosia trifida	Great Ragweed		0 FAC	FAC	0	Forb	Annual	Native
barvul	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket		0 FAC	FAC	0	Forb	Biennial	Adventive
bidfro	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork		1 FACW	FACW	-1	Forb	Annual	Native
epicol	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb		3 OBL	OBL	-2	Forb	Perennial	Native
geucan	Geum canadense	Geum canadense	White Avens		1 FAC	FAC	0	Forb	Perennial	Native
polpen	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed		0 FACW	FACW	-1	Forb	Annual	Native
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass		0 FACW	FACW	-1	Grass	Perennial	Adventive
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood		0 FAC	FAC	0	Tree	Perennial	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn		0 FAC	FAC	0	Shrub	Perennial	Adventive
salnig	Salix nigra	Salix nigra	Black Willow		5 OBL	OBL	-2	Tree	Perennial	Native
sciflu	Schoenoplectus fluviatilis	Scirpus fluviatilis; Bolboschoenus fluviatilis	River Club-Rush		4 OBL	OBL	-2	Sedge	Perennial	Native
soldul	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade		0 FAC	FAC	0	Vine	Perennial	Adventive
solgig	Solidago gigantea	Solidago gigantea	Late Goldenrod		4 FACW	FACW	-1	Forb	Perennial	Native
astsim	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster		3 FAC	FACW	0	Forb	Perennial	Native
astnov	Symphyotrichum novae-angliae	Aster novae-angliae	New England American-Aster		3 FACW	FACW	-1	Forb	Perennial	Native
urtdio	Urtica dioica ssp. gracilis	Urtica procera; Urtica gracilis	Tall Nettle		1 FACW	FAC	-1	Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape		1 FACW	FAC	-1	Vine	Perennial	Native

SITE:	Main Street Road Farm
LOCALE:	Spring Grove, IL
BY:	D. Krill
NOTES:	WETLAND B

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	1.77	SPECIES RICHNESS (ALL)	19
MEAN C (ALL SPECIES)	1.21	SPECIES RICHNESS (NATIVE)	13
MEAN C (NATIVE TREES)	0.00	% NON-NATIVE	0.32
MEAN C (NATIVE SHRUBS)	5.00	WET INDICATOR (ALL)	-0.42
MEAN C (NATIVE HERBACEOUS)	1.80	WET INDICATOR (NATIVE)	-0.62
FQAI (NATIVE SPECIES)	6.38	% HYDROPHYTE (MIDWEST)	0.79
FQAI (ALL SPECIES)	5.28	% NATIVE PERENNIAL	0.53
ADJUSTED FQAI	14.63	% NATIVE ANNUAL	0.16
% C VALUE 0	0.58	% ANNUAL	0.16
% C VALUE 1-3	0.26	% PERENNIAL	0.84
% C VALUE 4-6	0.16		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple		0 FAC	FAC	0	Tree	Perennial	Native
ambart	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed		0 FACU	FACU	1	Forb	Annual	Native
corobl	Cornus obliqua	Cornus obliqua	Pale Dogwood		5 FACW	FACW	-1	Shrub	Perennial	Native
geucan	Geum canadense	Geum canadense	White Avens		1 FAC	FAC	0	Forb	Perennial	Native
juntor	Juncus torreyi	Juncus torreyi	Torrey's Rush		2 FACW	FACW	-1	Forb	Perennial	Native
lytsal	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife		0 OBL	OBL	-2	Forb	Perennial	Adventive
nepcat	Nepeta cataria	NEPETA CATARIA	Catnip		0 FACU	FACU	1	Forb	Perennial	Adventive
pandic	Panicum dichotomiflorum	Panicum dichotomiflorum	Fall Panic Grass		0 FACW	FACW	-1	Grass	Annual	Native
polpen	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed		0 FACW	FACW	-1	Forb	Annual	Native
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass		0 FACW	FACW	-1	Grass	Perennial	Adventive
phrausm	Phragmites australis ssp. americanus	Phragmites americanus	Common Reed		3 FACW	FACW	-1	Grass	Perennial	Native
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood		0 FAC	FAC	0	Tree	Perennial	Native
rumcri	Rumex crispus	RUMEX CRISPUS	Curly Dock		0 FAC	FAC	0	Forb	Perennial	Adventive
sciflu	Schoenoplectus fluviatilis	Scirpus fluviatilis; Bolboschoenus fluviatilis	River Club-Rush		4 OBL	OBL	-2	Sedge	Perennial	Native
astsim	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster		3 FAC	FACW	0	Forb	Perennial	Native
astlat	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer		4 FACW	FAC	-1	Forb	Perennial	Native
taroff	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion		0 FACU	FACU	1	Forb	Perennial	Adventive
tripra	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover		0 FACU	FACU	1	Forb	Perennial	Adventive

SITE:	Main Street Road Farm
LOCALE:	Spring Grove, IL
BY:	D. Krill
NOTES:	WETLAND C

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	1.60	SPECIES RICHNESS (ALL)	16
MEAN C (ALL SPECIES)	1.00	SPECIES RICHNESS (NATIVE)	10
MEAN C (NATIVE TREES)	0.00	% NON-NATIVE	0.38
MEAN C (NATIVE SHRUBS)	0.00	WET INDICATOR (ALL)	-0.31
MEAN C (NATIVE HERBACEOUS)	2.50	WET INDICATOR (NATIVE)	-0.20
FQAI (NATIVE SPECIES)	5.06	% HYDROPHYTE (MIDWEST)	0.81
FQAI (ALL SPECIES)	4.00	% NATIVE PERENNIAL	0.50
ADJUSTED FQAI	12.65	% NATIVE ANNUAL	0.13
% C VALUE 0	0.63	% ANNUAL	0.13
% C VALUE 1-3	0.25	% PERENNIAL	0.88
% C VALUE 4-6	0.13		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple		0 FAC	FAC	0	Tree	Perennial	Native
agralb	Agrostis gigantea	AGROSTIS ALBA	Black Bent		0 FACW	FACW	-1	Grass	Perennial	Adventive
ambart	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed		0 FACU	FACU	1	Forb	Annual	Native
cuscam	Cuscuta campestris	Cuscuta campestris	Field Dodder		0 UPL	UPL	2	Vine	Annual	Native
geucan	Geum canadense	Geum canadense	White Avens		1 FAC	FAC	0	Forb	Perennial	Native
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass		0 FACW	FACW	-1	Grass	Perennial	Adventive
Phrausm	Phragmites australis ssp. americanus	Phragmites americanus	Common Reed		3 FACW	FACW	-1	Grass	Perennial	Native
poapra	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass		0 FAC	FACU	0	Grass	Perennial	Adventive
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood		0 FAC	FAC	0	Tree	Perennial	Native
rosmul	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose		0 FACU	FACU	1	Shrub	Perennial	Adventive
sciflu	Schoenoplectus fluviatilis	Scirpus fluviatilis; Bolboschoenus fluviatilis	River Club-Rush		4 OBL	OBL	-2	Sedge	Perennial	Native
soldul	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade		0 FAC	FAC	0	Vine	Perennial	Adventive
astsim	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster		3 FAC	FACW	0	Forb	Perennial	Native
typang	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail		0 OBL	OBL	-2	Forb	Perennial	Adventive
verhas	Verbena hastata	Verbena hastata	Simpler's-Joy		4 FACW	FACW	-1	Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape		1 FACW	FAC	-1	Vine	Perennial	Native

SITE:	Main Street Road Farm
LOCALE:	Spring Grove, IL
BY:	D. Krill
NOTES:	WETLAND D

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	2.42	SPECIES RICHNESS (ALL)	31
MEAN C (ALL SPECIES)	1.48	SPECIES RICHNESS (NATIVE)	19
MEAN C (NATIVE TREES)	0.00	% NON-NATIVE	0.39
MEAN C (NATIVE SHRUBS)	5.00	WET INDICATOR (ALL)	-0.55
MEAN C (NATIVE HERBACEOUS)	2.67	WET INDICATOR (NATIVE)	-0.74
FQAI (NATIVE SPECIES)	10.55	% HYDROPHYTE (MIDWEST)	0.84
FQAI (ALL SPECIES)	8.26	% NATIVE PERENNIAL	0.45
ADJUSTED FQAI	18.95	% NATIVE ANNUAL	0.13
% C VALUE 0	0.55	% ANNUAL	0.13
% C VALUE 1-3	0.19	% PERENNIAL	0.74
% C VALUE 4-6	0.26		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple		0 FAC	FAC	0	Tree	Perennial	Native
agralb	Agrostis gigantea	AGROSTIS ALBA	Black Bent		0 FACW	FACW	-1	Grass	Perennial	Adventive
alipet	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard		0 FAC	FACU	0	Forb	Biennial	Adventive
ambtri	Ambrosia trifida	Ambrosia trifida	Great Ragweed		0 FAC	FAC	0	Forb	Annual	Native
cirarv	Cirsium arvense	CIRSIUM ARVENSE	Canadian Thistle		0 FACU	FACU	1	Forb	Perennial	Adventive
corsto	Cornus alba	Cornus stolonifera; Cornus baileyi; Cornus sericea	Red Osier		5 FACW	FACW	-1	Shrub	Perennial	Native
cuscam	Cuscuta campestris	Cuscuta campestris	Field Dodder		0 UPL	UPL	2	Vine	Annual	Native
dipsyl	Dipsacus fullonum	DIPSACUS SYLVESTRIS	Fuller's Teasel		0 FACU	FACU	1	Forb	Biennial	Adventive
geucan	Geum canadense	Geum canadense	White Avens		1 FAC	FAC	0	Forb	Perennial	Native
lemmio	Lemna minor	Lemna minor	Common Duckweed		5 OBL	OBL	-2	Forb	Annual	Native
lycame	Lycopus americanus	Lycopus americanus	Cut-Leaf Water-Horehound		4 OBL	OBL	-2	Forb	Perennial	Native
lysnum	Lysimachia nummularia	LYSIMACHIA NUMMULARIA	Creeping-Jenny		0 FACW	FACW	-1	Forb	Perennial	Adventive
lytsal	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife		0 OBL	OBL	-2	Forb	Perennial	Adventive
menarv	Mentha arvensis	Mentha arvensis villosa; Mentha arvensis subsp. parietariaefolia; Mentha canadensis	American Wild Mint		5 FACW	FACW	-1	Forb	Perennial	Native
oenbie	Oenothera biennis	Oenothera biennis	King's-Cureall		0 FACU	FACU	1	Forb	Biennial	Native
polpen	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed		0 FACW	FACW	-1	Forb	Annual	Native

phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0 FACW	FACW	-1 Grass	Perennial	Adventive
phrausm	Phragmites australis ssp. americanus	Phragmites americanus	Common Reed	3 FACW	FACW	-1 Grass	Perennial	Native
poapra	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0 FAC	FACU	0 Grass	Perennial	Adventive
ranfla	Ranunculus flabellaris	Ranunculus flabellaris	Greater Yellow Water Buttercup	5 OBL	OBL	-2 Forb	Perennial	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0 FAC	FAC	0 Shrub	Perennial	Adventive
rumalt	Rumex altissimus	Rumex altissimus	Pale Dock	1 FACW	FACW	-1 Forb	Perennial	Native
rumcri	Rumex crispus	RUMEX CRISPUS	Curly Dock	0 FAC	FAC	0 Forb	Perennial	Adventive
scipun	Schoenoplectus pungens	Scirpus pungens	Three-Square	4 OBL	OBL	-2 Sedge	Perennial	Native
astsim	Symphyotrichum lanceolatum	Aster simplex	White Panicled American-Aster	3 FAC	FACW	0 Forb	Perennial	Native
astlat	Symphyotrichum lateriflorum	Aster lateriflorus	Farewell-Summer	4 FACW	FAC	-1 Forb	Perennial	Native
typang	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0 OBL	OBL	-2 Forb	Perennial	Adventive
urtdio	Urtica dioica ssp. gracilis	Urtica procera; Urtica gracilis	Tall Nettle	1 FACW	FAC	-1 Forb	Perennial	Native
vertha	Verbascum thapsus	VERBASCUM THAPSUS	Woolly Mullein	0 UPL	UPL	2 Forb	Biennial	Adventive
verhas	Verbena hastata	Verbena hastata	Simpler's-Joy	4 FACW	FACW	-1 Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape	1 FACW	FAC	-1 Vine	Perennial	Native

APPENDIX D

Representative Photographs

Photograph 1: View of WL A, facing northwest

Photograph 2: Data Point 1A – WL A facing N

Photograph 3: Data point 1B – UPL facing E

Photograph 4: Wetland B – Shoreline facing E

Photograph 5: Data Point 2A – Wetland B facing E

Photograph 6: Data point 2B – UPL facing S

Photograph 7: View of Wetland C – facing W

Photograph 8: Data Point 3A – Wetland C facing SE

Photograph 9: Data point 3B – UPL facing SE

Photograph 10: View of Wetland/WOUS- D – facing SE

Photograph 11: Data Point 4A – Wetland/WOUS-D facing E

Photograph 12: Data point 4B – UPL facing E

Photograph 13: View of Wetland D – facing S

Photograph 14: Data Point 5A – Wetland-D facing SE

Photograph 15: Data point 5B – UPL facing S

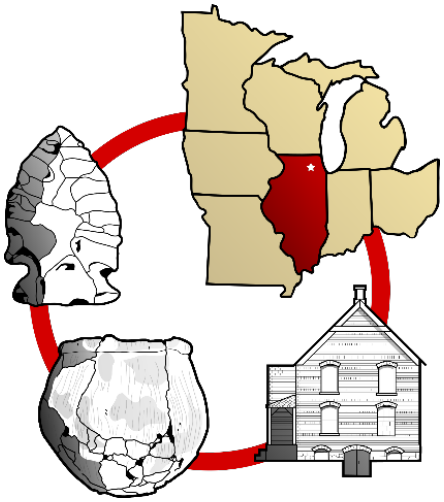
Photograph 16: Photo point in rolling landscape of farm field

Photograph 17: Photo point - eroded slope at north of farm field

Photograph 18: Photo point – Nippersink Creek, facing E

Appendix F – Phase I Archaeological Reconnaissance Survey

Results of the Phase I Archaeological Reconnaissance Survey of Approximately 104 Acres of Land for A Proposed Residential Development Spring Grove, McHenry County, Illinois



Prepared by:
Jay Martinez
Midwest Archaeological Research Services
PO Box 2533
Crystal Lake, IL 60039

&

Lucas Howser
RECON Archaeology
812 Willow St.
Kirkland, IL 60146

Submitted to:
Phil Brown
Fox Development, Inc.
5435 Bull Valley Road, Suite 330
McHenry, IL 60050

July 08, 2024

Cultural Resource Management Report No. 2072

ARCHAEOLOGICAL SURVEY SHORT REPORT
Illinois State Historic Preservation Office
Illinois Department of Natural Resources
Review & Compliance-Archaeology Division
One Natural Resources Way
Springfield, Illinois 62702

Reviewer_____
Date_____
_____Accepted _____ Rejected___

Locational Information and Survey Conditions

HSRPA#: 2024-026 (Figure 16) SHPO Log #: 013031324 (Figure 17) MARS Project #: 2072
County: McHenry Quadrangle: 7.5 Min Fox Lake

Project Type/Title: Proposed Residential Development (Figure 18)
Funding/Permitting Agency: IEPA
Section: N½ of Section 29, Township 46N, Range 09E, Spring Grove, McHenry County, Illinois (Figure 1).
Natural Division (No.): 3a (Northeastern Morainal Division: Morainal Section).
U.T.M. To center of the project area: 16T 400503E 4699490N.
Project Description: Phase I archaeological reconnaissance survey.
Topography: Other Upland
Soils: 197A Troxel silt loam (0 to 2 percent slopes), 290B Warsaw loam (2 to 4 percent slopes), 318C2 Lorenzo loam (4 to 6 percent slopes, eroded), 318D2 Lorenzo loam (6 to 12 percent slopes, eroded), 323C3 Casco clay loam (4 to 6 percent slopes, severely eroded), 323D2 Casco loam (6 to 12 percent slopes, eroded), 323D3 Casco clay loam (6 to 12 percent slopes, severely eroded), 327B Fox silt loam (2 to 4 percent slopes), 369B Waupecan silt loam (2 to 4 percent slopes), 528A Lahoguess loam (0 to 2 percent slopes), 969E2 Casco-Rodman complex (12 to 20 percent slopes, eroded), 1529A Selmass loam (0 to 2 percent slopes, undrained), 4103A Houghton muck (0 to 2 percent slopes, ponded), W Water (Figure 2).
Drainage: Nippersink Creek to Pistakee Lake (Upper Fox Watershed).
Land Use/Ground Cover (Include % Visibility): The land use consisted of an undulating agricultural field that had recently been punch planted (Figure 3). The ground surface visibility was between 75 and 80 percent (Plate 1).

Archaeological and Historical Information:

Historic Plats/Atlases/Sources: 1939 historic aerial (Figure 4); 1839 Government Land Office map (Figure 5); 1862, 1872, 1892, 1908, 1920, 1927, 1941, 1954, and 1956 plat maps (Figures 6-14); and the Illinois Inventory of Archaeological Sites and Survey files.
Previously Reported Sites: There is one previously recorded archaeological site (11MH4) present within the project area. There are eighteen previously recorded archaeological sites (11MH3, 91, 92, 95, 96, 140, 241, 11MH171, 175, 178, 180, 182, 184, 196, 210, 211, 212, 483) present within 1.6 km (1 mile) of the project area.
Previous Surveys: There are no previously recorded surveys present within the project area. There are ten previous surveys (ASSR# L2274, L7393, L7489, L8919, MH2274, MH5791, MH10280, MH15538, MH21125, MH99999) present within 1.6 km (1 mile) of the project area.
Regional Archaeologist Contacted: Jay Martinez, M.A., RPA
Investigation Techniques: Pedestrian survey, auger survey, and photographs.
Time Expended: 8 person/days.
Sites/Find Spots: 11MH555, 11MH556, and 11MH4 revisit (Figures 19-21).
Cultural Material: The sites were recorded using handheld GPS, photographed, and collected separately.

Curated At: ISM
Collection Techniques: Cultural material was recorded using handheld GPS, photographed, and collected separately by site.
Area Surveyed (Acres & Square Meters): 60.80 acres / 246,049.42 square meters.

Results of Investigation and Recommendations:

__ Phase I Archaeological Reconnaissance located no archaeological material; Project clearance Recommended.
xx Phase I Archaeological Reconnaissance located archaeological material; **Project clearance Recommended.**
__Phase I Archaeological Reconnaissance located archaeological material; Phase II Testing Recommended.

Comments:

Field methods employed during the survey were in accordance with the *Illinois State Historic Preservation Office* (ISHPO) *Guidelines for Archaeological Reconnaissance Surveys and Reports* memorandum published online on December 6, 2023.

On May 16th and May 22nd, 2024, Midwest Archaeological Research Services (MARS) conducted a Phase I archaeological reconnaissance survey for a proposed residential development in the N½ of Section 29, Township 46N, Range 09E, Spring Grove, McHenry County, Illinois (Figure 1). The project area falls within the northeastern Morainal Division of Illinois, specifically the Morainal Section. The U.T.M. coordinates for the center of the project area are 16T 400503E 4699490N. The area surveyed totaled approximately 60.80 acres (246,049.42 square meters).

The 1839 GLO surveyors depicted the vegetation of the area as timber, near English prairie, and did not annotate any farmsteads within the project area (Figure 5). The land of the project area was first purchased in 1852 by Lewis Hatch. According to the Illinois Public Domain Land Tract Sales the original purchase was for a total of $50.00 for 40 acres at $1.25 per an acre. On the 1870 US Federal Census it was stated that Lewis (56) and his wife Mandana (43) had four sons and one daughter; Fred (23), Frank (13), Lewis Feyette (1, 1845-1846), Miles (23), and Martha (20). From the 1862 historic plat of Burton Township, the land was parceled to G. Thompson and L. Raymond sometime between 1852 to 1862 (Figure 6). Review of the historic plat maps from 1862 and 1872 (Figures 6 and 7) depict two historic resources near the northwest and southwest corner of the project area. By 1892, and subsequent Burton Township plat maps (Figures 8-14), both structures no longer appear. From ca. 1870-1920 the land was then continuously owned by Lewis Hatch which was adjacent to his dairy farm (Figures 7-10). In 1873, the eldest Hatch son, Fred, returned from his studies at the University of Illinois. According to historic information from *McHenry County Illinois 1832-1968* by Lowell Nye (1968), it was at university where he formulated the idea of the silo and subsequently constructed the first silo within the continental United States in his father's old dairy barn along with the first underground silage. In 1879, three more wooden silos would be constructed around the dairy barn, leading to the construction of a steel silo in 1892 (later exhibited at the Chicago Columbian Exhibition). By 1919, the land would be sold to A. Kattner, and his ownership saw the demolition of the original barn and silos (Nye 1968). Between the 1939 and 1946 historic aerials, a small cluster of outbuilding appear near south central boundary of the project area with an access road. These structures appear to be abandoned/destroyed between 1987 and 1988, and completely razed by the mid-1990s. None of these structures are related to the construction of the Fred Hatch Silos.

The project area consisted of a cultivated agricultural field characterized by undulating topography (Plate 2). To the north, the landscape transitioned into a wooded property line bordering a residential area. The western edge extended into a continuation of the field, which included Cole cemetery situated beyond the northwest corner. The southern boundary was defined by the start of a hay field to the southwest and another agricultural property (Plate 3). On the eastern side, the project boundary was bordered by a line of trees, with a small pond nestled in the northeast corner (Plate 4). The ground surface visibility during the survey was between 75 and 90 percent (Plate 1). The survey techniques employed included pedestrian survey, auger survey, and photographic documentation.

During the pedestrian survey, MARS archaeologists walked transects at 5-meter intervals, identifying one historic (11MH555) and one prehistoric (11MH556) site (Plates 5 and 6). Upon revisiting site 11MH4, they discovered two clusters of historic artifacts (Plate 11). To investigate the purported precolonial mounds, six ½" auger tests were placed to identify any subsurface soil configurations indicative of mounds, as described by Birmingham and Rosebrough (2017). A second set of auger tests near an anomaly that appeared on historic aerials was terminated at shallow depths due to highly erosional conditions exposing a stratum of packed gravel. No evidence of mounds was identified in these tests.

11MH555

Surveyed on May 22, 2024, Site 11MH555 is a historic site that was situated 780 meters north-northeast from the intersection of Wilmot Road and Main Street in an undulating agricultural field, with Nippersink Creek 1.3 km to the south (see Figures 3 and 20). The site was located at an elevation of 247 meters on a private upland ridge within Township 46N, Range 9E, Section 29. Historical records indicate a dwelling on the 1862 and 1872 Burton Township plat map but absent from 1892 plat and beyond. The site has experienced severe agricultural damage, with the survey employing a pedestrian method, revealing elongated site boundaries due to plow drag. The project utilized a representative sample collection strategy with a surface visibility of 90% (Plate 5). Artifacts range from 1830-1920 (Table 1).

Table 1. Artifact inventory for 11MH555.

Type	Count	Weight (g)	Description	Dates
Undecorated Whiteware	9	26.09		1830-1900
Decorated Black Transfer Print Whiteware	2	13.7		1830-1850
Decorate Blue Transfer Print Whiteware	1	1.64		1830-1860
Undecorated Ironstone Ware	2	7.84		1840-1900
Undecorated Salt glaze Stoneware	1	23.29	Exterior Bristol Slip & Albany Interior Slip	1880-1900
Undecorated Stoneware	1	5.35	Exterior and Interior Albany Slip	1825-1900
Undecorated Porcelain	2	3.89		1850-1930
Undecorated Stoneware	1	91.98	Foot sherd with Interior and Exterior Bristol Slip	post 1880
Decorated Red Transfer Print Whiteware	1	2.56	Red Annular Print	1830-1850
Porcelain Electrical Insulator	1	67		1850-1890
Colorless Container Glass	6	84.44		post 1910
White Milk Glass	2	10.24		post 1890
7-Up Green Bottle Glass	3	47.8	Neck Fragment	1915-1920
Aqua Container Glass	3	9.43		1870-1920
Flat Glass	4	5.5		1845-1900
Amber Bottle Glass	2	32.19		1900-1920
Amethyst Container Glass	1	3	Burnt	1840-1890
Total Artifacts	42			1830-1920

Table 1 presents a summary of various types of ceramic and glass fragments, their counts, weights, descriptions, and approximate production dates. The fragments include undecorated whiteware (9 pieces, 26.09g, from 1830-1900), decorated black transfer print whiteware (2 pieces, 13.70g, from 1830-1850), and decorated blue transfer print whiteware (1 piece, 1.64g, from 1830-1860). Other items are undecorated ironstone ware (2 pieces, 7.84g, from 1840-1900), undecorated salt glaze stoneware (1 piece, 23.29g, from 1880-1900, with specific slip details), and general undecorated stoneware and porcelain fragments. Other artifacts include a porcelain electrical insulator (1 piece, 67.00g, from 1850-1890) and various glass types like colorless container glass (6 pieces, 84.44g, post-1910), white milk glass (2 pieces, 10.24g, post-1890), and 7-Up green bottle glass (3 pieces, 47.80g, from 1915-1920). The range of production dates spans from the early 19th century to the early 20th century from America's postcolonial period (Plate 12).

MARS archaeologists suggest that 11MH555 is not eligible for the National Register of Historic Places due to the extensive disturbance and low potential for intact subsurface features. It does not meet Criterion A, as it is not associated with any significant events. It fails to meet Criterion B, as there is no association with the lives of significant persons. Under Criterion C, the site does not embody distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic values.

Finally, the site does not meet Criterion D because the integrity of the data is compromised due to erosional and agricultural activities, rendering any potential information from the site unreliable to furthering our understanding of the Illinois historic cultural landscape.

11MH556

Surveyed on May 22, 2024, 11MH556 is located within an undulating agricultural field approximately 1.4 km northeast of the intersection of Wilmot Rd. and Main St., with Nippersink Creek 1.3 km to the southwest (see Figures 3 and 21). The site lies on private property at an elevation of 247 meters on an upland ridge in McHenry County, within Township 46N, Range 9E, Section 29. Despite severe agricultural damage, two precolonial artifacts were recovered (Table 2). The survey employed pedestrian methods across rocky, cultivated ground cover, with a total collection strategy and a surface visibility of 90% (Plate 6).

Table 2. Artifact Inventory for 11MH556.

Type	Count	Weight (g)	Description	Date
Primary Flake	1	9.49	Burlington Chert	Prehistoric Unknown
Retouched Biface	1	5.34	Burlington Chert, Worked Edge	Prehistoric Unknown

This table outlines two prehistoric artifacts, both made from Burlington Chert. The primary flake (1 piece, 9.49g) is unspecified, while the retouched biface (1 piece, 5.34g) is noted for its worked edge (Plate 13). Both artifacts are temporally and culturally unaffiliated due to having no diagnostic morphology.

MARS archaeologists suggest that 11MH556 is not eligible for the National Register of Historic Places due to the limited nature of its findings within a context that is not conducive for the preservation of intact subsurface deposits. It does not meet Criterion A, as it is not associated with any significant events. It fails to meet Criterion B, as there is no association with the lives of significant persons. Under Criterion C, the site lacks distinctive characteristics of a type, period, or method of construction, and it does not represent the work of a master or possess high artistic values. Finally, the site does not meet Criterion D because the site contained low artifact density with items having no diagnostic features, which were found in a highly erosional setting that had been subjected to years of agriculture. Therefore, 11MH556 potential data is unreliable to furthering our understanding of the Illinois prehistoric cultural landscape.

11MH4 Revisit

11MH4 was first recorded in 1957 due to the accidental exhumation of human remains by Sam Pirie, which was documented on the original site form as "Skeletons" and was designated as “Mounds.” When the site was revisited in 2015, no cultural materials or evidence of mounds were found, indicating that either the site had been destroyed or that any remaining evidence had been removed by agricultural practices. Prior to field work, historic aerials and modern LIDAR imagery were visually inspected for indicators of precolonial mounds as well as geomorphologic landforms of residual uplands. Two areas of interest (AOI) were identified and scheduled for ½” auger testing. The decision to use a small auger for sampling was made to minimize damage to any possible subsurface cultural resources which identified two areas of AOI (see Figure 3). The current revisit, surveyed on May 22, 2024, assumed the site to be 465 meters northeast of the intersection of Wilmot Road and Main Street in an undulating agricultural field near Nippersink Creek, which runs roughly 570 meters to the south, southwest. The site was situated on a private upland ridge in McHenry County, within Township 46N, Range 9E, Section 29, at an elevation of 247 meters.

On site, the AOIs were walked over at close intervals between archaeologists. After the walk over, six auger probes were excavated down to a maximum depth of 1.25 meters (m) and were spaced 10 m apart (Plates 7 and 8). Soil removed from the augers was observed, photographed, and recorded (e.g., soil texture, Munsell color, inclusions, etc.) in sequence to produce a cohesive soil stratigraphy and to detect any changes. The northern AOI was successfully probed (Plates 7 and 8), however, the southern AOI was a highly erosional alluvial/colluvial slope face (Plates 9 and 10), in which the soil was inundated with gravel (BC horizon) and without heavy equipment would have been overly difficult to continue by hand.

The soil profile consists of three distinct layers, each characterized by specific colors and textures (Figure 15). Overall, the Ap horizon (approximately 0-15 cmbs) is a very dark brown (10YR 2/2) loam, with a moderate granular structure, friable texture. The AB layer (15-25 cmbs) is a dark brown (7.5YR 3/2) loam with a weak angular blocky structure. The Bt layer (25-125 cm) is a brown (7.5YR 4/4) clay loam with a weak blocky structure, firm texture, and gravel. Below is a C horizon that was encounter auger probe transect 2 Severe agricultural and erosional damage was noted, and the survey employed pedestrian methods, and an auger soil test, that yielded a representative sample collection of historic artifacts with a 90% surface visibility (Plate 11). As in 2015, no precolonial items were found, however, artifacts recovered during the revisit are historic in nature and date from pre-1870 to 1930, including various types of container glass, whiteware, and ironstone (Table 3).

Table 3. Artifact inventory for the historic clusters within 11MH4.

Type	Count	Weight (g)	Description	Dates
Colorless Container Glass	74	525.95	Spirits Bottleneck	1890-1910
Amber Container Glass	10	39.24	Thatcher Glass Manufacturing Company	Post-1904
Undecorated Whiteware	14	39.01		1830-1900
Decorated Whiteware with Blueprint Transfer	4	13.39	Floral Pattern	1830-1860
Annular Yellow ware	2	10.58		1840-1900
Jadeite Glass	3	13.27		1930-1940
White Milk Glass	1	11.64		post 1890
Soda-Lime w/ Selenium	1	18.27		1915-1930
Undecorated Ironstone Ware	1	73.5		1840-1930
Amethyst Container Glass	1	11.6		1840-1890
Black-Green Glass	1	10.03		Pre-1870
Total Artifacts	112			pre-1870 to 1930

This table provides a detailed overview of various types of glass and ceramic fragments, along with their counts, weights, descriptions, and approximate production dates. The fragments include a significant amount of colorless container glass (74 pieces, 525.95g, from 1890-1910, described as spirits bottleneck) and amber container glass (10 pieces, 39.24g, post-1904, from Thatcher Glass Manufacturing Company). There are also undecorated whiteware pieces (14 pieces, 39.01g, from 1830-1900) and decorated whiteware with blue transfer print (4 pieces, 13.39g, from 1830-1860, featuring a floral pattern). Additionally, there are fragments of annular yellow ware (2 pieces, 10.58g, from 1840-1900), jadeite glass (3 pieces, 13.27g, from 1930-1940), and white milk glass (1 piece, 11.64g, post-1890). Other items include soda-lime glass with selenium (1 piece, 18.27g, from 1915-1930), undecorated ironstone ware (1 piece, 73.50g, from 1840-1930), amethyst container glass (1

piece, 11.60g, from 1840-1890), and black-green glass (1 piece, 10.03g, pre-1870) (Plate 14). The collection spans a wide range of production dates, from pre-1870 to the mid-20th century.

Upon reviewing records and revisiting 11MH4, we suspect a clerical error regarding the site's location. The following is the evidence for this claim: records indicate that John Pirie never owned the property where the site is annotated. He did, however, own the adjacent parcels near the project area and Cole Cemetery; the 1839 GLO showed a farmstead west of the site with other structures being marked through the late nineteenth century (Figure 5). Cole Cemetery has a grave with a death date of 1858, was first marked on the 1872 plat map, and still exists today (Figure 7). The area hosted a group of early Euro-American settlers that lived and died in the region which explains the presence of unmarked graves. A discussion with Gary Miller (2024), the caretaker, revealed that he was unaware of any events in the 1950s but recalled a similar incident in 1976 where human remains were uncovered from unmarked graves in a lot behind the current cemetery boundaries; historic aerial photographs beginning in 1939 do not show any clear residual mounds; auger samples taken from the AOIs showed that soil development was natural, with no drastic soil changes or soil layering that would indicate the existence of mounds; and no precolonial material, grave goods, or human remains were found within or near the site, as confirmed by the 2015 revisit, auger cores, and close-interval pedestrian surveys. Additionally, site polygons mapped within the Illinois Inventory of Archaeological Sites from early site forms that contained little spatial information were mapped near to. This comprehensive evaluation suggests that the historical records of mounds and human remains may not accurately reflect the actual location of the site as Cole Cemetery is also within the northwest quarter of Section 29 T46N R9E.

MARS archaeologists suggest that 11MH4 is not eligible for the National Register of Historic Places due to extensive destruction. The historic component of 11MH4 does not meet Criterion A, as it is not associated with any significant events. It fails to meet Criterion B, as there is no association with the lives of significant persons. Under Criterion C, the site does not embody distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic values. Finally, the site does not meet Criterion D because the integrity of the data is compromised; the site has been destroyed and any potential information is unreliable for furthering our understanding of the Illinois prehistoric cultural landscape. Additionally, we have reason to believe that the site may be miss-mapped and that the project area has never held precolonial mounds or remains.

Recommendation:

The Phase I reconnaissance survey conducted by MARS archaeologists resulted in the identification of three archaeological sites: 11MH555, 11MH556, and 11MH4. In our opinion, none of these sites meet the criteria for inclusion in the National Register of Historic Places (NRHP) and are not recommended for further investigation. Additionally, these sites are located on highly erosional soil within active agricultural fields, with a low density of artifacts across all sites, which undermines the reliability of subsurface features and negates Criterion D for data. Consequently, none of the sites provide enough archaeological data to impact our understanding of Illinois' cultural landscape.

MARS archaeologists have determined that 11MH555 is extensively disturbed with low potential for intact subsurface features, failing NRHP criteria. Similarly, 11MH556's findings are limited and lack diagnostic features and was in a highly erosional and agricultural context, compromising its data integrity. The revisit of 11MH4 found no immediate indication of mounds, and in association with archival research, it suggests that the site was likely miss-mapped and is more possible associated with the existing {CEMETARY} The historic

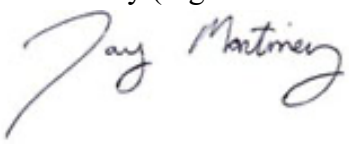
component of 11MH4 is also ineligible due to the annotated destruction. **Therefore, Midwest Archaeological Research Services (MARS) recommends that no additional work is required or warranted within the project area and advises project clearance.**

This recommendation is solely the opinion of the author after conducting the Phase I archaeological survey within the proposed project area. Also, no survey techniques are completely adequate in locating all cultural resources that may exist in an area given ground cover, time, sampling and other factors. Should previously undetected cultural resources or human remains appear during construction activities, the Illinois State Historic Preservation Office should be contacted immediately.

Archaeological Contractor Information:

Archaeological Contractor: Midwest Archaeological Research Services
Address/Phone: PO Box 2533, Crystal Lake, Illinois 60039/ (815) 568-0680
Surveyed by: Jay Martine, Jordan Solis, and Lucas Howser Survey Date(s): 05/22/2024
Report Completed by: Jay Martinez and Lucas Howser Date: 07/8/2024

Submitted by (Signature and Title):

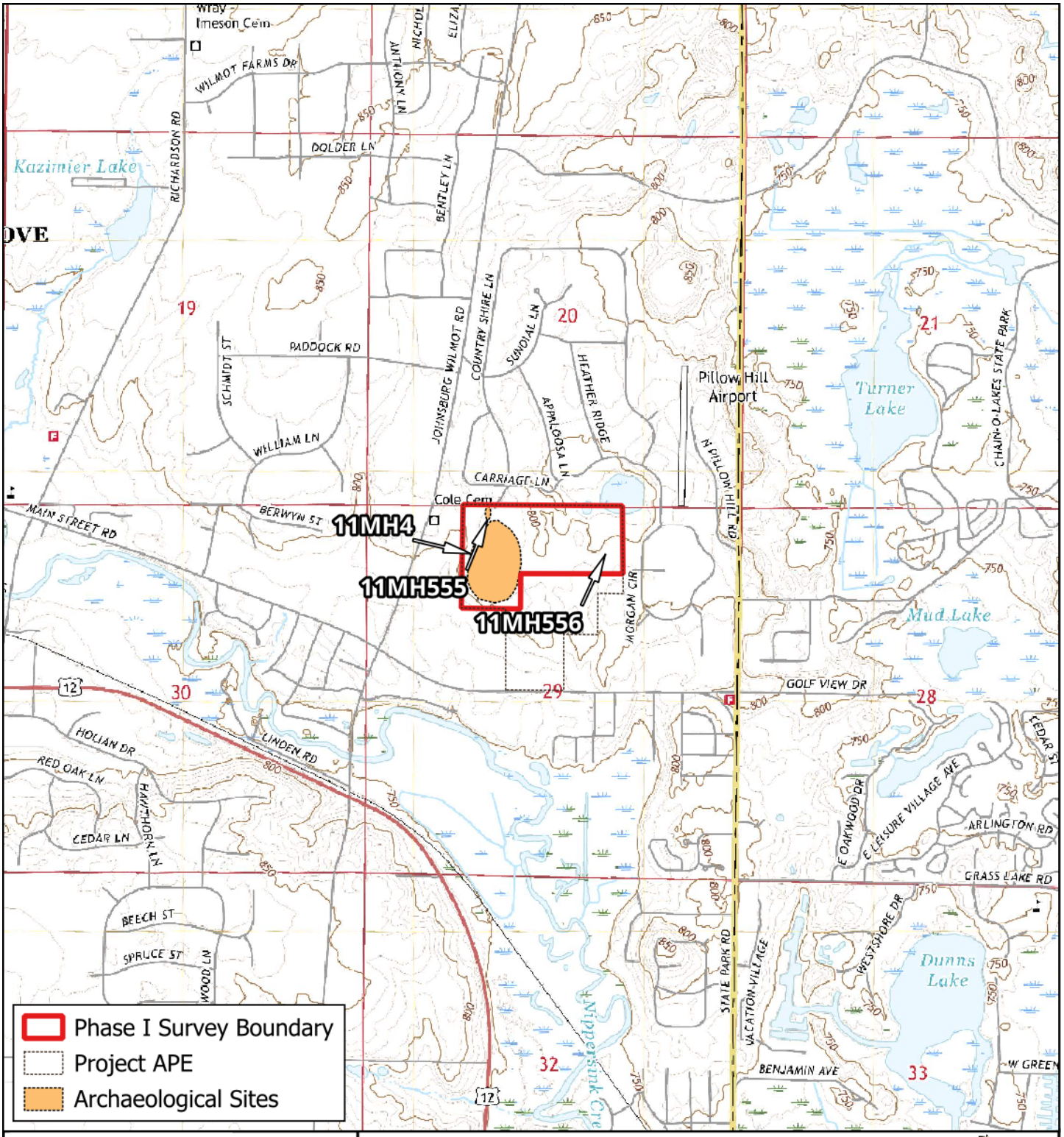


Attachment Check List: (#1 through #4 are MANDATORY)

xx 1) Portion of USGS 7.5' Topographic Map(s) Showing Project Location and Any Recorded Sites.
xx 2) Project Maps(s) Depicting Survey Limits, Site Limits, and Isolated Finds.
xx 3) Site Form(s): Two Copies of Each Form.
xx 4) All Relevant Project Correspondence
xx 5) Additional Sheets as Necessary.

Address of Owner/Agent to Whom SHPO Comment Should Be Mailed:

Address:
Fox Development, Inc.
5435 Bull Valley Road, Suite 330
McHenry, IL 60050
Contact Person: Phil Brown Phone Number: (815) 385-8000



SOURCE OF MAP IS USGS 7.5 MINUTE QUADRANGLE MAP, FOX LAKE, IL (2021)

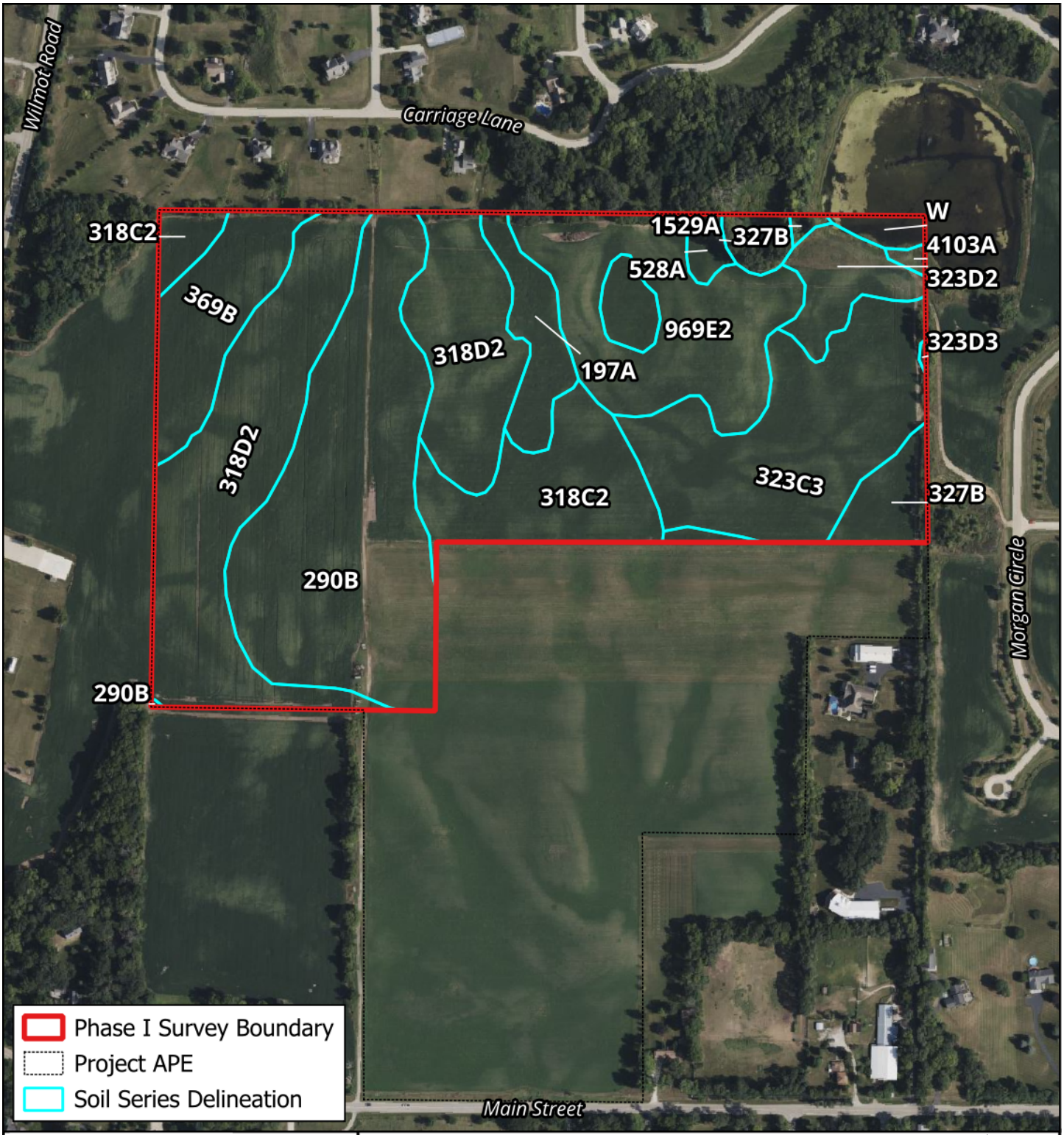
MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

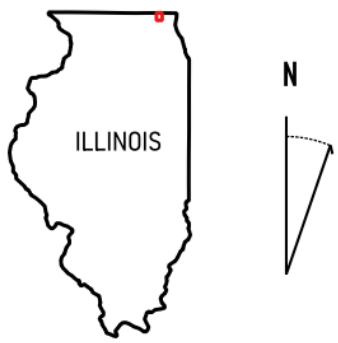
Author:	LSH
Date:	20240528
Scale:	1:24000
Projection:	WGS84 16N

USGS TOPO

SPRING GROVE, IL

FIGURE 1





MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

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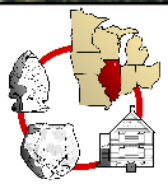
SOURCE OF MAP IS USDA WEBSOIL SURVEY (2024)



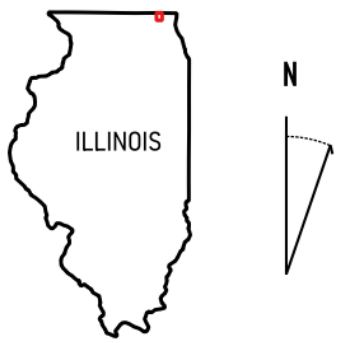
Author:	LSH
Date:	20240523
Scale:	1:5000
Projection:	WGS84 16N

1939 HISTORIC AERIAL

SPRING GROVE, IL

FIGURE

2



MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

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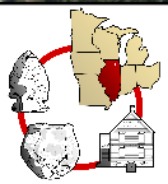
SOURCE OF MAP IS BING VIRTUAL EARTH (2024)



Author:	LSH
Date:	20240523
Scale:	1:5000
Projection:	WGS84 16N

SKETCH MAP

SPRING GROVE, IL

FIGURE

3

N

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

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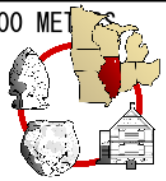
0 500 1,000 1,500 2,000 2,500 FEET

SOURCE OF MAP IS ISGS HISTORICAL AERIAL PHOTO (1939)



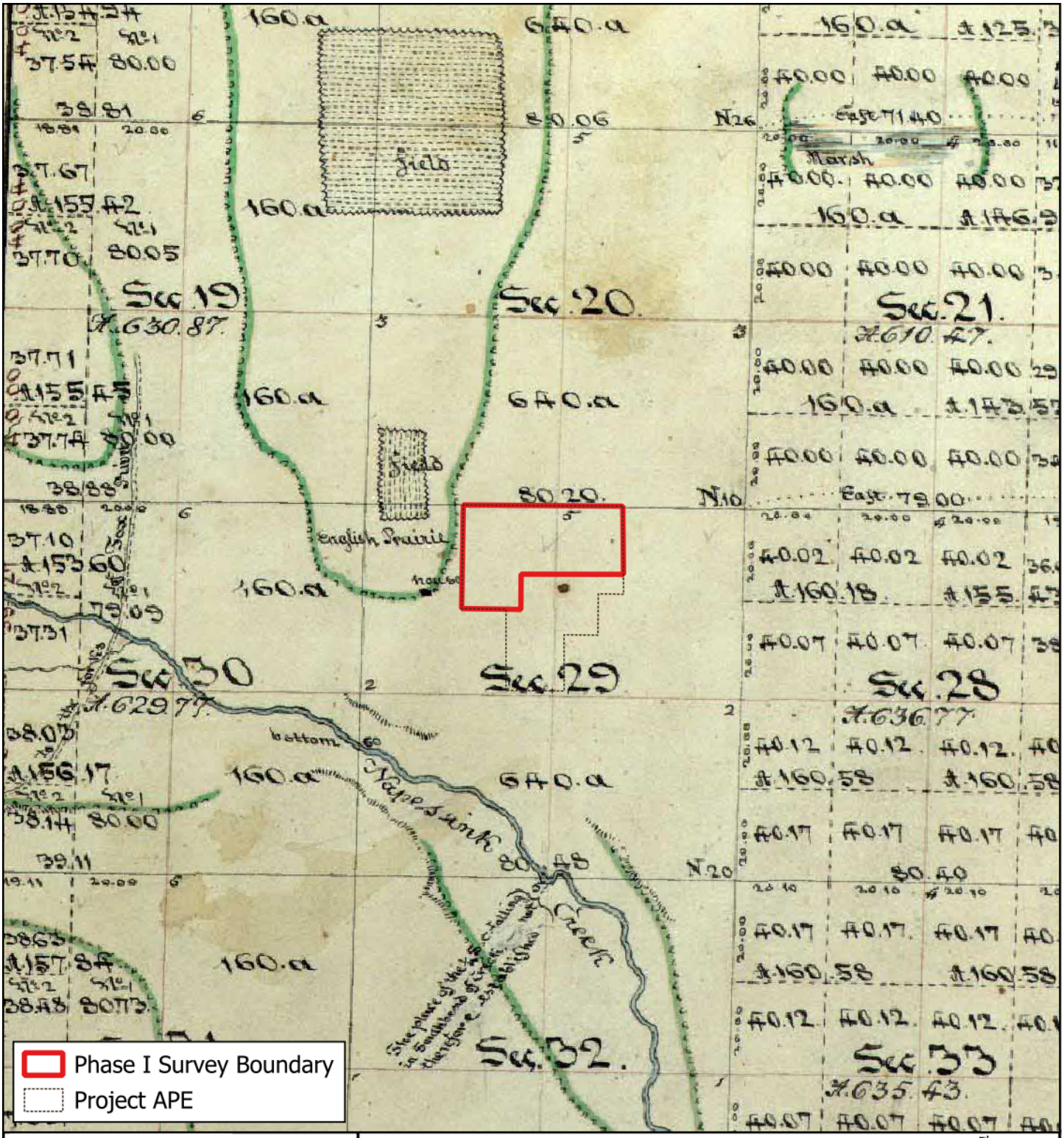
Author:	LSH
Date:	20240523
Scale:	1:10000
Projection:	WGS84 16N

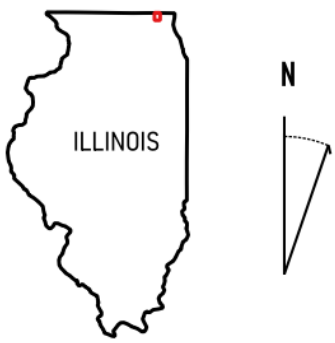
1939 HISTORIC AERIAL

SPRING GROVE, IL

FIGURE

4





0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS ILLINOIS GENERAL LAND OFFICE SURVEY PLATS (1839)

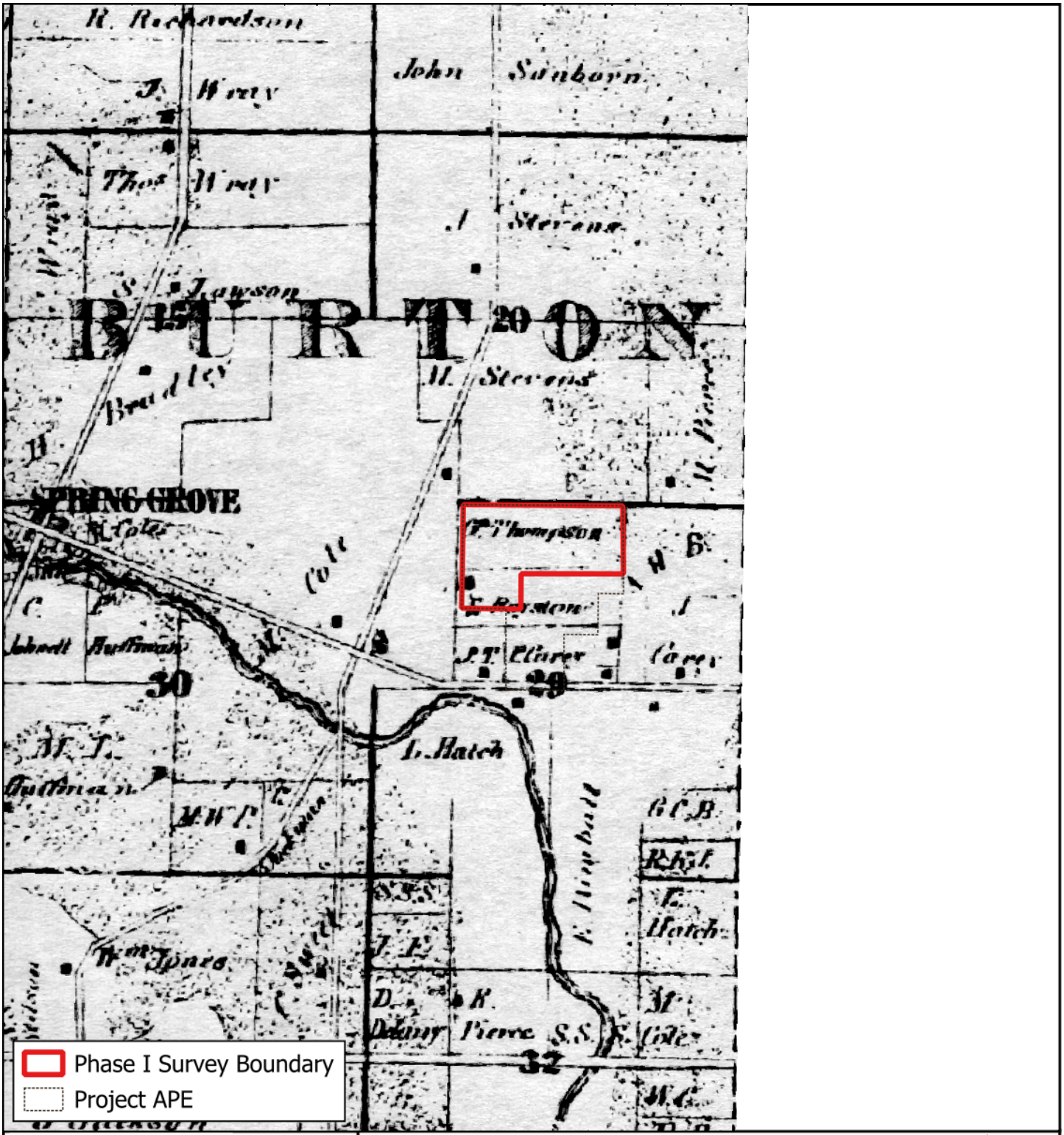
Author:	LSH
Date:	20240528
Scale:	1:24000
Projection:	WGS84 16N

1839 GLO

SPRING GROVE, IL

FIGURE 5

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024



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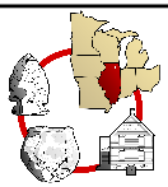
SOURCE OF MAP IS THOMPSON & BROTHERS, PUBLISHER (1862)



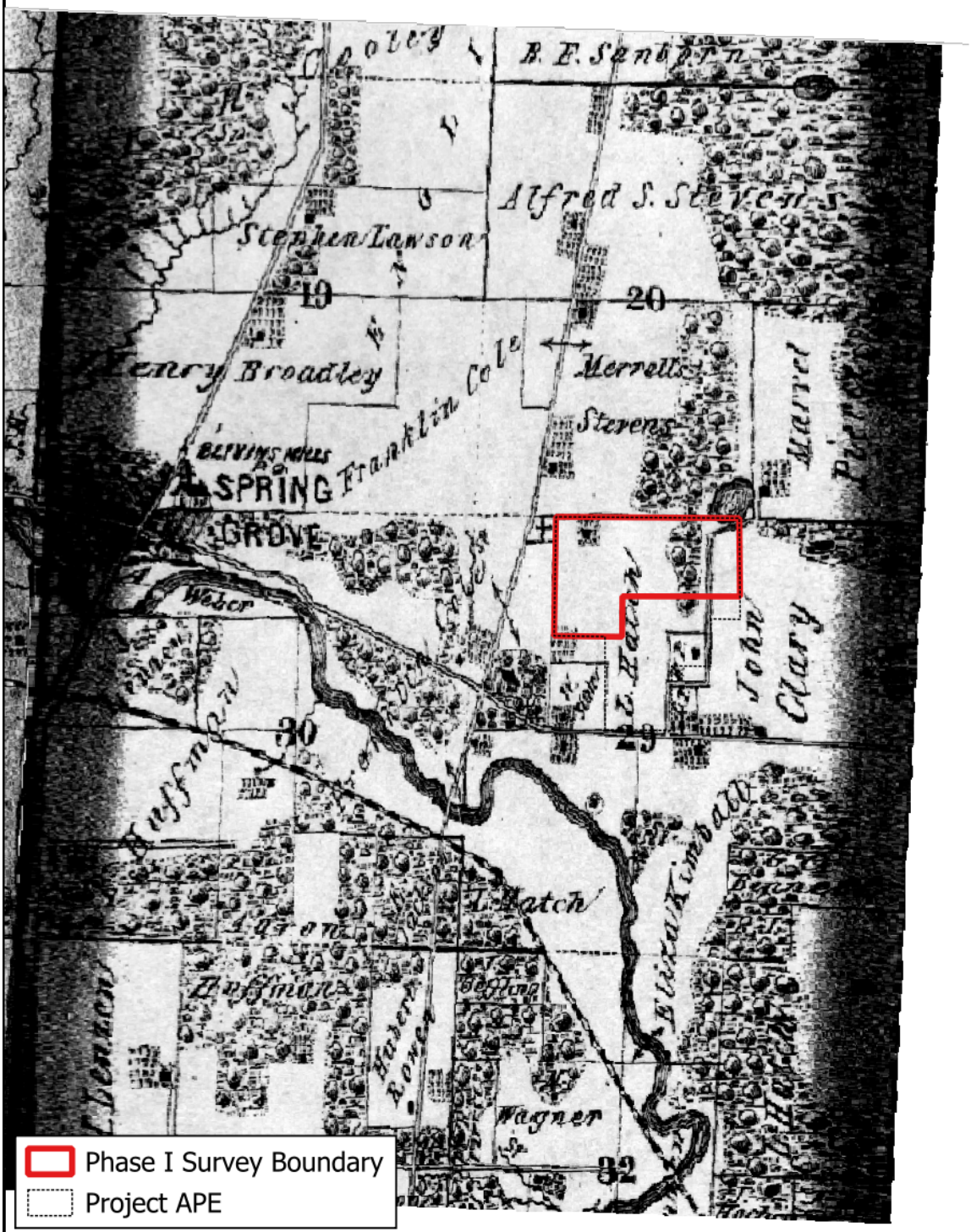
Author:	LSH
Date:	20240528
Scale:	1:24000
Projection:	WGS84 16N

1862 PLAT

SPRING GROVE, IL

FIGURE 6

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024



N

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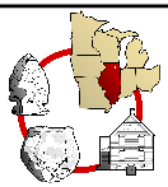
SOURCE OF MAP IS EVERTS, BASKIN & STEWERT, PUBLISHER (1872)



Author:	LSH
Date:	20240523
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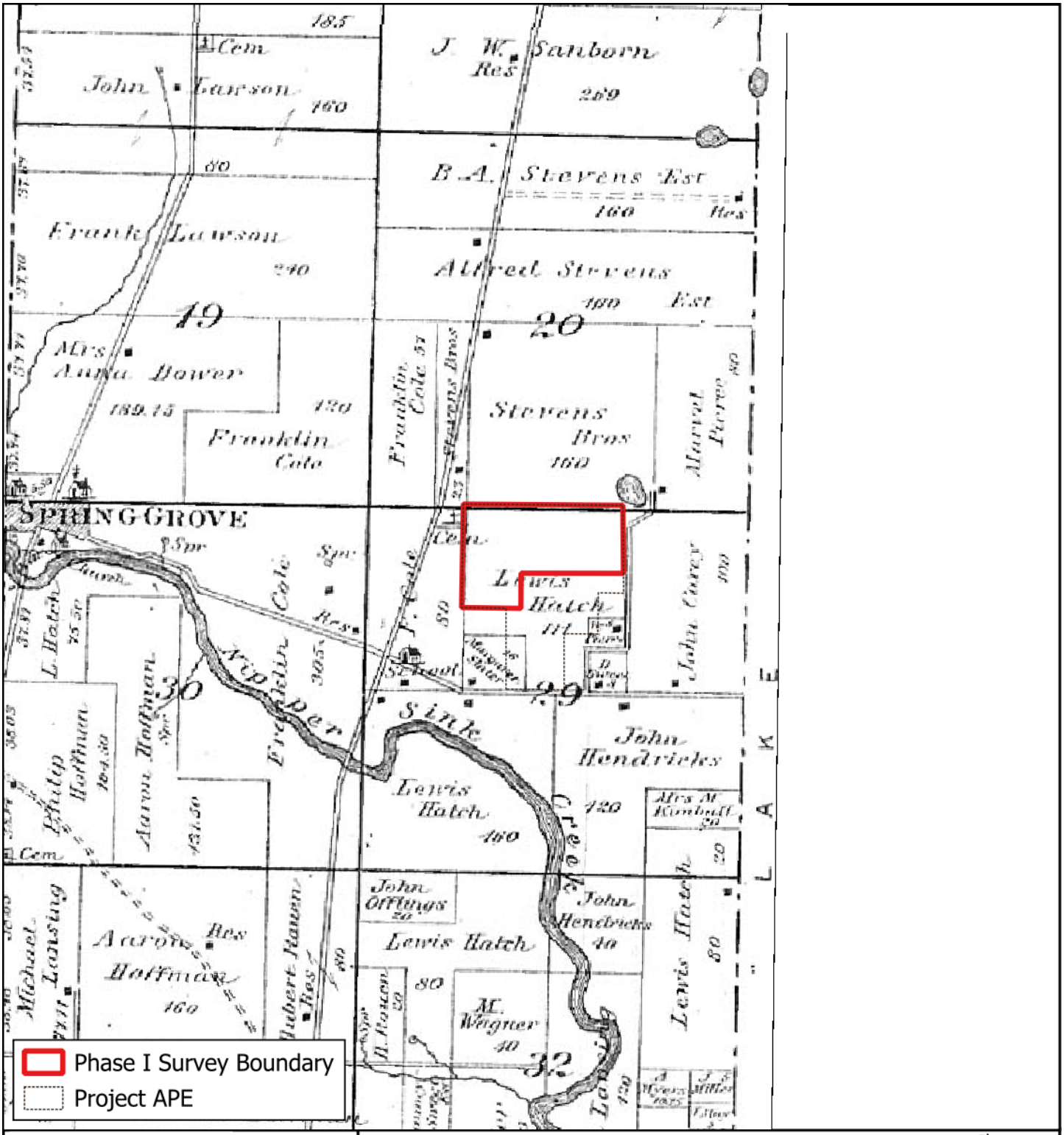
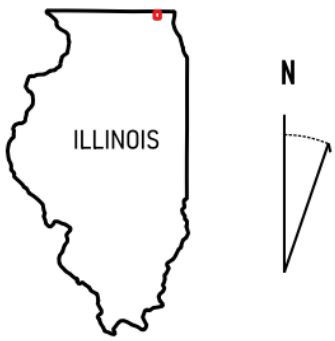
1872 PLAT

SPRING GROVE, IL

FIGURE 7

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024



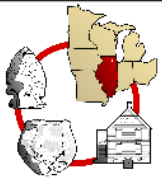


N

0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS OGLE, GEO. A., PUBLISHER (1892)



MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

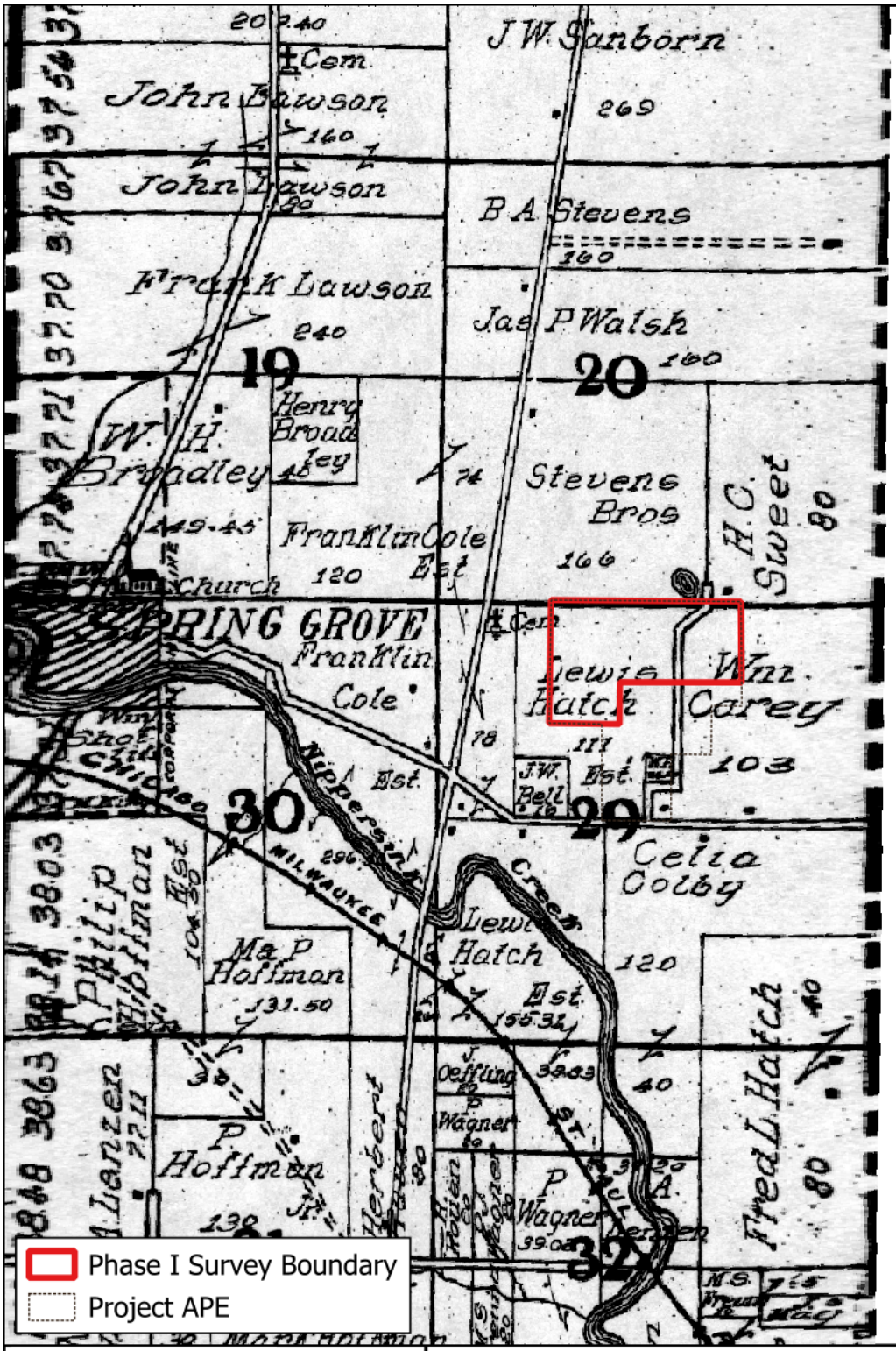
Author:	LSH
Date:	20240528
Scale:	1:24000
Projection:	WGS84 16N

1892 PLAT

SPRING GROVE, IL

FIGURE

8

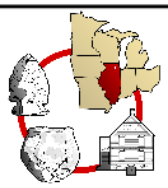


N

0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS OGLE, GEO. A., PUBLISHER (1908)



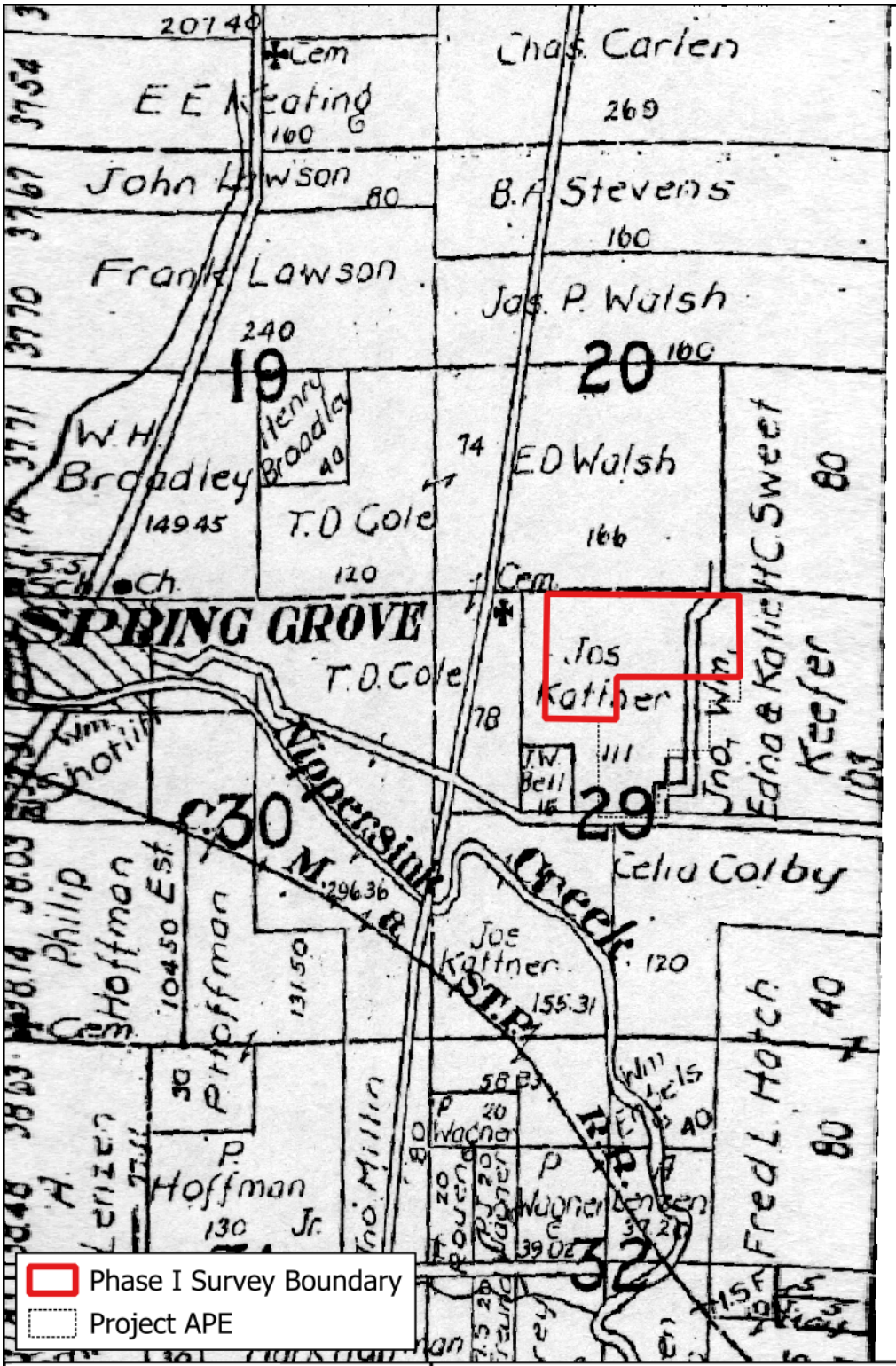
Author:	LSH
Date:	20240528
Scale:	1:24000
Projection:	WGS84 16N

1908 PLAT

SPRING GROVE, IL

FIGURE 9

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

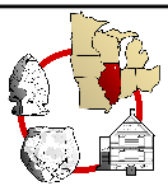


N

0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS HIXSON, W. W., PUBLISHER (1920)



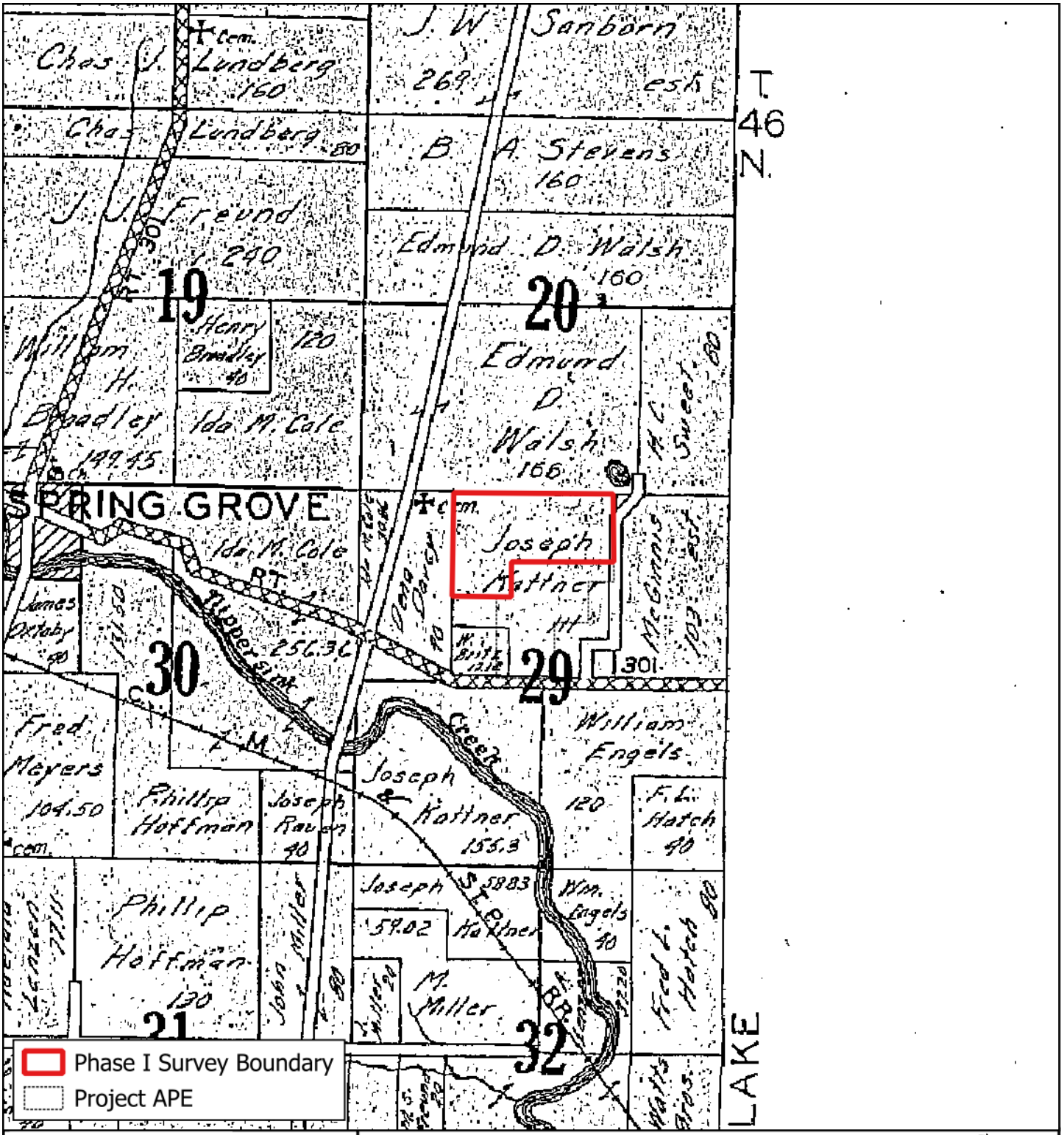
Author:	LSH
Date:	20240523
Scale:	1:24000
Projection:	WGS84 16N

1920 PLAT

SPRING GROVE, IL

FIGURE 10

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

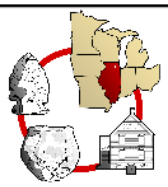


N

0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS THRIFT PRESS, PUBLISHER (1927)



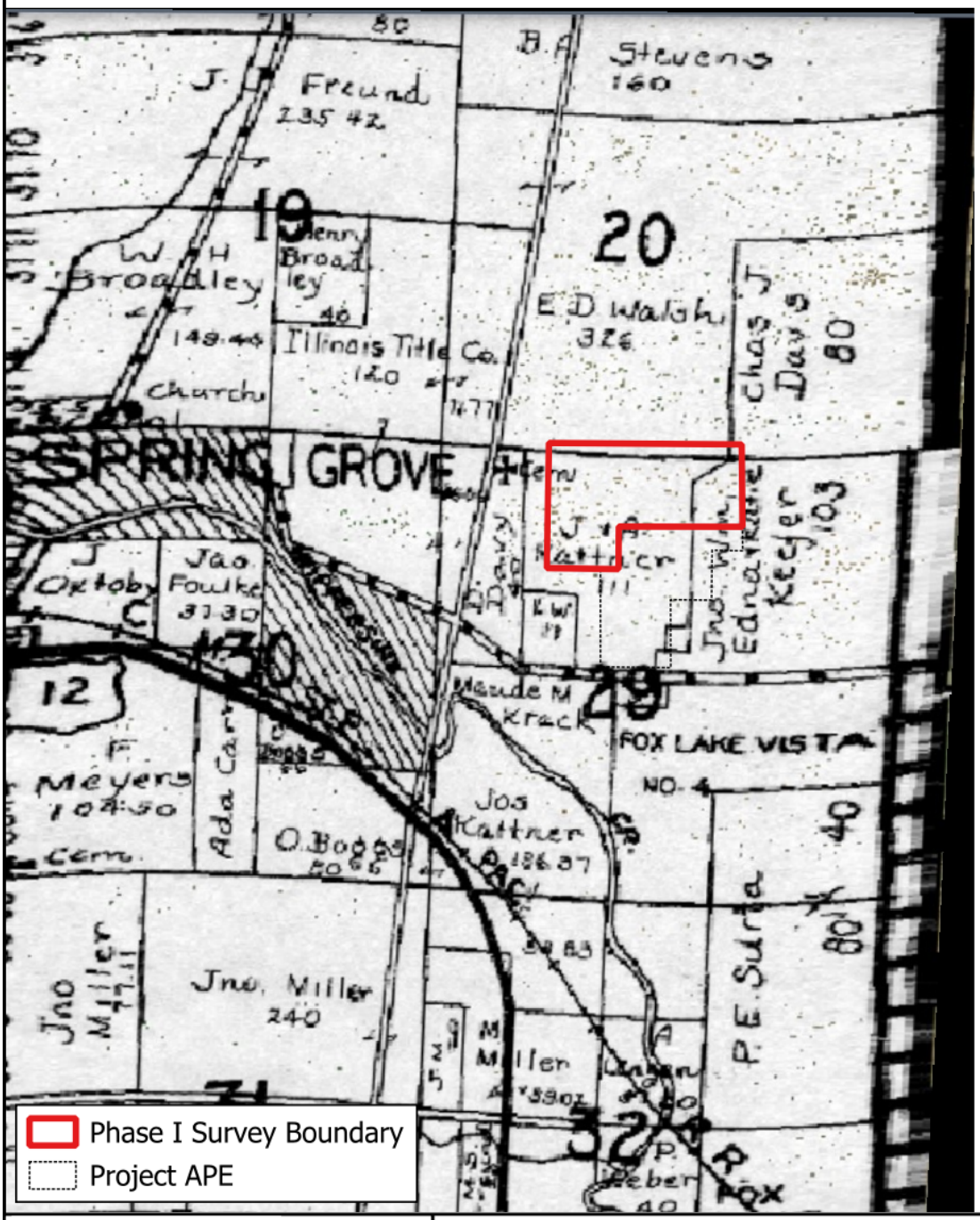
Author:	LSH
Date:	20240523
Scale:	1:24000
Projection:	WGS84 16N

1927 PLAT

SPRING GROVE, IL

FIGURE 11

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024



ILLINOIS

N

0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS HIXSON, W. W., PUBLISHER (1941)

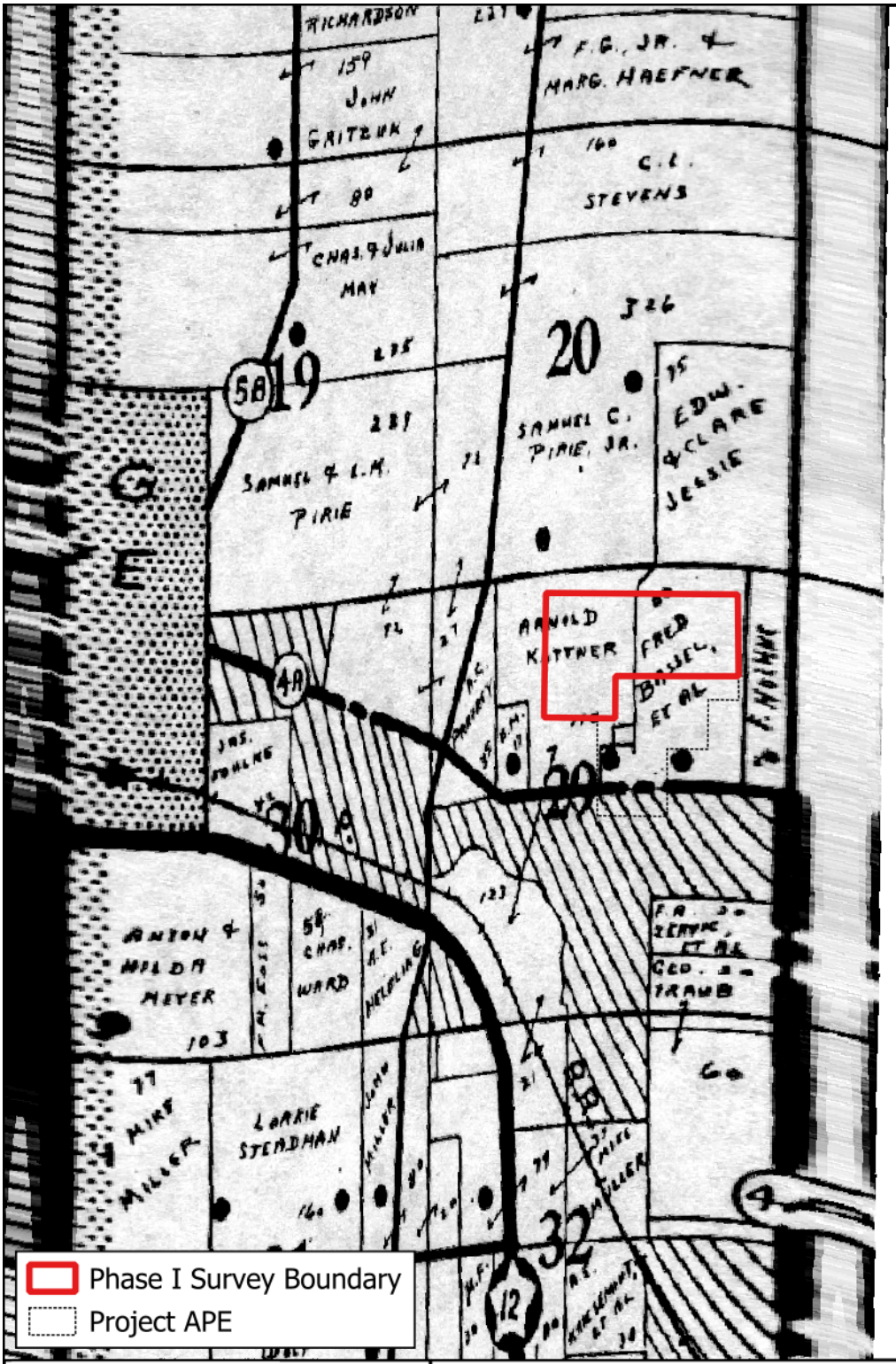
Author:	LSH
Date:	20240523
Scale:	1:24000
Projection:	WGS84 16N

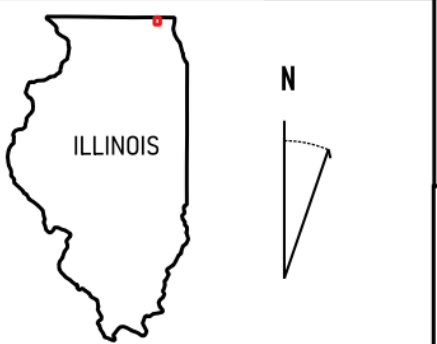
1941 PLAT

SPRING GROVE, IL

FIGURE 12

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

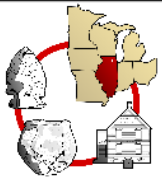




0 500 1,000 1,500 2,000 METERS

0 1,000 2,000 3,000 4,000 5,000 FEET

SOURCE OF MAP IS FARM PLAT BOOK PUBLISHING COMPANY (1954)



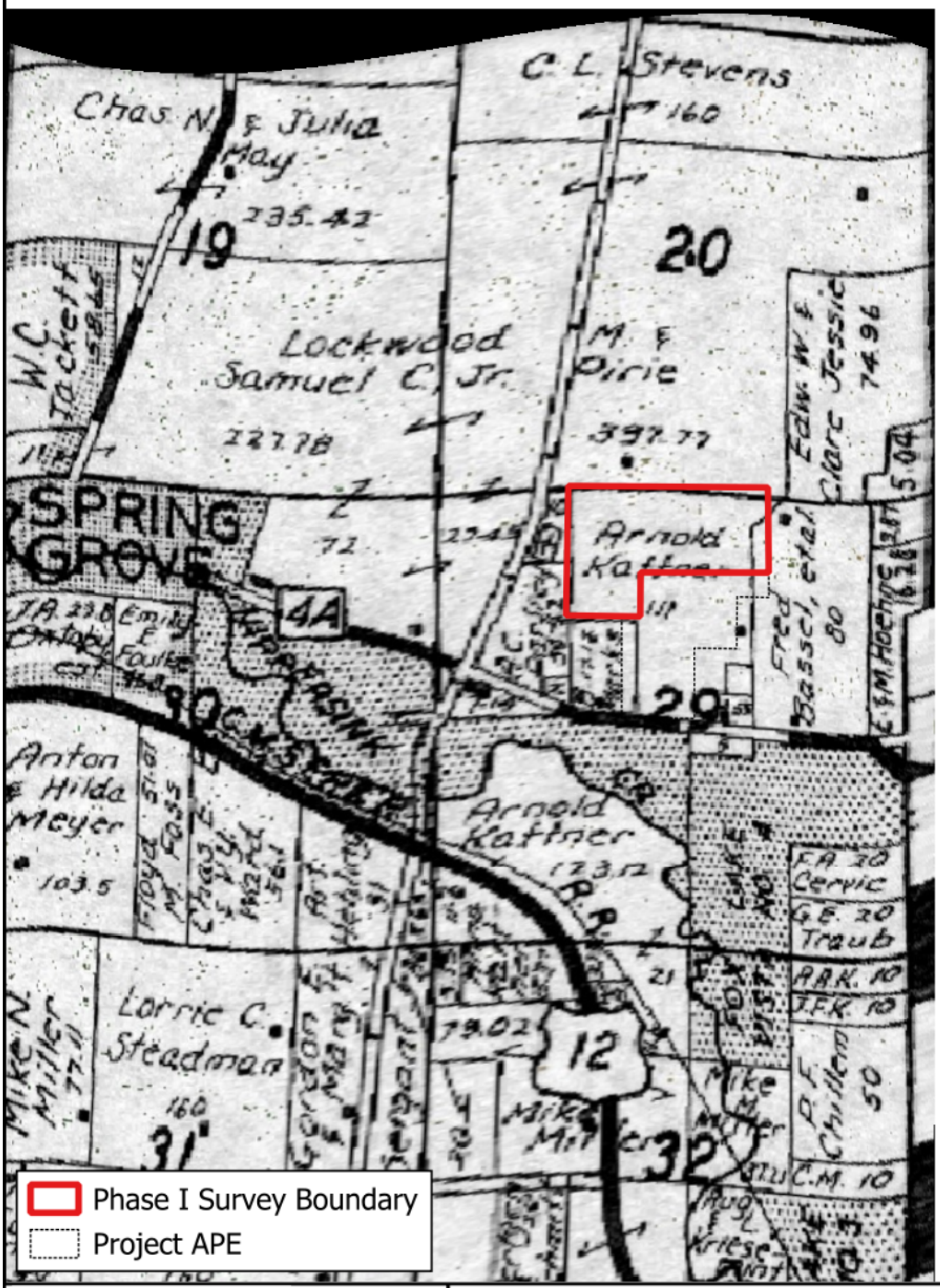
Author:	LSH
Date:	20240523
Scale:	1:24000
Projection:	WGS84 16N

1954 PLAT

SPRING GROVE, IL

FIGURE 13

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024



SOURCE OF MAP IS ROCKFORD MAP PUBLISHERS (1956)

MIDWEST ARCHAEOLOGICAL RESEARCH SERVICES 2024

Author:	LSH
Date:	20240523
Scale:	1:24000
Projection:	WGS84 16N

1956 PLAT

SPRING GROVE, IL

FIGURE 14

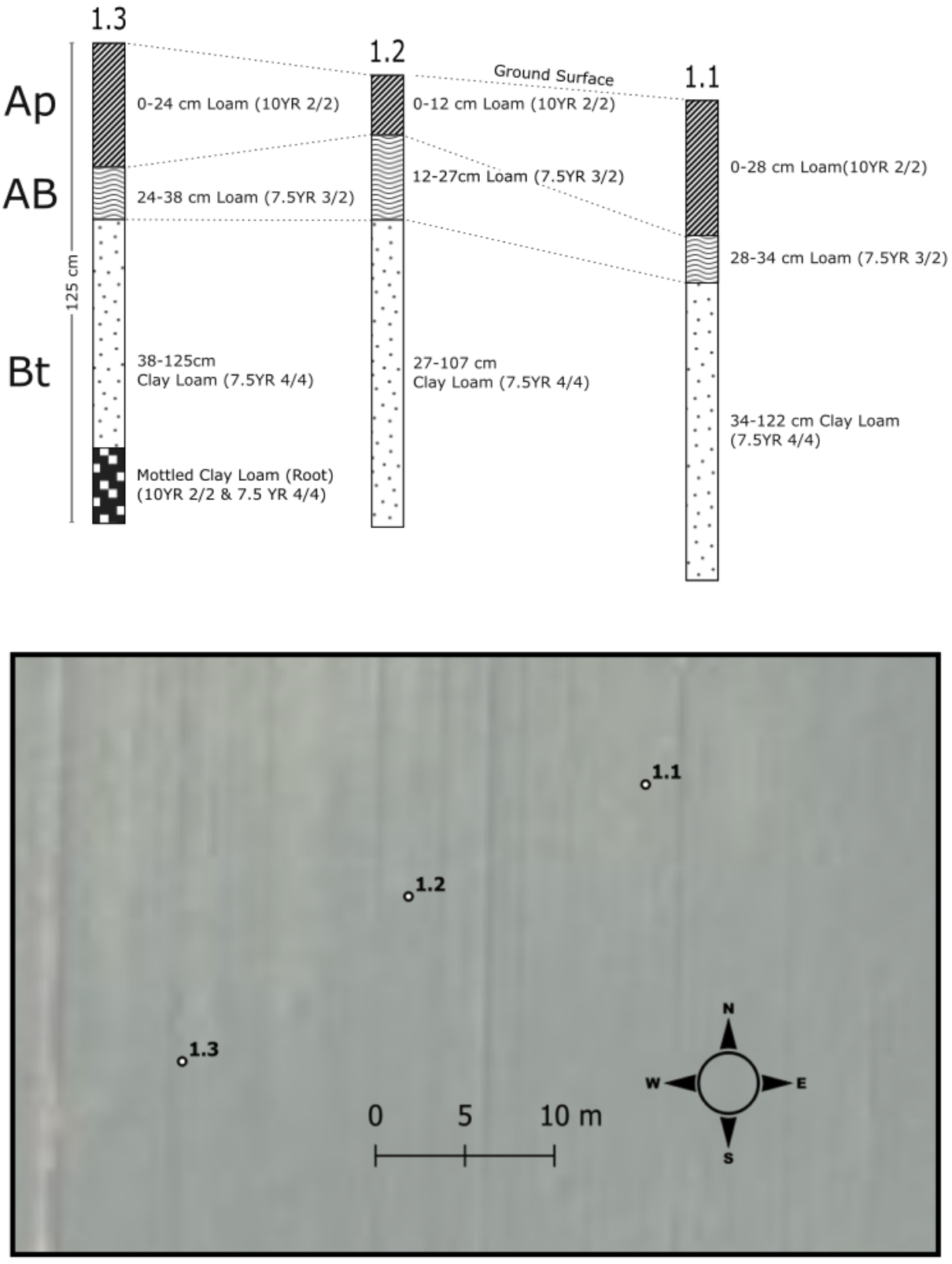


Figure 15. Soil strata for augers 1.1-1.3 within the current 11MH4 site boundary.

Illinois Department of Natural Resources

JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

8 May 2024

McHenry County
801 Main Street, Spring Grove
Section: 29, Township: 46 North, Range: 9 East

HSRPA #2024-026, Phase I archaeological survey, 11MH4

Mr. Jay Martinez
Midwest Archaeological Research Services
PO Box 2533
Crystal Lake, IL 60039

Dear Mr. Martinez,
We are in receipt of your permit application to conduct a Phase I archaeological survey at site 11MH4, McHenry County, Illinois. The 1957 archaeological site form recorded that human skeletons were excavated from the ridge north of Nippersink Creek. Site 11MH4 is within the current project area and must be identified as present or destroyed prior to any development (SHPO Log 013031324, letter dated 4-5-2024). Therefore, a Human Remains Protection Act (HRPA; 20 ILCS 3440) permit is required for the archaeological survey.

This letter, together with your scope of work, will serve as your permit for the 2024 archaeological survey at 11MH4, which will be in effect for six months from the date of this letter. A letter report summarizing the work is due thirty days after the field investigation is complete. A full draft report of investigations is due one year after the completion of the field work. If you require additional time to continue your field investigations past the permit expiration date, you may request a *permit extension* in writing from our office.

This HRPA permit is issued with the following restrictions:

1. The field investigations will be implemented as described in the survey plan. There will be no modification of the permit except by advance application in writing.
2. Field investigations will be conducted by an archaeologist who meets the Secretary of Interior's Professional Qualifications (36 CFR 61). Professionals meeting these qualifications must be on site whenever the fieldwork is in progress.
3. If suspected human bones are encountered during the field investigations, a certified human osteologist must verify if the bone(s) is human.
4. If human bones, grave artifacts, or grave markers are encountered, and verified, during the field investigations, all work must stop immediately. A 100-foot buffer must be established around the encountered remains and all excavations within the buffer zone will cease.
5. The county coroner must be notified within 48 hours of the discovery. Our office must also be notified.
6. A site revisit form must be submitted and must indicate the presence of human bones.

With the acceptance of this permit, deemed by initiation of work, the applicant agrees to abide by the permit's regulations, and to assume all accompanying legal and financial obligations. This permit does not release you from any obligation under any other law. It is the applicant's responsibility to make all arrangements for appropriate recordation and curation of project documentation.
If you have any questions, please contact me at 217/785-4992 or dawn.cobb@illinois.gov.

Sincerely,

Dawn Cobb

Dawn Cobb
Archaeologist and Human Remains Protection Act Coordinator
Illinois Department of Natural Resources

Cc: Jeff Kruchten, Principal Archaeologist, State Historic Preservation Office

Figure 16. Human Remains Protection Act Permit Letter from the Illinois Department of Natural Resources.

Illinois Department of Natural Resources

JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

McHenry County
Spring Grove
801 Main Street
Section:29-Township:46N-Range:9E
Potentially Eligible Site: 11MH4 (HRPA)
IEPA
New Construction of a Residential Development and Lake

PLEASE REFER TO: SHPO LOG #013031324

SURVEY REQUEST

April 5, 2024

Phil Brown
Fox Development
5435 Bull Valley Road, Suite 330
McHenry, IL 60050

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) to review all state funded, permitted, or licensed undertakings for their effect on cultural resources. We have received information indicating that the referenced project will, pursuant to that law, require comments from our office and our comments follow. Should you have any contrary information, please contact our office at the number below.

According to the information provided there is no federal involvement in your project. Be aware that the state law is less restrictive than the federal cultural resource laws concerning archaeology. Therefore, if your project will use federal loans or grants, need federal agency permits, or is on federal property then your project must be reviewed by us pursuant to the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case.

Known archaeological site 11MH4, a reported mound site from which human remains were excavated in the 1950s, is within the project area. Additionally, structures are annotated within the project area on plat maps published in 1862 and 1872. Accordingly, a Phase I archaeological **survey** to locate, identify, record, and evaluate these resources, at the legal minimum, will be **required**. In addition to the survey we will also need clear photographs of all structures in, or adjacent to, the current project area. This decision is based upon our understanding that there has not been any large-scale disturbance of the ground surface (excluding agricultural activities) or major construction activity within the project area which would have destroyed existing cultural resources prior to your project. If you have further questions, please contact Jeff Kruchten, Principal Archaeologist, at 217/785-1279 or jeff.kruchten@illinois.gov.

Archaeological site 11MH4 has been afforded protection under the Illinois Human Remains Protection Act (20 ILCS 3440, as amended, 17 IAC 4190) (HRPA). Pursuant to recent amendments to this Act, a permit from the Department of Natural Resources will be required before any fieldwork can be conducted within the site limits. Please contact Dawn Cobb, HRPA Coordinator, at 217/785-4992 or dawn.cobb@illinois.gov to initiate the permitting process.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic
Preservation Officer

Figure 17. Request for archaeological survey letter from the Illinois Department of Natural Resources.

Figure 18. Project development map.

Illinois Archaeological Site Recording Form

County McHenry **Site Name** **Revisit** Y

Field No. 2072-MH4R **7.5' Quadrangle** Fox Lake **County Site No.** 4

Ownership Private **Meridian** 3 **Township** 46 N **Range** 9 E **Section** 29 **Recorded** 2024.05.23

WGS84 Latitude 42.442288 **Longitude** -88.211637 **Site Area (sq. m)** 63,256

UTM Nad83 Zone 16 **UTM North** 4,699,595 **UTM East** 400,353

Known Alternate Names

ENVIRONMENT

Topography Upland Ridge **Drainage Basin** Upper Fox

Nearest Water Supply Nippersink Creek **Elevation (meters AMSL)** 247

Soil Association Rodman-Fox-Casco (s8798)

Description The site is located within an undulating agricultural field approximately 465 m NE of the intersection of Wilmot Rd. and Main St. Nippersink Creek is 570 m to the SW.

SURVEY

Project Name MARS#2072 Fox Development **Project Type** Phase I CRM

Ground Cover Cultivated No Till Rock **Surface Visibility %** 90

Survey Methods Pedestrian

Site Type Habitation **Standing Structure** N

SITE CONDITION

Extent of Damage Severe **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Representative Sample Collection

Number of Prehistoric Artifacts (count or estimate) 0

- N **Prehistoric Diagnostic Artifacts**
- N **Prehistoric Surface Features**
- N **Prehistoric Buried Features** **Ave. Depth (cm)** 0

Number of Historic Artifacts (count or estimate) 112

- N **Historic Diagnostic Artifacts**
- N **Historic Surface Features**
- N **Historic Buried Features** **Ave. Depth (cm)** 0

Description Cluster 1: 74 Colorless, 1 Amethyst, 1 Soda-Lime, 10 Amber, 3 Jadeite, Container Glass; 1 White Milk Glass; 14 Undecorated Whiteware; 4 Blue Transfer; 2 Annular Yellow ware; 1 Undecorated Ironstone || Cluster 2: 1 Black-Green Glass.

TEMPORAL AFFILIATION

[ ] Prehistoric Unknown	[ ] Woodland	[ ] Protohistoric	[ ] Frontier Antebellum (1841-April 11, 1861)
[ ] Paleoindian	[ ] Early Woodland	[ ] Historic Native American	[ ] Civil War (April 12, 1861-April 9, 1865)
[ ] Archaic	[ ] Middle Woodland	[ ] Historic (generic)	[Y] Frontier Post-Civil War (April 10, 1865-1870)
[ ] Early Archaic	[ ] Late Woodland	[ ] Colonial (1673-1780)	[Y] Early Industrial (1871-1900)
[ ] Middle Archaic	[ ] Mississippian	[ ] Pioneer (1781-1840)	[Y] Urban Industrial (1901-1945)
[ ] Late Archaic	[ ] Upper Mississippian	[ ] Frontier (generic; 1841-1870)	[Y] Post-War (1946-present)

Description A dwelling is marked on the1862 Burton plat near cluster 2. Agricultural outbuildings first appear on the 1939 aerial, over the subsequent years the buildings change and then are razed by 1999. Artifacts date roughly from pre-1870 to 1930 (see report).

Surveyor JM, LH, JS **Institution** MRS **Survey Date** 2023.05.22 **Curation Facility** ISM

Form By JM, LH, JS **Institution** MRS **Report Date** 2023.05.23 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status HRPA BURIAL LAW **HRPA** Y

Updated 2023.12.20

Figure 19. Illinois Archaeological Site Form for 11MH4.

Illinois Archaeological Site Recording Form

County McHenry **Site Name** **Revisit** N

Field No. 2072-1 **7.5' Quadrangle** Fox Lake **County Site No.** 555

Ownership Private **Meridian** 3 **Township** 46 N **Range** 9 E **Section** 29 **Recorded** 2024.05.23

WGS84 Latitude 42.444273 **Longitude** -88.212021 **Site Area (sq. m)** 1,055

UTM Nad83 Zone 16 **UTM North** 4,699,816 **UTM East** 400,324

Known Alternate Names

ENVIRONMENT

Topography Upland Ridge **Drainage Basin** Upper Fox

Nearest Water Supply Nippersink Creek **Elevation (meters AMSL)** 247

Soil Association Rodman-Fox-Casco (s8798)

Description The site is located within an undulating agricultural field approximately 780 m N by NE of the intersection of Wilmot Rd. and Main St. Nippersink Creek is 1.3 km to the S. Site boundary is likely elongated due to plow drag.

SURVEY

Project Name MARS#2072 Fox Development **Project Type** Phase I CRM

Ground Cover Cultivated No Till Rock **Surface Visibility %** 90

Survey Methods Pedestrian

Site Type Habitation **Standing Structure** N

SITE CONDITION

Extent of Damage Severe **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Representative Sample Collection

Number of Prehistoric Artifacts (count or estimate) 0

Number of Historic Artifacts (count or estimate) 42

N	Prehistoric Diagnostic Artifacts	Y	Historic Diagnostic Artifacts
N	Prehistoric Surface Features	N	Historic Surface Features
N	Prehistoric Buried Features **Ave. Depth (cm)** 0	N	Historic Buried Features **Ave. Depth (cm)** 0

Description 9 Undecorated, Black Transfer (2) Blue (1), Red (1) Transfer Whiteware; 2 Undecorated Ironstone; 1 Stoneware; 2 Porcelain; 6 Colorless Container and 4 Flat Glass, 2 White Milk, 3 Green, 3 Aqua, 2 Amber, 1 Amethyst; 1 Porcelain Electrical Insulator.

TEMPORAL AFFILIATION

☐ Prehistoric Unknown	☐ Woodland	☐ Protohistoric	☐ Frontier Antebellum (1841-April 11, 1861)
☐ Paleoindian	☐ Early Woodland	☐ Historic Native American	☐ Civil War (April 12, 1861-April 9, 1865)
☐ Archaic	☐ Middle Woodland	☐ Historic (generic)	☑ Frontier Post-Civil War (April 10, 1865-1870)
☐ Early Archaic	☐ Late Woodland	☐ Colonial (1673-1780)	☑ Early Industrial (1871-1900)
☐ Middle Archaic	☐ Mississippian	☐ Pioneer (1781-1840)	☐ Urban Industrial (1901-1945)
☐ Late Archaic	☐ Upper Mississippian	☐ Frontier (generic; 1841-1870)	☐ Post-War (1946-present)

Description A dwelling was first annotated within the parcel on the Burton plat of 1862. The farmstead is present on the subsequent 1872 plat, but was not annotated on the 1892 plat. Artifacts date roughly from 1830-1920 (see report).

Surveyor JM, LH, JS **Institution** MRS **Survey Date** 2023.05.22 **Curation Facility** ISM

Form By JM, LH, JS **Institution** MRS **Report Date** 2023.05.23 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HRPA** N

Updated 2023.12.20

Figure 20. Illinois Archaeological Site Form for 11MH555.

Illinois Archaeological Site Recording Form

County McHenry **Site Name** **Revisit** N

Field No. 2072-2 **7.5' Quadrangle** Fox Lake **County Site No.** 556

Ownership Private **Meridian** 3 **Township** 46 N **Range** 9 E **Section** 29 **Recorded** 2024.05.23

WGS84 Latitude 42.442707 **Longitude** -88.205798 **Site Area (sq. m)** 11

UTM Nad83 Zone 16 **UTM North** 4,699,635 **UTM East** 400,834

Known Alternate Names

ENVIRONMENT

Topography Upland Ridge **Drainage Basin** Upper Fox

Nearest Water Supply Nippersink Creek **Elevation (meters AMSL)** 247

Soil Association Rodman-Fox-Casco (s8798)

Description The site is located within an undulating agricultural field approximately 1.4 km NE of the intersection of Wilmot Rd. and Main St. Nippersink Creek is 1.3 km to the SW.

SURVEY

Project Name MARS#2072 Fox Development **Project Type** Phase I CRM

Ground Cover Cultivated No Till Rock **Surface Visibility %** 90

Survey Methods Pedestrian

Site Type Habitation **Standing Structure** N

SITE CONDITION

Extent of Damage Severe **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 2

- N **Prehistoric Diagnostic Artifacts**
- N **Prehistoric Surface Features**
- N **Prehistoric Buried Features** **Ave. Depth (cm)** 0

Number of Historic Artifacts (count or estimate) 0

- N **Historic Diagnostic Artifacts**
- N **Historic Surface Features**
- N **Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 bifacial tool fragment; 1 primary flake.

TEMPORAL AFFILIATION

Y Prehistoric Unknown	Woodland	Protohistoric	Frontier Antebellum (1841-April 11, 1861)
Paleoindian	Early Woodland	Historic Native American	Civil War (April 12, 1861-April 9, 1865)
Archaic	Middle Woodland	Historic (generic)	Frontier Post-Civil War (April 10, 1865-1870)
Early Archaic	Late Woodland	Colonial (1673-1780)	Early Industrial (1871-1900)
Middle Archaic	Mississippian	Pioneer (1781-1840)	Urban Industrial (1901-1945)
Late Archaic	Upper Mississippian	Frontier (generic; 1841-1870)	Post-War (1946-present)

Description The prehistoric artifacts have no diagnostic features; therefore the temporal affiliation is unknown.

Surveyor JM, LH, JS **Institution** MRS **Survey Date** 2023.05.22 **Curation Facility** ISM

Form By JM, LH, JS **Institution** MRS **Report Date** 2023.05.23 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HRPA** N

Updated 2023.12.20

Figure 21. Illinois Archaeological Site Form for 11MH555.

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W.W. Hixson & Co. and Sidwell Studio

1941 Plat Book of McHenry County, Illinois. Rockford, Illinois.

Plate 1. Sample ground surface visibility within the Phase I survey boundary.

Plate 2. Overview of the Phase I project area, taken from the south-central boundary.

Plate 3. Southern wheat field, taken from the south-central boarder of the Phase I project area, facing southeast.

Plate 4. Center of Phase I project area, facing northeast toward the pond.

Plate 5. Site11MH555, taken from the southern site boundary, facing north.

Plate 6. Site 11MH556, taken from the southeastern site boundary, facing west by northwest.

Plate 7. Overview of auger probe transect 1, trending southwest, upslope.

Plate 8. Soil auger sample (Probe 1.2, second iteration).

Plate 9. Overview of auger probe transect 2 (within 11MH4), trending northwest upslope.

Plate 10. Soil auger sample (Probe 2.1, first iteration, terminated).

Plate 11. Historic “cluster 1” and “cluster 2” within 11MH4.

Plate 12. Selected example of historic artifacts from 11MH555.

Plate 13. Prehistoric artifacts from 11MH556.

Plate 14. Selected example of historic artifacts found within 11MH4

Illinois Department of Natural Resources

JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

10 July 2024

McHenry County
801 Main Street, Spring Grove
Section: 29, Township: 46 North, Range: 9 East

HSRPA #2024-026, Phase I archaeological survey, 11MH4

Mr. Jay Martinez
Midwest Archaeological Research Services
PO Box 2533
Crystal Lake, IL 60039

Dear Mr. Martinez,

We are in receipt of a final report of investigations prepared for Human Remains Protection Act (HRPA) Permit #2024-026 for archaeological field investigations of 11MH4, McHenry County. A 1957 site form recorded the presence of a mound and skeletal remains that were likely in the current project area for new development. A Phase I archaeological survey did not locate any evidence of a mound or human skeletal remains. In addition, document research has concluded that the site 11MH4 was most likely mis-plotted and actually represented the adjacent historic Cole Cemetery.

Our staff has reviewed the report and finds that the field investigation appears to satisfy the standards established under the Human Remains Protection Act, as amended (20 ILCS 3440). We concur with the conclusion that the previously reported mound and human skeleton was likely related to the adjacent Cole Cemetery.

Please retain this letter in your files as evidence of compliance with the Illinois Human Remains Protection Act.

If you have any questions, please contact me at 217/785-4992 or dawn.cobb@illinois.gov.

Sincerely,

Dawn Cobb

Dawn Cobb
Archaeologist
Human Remains Protection Act Coordinator
Illinois Department of Natural Resources

Cc: Jeff Kruchten, State Historic Preservation Office

Illinois Department of Natural Resources
JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

McHenry County
Spring Grove
801 Main Street
Section:29-Township:46N-Range:9E
Ineligible Sites: 11MH4, 11MH555, 11MH556
HRPA-2024-026, IEPA, MARS-2072
New Construction of a Residential Development and Lake

PLEASE REFER TO: SHPO LOG #013031324

July 29, 2024

Phil Brown
Fox Development
5435 Bull Valley Road, Suite 330
McHenry, IL 60050

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) to review all state funded, permitted, or licensed undertakings for their effect on cultural resources. Pursuant to this, we have received information regarding the referenced project for our comment.

Our staff has reviewed the specifications under the state law and assessed the impact of the project as submitted by your office. We have determined, based on the available information, that no significant historic, architectural, or archaeological resources will be affected within the proposed project area.

According to the information you have provided there is no federal involvement in your project. Be aware that the state law is less restrictive than the federal cultural resource laws concerning archaeology. If your project will use federal loans or grants, need federal agency permits, use federal property, or involve assistance from a federal agency then your project must be reviewed under the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case.

This approval remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Remains Protection Act (20 ILCS 3440).

Please retain this letter in your files as evidence of compliance with the Illinois State Agency Historic Resources Preservation Act.

If further assistance is needed, please contact Jeff Kruchten, Principal Archaeologist, at 217/785-1279 or jeff.kruchten@illinois.gov.

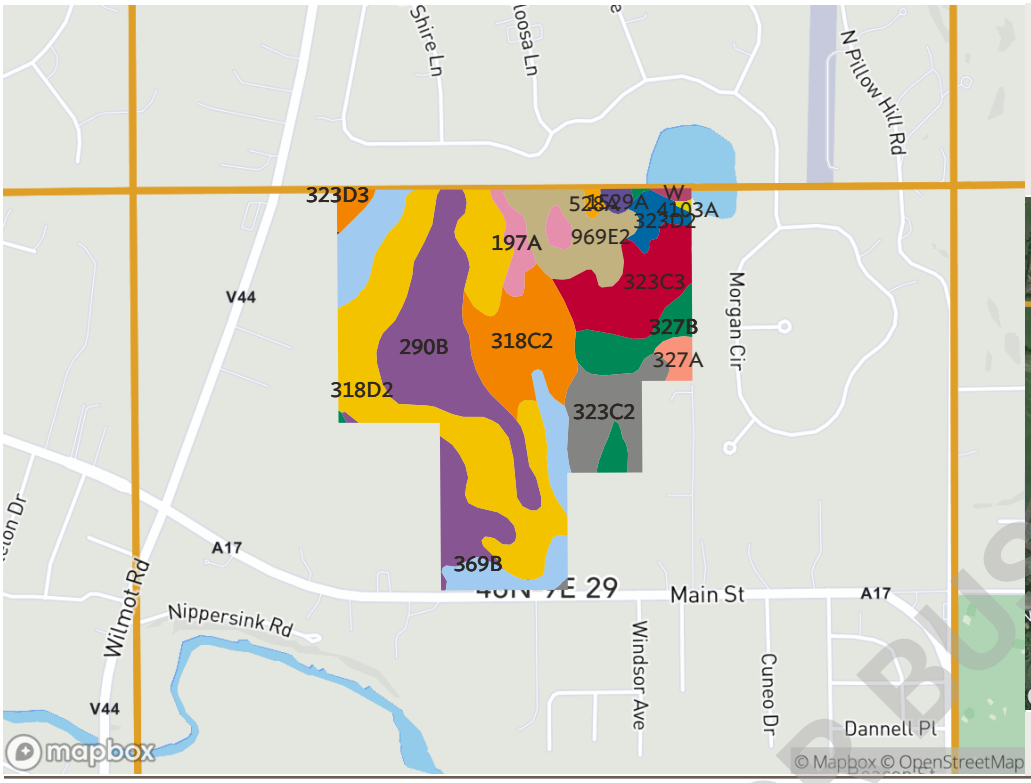
Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic
Preservation Officer

Appendix G – Soils Report and Map

2 fields, 103 acres in McHenry County, IL **TOWNSHIP/SECTION** 46N 9E – 29

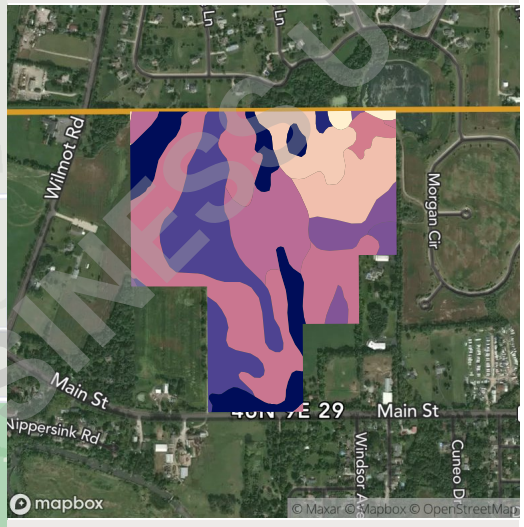


AVG PI Upgrade

COUNTY AVG 115.0

AVG NCCPI Upgrade

COUNTY AVG 68.7



QUALITY 67 — 136

Source: NRCS Soil Survey

All fields

103 ac.

SOIL CODE	SOIL DESCRIPTION	ACRES	PERCENTAGE OF FIELD	SOIL CLASS	PI
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	25.52	24.9%	3	Upgrade
290B	Warsaw loam, 2 to 4 percent slopes	20.72	20.2%	2	Upgrade
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	11.24	11.0%	3	Upgrade
369B	Waupecan silt loam, 2 to 4 percent slopes	9.75	9.5%	2	Upgrade
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	8.57	8.4%	3	Upgrade
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	7.03	6.9%	6	Upgrade
323C2	Casco loam, 4 to 6 percent slopes, eroded	6.85	6.7%	3	Upgrade
327B	Fox silt loam, 2 to 4 percent slopes	5.26	5.1%	2	Upgrade
197A	Troxel silt loam, 0 to 2 percent slopes	2.82	2.7%	1	Upgrade

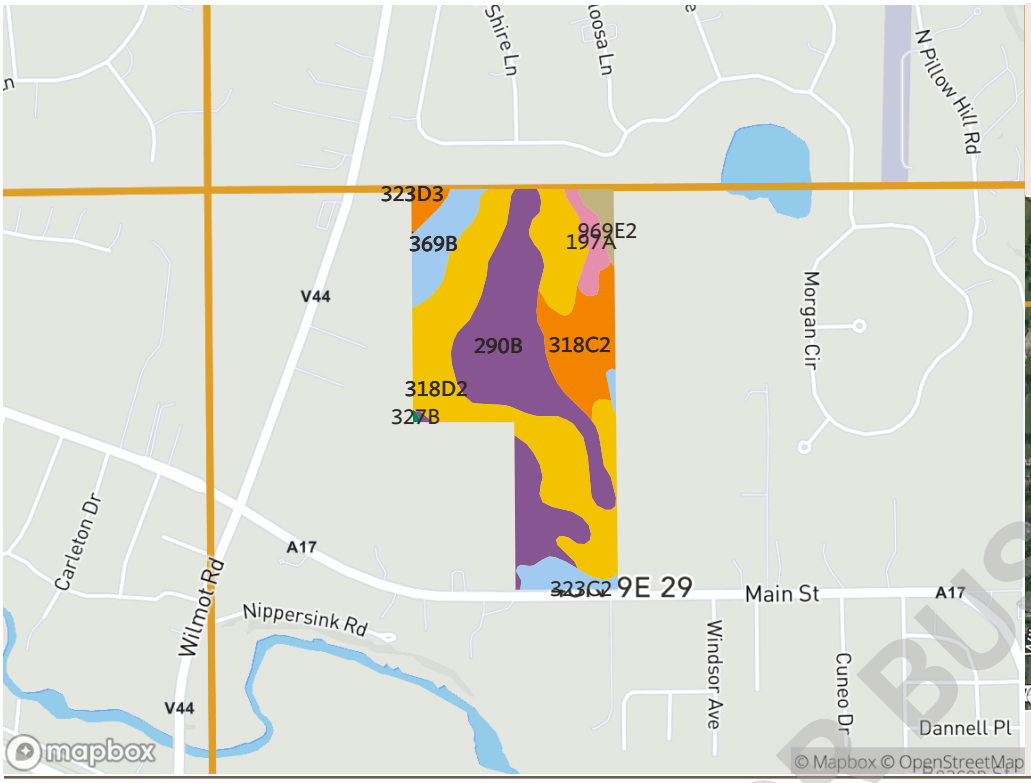
2 fields, 103 acres in McHenry County, IL

TOWNSHIP/SECTION 46N 9E – 29

■	323D2	Casco loam, 6 to 12 percent slopes, eroded	1.93	1.9%	4	Upgrade
■	327A	Fox silt loam, 0 to 2 percent slopes	1.21	1.2%	2	Upgrade
■	1529A	Selmass loam, 0 to 2 percent slopes, undrained	0.63	0.6%	5	Upgrade
■	528A	Lahoguess loam, 0 to 2 percent slopes	0.45	0.4%	1	Upgrade
■	W	Water	0.38	0.4%	8	Upgrade
■	4103A	Houghton muck, ponded, 0 to 2 percent slopes	0.13	0.1%	7	Upgrade
■	323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	0.03	0.0%	6	Upgrade
			102.13	**99.6%**		**Upgrade**

2 fields, 103 acres in McHenry County, IL

TOWNSHIP/SECTION 46N 9E – 29



AVG PI
Upgrade

COUNTY AVG
115.0

AVG NCCPI
Upgrade

COUNTY AVG
68.7

QUALITY 67 — 136

Source: NRCS Soil Survey

Field 1

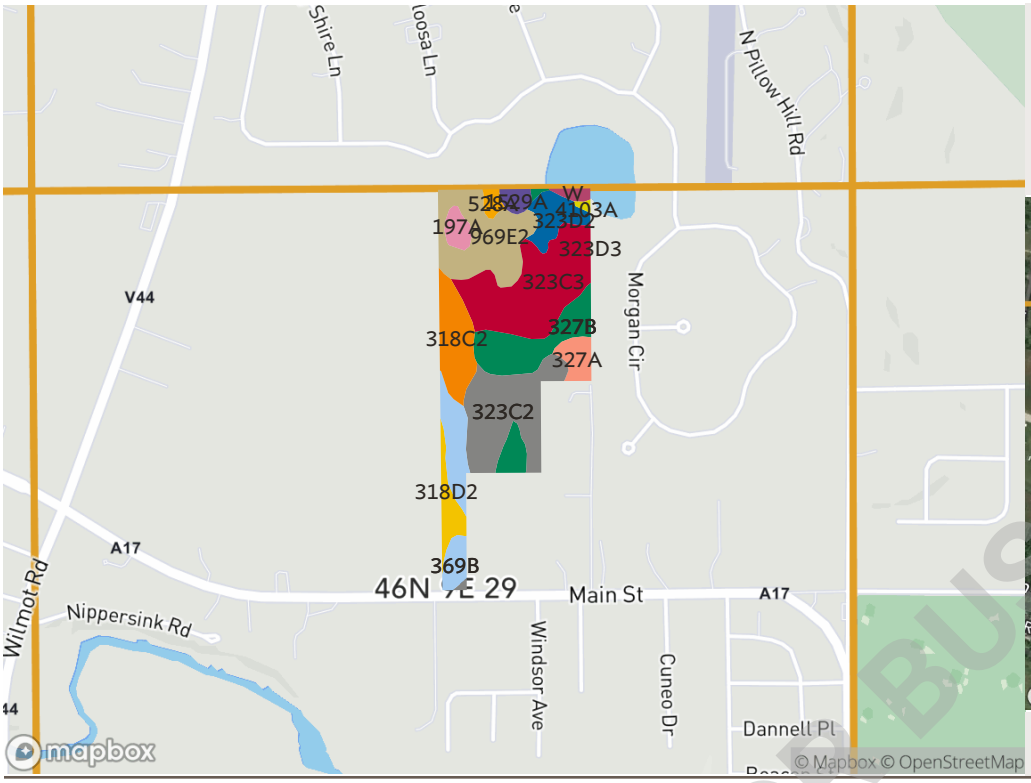
62 ac.

SOIL CODE	SOIL DESCRIPTION	ACRES	PERCENTAGE OF FIELD	SOIL CLASS	PI
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	24.13	38.6%	3	Upgrade
290B	Warsaw loam, 2 to 4 percent slopes	20.72	33.2%	2	Upgrade
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	7.89	12.6%	3	Upgrade
369B	Waupecan silt loam, 2 to 4 percent slopes	6.42	10.3%	2	Upgrade
197A	Troxel silt loam, 0 to 2 percent slopes	1.98	3.2%	1	Upgrade
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	1.23	2.0%	6	Upgrade
327B	Fox silt loam, 2 to 4 percent slopes	0.06	0.1%	2	Upgrade
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	0.03	0.0%	6	Upgrade
323C2	Casco loam, 4 to 6 percent slopes, eroded	0.01	0.0%	3	Upgrade

	62.46	**Upgrade**

2 fields, 103 acres in McHenry County, IL

TOWNSHIP/SECTION 46N 9E – 29



AVG PI
Upgrade

COUNTY AVG
115.0

AVG NCCPI
Upgrade

COUNTY AVG
68.7

QUALITY 67 — 136

Source: NRCS Soil Survey

Field 2

40 ac.

SOIL CODE	SOIL DESCRIPTION	ACRES	PERCENTAGE OF FIELD	SOIL CLASS	PI
323C3	Casco clay loam, 4 to 6 percent slopes, severely eroded	8.57	21.4%	3	Upgrade
323C2	Casco loam, 4 to 6 percent slopes, eroded	6.84	17.1%	3	Upgrade
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	5.80	14.5%	6	Upgrade
327B	Fox silt loam, 2 to 4 percent slopes	5.21	13.0%	2	Upgrade
318C2	Lorenzo loam, 4 to 6 percent slopes, eroded	3.35	8.4%	3	Upgrade
369B	Waupecan silt loam, 2 to 4 percent slopes	3.33	8.3%	2	Upgrade
323D2	Casco loam, 6 to 12 percent slopes, eroded	1.93	4.8%	4	Upgrade
318D2	Lorenzo loam, 6 to 12 percent slopes, eroded	1.39	3.5%	3	Upgrade
327A	Fox silt loam, 0 to 2 percent slopes	1.21	3.0%	2	Upgrade

2 fields, 103 acres in McHenry County, IL				TOWNSHIP/SECTION 46N 9E – 29	
197A	Troxel silt loam, 0 to 2 percent slopes	0.83	2.1%	1	Upgrade
1529A	Selmass loam, 0 to 2 percent slopes, undrained	0.63	1.6%	5	Upgrade
528A	Lahoguess loam, 0 to 2 percent slopes	0.45	1.1%	1	Upgrade
W	Water	0.38	0.9%	8	Upgrade
4103A	Houghton muck, ponded, 0 to 2 percent slopes	0.13	0.3%	7	Upgrade
323D3	Casco clay loam, 6 to 12 percent slopes, severely eroded	0.00	0.0%	6	Upgrade
		39.67	**99.1%**		**Upgrade**

Appendix H – Spill Prevention Containment and Control Plan

A Proven History ……
……. A Future Commitment

Spill Prevention, Containment and Control Plan

Super Aggregates

March 2019

SPILL PREVENTION, CONTAINMENT, AND CONTROL PLAN

TABLE OF CONTENTS

SPILL PREVENTION, CONTAINMENT AND CONTROL PLAN

1.0 INTRODUCTION

This Spill Prevention, Containment and Control Plan ("Spill Plan") describes planning, prevention and control measures to minimize impacts resulting from spills of fuels, petroleum products, or other regulated substances as a result of extraction and reclamation operations ("Construction"). Super Aggregates ("Contractor") shall implement these controls measures at all facilities.

2.0 PLANNING AND PREVENTION

Contractor requires proper implementation, planning and preventative measures to minimize the likelihood of spills, and to quickly and successfully clean up a spill should one occur. Contractor has developed this Spill Plan to set forth minimum standards for handling and storing regulated substances and cleaning up spills. Potential sources of construction-related spills include machinery and equipment failure, fuel handling, transfer accidents and storage tank leaks. The Contractor shall be responsible for implementing, at a minimum, the following planning and prevention measures.

2.1 ROLES AND RESPONSIBILITIES

Spill Coordinator

A Spill Coordinator shall be designated by the Contractor and the Spill Coordinator shall insure that Contractor is notified immediately and may assist in response action as dictated by the Contractor. For all construction related spills, the following shall apply:

- The Spill Coordinator shall report all spills to the Contractor Representative immediately.
- The Spill Coordinator (under Contractor oversight), shall report spills to appropriate federal, tribal, state, and local agencies as soon as possible.
- The Spill Coordinator shall mobilize on-site personnel, equipment, and materials for containment and/or cleanup commensurate with the extent of the spill.
- The Spill Coordinator shall assist the Emergency Response Contractor (Appendix A) and monitor containment procedures to ensure that the actions are consistent with the requirements of this Spill Plan.
- The Spill Coordinator and/or Contractor Representative, in consultation with appropriate agencies, shall determine when it is necessary to evacuate spill sites to safeguard human health.
- The Spill Coordinator (under Contractor oversight), shall coordinate with appropriate agencies the need to contact additional parties or agencies.
- The Spill Coordinator is responsible for completing a Spill Report Form (Appendix B) within 24-hours of the occurrence of a spill, regardless of the size of the spill.

Environmental Inspector

- The Environmental Inspector will monitor the Contractor's compliance with the provisions of this Spill Plan.

Authorized Personnel

- Authorized Personnel are representatives of the Contractor who are designated to handle fuel, lubricants or other regulated substances.

- Authorized Personnel must be familiar with the requirements of the Spill Plan and the consequences of non-compliance.

Construction Superintendent

- The Contractor's Construction Superintendent or representative must notify the Contractor Representative and the Environmental Inspector immediately of any spill of a petroleum product or hazardous liquid, regardless of volume.

Construction Personnel

- Construction Personnel are representatives of the Contractor involved with operations.

- Construction Personnel shall notify the crew foreman or Spill Coordinator immediately of any spill of a petroleum product or hazardous liquid, regardless of volume.

Contractor Representative

- The Contractor Representative shall oversee the Spill Coordinator to ensure that appropriate agency notifications are made, spill resources are allocated, and cleanup is accomplished in accordance with applicable agency requirements.

2.2 TRAINING

- The Contractor shall train all employees who handle fuels and other regulated substances to follow spill prevention procedures and to quickly and effectively contain and clean up spills that may occur in accordance with applicable regulations.

- The Contractor and employees will be briefed on procedures to respond to an operations spill during mandatory safety and environmental training to be provided by the Contractor.

2.3 EQUIPMENT

- Each construction crew must have adequate absorbent materials and containment booms on hand, to enable the rapid cleanup of a spill.

- The Contractor must maintain spill kits containing a sufficient quantity of absorbent and barrier materials to adequately contain and recover foreseeable spills. These kits may

include, but are not limited to absorbent pads, straw bales, absorbent clay, sawdust, floor-drying agents, spill containment barriers, plastic sheeting, skimmer pumps, and holding tanks. This equipment shall be located near fuel storage areas and other locations as necessary to be readily available to control foreseeable spills.

- Suitable plastic lining materials shall be available for placement below and on top of temporarily-stored contaminated soils and materials.

- All fuel, and where necessary, service vehicles, shall carry spill containment materials adequate to control foreseeable spills. Such material may include but not be limited to absorbent pads, commercial absorbent material, plastic bags with ties, and a shovel.

- The Spill Coordinator shall make known to Authorized Personnel, Construction Personnel, the Environmental Inspector, and the Contractor Representative the locations of spill control equipment & materials and have them readily accessible during construction activity.

- Unless previously approved by the Environmental Inspector, construction equipment shall be removed from wetlands and parked a minimum of 100 feet away from streams, wetlands, ditches, and other waterbodies at the end of each work day.

- In large wetlands where no upland site is available for refueling, auxiliary fuel tanks on construction equipment are recommended.

- All fuel nozzles shall be equipped with functional automatic shut-offs and over-flow alarms.

- Fuel trucks transporting fuel to on-site construction equipment shall travel only on approved access roads.

2.4 SUPERVISION AND INSPECTION

- The Contractor shall perform a pre-construction inspection and test of all equipment to ensure that it is in good repair.

- During construction, the Contractor shall regularly inspect hoses, pipes, valves, and tanks to ensure equipment is free of leaks. Any equipment that is leaking or in need of repair will be immediately removed from service by Contractor and repaired, prior to resuming work.

3.0 STORAGE AND HANDLING OF FUELS/HAZARDOUS LIQUIDS

3.1 FUEL STORAGE - GENERAL

The Contractor shall follow proper fuel storage practices, including, but not limited to the following:

- Fuel storage shall be at Contractor yards only or as approved by Contractor.

- Proper signage at and adjacent to fuel storage areas to include "Fuel Storage Area – No smoking within 50 feet.

- A minimum of two 30-pound or four 20-pound fire extinguishers must be located and readily available at all fuel storage locations. The extinguishers shall be located not less than 25 feet and not more than 75 feet from these locations.

- Tools and materials to stop the flow of leaking tanks and pipes shall be kept on-site. Such equipment may include, but not be limited to, plugs of various sizes, 3M tank patches, a hammer, assorted sizes of metal screws with rubber washers, a screwdriver, and plastic tape. Spill kits (see section 2.3 of this Spill Plan) must be located at fuel storage areas.

- Fuels, lubricants, waste oil, and any other regulated substances shall be stored in aboveground tanks only.

- Storage tanks and containers must conform to all applicable industry codes (NFPA, UFC, etc.).

- A suitable secondary containment structure must be utilized at each fuel storage site. These structures must be lined with suitable plastic sheeting; provide a minimum containment volume equal to 150 percent of the volume of the largest storage vessel; and provide at least 1 foot of freeboard.

- If earthen containment dikes are used, they shall be constructed with slopes no steeper than 3:1 (horizontal to vertical) to limit erosion and provide structural stability.

- Secondary containment areas must not have drains. Precipitation may be drawn off as necessary. If visual inspection indicates that no spillage has occurred in the secondary containment structure, accumulated water may be drawn off and sprayed on the surrounding upland areas. If spillage has occurred in the structure, accumulated waste shall be drawn off and pumped into drum storage for proper disposal.

- Vehicle maintenance wastes, including used oils and other fluids, shall be handled and managed by personnel trained in the procedures outlined in this plan. Vehicle maintenance wastes will be stored and disposed of in accordance with section 7.0 of this Spill Plan.

3.2 REFUELING

- Contractor shall make all efforts to dispense fuel by Authorized Personnel during daylight hours.

- Fuel dispensing operations shall be attended by Authorized Personnel at all times. Personnel must be stationed at both ends of the hose during fueling unless both ends are visible and are readily accessible by one person.

- Fuel dispensing equipment (i.e., portable gas cans, nozzles, hoses, etc.) shall be of the appropriate type. Consult with the Contractor Safety Program (CSP) for details.

3.3 REFUELING AND FUEL STORAGE NEAR WETLANDS AND WATERBODIES

Contractor requires that the storage of petroleum products, refueling, lubricating and maintenance operations take place in upland areas that are more than 100 feet from wetlands, streams, and waterbodies (including drainage ditches), and water supply wells. In addition, the Contractor must store hazardous materials, chemicals, fuel and lubricating oils, and perform concrete coating activities outside these areas. Auxiliary fuel tanks solidly attached to construction equipment or pumps are not considered storage and are acceptable.

In certain instances, refueling or fuel storage within the 100-foot buffer may be unavoidable due to site-specific conditions or unique construction requirements (*e.g.* continuously operating pumps or equipment on barges). These locations must be identified by the Contractor and approved in advance by the Environmental Inspector. Site-specific precautions, in addition to those practices described above, will be taken when refueling or maintenance activities are required within 100 feet of streams, wetlands or other waterbodies. These precautions include, but are not limited to:

- Adequate amounts of absorbent materials and containment booms must be kept on hand by each construction crew to enable the rapid cleanup of any spill which may occur.
- If fuel must be stored within wetlands or near streams for refueling of continuously operating pumps, secondary containment must be provided.
- Secondary containment structures must be lined with suitable plastic sheeting, provide a containment volume of at least 150 percent of the storage vessel, and allow for at least one foot of freeboard.
- Provide for adequate lighting of these locations and activities.
- Procedures regarding excavation and disposal of contaminated soil material from wetlands or near waterbodies are described in section 6.2 of this Spill Plan.

3.4 OVERNIGHT PARKING

Overnight parking of equipment is not allowed within 100 feet of a wetland or waterbody unless special containment provisions have been implemented and approved by the Environmental Inspector.

3.5 CONCRETE WASHOUT HANDLING

The Contractor shall follow proper concrete washout handling procedures, including, but not limited to the following:

- Contain all liquid and solid wastes generated during activities involving concrete in leak-proof containment facilities or an impermeable liner. An impermeable liner may consist of a compacted clay layer that does not allow liquids to enter ground water, double layered plastic sheeting, etc.
- Liquid or solid concrete waste must not contact the ground.

- Concrete washout containments or liners must not have drains and no runoff from concrete washout activities is allowed. Precipitation may be drawn off as necessary. If visual inspection indicates that no concrete contamination of the water has occurred in the containment structure, accumulated water may be drawn off and sprayed on the surrounding upland areas. If contamination has occurred in the structure, accumulated waste shall be drawn off and pumped into a containment structure for proper disposal.

- Liquid and solid wastes must be disposed of in accordance with all applicable federal, state, and local agency requirements (see Section 7.0 of this Spill Plan).

- Install signage adjacent to washout facilities to inform personnel to use proper facilities.

4.0 INITIAL SPILL MANAGEMENT

4.1 IMMEDIATE RESPONSE

Immediately upon learning of any fuel, oil, hazardous material or other regulated substance spill, or upon learning of conditions that will lead to an imminent spill, the person discovering the situation shall:

- Initiate actions to contain the fluid that has spilled or is about to spill, and initiate action to eliminate the source of the spill to the maximum extent that is safely possible.

- Notify the crew foreman and/or the Spill Coordinator and provide them with the following information:

- Location and cause of the spill

- The type of material that has spilled

- Whether the spill has reached or is likely to reach any surface water

Upon learning of a spill or a potential spill the Spill Coordinator shall:

- Assess the situation and determine the need for further action.

- Direct subsequent activities and/or further assign responsibilities to other personnel.

- Procedures regarding excavation and disposal of contaminated soil material from wetlands or near waterbodies are described in section 6.2 of this Plan.

- Notify the Contractor Representative and Environmental Inspector.

4.2 MOBILIZATION

- The Spill Coordinator shall mobilize on-site personnel, equipment, and materials for containment and/or cleanup commensurate with the extent of the spill.

- If the Spill Coordinator determines that a spill is beyond the scope of on-site equipment and personnel, the Spill Coordinator shall immediately notify the Construction

Superintendent that an Emergency Response Contractor is needed to contain and/or clean up the spill. Appendix A contains a list of potential Emergency Response Contractors.

- The Spill Coordinator shall assist the Emergency Response Contractor and monitor containment procedures to ensure that the actions are consistent with the requirements of this Spill Plan.

5.0 SPILL NOTIFICATION RESPONSIBILITIES

5.1 NOTIFICATION VOLUMES

The Contractor's Construction Superintendent or representative must notify the Contractor Representative and the Environmental Inspector immediately of any spill of a petroleum product or hazardous liquid, regardless of volume.

5.2 SPILL REPORT FORM (APPENDIX B)

The Spill Coordinator shall complete a Spill Report Form for each release of a regulated substance, regardless of volume. The Spill Report Form must be submitted to the Contractor Representative within 24 hours of the occurrence of a spill. To complete the Spill Report Form, the Spill Coordinator shall compile the following information:

- A legal description of the spill location to the quarter section, and specific directions from the nearest community.
- The time and date of the spill, and the time and date the spill was discovered.
- The type and estimated volume of spilled material, and the manufacturer's name.
- The media in which the spill exists (e.g., soil, water, etc.).
- The topography and surface conditions of the spill site.
- Proximity of surface waters.
- Weather conditions.
- Name, company, address, and telephone number of the Construction Superintendent, Spill Coordinator, Contractor representative, and the person who reported the spill.
- The cause of the spill.
- Immediate containment and/or cleanup actions taken.
- Current status of cleanup actions.

Follow-up written reports, associated laboratory analyses, confirmatory field sampling and other documentation may also be required separately on a site-specific basis as directed by the Company Representative or Environmental Inspector. Documentation is the responsibility of the Contractor.

5.3 AGENCY NOTIFICATION

The Contractor will notify Contractor and report spills to appropriate federal, tribal, state and local agencies as soon as possible. These include, but may not be limited to the following:

National Response Center, in Washington, D.C.
Phone: (800) 424-8802 (24 hours)

Illinois Emergency Management Agency (IEMA)
Phone: (800) 782-7860

McHenry County EMA
Phone (815) 338-6400

The Contractor, in coordination with Contractor and the appropriate federal, tribal, state and local agencies must ensure that additional parties or agencies are properly notified. Additionally, the Contractor is responsible for ensuring that all cleanup activities required by a jurisdictional agency are satisfactorily met and provide documentation to Contractor demonstrating this compliance.

6.0 SPILL CONTAINMENT AND CLEANUP

In the event of a spill, the Contractor will abide by all applicable federal, tribal, state and local regulations with respect to cleaning up the spill. All cleanup and other construction related spill activities must be completed by, and costs assumed by the Contractor. Specific cleanup measures for both upland and wetland/waterbody spills are described below.

6.1 SPILL CONTROL - UPLAND AREAS

- If a spill should occur during refueling operations, STOP the refueling operation until the spill can be controlled and the situation corrected.
- The source of the spill must be identified and contained immediately.
- For large spills on land, the spill must be contained and pumped immediately into tank trucks. The Contractor or, if necessary, an Emergency Response Contractor, shall excavate contaminated soil. Appendix A lists potential Emergency Response Contractors.
- The spilled material and the contaminated soil must be treated and/or disposed of in accordance with all applicable federal, state, and local agency requirements (see Section 7.0 of this Spill Plan).

- Smaller spills on land shall be cleaned up with absorbent materials. Contaminated soil or other materials associated with these releases shall also be collected and disposed of in accordance with applicable regulations (see Section 7.0 of this Spill Plan).

- Flowing spills must be contained and/or absorbed before reaching surface waters or wetlands.

- Absorbent material(s) shall be placed over spills to minimize spreading and to reduce its penetration into the soil.

- The Spill Coordinator and/or Contractor Representative, in consultation with appropriate agencies, determine when spill sites will be evacuated as necessary to safeguard human health. Evacuation parameters shall include consideration for the potential of fire, explosion, and hazardous gases.

6.2 SPILL CONTROL - WETLANDS AND WATERBODIES

In addition to the above measures, the following conditions shall apply if a spill occurs near or into a stream, wetland or other waterbody, regardless of size:

- If a spill should occur during refueling operations, STOP the operation until the spill can be controlled and the situation corrected.

- For spills into streams, lakes or other waterbodies containing standing or flowing water, regardless of size, the Contractor Representative must apprise Contractor of the incident and notify the National Response Center immediately.

- For spills in standing water, sorbent booms and pads shall be on hand and used by the Contractor to contain and recover released materials. In addition, other spill response materials and equipment shall be on hand as appropriate for each waterbody and used to contain and recover foreseeable spills. This may include containment booms, skimmer pumps, holding tanks, boats, and other equipment.

- If necessary, for large spills in waterbodies, an Emergency Response Contractor must be secured to further contain and clean up the spill. A list of Emergency Response Contractors is included in Appendix A.

- Contaminated soils in wetlands must be excavated and temporarily placed on plastic sheeting in a bermed area, a minimum of 100 feet away from the wetland. Contaminated soils shall be covered with plastic sheeting while being stored temporarily and properly disposed of as soon as possible, in accordance with this Plan (see Section 7.0). Contractor maintains spill records along its entire system. Historic leak sites may exist within the project area and the Environmental Inspector will be made aware of the location of these sites prior to work occurring in them. Unknown contamination or historic contamination encountered during construction will be managed per Contractor's Contaminated Soils Management Plan. Water Quality and Solid Waste program staff will continue to be notified of newly discovered sites.

7.0 STORAGE AND DISPOSAL OF CONTAMINATED MATERIALS

- Appendix A of this SPCC Plan lists potential treatment and disposal facilities for contaminated materials, petroleum products, and other construction-related wastes. Contractor will recycle those wastes, such as motor oil, where there is an established recycling program available. Wastes such as grease or oily rags shall be disposed of in accordance with state requirements.

- All contaminated soils, absorbent materials, and other wastes shall be stored and disposed of by the Contractor in accordance with all applicable state and federal regulations.

- Only licensed carriers may be used to transport contaminated material from the site to a disposal facility.

- If it is necessary to temporarily store excavated soils on site, these materials shall be placed on, and covered by, plastic sheeting, or placed in properly labeled ring-top 55-gallon drums and the storage area bermed to prevent and contain runoff.

- Any hazardous or contaminated material stored on Contractor property or the right-of way will be properly labeled in accordance with State and US EPA labeling requirements.

APPENDIX A

Emergency Response Contractors;
Disposal and Treatment Facilities

The Contractor must dispose of all wastes according to applicable federal, state, and local requirements. A listing of potential Emergency Spill Response Contractors and waste disposal facilities is provided below. This list was developed from state-wide data bases. This list represents firms operating at the time the data base was produced. The Contractor is responsible for verifying if a contractor or facility is currently operating under appropriate permits or licenses. The Contractor is responsible for ensuring wastes are disposed of properly.

Spill Response Contractors:

Bodine Environmental Services, Inc.
Decatur, IL 62521
(217) 428-3629

Bodine Environmental Services, Inc.
Springfield, IL 62704
(217) 698-0700

Bodine Environmental Services, Inc.
Bartonville, IL 61607
(309) 633-9999

BEI Pipeline & Tank Maintenance
Casey, IL 62420
(217) 932-4533
(800) 650-7834

Carylon Corporation
Chicago, IL 60612
(800) 621-4342

Clean Harbors Environmental
Dolton, IL 60419
(708) 225-8110
(800) 645-8265

Clean Harbors Environmental
Dolton, IL 60419
(708) 225-8110
(800) 645-8265

EnviroServe
Galesburg, IL 61401
(800) 488-0910

Freeman Environmental Services
Benton, IL 62812
(618) 435-9375
(888) 675-3591

Future Environmental, Inc
Mokena, IL 60448
(708) 479-6900
(866) 579-6900

HazChem Environmental Corp.
Addison, IL 60101
(630) 458-1910
(630) 458-1918

HEPACO, LLC
Loves Park, IL 61111
(815) 885-4840
(800) 888-7689

Heritage Environmental Services
Lemont, IL 60439
(630) 739-1151
(877) 436-8778

Heritage Environmental Services
Wood River, IL 62095
(618) 216-8600
(877) 436-8778

Clean Harbors Environmental
Roxana, IL 62084
(636) 441-0104
(800) 645-8265
Benton, IL 62812
(618) 218-4958

Eagle Services Corporation
Creve Coeur, IL 61610
(309) 694-1111

Eagle Services Corporation
Channahon, IL 60410
(815) 521-0001

Environmental Protection Industries
South Holland, IL 60473
(708) 225-1115
(708) 225-1117

EnviroServe
Edwardsville, IL 62052
(800) 488-0910

Integrated Environmental Solutions, Inc
Crestwood, IL 60445
(708) 926-9588
(877) 367-7745

SET Environmental, Inc.
Glenwood, IL 60425
(847) 537-9221
(877) 437-7455

SET Environmental, Inc.
Wheeling, IL 60090
(847) 537-9221
(877) 437-7455

Ziron Environmental Services Inc.
Chicago Heights, IL 60411
(708) 757-9601

Waste Disposal Facilities:

Covanta
3801 W. McKinley Ave.
Milwaukee, WI 53208
(800) 842-9792

Nexeo Solutions
1345 Wiley Rd.
Schaumburg, IL 60173
(800) 637-7922

Nexeo Solutions
1501 Commerce Drive
Montgomery, IL 60538
(800) 637-7922

Veolia Orchard Hills Landfill
8290 N. IL Rt. 251
Davis Junction, IL 61020
(815) 874-9000

APPENDIX B
Super Aggregates Spill Report Form

Date of Spill: _____ Date of Spill Discovery: _____

Time of Spill: _____ Time of Spill Discovery: _____

Name and Title of Discoverer: _____

Type of material spilled and manufacturer's name: _____

Legal Description of spill location to the quarter section: _____

Directions from nearest community: _____

Estimated volume of spill: _____

Weather conditions: _____

Topography and surface conditions of spill site: Spill medium (pavement, sandy soil, water, etc.):

_____

Proximity of spill to surface waters:

Did the spill reach a waterbody? _____Yes _____No

If so, was a sheen present? _____Yes _____No

Describe the causes and circumstances resulting in the spill:

_____

_____

Describe the extent of observed contamination, both horizontal and vertical (i.e., spill-stained soil in a 5-foot radius to a depth of 1 inch):

_____

_____

Describe immediate spill control and/or cleanup methods used and implementation schedule:

_____

_____

Current status of cleanup actions:_____

_____

Name and Company for the following:

Construction Superintendent:_____

Spill Coordinator:_____

Contractor Representative: Person Who Reported the Spill: _____

Environmental Inspector: _____

Form completed by:_____ Date: _____

Spill Coordinator must complete this for any spill, regardless of size, and submit the form to the Contractor Representative within 24 hrs. of the occurrence.

Appendix I – Hydrological Study

Autumnwood ESH Consultants, LLC
6539 Autumnwood Ct.
Mount Pleasant, WI 53403

4 June 2024

Mr. Jack Pease
Super Aggregates. Inc.
5435 Bull Valley Dr., Suite 330
McHenry, IL 60050

RE: Paradise Lakes Development Plan

Dear Mr. Pease:

Autumnwood ESH Consultants, LLC (Autumnwood) was retained by Super Aggregates to determine if the proposed Paradise Lake development would impact the private wells in the residential areas adjacent to the proposed Paradise Lake Development.

Paradise Lake within the development will be constructed by removing approximately 6.5 million tons of aggregate (sand & gravel) from the 104-acre property primarily with the use of an electronic hydraulic dredge. Excavation will take place down to the clay layer approximately 40 - 50 feet below ground surface (bgs).

The baseline data that was provided to Autumnwood includes:

- The horizontal distance from the mining operation to any private well is at least 275 feet.
- The clay layer below the mining operation is about 40 - 50 feet below the ground surface (bgs) according to your draft “Development Plan for Paradise Lake”.
- Private wells completions in the area range from 60 to 90 feet bgs which are below the clay layer according to a local well driller.
- The sand and gravel extraction operations will not include dewatering the site to extract the aggregates. The groundwater used in the processing/rinsing operations at the site will be recycled within the processing operation.
- No chemicals or flocculants will be used. There will be no introduction of any materials that could affect water quality.
- Excavation of the sand and gravel aggregate will be primarily by an electrically powered hydraulic dredge.

The first level of protection that the private wells have from potential impacts resulting from the aggregate mining operation is the clay layer. Extraction operations will take place above the clay layer and modern cased private water supply wells utilize groundwater from below the clay layer. The clay

acts as an aquitard. An aquitard is any geological formation of a semipervious nature that transmits water at slower rates than an aquifer. Freeze and Cherry (1979) describe an aquitard as “the less-permeable beds in a stratigraphic sequence.”

The aggregate mining operation will be done above this clay layer and the private wells in the area are constructed to depths ranging from 60 – 90 feet bgs, i.e., below the clay layer. Therefore, the well water pumped from private wells is separated from the aggregate mining operation by the clay layer.

Another way to show that the private wells in the area are not going to be impacted by the aggregate mining operations is to conduct “distance – drawdown” calculation. This can be done by using what is known as the Theis equation, a complicated hydrogeological equation that evaluates the drawdown in the aquifer as a result of pumping in the lower aquifer using the following data:

- Constant pumping rate. Private wells are activated, i.e., pumped, only when needed by the homeowner and its occupants whereas the equation assumes a constant pumping rate (24/7).
- Aquifer (groundwater) Transmissivity (T) which is the rate at which water passes through the groundwater.
- The Time since pumping began which again assumes 24/7 pumping and adds to the conservative nature of this calculation. For this calculation 1 year or 365 days was the time value.
- The Distance from the private well to the aggregate mining activity, i.e., greater than or equal to 275 feet.
- Aquifer Storativity (S) which is a measure of the volume of water that will be discharged from an aquifer.

Typically, the S and T values are calculated by pumping tests at the well location, so a variety of calculations were done with high and low values that have been published for pumping tests at various locations within McHenry County. Also used were actual values measured at a location north of Union, IL. The calculation is complicated, so a computer-based calculation developed by the Utah Division of Water Rights was used. It can be found at https://waterrights.utah.gov/wellinfo/theis/theis_input.asp .

Autumnwood assumed that, to be conservative, three drinking water wells would be used for this calculation. At each home it was assumed five people occupied the home and there is water use of 150 gallons per person per day which equals 750 gallons per day. This equals 0.52 gallons per minute per day (750 gal./1440 min.). Even more conservatively, one gallon per minute per day was used for each home (3 gallons per minute per day – twice t the assumed use.).

The results showed that the maximum drawdown (lowering of the water table at the edge of the mining operation) ranged from 0.12 inches to 4.92 inches. That does not account for the clay layer (clay aquitard) which would inhibit groundwater above the clay layer from entering the lower aquifer below the clay layer and thus reduce these values. The value of the calculation using actual values found near Union is 0.12 inches of drawdown in the lower aquifer. These values, along with the clay aquitard, indicate that the aggregate extraction operations, where no water is removed from the site, will have no impact on the water quantity available or the water quality.

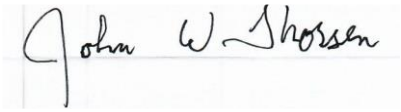
The final level of protection is the monitoring wells which will include four wells, two upgradient of the mining site and two downgradient, that will be sampled on a quarterly basis for general water quality parameters related to aggregate mining operations as specified in the McHenry County Groundwater Monitoring and Protection in the Earth Materials Extraction Sites Ordinance (Ordinance No. 0-2010008-10-041).

Conclusion

Based on the information provided including implementing the aggregate extraction as outlined in the "Development Plan for Paradise Lake," there should be no adverse environmental impact to the private water wells supplying drinking water to the homes surrounding the Paradise Lake development.

Respectfully Submitted,

Autumnwood ESH Consultants, LLC



John W. Thorsen

JWT/jt

Appendix J – Stormwater Pollution Prevention Plan

STORMWATER
POLLUTION PREVENTION PLAN
PARADISE LAKE, SPRING GROVE

Prepared By: Super Aggregates
5435 Bull Valley Road Suite 330 McHenry, IL 60050
Office: 815-385-8000

March 25, 2024

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ATTACHMENTS

APPENDICES

INTRODUCTION

This Erosion Control and Stormwater Pollution Prevention Plan (SWPPP) has been prepared and updated for stormwater discharges from Construction Site Activities. This plan shall be used in conjunction with SWPPP Plan prepared by Schmitt Engineering. As of the date of this plan, the site is undisturbed and used for agricultural crop production. This plan utilizes Best Management Practices (BMP's) to control proposed construction-related erosion and sedimentation per the guidelines contained in the following publications:

- *Procedures and Standards for Urban Soil Erosion and Sediment Control* (The Urban Committee of the Association of Illinois Soil and Water Conservation Districts, July 1988).
- *Illinois Urban Manual – A Technical Manual Designed for Urban Ecosystem Protection and Enhancement* (USDA Natural Resources Conservation Service, 2002).

1.0 FACILITY DESCRIPTION.

1.01 General Description of the Property.

The project site is located on the North side of Main Street, .40 miles East of the intersection of Johnsburg/Wilmot Road and Main Street, East side of Spring Grove, IL. The entire property is approximately 104 acres including proposed berms, mining areas, compensatory storage and lake areas and is the subject of this SWPPP. Please see Appendix A – Aerial Map for more information.

1.02 Detailed Project Site Description.

Landscaped screening berms shall be constructed adjacent to Main Street and the remaining perimeter shall have temporary operations berms constructed. The berms shall be constructed by onsite overburden materials. Inside the berm, the operational activities shall include mining, processing operations and compensatory storage. Appendix B includes the detailed plans for mining operations and reclamation activities.

1.03 Construction Activities.

Major construction activities and anticipated sequences include:

a. Sediment Control: Silt fencing shall be installed on all down gradient slopes at the onset of the project. Perimeter berms shall be considered vegetated and once 70% cover is achieved, the silt fence shall be removed and the site becomes internally drained.
b. Clearing: There is not the presence of trees or vegetation that conflict with the operations on the site.
c. Earthwork: Depressional excavation forming a lake shall occur until sand/gravel reserves are depleted.
d. Reclamation: Reclamation operations continue to form 2-3% slopes to the lake.

1.04 Existing Drainage.

The current site runoff discharges to the Southwest. As operations progress, the site will drain into the excavation and form a lake.

1.05 Proposed Stormwater Discharge.

The existing drainage pattern will be intercepted by lake formation and the site will become internally drained.

2.0 CONTROLS

2.01 Erosion and Sediment Controls.

Contractor shall remove vegetated areas only as required to complete the work. Structural sediment barriers shall be installed at the construction limits of the site as applicable.

Exposed soil surfaces shall be stabilized with vegetation and/or protective mulched or blankets. If conditions prevent the effective use or placement of such measures, then the installation of structural controls such as sediment barrier fencing and sediments traps will be installed as applicable. Stabilization measures shall be initiated as soon as practicable after the soil disturbing activities have temporarily or permanently ceased, but in no case more than 14 calendar days after such operations have ceased. If construction activity is scheduled to cease for a period of less than 15 calendar days, then stabilization measures do not have to be initiated on that portion of the site until the 14th day after construction temporarily ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, then stabilization measures shall be initiated as soon as practicable.

Temporary erosion control seeding shall consist of IDOT Class 6 Seed Mixture (114 lbs./acre) and wood fiber mulch containing a pre-blended chemical tackifier. Temporary seeding shall be employed due to seasonal limitations of temporary work stoppages as discussed above. When seasonal weather conditions prevent seeding, sodding, and planting operations, sloped surfaces shall be mulched with wood fiber mulch/tackifier combination as a means of temporary erosion protection. Temporary seeding and mulching shall be in accordance with the project specifications.

Seeded areas within berm steep slope, or susceptible to significant wind or water erosion shall be protected by the use of applied mulch or erosion control blankets.

2.02 Structural Practices.

Sediment Barrier Fences (Silt Fence) shall be installed at the locations that have down gradient slopes, around soil stockpiles and other locations when it is deemed necessary to filter sediment from storm runoff. Such barriers shall be installed prior to the initiation of construction activities that will disturb soil for significant portions of the site (i.e., earthwork operations or the installation of underground utilities). These barriers shall he installed as detailed in the plans and shall be maintained until final stabilization is achieved; "Final stabilization" shall mean that all soil disturbing activities at the site have been completed, that a uniform perennial vegetative cover with a density of 70% has been established over the disturbed areas and equivalent stabilization measures (such as the use of riprap, concrete block mats or geotextiles) have been employed where the use of vegetative cover is not suitable.

Filter fabric barriers shall be installed on all existing drainage structure inlets/outlets and maintained in place for the duration of construction activities. Filter fabric fence barriers shall be placed around structures receiving surface runoff, indicated on the plan and where required by the Engineer due to site conditions during construction.

2.03 Soil Stockpiles.

Topsoil and sub-grade material stockpiles scheduled to remain in place longer than 14 days shall be surrounded with a sediment barrier fence unless runoff from the stockpile area drains directly to a constructed sediment trap.

2.04 Unvegetated Areas.

If runoff affects adjacent areas, unvegetated areas anticipated to remain unpaved or unrestored or for longer than 60 days shall be protected with temporary erosion control seeding and/or mulching within 14 days after soil disturbing construction activities have ceased. If unvegetated areas are to remain unpaved or unrestored for less than 60 days, sediment barrier fences shall be installed where the Engineer determines that sediment runoff will affect adjacent areas.

2.05 Vegetative Ground Covers.

Permanent vegetative ground covers (seeding, sodding, and planting) and associated erosion control measures (protective mulches and blankets) shall be in accordance with the requirements of the Landscape Architect Plans and Specifications.

2.06 Stormwater Management.

Various stormwater management measures to control drainage and flow velocity will be installed as part of this project. These measures include the installation of depressional areas, vegetated slopes, drainage pipes and swales.

2.07 Other Controls.

a. Waste Disposal.

No solid materials, including building materials, shall be discharged into waters of the State. Contractor shall comply with applicable waste disposal, and sanitary sewer regulations.

b. Spill Prevention

The Contractor shall maintain good housekeeping practices for the duration of the project. All soluble and liquid materials stored on-site shall be suitably covered or placed within an enclosure. The contents of partially used containers of such materials shall be placed in sealable containers to avoid spills. All on-site vehicles shall be monitored for leaks. Petroleum products shall be stored in tightly sealed containers that are clearly labeled. Cleanup material, such as absorbent pillows and trash containers, shall be maintained on site. Incidental spills (less than 12.5 gallons of gasoline and 25 gallons of diesel) shall be cleaned up immediately upon discovery. Larger spills shall be recovered only by qualified personnel as defined by OSHA (29 CFR 1910.120). The Contractor shall take immediate action, however, to prevent spill from spreading or discharging off site. Such action may include the construction of earthen dikes and plugging culverts. All spi11s shall be reported to the Owner's representative in a prompt manner. The Owner's representative shall report spills to government agencies as required.

2.08 Approved State or Local Plans.

The management practices, controls, and other provisions contained in this plan are in accordance with the requirements contained in the Illinois Urban Manual. All other local requirements and/or ordinances that are applicable to protecting surface water resources are

enforceable under the ILR1O general permit even if they are not specifically included in this plan.

3.0 MAINTENANCE

3.01 Silt fence sediment barriers shall be cleaned or replaced as needed to provide adequate filtering and flow capacity for its effective use. If the fence is sagging or the soil has reached one-third the height of the fabric, the soil behind the fabric must be removed and disposed of in a stable upland site.

3.02 If the fabric is undercut, the fence shall be removed and reinstalled, following the correct procedures.

3.03 Filter fabric barriers will be placed under/over grates of Storm sewer inlets and catch basins, in such a manner to maintain the stability of the filter fabric holding the sediment once the grate is lifted from the frame. These barriers will be cleaned or replaced as needed to provide adequate filtering and flow capacity.

3.04 Outlet erosion protection for culverts shall be maintained by replacing any washed-out riprap.

3.05 Contractor shall clean all roads of dirt and debris deposited as a result of construction activities associated with this project at the end of each day's operations.

3.06 Vegetation stabilization areas shall be maintained by fertilizing, mulching, reseeding, filling of gulleys, etc., as necessary to develop an acceptable stand of vegetation.

4.0 INSPECTION REQUIREMENTS

4.01 Inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm event that has 0.5 inches or more of precipitation. The Illinois Field Manual for Implementation and Inspection of Erosion Control and Sediment Control Plan shall be used as a guide when conducting inspections. Qualified personnel shall inspect:

- Disturbed areas of the construction site have not been reclaimed and stabilized.
- Structural control measures (silt fence; straw bales, etc.)
- Pavements on which the contractor's vehicles and/or equipment operate.
- Spoil piles and stockpiles to ensure erosion has not occurred. (If erosion has occurred, the side Slopes shall be reduced or the pile shall be stabilized with vegetation.)
- Drainage swales, following storm events for sediment accumulation or washouts. (Sediment shall be removed and disposed of properly when sedimentation affects hydraulics.)
- Construction and access pads, after each storm event for erosion and necessary repairs. (Additional stone layers shall be added when original stone becomes covered with mud.)
- Disturbed areas and areas used for storage of materials that are exposed to precipitation, for evidence of or potential for pollutants entering the drainage system or discharging off-site. (Discharge locations shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.)

- General housekeeping to ensure that trash, including paper products that may be blown off-site, is properly disposed of.

4.02 Based on the results of the inspection, pollution prevention measures shall be revised as appropriate as soon as practical after such inspection. Such modifications shall provide for timely implementation of any changes to the plan within seven (7) calendar days following the inspection.

4.03 Reports shall be prepared indicating the scope of the inspection, name(s) and qualifications of personnel conducting the inspection, the date(s) of the inspection, major observations relating to the implementation of this plan, and actions taken. These reports shall be retained as part of the plan for at least three (3) years after the date of the inspection. The reports shall be made on the forms included in Appendix G and shall be signed.

4.04 Any violation of the provisions of the plan identified during the conduct of the associated work shall be reported promptly to the McHenry County and the owner or its authorized representative shall complete and file an "Incidence of Noncompliance" (ION) report (Appendix D) for the identified violation. The submittal shall include specific information on the cause of the noncompliance, and a statement detailing any environmental impact which may have resulted from such noncompliance. Land Reserves, LLC shall sign all reports of noncompliance, the ION report shall be submitted to the Illinois Environmental Protection Agency as indicated on the form.

5.0 NON-STORMWATER DISCHARGES

The only allowable non-stormwater discharge from the site is groundwater pumped for construction dust control. Water from the dust control operations shall be suitably filtered prior to discharge from the site. There shall be no other sources of non-stormwater combined with stormwater discharges associated with construction activities.

6.0 CERTIFICATIONS

Certifications from the Owner, Land Reserves LLC, and the General Contractor, Super Aggregates, are included as Attachments 1 and 2 respectively.

ATTACHMENTS

ATTACHMENT 1

STORMWATER POLLUTION PREVENTION PLAN
OWNER CERTIFICATION STATEMENT

Project: Paradise Lake
Project Location: Spring Grove, IL

This certification statement is a part of the Stormwater Pollution Prevention Plan for the project identified above for stormwater discharges from Construction Site Activities.

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including. the possibility of fine and imprisonment for knowing violations.

_____ _____
Signature Date

_____
Title

Land Reserves, LLC
5435 Bull Valley Rd.
Suite 330
McHenry, IL 60050

ATTACHMENT 2

STORMWATER POLLUTION PREVENTION PLAN
CONTRACTOR CERTIFICATION STATEMENT

Project: Paradise Lake
Project Location: Spring Grove, IL

This certification statement is a part of the Stormwater Pollution Prevention Plan for the project identified above for stormwater discharges from Construction Site Activities.

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including. the possibility of fine and imprisonment for knowing violations.

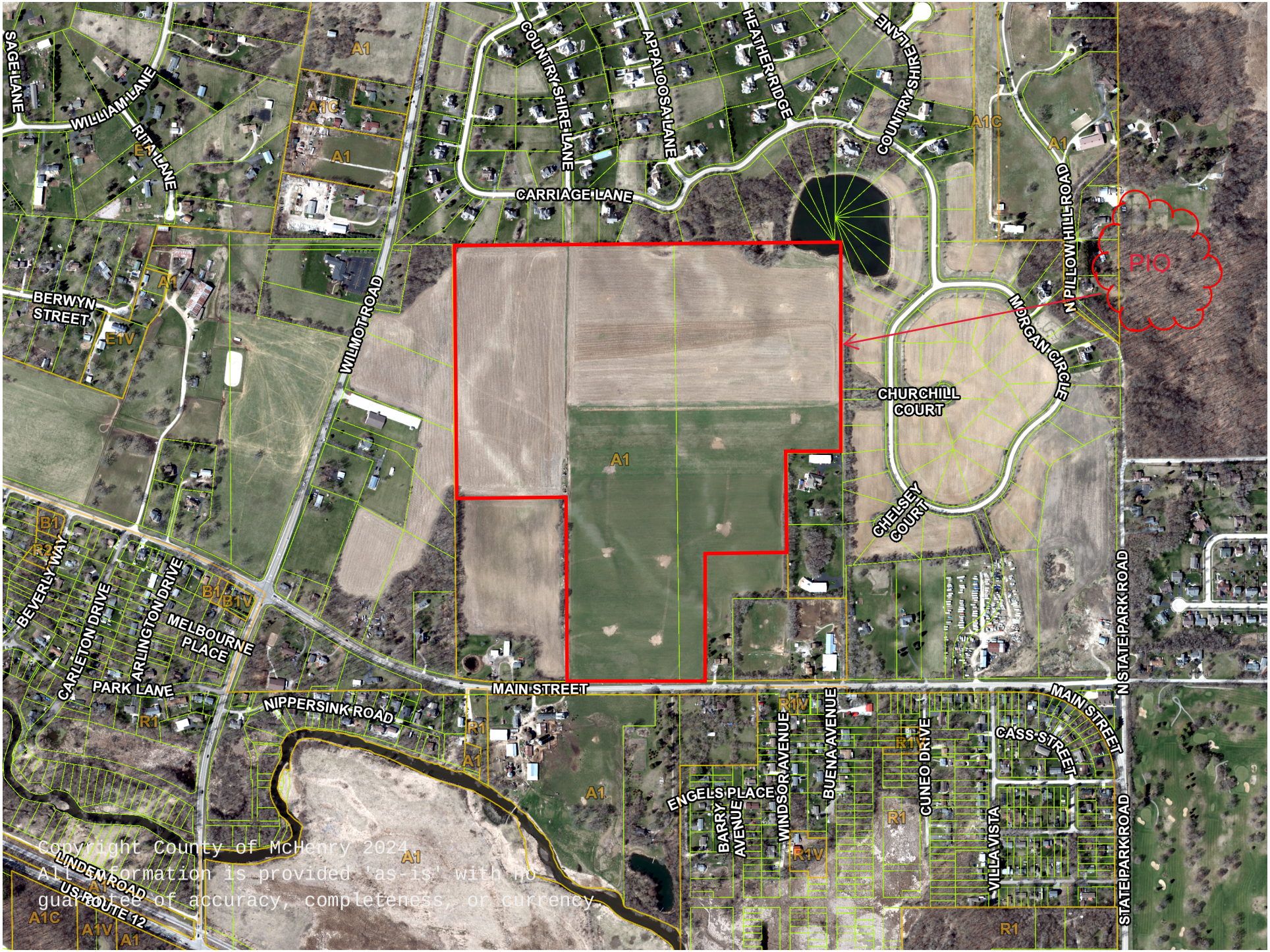
_____ _____
Signature Date

_____
Title

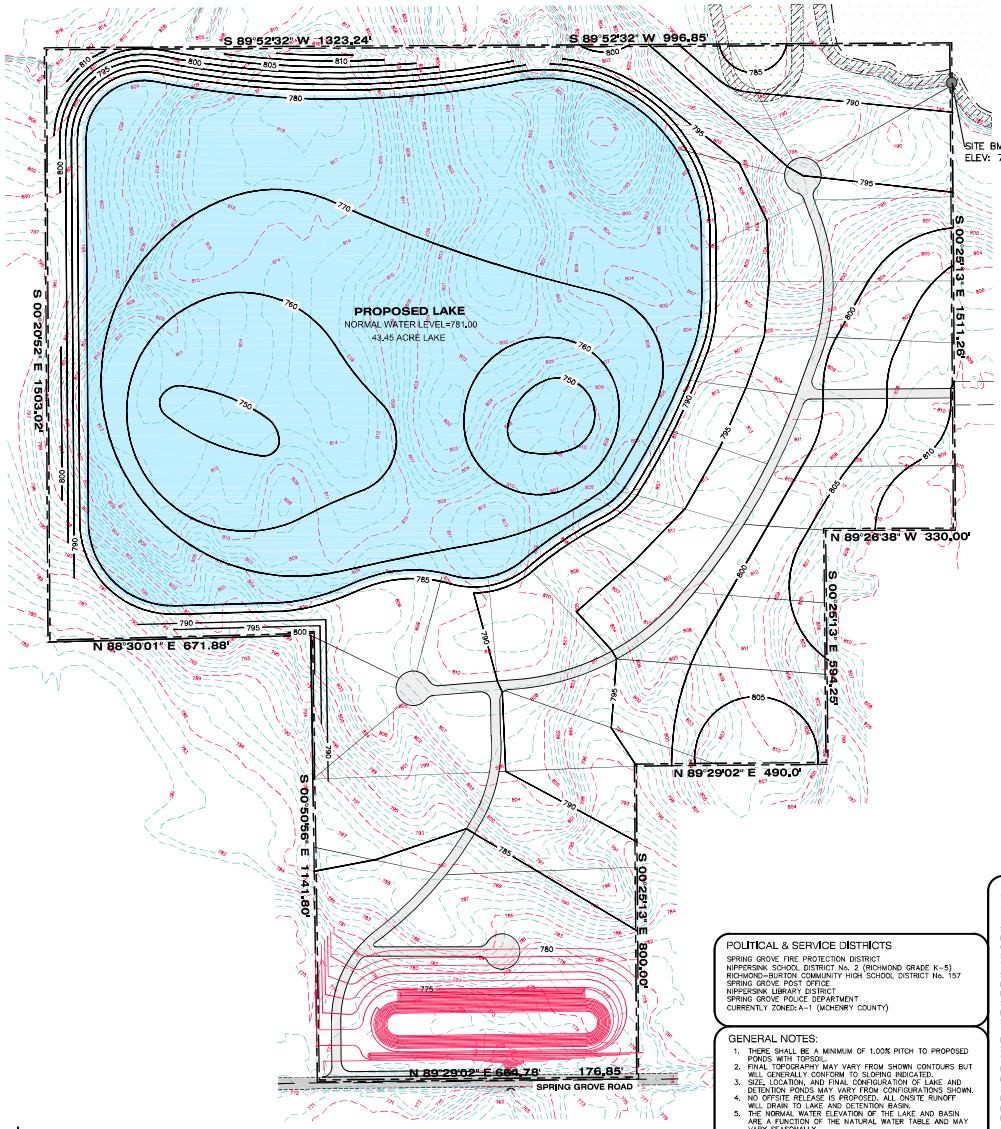
Super Aggregates
5435 Bull valley Rd.
Suite 330
McHenry, IL 60050

APPENDICIES

APPENDIX A
AERIAL MAP



APPENDIX B
RECLAMATION PLAN



POLITICAL & SERVICE DISTRICTS

SPRING GROVE FIRE PROTECTION DISTRICT
NIPPERSINK SCHOOL DISTRICT No. 2 (RICHMOND GRADE K-5)
RICHMOND-BURTON COMMUNITY HIGH SCHOOL DISTRICT No. 157
SPRING GROVE POST OFFICE
NIPPERSINK LIBRARY DISTRICT
SPRING GROVE POLICE DEPARTMENT
CURRENTLY ZONED:A-1 (MCHENRY COUNTY)

GENERAL NOTES:

1. THERE SHALL BE A MINIMUM OF 1.00% PITCH TO PROPOSED PONDS WITH TOPSOIL.
2. FINAL TOPOGRAPHY MAY VARY FROM SHOWN CONTOURS BUT WILL GENERALLY CONFORM TO SLOPING INDICATED.
3. SIZE, LOCATION, AND FINAL CONFIGURATION OF LAKE AND DETENTION PONDS MAY VARY FROM CONFIGURATIONS SHOWN.
4. NO OFFSITE RELEASE IS PROPOSED, ALL ONSITE RUNOFF WILL DRAIN TO LAKE AND DETENTION BASIN.
5. THE NORMAL WATER ELEVATION OF THE LAKE AND BASIN ARE A FUNCTION OF THE NATURAL WATER TABLE AND MAY VARY SEASONALLY.
6. THE RECLAMATION PLAN REPRESENTS A REASONABLE ESTIMATION OF THE FUTURE DEVELOPMENT OF THE PROPERTY BASED ON THE BEST AVAILABLE DATA AT THE TIME OF CREATION OF THIS PLAN. RESULTANT SOIL CONDITIONS UPON THE COMPLETION OF THE MINING PHASE MAY NECESSITATE CHANGES TO THE PROPOSED RECLAMATION PLAN.
7. WATER SUPPLY WILL BE SERVED BY INDIVIDUAL WELLS.
8. SEWAGE DISPOSAL SYSTEMS WILL BE BY INDIVIDUAL SEPTIC SYSTEMS OR MUNICIPAL SANITARY TREATMENT SYSTEM.
9. ALL INTERSECTION ROAD CURB RADII TO BE 40' BACK OF CURB.
10. ALL ROAD RIGHT-OF-WAYS SHALL BE 60'
11. DK ENVIRONMENTAL SERVICES, INC. PROVIDED WETLAND & WATERBODY DELINEATION REPORT.
12. ALL UTILITY EASEMENTS ARE SEPTIC RESTRICTED.
13. BASED UPON FIRM MAP, COMMUNITY PANEL No. 170732 0112 J, MAP REVISED NOVEMBER 16, 2006. 100 YEAR FLOOD PLAIN EXISTS.
14. REFER TO HOMEOWNERS ASSOCIATION COVENANTS AND RESTRICTIONS FOR MAINTENANCE OF STORM WATER AREA & CONTROL SYSTEMS. A DORMANT & SPECIAL SERVICE AREA (SSA) WILL BE CREATED TO ENSURE THE MAINTENANCE OF THE STORMWATER DRAINAGE AREAS. THIS SSA WILL BE RECORDED PRIOR TO RECORDING OF FINAL PLAT.
15. BOUNDARY INFORMATION PROVIDED BY ZAHN & ASSOCIATES LAND SURVEYORS FIRM NO. 184003386 DATED MARCH 3, 2022.
16. TOPOGRAPHY TAKEN FROM ELEVATIONS SHOT BY SHMITT ENGINEERING ON NOVEMBER, 17 2022

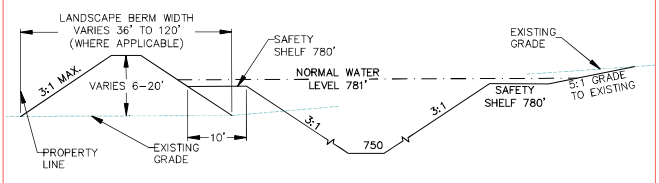
LEGAL DESCRIPTION

TRACT 2:

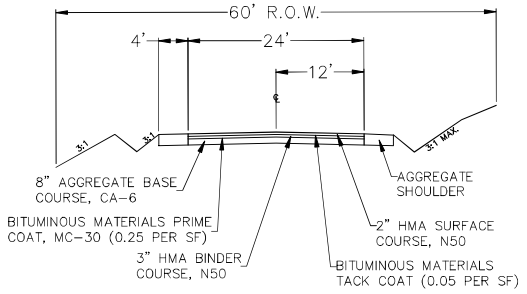
THE WEST HALF OF THE NORTH EAST QUARTER OF SECTION 29, EXCEPTING THEREFROM A TRACT DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID WEST HALF OF THE NORTH EAST QUARTER; RUNNING THENCE WEST ALONG THE EAST AND WEST QUARTER SECTION LINE 60 RODS; THENCE NORTH PARALLEL WITH THE NORTH AND SOUTH QUARTER SECTION LINE, 32 RODS; THENCE EAST PARALLEL WITH SAID EAST AND WEST QUARTER SECTION LINE, 20 RODS; THENCE NORTH PARALLEL WITH SAID NORTH AND SOUTH QUARTER SECTION LINE, 36 1/2 RODS; THENCE EAST PARALLEL WITH SAID EAST AND WEST QUARTER SECTION LINE, 20 RODS; THENCE NORTH PARALLEL WITH SAID NORTH AND SOUTH QUARTER SECTION LINE, 91 1/2 RODS TO THE NORTH LINE OF SAID SECTION; THENCE EAST ALONG SAID NORTH LINE, 20 RODS TO THE NORTH EAST CORNER OF SAID WEST HALF OF THE NORTH EAST QUARTER; THENCE SOUTH 160 RODS TO THE PLACE OF BEGINNING; ALSO EXCEPTING THEREFROM THAT PART DESCRIBED AS FOLLOWS: COMMENCING AT AN IRON PIPE 1509.75 FEET SOUTH OF AND 330.0 FEET WEST OF THE NORTHEAST CORNER OF SAID WEST 1/2 OF THE NORTHEAST 1/4; THENCE WEST PARALLEL WITH THE NORTH LINE OF SAID NORTHEAST 1/4330.00 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE NORTHEAST 1/4 264.00 FEET; THENCE EAST PARALLEL WITH THE NORTH LINE OF SAID NORTHEAST 1/4 330.00 FEET; THENCE SOUTH PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE NORTHEAST 1/4, 264.00 FEET TO THE PLACE OF BEGINNING; ALSO EXCEPTING THEREFROM THAT PART DESCRIBED AS FOLLOWS: COMMENCING AT A POINT ON THE SOUTH LINE OF SAID NORTHEAST 1/4, A DISTANCE OF 990 FEET WEST OF THE SOUTHEAST CORNER OF THE WEST 1/2 OF SAID NORTHEAST 1/4; THENCE NORTH PARALLEL WITH THE WEST LINE OF SAID NORTHEAST 1/4 A DISTANCE OF 528.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST 1/4 A DISTANCE OF 330.0 FEETHENCE NORTH PARALLEL WITH THE WEST LINE OF SAID NORTHEAST 1/4, A DISTANCE OF 272.00 FEET; THENCE WEST PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST 1/4 A DISTANCE OF 490.0 FEET; THENCE SOUTH PARALLEL WITH THE WEST LINE OF SAID NORTHEAST 1/4, A DISTANCE OF 800.08 FEET TO THE SOUTH LINE OF SAID NORTHEAST 1/4; THENCE EAST ALONG SAID SOUTH LINE A DISTANCE OF 160.0 FEET TO THE PLACE OF BEGINNING;

TRACT 3:

THE EAST HALF OF THE NORTH WEST QUARTER OF SAID SECTION 29, EXCEPTING THEREFROM A TRACT OF LAND DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST AND WEST QUARTER SECTION LINE 20.11 1/4 CHAINS EAST OF THE QUARTER POST ON THE WEST SIDE OF SAID SECTION, SAID POINT BEING THE SOUTH WEST CORNER OF THE SAID EAST HALF OF THE NORTH WEST QUARTER; RUNNING THENCE NORTH ALONG THE EIGHTY LINE, 17 CHAINS, 12 1/2 LINKS; THENCE EAST 10 CHAINS, 18 LINKS; THENCE SOUTH 30 MINUTES EAST, 17 CHAINS AND 30 LINKS TO SAID EAST AND WEST QUARTER SECTION LINE; THENCE NORTH 89 DEGREES WEST ALONG SAID EAST AND WEST QUARTER SECTION LINE 10 CHAINS AND 33 LINKS TO THE PLACE OF BEGINNING; ALL IN TOWNSHIP 46 NORTH, RANGE 9 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN MCHENRY COUNTY, ILLINOIS.



TYPICAL LAKE SECTION
N.T.S.



TYPICAL ROAD SECTION FOR FUTURE SUBDIVISION
N.T.S.

Drawn By: ACT
Checked By: AMS
Date: 05/02/2024
Scale: 1" = 150 Ft.
Job Number: 220907

SCHMITT ENGINEERING
215 West Calhoun Street, Woodstock, Illinois 60098
Phone (815) 337-7810 Fax (815) 337-7812
www.djschmittengineering.com

PARADISE LAKE DEVELOPMENT
801 MAIN STREET ROAD,
SPRING GROVE, IL 60081
P.I.N.: 05-29-326-004

RECLAMATION PLAN

LICENSED PROFESSIONAL ENGINEER — ALBERT M. SCHMITT — 062-061201 — ILLINOIS
EXPIRES 11-30-2025

Permit Number PLANNING —
Permit Number HEALTH —

REVISIONS	
DATE	DESCRIPTION

SHEET 7 OF 8

PLANS PREPARED FOR:
FOX DEVELOPMENT/ SUPER AGGREGATES
PHILLIP BROWN
5435 BULL VALLEY RD. STE. 330
MCHENRY, IL 60050
EMAIL: PHILLIPW.BROWN@GMAIL.COM
PHONE: (815) 385 - 8000 EXT. 21

APPENDIX C
NOTICE OF INTENT (NOI)

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Water Pollution Control
Notice of Intent (NOI) for General Permit
to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only

Permit No. ILR10 _____

OWNER INFORMATION

Company/Owner Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

Contact Person: _____ E-mail: _____

Owner Type (select one) _____

CONTRACTOR INFORMATION

MS4 Community: ◯ Yes ◯ No

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: ◯ New ◯ Change of information for: ILR10 _____

Project Name: _____ County: _____

Street Address: _____ City: _____ IL Zip: _____

Latitude: _____ _____ _____ Longitude: _____ _____ _____ _____ _____ _____

(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Approximate Construction Start Date _____ Approximate Construction End Date _____

Total size of construction site in acres: _____

If less than 1 acre, is the site part of a larger common plan of development?

◯ Yes ◯ No

Fee Schedule for Construction Sites:
Less than 5 acres - $250
5 or more acres - $750

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency? ◯ Yes ◯ No

(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: _____ City: _____

SWPPP contact information:

Inspector qualifications:

Contact Name: _____ _____

Phone: _____ Fax: _____ E-mail: _____

Project inspector, if different from above

Inspector qualifications:

Inspector's Name: _____ _____

Phone: _____ Fax: _____ E-mail: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

TYPE OF CONSTRUCTION (select one)

Construction Type _____

SIC Code: _____

Type a detailed description of the project:

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency ◯ Yes ◯ No

Endangered Species ◯ Yes ◯ No

RECEIVING WATER INFORMATION

Does your storm water discharge directly to: ☐ Waters of the State or ☐ Storm Sewer

Owner of storm sewer system: _____

Name of closest receiving water body to which you discharge: _____

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____

Owner Signature: Date:

_____ _____

Printed Name: Title:

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610

FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as “Unnamed Tributary to Sugar Creek to Sangamon River.”

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is $250.

Construction sites with 5 or more acres of land disturbance - fee is $750.

SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov. When submitting electronically, use Project Name and City as indicated on NOI form.

APPENDIX D
INCIDENCE OF NON-COMPLIANCE (ION)

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Water Pollution Control

Construction Site Storm Water Discharge Incidence of Non-Compliance (ION)

This form should be completed within Acrobat before being saved, printed, signed, and submitted within 24 hours to the appropriate Region email address listed on the next page.

Permittee Information

Name: _____ Permit No. ILR10 _____

Mailing Address: _____ P.O. Box: _____

City: _____ State: IL Zip Code: _____ County: _____

Phone: _____ Email: _____

Construction Site Information

Site Name: _____

Street Address: _____

City: _____ State: IL Zip Code: _____

Cause of Non-Compliance

Actions Taken to Prevent Any Further Non-Compliance

Environmental Impact Resulting From the Non-Compliance

Actions Taken to Reduce the Environmental Impact Resulting From the Non-Compliance

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____

Owner Printed Name Title

_____ _____

Owner Signature Date

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied.

Guidelines for Completion of the Construction Site Storm Water Discharge Incidence of Non-Compliance (ION) Form

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the SWPPP. Please adhere to the following guidelines:

Initial submission within 24 hours by email to appropriate region contact listed below of any incidence of non-compliance for any violation. After 24 hours notification, submit signed original ION form within 5 days to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance #19
Post Office Box 19276
Springfield, Illinois 62794-9276

Region 2 - DES PLAINES
Jay Patel - Manager 847-294-4000
EPA.DWPC.DesPlaines@illinois.gov

Region 3 - PEORIA
Paul Jungles - 309-671-3022
EPA.DWPC.Peoria@illinois.gov

Region 4 - Champaign
Jeff Holste - 217-278-5800
EPA.DWPC.Champaign@illinois.gov

Region 5 - SPRINGFIELD
David Ginder - 217-557-8761
EPA.DWPC.Springfield@illinois.gov

Region 6 - COLLINSVILLE
Joe Stitely - 618-346-5120
EPA.DWPC.Collinsville@illinois.gov

Region 7 - MARION
Joe Stitely - 618-993-7200
EPA.DWPC.Marion@illinois.gov

APPENDIX E
NOTICE OF TERMINATION (NOT)

Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
NOTICE OF TERMINATION (NOT)
of Coverage under the General Permit for Storm Water Discharges Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

Permit No. ILR10 _____

OWNER INFORMATION

Owner Name: _____

Owner Type (select one) _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

Contact Person: _____ E-mail: _____

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Facility Name: _____

Street Address: _____

City: _____ IL Zip: _____ County: _____

NPDES Storm Water General Permit Number: ILR10 _____

Latitude: _____ _____ _____ Longitude: _____ _____ _____ _____ _____ _____

(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED: _____

NOTE: Coverage under this permit cannot be terminated without the completion date.

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES Permit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____

Owner Signature: Date:

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

(Do not submit additional documentation unless requested)

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

GUIDELINES FOR COMPLETION OF NOTICE OF TERMINATION (NOT) FORM

Please adhere to the following guidelines:

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible.

Submit completed forms to:

Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

Final stabilization has occurred when:

(a) all soil disturbing activities at the site have been completed;

(b) a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas not covered by permanent structures; or

(c) equivalent permanent stabilization measures have been employed.

APPENDIX F
INSPECTION DOCUMENTS

STORMWATER DISCHARGE FROM CONSTRUCTION SITE ACTIVITIES
STORMWATER POLLUTION PREVENTION PLAN
INSPECTION REPORT

Facility/Project Name: _____

Inspection Date: _____

Inspector Name: _____

Inspection Type: ☐ Routine ☐ Post-Strom Event

Scope of Inspection: _____

_____

_____

_____

_____

Major Observations: _____

_____

_____

_____

_____

Actions Taken: _____

_____

_____

_____

_____

_____

_____

Inspector Signature: _____

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