Stormwater Management Report

8S201 Old College Road, Naperville, IL

Tabular Submittal

ERA Project W21154.00

Prepared for:

Edmund Burke

October 15, 2021

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Architecture Plans

8S201 Old College Road,
Naperville, Illinois

October 2, 2021

DuPage County
Stormwater Management Department

Subject: SM2021-1627 Stormwater Report

ERA is pleased to submit this report for the civil site design of 8s201 Old College Road. Enclosed you will find calculations, plans, exhibits and narratives describing the proposed work for this project.

All work has been completed by me or someone directly under my supervision, and this sheet signed and sealed will encompass all documents pertaining to the stormwater report.

I appreciate the opportunity for your review of this project.

Sincerely,

Jon P. Green, P.E.
Project Manager

Expires: November 30, 2021

TAB 1 – NARRATIVE

Engineering Resource Associates, Inc. (ERA) prepared this stormwater permit submittal on behalf of Mr. Edmund Burke. Mr. Burke is seeking permit approval regarding construction of a new single-family home. The project is located at the end of Old College Road on the south end of Lot 2, which has been divided into two separate lots, the previous residence being Lot 1 and the new residence being Lot 2. Due to this split it is proposed that Lot 1 has a PCBMP threshold of 300 square feet and Lot 2 has a PCBMP threshold of 2,200 square feet. Residential properties border the site to the north, south, east, and west with a drive running down the west side that leads to College Road to the southwest.Exhibit 1 depicts this project location and Exhibit 3 provides aerial imagery of the site. ERAcreated this submittal in accordance with the Countywide Stormwater and Flood PlainOrdinance (Ordinance) prepared by the DuPage County Stormwater ManagementPlanning Committee and Stormwater Management, effective April 2013.

Regulatory wetlands and buffers are present within the project area. Tabs 4 and 5 describe the proposed wetland buffer.

The net new impervious area of this site is 2,076 sq. ft. therefore PCBMPs will be not required.

TAB 2/2A – SITE RUNOFF STORAGE

The proposed residence will be over two feet above the approximate high-water level, 755.4, and will maintain existing drainage patterns, allowing water to move around the proposed development. The proposed net new impervious area of the site is 2,076 sq. ft. Since the net new impervious is less than the 2,200 sq. ft threshold for Lot 2 PCBMPs are not required. Since the net new impervious is less than 25,000 sq. ft detention is not required.

TAB 3 – FLOOD PLAIN

FLOOD PLAIN and FLOODWAY

No regulatory floodplains or floodways exist on this site. Please see Exhibit 5 for the FEMA FIRM Panel Map, dated August 2019.

TAB 4 – WETLANDS / WETLAND BUFFER

Wetlands as defined by the DuPage County Countywide Stormwater and Flood Plain Ordinance (Ordinance) are areas that are inundated or saturated by surface water or groundwater 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.

Wetlands as defined by the DuPage County Countywide Stormwater and Flood Plain Ordinance (Ordinance) are areas that are inundated or saturated by surface water or groundwater 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. Wetlands were found within the project boundaries.

<u>Sec. 15-85. Requirements for Wetland Delineation.</u>

A. The following should be completed as part of an onsite procedure, unless the Director or Administrator concludes otherwise. The decision shall be based on review of available engineering and mapping resources, current or prior site knowledge, a site visit, or staff recommendations, or the results of Section 15-85.B.1. The basis for the decision shall be documented and placed in the development file.
Noted.

B. The boundaries, extent, hydrology, function and quality of all wetland areas on the subject property shall be determined by an Environmental Scientist in accordance with the Federal wetland delineation methodology. All development site wetland boundaries shall be demarcated in the field and verified by an Environmental Scientist representing the County, or the Complete Waiver Community where the wetland is located. Verified wetland boundaries are valid for two years after the date of verification.
A full wetland delineation was conducted by an Environmental Scientist with CBBEL in accordance with the Federal wetland delineation methodology. There is one wetland and one isolated waters of DuPage located within the study area. The boundaries of the wetland and isolated waters were staked with pink pin flags with the wording "Wetland Delineation" which were then located using a handheld GPS with sub-meter accuracy. Three data points were taken to confirm these findings. One data point was taken within the wetland, one outside of the wetland and one on the edge of the isolated waters. The delineation report has been provided and corresponding data forms are in Appendix A. The wetland boundary was verified by County staff on July 29, 2021.

If an Environmental Scientist confirms that no wetlands are present on or within 100 feet of the development site, the Director, or Administrator within a Complete Waiver Community, shall document those findings.
Wetlands were found within 100-feet of the proposed activity.

If wetlands or waters are determined to be present, a delineation report shall be prepared documenting boundaries, extent, function, and quality of wetland, waters and buffers in compliance with all methodologies and definitions set forth in this Ordinance, or the applicable Waiver Community Ordinance.
Wetlands were determined to be present, therefore a delineation report has been prepared, documenting boundaries, extent, function, and quality of wetland and buffers in compliance with all methodologies and definitions set forth in the Ordinance.

C. The boundaries, extent, hydrology, function, and quality of all wetland areas on sites in agricultural production shall be determined by an Environmental Scientist in accordance with the current methodology. Agricultural areas that have been abandoned for five, or more, consecutive years shall be delineated in accordance with the current Federal wetland delineation methodology authorized under Section 404 of the Clean Water Act.
There are no wetland areas on site in agricultural production.

D. The approximate location, extent, and relative quality of off-site wetlands within one hundred (100) feet of the development shall be identified by using the first of the following documents or procedures applicable at the time of delineation:

15-85.D.1 Site specific delineation according to the procedures specified in accordance with the Federal wetland delineation methodology.

15-85.D.2 Wetland signatures identifiable from historic and current aerial photography, as determined by an Environmental Scientist.

15-85.D.3 DuPage County Wetland Inventory Maps.

15-85.D.4 US Fish and Wildlife Service, National Wetland Inventory Maps.

15-85.D.5 Wetlands identified in Interim Watershed Plans.

15-85.D.6 Wetlands identified in Watershed Plans.
Offsite wetlands were not noted within 100 ft of the development.

E. Wetlands shall be classified as either critical or regulatory based on the evaluation of the entire wetland complex. Critical wetland status shall be assigned to those wetlands that have been determined to satisfy one of the following Sections 15-85.E.1 through 15-85.E.5 below:

15-85.E.1 Calculate the wetland Qualitative Value using the Modified Michigan Department of Natural Resources Method. A score of 5 or higher will be considered a Critical wetland. Alternatively, the mean rated wildlife quality (MRWQ) can be calculated using the Ludwig Wildlife Habitat Evaluation Method. A score of 8 or higher will be considered Critical wetland. If both methods are completed, the MRWQ shall prevail.

15-85.E.2 The plant community within the wetland is determined to have a native floristic quality index (nFQI) of 20 or higher during a single growing season assessment or a native mean C-value of 3.5 or greater, as calculated by the Swink & Wilhelm methodology.

15-85.E.3 The wetland is known to be inhabited by a State listed threatened or endangered species based on the consultation with the Illinois Department of Natural Resources.

15-85.E.4 An evaluation of the wetland completed in accordance with current United States Fish and Wildlife Service review procedure that confirms the presence or use by listed threatened or endangered species.

15-85.E.5 If the wetland is identified as a critical wetland in the County's wetland inventory, confirmation of the Critical status shall be completed through an evaluation of Sections 15-85.E.1 through 15-85.E.4 above. If the wetland evaluation does not confirm a critical status, the wetland shall be considered “regulatory” for purposes of this Ordinance.
Wetland 1 satisfies the three wetland criteria to qualify as a regulatory wetland. The Native Floristic Quality Index, Coefficient of Conservatism and Coefficient of Wetness for the wetland area are 9.71, 2.05, and -0.60 respectively. The MDNR Wildlife Assessment score is 2.5 and has been provided at the end of the Wetland Delineation Report. The IDNR EcoCAT consultation and USFWS Threatened and Endangered Species evaluation resulted in no effect Threatened and Endangered species present. Therefore, the wetland area is classified as regulatory based on the evaluation of the entire wetland complex.

Sec. 15-86. Requirements for Development Affecting the Function and Values of Wetlands.

A. A Development affecting wetlands may not occur without certification, or letter of permission if applicable.
Noted.

B. Development proposing to affect critical wetlands must demonstrate through an alternatives analysis that the presence of critical wetlands precludes all economic use of the entire parcel, and that no practicable alternative to wetland modification exists, and that the proposed development represents the least damaging alternative while still achieving the basic development purpose. If the impact is determined to be allowable, the impacted area shall be mitigated in accordance with Section 15-88.
No critical wetlands are present on site.

C. Development proposing to affect regulatory wetland must demonstrate through an alternatives analysis that the proposed development represents the least damaging alternative while still achieving the basic development purpose. If the impact is determined to be allowable, the impacted area shall be mitigated in accordance with Section 15-88. The following exception applies:

The Director, or Administrator in a Complete Waiver Community, shall waive the requirement for completion of an Alternatives Analysis or provide mitigation for developments proposing, in the aggregate, 0.10 acre or less direct impact to wetlands provided:

15-86.C.1.a. the wetland(s) is regulatory; and

15-86.C.1.b. none of the wetland(s) to be impacted is over 0.1 acres in size; and

15-86.C.1.c. the wetland(s) to be impacted are not jurisdictional under the USACE; and

15-86.C.1.d. the wetland(s) to be impacted are located entirely within the development's platted lot(s), and

15-86.C.1.e. There will be no indirect impacts to remaining wetland area(s), and

15-86.C.1.f. The wetland(s) to be impacted are not part of a wetland mitigation development, and

15-86.C.1.g. Is in line with the basic development purpose.

No impacts to the wetland are proposed.

D. Development proposing to temporarily affect a regulatory wetland is allowable provided the impacted wetland is restored pursuant to Section 15-88.D.
Temporary impacts to the wetland are not proposed.

E. Vegetative Maintenance within wetland may be allowed through issuance of a Letter of Permission under the following conditions. A written description of the development goals, objectives and management plan must be provided for approval to the Director or Administrator of a Waiver Community, as long as the development does not require Stormwater Management Certification for any other aspect of the development, the Director or Administrator of a Waiver Community may issue a Letter of Permission to allow the maintenance activity.
Not applicable.

Sec. 15-87. Indirect Impacts to Wetlands

A. The applicant must demonstrate that the development or hydraulic alteration will not cause an indirect wetland impact with the following exceptions.

15-87.A.1 Wetland at or below the OHWM of a waterway on which the hydraulics will not be changed

15-87.A.2 Streambank stabilization developments.
Changes to hydrology are not proposed.

B. The following requirements apply to a development or alteration to a hydraulic structure where there is the potential for hydrologic changes to a regulatory wetland.

> 15-87.B.1 Existing wetlands within 100 feet of the limit of disturbance of a proposed development that have in whole or part topography that is sensitive to change in runoff volume, or if greater than 20% of the wetland's tributary watershed will be developed, shall be evaluated for potential changes in surface hydrology due to development, unless the Director or Administrator concludes otherwise. If there is no potential for change then the Director or Administrator shall not require an evaluation.
> **The total tributary area to this wetland is approximately 19.2 acres and the proposed development only covers .43 acres. Therefore, the development covers less than 20% of the tributary area and no indirect impact analysis is required.**

C. Increases or decreases in maximum depth of more than 3 inches, or changes in duration greater than 48 hours above existing high water for the rainfall events as defined in Section 15-87.E shall be considered an indirect impact. The Director, or Administrator in a Complete Waiver Community, can, based on a review of the submitted information, determine that proposed impacts outside of the above limits will not affect the existing plant communities, and therefore, would not be considered an indirect impact.
Not applicable.

D. When the dominant plant community or wetland type is known to be sensitive to relatively small changes in depth and duration of inundation (e.g., sedge meadow, vernal pool), then an analysis of depth and duration of inundation shall be required before such an impact is certified. (Section 15-87.E.3).
Not applicable.

E. The review of the evaluation of indirect impacts for a development is limited to the following analysis, unless the wetland meets the condition described in Section 15-87.D. The applicant shall develop a sub-watershed model using a model sensitive to land cover changes as they affect surface runoff for rainfall events of 0.5 inches, 1.5 inches and 3.0 inches for the twenty-four (24) hour rainfall event. A Soil Conservation Service curve number analysis will be accepted provided:

> 15-87.E.1 The distinction between directly connected impervious areas and unconnected impervious areas is in accordance with TR-55 methodology. Unconnected impervious areas may be part of a composite curve numbers, but directly connected impervious areas draining to the wetlands must be modeled separately to define runoff in the smaller rainfall events required. Directly connected impervious areas draining through BMPs which promote infiltration may also be part of the composite curve number analysis.
>
> 15-87.E.2 The model area shall be the existing and proposed area draining directly to the wetlands. The applicant need not model either groundwater to the wetland, or flooding of the wetland from adjacent streams unless the development proposes to significantly change the stage/discharge

relationship of the existing wetland. The existing conditions model shall reflect the current land cover, soils, wetland storage and discharge characteristics in the sub watershed prior to development. The proposed conditions model shall be the existing conditions model with land cover and soils changes reflecting the proposed development.

15-87.E.3 The runoff-volume sensitive topographic feature, identified in Section 15-87.D, shall be represented in a stage-storage-discharge relationship under pre-development conditions and if any fill or grading or other alteration is proposed within the topographic feature, and then a proposed stage/storage/discharge relationship shall also be developed.

15-87.E.4 The applicant shall model rainfall events of 0.5, 1.5 and 3.0 inches for twenty-four (24) hour rainfall events under existing and proposed conditions and calculate the total volume of runoff to and including the area of the wetland. For purposes of this comparison, that the entire volume is assumed to be present in the wetland at the beginning of routing, and the depth and duration of flooding shall be compared between existing and proposed conditions. If the 3.0 inch rainfall volume does not cause a closed or restricted depression to completely fill, then the applicant shall also model an event of greater rainfall depth such that the volume of runoff produced will be greater than the spillover elevation of the depression. The maximum rainfall event that must be considered is 7.58 inches. For those elevations of a closed depression without a positive outlet, only the change in elevation limitation applies.
No changes in hydrology will result from the proposed actions.

Sec. 15-88. Requirements for Wetland Mitigation.

A. Mitigation for wetland impacts shall take place in the same watershed planning area as the affected wetland. For the purpose of Section 15-88, the three watershed planning areas are defined as the Salt Creek (including the Des Plaines River and Sawmill Creek), East Branch DuPage River and West Branch DuPage River, as shown on Exhibit 1. If mitigation is not practicable within the same watershed, the Director or Administrator may allow out of watershed mitigation, following a request in writing by the applicant. The designs and analyses of all wetland mitigation measures shall meet the applicable standards of the Plan.
No wetland mitigation is required or proposed.

B. Mitigation for permanent wetland impacts shall be provided as follows:

15-88.B.1 Three to one (3:1) for permanent development impacts within critical wetlands.

15-88.B.2 One and one half to one (1.5:1) for permanent development impacts within regulatory wetlands,

15-88.B.3 Natural area restoration developments shall provide wetland mitigation for permanent wetland impacts at a minimum proportional rate of one to one (1:1).

15-88.B.4 Developments that contain both development and restoration components shall mitigate at the ratios listed above applicable to each type of impact.

15-88.B.5 If a wetland mitigation area is disturbed prior to acceptance, the impact shall be mitigated at a one to one (1:1) rate. Restoration of the impacted area can constitute fulfillment of the one to one requirement. If a wetland mitigation area is impacted following acceptance, the impact must be mitigated at the appropriate critical or regulatory proportional rate.
15-88.B.6 In order to be eligible for credit, the mitigation must meet the performance standards referenced by the stormwater certification.
Not applicable.

C. The Director or Administrator may allow partial mitigation credit for the following, provided that wetland creation for permanent wetland impacts does not fall below a 1:1 ratio. A credit may not be counted twice.

15-88.C.1 Enhancement or restoration of an existing wetland will be credited at a ratio of 0.5:1.

15-88.C.2 Enhancement, restoration, or creation of buffer will be credited at a ratio of 0.25:1.
Not applicable.

D. Temporary wetland impacts shall be restored in place. The disturbed area must be returned to its original contour and general soil profile, be restored to a comparable wetland community type, and exhibit an FQI no lower than that of the original wetland in accordance with the approved performance standards. The Director or Administrator in a Complete Waiver Community shall make a determination as to whether the proposed impacts will be considered temporary.
Not applicable.

E. The applicant may request an alternative community type, if the development is part of a natural area restoration development, and documentation is provided describing the restoration plan and goals.
Not applicable.

F. Mitigation for depressional storage lost within wetlands shall be provided in accordance with Section 15-81.D of this Ordinance.
There is no proposed loss of depressional storage.

G. Wetland creation shall only take place within areas that are currently non-wetland.
Not applicable.

H. Development or the removal of native vegetation in the existing wetland shall be initiated only after a plan has been approved and adequate securities are provided as specified in Article VI of this Ordinance.
Not applicable.

I. Wetland mitigation areas shall incorporate native, non-invasive species and be designed to duplicate or improve the hydrologic and biologic function of the original wetland.
Not applicable. No impacts are proposed.

J. A native buffer is required to protect the mitigation wetland from surrounding land uses. Buffers shall be 100' for mitigation adjacent to critical wetland and 50' adjacent to regulatory wetland unless the Director or Administrator concludes otherwise.
Not applicable. No wetland mitigation is proposed.

K. Evaluation of Wetland Hydrology for Mitigation. Hydrology for wetland mitigation shall be evaluated by the applicant to establish the depth and duration of inundation and soil saturation for the wetland plant community design. The applicant shall identify the sources of wetland hydration including surface runoff, groundwater and overbank flooding.
Not applicable.

L. The review of the evaluation of wetland hydrology for wetland mitigation is limited to the following analysis. The applicant shall develop a sub-watershed model using a model sensitive to land cover changes as they affect surface runoff for rainfall events of 0.5 inches, 1.5 inches and 3.0 inches. SCS curve number analysis will be accepted provided:

15-88.L.1 Applicants shall submit hydrology information for the wetland suitable to demonstrate wetland sustainability using best available data based on the proposed plant community.
Not applicable.

15-88.L.2 The distinction between directly connected impervious areas and unconnected impervious areas is maintained in accordance with TR-55. Unconnected impervious areas may be part of a composite curve numbers, but directly connected impervious areas draining to the wetlands must be modeled separately to define runoff in the smaller rainfall events required. Directly connected impervious areas draining through BMPs which promote infiltration may also be part of the composite curve number.
Not applicable.

15-88.L.3 The model area shall be the existing and proposed area draining directly to the wetland mitigation. The existing conditions model shall reflect the current land cover and soils in the sub watershed prior to development, and the proposed conditions model shall be the existing conditions model with land cover and soils changes reflecting the proposed development.
Not applicable.

15-88.L.4 The runoff-volume sensitive topographic feature shall be represented in a stage-storage-discharge relationship under pre-development conditions and if any fill or grading or other alteration is proposed within the topographic feature, and then a proposed stage/storage/discharge relationship shall also be developed.
Not applicable.

15-88.L.5 The applicant shall model rainfall events of 0.5 inches, 1.5 inches and 3.0 inches under existing and proposed conditions and calculate the total volume of runoff to and including the area of the wetland. For purposes of this comparison, it shall be assumed that the entire volume is present in the wetland at the beginning of routing, and the depth and duration of flooding shall be compared between existing and proposed conditions. If the 3.0 inch rainfall volume does not cause a closed depression to completely fill, then the applicant shall also model an event of greater rainfall depth such that the volume of runoff produced will be greater than the spillover elevation of the depression. The maximum rainfall event that must be considered is 7.58 inches. For those elevations of a closed depression without a positive outlet, only the change in elevation limitation applies.
Not applicable.

15-88.L.6 The applicant shall evaluate the groundwater flow and elevation if the proposed wetland mitigation intersects the seasonal high or apparent water table.
Not applicable.

15-88.L.7 The applicant shall evaluate the effect of overbank flooding on the wetland mitigation when adjacent to a stream.
Not applicable.

M. Mitigation must meet certification requirements and associated performance standards and shall undergo a maintenance and monitoring period as required in the Stormwater Management Certification.

15-88.M.1 Upon inspection, if the mitigation meets certification requirements and performance standards during or at the end of the monitoring period, the Director, or Administrator in a Complete Waiver Community shall issue regulatory signoff.

15-88.M.2 If the permit requirements are met early and it appears that the cessation of the maintenance and monitoring period will not jeopardize the area's continuing compliance, the Director or Administrator in a Complete Waiver Community may consider granting early signoff when requested

15-88.M.3 If the mitigation area is not considered a success within the approved monitoring period, additional measures shall be required to bring the site into compliance.
Not applicable. Wetland mitigation is not proposed.

N. Mitigation is considered separate from other development components, and requires a performance security be established in accordance with Article VI for the completion of the mitigation development.
Not applicable.

O. The certification holder shall provide annual monitoring reports documenting progress towards meeting the approved performance standards. The monitoring

reports shall include relevant data and observations during the growing season and shall be submitted no later than January 31st of the following year until performance standards are met and accepted.
Not applicable.

P. If property ownership is changed during the management and monitoring period, the applicant shall provide formal written notification to the Director or Administrator. The notification shall contain complete contact information including certification number(s), owner(s) names(s), street address(s), phone number(s) (office, fax, mobile), email address(s), etc. The certification holder must notify the future owners(s) of their obligations regarding certification conditions and maintenance and monitoring requirements for the subject development as they relate to the Stormwater Management Certification and to submit written confirmation from the receiving party accepting these responsibilities.
Not applicable.

Q. Development within or affecting a wetland begun prior to authorization under this Ordinance, or other unauthorized impact to a wetland, shall presume the wetland was critical and provide mitigation at a 3:1 replacement ratio, and shall be processed in one of the following two ways:

15-88.Q.1 If the unauthorized wetland impact can be considered a temporary impact, the Director or Administrator may process the resolution of this violation outside of the normal certification program, through preparation of a Letter of Permission which would be countersigned by the Applicant committing them to specific site restoration and management requirements and timeframes.

15-88.Q.2 If the unauthorized wetland impact cannot be considered a temporary wetland impact, the applicant shall enter into a formal Stormwater Management Certification process, and meet all requirements of the Ordinance.
Not applicable.

Sec. 15-89. Wetland Banking.

A. Where development affecting wetland meets the requirements of Article XI and the long term preservation of existing wetland functions or characteristics is unlikely as a result of existing or proposed land use practices in adjacent upland areas, then the Director or Administrator may provide that mitigation for development within or affecting wetlands be accomplished wholly or in part through investment in an established wetland banking development in lieu of constructing new wetlands.
No wetland banking is proposed.

B. Such wetland banking shall be allowed only if no long term net loss of wetlands results within each watershed planning area as defined in Article XI and if the adverse impacts of development in regulatory or critical wetlands are fully mitigated.
Not applicable.

C. Wetland banking for development impacts within a critical or regulatory wetland shall take place within an established wetland banking development approved by the Committee, or the Oversight Committee, and shall:

15-89.C.1 Include a wetland enhancement, restoration, and construction plan approved by the Committee and the County Board, or by the Oversight Committee and the corporate authorities; and

15-89.C.2 Include a capital improvements plan containing an estimate of the total per acre cost of wetland mitigation, including operation and maintenance costs; and

15-89.C.3 Include a formula to determine that any investment in a wetland bank shall be at least equal to the cost of planning, acquiring of lands, constructing, operating, and maintaining mitigated wetlands of equivalent or greater functional value than those lost to development.
Not applicable.

D. If development impacts to a wetland meet all the conditions for mitigation in a wetland banking development, a payment may be made into the wetland banking program and shall be determined by multiplying the acres of required mitigation times the first of the following applicable costs:

15-89.D.1 The investment cost of the closest wetland banking development to the development that is in the watershed planning area that has the greatest wetland deficit, as defined in Section 15-89.D.3; or

15-89.D.2 The investment cost of the closest wetland banking development within the same watershed planning area as the proposed wetland impact; or

15-89.D.3 The investment cost of the closest wetland bank to the development that is outside the watershed planning area where the development is proposed. However, the area of mitigation available within a wetland banking development for mitigation from outside the watershed planning area shall not exceed 15% of the bank's total wetland area. This amount of wetland mitigation is considered a wetland deficit in the watershed planning area where the development occurs. The watershed planning area that receives the wetland mitigation shall pay back the wetland deficit in accordance with Section 15-89.D.1.
Not applicable.

E. If development impacts to a wetland meet all the conditions for mitigation in the wetland banking program, and there is not a wetland banking development available per Section 15-89.D, a payment may be made to the County for deposit into a specific wetland banking development or in a wetland bank suspense account equal to $175,000 per acre of required mitigation.
Not applicable.

F. All funds deposited in the wetland banking program shall be maintained in accounts designated solely for a particular wetland banking development or in a wetland bank suspense account if collected under Section 15-89.E. At the option of the Director or Administrator, funds may be transferred to the account of another wetland banking development in the same watershed planning area, or if one is not available, in an off-site mitigation area meeting the requirements in Section 15-89, if that particular wetland banking development is not constructed within 10 years after the date on which such funds were deposited. Upon approval of a wetland banking development within a watershed planning area for which payments have been deposited in accordance with Section 15-89.E, such payments shall be immediately transferred into that wetland banking development. Any portion of the payment paid in excess of the actual fee established for said wetland banking development shall be refunded to the then current property owner or his/her/its designee.
Not applicable

G. The County Board or the corporate authorities in a Waiver Community shall audit annually all funds deposited in wetland banking accounts and shall account for such funds on a first-in, first-out basis.
Not applicable

JULY 7, 2021

BURKE PROPERTY

8S201 COLLEGE RD., NAPERVILLE

WATERS OF THE UNITED STATES – WETLAND ASSESSMENT

DUPAGE COUNTY
ILLINOIS

CBBEL PROJECT NO: 210330

CHRISTOPHER B. BURKE ENGINEERING, LTD
9575 WEST HIGGINS ROAD, SUITE 600.
Rosemont, IL 60018

Site Title

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EXECUTIVE SUMMARY

As requested, on June 29, 2021, Christopher B. Burke Engineering, Ltd. (CBBEL) staff completed a wetland assessment of the study area using the U.S. Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010). A wetland and an excavated pond were identified within the study area. An Aerial photograph depicting the location of the identified wetland and pond are found on Exhibit 7, Appendix A. Representative photographs are included in Appendix C. Information collected from the field investigation is listed in the USACE Data Forms found in Appendix D.

WOUS / Wetland Summary Table:

Delineated Area	Data Point	Community Type	Native Mean C-Value	Native FQI
Wetland 1	1A	Wet Meadow	2.05	9.17
Pond 1	2A	Excavated Pond	1.40	3.13

METHODOLOGY

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010), identifies the mandatory technical criteria for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

Hydrophytic Vegetation: The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:

(1) Obligate wetland plants (OBL) almost always occur (estimated probability >99%) in wetlands under natural conditions;

(2) Facultative wetland plants (FACW) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in non-wetlands;

(3) Facultative plants (FAC) are equally likely to occur in wetlands or non-wetlands (estimated probability 34-66%);

(4) Facultative upland plants (FACU) usually occur in non-wetlands (estimated probability 67-99%), but occasionally are found in wetlands; and

(5) Obligate upland plants (UPL) almost always occur (estimated probability >99%) in non-wetlands under natural conditions.

Four procedures completed in the following order are used to determine if hydrophytic vegetation is present:

1) Rapid Test: The Rapid Test for hydrophytic vegetation is met if all dominant species across all strata are OBL or FACW, or a combination of the two based on a visual assessment.

2) Dominance Test: Using the 50/20 Rule, if greater than 50% of the plants present are FAC, FACW, or OBL, the subject area meets the hydrophytic vegetation criterion.

3) Prevalence Index: Each plant species in a sampling plot is assigned a numeric value (OBL=1; FACW=2; FAC=3; FACU=4; UPL=5). Based on the sampling data, the absolute cover is calculated for each species in each stratum and using the specified formula, if the Prevalence Index is 3 or less, hydrophytic vegetation is present.

4) Morphological Adaptations: Various species may develop physical characteristics after growing in wetland areas such as multi-stemmed trunks, shallow roots and buttressed stems. Hydrophytic vegetation is present if an adaptation is observed in more than 50% of FACU species growing in an area that contains hydric soil and wetland hydrology.

Hydric Soils: Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part." Field indicators of hydric soil are found in the NTCHS Field Indicators of Hydric Soils in the United States (USDA Natural Resources Conservation Service 2006b or current version).

Wetland Hydrology: The wetland hydrology criterion is often the most difficult to determine. Typically, the presence of water for a portion of the growing season creates anaerobic conditions. Anaerobic conditions lead to the prevalence of wetland plants. Morphological adaptations of plants, drift lines and watermarks are examples of wetland hydrology field indicators.

Waters of the United States: Waters of the United States (waters) are defined as the ordinary high-water mark (OHWM) in non-tidal waters, provided the jurisdiction is not extended by the presence of wetlands. The OHWM refers to the line established by the fluctuations of water. These fluctuations can be indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris. Waters are typically not vegetated. They typically area located below the Ordinary High Water Mark (OHWM) of a creek, stream, river or lake. There are on occasions exceptions to this generalization.

RESULTS AND DISCUSSION

STUDY AREA

As shown on Exhibit 1 in Appendix A, the study area is an existing residential lot with rural character that contains one wetland and one pond. The site is located at 8S201 College Road, Naperville, DuPage County, Illinois (Exhibit 1). Geographically, the study area is in Section 28, Township 38 North, and Range 10 east of the 3rd Principal Meridian. The latitude is 41.752905 and longitude is ˚N; -88.097780˚W.

Existing Site Conditions

The study area is an existing residential lot that contains a small wetland area along the south property line and an excavated pond along the east property line that is shared by the neighbor. The remainder of the site is mowed lawn, driveways, and residential structures.

Wetland 1

Wetland 1, characterized at Data Point 1A, is an approximately 1/3rd acre wetland. The wetland appears to be isolated, as it drains out through a yard drain located along the south property line. There is no identifiable surface drainage to a creek or stream. Vegetation is dominated by reed canary grass, but other notable species included switch grass, stinging nettle, poison ivy, fowl manna grass, and jewel weed.

Vegetation: The completed wetland floristic inventory is in Appendix B and Data Forms are in Appendix D.

Hydrology: At the time of the field visit, standing water was present in the wetland up to 3 inches deep from a recent heavy rain. Water in Wetland 1 was draining into a yard drain located in the southeast corner of the wetland on the property line. The wetland is likely an isolated wetland of DuPage County.

Soils: Soils were mapped as and confirmed to be Ashkum Silty Clay Loam, a hydric soil.

Pond 1

Pond 1, characterized at Data Point 2A, is an excavated pond that is mowed up to most of the water's edge. Volunteer trees and shrubs have established at a few locations around the pond. The pond is approximately 2 to 3 feet higher than Wetland 1. At the time of the field visit water was flowing out of the pond through a constructed stone spillway into Wetland 1. Water in Wetland 1 was draining into a yard drain located in the southeast corner of the wetland on the property line. Pond 1 is likely an isolated waters because it drains into Wetland 1 which had no identifiable surface drainage to a water of the United States.

Vegetation: At the time of the field investigation, dominate vegetation consisted of mowed lawn, volunteer trees and shrubs, such as Silver maple, buckthorn, box elder, and poison ivy. The completed wetland floristic inventory is in Appendix B and the Data Forms are in Appendix D.

Hydrology: At the time of the field visit, the pond was draining westerly into a stone drainageway to Wetland 1. Pond 1 appears to be at least 4 or more feet deep. Water tributary to the pond appears to be from the adjoining lawns. There is no creek or stream flowing to the pond. The pond is likely an isolated waters of DuPage County.

Soils: Soils are mapped "water", which was confirmed during the site visit.

REFERENCE MATERIALS

The following reference materials were reviewed and used to assist in the wetland field reconnaissance. They are included as Exhibits 1-6.

LOCATION MAP

The study area is an existing residential lot with rural character that contains one wetland and one pond – Exhibit 1. The site is located at 8S201 College Road, Naperville, DuPage County, Illinois (Exhibit 1). Geographically, the study area is in Section 28, Township 38 North, and Range 10 east of the 3rd Principal Meridian. The latitude is 41.752905 and longitude is ˚N; -88.097780˚W).

NATIONAL WETLAND INVENTORY

The National Wetland Inventory (NWI), Wheaton Quadrangle (1983), was reviewed to determine the location of mapped wetland or waters of the United States. The map indicates a waters/pond mapped within the study area (Exhibit 2). The NWI serves only as a large-scale guide and actual wetland locations and types often vary from that mapped.

PUBGx - Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated

DUPAGE COUNTY WETLAND INVENTORY

The DuPage County Wetland Inventory, Lisle Township (2001), was reviewed to determine the location of mapped wetland or waters of the United States. The mapping indicates that a pond is located on the property. The mapping did not identify the onsite wetland.

SOIL SURVEY

The Soil Survey of DuPage County, Illinois (dated September 16, 2019) was reviewed to determine the location of hydric soils within the study area (Exhibit 3). Hydric soils can be indicative of wetland habitat. The following soil types are mapped within the study area:

W	-	Water
238	-	Blount Silt Loam
232A	-	Ashkum Silty Clay Loam - Hydric
298A	-	Beecher Silt Loam

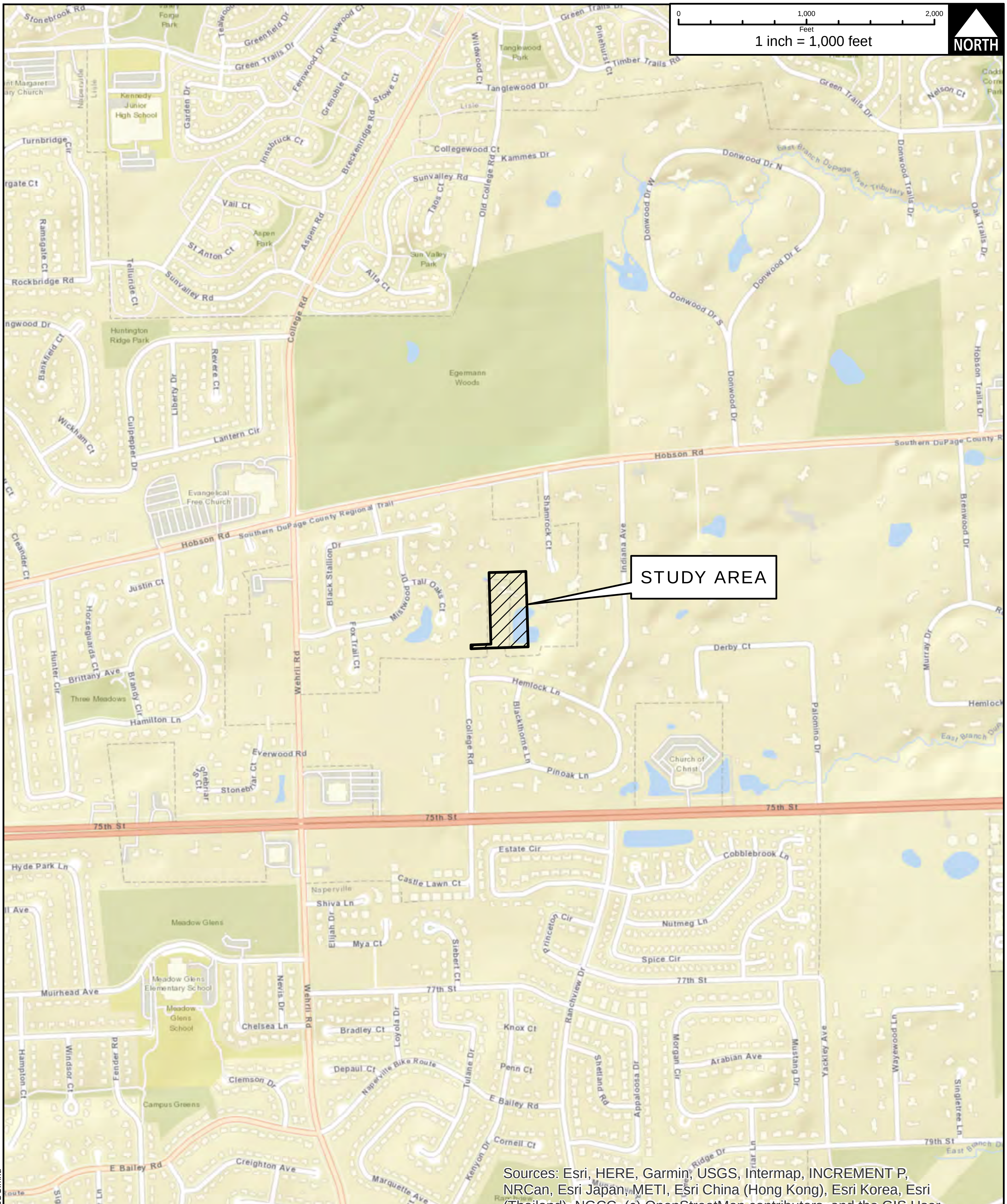
UNITED STATES GEOLOGICAL SURVEY

The United States Geological Survey (USGS), Wheaton Quadrangle (1993) was reviewed to determine historic local drainage patterns (Exhibit 4). The USGS map was inconclusive on the drainage patterns. Generally, surface water drains east towards the East Branch DuPage River.

FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map (FIRM), DuPage County and Incorporated Areas, Map Number 17043C0163J, Effective Date August 1, 2019, was reviewed to determine the location of regulatory floodplain within the study area (Exhibit 5). The presence of floodplain can be indicative of wetland hydrology. The FIRM indicates no mapped 100-year regulatory floodplain or floodway within the study area.

APPENDIX A – EXHIBITS



P:\EDMUND BURKE\210330\210330_LOC.mxd

CLIENT:

EDMUND BURKE

TITLE:

LOCATION MAP

CBBEL# 21-0330

DATE: 7/1/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 1,000 '
DWN.	KEK		USER:	kkopija
CHKD.	JMA		PLOT DATE:	7/1/2021
FILE NAME:	210330_LOC			

EXH 1

NOTE: TAKEN FROM THE NATIONAL WETLAND INVENTORY(NWI), WHEATON QUADRANGLE(1983)

0 100 200
Feet
1 inch = 100 feet

NORTH

LEGEND
PUBGx - PALUSTRINE, UNCONSOLIDATED BOTTOM, INTERMITTENTLY EXPOSED, EXCAVATED

CLIENT: EDMUND BURKE	TITLE: NATIONAL WETLAND INVENTORY					CBBEL# 21-0330 DATE: 7/1/2021
CHRISTOPHER B. BURKE Engineering, Ltd. 9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500	DSGN.			SCALE:	1 "= 100 '	EXH 2
	DWN.	KEK		USER:	kkopija	
	CHKD.	JMA		PLOT DATE:	7/1/2021	
	FILE NAME:	210330_NWI				

P:\EDMUND BURKE\210330\210330_NWI.mxd

NOTE: TAKEN FROM THE DUPAGE COUNTY WETLAND INVENTORY(DCWI), LISLE TOWNSHIP(2001)

0 100 200
Feet
1 inch = 100 feet

NORTH

CLIENT:	TITLE:	
EDMUND BURKE	DUPAGE COUNTY WETLAND INVENTORY	CBBEL# 21-0330 DATE: 7/1/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 100 '
DWN.	KEK		USER:	kkopija
CHKD.	JMA		PLOT DATE:	7/1/2021
FILE NAME:	210330_DCWI			

EXH 3

P:\EDMUND BURKE\210330\210330_DCWI.mxd

NOTE: TAKEN FROM THE SOIL SURVEY OF DUPAGE COUNTY, ILLINOIS, DATED: SEPTEMBER 16, 2019

0 100 200
Feet
1 inch = 100 feet

NORTH

LEGEND
W - WATER
23B - BLOUNT SILT LOAM
232A - ASHKUM SILTY CLAY LOAM, HYDRIC
298A - BEECHER SILT LOAM

CLIENT:
EDMUND BURKE

TITLE:
SOIL SURVEY

CBBEL# 21-0330
DATE: 7/1/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 100 '
DWN.	KEK		USER:	kkopija
CHKD.	JMA		PLOT DATE:	7/1/2021
FILE NAME:	210330_SOILS			

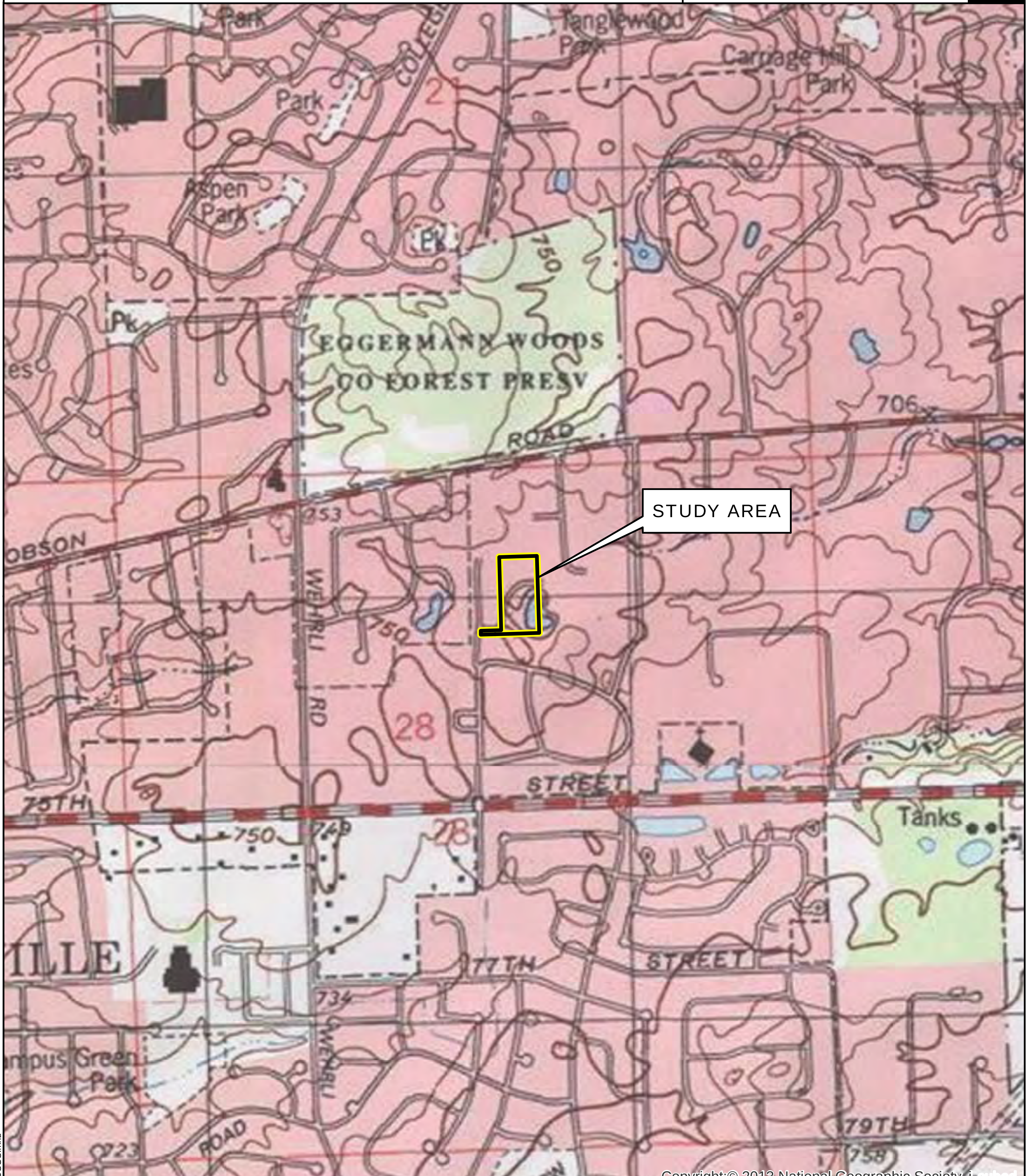
EXH 4

P:\EDMUND BURKE\210330\210330_SOILS.mxd

NOTE: TAKEN FROM THE UNITED STATES GEOLOGICAL SURVEY(USGS), WHEATON QUADRANGLE(1993)

0 1,000 2,000
Feet
1 inch = 1,000 feet

NORTH



CLIENT:

EDMUND BURKE

TITLE:

UNITED STATES GEOLOGICAL SURVEY

CBBEL# 21-0330

DATE: 7/1/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 1,000 '
DWN.	KEK		USER:	kkopija
CHKD.	JMA		PLOT DATE:	7/1/2021
FILE NAME:	210330_USGS			

EXH 5

P:\EDMUND BURKE\210330\210330_USGS.mxd

NOTE: TAKEN FROM THE FLOOD INSURANCE RATE MAP(FIRM), DUPAGE COUNTY AND INCORPORATED AREAS, ILLINOIS, MAP NUMBER 17043C0163J, EFFECTIVE DATE: AUGUST 1, 2019

0 100 200
Feet
1 inch = 100 feet

NORTH

CLIENT:	TITLE:	
EDMUND BURKE	FLOOD INSURANCE RATE MAP	CBBEL# 21-0330 DATE: 6/30/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 100 '	
DWN.	KEK		USER:	kkopija	EXH 6
CHKD.	JMA		PLOT DATE:	6/30/2021	
FILE NAME:	210330_FIRM				

P:\EDMUND BURKE\210330\210330_FIRM.mxd

NOTE: AERIAL PHOTOGRAPH TAKEN FROM NEARMAP VERTICAL IMAGERY, DATED: JUNE 22, 2021

0 100 200
Feet
1 inch = 100 feet

NORTH

CLIENT:

EDMUND BURKE

TITLE:

APPROXIMATE
WETLAND DELINEATION

CBBEL# 21-0330

DATE: 6/30/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 100 '
DWN.	KEK		USER:	kkopija
CHKD.	JMA		PLOT DATE:	6/30/2021
FILE NAME:	210330_AWD			

EXH 7

P:\EDMUND BURKE\210330\210330_AWD.mxd

APPENDIX B – FLORISTIC INVENTORIES

SITE: Burke Residence
LOCALE: College Drive, Nap
BY: Jedd Anderson - CBBEL
NOTES: October 5, 2021

CONSERVATISM-BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	2.41	SPECIES RICHNESS (ALL)	40
MEAN C (ALL SPECIES)	1.63	SPECIES RICHNESS (NATIVE)	27
MEAN C (NATIVE TREES)	1.60	% NON-NATIVE	0.33
MEAN C (NATIVE SHRUBS)	0.00	WET INDICATOR (ALL)	-0.43
MEAN C (NATIVE HERBACEOUS)	2.70	WET INDICATOR (NATIVE)	-0.67
FQAI (NATIVE SPECIES)	12.51	% HYDROPHYTE (MIDWEST)	0.83
FQAI (ALL SPECIES)	10.28	% NATIVE PERENNIAL	0.53
ADJUSTED FQAI	19.78	% NATIVE ANNUAL	0.15
% C VALUE 0	0.50	% ANNUAL	0.15
% C VALUE 1-3	0.28	% PERENNIAL	0.83
% C VALUE 4-6	0.20		
% C VALUE 7-10	0.03		

SPECIES NAME (NWPL/ MOHLENBROCK)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)
Acalypha rhomboidea	Common Three-Seed-Mercury	0	FACU	FACU	1
Acer negundo	Ash-Leaf Maple	0	FAC	FAC	0
Acer saccharinum	Silver Maple	1	FACW	FACW	-1
Agrostis gigantea	Black Bent	0	FACW	FACW	-1
Alliaria petiolata	Garlic-Mustard	0	FAC	FACU	0
Alnus glutinosa	European Alder	0	FACW	FACW	-1
Ambrosia artemisiifolia	Annual Ragweed	0	FACU	FACU	1
Ambrosia trifida	Great Ragweed	0	FAC	FAC	0
Bidens frondosa	Devil's-Pitchfork	1	FACW	FACW	-1
Boehmeria cylindrica	Small-Spike False Nettle	5	OBL	OBL	-2
Calystegia sepium	Hedge False Bindweed	1	FAC	FAC	0
Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1
Cirsium arvense	Canadian Thistle	0	FACU	FACU	1
Elymus canadensis	Nodding Wild Rye	4	FACU	FACU	1
Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2

Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0
Frangula alnus	Glossy False Buckthorn	0	FACW	FAC	-1
Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1
Glechoma hederacea	Groundivy	0	FACU	FACU	1
Glyceria striata	Fowl Manna Grass	4	OBL	OBL	-2
Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1
Iris virginica var. shrevei	Virginia Blueflag	5	OBL	OBL	-2
Lobelia cardinalis	Cardinal-Flower	7	OBL	OBL	-2
Lonicera maackii	Amur Honeysuckle	0	UPL	UPL	2
Lonicera tatarica	Twinsisters	0	FACU	FACU	1
Panicum virgatum	Wand Panic Grass	3	FAC	FAC	0
Persicaria lapathifolia	Dock-Leaf Smartweed	0	FACW	FACW	-1
Phalaris arundinacea	Reed Canary Grass	0	FACW	FACW	-1
Poa pratensis	Kentucky Blue Grass	0	FAC	FACU	0
Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0
Rhamnus cathartica	European Buckthorn	0	FAC	FAC	0
Rumex crispus	Curly Dock	0	FAC	FAC	0
Silphium perfoliatum	Cup-Plant	5	FACW	FACW	-1
Solanum dulcamara	Climbing Nightshade	0	FAC	FAC	0
Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1
Symphyotrichum lanceolatum	White Panicled American-Aster	3	FAC	FACW	0
Symphyotrichum lateriflorum	Farewell-Summer	4	FACW	FAC	-1
Toxicodendron radicans	Eastern Poison-Ivy	2	FAC	FAC	0
Ulmus americana	American Elm	3	FACW	FACW	-1
Vitis riparia	River-Bank Grape	1	FACW	FAC	-1

Pond 1 – Floristic Inventory - Burke Residence – CBBEL Project No. 210330

CONSERVATISM-BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	1.40	SPECIES RICHNESS (ALL)	9
MEAN C (ALL SPECIES)	0.78	SPECIES RICHNESS (NATIVE)	5
MEAN C (NATIVE TREES)	1.25	% NON-NATIVE	0.44
MEAN C (NATIVE SHRUBS)	0.00	WET INDICATOR (ALL)	-0.22
MEAN C (NATIVE HERBACEOUS)	n/a	WET INDICATOR (NATIVE)	-0.40
FQAI (NATIVE SPECIES)	3.13	% HYDROPHYTE (MIDWEST)	0.89
FQAI (ALL SPECIES)	2.33	% NATIVE PERENNIAL	0.56
ADJUSTED FQAI	10.43	% NATIVE ANNUAL	0.00
% C VALUE 0	0.67	% ANNUAL	0.00
% C VALUE 1-3	0.22	% PERENNIAL	1.00
% C VALUE 4-6	0.11		
% C VALUE 7-10	0.00		

SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)
Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0
Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1
Frangula alnus	RHAMNUS FRANGULA	Glossy False Buckthorn	0	FACW	FAC	-1
Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima; Fraxinus lanceolata	Green Ash	4	FACW	FACW	-1
Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1

Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0
Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0
Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0
Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	FAC	0

APPENDIX C – SITE PHOTOGRAPHS

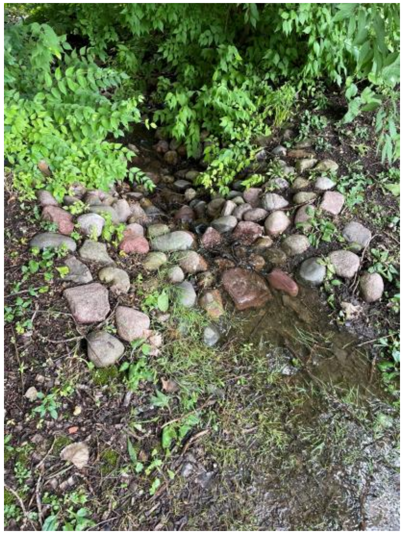
Wetland 1

Wetland 1

Wetland 1

Wetland 1

Fringe of Wetland 1



Overflow of Pond 1 to Wetland 1

Pond 1

Pond 1 Fringe

Pond 1

Pond 1

Pond 1 Fringe

Pond 1 Fringe South End

APPENDIX D – DATA FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Burke Residence 210330 City/County: DuPage Sampling Date: 06/29/21

Applicant/Owner: Edmund Burke State: IL Sampling Point: 1A

Investigator(s): Jedd Anderson Section, Township, Range: 28, T38N, R10E

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

Slope (%): 0 Lat: 41.752905 Long: -88.097780 Datum: WGS 84

Soil Map Unit Name: Ashkum Silty Clay Loam 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 ___
Hydric Soil Present?	Yes x	No ___
Wetland Hydrology Present?	Yes x	No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

Remarks:
Fringe of excavated pond.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	2	No	FAC
2. *Acer saccharinum*	2	No	FACW
3.			
4.			
5.			
	4	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	70	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	72	x 3 =	216
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	74 (A)		220 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 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.)
Mowed lawn next to excavated pond.

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)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	80	10YR 4/2	5			Loamy/Clayey	

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ 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)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 1
Water Table Present?	Yes x	No ___	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0

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: Burke Residence 210330 City/County: DuPage Sampling Date: 06/29/21

Applicant/Owner: Edmund Burke State: IL Sampling Point: 1A

Investigator(s): Jedd Anderson Section, Township, Range: 28, T38N, R10E

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

Slope (%): 0 Lat: 41.752905 Long: -88.097780 Datum: WGS 84

Soil Map Unit Name: Ashkum 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 ___
Hydric Soil Present?	Yes 0	No x
Wetland Hydrology Present?	Yes 0	No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*	20	Yes	FAC
2. *Lonicera tatarica*	10	Yes	FACU
3.			
4.			
5.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia*	1	No	FACW
2.			
	1	=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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	1	x 2 =	2
FAC species	70	x 3 =	210
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	81 (A)		252 (B)

Prevalence Index = B/A = 3.11

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)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	80		5			Loamy/Clayey	fill material

[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)
- ___ Dark Surface (S7)
- ___ 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)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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: Burke Residence 210330 City/County: DuPage Sampling Date: 06/29/21

Applicant/Owner: Edmund Burke State: IL Sampling Point: 2A

Investigator(s): Jedd Anderson Section, Township, Range: 28, T38N, R10E

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

Slope (%): 0 Lat: 41.752905 Long: -88.097780 Datum: WGS 84

Soil Map Unit Name: Pond NWI classification: PUBGx

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:
Fringe of excavated pond.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	2	No	FAC
2. *Acer saccharinum*	2	No	FACW
3.			
4.			
5.			
	4	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	70	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	72	x 3 =	216
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	74 (A)		220 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 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.)
Fringe of excavated Pond.

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)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	80	10YR 4/2	5			Loamy/Clayey	fill material

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ 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)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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:
Fringe of excavated pond

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 1
Water Table Present?	Yes x	No ___	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks:
Fringe of Excavated Pond.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Burke Residence 210330 City/County: DuPage Sampling Date: 06/29/21

Applicant/Owner: Edmund Burke State: IL Sampling Point: 2B

Investigator(s): Jedd Anderson Section, Township, Range: 28, T38N, R10E

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

Slope (%): 0 Lat: 41.752905 Long: -88.097780 Datum: WGS 84

Soil Map Unit Name: Pond NWI classification: PUBGx

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** ___ **No** X
Hydric Soil Present?	Yes ___	No X	
Wetland Hydrology Present?	Yes ___	No x	

Remarks:
Fringe of excavated pond.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	90	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		270 (B)

Prevalence Index = B/A = 3.00

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.)
Mowed lawn next to excavated pond.

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 %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	80					Loamy/Clayey	fill material

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ 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)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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:
Fringe of excavated pond in mowed lawn

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:
Fringe of Excavated Pond in mowed lawn.

TAB 5 – BUFFER REQUIREMENTS

A buffer, as defined by the DuPage County Countywide Stormwater and Flood Plain Ordinance (Ordinance), is the predominately vegetated area with a defined width adjacent to those areas that meet the definition of wetland and waters of DuPage for the purpose of eliminating or minimizing adverse impacts to those areas. As such buffers are present within the scope of the project.

Sec.15-92. Identification of Buffers:

A. Buffer areas for wetlands shall extend from the edge of the delineated wetland. Buffer for those portions of non-wetland waters of DuPage shall extend from the ordinary high water mark (OHWM):

    15-92.A.1 A property may contain a buffer area that originates from another property.

    15-92.A.2 Buffer widths for wetland shall be as follows:

    15-92.A.2.a. One hundred (100) feet for critical wetlands, except as noted in Section 15-92.B.2.

    15-92.A.2.b. Fifty (50) feet for regulatory wetlands, except as noted in Section 15-92.B.2.
    Regulatory wetlands are present and the buffer from the limit of the wetland is 50'.

B. Buffer for non-wetland waters of DuPage shall be a minimum width of fifteen (15) feet and a maximum width matching the regulatory flood plain. Width shall be determined as follows for the following situations:

    15-92.B.1.b. 15-92.B.1.a. Where there is no regulatory flood plain study, and the drainage area is over one hundred (100) acres, then the required site specific BFE study in Section 15-80 will define a 100-yr flood elevation for the site and that elevation shall be used to set the buffer width, except as noted in Section 15-92.B.2. Waters of DuPage which have a drainage area of less than one hundred (100) acres and no flood study has been performed will have a buffer of fifteen (15) feet, except as noted in Section 15-92.B.2.
    No floodplain is mapped in the project area and the drainage area is less than 100 acres. Therefore, the non-wetland Waters of DuPage buffer is 15'.

    15-92.B.1.c. For purposes of regulation under this Ordinance, the applicant may choose to accept the 100-year flood plain limit as the buffer, or he may submit documentation addressing the buffer functions and request the Administrator's or Director's concurrence that a buffer limit between the 100-year flood plain and fifteen (15) feet from OHWM is appropriate.

Not applicable. no floodplain is mapped in the project area.

15-92.B.2 Buffer does not include impervious non-vegetated surfaces, permanent structures or buildings. In addition, non-wetland waters of DuPage County buffer does not include maintained lawn or associated maintained landscape plantings within the limits of the 100 year flood plain that are more than fifty (50) feet from the limits of the waters.
Noted. An existing paved driveway is present in the buffer of wetland 1. It is understood that this area is not considered buffer.

<u>Sec. 15-94. Development Affecting a Buffer</u>

A. Vegetative Maintenance within buffer may be allowed through issuance of a Letter of Permission under the following conditions.

15-94.A.1 A written description of the development goals, objectives and management plan must be provided for approval to the Director or Administrator in a Waiver Community, as long as the development does not require Stormwater Management Certification for any other aspect of the development, the Director or Administrator of a Waiver Community may issue a Letter of Permission to allow the maintenance activity.

15-94.A.2 Maintained lawn or landscape planting beds have limited buffer function and may be replaced in kind.
Not applicable, a letter of permission is not being requested.

B. Development of buffer, or a reduction in width, function, or the removal of native vegetation, shall not occur without mitigation.

15-94.B.1 Mitigation for buffer impact does not require one for one replacement of the area impacted. Replacement of impacted function takes precedent over replacement of area.

15-94.B.2 Impacts to buffers shall consider the effectiveness of the natural functions and mitigate those functions to the extent practicable.
Impacts to the buffer, which are a result of renovating the driveway, all occur in areas that currently exist as mowed turf. .015 acre of turf grass will be converted to driveway while .020 acre of driveway will be converted to turf grass. Additionally, a portion of the renovated driveway will be permeable pavers which will improve water quality to the wetland and pond. As turf is not recognized to serve ecological functions, no mitigation of buffer impacts is proposed.

C. Buffer mitigation design shall incorporate native, non-invasive species and be designed to duplicate or improve the hydrologic and biologic function of the original buffer unless documentation is provided to support establishment of alternative communities. When native plantings are required as part of a mitigation development, the plantings shall be native to Northeastern Illinois as defined by *Plants of the Chicago Region.*
No buffer mitigation is proposed.

D. Buffer mitigation shall meet certification requirements, associated performance standards, and shall undergo a maintenance and monitoring period, as required in the Stormwater Management Certification. Performance Standards are found in Appendix B. Applicants may choose to use the Performance Standards found in Appendix B, or the Applicant may prepare and submit individualized site specific standards for review and approval.
Buffer mitigation is not proposed.

15-94.D.1 Upon inspection, if the buffer mitigation meets certification requirements and performance standards during or at the end of the monitoring period, the Director, or Administrator in a Complete Waiver Community shall issue regulatory signoff.
Noted.

15-94.D.2 If the buffer mitigation area is not considered a success within the approved monitoring period, additional measures shall be required to bring the site into compliance.
Noted.

E. Development affecting a wetland buffer shall be initiated only after a mitigation plan has been approved and adequate securities are provided as specified in Article VI of this Ordinance.
Noted.

F. Mitigation is considered separate from other development components, and requires a performance security be established in accordance with Article VI for the completion of the mitigation development.
Not applicable. No mitigation is proposed.

G. The certification holder shall provide annual monitoring reports documenting progress towards meeting the approved performance standards. The Director or Administrator may require the certification holder to undertake remedial action to bring the area into compliance with the mitigation plan. The monitoring reports shall include relevant data and observations taken during the growing season and shall be submitted no later than January 31st of the following year until performance standards are met and accepted.
Not applicable.

H. If property ownership is changed during the management and monitoring period, the applicant shall provide formal written notification to the Director or Administrator. The notification shall contain complete contact information including certification number(s), owner(s) names(s), street address(s), phone number(s) (office, fax, mobile), email address(s), etc. The certification holder must notify the future owners(s) of their obligations regarding certification conditions and maintenance and monitoring requirements for the subject development as they relate to the Stormwater Management Certification and to submit written confirmation from the receiving party accepting these responsibilities.
Noted.

I. Features of a naturalized stormwater management system, such as stormwater structures, infiltration trenches, vegetated swales, filter strips, site runoff storage ponds, compensatory storage areas, may be within the buffer area, provided the system is set back to a minimum of fifty percent (50%) of the required buffer width and the buffer functions, if impacted, are mitigated.
No BMPs are proposed.

J. Access through buffer areas shall be allowed, when necessary, for maintenance purposes.
Noted.

TAB 6 – PCBMPS

Per Article 8 of the Dupage County Stormwater Ordinance, post construction PCBMPs are required for projects where the proposed net new impervious area exceeds 2,500 sq. ft. Due to this site being divided into two lots, the 2,500 square foot requirement is to be split between the two lots. It is proposed that Lot 1 should have a PCBMP threshold of 300 square feet and Lot 2 should have a PCBMP threshold of 2,200 square feet. Lot 2 has a proposed net new impervious area of 2,097 sq. ft., therefore PCBMPs are not required. After removing the proposed net new impervious, Lot 1 will have an allowable net new impervious allocation of 300 square feet and Lot 2 will have an allowable net new impervious allocation of 124 square feet that may be utilized for future projects.

TAB 7 – SOIL EROSION AND SEDIMENT CONTROL

EROSION AND SEDIMENT CONTROL SCHEDULE OF IMPLEMENTATION

1. Sediment and Erosion Control measures will be installed prior to the commencement of work.
2. The disturbed areas of the property shall be stabilized with seed and blanket immediately after ground disturbances.

NOTE: All erosion control items shall be maintained throughout the project duration and until all areas are permanently stabilized.

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

Erosion Control Blankets:

1. Shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
2. Blanket should be replaced if it becomes ineffective before ground has become permanently stabilized.

Other:

1. Sediment should be removed from the roadway after each rainfall.
2. Fix any damage that may occur to roadway or turf outside project limits.
3. Except as prevented by inclement weather conditions, all disturbed areas to remain inactive for more than fourteen days will be stabilized by seeding, sodding, mulching, covering, or by other equivalent erosion control measures within seven days. Permanent soil stabilization shall be provided within seven days after final grade is established.
4. All temporary erosion and sediment control practices shall be removed and disposed of within thirty days after site stabilization is achieved or after the temporary practices are no longer needed. Trapped sediment shall be permanently stabilized to prevent further erosion.

COMMITMENT AND RESPONSIBILITY

Mr. Burke will be the responsible entity for the long-term funding, operation, and maintenance activities for stormwater facilities, as described in this document.

CONSTRUCTION TIMELINE

Winter 2021 – Install erosion control measures at location as indicated on plans
Winter 2021 – Strip existing topsoil and stockpile
Winter 2021 – Provide silt fence or sediment trench around stockpile
Winter 2021 – Perform mass grading on site
Winter 2021 – Construct single family home
Spring 2022 – Install sanitary service and water service
Spring 2022 – Install pavement and landscaping

Tab 8 - EXHIBITS

Exhibit 1: PROJECT LOCATION MAP

Exhibit 2: NATIONAL WETLAND INVENTORY MAP

Exhibit 3: AERIAL MAP

Exhibit 4: NRCS SOILS MAP

Exhibit 5: FLOOD INSURANCE RATE MAP

Exhibit 6: DUPAGE COUNTY TOPOGRAPHY MAP

Exhibit 7: DUPAGE COUNTY WETLAND MAP

Exhibit 8: WETLAND LOCATION MAP

Exhibit 9: LOT SUBDIVISION

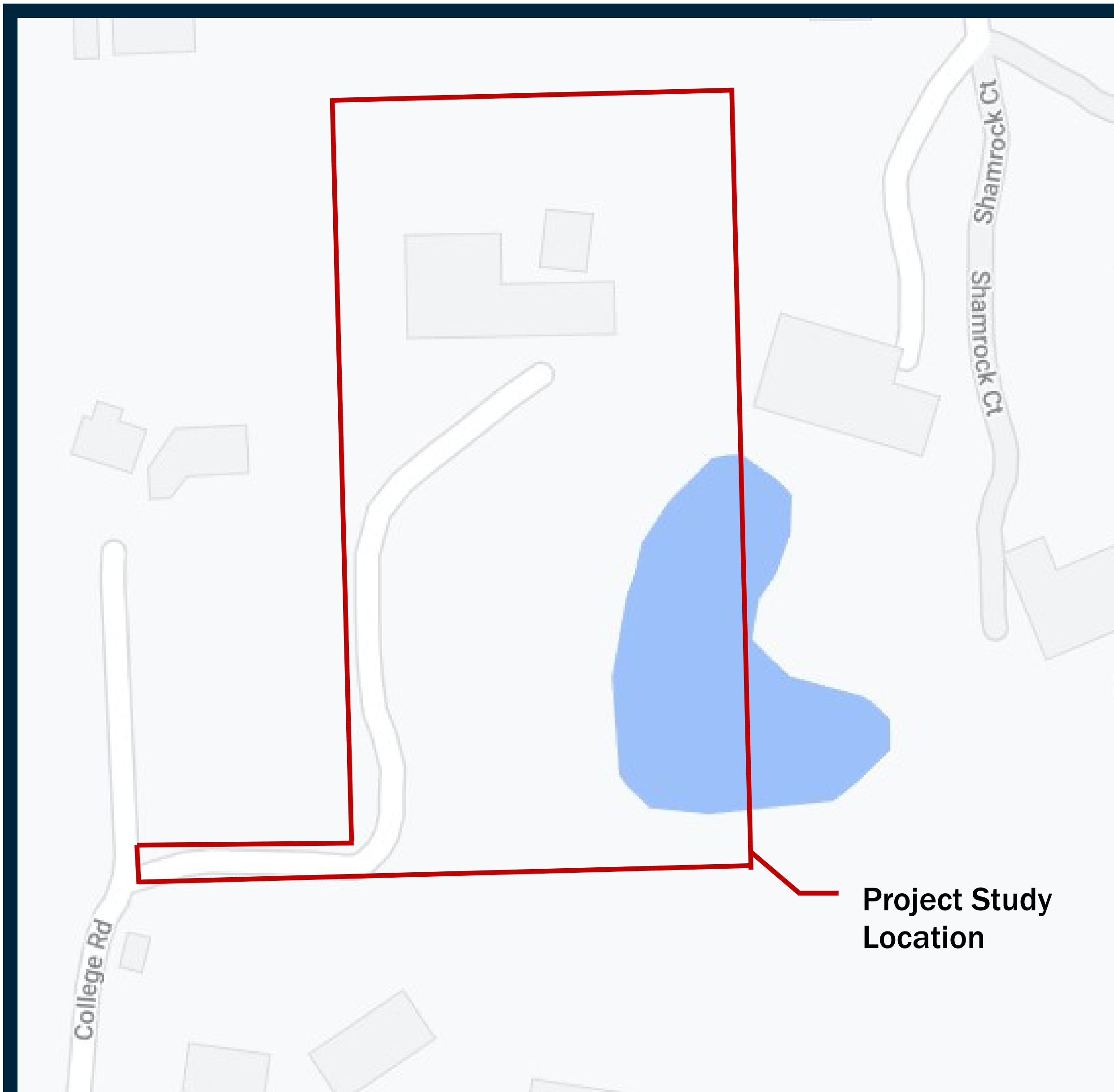


Exhibit 1
Project Location
Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Not to Scale

Client:	DJK Custom Homes
Project Name:	8s201 Old College Rd
ERA Project #:	W21154.00
Source :	Google Maps

ENGINEERING RESOURCE ASSOCIATES
Engineering Resource Associates, Inc.
3S701 West Avenue, Suite 150
Warrenville, IL 60555
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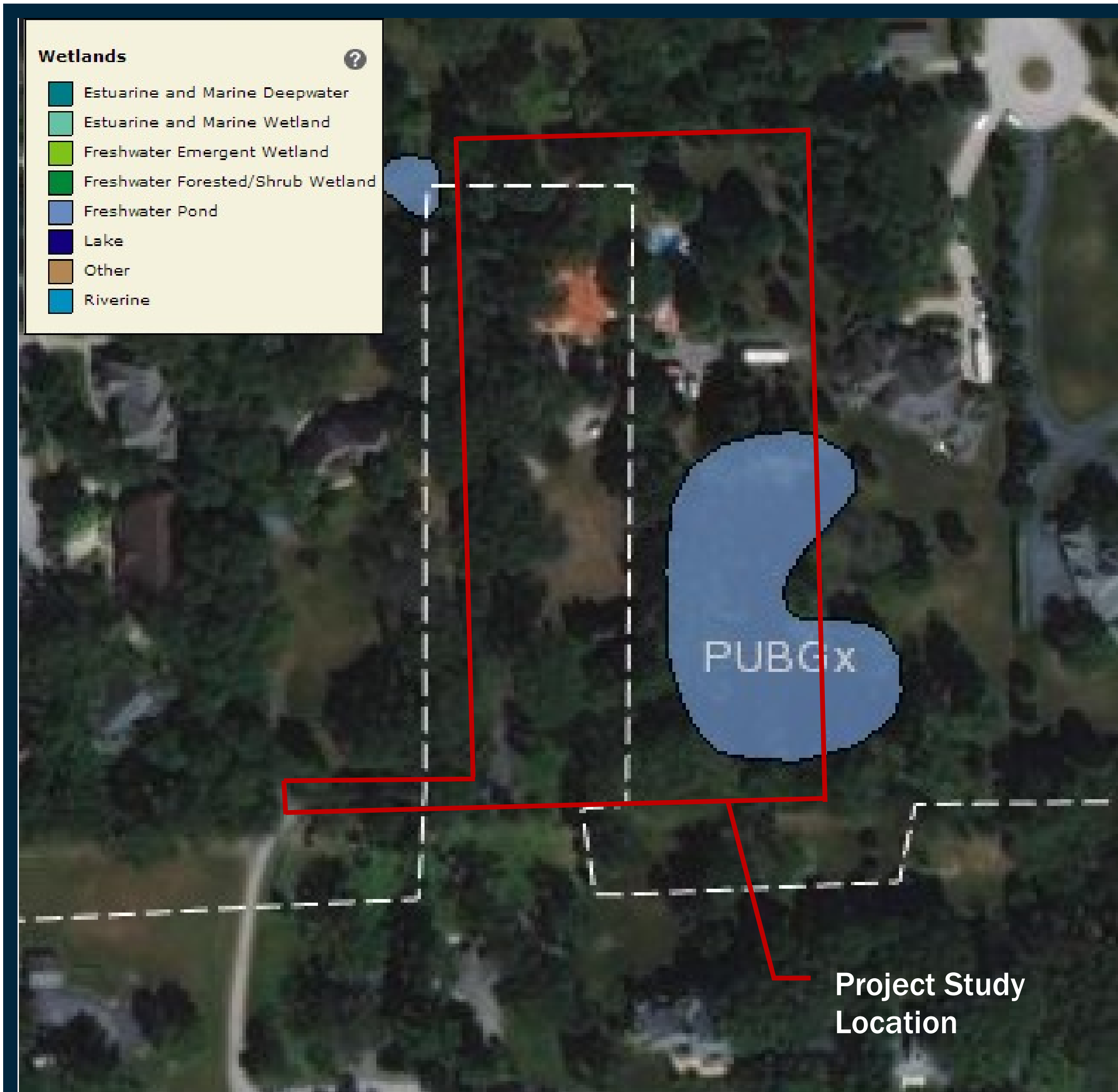

Exhibit 2
National Wetland Inventory Map
Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Not to Scale

Client:	**DJK Custom Homes**
Project Name:	**8s201 Old College Road**
ERA Project #:	**W21154.00**
Source :	**U.S. FWS NWI**

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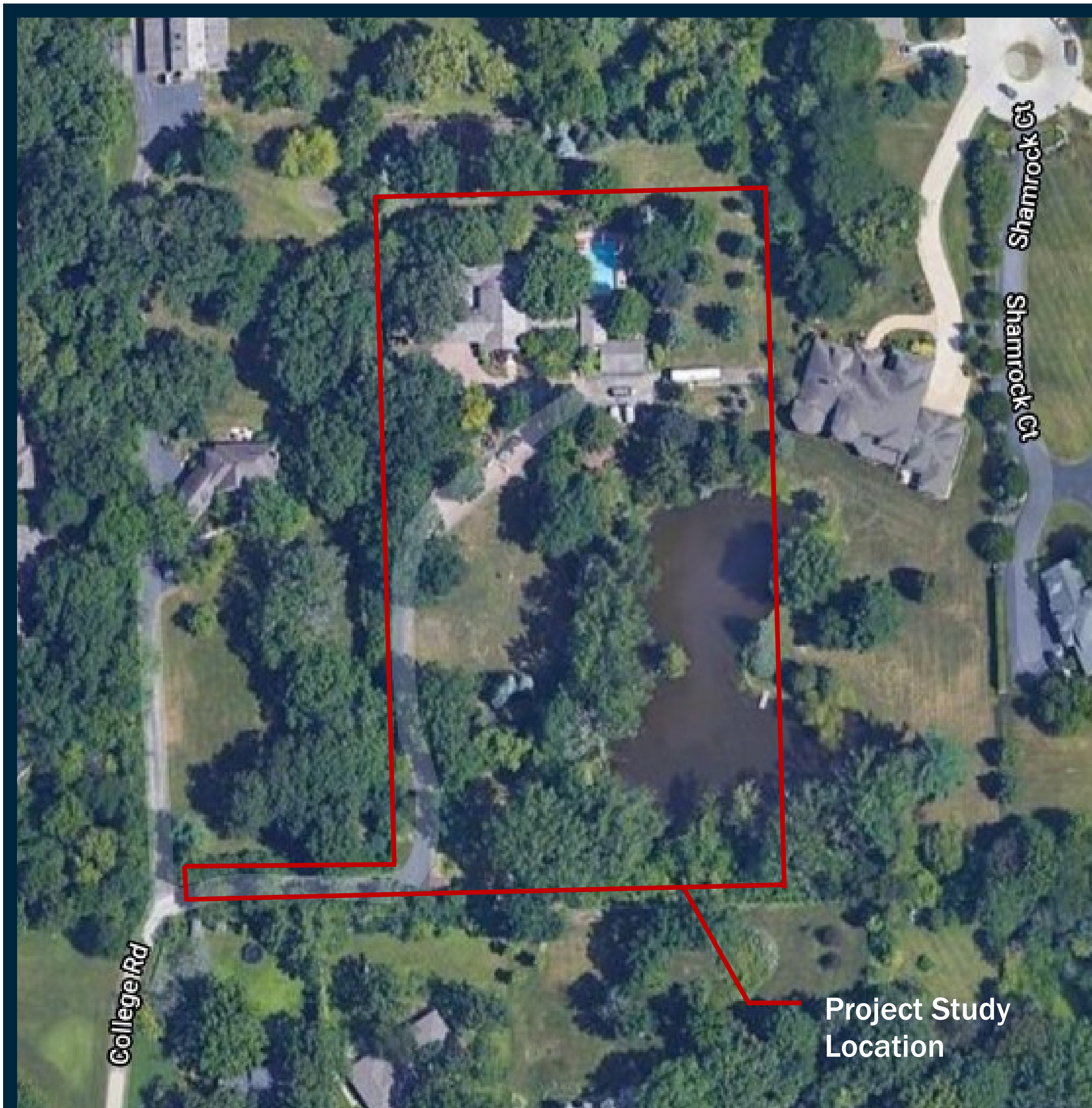

Exhibit 3
Aerial Photo
Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Not to Scale

Client:	DJK Custom Homes
Project Name:	106 Old College Road
ERA Project #:	W21154.00
Source :	Google Maps

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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
23B	Blount silt loam, Lake Michigan Lobe, 2 to 4 percent slopes	0.1	2.3%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	2.6	65.1%
298A	Beecher silt loam, 0 to 2 percent slopes	.8	19.8%
W	Water	.5	12.8%
Totals for Area of Interest		4.0	100.0%

Exhibit 4
NRCS Soils Map
Lat/Long: 41.753169°, -88.097772°

NORTH

Client: DJK Custom Homes
Project Name: 8s201 Old College Road
ERA Project #: W21154.00
Source : USDA

Not to Scale

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Exhibit 5
Flood Insurance Rate Map
Lat/Long: 41.753169°, -88.097772°

Project Study Location

Client: DJK Custom Homes
Project Name: 8s201 Old College Road
ERA Project #: W21154.00
Source : FEMA

NORTH
Not to Scale

- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- A
- AE
- FLOODWAY
- AH
- AO
- X PROTECTED BY LEVEE

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Exhibit 6
DuPage Topography Map
Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Client:	DJK Custom Homes
Project Name:	8s201 Old College Road
ERA Project #:	W21154.00
Source :	DuPage GIS

Not to Scale

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Exhibit 7

DuPage County Wetland Map

Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Not to Scale

Client:	**DJK Custom Homes**
Project Name:	**8s201 Old College Road**
ERA Project #:	**W21154.00**
Source :	**DuPage GIS**

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Exhibit 8
Wetland Location Map
Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Not to Scale

Client:	DJK Custom Homes
Project Name:	8s201 Old College Road
ERA Project #:	W21154.00
Source :	DuPage GIS

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TOTAL ALLOWABLE NET NEW IMPERVIOUS:	2,500 S.F.
TOTAL NET NEW IMPERVIOUS:	2,076 S.F.
FUTURE ALLOCATION FOR NET NEW IMPERVIOUS AREA AS FOLLOWS:	
LOT 1	300 S.F.
LOT 2	124 S.F.
TOTAL REMAINING AREA	424 S.F.

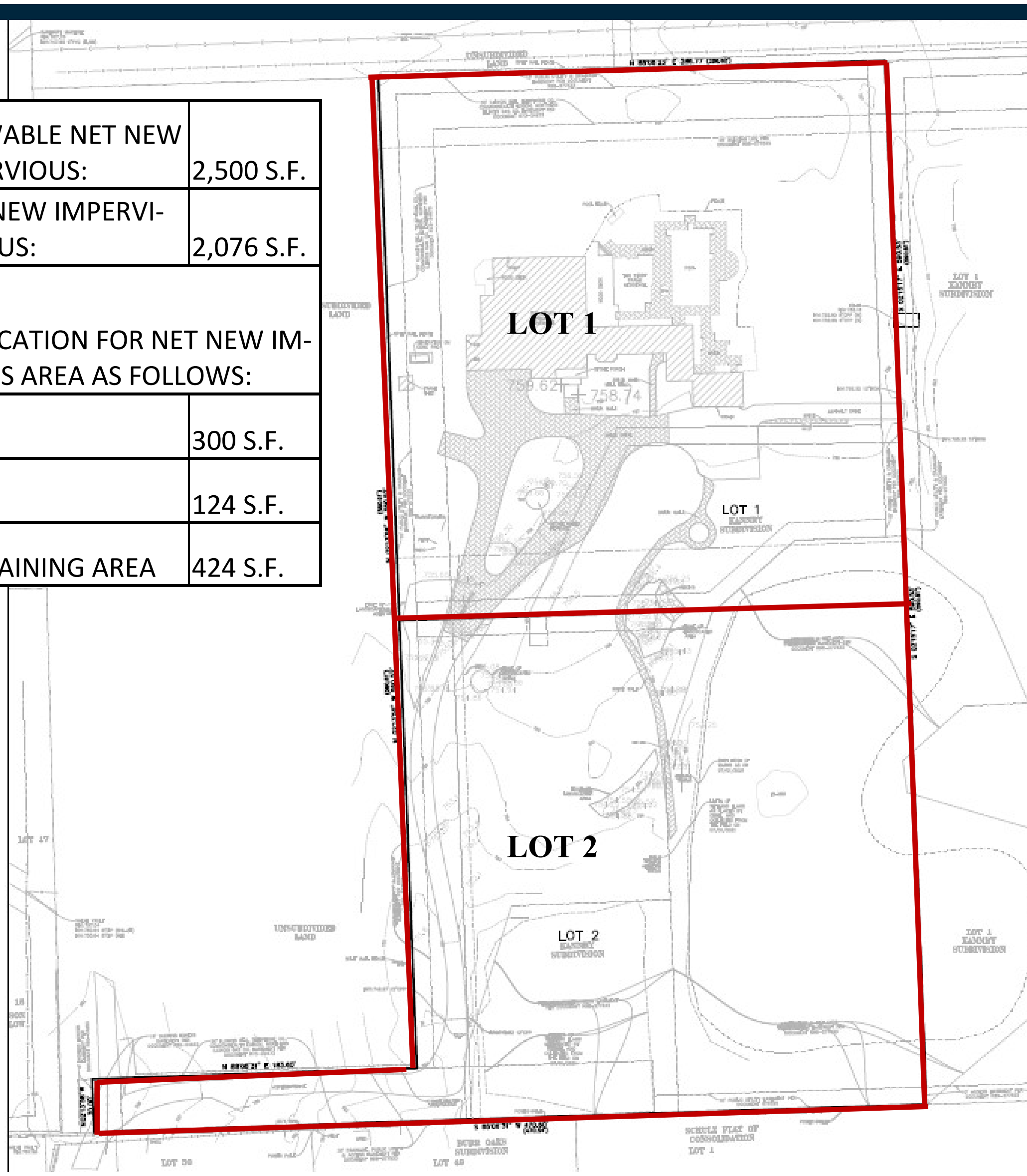

Exhibit 9
Lot Subdivision
Lat/Long: 41.753169°, -88.097772°

Project Study Location

NORTH

Not to Scale

Client:	**DJK Custom Homes**
Project Name:	**8s201 Old College Road**
ERA Project #:	**W21154.00**
Source :	**Engineering Resource Associates, Inc.**

TAB 9 – SECURITY

ENGINEERING RESOURCE ASSOCIATES, INC.
Consulting Engineers, Scientists & Surveyors

Engineers Opinion of Probable Cost 8/12/2021
8s201 Old College Road, Naperville, IL

DESCRIPTION	UNIT	TOTAL QUANTITY	UNIT COST	TOTAL COST
SILT FENCE	L.F.	1480.00	$ 3.00	$ 4,440.00
1-1/2" Type 'K' Water Service	L.F.	613.00	$ 16.00	$ 9,808.00
Chain Link Tree Protection Fence	L.F.	798.00	$ 15.00	$ 11,970.00
6" TOPSOIL RESPREAD AND SOD (DISTURBED AREA)	S.Y.	700.00	$ 15.00	$ 10,500.00
6" PVC SDR 6 Sanitary Service	L.F.	667.00	$ 7.00	$ 4,669.00
Topsoil Stripping (6" Depth)	S.Y.	1600.00	$ 3.00	$ 4,800.00
			TOTAL	**$ 46,187.00**