$202,741.58

BID OF HEARTLAND ECOLOGICAL GROUP, INC

2023

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

LOWER BADGER MILL PONDS RESTORATION

CONTRACT NO. 9390

PROJECT NO. 14980

MUNIS NO. 14980

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL
MADISON, WISCONSIN ON **JANUARY 23, 2024**

CITY ENGINEERING DIVISION
1600 EMIL STREET
MADISON, WISCONSIN 53713

https://bidexpress.com/login

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

INDEX

This Proposal, and Agreement have
been prepared by:

CITY ENGINEERING DIVISION
CITY OF MADISON
MADISON, DANE COUNTY, WISCONSIN

James M. Wolfe, P.E., City Engineer

JMW: scl

SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION
CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO.:	9390
SBE GOAL	18%
BID BOND	5%
SBE PRE BID MEETING (2:00P.M.)	12/07/2023 (VIRTUAL)
PREQUALIFICATION APPLICATION DUE (2:00 P.M.)	12/14/2023
BID SUBMISSION (2:00 P.M.)	12/21/2023
BID OPEN (2:30 P.M.)	12/21/2023
PUBLISHED IN WSJ	11/30/2023, 12/7/2023 & 12/14/2023

SBE PRE BID MEETING: Pre-Bid Meetings are being held virtually. Advance registration is required. Visit the SBE Meeting web page on Engineering's web site: https://www.cityofmadison.com/engineering/developers-contractors/contractors/how-to-bid-public-works-contracts/small-business. Questions regarding SBE Program requirements may be directed to Tracy Lomax, Affirmative Action Division. Tracy may be reached at (608) 267-8634, or by email, TLomax@cityofmadison.com.

PREQUALIFICATION APPLICATION: Forms are available on our website, www.cityofmadison.com/engineering/developers-contractors/contractors/how-to-get-prequalified. If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

BIDS TO BE SUBMITTED: by hand to 1600 EMIL ST., MADISON, WI 53713 or online at www.bidexpress.com.

Bids may be submitted on line through Bid Express or in person at 1600 Emil St. The bids will be posted on line after the bid opening. If you have any questions, please call Alane Boutelle at (608) 267-1197, or John Fahrney at (608) 266-9091.

STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2023 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, www.cityofmadison.com/engineering/developers-contractors/standard-specifications.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102, "BIDDING REQUIREMENTS AND CONDITIONS" and Article 103, "AWARD AND EXECUTION OF THE CONTRACT." For the convenience of the bidder, below are highlights of three subsections of the specifications.

SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be pre-qualified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)I. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

SECTION 102.4 PROPOSAL

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express (www.bidexpress.com). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond (City of Madison form) equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Nothwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an ☒

Building Demolition

101 ☐ Asbestos Removal
120 ☐ House Mover
110 ☐ Building Demolition

Street, Utility and Site Construction

201 ☐ Asphalt Paving
205 ☐ Blasting
210 ☐ Boring/Pipe Jacking
215 ☐ Concrete Paving
220 ☐ Con. Sidewalk/Curb & Gutter/Misc. Flat Work
221 ☐ Concrete Bases and Other Concrete Work
222 ☐ Concrete Removal
225 ☐ Dredging
230 ☐ Fencing
235 ☐ Fiber Optic Cable/Conduit Installation
240 ☐ Grading and Earthwork
241 ☐ Horizontal Saw Cutting of Sidewalk
242 ☐ Hydro Excavating
243 ☐ Infrared Seamless Patching
245 ☐ Landscaping, Maintenance
246 ☒ Ecological Restoration
250 ☐ Landscaping, Site and Street
251 ☐ Parking Ramp Maintenance
252 ☐ Pavement Marking
255 ☐ Pavement Sealcoating and Crack Sealing
260 ☐ Petroleum Above/Below Ground Storage Tank Removal/Installation
262 ☐ Playground Installer
265 ☐ Retaining Walls, Precast Modular Units
270 ☐ Retaining Walls, Reinforced Concrete
275 ☐ Sanitary, Storm Sewer and Water Main Construction
276 ☐ Sawcutting
280 ☐ Sewer Lateral Drain Cleaning/Internal TV Insp.
285 ☐ Sewer Lining
290 ☐ Sewer Pipe Bursting
295 ☐ Soil Borings
300 ☐ Soil Nailing
305 ☐ Storm & Sanitary Sewer Laterals & Water Svc.
310 ☐ Street Construction
315 ☐ Street Lighting
318 ☐ Tennis Court Resurfacing
320 ☐ Traffic Signals
325 ☐ Traffic Signing & Marking
332 ☐ Tree pruning/removal
333 ☐ Tree, pesticide treatment of
335 ☐ Trucking
340 ☐ Utility Transmission Lines including Natural Gas, Electrical & Communications
399 ☐ Other_____

Bridge Construction

501 ☐ Bridge Construction and/or Repair

Building Construction

401 ☐ Floor Covering (including carpet, ceramic tile installation, rubber, VCT
402 ☐ Building Automation Systems
403 ☐ Concrete
404 ☐ Doors and Windows
405 ☐ Electrical - Power, Lighting & Communications
410 ☐ Elevator - Lifts
412 ☐ Fire Suppression
413 ☐ Furnishings - Furniture and Window Treatments
415 ☐ General Building Construction, Equal or Less than $250,000
420 ☐ General Building Construction, $250,000 to $1,500,000
425 ☐ General Building Construction, Over $1,500,000
428 ☐ Glass and/or Glazing
429 ☐ Hazardous Material Removal
430 ☐ Heating, Ventilating and Air Conditioning (HVAC)
433 ☐ Insulation - Thermal
435 ☐ Masonry/Tuck pointing
437 ☐ Metals
440 ☐ Painting and Wallcovering
445 ☐ Plumbing
450 ☐ Pump Repair
455 ☐ Pump Systems
460 ☐ Roofing and Moisture Protection
464 ☐ Tower Crane Operator
461 ☐ Solar Photovoltaic/Hot Water Systems
465 ☐ Soil/Groundwater Remediation
466 ☐ Warning Sirens
470 ☐ Water Supply Elevated Tanks
475 ☐ Water Supply Wells
480 ☐ Wood, Plastics & Composites - Structural & Architectural
499 ☐ Other_____
_____

State of Wisconsin Certifications

1 ☐ Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
2 ☐ Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
3 ☐ Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
4 ☐ Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
5 ☐ Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application: www.dhs.wisconsin.gov/Asbestos/Cert. State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
6 ☐ Certification number as a Certified Arborist or Certified Tree Worker as administered by the International Society of Arboriculture
7 ☐ Pesticide application (Certification for Commercial Applicator For Hire with the certification in the category of turf and landscape (3.0) and possess a current license issued by the DATCP)
8 ☐ State of Wisconsin Master Plumbers License.

SECTION B: PROPOSAL

Please refer to the Bid Express Website at https://bidexpress.com look up contract number and go to Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at www.bidexpress.com

Click on the "Register for Free" button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a 'per bid' basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the 'Digital ID' process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

SECTION C: SMALL BUSINESS ENTERPRISE

Instructions to Bidders
City of Madison
SBE Program Information

2 Small Business Enterprise (SBE) Program Information

2.1 Policy and Goal

The City of Madison reaffirms its policy of nondiscrimination in the conduct of City business by maintaining a procurement process which remains open to all who have the potential and ability to sell goods and services to the City. It is the policy of the City of Madison to allow Small Business Enterprises (SBE) maximum feasible opportunity to participate in City of Madison contracting. The bidder acknowledges that its bid has been submitted in accordance with the SBE program and is for the public's protection and welfare.

Please refer to the "ADVERTISEMENT FOR BIDS" for the goal for the utilization of SBEs on this project. SBEs may participate as subcontractors, vendors and/or suppliers, which provide a commercially useful function. The dollar value for SBE suppliers or 'materials only' vendors shall be discounted to 60% for purposes of meeting SBE goals.

A bidder which achieves or exceeds the SBE goal will be in compliance with the SBE requirements of this project. In the event that the bidder is unable to achieve the SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Failure to either achieve the goal or demonstrate a good faith effort to do so will be grounds for the bidder being deemed a non-responsible contractor ineligible for award of this contract.

A bidder may count towards its attainment of the SBE goal only those expenditures to SBEs that perform a commercially useful function. For purposes of evaluating a bidder's responsiveness to the attainment of the SBE goal, the contract participation by an SBE is based on the percentage of the total base bid proposed by the Contractor. The total base bid price is inclusive of all addenda.

Work performed by an SBE firm in a particular transaction can be counted toward the goal only if it involves a commercially useful function. That is, in light of industry practices and other relevant considerations, does the SBE firm have a necessary and useful role in the transaction, of a kind for which there is a market outside the context of the SBE Program, or is the firm's role a superfluous step added in an attempt to obtain credit towards goals? If, in the judgment of the Affirmative Action Division, the SBE firm will not perform a commercially useful function in the transaction, no credit towards goals will be awarded.

The question of whether a firm is performing a commercially useful function is completely separate from the question of whether the firm is an eligible SBE. A firm is eligible if it meets the definitional criteria and ownership and control requirements, as set forth in the City of Madison's SBE Program.

If the City of Madison determines that the SBE firm is performing a commercially useful function, then the City of Madison must then decide what that function is. If the commercially useful function is that of an SBE vendor / supplier that regularly transacts business with the respective product, then the City of Madison will count 60% of the value of the product supplied toward SBE goals.

To be counted, the SBE vendor / supplier must be engaged in selling the product in question to the public. This is important in distinguishing an SBE vendor / supplier, which has a regular trade with a variety of customers, from a firm which performs supplier-like functions on an ad hoc basis or for only one or two contractors with whom it has a special relationship.

A supplier of bulk goods may qualify as an eligible SBE vendor / supplier if it either maintains an inventory or owns or operates distribution equipment. With respect to the distribution equipment; e.g., a fleet of trucks, the term "operates" is intended to cover a situation in which the supplier leases the equipment on a regular basis for its entire business. It is not intended to cover a situation in which the firm simply provides drivers for trucks owned or leased by another party; e.g., a prime contractor, or leases such a party's trucks on an ad hoc basis for a specific job.

If the commercially useful function being performed is not that of a qualified SBE vendor / supplier, but rather that of delivery of products, obtaining bonding or insurance, procurement of personnel, acting as a broker or manufacturer's representative in the procurement of supplies, facilities, or materials, etc., only the fees or commissions will apply towards the goal.

For example, a business that simply transfers title of a product from manufacturer to ultimate purchaser; e. g., a sales representative who re-invoices a steel product from the steel company to the Contractor, or a firm that puts a product into a container for delivery would not be considered a qualified SBE vendor / supplier. The Contractor would not receive credit based on a percentage of the cost of the product for working with such firms.

Concerning the use of services that help the Contractor obtain needed supplies, personnel, materials or equipment to perform a contract: only the fee received by the service provider will be counted toward the goal. For example, use of a SBE sales representative or distributor for a steel company, if performing a commercially useful function at all, would entitle the Contractor receiving the steel to count only the fee paid to the representative or distributor toward the goal. This provision would also govern fees for professional and other services obtained expressly and solely to perform work relating to a specific contract.

Concerning transportation or delivery services: if an SBE trucking company picks up a product from a manufacturer or a qualified vendor / supplier and delivers the product to the Contractor, the commercially useful function it is performing is not that of a supplier, but simply that of a transporter of goods. Unless the trucking company is itself the manufacturer or a qualified vendor / supplier in the product, credit cannot be given based on a percentage of the cost of the product. Rather, credit would be allowed for the cost of the transportation service.

The City is aware that the rule's language does not explicitly mention every kind of business that may contribute work on this project. In administering these programs, the City would, on a case-by-case basis, determine the appropriate counting formula to apply in a particular situation.

2.2 Contract Compliance

Questions concerning the SBE Program shall be directed to the Contract Compliance Officer of the City of Madison Department of Civil Rights, Affirmative Action Division, 210 Martin Luther King, Jr. Blvd., Room 523, Madison, WI 53703; telephone (608) 266-6510.

2.3 Certification of SBE by City of Madison

The Affirmative Action Division maintains a directory of SBEs which are currently certified as such by the City of Madison. Contact the Contract Compliance Officer as indicated in Section 2.2 to receive a copy of the SBE Directory or you may access the SBE Directory online at www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise.

All contractors, subcontractors, vendors and suppliers seeking SBE status must complete and submit the **Targeted Business Certification Application** to the City of Madison Affirmative Action Division by the time and date established for receipt of bids. A copy of the Targeted Business Certification Application is available by contacting the Contract Compliance Officer at the address and telephone indicated in Section 2.2 or you may access the Targeted Business Certification Application online at www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise. Submittal of the Targeted Business Certification Application by the time specified does not guarantee that the applicant will be certified as a SBE eligible to be utilized towards meeting the SBE goal for this project.

2.4 Small Business Enterprise Compliance Report

2.4.1 Good Faith Efforts

Bidders shall take all necessary affirmative steps to assure that SBEs are utilized when possible and that the established SBE goal for this project is achieved. A contractor who self performs a portion of the work, and is pre-qualified to perform that category of work, may subcontract that portion of the work, but shall not be required to do so. When a bidder is unable to achieve the established SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Such a good faith effort should include the following:

2.4.1.1 Attendance at the pre-bid meeting.

2.4.1.2 Using the City of Madison's directory of certified SBEs to identify SBEs from which to solicit bids.

2.4.1.3 Assuring that SBEs are solicited whenever they are potential sources.

2.4.1.4 Referring prospective SBEs to the City of Madison Affirmative Action Division for certification.

2.4.1.5 Dividing total project requirements into smaller tasks and/or quantities, where economically feasible, to permit maximum feasible SBE participation.

2.4.1.6 Establishing delivery schedules, where requirements permit, which will encourage participation by SBEs.

2.4.1.7 Providing SBEs with specific information regarding the work to be performed.

2.4.1.8 Contacting SBEs in advance of the deadline to allow such businesses sufficient time to prepare a bid.

2.4.1.9 Utilizing the bid of a qualified and competent SBE when the bid of such a business is deemed reasonable (i.e. 5% above the lowest bidder), although not necessarily low.

2.4.1.10 Contacting SBEs which submit a bid, to inquire about the details of the bid and confirm that the scope of the work was interpreted as intended.

2.4.1.11 Completion of Cover Page (page C-6), Summary Sheet (page C-7) and SBE Contact Reports (pages C-8 and C9) if applicable.

2.4.2 **Reporting SBE Utilization and Good Faith Efforts**

The Small Business Enterprise Compliance Report is to be submitted by the bidder with the bid: This report is due by the specified bid closing time and date. Bids submitted without a completed SBE Compliance Report as outlined below may be deemed non-responsible and the bidder ineligible for award of this contract. Nothwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion, performance of the contract, or percentage of SBE utilization.

2.4.2.1 If the Bidder meets or exceeds the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.1.1 **Cover Page,** Page C-6; and
2.4.2.1.2 **Summary Sheet,** C-7.

2.4.2.2 If the bidder does not meet the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.2.1 **Cover Page,** Page C-6;
2.4.2.2.2 **Summary Sheet,** C-7; and
2.4.2.2.3 **SBE Contact Report,** C-8 and C-9. (A separate Contact Report must be completed for each applicable SBE which is not utilized.)

2.5 Appeal Procedure

A bidder which does not achieve the established goal and is found non-responsible for failure to demonstrate a good faith effort to achieve such goal and subsequently denied eligibility for award of contract may appeal that decision to the Small Business Enterprises Appeals Committee. All appeals shall be made in writing, and shall be delivered to and received by the City Engineer no later than 4:30 PM on the third business day following the bidder's receipt of the written notification of ineligibility by the Affirmative Action Division Manager. Postmark not acceptable. The notice of appeal shall state the basis for the appeal of the decision of the Affirmative Action Division Manager. The Appeal shall take place in accordance with Madison General Ordinance 33.54.

2.6 SBE Requirements After Award of the Contract

The successful bidder shall identify SBE subcontractors, suppliers and vendors on the subcontractor list in accordance with the specifications. The Contractor shall submit a detailed explanation of any variances between the listing of SBE subcontractors, vendors and/or suppliers on the subcontractor list and the Contractor's SBE Compliance Report for SBE participation.

No change in SBE subcontractors, vendors and/or suppliers from those SBEs indicated in the SBE Compliance Report will be allowed without prior approval from the Engineer and the Affirmative Action Division. The contractor shall submit in writing to the City of Madison Affirmative Action Division a request to change any SBE citing specific reasons which necessitate such a change. The Affirmative Action Division will use a general test of reasonableness in approving or rejecting the contractor's request for change. If the request is approved, the Contractor will make every effort to utilize another SBE if available.

The City will monitor the project to ensure that the actual percentage commitment to SBE firms is carried out.

2.7 SBE Definition and Eligibility Guidelines

A Small Business Enterprise is a business concern awarded certification by the City of Madison. For the purposes of this program a Small Business Enterprise is defined as:

A. An independent business operated under a single management. The business may not be a subsidiary of any other business and the stock or ownership may not be held by any individual or any business operating in the same or a similar field. In determining whether an entity qualifies as a SBE, the City shall consider all factors relevant to being an independent business including, but not limited to, the date the business was established, adequacy of its resources for the work in which it proposes to involve itself, the degree to which financial, equipment leasing and other relationships exist with other ineligible firms in the same or similar lines of work. SBE owner(s) shall enjoy the customary incidents of ownership and shall share in the risks and profits commensurate with their enjoyment interests, as demonstrated by an examination of the substance rather than form or arrangements that may be reflected in its ownership documents.

B. A business that has averaged no more than $4.0 million in annual gross receipts over the prior three year period and the principal owner(s) do not have a personal net worth in excess of $1.32 million.

Firm and/or individuals that submit fraudulent documents/testimony may be barred from doing business with the City and/or forfeit existing contracts.

SBE certification is valid for one (1) year unless revoked.

SECTION D: SPECIAL PROVISIONS

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

SECTION 102.11: BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than $74,000 for a single trade contract; or equal to or greater than $360,500 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 104 SCOPE OF WORK

This contract and associated plan set describes the work necessary to perform ecological restoration, including tree and shrub planting, invasive species removals, and native seeding at a City of Madison owned property. This contract is referred to as Phase Two of the Lower Badger Mill Ponds project as described under Section 105.12 Cooperation by the Contractor.

The Contractor shall view the site prior to bidding to become familiar with the existing conditions. It will be the responsibility of the Contractor to work with the utilities located in the right of way and easements to resolve conflicts during the construction process.

SECTION 104.4: INCREASED OR DECREASED QUANTITIES

It is agreed and understood that the quantities of any items of work shown on the plans or in the proposal are subject to increase or decrease during the progress of the work. The Engineer reserves the right to increase or decrease the quantities of any items of work, including increase or decrease of quantities by alteration of plans, as may be considered necessary or desirable during the progress of the work to satisfactorily complete the project. Such increases or decreases in quantities shall not be considered as a waiver of any conditions of the contract nor invalidate any of the provisions thereof. All terms of Section 104.5 Increase Items and Section 104.6 Decreased and Deleted Items of the Standard Specifications for Public Works Construction are applicable to this project. All bid items listed in the proposal page shall be paid for at the plan quantity, unless noted otherwise in the special provisions. Bid items that are not used may be eliminated.

SECTION 105.7 CONTRACT DOCUMENTS

The Contractor shall submit the following documents prior to beginning work on any of the associated activities. Once approved by the Engineer, these submittals shall be considered contract documents, to which the Contractor shall adhere. Additional submittal requirements are listed within Article descriptions or individual bid items.

- INVASIVE REMOVAL APPROACH (90014, 90015)
- HERBICIDE CHEMISTRY AND APPLICATION METHOD (90014, 90015)
- BURN PLAN (BID ITEMS 90014, 90015)

SECTION 105.9 SURVEYS, POINTS, AND INSTRUCTIONS

The Contractor shall be responsible for staking out the layout of all plantings, including shrubs, trees, plugs, seeding areas, as shown on the plans or described in the special provisions. An AutoCAD .dwg file will be made available to the Contractor for final staking. The Contractor shall make adjustments based on existing field conditions and the appropriate growing conditions for the proposed species. The Contractor must notify the Engineer 48 hours prior to staking planting areas and plants. The Contractor shall give the Engineer at least ten (10) business days after staking to review plant locations prior to planting. Final planting locations shall be approved by the Engineer prior to planting.

SECTION 105.12 COOPERATION BY THE CONTRACTOR

This work is part of a multiphase project. This work shall include all permanent restoration of areas disturbed in Phase One of the contract as described below. This work shall be referred to in this contract as Phase Two.

Phase One
Phase One was completed in 2023 and included grading and stormwater infrastructure. This work was completed under Contract 8875 Lower Badger Mill Creek Pond. The Contractor shall become familiar with the plans and specifications under contract 8875. Plans and specifications for Contract 8875 are below:

Contract 8875 Lower Badger Mill Creek Pond
https://www.cityofmadison.com/business/pw/contracts/details.cfm?ContractNumber=8875

Phase Two
This contract is Phase Two of development of the larger site. This contract permanently restores all graded areas with Phase One, as well as areas that were not graded.

Phase Three
Phase Three will start in the summer of 2024. This work will including asphalt paving of the existing graded roads, constructing a new asphalt path, and minor regrading to tie into adjacent bike path and road areas. A plan showing the project extents of work in Phase Three is included in Attachment C.

As part of Phase Three construction, the Phase Three contractor shall be required to install construction fencing along the grading extents of Phase Three limits of disturbance. Additionally, the Phase Three contractor shall be prohibited from entering areas outside the construction fence in order to protect areas being restored under this contract.

Private utilities exist in the right of way and easements. The Contractor shall perform a One Call through Digger's Hotline for the site at least three days prior to beginning construction. The Contractor shall allow access to utility companies and resolve any conflicts that may arise during construction. It will be the responsibility of the Contractor to work with the utilities located in the project area to resolve conflicts during the construction process.

The Contractor shall secure materials at the end of each work day to deter any potential damage, loss, vandalism and theft.

The Contractor warrants that its services are performed, within the limits prescribed by the City, with the usual thoroughness and competence of the consulting profession; in accordance with the standard for professional services at the time those services are rendered. The Contractor shall be responsible for the accuracy of the work performed under this Agreement, and shall promptly make necessary revisions or corrections resulting from their negligent acts, errors or omissions without additional compensation. The Contractor shall be responsible for any damages incurred as a result of their errors, omissions, or negligent acts and for any losses or costs to repair or remedy construction.

The Contractor shall attend a pre-construction meeting prior to the start of construction. The Contractor shall use care when accessing the site and during construction not to damage existing trees, plantings, fences, retaining walls, existing utilities, concrete curb, sidewalk, asphalt pavement and other facilities that are in the area to remain. Damage to these items during construction shall be repaired or replaced at the Contractor's expense per the City of Madison Standard Specifications. The Contractor shall use care around all existing trees that are to remain. No trees that are to be preserved shall be cut without the approval of the Engineer. The Contractor shall protect and not disturb vegetation located outside of the limits of disturbance. Orange construction fence and silt fence is noted on the plans to help protect some areas outside of the limits during construction. It shall be the contractor's responsibility to understand where the limits of disturbance are located.

Contractor shall confine their operations to work areas indicated on the plans and right-of-way. Contractor shall not trespass. Any damage to private property caused by access shall be restored in kind by Contractor at Contractor's expense. Contractor may NOT store materials, or stage equipment on private property.

The plans and specifications were created by the City of Madison. Contact Sarah Lerner at City Engineering with any questions or discrepancies found on the plans at slerner@cityofmadison.com.

SECTION 105.13 ORDER OF COMPLETION

The Contractor shall phase operations to minimize the amount of time that there is disturbance within the project. The Contractor is responsible for their construction staging and shall do so to minimize the impacts to the project site.

SECTION 107.13 TREE PROTECTION

All existing trees on both public and private property shall be protected. Tree protection shall be considered incidental to this contract. Any damage to trees including injury to roots, trunks or branches, bark or tree wounding, soil compaction that degrades the function of roots may be determined by the Engineer as damage subject to fine or liquidated damages.

ARTICLE 108.2 PERMITS

The following permits are required for this project:

- Wisconsin DNR Aquatic Plant Management Application
- Approved Burn Permit through Madison Fire Department

Permits are required prior to authorizing the start of construction.

The Contractor shall be responsible for knowing, understanding, and meeting the conditions of all permits and must keep a copy of each individual permit on site at all times throughout construction. Any questions pertaining to permit compliance shall be immediately brought to the attention of the Project or Construction Engineer.

The City of Madison Erosion Control Permit includes ground disturbance related to tree removals. In the event that tree removals cause rutting, disturbance, or sedimentation the Contractor shall be required to install erosion control measures. Installation of erosion control measures shall include metal plates to protect ground, or other form of protection. Additionally erosion control measures may be ordered by the Engineer if tree removals cause erosion. All erosion control shall be incidental to this contract.

The Contractor shall meet the conditions of the permits as directed by the Construction Engineer or his designees.

The City's obtaining of these permits is not intended to be exhaustive of all permits that may be required to be obtained by the Contractor for construction of this project. It shall be the responsibility of the Contractor to identify and obtain any other permits needed for construction.

SECTION 109.2 PROSECUTION OF WORK

Work cannot start on this contract until after the "Start to Work" letter has been received and no earlier than February 15, 2024. Construction work must begin within seven (7) calendar days after the date appearing on the mailed notice that was sent to the Contractor. Construction work shall be carried out at a rate so as to secure full completion within the contract times outlined in Section 109.7, the rate of progress and the time of completion being essential conditions of this Agreement. Definite notice of intention to start work shall be given to the Engineer at least seventy-two (72) hours in advance of beginning work.

The fixed, agreed upon, liquidated damages for failure to complete all work within the contract, unless otherwise specified in this section, shall be calculated in accordance with Article 109 of the Standard Specifications.

Native dormant seeding shall occur prior April 30th to allow for stratification. If seeding on top of snow, Contractor shall ensure snow is not iced over as this can allow seed to blow away. Ideal conditions for seeding are immediately before a snowfall, on top of a soft and/or wet snow, or damp, exposed soil.

All plants shall be installed between the time frost is out of the ground in spring 2024 to no later than July 1, 2024.

Plant maintenance incidental to bid items 90001 – 90008 shall continue until the end of the two year growing season and considered incidental to those bid items.

SECTION 109.7 TIME OF COMPLETION

The Contractor shall begin work on or around **FEBRUARY 15, 2024**.

All plants shall be installed by **JULY 1, 2024.**

Ecological restoration per bid item 90015 shall continue until **DECEMBER 1, 2026.**

SECTION 110.1: MEASUREMENT OF QUANTITIES

All bid items listed in the proposal page will be paid for at the quantity listed in the proposal page, and will not be measured in the field unless otherwise indicated in these special provisions, or there is a significant change approved by the Engineer.

SECTION 209.6: ACCEPTANCE AND GUARANTEE

Plants shall be guaranteed for two (2) years from the date of installation. The certificate of completion will be released once Bid Item 90015 - 2025 Restoration Maintenance is complete.

BID ITEM 10911 – MOBILIZATION

DESCRIPTION

Work under this item shall include all costs associated with mobilization of the Contractor to the site in 2024 and 2025, excluding bid items 90014 - 2024 Restoration Maintenance and 90015 - 2025 Restoration Maintenance.

Mobilization for bid items 90014 and 90015 shall be considered incidental to those bid items.

The Contractor shall not stage equipment or materials outside of the project limits. Staging of materials within the street shall not be allowed.

Damage to curb and gutter, sidewalks, streets or other features or on adjacent property shall be the responsibility of the Contractor to repair at no additional cost to the City.

No additional compensation shall be provided for re-mobilization or de-mobilization during the contract.

SECTION 209: TREES, SHRUBS, PERENNIALS AND GRASSES

BID ITEM 90001 - BETULA NIGRA

BID ITEM 90002 – QUERCUS BICOLOR

BID ITEM 90003 – QUERCUS X SCHUETTEI

BID ITEM 90004 - CEPHALANTHUS OCCIDENTALIS

BID ITEM 90005 – SAMBUCUS CANADENSIS

BID ITEM 90006 – SPIREA TOMENTOSA

All planting as part of this contract shall be completed per Article 209 – Trees, Shrubs, Perennials and Grasses of the latest edition of the City of Madison Standard Specifications for Public Works Construction and as outlined in these Special Provisions.

Location of the trees and shrubs shall be staked by the Contractor, for approval by the Engineer prior to installation.

There are no plants proposed within the delineated wetland. However, the Wisconsin DNR Wetland Specialist Allen Ramminger (608) 228-4067 has approved planting in these areas without a permit, as long as the Contractor places the soils back in the hole after digging to make sure that spoils left on surface are not displaced during rain events.

Care of plants and preparing ground for planting shall be incidental to BID ITEMS 90001- 90006 and BID ITEMS 90007 - Wetland Emergent Plugs and 90008 – Wetland Plugs as defined in Subsection 209.6(b) and shall continue until the end of the 2025 growing season.

The Contractor shall only mulch newly planted trees and shrubs that are outside of side slopes.

If plants are being installed in areas that are receiving herbicide treatment, plants shall be planted after herbicide will no longer pose a threat to the survival of the proposed plant.

Plants shall be watered the day of installation. Watering the day of installation shall be incidental to this bid item. In addition to the waterings required in Subsection 209.4(g), additional waterings may be ordered by the Engineer at any time and shall be incidental to BID ITEMS 90001-90006 and bid items 90007 – Wetland Emergent Plugs and 90008 – Wetland Plugs. All plants shall be appropriately watered throughout the 2024 and 2025 growing season to keep plants in a healthy growing condition regardless of drought condition. Watering during drought conditions are incidental to this contract. The volume of water shall be enough to soak the root zone. Care must be taken when watering not to wash away mulch and topsoil. Mulch and topsoil displaced must be replaced immediately by the Contractor. There is no existing water access available on site. The Contractor shall be required to supply water. The Contractor shall be allowed to use existing onsite water within the retention ponds.

Watering shrubs, trees, and plugs from the time of installation through the end of the 2025 growing season shall be considered incidental to this contract regardless of drought condition and U.S. Drought Monitor status.

A monthly inspection of all landscape areas shall be completed by the Contractor. This is to assess work to be done and to locate problems which may have developed since the last inspection. The Contractor shall notify the Engineer 48 hours prior to inspection.

All trees and shrubs shall conform to the sizes specified below:

BOTANICAL NAME	COMMON NAME	SIZE	ROOT
TREES			
Betula nigra	River birch	20#	CONT TREE
Quercus bicolor	Swamp White Oak	1.5" Cal.	B&B or CONT
Quercus x scheuttei	Scheutte's Oak	1.5" Cal.	B&B or CONT
SHRUBS			
Cephalanthus occidentalis	Buttonbush	#3	CONT
Sambucus canadensis	Elderberry	3'	B&B
Spirea tomentosa	Steeplebush	#3	CONT

Work under this bid item shall include all work, materials, labor, and incidentals required to provide watering during drought conditions.

METHOD OF MEASUREMENT

BID ITEMS 90001-90006 shall be measured by the number of plants of each species, variety and size complete in place and accepted in accordance with the terms of the contract as listed in the proposal page.

BASIS OF PAYMENT

BID ITEM 90001-90006 shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete work as set forth in the description.

BID ITEM 90007 – WETLAND EMERGENT PLUGS

DESCRIPTION

This bid item shall include all necessary work, labor and incidentals required to procure plant plugs in accordance with the City of Madison Standard Specifications for Public Works Contract and as outlined in Section 209 of this contract.

Wetland emergent plugs shall be installed from approximately 2.5"D x 2.5"W x 4"H containers. Plants shall be placed 1'-1.5' on center.
Wetland emergent plugs shall be installed in general areas defined on the plan. The Contractor shall be responsible for determining the exact location based on existing vegetation, removals, sun/shade and soil moisture. The Engineering shall approve the final general planting locations prior to installation.

Plants shall be installed in general areas defined on the plan. Plants shall be placed in dense groupings to promote establishment of high biodiverse, low invasive colonies of native plants. This approach is intended to minimize invasive species growth to unplanted areas that can be treated chemically without impact to surrounding native plants, and to encourage spread of native plant dense groupings for long term establishment.

Plants shall be installed so that the top (crowns) stems shall be set at grade. The Contractor shall install plugs by cutting through the existing erosion control matting. The Contractor shall not mulch around the plugs, but shall ensure their roots are fully covered with topsoil.

The Contractor shall be required to ensure that ~75% of the total number of forbs and grasses are flourishing by the end of the 2025 growing season.

The Contractor shall provide the below species and quantities. Slight variations based on availability shall be accepted as determined by the Engineer.

BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QUANTITY	UNIT
Acorus calamus	Sweet flag	4" Deep	Plug	1184	EA
Caltha palustris	Marsh marigold	4" Deep	Plug	1184	EA
Carex stricta	Tussock Sedge	4" Deep	Plug	1184	EA
Carex lacustris	Common Lake Sedge	4" Deep	Plug	1184	EA
Alisma subcordatum	Mud plantain	4" Deep	Plug	1184	EA
Pontederia cordata	Pickerelweed	4" Deep	Plug	1184	EA
Sagittaria latifolia	Arrowhead	4" Deep	Plug	1184	EA
Schoenoplectus pungens	Chairmaker's rush	4" Deep	Plug	1184	EA
Scirpus acutus	Hardstem bulrush	4" Deep	Plug	1184	EA
Scripus validus	Softstem bulrush	4" Deep	Plug	1184	EA
Sparganium americanum	American bur reed	4" Deep	Plug	1184	EA
Total				**13024**	

METHOD OF MEASUREMENT

Wetland emergent plugs shall be measured by plan square yard as listed on the proposal page.

BASIS OF PAYMENT

Wetland emergent plugs shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete work as set forth in the description.

BID ITEM 90008 – WETLAND PLUGS

DESCRIPTION

This bid item shall include all necessary work, labor and incidentals required to procure plant plugs in accordance with the City of Madison Standard Specifications for Public Works Contract and as outlined in Section 209 of this contract.

All plants shall be installed from approximately 2.5"D x 2.5"W x 4" H containers. Plants shall be placed 1.5' on center.

Wetland emergent plugs shall be installed in general areas defined on the plan. The Contractor shall be responsible for determining the exact location based on existing vegetation, removals, sun/shade and soil moisture. The Engineering shall approve the final general planting locations prior to installation.

Plants shall be installed in general areas defined on the plan. Plants shall be placed in dense groupings to promote establishment of high biodiverse, low invasive colonies of native plants. This approach is intended to minimize invasive species growth to unplanted areas that can be treated chemically without impact to surrounding native plants, and to encourage spread of native plant dense groupings for long term establishment.

Plants shall be installed so that the top (crowns) stems shall be set at grade. The Contractor shall install plugs by cutting through the existing erosion control matting. The Contractor shall not mulch around the plugs, but shall ensure their roots are fully covered with topsoil.

The Contractor shall be required to ensure that ~75% of the total number of forbs and grasses are flourishing by the end of the 2025 growing season.

The Contractor shall provide the below species and quantities. Slight variations based on availability shall be accepted as determined by the Engineer.

BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QUANTITY	UNIT
Asclepias incarnate	Swamp milkweed	4" Deep	Plug	1088	EA
Calamagrostis canadensis	Canada bluejoint grass	4" Deep	Plug	1088	EA
Carex hystericina	Porcupine sedge	4" Deep	Plug	1088	EA
Hypericum pyramidatum	Greater St. John's wort	4" Deep	Plug	1088	EA
Iris virginicus or versicolor	Blue flag iris	4" Deep	Plug	1088	EA
Symphyotrichum puniceum	Swamp aster	4" Deep	Plug	1088	EA
Total				**6528**	

METHOD OF MEASUREMENT

Wetland plugs shall be measured by plan square yard as listed on the proposal page.

BASIS OF PAYMENT

Wetland plugs shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete work as set forth in the description.

BID ITEM 90009 – LOW GROWING ROW NATIVE SEED MIX

DESCRIPTION

Work under this bid item includes seeding all areas within the right of way as identified on the plans for Low Growing ROW Native Seed Mix. Seeding shall be completed in accordance with these special provisions and Article 207 of the latest edition of the City of Madison Standard Specifications for Public Works Construction.

This seeding shall be completed at two different times.

1. In February 2024, the contractor shall dormant seed all areas called out for Low Growing ROW Native Seed Mix, except for areas within the Phase Three Limits shown on plans and in Attachment C.
2. Once Phase Three is complete in 2024, the contractor shall seed the areas within the Phase Three Limits.

All other sections of Part Two of the City of Madison Standard Specifications for Public Works Construction shall be applicable. Watering shall be incidental to this bid item per BID ITEM 207.2(e).

The Engineer shall inspect and approve the seed prior to placement. The Contractor shall submit photos of seed bag labels and seed mix composition to Construction Engineering for approval prior to seeding

Substitution requests shall be submitted to City Engineering for review and approval. Contractor is notified that if an alternate is allowed, the rate of seed may be altered as a condition of approval, and seed shall be native ecotypes. No improved varieties are allowed. Seed source shall be native ecotypes from Southeastern Minnesota, Eastern Iowa, Southern Wisconsin or Northern Illinois.

The native seed mix shall be as listed below. Seed mix shall be applied at 65 seeds per sq/ft.

FORBS						
Botanical Name	**Common Name**	**Quantity**	**# Seeds**	**/SQFT**	**%Ct**	**% Wt**
Achillea millefolium	Yarrow	.5 OZ	89,000	2.0	3.12	0.30
Anemone canadensis	Canada anemone	2.0 OZ	16,000	0.4	0.56	1.21
Asclepias tuberosa	Butterfly weed	6.0 OZ	25,800	0.6	0.90	3.62
Baptisia bracteata	Cream wild indigo	.25 OZ	425	0.0	0.01	0.15
Coreopsis lanceolata	Lance-leaf coreopsis	9.0 OZ	126,000	2.9	4.42	5.43
Coreopsis palmata	Prairie coreopsis	.5 OZ	4,000	0.1	0.14	0.30
Dalea candida	White prairie clover	8.0 OZ	176,000	4.0	6.17	4.83
Dalea purpurea	Purple prairie coneflower	8.0 OZ	136,000	3.1	4.77	4.83
Echinacea pallida	Pale purple coneflower	8.0 OZ	38,400	0.9	1.35	4.83
Ruellia humilis	Wild petunia	3.0 OZ	15,600	0.4	0.55	1.81
Solidago nemoralis	Old field goldenrod	1.25 OZ	312,500	7.2	10.95	0.75
Symphyotrichum sericeum	Silky aster	3.0 OZ	96,000	2.2	3.37	1.81
Subtotal			*1,035,725*		*36.31*	*29.86*
GRASSES, SEDGES & RUSHES						
Botanical Name	**Common Name**	**Quantity**	**# Seeds**	**/SQFT**	**%Ct**	**% Wt**
Bouteloua curtipendula	Side-oats Gramma	3.00 LB	192,000	4.4	6.73	28.96
Carex bicknellii	Copper-shouldered Oval Sedge	1.0 OZ	35,000	0.8	1.23	0.6
Eragrostis spectabilis	Purple love grass	1.0 OZ	280,000	6.4	9.82	0.6
Koeleria macrantha	June grass	.25 OZ	50,000	1.1	1.75	0.15
Schizachyrium compositus	Rough dropseed	1.0 LB	720,0000	16.5	25.24	28.96
Sporobolus heterolepsis	Prairie dropseed	2.0 OZ	28,000	0.6	0.98	1.21
Subtotal			*1,817,000*		*63.69*	*70.14*
Grand Total		**165.75 OZ**	**2,852,725**			

For Contractor's information, a custom seed mix meeting this specification is available at Prairie Moon Nursery, Winona MN phone (866) 417-8156.

METHOD OF MEASUREMENT

Low Growing ROW Native Seed Mix shall be measured by plan square yard as listed on the proposal page.

BASIS OF PAYMENT

Low Growing ROW Native Seed Mix shall be measured as described above and shall be paid for at the contract unit prices which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement and incidentals required to complete the work as set forth in the description.

BID ITEM 90010 – GREENWAY SWALE SEED MIX

DESCRIPTION

Work under this bid item includes seeding all areas identified on the plans for Greenway Swale Seed Mix. Seeding shall be completed in accordance with these special provisions and Article 207 of the latest edition of the City of Madison Standard Specifications for Public Works Construction.

This seeding shall be completed at two different times.

1. In February 2024, the contractor shall dormant seed all areas called out for Greenway Swale Seed Mix, except for areas within the Phase Three Limits shown on plans and in Attachment C.
2. Once Phase Three is complete in 2024, the contractor shall seed the areas within the Phase Three Limits.

All other sections of Part Two of the City of Madison Standard Specifications for Public Works Construction shall be applicable. Watering shall be incidental to this bid item per BID ITEM 207.2(e).

The Engineer shall inspect and approve the seed prior to placement. The Contractor shall submit photos of seed bag labels and seed mix composition to Construction Engineering for approval prior to seeding

Substitution requests shall be submitted to City Engineering for review and approval. Contractor is notified that if an alternate is allowed, the rate of seed may be altered as a condition of approval, and seed shall be native ecotypes. No improved varieties are allowed. Seed source shall be native ecotypes from Southeastern Minnesota, Eastern Iowa, Southern Wisconsin or Northern Illinois.

The native seed mix shall be as listed below. Seed mix shall be applied at 7.6 lbs per acres, 261 seeds per sq/ft.

FORBS		
Botanical Name	**Common Name**	**% Wt**
Acorcus americanus	Sweet flag	0.69
Alisma subcordatum	Mud plantain	1.39
Ammannia coccinea	Scarlet toothcup	.69
Aslepias incarnata	Rose milkweed	4.14
Bidens aristosa	Swamp marigold	1.38
Boltonia asteroides	False aster	.90
Aster umbellatus	Flat-topped aster	.0

Eupatorium perfoliatum	Boneset	.69
Euthamia gramifolia	Grass-leaved goldenrod	1.38
Eutrochium maculatum	Joe pye Weed	.69
Helenium autumnale	Sneezeweed	1.38
Hibiscus laevis	Rose mallow	2.75
Iris virginica var. shrevei	Southern blue flag	3.45
Liastris pycnostachya	Prairie blazing start	5.52
Lobelia cardinalis	Cardinal flower	0.34
Mimulus ringens	Monkey flower	0.30
Oligoneuron riddellii	Riddell's goldenrod	.60
Penthorum sedoides	Ditch stonecrop	1.38
Physostegia virginiana	Obedient plant	1.03
Pycanthemum virginianum	Mountain mint	0.69
Ranunculus screleratus	Annual buttercup	1.38
Sagittaria latifolia	Common arrowhead	0.75
Sparganium eurycarpum	Great bur reed	11.11
Symphyotrichum novae-angliae	New England aster	1.20
Verbena hastata	Blue vervain	3.00
Veronia fasciculata	Common ironweed	1.38
Subtotal		*50.53%*
GRASSES, SEDGES & RUSHES		
Botanical Name	**Common Name**	**% Wt**
Bromus ciliates	Fringed brome	20.41
Carex comosa	Bristly sedge	1.38
Carex crinite	Fringed sedge	4.14
Carex hystercina	Porcupine sedge	3.00
Carex vulpinoidea	Brown fox sedge	2.07
Eleocharis acicularis	Spike rush	1.38
Elymus virginicus	Virginina wild rye	11.03
Glyceria grandis	Reed manna grass	2.07
Scirpus atrovirens	Dark green Bulrush	0.69
Scirpus cyperinus	Wool grass	0.30
Scirpus validus	Great bulrush	1.50
Spartina pectinate	Cordgrass	1.50
Subtotal		*49.47%*

For Contractor's information, a seed mix meeting this specification is available at Prairie Moon Nursery, Winona MN (866) 417-8156.

https://www.prairiemoon.com/tall-sedge-meadow-seed-mix-prairie-moon-nursery.html#panel-components

METHOD OF MEASUREMENT

Greenway Swale Seed Mix shall be measured by plan square yard as listed on the proposal page.

BASIS OF PAYMENT

Greenway Swale Seed Mix shall be measured as described above and shall be paid for at the contract unit prices which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement and incidentals required to complete the work as set forth in the description.

BID ITEM 90011 – WETLAND RESTORATION SEED MIX

Work under this bid item includes seeding all areas within the right of way as identified on the plans for Wetland Restoration Seed Mix. Seeding shall be completed in accordance with these special provisions and Article 207 of the latest edition of the City of Madison Standard Specifications for Public Works Construction.

This seeding shall be completed at two different times.

1. In February 2024, the contractor shall dormant seed all areas called out for Wetland Restoration Seed Mix, except for areas within the Phase Three Limits shown on plans and in Attachment C.
2. Once Phase Three is complete in 2024, the contractor shall seed the areas within the Phase Three Limits.

All other sections of Part Two of the City of Madison Standard Specifications for Public Works Construction shall be applicable. Watering shall be incidental to this bid item per BID ITEM 207.2(e).

The Engineer shall inspect and approve the seed prior to placement. The Contractor shall submit photos of seed bag labels and seed mix composition to Construction Engineering for approval prior to seeding

Substitution requests shall be submitted to City Engineering for review and approval. Contractor is notified that if an alternate is allowed, the rate of seed may be altered as a condition of approval, and seed shall be native ecotypes. No improved varieties are allowed. Seed source shall be native ecotypes from Southeastern Minnesota, Eastern Iowa, Southern Wisconsin or Northern Illinois.

The native seed mix shall be as listed below. Seed mix shall be applied at 239 seeds per sq/ft.

FORBS						
Botanical Name	**Common Name**	**Quantity**	**# Seeds**	**/SQFT**	**%Ct**	**% Wt**
Asclepias incarnata	Rose milkweed	8.0 OZ	38,400	0.9	.37	7.91
Eupatorium perfoliatum	Boneset	3.0 OZ	480,000	11.0	4.6	2.97
Lobelia siphilitica	Great blue lobelia	4.0 OZ	2,000,000	45.9	19.17	3.96
Pycnanthemum virgianum	Mountain mint	2.5 OZ	500,000	11.5	4.79	2.47
Verbena hastata	Blue vervain	8.0 OZ	744,000	17.1	7.13	7.91
Vernonia noveboracensis	Ironweed	5.0 OZ	100,000	2.3	0.96	4.95

Subtotal		*30.50 OZ*	*3,862,400*		*37.02*	*30.17*
GRASSES, SEDGES AND RUSHES						
Botanical Name	**Common Name**	**Quantity**	**# Seeds**	**/SQFT**	**%Ct**	**% Wt**
Calamagrostis canadensis	Blue joint grass	.5 OZ	140,000	3.2	1.34	.49
Carex hystericina	Porcupine sedge	6.0 OZ	180,000	4.1	1.73	5.93
Carex lacustris	Common lake sedge	0.10 OZ	1,500	0.0	0.01	0.10
Carex vulpinoidea	Brown fox sedge	6.0 OZ	480,000	11.0	4.60	5.93
Elymus virginicus	Virginia wild rye	1.0 LB	56,000	1.3	0.54	15.83
Panicum virgatum	Switch grass	1.0 LB	224,000	5.1	2.15	15.83
Scirpus atrovirens	Dark green bulrush	4.0 OZ	1,840,000	42.2	17.64	3.96
Scirpus cyperinus	Wool grass	2.0 OZ	3,400,000	78.1	32.59	1.98
Scirpus validus	Great bulrush	4.0 OZ	152,000	3.5	1.46	3.96
Spartina pectinate	Cord grass	1.0 LB	96,000	2.2	0.92	15.83
Subtotal		*70.60 OZ*	*6,569,500*		*62.93*	*69.83*
Grand Total		**101.100 OZ**	**10,431,900**			

For Contractor's information, a custom seed mix meeting this specification is available at Prairie Moon Nursery, Winona MN phone (866) 417-8156.

METHOD OF MEASUREMENT

Wetland Restoration Seed Mix shall be measured by plan square yard as listed on the proposal page.

BASIS OF PAYMENT

Wetland Restoration Seed Mix shall be measured as described above and shall be paid for at the contract unit prices which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement and incidentals required to complete the work as set forth in the description.

BID ITEM 90012 – UPLAND NATIVE SEED MIX

Work under this bid item includes seeding all areas within the right of way as identified on the plans with Upland Native Seed Mix in accordance with these special provisions and Article 207 of the latest edition of the City of Madison Standard Specifications for Public Works Construction.

All other sections of Part Two of the City of Madison Standard Specifications for Public Works Construction shall be applicable. Watering shall be incidental to this bid item per BID ITEM 207.2(e).

The Engineer shall inspect and approve the seed prior to placement. The Contractor shall submit photos of seed bag labels and seed mix composition to Construction Engineering for approval prior to seeding

Substitution requests shall be submitted to City Engineering for review and approval. Contractor is notified that if an alternate is allowed, the rate of seed may be altered as a condition of approval, and seed shall be native ecotypes. No improved varieties are allowed. Seed source shall be native ecotypes from Southeastern Minnesota, Eastern Iowa, Southern Wisconsin or Northern Illinois.

The native seed mix shall be as listed below. Seed mix shall be applied at 55 seeds per sq/ft.

FORBS						
Botanical Name	**Common Name**	**Quantity**	**# Seeds**	**/SQFT**	**%Ct**	**% Wt**
Achillea millefolium	Yarrow	1.0 OZ	178,000	4.1	7.39	0.58
Asclepias syriaca	Common milkweed	7.25 OZ	29,000	0.7	1.2	4.23
Astragalus canadensis	Canada milk vetch	2.25 OZ	33,750	0.8	1.40	1.31
Chamaecrista fasciculate	Patridge pea	1.25 LB	54,000	1.2	2.24	11.66
Rudbeckia triloba	Brown-eyed sustan	1.50 OZ	60,000	1.4	2.49	0.87
Solidago speciosa	Showy goldenrod	3.5 OZ	262,500	6.0	10.91	2.04
Symphotrichum leave	Smooth blue aster	6.0 OZ	330,000	7.6	13.71	3.5
Ziza aurea	Golden alexanders	10.0 OZ	110,000	2.5	4.57	5.83
Subtotal		*51.50 OZ*	*1,057,250*		*43.92*	*30.03*
GRASSES, SEDGES & RUSHES						
Botanical Name	**Common Name**	**Quantity**	**# Seeds**	**/SQFT**	**%Ct**	**% Wt**
Andropogon gerardii	Big bluestem	2.0 OZ	20,000	0.5	.83	1.17
Bouteloua curtipendula	Sideoats grama	3.0 LB	192,000	4.4	7.98	27.99
Carex brevior	Plains oval sedge	2.0 OZ	58,000	1.3	2.41	1.17
Carex vulpinoidea	Brown fox sedge	3.0 OZ	240,000	5.5	9.97	1.75
Elymus canadensis	Canada wild rye	5.5 OZ	28,600	0.7	1.19	3.21
Elymus virginicus	Virginina wild rye	5.5 OZ	19,250	0.4	0.80	3.21
Panicum virgatum	Switch grass	2.0 OZ	28,000	0.6	1.16	1.17
Schizachyrium scoparium	Little bluestem	3.0 LB	720,000	16.5	29.91	27.99
Sorghastrum nutans	Indian grass	4.0 OZ	44,000	1.0	1.83	2.33
Subtotal		*120.00 OZ*	*1,349,850*		*56.08*	*69.97*
Grand Total		**171.50 OZ**	**2,407,100**			

For Contractor's information, a custom seed mix meeting this specification is available at Prairie Moon Nursery, Winona MN phone (866) 417-8156.

METHOD OF MEASUREMENT

Upland Native Seed Mix shall be measured per square yard of material provided, transported, and placed onsite based on quantities listed in the proposal page.

BASIS OF PAYMENT

Upland Native Seed Mix shall be measured as described above and shall be paid for at the contract unit prices which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement and incidentals required to complete the work as set forth in the description.

BID ITEM 90013 – ROOTSTOCK PROTECTION

DESCRIPTION

Work under this bid item shall include all labor, materials, equipment, and incidentals necessary to install rootstock protection for wetland plantings at locations determined by the Contractor.

Emergent wetland plantings shall be placed in groupings of at least ~100 plants in order to minimize the amount of rootstock protection required.

MATERIALS

The Contractor shall furnish and install posts consisting of 1" x 2" x 5' wooden stakes.

The Contractor shall furnish cross members that consist of biodegradable, natural organic fiber bailing twine.

CONSTRUCTION

The Contractor shall install posts a minimum of 2 feet into the ground or to a depth that secures the post and resists being pushed over. Install rootstock protection in such a manner as to provide a grid like pattern 10 feet by 20 feet through the area of the rootstock plantings. Extend the perimeter of the Rootstock Protection to a minimum of 5 feet in all directions beyond the limits of the rootstock plantings. Attach bailing twine, used as cross members, to all posts as shown in the plan. Attach bailing twine to the posts using knots or any other means approved by the Engineer so that no more than three cross members may be affected if any one cross member breaks or becomes unattached. The Contractor shall use means approved by the Engineer when bailing twine is attached to all intermediate posts.

This bid item shall include maintenance of rootstock protection through the life of the contract, as needed, or within 24 hours of notification by the Engineer.

METHOD OF MEASUREMENT

Rootstock protection shall be measured per square yard.

BASIS OF PAYMENT

Rootstock protection shall be measured as described above and shall be paid for at the contract unit price as listed on the proposal page which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description. Overlap and extension of rootstock shall be incidental to the quantities listed in the proposal page.

BID ITEM 90014 – 2024 RESTORATION MAINTENANCE

This bid item includes removal/treatment of invasive or nuisance plant growth throughout the 2024 growing season. This bid item shall include maintaining invasive growth throughout all areas that are not under construction as part of Phase Three improvements as shown on the plan. Phase Three construction is anticipated to occur during 2024.

The Contractor shall be responsible for maintaining the entire site including Phase Three in 2025 per Bid Item 90015 – 2025 RESTORATION MAINTENANCE.

The Contractor shall employ personnel capable of identifying invasive plants and removing the plant as appropriate for that specific species. This restoration is intended to be provide a highly biodiverse, high quality native restoration with minimal invasive species. The expectations for this site shall be at least a 85% native vegetation cover over the established and seeded areas.

This work shall include the removal of all invasive plants listed in Attachment B. Ornamental species that appear to have been planted by adjacent home owners shall not be removed unless approved by the Engineer.

Attachment B includes a list of species to be removed from site along with the tolerance of species and expectations for eradication.

- Species marked for LOW tolerance, includes species that must be completely eradicated from site and continued to be removed throughout contract.
- Species marked for MEDIUM tolerance shall be removed from site, tolerance is allowed if the planting doesn't conflict with native plant establishment.
- Species marked for HIGH tolerance shall be removed when competing with native plant establishment, the contractor shall remove when appropriate, but it is likely not possible to remove all species from site

The Contractor shall assume that woody resprouts both native and non-native species are unwanted and should be controlled, including native woody resprouts that may be desirable in their mature form. Exceptions may be volunteers of the following native woody species: Quercus spp.,Carya spp., Sambucus canadensis or Sambucus racemosa, Cornus sericea, or Cornus alternifolia.

The Contractor is expected to begin in the spring to treat invasive plants, with the understanding that timing will be largely dependent on maturity, type, and flowering time of species targeted for removal. The Contractor shall submit a project schedule prior to starting work.

Prior to removing invasive plants, the Contractor shall submit the proposed method for removals for approval from the Engineer. The following submittals are required for this bid item:

- Invasive Removal Approach
- Herbicide Chemistry and Application Method
- Burn Plan

Mobilization, permitting, and all other incidentals are incidental to this bid item.

Invasive Removal Approach

The Contractor shall be required to submit an invasive removal approach prior to starting any invasive removals. The Contractor shall review Attachment A – Ecological Assessment to develop Invasive Removal Approach. This approach shall require a combination of prescribed burning, mowing, hand pulling, and chemical approaches. This work shall also include removal of invasive species within standing water. The Contractor shall be required to completely destroy and prevent spread of any cattails that appear on site.

During each treatment the Contractor shall use a combination of the following, listed below in the order of the preferred method by the City of Madison:

- Mowing (for annual invasive plants that can be managed by removing the seeds produced that season).
- Hand pulling (for individual small patches of invasive plants that do not spread more aggressively after hand pulling - i.e. hand pulling is not allowed for Japanese Knotweed which spreads rhizomatically and would become more aggressive if hand pulled).
- Prescribed Burning – for locations where burning would be an effective treatment. Exact locations to be burned shall be determined upon contract award.
- Other non-chemical approaches to invasive control to be determined by Contractor.
- Spot herbicide application by "painting" treated stumps, or the "glove of death method" which requires placing a chemical resistant glove over one hand, putting a cotton glove over that, and then spraying herbicide on the cotton glove and hand wiping the undesirable plant.

- Spray herbicide with backpack and pump sprayers, selectively spraying undesirable species.

Herbicide Chemistry and Application Method

The herbicide shall be the least toxic required to prevent regrowth. Whenever possible the Contractor shall select an herbicide that will not prevent growth or germination of future seeding and planting operations. Herbicide chemistry and the potential for exposure (i.e. application method) shall be considered as part of the herbicide selection process. Herbicides containing Triclopyr, or Glyphosphate, or similar chemicals are recommended. Herbicides containing Picloram will not be approved. The Contractor shall select herbicides that are appropriate for both woody and herbaceous regrowth. All herbicides shall be applied by a licensed applicator and in accordance with the manufacturer's instructions. The Contractor shall include all proposed herbicides and methodologies in the Brushing and Herbicide Submittal as described in this bid item. All herbicides shall be applied by a licensed applicator and in accordance with the manufacturer's instructions.

The Contractor shall submit to the Engineer a Herbicide Chemistry and Application Method for approval prior to any brushing activities. The submittal shall include:

- Proposed herbicides and their individual applications, i.e. which herbicides will be used on which plants
- Material Data Safety Sheets for each herbicide
- Proposed application methods and timing
- Qualifications of personnel

All herbicide application shall be in strict accordance with the City of Madison Pesticide policy, available at https://www.cityofmadison.com/parks/about/documents/pesticidepolicy2004.pdf. The Contractor shall adhere to this policy and the notification requirements contained in the policy, and shall promptly report to the Engineer all dates of application, type of herbicide used, and amount applied.

The Contractor should be aware that it may be necessary to use an aquatic approved herbicide. Applicators may need to be certified to apply aquatic pesticides with a state DATCP license in the appropriate category. An Aquatic Plant Management Permit may be required from the Wisconsin Department of Natural Resources. All control measures not requiring the use of herbicides must be approved by the Greenway Vegetation Coordinator prior to the start of work.

All herbicide application shall be completed in a manner that prevents damage to adjacent vegetation. The Contractor shall adhere to the following:

- All cutting and clearing debris shall become property of the Contractor and shall be removed from the project site at no additional cost to the City.
- The Contractor shall remove trash that has accumulated on site at each treatment and shall dispose at no additional compensation.
- The Contractor shall be responsible for replacing any native species at the direction of the Engineer that have died as a result of herbicide overspray which can include trees, shrubs, and forbs.
- All herbicide application signage must be clearly visible.
- The Contractor shall be required to use aquatic herbicide as necessary for all areas required by the Wisconsin Department of Natural Resources and to obtain all required permits necessary for application of aquatic herbicide.
    - The Contractor shall submit to the Engineer an herbicide submittal for approval prior to any invasive removal activities. The submittal shall include:
        - Proposed herbicides and their individual applications, i.e. which herbicides will be used on which plants
        - Material Data Safety Sheets for each herbicide
        - Proposed application methods and timing
        - Qualifications of personnel as highlighted in the section below

Burn Plan
The Contractor shall be required to submit a burn plan for approval by the Engineer prior to construction. The Contractor shall be required to:

- Provide proof of completed training per DNR's standard certifications.
- Obtain an approved burn permit through the Madison Fire Department which shall include the following information in the submittal:
    - Names and on-site cell phone contact information of personnel assisting with burn.
    - Description of vegetation inside, adjacent to, and outside burn areas.
    - Method of starting fire.
    - Method of smoke management.
    - Method of fire management control.
- Provide appropriate signage for major highways, main, and residential roads.
- Coordinate with Maddie Dumas (608) 266-9525, mdumas2@cityofmadison.com to notify residents of scheduled burns.

METHOD OF MEASUREMENT

2024 Restoration Maintenance shall be measured by lump sum.

BASIS OF PAYMENT

2024 Restoration Maintenance shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

BID ITEM 90015 – 2025 RESTORATION MAINTENANCE

DESCRIPTION

This bid item includes removal/treatment of invasive or nuisance plant growth throughout the entire project area defined on the plans throughout the 2025 growing season.

The Contractor shall employ personnel capable of identifying invasive plants and removing the plant as appropriate for that specific species.

The Contractor shall employ personnel capable of identifying invasive plants and removing the plant as appropriate for that specific species. This restoration is intended to be provide a highly biodiverse, high quality native restoration with minimal invasive species. The expectations for this site shall be at least a 85% native vegetation cover over the established and seeded areas.

This work shall include the removal of all invasive plants listed in Attachment B. Ornamental species that appear to have been planted by adjacent home owners shall not be removed unless approved by the Engineer.

Attachment B includes a list of species to be removed from site along with the tolerance of species and expectations for eradication.

- Species marked for LOW tolerance, includes species that must be completely eradicated from site and continued to be removed throughout contract.
- Species marked for MEDIUM tolerance shall be removed from site, tolerance is allowed if the planting doesn't conflict with native plant establishment.
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The Contractor shall assume that woody resprouts both native and non-native species are unwanted and should be controlled, including native woody resprouts that may be desirable in their mature form. Exceptions may be volunteers of the following native woody species: Quercus spp.,Carya spp., Sambucus canadensis or Sambucus racemosa, Cornus sericea, or Cornus alternifolia.

The Contractor is expected to begin in the spring to treat invasive plants, with the understanding that timing will be largely dependent on maturity, type, and flowering time of species targeted for removal. The Contractor shall submit a project schedule prior to starting work.

Prior to removing invasive plants, the Contractor shall submit the proposed method for removals for approval from the Engineer. The following submittals are required for this bid items:

- Invasive Removal Approach
- Herbicide Chemistry and Application Method
- Burn Plan

Mobilization, permitting, and all other incidentals are incidental to this bid item.

Invasive Removal Approach

The Contractor shall be required to submit an invasive removal approach prior to starting any invasive removals. The Contractor shall review Attachment A – Ecological Assessment to develop Invasive Removal Approach. This approach shall require a combination of prescribed burning, mowing, hand pulling, and chemical approaches. This work shall also include removal of invasive species within standing water. The Contractor shall be required to completely destroyed and prevent spread of any cattails that appear on site.

During each treatment the Contractor shall use a combination of the following, listed below in the order of the preferred method by the City of Madison:

- Mowing (for annual invasive plants that can be managed by removing the seeds produced that season).
- Hand pulling (for individual small patches of invasive plants that do not spread more aggressively after hand pulling - i.e. hand pulling is not allowed for Japanese Knotweed which spreads rhizomatically and would become more aggressive if hand pulled).
- Prescribed Burning – for locations where burning would be an effective treatment. Exact locations to be burned shall be determined upon contract award.
- Other non-chemical approaches to invasive control to be determined by Contractor.
- Spot herbicide application by "painting" treated stumps, or the "glove of death method" which requires placing a chemical resistant glove over one hand, putting a cotton glove over that, and then spraying herbicide on the cotton glove and hand wiping the undesirable plant.
- Spray herbicide with backpack and pump sprayers, selectively spraying undesirable species.

Herbicide Chemistry and Application Method

The herbicide shall be the least toxic required to prevent regrowth. Whenever possible the Contractor shall select an herbicide that will not prevent growth or germination of future seeding and planting operations. Herbicide chemistry and the potential for exposure (i.e. application method) shall be considered as part of the herbicide selection process. Herbicides containing Triclopyr, or Glyphosphate, or similar chemicals are recommended. Herbicides containing Picloram will not be approved. The Contractor shall select herbicides that are appropriate for both woody and herbaceous regrowth. All herbicides shall be applied by a licensed applicator and in accordance with the manufacturer's instructions. The Contractor shall include all proposed herbicides and methodologies in the Brushing and Herbicide Submittal as described in this bid item. All herbicides shall be applied by a licensed applicator and in accordance with the manufacturer's instructions.

The Contractor shall submit to the Engineer a Herbicide Chemistry and Application Method for approval prior to any brushing activities. The submittal shall include:

- Proposed herbicides and their individual applications, i.e. which herbicides will be used on which plants
- Material Data Safety Sheets for each herbicide
- Proposed application methods and timing
- Qualifications of personnel

All herbicide application shall be in strict accordance with the City of Madison Pesticide policy, available at https://www.cityofmadison.com/parks/about/documents/pesticidepolicy2004.pdf. The Contractor shall adhere to this policy and the notification requirements contained in the policy, and shall promptly report to the Engineer all dates of application, type of herbicide used, and amount applied.

The Contractor should be aware that it may be necessary to use an aquatic approved herbicide. Applicators may need to be certified to apply aquatic pesticides with a state DATCP license in the appropriate category. An Aquatic Plant Management Permit may be required from the Wisconsin Department of Natural Resources. All control measures not requiring the use of herbicides must be approved by the Greenway Vegetation Coordinator prior to the start of work.

All herbicide application shall be completed in a manner that prevents damage to adjacent vegetation. The Contractor shall adhere to the following:

- All cutting and clearing debris shall become property of the Contractor and shall be removed from the project site at no additional cost to the City.
- The Contractor shall remove trash that has accumulated on site at each treatment and shall dispose at no additional compensation.
- The Contractor shall be responsible for replacing any native species at the direction of the Engineer that have died as a result of herbicide overspray which can include trees, shrubs, and forbs.
- All herbicide application signage must be clearly visible.
- The Contractor shall be required to use aquatic herbicide as necessary for all areas required by the Wisconsin Department of Natural Resources and to obtain all required permits necessary for application of aquatic herbicide.
    - The Contractor shall submit to the Engineer an herbicide submittal for approval prior to any invasive removal activities. The submittal shall include:
        - Proposed herbicides and their individual applications, i.e. which herbicides will be used on which plants
        - Material Data Safety Sheets for each herbicide
        - Proposed application methods and timing
        - Qualifications of personnel as highlighted in the section below

Burn Plan

The Contractor shall be required to submit a burn plan for approval by the Engineer prior to construction. The Contractor shall be required to:

- Provide proof of completed training per DNR's standard certifications.
- Obtain an approved burn permit through the Madison Fire Department which shall include the following information in the submittal:
    - Names and on-site cell phone contact information of personnel assisting with burn.
    - Description of vegetation inside, adjacent to, and outside burn areas.
    - Method of starting fire.
    - Method of smoke management.
    - Method of fire management control.
- Provide appropriate signage for major highways, main, and residential roads.
- Coordinate with Maddie Dumas (608) 266-9525, mdumas2@cityofmadison.com to notify residents of scheduled burns.

METHOD OF MEASUREMENT

2025 Restoration Maintenance shall be measured as a Lump Sum.

BASIS OF PAYMENT

2025 Restoration Maintenance shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

END OF SPECIAL PROVISIONS

Attachment A

Heartland
ECOLOGICAL GROUP INC

Ecological Assessment Report

Lower Badger Mill Creek Property

City of Madison, Dane County, Wisconsin

October 30, 2023

Project Number: 20231102

506 Springdale Street | Mount Horeb, WI 53572 | www.heartlandecological.com

Lower Badger Mill Creek Property

City of Madison, Dane County, Wisconsin

October 30, 2023

Prepared for:

Ms. Sarah Lerner, PLA

City of Madison Engineering Division

210 Martin Luther King, Jr. Blvd.

Madison, WI 53703

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Prepared by:

Heartland Ecological Group, Inc.

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Mount Horeb, WI 53572

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Prepared by: Sarah Kraszewski, Senior Ecologist

Reviewed by: Scott Fuchs, Environmental Scientist

Solutions for people, projects, and ecological resources.

Table of Contents

1.0 Introduction

Heartland Ecological Group, Inc. ("Heartland") completed an ecological assessment of the Lower Badger Mill Creek Property on October 2, 2023, at the request of the City of Madison Engineering Division (the "City"). Fieldwork was completed by Sarah Kraszewski, a Senior Ecologist and Professional Wetland Scientist (PWS) at Heartland. The City identified an approximate 38-acre portion of the City's property as the "Study Area" for this assessment. The Study Area is southeast of the intersection of Meadow Road and Valley View Road, in Section 32, T7N, R8E, City of Madison, Dane County, WI (Figure 1, Appendix A). The Study Area is identified with the following two addresses: 1524 Feather Edge Drive and 1661 Meadow Road.

The City is constructing a flood mitigation project at the Study Area that includes dredging of an existing open water wetland and conversion to a stormwater pond, creation of three stormwater ponds, channel realignment, bridge construction, and sanitary sewer installation. The purpose of the ecological assessment was to identify and evaluate the ecological quality of the plant communities that were not disturbed by the flood mitigation project. The City may use the results of this assessment to guide the restoration planning of the natural communities within the Study Area. This report provides a description of the Study Area based on publicly available resources and historic aerial imagery, assessment methods, a description of the plant communities and floristic quality observed in the field, vegetation lists, representative photographs, and figures depicting the identified plant communities.

2.0 Site Characteristic Assessment

Publicly available resources were utilized including the U.S. Geological Survey's (USGS) *WI 7.5 Minute Series (Topographic) Map* and the WNDR's *24k Hydro Flowlines (Rivers and Streams)* data layer (Figure 2, Appendix A), the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service's (NRCS) Soil Survey Geographic Database (SSURGO) *Web Soil Survey* (Figure 3, Appendix A), and aerial imagery available through the USDA Farm Service Agency's (FSA) National Agriculture Imagery Program (NAIP) and Dane County's Land Information Office (Appendix B).

A review of historic aerial imagery indicates that the Study Area was used for agricultural purposes prior to the 1940s (Appendix B). The 1937 orthophoto depicts the entire Study Area divided into fields for agricultural production with only scattered trees present along some of the field perimeters. Land use conditions appeared relatively consistent until at least 1987. By 1995, three wetland/pond areas appear to have been excavated within the Study Area including a large pond in the northwest portion, a small pond in the southcentral portion, and a large pond in the southeast portion. In 2004 the majority of the Study Area, apart from the ponds, appeared to be in agricultural use and residential developments were constructed to the east of the Study Area. By 2005, it appears that agricultural production was reduced in the northwest portion of the Study Area and a swale became evident within the agricultural field in the northeast portion of the Study Area that may have received surface water flow from the residential development to the east. Conditions appear to have become progressively wetter within the Study Area over time, with surface water visible outside of the ponds in 2010 and 2013 imagery. Agricultural land use continued; however, cropped and hayed areas appeared to get smaller over time and perennial vegetation became established within wetland areas.

The WDNR's *Rivers and Streams* data layer depicts an intermittent waterway that initiates near Meadow Road within the Study Area. This unnamed intermittent waterway has Waterbody Identification Code (WBIC) 5036012 and is a tributary to Badger Mill Creek, which is located approximately 5 miles to the south of the Study Area. The City refers to the waterway as Lower Badger Mill Creek. Based on the topographic map and Dane County one-foot contours, the Study Area appears to be located at a low elevation compared to the

surrounding areas and appears to receive drainage from the west, northeast, and east. Drainage appears to continue to the south of the Study Area along Lower Badger Mill Creek.

Soils within the Study Area consist of a variety of silt loams including Plano (PoB), Troxel (TrB), Radford (RaA), Marshan (Mc), McHenry (MdC2), and Kegonsa (KeB). The NRCS identifies Marshan silt loam as hydric (100%) and Radford silt loam as predominantly non-hydric (1-15%). The remaining soil types mapped within the Study Area are considered non-hydric.

3.0 Field Assessment Methods

The field assessment was completed via a pedestrian meander survey across the Study Area to identify plant communities that were not disturbed by recent stormwater facility, stream realignment, and/or maintenance path and roadway construction. If multiple areas of a plant community were observed and these areas were determined to have different vegetation composition, these distinct stands were further distinguished by placing a number after the community designation. For example, three different upland meadow communities were identified based on vegetation composition and were described as Upland Meadow 1 (UPL1), Upland Meadow 2 (UPL2), and Upland Meadow 3 (UPL3). Distinct plant community boundaries were mapped using a Global Positioning System (GPS) in the field and then digitized onto recent aerial photography using Geographic Information System (GIS) technology at the office. A plant species list was compiled for each distinct plant community and the cover of each identified species was estimated by assigning a cover class value based on a Modified Braun-Blanquet Cover Class Scale as follows:

Cover Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**
% Areal Cover	<1%	1-5%	5-10%	10-25%	25-50%	50-75%	75-100%

Representative photographs were taken across the Study Area and wildlife observations were recorded.

Species lists collected during the meander survey were entered into the Universal FQA Calculator (Freyman et al. 2016) using the predetermined Coefficient of Conservatism (C values) and wetland indicator status assigned to each species in the Wisconsin (WDNR) - NCNE Wetland Region (Northern and South-central Wisconsin) FQA database (Chung-Gibson et al. 2017). A Floristic Quality Assessment (FQA) was performed for each distinct plant community. The FQA method is based on calculating the mean C value and species richness to determine a Floristic Quality Index (FQI) for the plant community. C values are assigned to individual plant species based on their tolerance to degradation and the degree to which the species is found in remnant habitats (Freyman et al. 2016). A C value of 0 is applied to a species that demonstrates little fidelity to any remnant natural community; whereas a C value of 10 is applied to plants that are almost always restricted to pre-settlement remnant communities. Values lower than 4 generally represent weedy or common species and values close to 10 represent more conservative, rare, or disturbance intolerant species (Swink and Wilhelm 1994).

FQI = Mean C ($\sqrt{N}$), where:

C is the Coefficient of Conservatism, and

N is the species richness value.

Non-native species were included in 'All Species' calculations and were assigned a value of zero. The mean C and FQI were calculated for each distinct plant community.

4.0 Results and Discussion

4.1 Existing Conditions

Four wetland community types (degraded wet meadow, hardwood swamp, shrub-carr, and seasonally flooded basin) and three upland community types (old field, upland meadow, and upland woodland) were identified and described within the Study Area. Plant communities are depicted on Figure 4 and the approximate acreage of each plant community is provided in the figure legend (Appendix A). Plant communities are summarized in Table 1 below. Representative photographs were taken from photo points depicted on Figure 4 and are provided in Appendix C. Species lists and FQA metrics for each distinct plant community are

provided in Appendix D. Plant community types that had multiple distinct vegetation assemblages are distinguished with numbers on Figure 4 that correspond to the species list name in Appendix D (e.g., Upland Meadow 1, 2, 3, etc.).

Areas that had been recently seeded, matted, or otherwise disturbed by stormwater facility construction are not depicted as a plant community on Figure 4. The constructed stormwater pond perimeters, approximate maintenance path locations, bridge, and the Lower Badger Mill Creek alignment depicted on Figure 4 were taken from the City's CAD data, which was provided to Heartland. Additional features shown on Figure 4 include a mowed path in the northeastern portion of the Study Area, an old spoil pile with tree growth, and a parking lot utilized by an adjacent business in the southwest portion.

Table 1. Plant Community Summary

Plant Community	Dominant Species	General Notes
Degraded Wet Meadow	Reed canary grass	Low quality herbaceous wetland that lacks seasonal ponding, found across the Study Area
Hardwood Swamp 1 (HS1)	Eastern cottonwood, sandbar willow, and reed canary grass	Small wooded wetland in northern portion of Study Area
Hardwood Swamp 2 (HS2)	River birch, Bell's honeysuckle, and reed canary grass	Small wooded wetland in eastern portion of Study Area
Shrub-Carr	Sandbar willow, reed canary grass, and eastern cottonwood	Small sandbar willow dominated wetland
Seasonally Flooded Basin 1 (SFB1)	Pennsylvania knotweed	Historically excavated ponds in the northern and southern portions of Study Area that appear to be seasonally ponded and dominated by annual species. The southern basin appears to have long durations of open water.
Seasonally Flooded Basin 2 (SFB2)	Rice cut grass	Historically excavated pond in southwest portion of Study Area that appears to be seasonally ponded
Old Field	Fall panic grass and giant foxtail	Fallow agricultural field along eastern perimeter of Study Area with weedy vegetation establishment
Upland Meadow 1 (UPL1)	Reed canary grass and Canada goldenrod	Three upland meadow areas in northwestern portion of Study Area

Plant Community	Dominant Species	General Notes
Upland Meadow 2 (UPL2)	Canada goldenrod, crown vetch, reed canary grass, globular coneflower, and black locust	Upland meadow in northeastern portion of Study Area with scattered native prairie species present but overall dominated by invasive species including black locust saplings in northern portion. Mowed path down center.
Upland Meadow 3 (UPL3)	Orchard grass, Queen Anne's lace, fescue, crown vetch, and Canada goldenrod	Upland meadow in southwestern portion of Study Area, dominated by Eurasian cool season grasses and non-native forbs
Upland Woodland	Bell's honeysuckle, black locust, box elder, silver maple, black walnut, and orchard grass	Disturbed upland woodlands. Southwestern community contains areas of prior upland meadow that have been encroached by black locust.

No remnant or high-quality plant communities were observed within the Study Area, which was anticipated given the history of agricultural land use. Overall, plant communities within the Study Area were low quality based on low native species richness and cover and were degraded by non-native and invasive species (Appendix D). Although several native prairie species were observed in Upland Meadow 2, the dominance of invasive species such as crown vetch and black locust have negatively impacted the floristic and habitat quality. The stand of river birch within Hardwood Swamp 2 is desirable; however, there are few other native species present in the forested wetland and surrounding areas. The Upland Woodand community in the southwest corner does contain scattered native species; however, the overall wooded area is not representative of a natural community and is extensively degraded by invasive shrubs and herbaceous species.

Wildlife and signs of wildlife observed while conducting the meander surveys included small mammals, white-tailed deer, and frogs. Observed insects included grasshoppers and monarch butterflies. Observed birds included killdeer, Canada geese, gray catbirds, blue jays, black-capped chickadees, sparrows, rock doves, mallards, great blue heron, and wood ducks. Canada geese were primarily observed within the newly constructed stormwater ponds and the rock doves were observed around the newly constructed pond slopes. The large seasonally flooded basin in the southern portion of the Study Area (SFB1) appears to

provide good waterfowl habitat within open water areas. This area likely supports migrating waterfowl, provides amphibian habitat, and provides a water source for other wildlife.

4.2 Restoration Opportunities

Although the existing plant communities are generally low quality, there are restoration opportunities throughout the Study Area to enhance wildlife and pollinator habitat, improve floristic quality, enhance the restoration of Lower Badger Mill Creek, and improve aesthetics for the adjacent landowners and property users. These enhancements and restoration opportunities will become increasingly more important as the surrounding landscape is developed for residential use. The areas of greatest wildlife habitat potential appear to be the seasonally flooded basins, particularly the large basin in the southern portion of the Study Area that has open water components for much of the growing season. Habitat could be further enhanced by restoring the degraded wet meadow areas around the seasonally flooded basins to native wet meadow/wet prairie vegetation. These communities would provide native perennial cover with a diversity of wildflowers to attract insects and graminoids that provide nesting habitat and cover. Encouraging a diversity of insects will provide food sources for birds, frogs, and bats. Restoring the adjacent wetland areas will also improve habitat for birds and amphibians. Structures such as sunning logs for turtles could be added to areas that frequently have open water.

It is recommended that invasive trees and shrubs be removed across the Study Area, including black locust, common buckthorn, and invasive bush honeysuckle. Upland meadow and old field areas that will not be impacted by future road construction are suitable for prairie restoration following removal of existing vegetation and invasive species control. Shortgrass prairie plantings could provide an aesthetically pleasing landscape along the future roads and bike paths, buffer the adjacent wetland areas with deep-rooted perennials that would assist with infiltration, and provide nesting habitat and food sources for small birds and pollinators. Woodland areas can be enhanced by controlling invasive species and adding additional native species to improve floristic diversity and habitat. Plant community restoration should be assessed comprehensively with the restoration of the newly constructed stormwater facilities.

5.0 Conclusion

Heartland completed an ecological assessment at the Lower Badger Mill Creek Property on October 2, 2023, to assess areas not impacted or disturbed by recent flood mitigation project work. The ecological assessment was completed on behalf of the City of Madison Engineering Division. The Study Area was historically used for agricultural purposes and had been entirely cleared of natural plant communities prior to the 1940s.

Four wetland plant communities and three upland plant communities were identified and assessed. Overall, the plant communities had low floristic quality and were dominated by non-native and invasive species. Although the floristic quality of the plant communities was low, the Study Area is currently providing wildlife habitat which can be further enhanced by removing invasive species and restoring native plant communities such as wet meadow, wet prairie, and shortgrass upland prairie. Restoration of native plant communities may improve floristic quality, storm and floodwater storage, aquatic life and wildlife habitat, and human use values in a landscape that is being rapidly developed for residential use.

5.0 References

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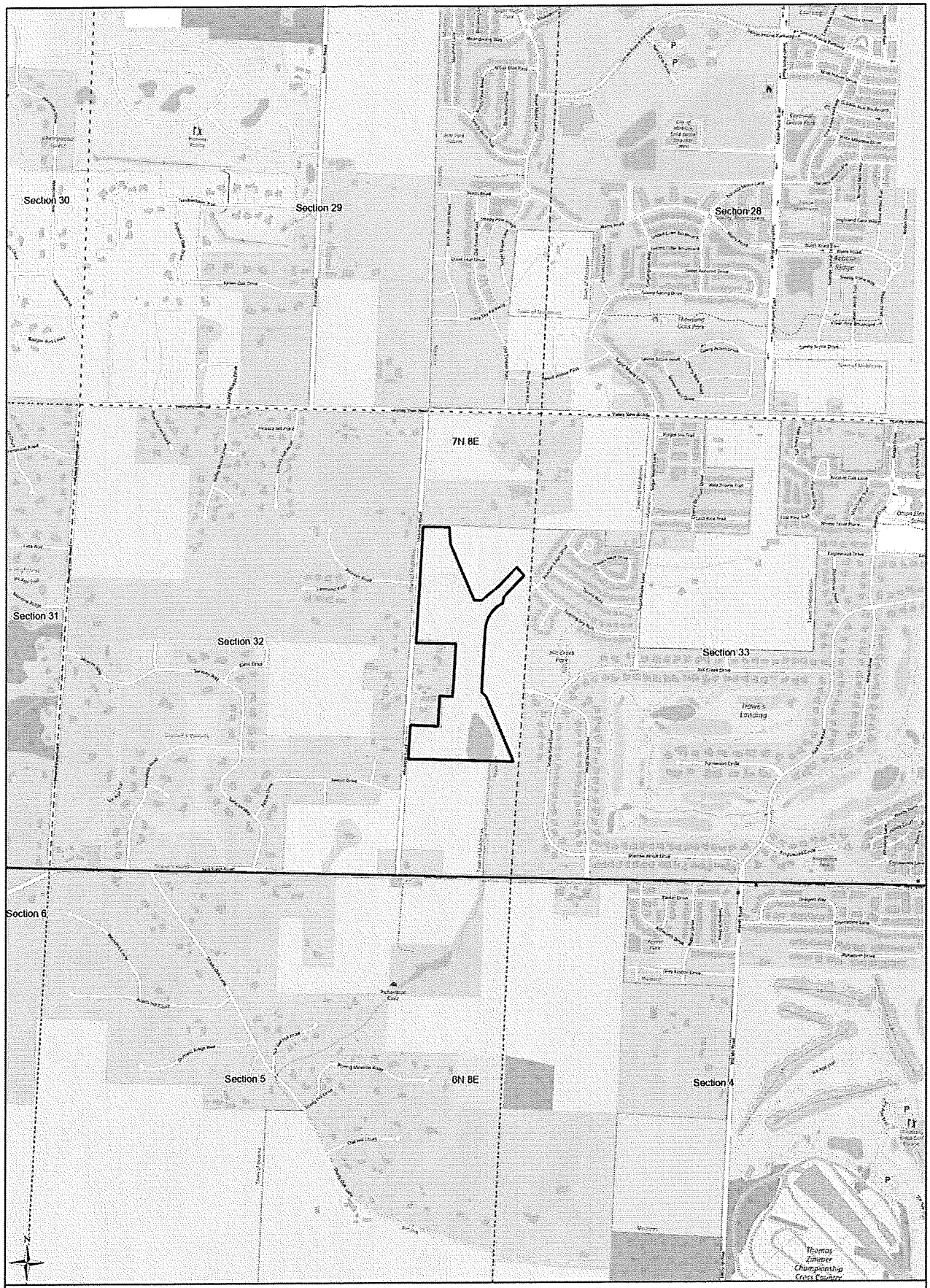
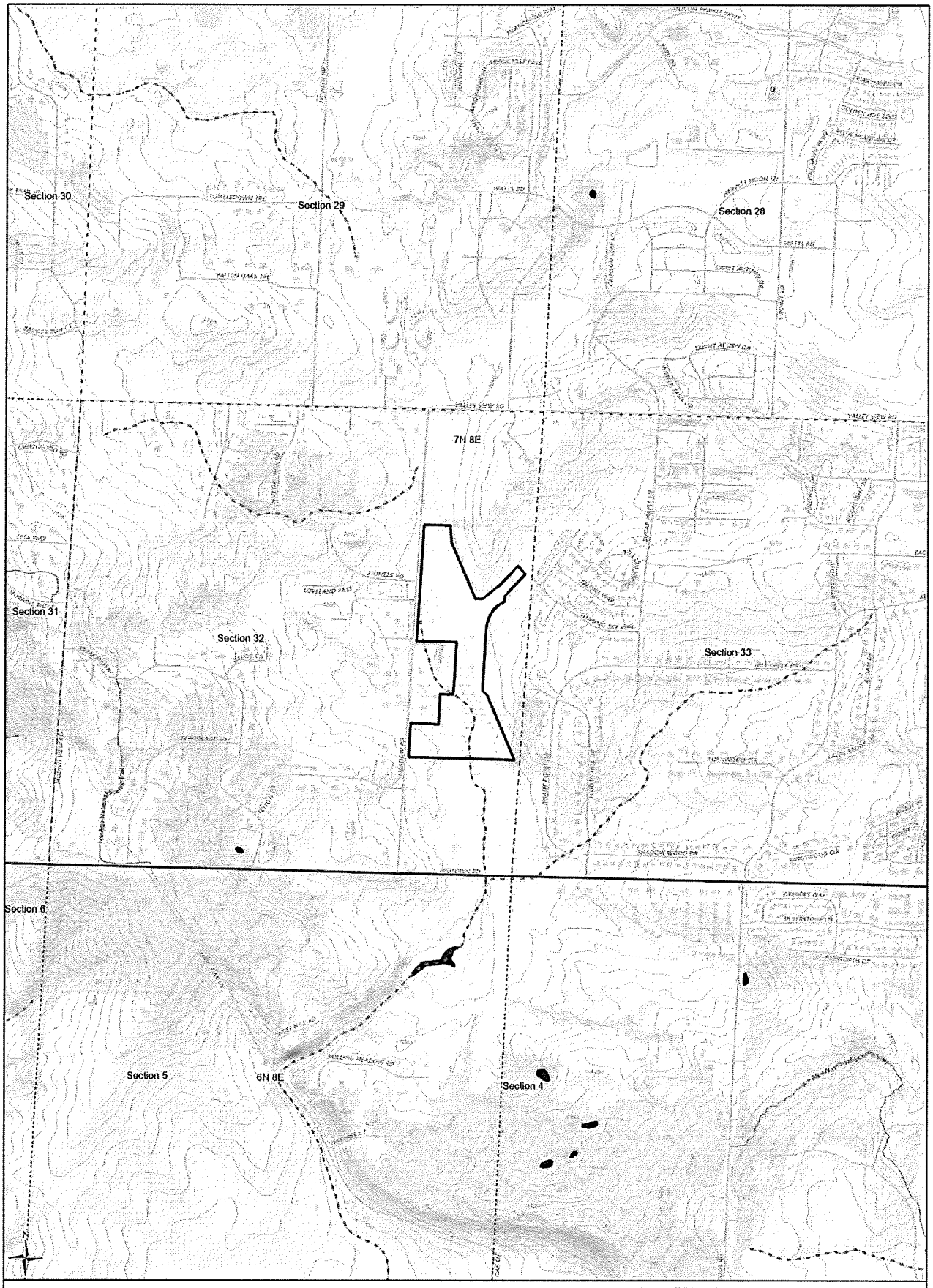
Appendix A | Figures

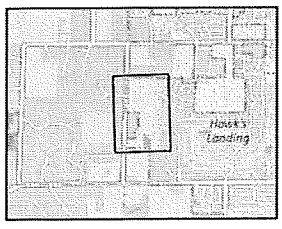

Section 30
Section 29
Section 28
7N 8E
Section 31
Section 32
Section 33
Section 6
Section 5
6N 8E
Section 4
N
Middleton
Verona
Study Area (38.35 ac)
Township
Section
0 500 1,000 Ft
Heartland
ECOLOGICAL GROUP INC
Figure 1. Project Location
Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co
OpenStreetMap
ESRI
LRR: NCNE
Figure Created: 9/22/2023


Section 30
Section 29
Section 28
7N 8E
Section 31
Section 32
Section 33
Section 6
Section 5
6N 8E
Section 4
Middleton
Verona
Study Area (38.35 ac)
Township
Section
Perennial Streams (None in Map Extent)
Intermittent Streams
Waterbodies
0 500 1,000 Ft
Heartland ECOLOGICAL GROUP INC
Figure 2. USGS Topography
Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co
USGSTopo
USGS, WDNR
LRR: NCNE
Figure Created: 11/25/2023


GsB
PrB
RrC2
DsC2
PnB
T:B
Feather Edge Dr
Soaring Sky Run
MdC2
DaB
Garden Ct
KeB
PoB
DnB
DaC2
Meadow Rd
BlB
KeB
ScB
RaA
Treetops Dr
ScB
Shady Point Dr
VrB
Pits
N
Study Area (38.35 ac)
NRCS Soil Survey Data
Hydric (100%)
Predominantly Hydric (85-99%)
Partially Hydric (16-84%)
Predominantly Non-Hydric (1-15%)
Non-Hydric (0%)
Hook's Landing
0
200
Ft
Heartland
ECOLOGICAL GROUP INC
Figure 3. NRCS Hydric Soils
Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co
2020 NAIP
NRCS
LRR: NCNE
Figure Created: 11/25/2023


UPL2
HS1
SFB1
UPL1
UPL1
UPL1
UPL3
UPL3
HS2
SFB1
SFB2
PP1
PP2
PP3
PP4
PP6
PP7
PP8
PP9
PP10
PP11
PP12
PP13
PP14
Meadow Rd
Feather Edge Dr
Spring Sky Run
Cardel Cir
Treetops Dr
Shady Point Dr
Study Area (38.35 ac)
Dane Co 1' Contours
Photo Points
Storm Water Ponds (4.65 ac)
Spoil Pile (0.30 ac)
Maintenance Paths
Mowed Path
Parking Lot
Lower Badger Mill Creek Alignment
Bridge
Upland Communities
Upland Meadow (4.85 ac)
Old Field (3.91 ac)
Upland Woodland (1.63 ac)
Wetland Communities
Degraded Wet Meadow (8.48 ac)
Hardwood Swamp (0.59 ac)
Shrub-Carr (0.13 ac)
Seasonally Flooded Basin (4.28 ac)
0
200
Ft
Heartland
ECOLOGICAL GROUP INC
Figure 4. Existing Plant Communities
Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co
2022 NAIP
Dane Co, HEG
LRR: NCNE
Figure Created: 11/26/2023

Appendix B | Historic Aerial Imagery



Study Area (38.35 ac)

0 200 Ft

Heartland
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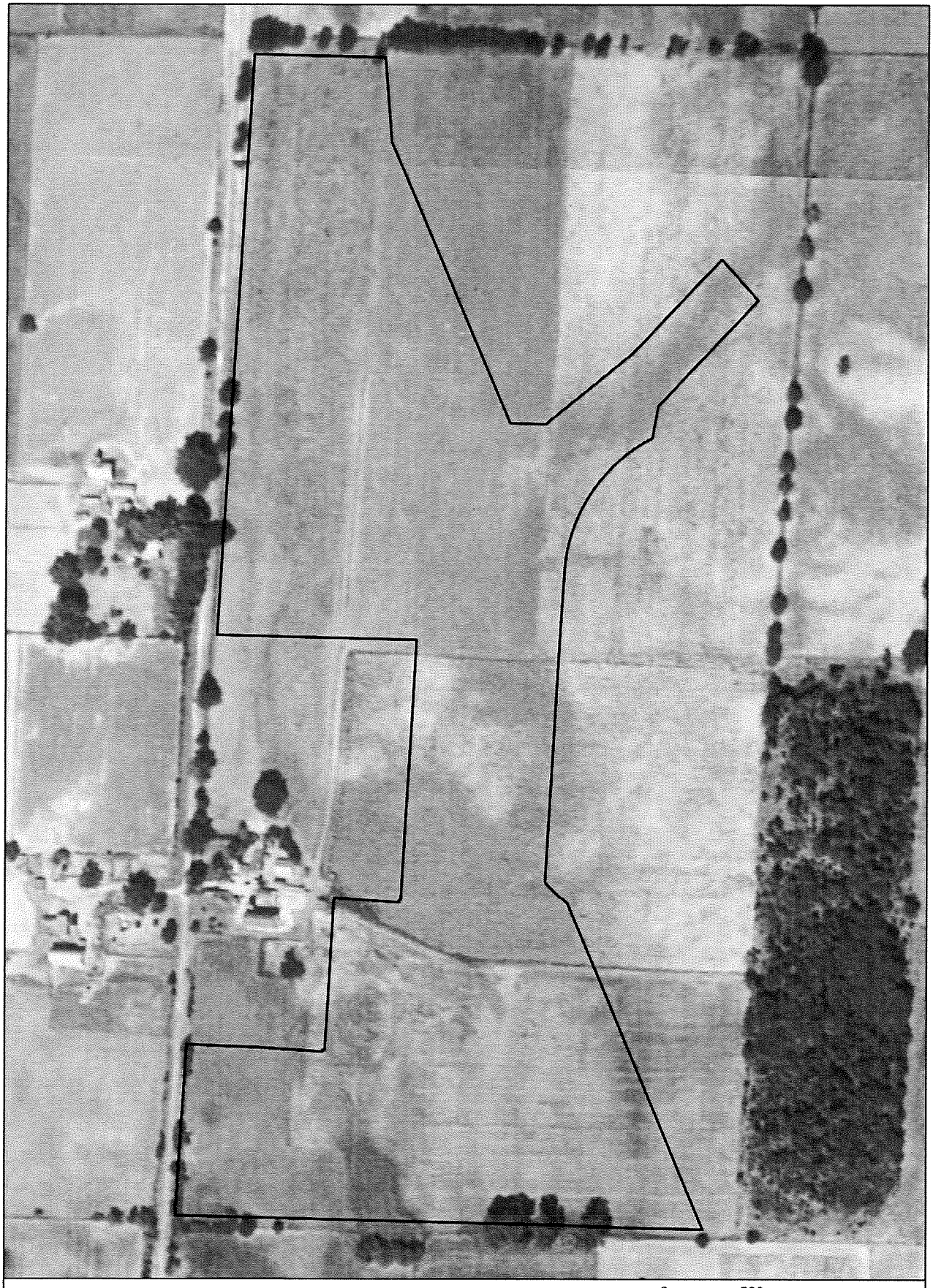
Appendix: 1937
Dane Co Orthophoto

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

1937 Orthophoto
Dane Co. LIO
LRR: NCNE

Figure Created: 10/30/2023



Study Area (38.35 ac)

0 200 Ft

Heartland
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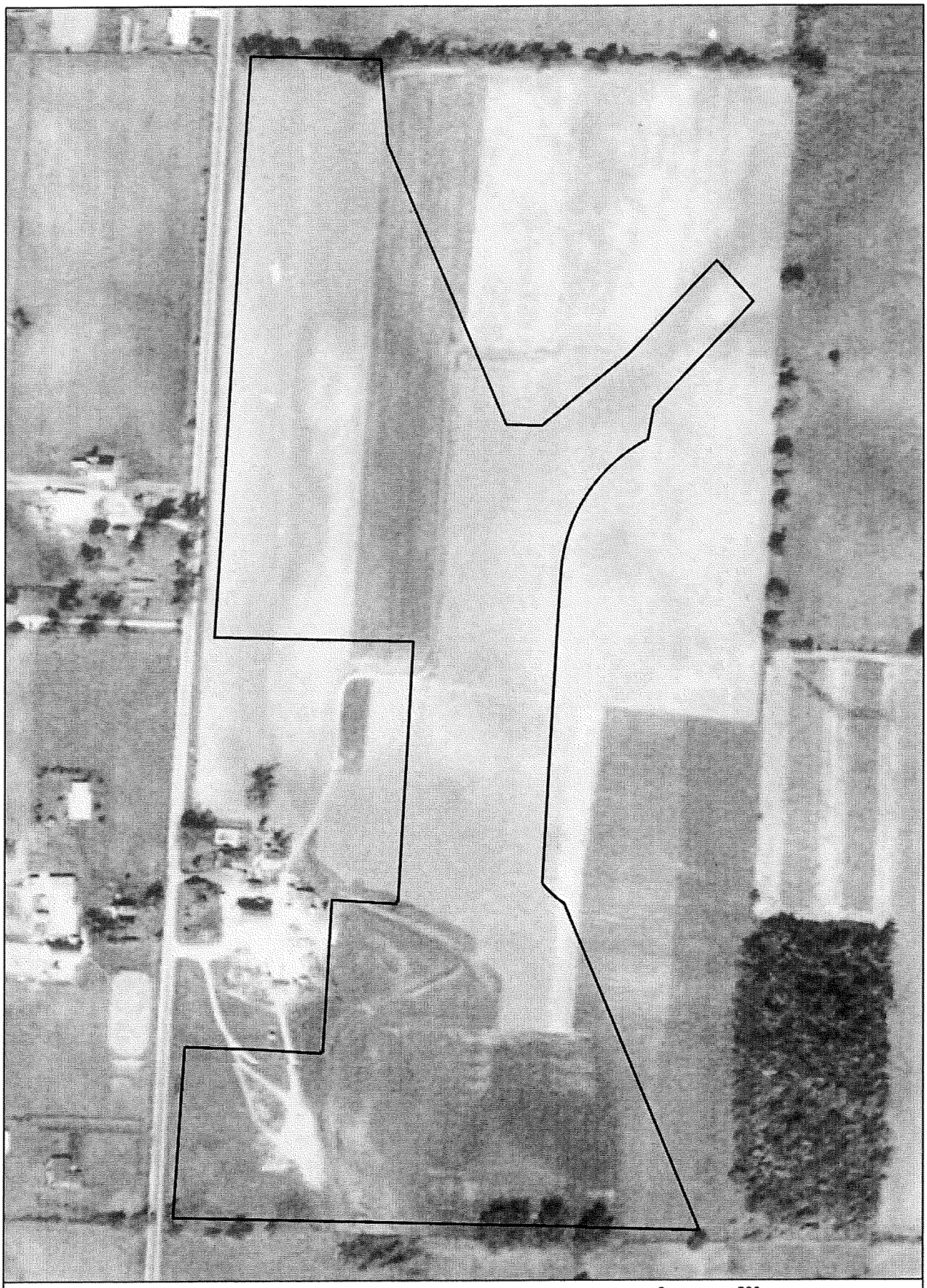
Appendix: 1955
Dane Co Orthophoto

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

1955 Orthophoto
Dane Co. LIO
LRR: NCNE

Figure Created: 10/30/2023



Study Area (38.35 ac)

0 200 Ft

Heartland
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Appendix: 1976
Dane Co Orthophoto

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

1976 Orthophoto
Dane Co. LIO
LRR: NCNE

Figure Created: 10/30/2023


Study Area (38.35 ac)
0
200
Ft
Heartland
ECOLOGICAL GROUP INC
Appendix: 1987
Dane Co Orthophoto
Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co
1987 Orthophoto
Dane Co. LIO
LRR: NCNE
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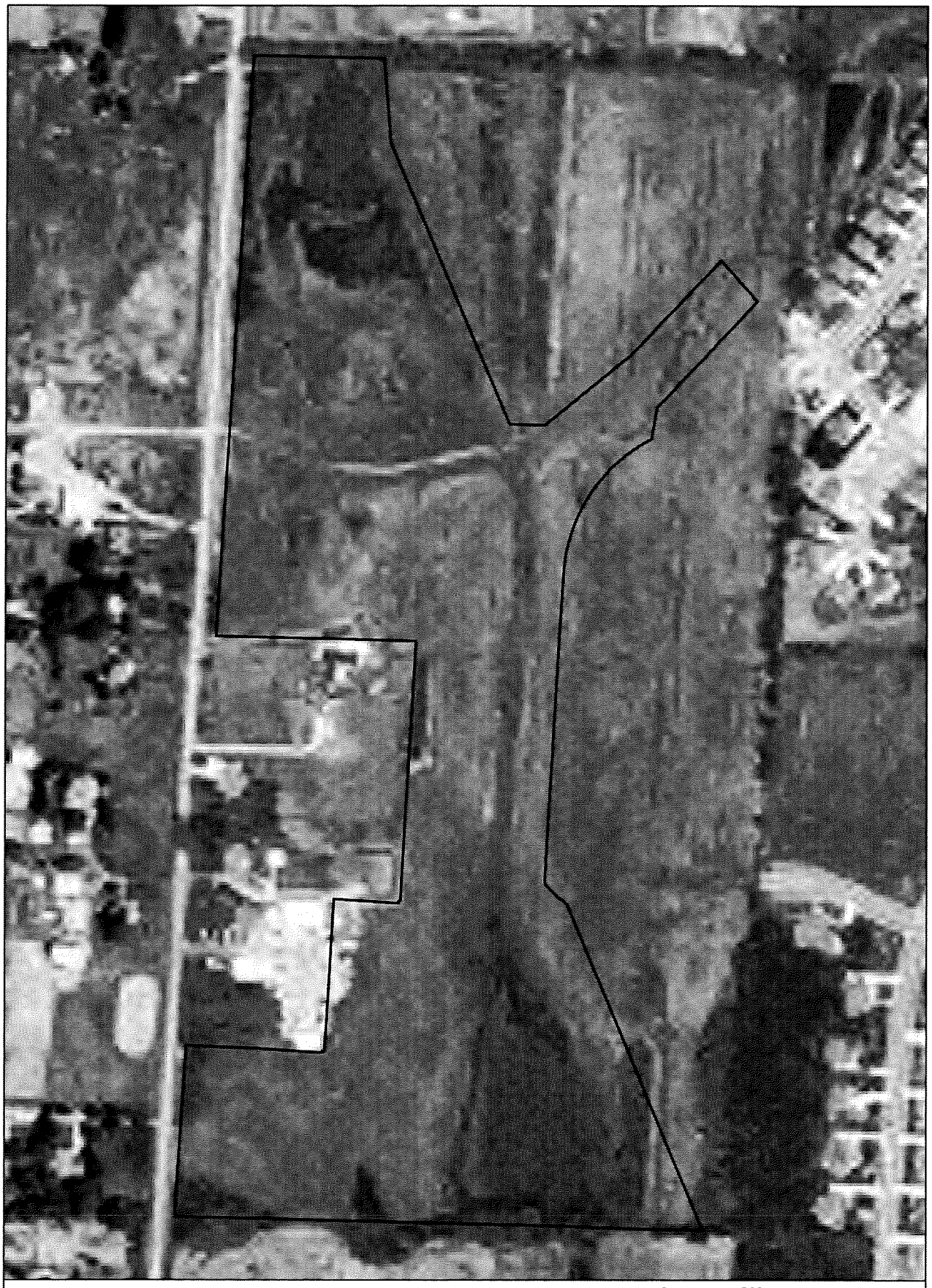

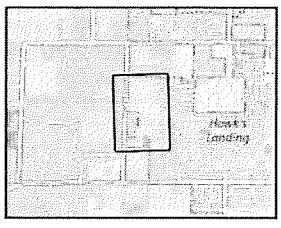

Study Area (38.35 ac)

0 200 Ft

Heartland
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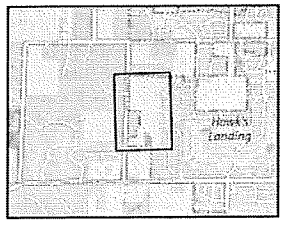
Appendix: 2004-07-15
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2004 NAIP
USDA

LRR: NCNE

Figure Created: 9/22/2023



Study Area (38.35 ac)

0 200 Ft

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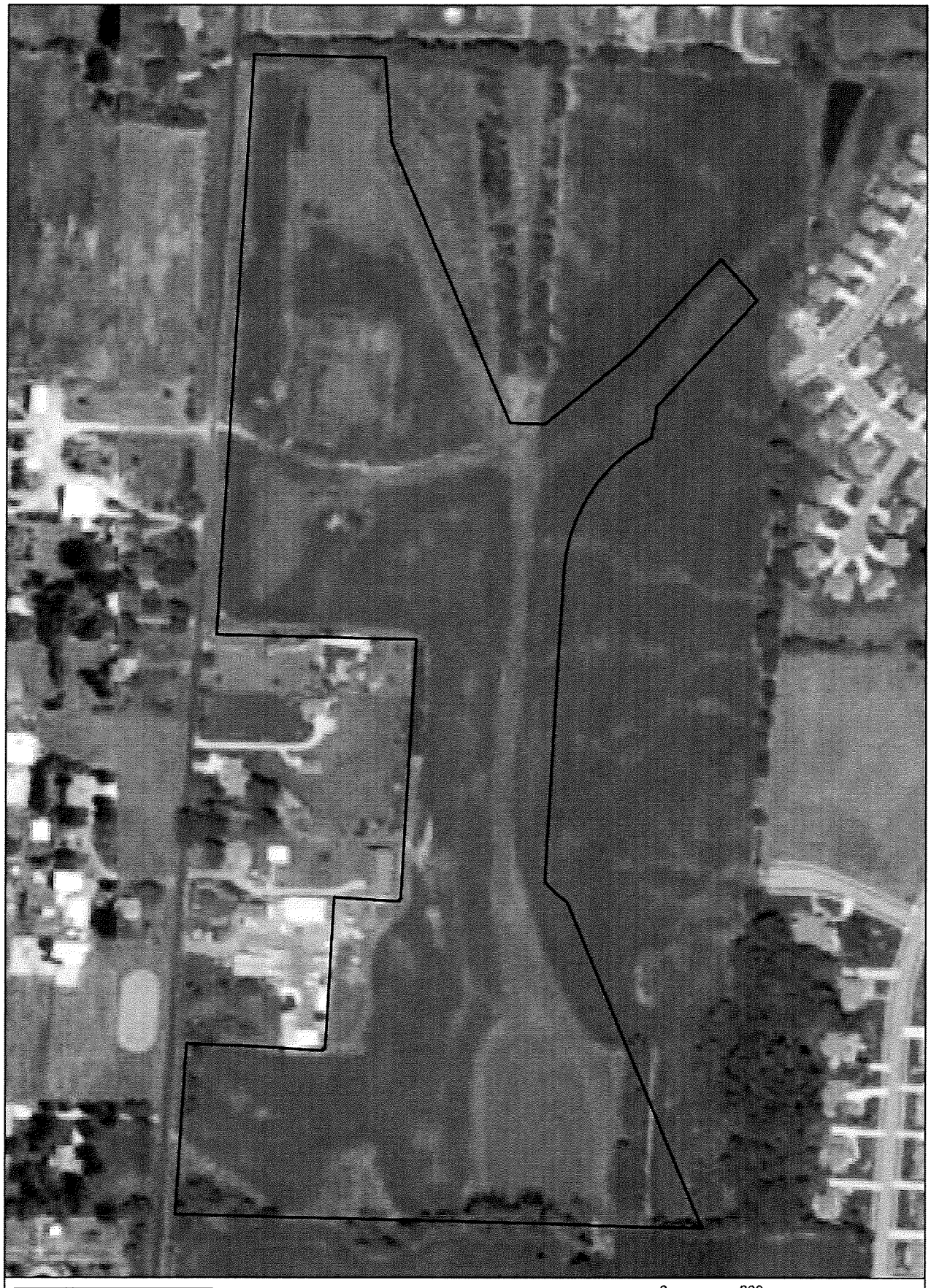
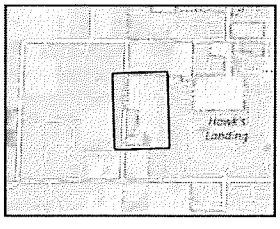
Appendix: 2005-07-08
NAIP Aerial Imagery
Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2005 NAIP
USDA
LRR: NCNE

Figure Created: 9/22/2023





Study Area (38.35 ac)

0 200 Ft

Heartland
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Appendix: 2006-07-15
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2006 NAIP
USDA
LRR: NCNE

Figure Created: 9/22/2023

Study Area (38.35 ac)

0 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2008-07-09
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2008 NAIP
USDA
LRR: NCNE

Figure Created: 9/22/2023

Study Area (38.35 ac)

0 200 Ft

Heartland
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Appendix: 2010-07-02
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2010 NAIP
USDA
LRR: NCNE

Figure Created: 9/22/2023

Study Area (38.35 ac)

0 200 Ft

Heartland
ECOLOGICAL GROUP INC

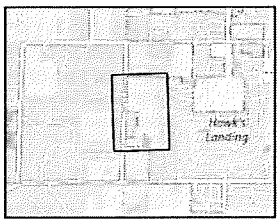
Appendix: 2013-07-04
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2013 NAIP
USDA

LRR: NCNE

Figure Created: 9/22/2023



Study Area (38.35 ac)

0 200 Ft

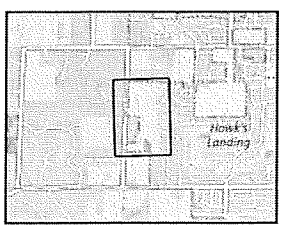
Heartland
ECOLOGICAL GROUP INC

Appendix: 2015-07-10
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2015 NAIP
USDA
LRR: NCNE

Figure Created: 9/22/2023



Study Area (38.35 ac)

0 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2017-09-03
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2017 NAIP
USDA

LRR: NCNE

Figure Created: 9/22/2023

Study Area (38.35 ac)

0 200 Ft

Heartland
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Appendix: 2018-07-28
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2018 NAIP
USDA
LRR: NCNE

Figure Created: 9/22/2023

Study Area (38.35 ac)

0 200 Ft

Heartland
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Appendix: 2020-08-29
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2020 NAIP
USDA

LRR: NCNE

Figure Created: 9/22/2023

Study Area (38.35 ac)

0 200 Ft

Heartland
ECOLOGICAL GROUP INC

Appendix: 2022-06-26
NAIP Aerial Imagery

Lower Badger Mill Creek
Project #20231102
T7N, R8E, S32
C Madison, Dane Co

2022 NAIP
USDA

LRR: NCNE

Figure Created: 9/22/2023

Appendix C | Photographs

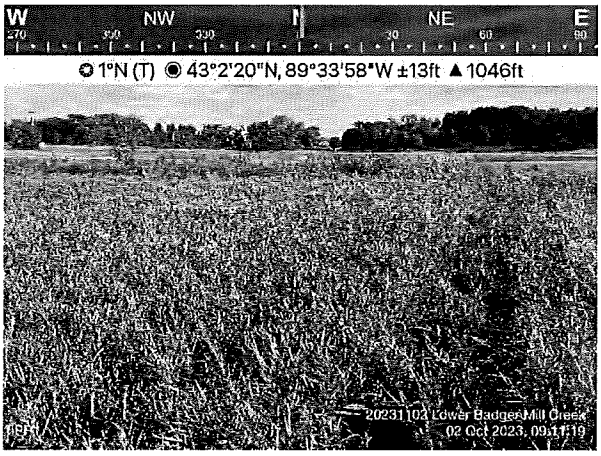


Photo #1 Photo point 1, view north of degraded wet meadow

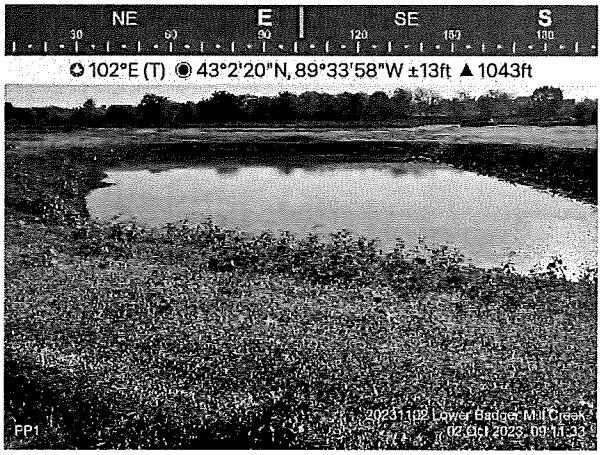


Photo #2 Photo point 1, view east toward stormwater pond

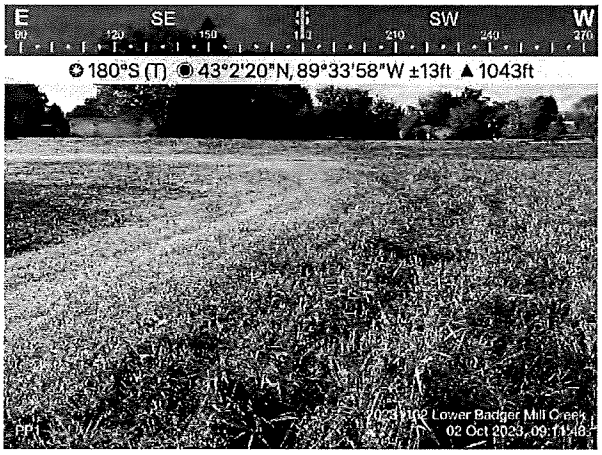


Photo #3 Photo point 1, view south of stormwater pond slope (left) and degraded wet meadow (right)

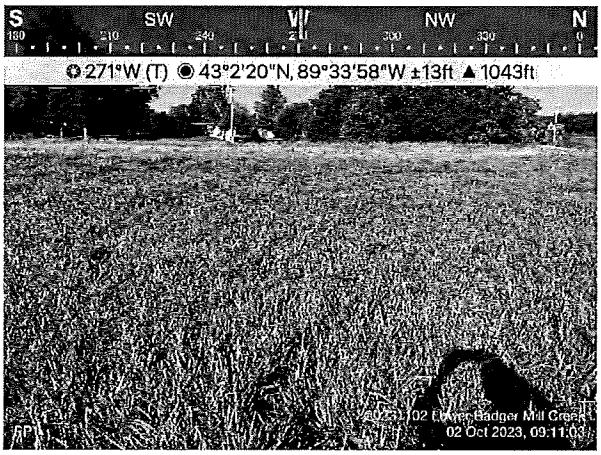


Photo #4 Photo point 1, view west of degraded wet meadow with upland meadow (UPL1) in background

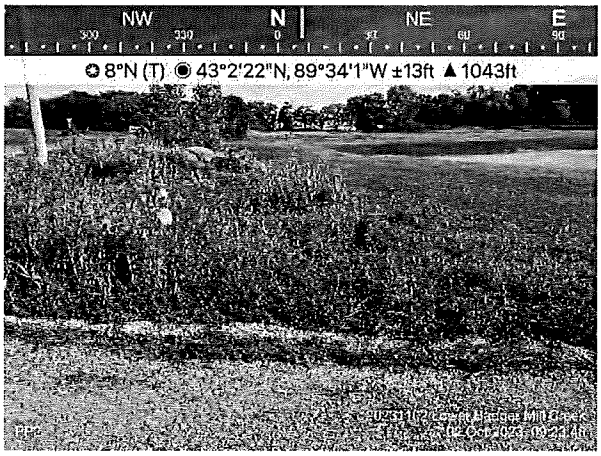


Photo #5 Photo point 2, view north along Meadow Road ROW and newly seeded stormwater pond perimeter

Photo #6 Photo point 2, view east along maintenance path

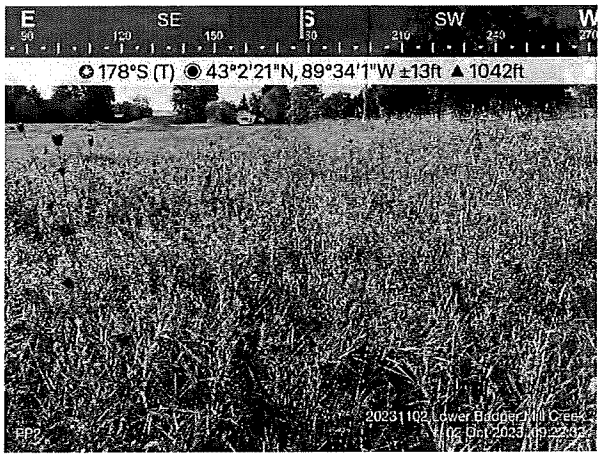


Photo #7 Photo point 2, view south of upland meadow (UPL1)

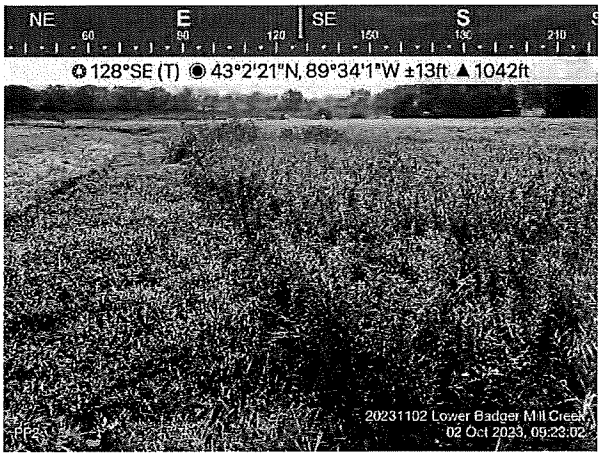


Photo #8 Photo point 2, view southeast along recently restored path perimeter and upland meadow (UPL1)

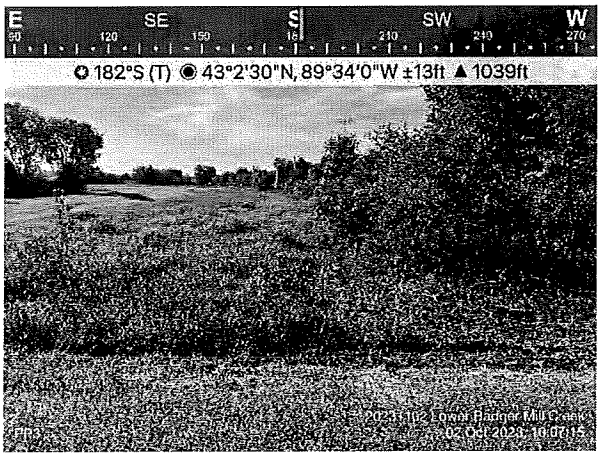


Photo #9 Photo point 3, view south of degraded wet meadow and shrubby ROW along Meadow Road

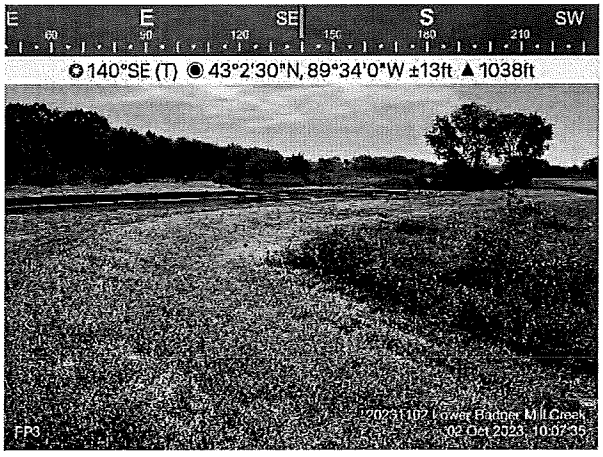


Photo #10 Photo point 3, view southeast along maintenance path perimeter and degraded wet meadow

Photo #11 Photo point 3, view east along maintenance path at northwest corner of the Study Area

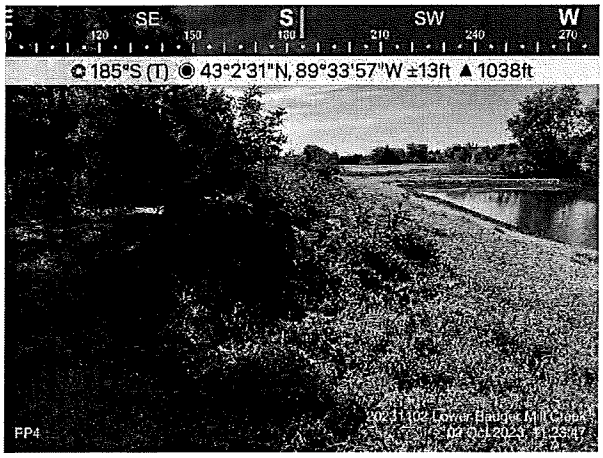


Photo #12 Photo point 4, view south along upland meadow (UPL2) with black locust saplings

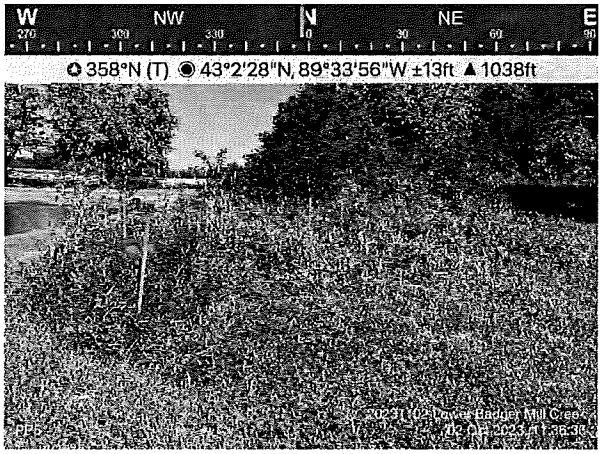


Photo #13 Photo point 5, view north of upland meadow (UPL2) above stormwater pond (to left)

Photo #14 Photo point 5, view south toward seasonally flooded basin (SFB1)

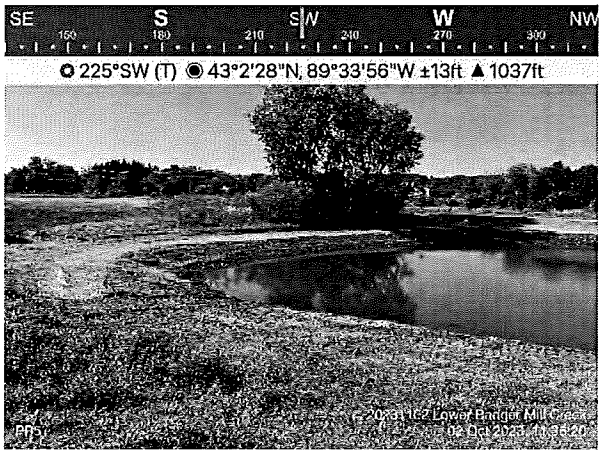


Photo #15 Photo point 5, view southwest of stormwater pond with hardwood swamp (HS1) in background

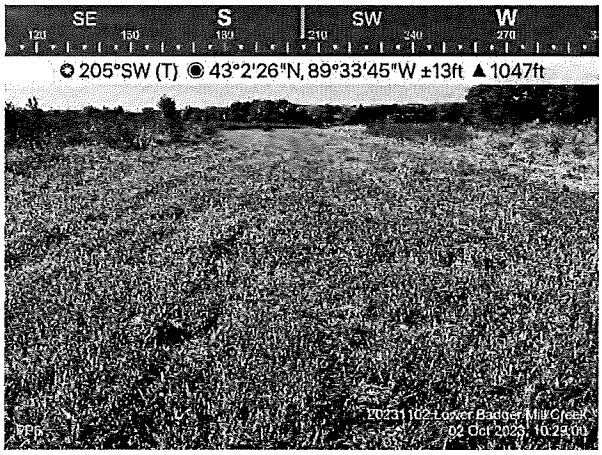


Photo #16 Photo point 6, view SSW along mowed degraded wet meadow with old field along the perimeters

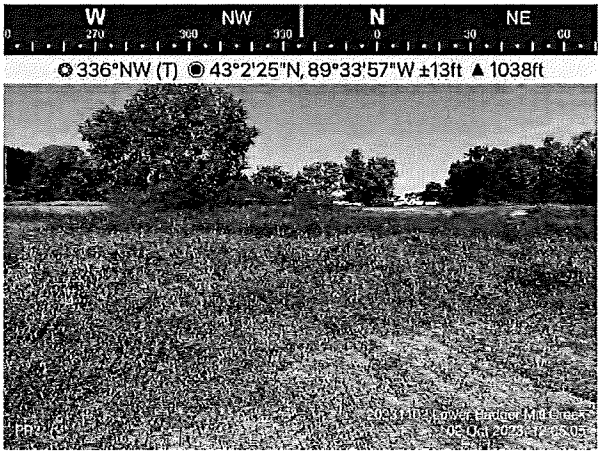


Photo #17 Photo point 7, view NNW of degraded wet meadow with SFB1 and HS1 in background

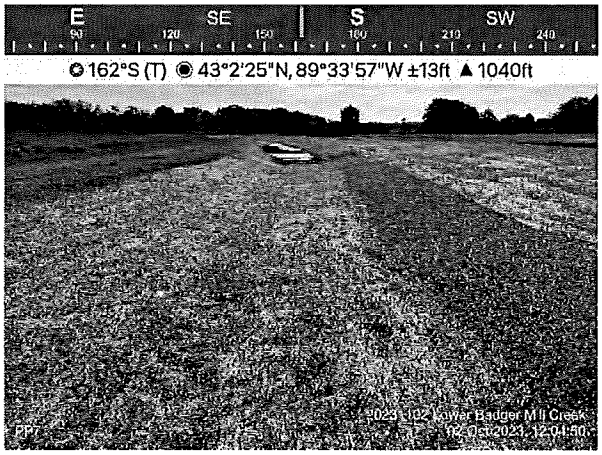


Photo #18 Photo point 7, view SSE along constructed swale for Lower Badger Mill Creek

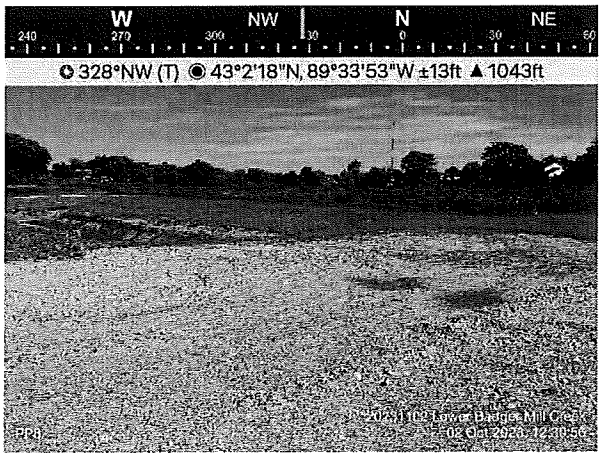


Photo #19 Photo point 8, view northwest from bridge

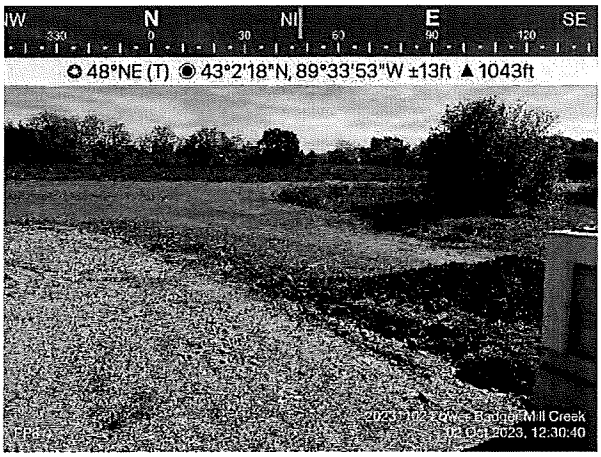


Photo #20 Photo point 8, view northeast from bridge

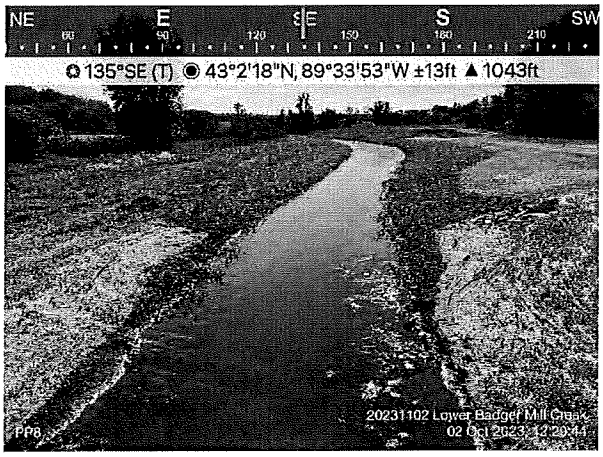


Photo #21 Photo point 8, view southeast from bridge along Lower Badger Mill Creek

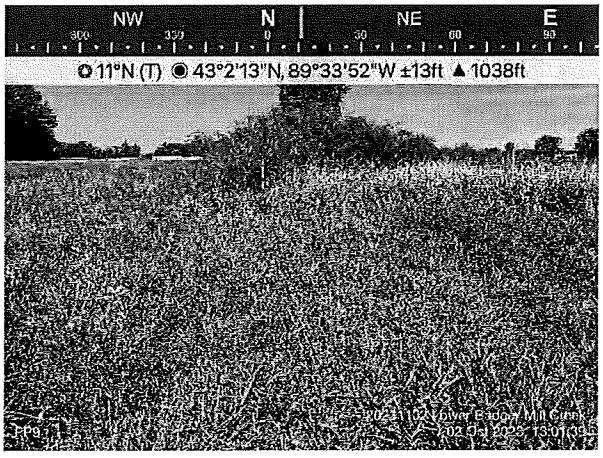


Photo #22 Photo point 9, view north towards shrub-carr

Photo #23 Photo point 9, view east in recently disturbed stormwater utility corridor with old field in background

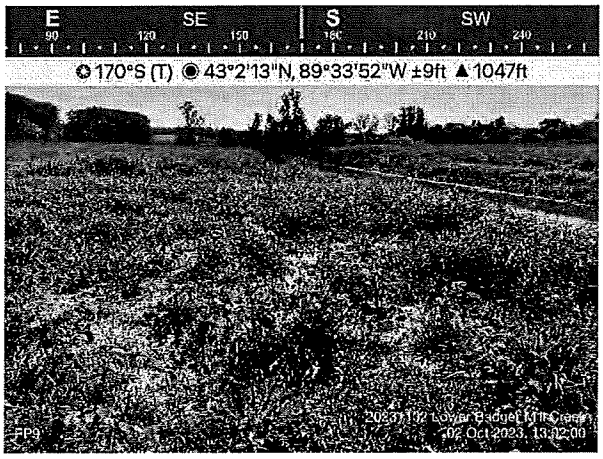


Photo #24 Photo point 9, view south along eastern bank of Lower Badger Mill Creek

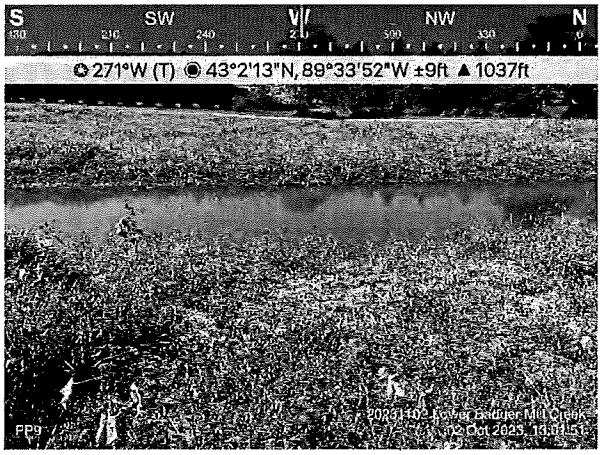


Photo #25 Photo point 9, view west across Lower Badger Mill Creek

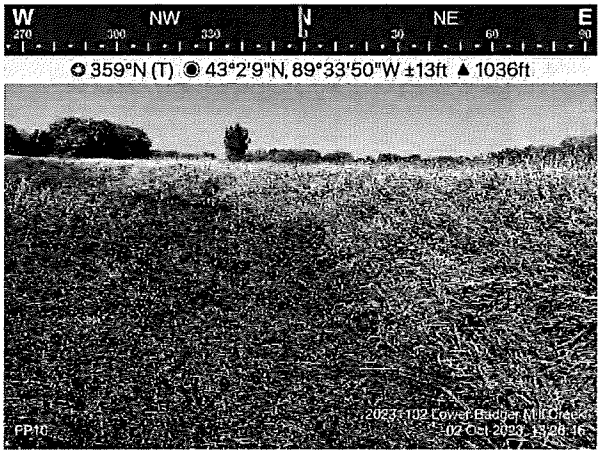


Photo #26 Photo point 10, view north along transition from seasonally flooded basin to degraded wet meadow

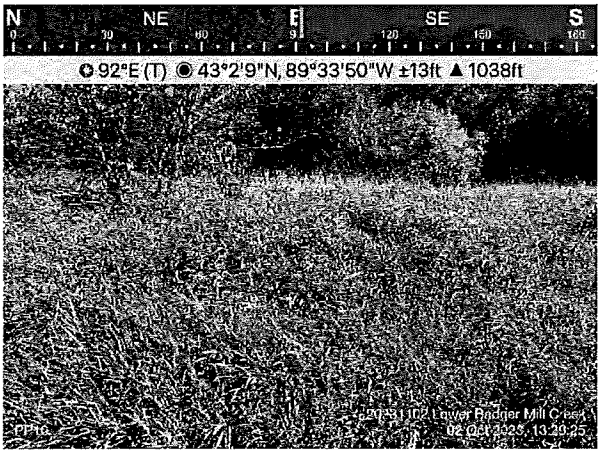


Photo #27 Photo point 10, view east of degraded wet meadow with hardwood swamp in background

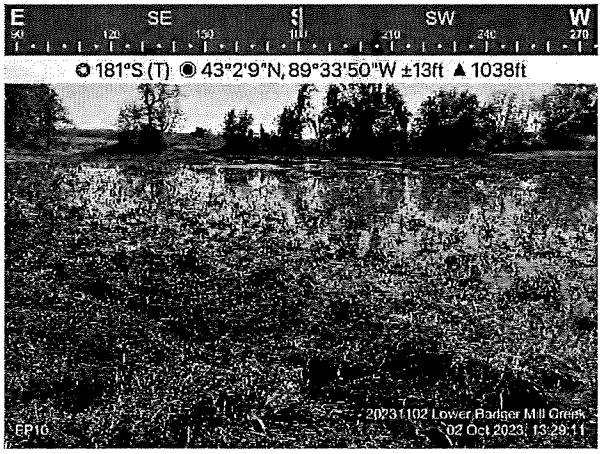


Photo #28 Photo point 10, view south of seasonally flooded basin with ponding

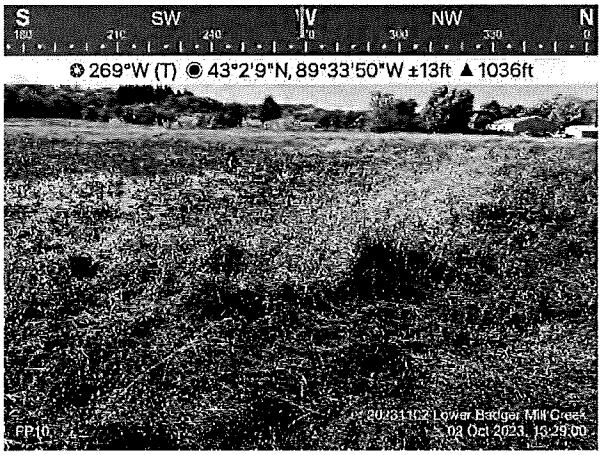


Photo #29 Photo point 10, view west of seasonally flooded basin

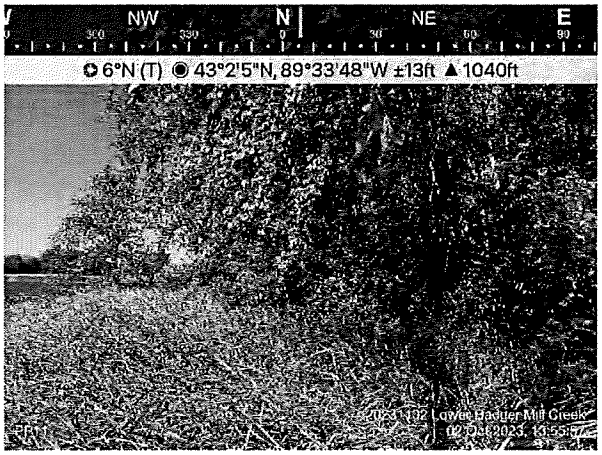


Photo #30 Photo point 11, view north along perimeter of degraded wet meadow and hardwood swamp (HS2)

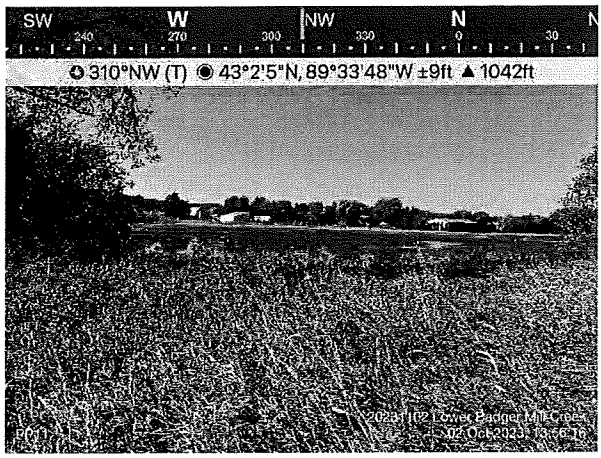


Photo #31 Photo point 11, view northwest toward seasonally flooded basin from south edge of Study Area

Photo #32 Photo point 12, view south of seasonally flooded basin (SFB2)

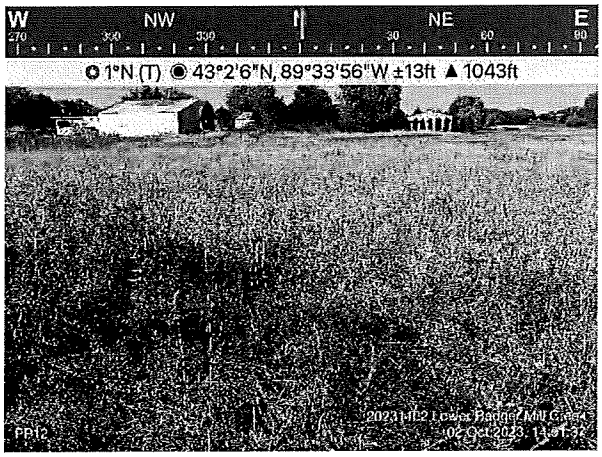


Photo #33 Photo point 12, view north of upland meadow (UPL3)

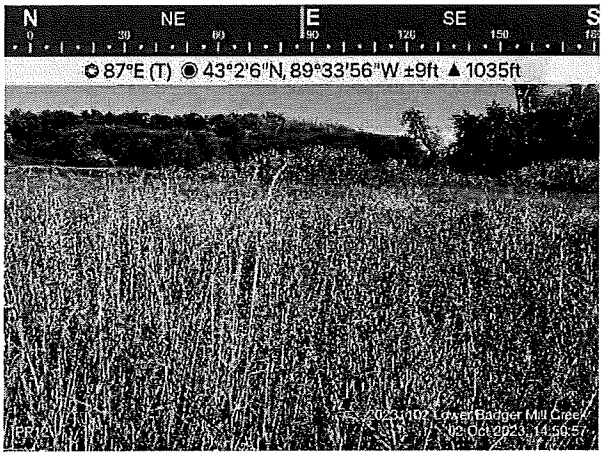


Photo #34 Photo point 12, view east of upland meadow (UPL3, left) and degraded wet meadow (right)

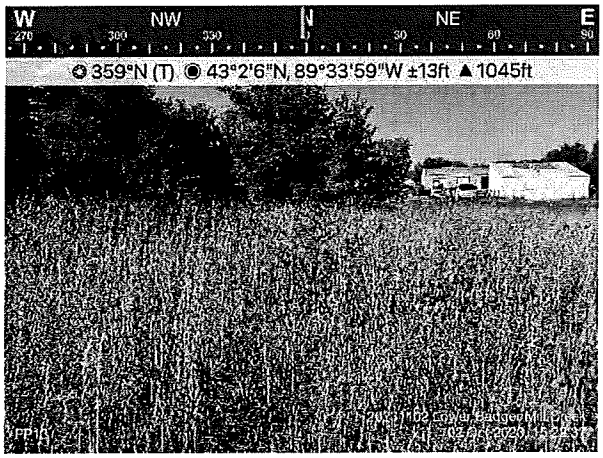


Photo #35 Photo point 13, view north from upland meadow (UPL3) toward upland woodland

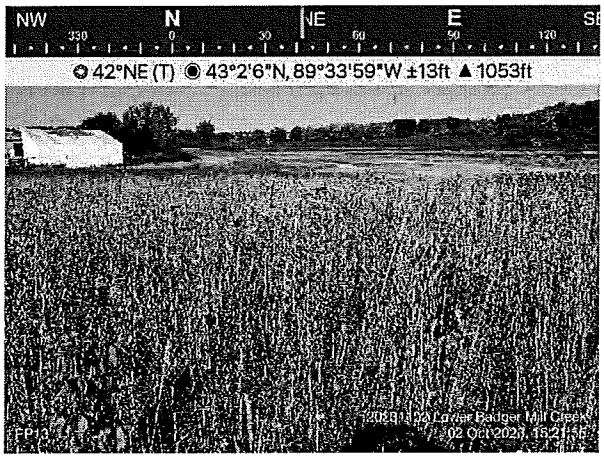


Photo #36 Photo point 13, view northeast of upland meadow (UPL3)

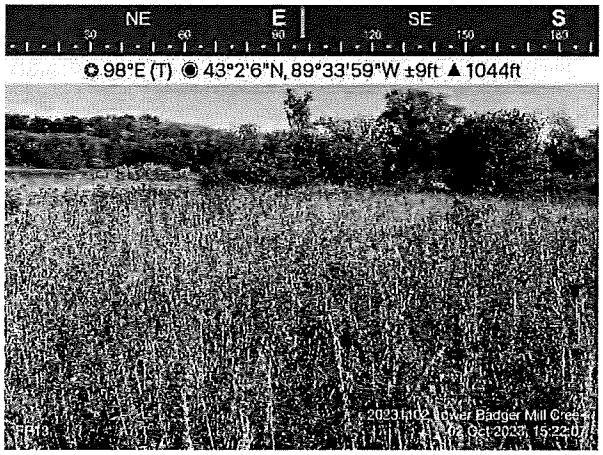


Photo #37 Photo point 13, view east of upland meadow (UPL3)

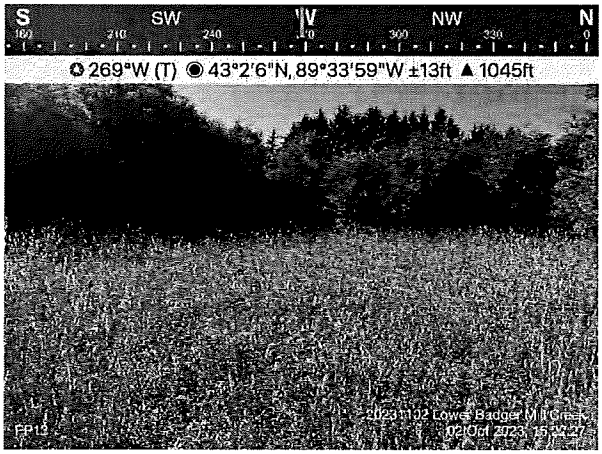


Photo #38 Photo point 13, view west from upland meadow (UPL3) toward upland woodland

Photo #39 Photo point 14, view north along maintenance path along western Study Area perimeter

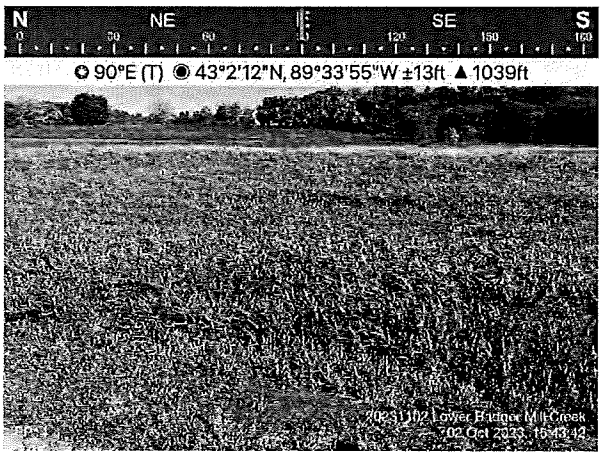


Photo #40 Photo point 14, view east towards degraded wet meadow

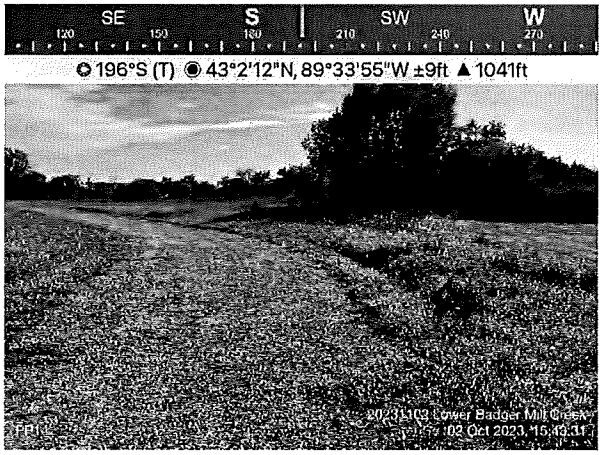


Photo #41 Photo point 14, view south along maintenance path

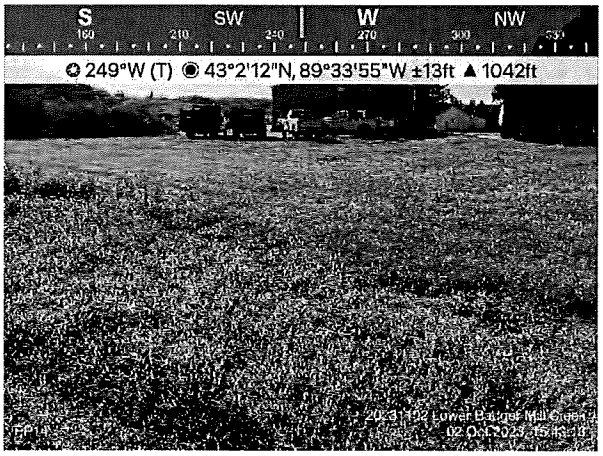


Photo #42 Photo point 14, view WSW toward area of encroachment by adjacent business

Appendix D | Vegetation Lists

Table D-1. Degraded Wet Meadow Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Abutilon theophrasti	piemarker	non-native	forb	0	FACU	2
Acer negundo	box elder	native	tree	0	FAC	1
Acer saccharinum	silver maple	native	tree	2	FACW	2
Agrostis gigantea	redtop	non-native	grass	0	FACW	2
Ambrosia artemisiifolia	annual bur-sage	native	forb	0	FACU	2
Ambrosia trifida	giant ragweed	native	forb	0	FAC	1
Betula nigra	river birch	native	tree	6	FACW	1
Bolboschoenus fluviatilis	river bulrush	native	sedge	6	OBL	2
Chenopodium simplex	maple-leaved goosefoot	native	forb	1	UPL	1
Cyperus esculentus	field nut sedge	native	sedge	0	FACW	2
Echinochloa crus-galli	barnyard grass	non-native	grass	0	FAC	2
Euthamia graminifolia	common flat-topped goldenrod	native	forb	4	FAC	1
Festuca arundinacea	reed fescue	non-native	grass	0	FACU	2
Fraxinus pennsylvanica	green ash	native	tree	2	FACW	1
Lonicera x bella	Bell's honeysuckle	non-native	shrub	0	FACU	1
Panicum dichotomiflorum	fall panic grass	native	grass	0	FACW	2
Persicaria lapathifolia	curly-top knotweed	native	forb	2	FACW	1
Persicaria maculosa	heart's-ease	non-native	forb	0	FAC	1
Persicaria pensylvanica	Pennsylvania knotweed	native	forb	1	FACW	1
Persicaria punctata	dotted smartweed	native	forb	5	OBL	1
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	7
Populus deltoides	eastern cottonwood	native	tree	2	FAC	1
Salix eriocephala	diamond willow	native	shrub	4	FACW	1
Salix interior	sandbar willow	native	shrub	2	FACW	1
Salix petiolaris	meadow willow	native	shrub	6	FACW	2
Scirpus cyperinus	wool-grass	native	sedge	4	OBL	2
Solidago canadensis	Canadian goldenrod	native	forb	1	FACU	3
Trifolium hybridum	alsike clover	non-native	forb	0	FACU	1
Vitis riparia	frost grape	native	vine	2	FAC	1

FQA Metrics	Species Richness	Mean C Value	FQI
Native	21	2.4	11.0
All Species	29	1.7	9.2

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-2. Hardwood Swamp 1 (HS1) Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Asclepias syriaca	common milkweed	native	forb	1	UPL	2
Asclepias verticillata	whorled milkweed	native	forb	2	UPL	1
Bromus inermis	Hungarian brome	non-native	grass	0	UPL	2
Carex vulpinoidea	brown fox sedge	native	sedge	2	OBL	1
Juniperus virginiana	eastern red-cedar	native	tree	3	FACU	2
Lonicera x bella	Bell's honeysuckle	non-native	shrub	0	FACU	3
Melilotus officinalis	yellow sweet-clover	non-native	forb	0	FACU	2
Persicaria pensylvanica	Pennsylvania knotweed	native	forb	1	FACW	2
Persicaria punctata	dotted smartweed	native	forb	5	OBL	2
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	5
Poa pratensis	Kentucky bluegrass	non-native	grass	0	FACU	2
Populus deltoides	eastern cottonwood	native	tree	2	FAC	6
Rhamnus cathartica	common buckthorn	non-native	shrub	0	FAC	2
Rubus idaeus var. strigosus	American red raspberry	native	shrub	3	UPL	1
Rumex crispus	curly dock	non-native	forb	0	FAC	2
Salix interior	sandbar willow	native	shrub	2	FACW	5
Solidago canadensis	Canadian goldenrod	native	forb	1	FACU	3
Symphyotrichum novae-angliae	New England aster	native	forb	3	FACW	3
Symphyotrichum pilosum	frost aster	native	forb	1	FACU	2
Vitis riparia	frost grape	native	vine	2	FAC	2

FQA Metrics	Species Richness	Mean C Value	FQI
Native	13	2.2	7.9
All Species	20	1.4	6.3

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-3. Hardwood Swamp 2 (HS2) Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Betula nigra	river birch	native	tree	6	FACW	6
Juglans nigra	black walnut	native	tree	3	FACU	3
Lonicera x bella	Bell's honeysuckle	non-native	shrub	0	FACU	6
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	4

FQA Metrics	Species Richness	Mean C Value	FQI
Native	2	4.5	6.4
All Species	4	2.3	4.6

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-4. Shrub-Carr Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	6
Populus deltoides	eastern cottonwood	native	tree	2	FAC	4
Salix interior	sandbar willow	native	shrub	2	FACW	6

FQA Metrics	Species Richness	Mean C Value	FQI
Native	2	2.0	2.8
All Species	3	1.3	2.3

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-5. Seasonally Flooded Basin 1 (SFB1) Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Abutilon theophrasti	piemarker	non-native	forb	0	FACU	2
Bidens cernua	nodding beggar-ticks	native	forb	4	OBL	2
Echinochloa crus-galli	barnyard grass	non-native	grass	0	FAC	3
Persicaria lapathifolia	curly-top knotweed	native	forb	2	FACW	3
Persicaria pensylvanica	Pennsylvania knotweed	native	forb	1	FACW	7
Persicaria punctata	dotted smartweed	native	forb	5	OBL	2
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	3
Rorippa palustris	bog yellow-cress	native	forb	3	OBL	2
Rumex crispus	curly dock	non-native	forb	0	FAC	3

FQA Metrics	Species Richness	Mean C Value	FQI
Native	5	3.0	6.7
All Species	9	1.7	5.1

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-6. Seasonally Flooded Basin 2 (SFB2) Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Alisma subcordatum	American water-plantain	native	forb	3	OBL	1
Bidens cernua	nodding beggar-ticks	native	forb	4	OBL	2
Bolboschoenus fluviatilis	river bulrush	native	sedge	6	OBL	3
Echinochloa crus-galli	barnyard grass	non-native	grass	0	FAC	4
Erechtites hieraciifolius	American burn-weed	native	forb	2	FACU	2
Impatiens capensis	orange jewelweed	native	forb	2	FACW	1
Leersia oryzoides	rice cut grass	native	grass	3	OBL	7
Panicum dichotomiflorum	fall panic grass	native	grass	0	FACW	4
Persicaria pensylvanica	Pennsylvania knotweed	native	forb	1	FACW	2
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	4

FQA Metrics	Species Richness	Mean C Value	FQI
Native	8	2.6	7.4
All Species	10	2.1	6.6

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-7. Old Field Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Abutilon theophrasti	piemarker	non-native	forb	0	FACU	2
Amaranthus tuberculatus	rough-fruited amaranth	native	forb	3	OBL	2
Ambrosia artemisiifolia	annual bur-sage	native	forb	0	FACU	3
Carduus acanthoides	plumeless thistle	non-native	forb	0	UPL	2
Chenopodium simplex	maple-leaved goosefoot	native	forb	1	UPL	3
Cirsium arvense	Canada thistle	non-native	forb	0	FACU	2
Cirsium vulgare	bull thistle	non-native	forb	0	FACU	3
Conyza canadensis	Canadian horseweed	native	forb	0	FACU	3
Daucus carota	Queen Anne's-lace	non-native	forb	0	UPL	2
Echinochloa crus-galli	barnyard grass	non-native	grass	0	FAC	3
Elymus virginicus	common eastern wild-rye	native	grass	6	FACW	1
Erechtites hieraciifolius	American burn-weed	native	forb	2	UPL	3
Erigeron annuus	annual fleabane	native	forb	0	FACU	2
Eriochloa villosa	Chinese cup grass	non-native	grass	0	UPL	3
Panicum dichotomiflorum	fall panic grass	native	grass	0	FACW	5
Pastinaca sativa	wild parsnip	non-native	forb	0	UPL	1
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	3
Rumex crispus	curly dock	non-native	forb	0	FAC	3
Salix interior	sandbar willow	native	shrub	2	FACW	2
Setaria faberi	giant foxtail	non-native	grass	0	FACU	4
Solidago canadensis	Canadian goldenrod	native	forb	1	FACU	2
Sonchus arvensis	field sow-thistle	non-native	forb	0	FACU	1
Sonchus asper	prickly sow-thistle	non-native	forb	0	FACU	2
Symphyotrichum pilosum	frost aster	native	forb	1	FACU	2

FQA Metrics	Species Richness	Mean C Value	FQI
Native	11	1.5	5.0
All Species	24	0.7	3.4

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-8. Upland Meadow 1 (UPL1) Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Acer saccharinum	silver maple	native	tree	2	FACW	1
Ambrosia artemisiifolia	annual bur-sage	native	forb	0	FACU	2
Asclepias syriaca	common milkweed	native	forb	1	UPL	1
Bromus inermis	Hungarian brome	non-native	grass	0	UPL	2
Daucus carota	Queen Anne's-lace	non-native	forb	0	UPL	2
Erigeron annuus	annual fleabane	native	forb	0	FACU	2
Festuca arundinacea	reed fescue	non-native	grass	0	FACU	2
Juglans nigra	black walnut	native	tree	3	FACU	1
Kuhnia eupatoriodes var. corymbulosa	false boneset	native	forb	5	UPL	2
Lotus corniculatus	bird's-foot trefoil	non-native	forb	0	FACU	3
Morus alba	Russian mulberry	non-native	tree	0	FACU	1
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	7
Poa pratensis	Kentucky bluegrass	non-native	grass	0	FACU	3
Populus deltoides	eastern cottonwood	native	tree	2	FAC	2
Securigera varia	crown-vetch	non-native	forb	0	UPL	2
Setaria faberi	giant foxtail	non-native	grass	0	FACU	2
Solidago canadensis	Canadian goldenrod	native	forb	1	FACU	5
Sonchus arvensis	field sow-thistle	non-native	forb	0	FACU	3
Symphyotrichum lateriflorum	side-flowering aster	native	forb	3	FAC	1
Symphyotrichum novae-angliae	New England aster	native	forb	3	FACW	1
Symphyotrichum pilosum	frost aster	native	forb	1	FACU	3
Tanacetum vulgare	common tansy	non-native	forb	0	FACU	2
Taraxacum officinale	common dandelion	non-native	forb	0	FACU	2
Trifolium pratense	red clover	non-native	forb	0	FACU	2
Vitis riparia	frost grape	native	vine	2	FAC	1

FQA Metrics	Species Richness	Mean C Value	FQI
Native	12	1.9	6.6
All Species	25	0.9	4.5

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-9. Upland Meadow 2 (UPL2) Species List

Scientific Name	Common Name	Native	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Abutilon theophrasti	piemarker	non-native	forb	0	FACU	2
Arctium minus	common burdock	non-native	forb	0	FACU	3
Asclepias syriaca	common milkweed	native	forb	1	UPL	2
Cirsium arvense	Canada thistle	non-native	forb	0	FACU	2
Cornus racemosa	gray dogwood	native	shrub	2	FAC	2
Daucus carota	Queen Anne's-lace	non-native	forb	0	UPL	3
Elymus canadensis	Canada wild-rye	native	grass	4	FACU	1
Erigeron annuus	annual fleabane	native	forb	0	FACU	1
Heliopsis helianthoides	false sunflower	native	forb	5	FACU	2
Lonicera x bella	Bell's honeysuckle	non-native	shrub	0	FACU	2
Monarda fistulosa	bee balm	native	forb	3	FACU	2
Parthenium integrifolium	American feverfew	native	forb	8	UPL	1
Pastinaca sativa	wild parsnip	non-native	forb	0	UPL	2
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	4
Poa pratensis	Kentucky bluegrass	non-native	grass	0	FACU	3
Populus deltoides	eastern cottonwood	native	tree	2	FAC	1
Prunus americana	American plum	native	shrub	3	UPL	2
Prunus serotina	wild black cherry	native	tree	3	FACU	1
Ratibida pinnata	globular coneflower	native	forb	4	UPL	4
Robinia pseudoacacia	black locust	non-native	tree	0	FACU	4
Rudbeckia hirta	black-eyed Susan	native	forb	4	FACU	1
Rumex crispus	curly dock	non-native	forb	0	FAC	1
Securigera varia	crown-vetch	non-native	forb	0	UPL	5
Solidago canadensis	Canadian goldenrod	native	forb	1	FACU	5
Solidago rigida	rigid goldenrod	native	forb	5	FACU	2
Symphyotrichum lanceolatum	panicled aster	native	forb	4	FACW	2
Symphyotrichum novae-angliae	New England aster	native	forb	3	FACW	3
Symphyotrichum pilosum	frost aster	native	forb	1	FACU	2
Taraxacum officinale	common dandelion	non-native	forb	0	FACU	2
Vitis riparia	frost grape	native	vine	2	FAC	2

FQA Metrics	Species Richness	Mean C Value	FQI
Native	18	3.1	13.2
All Species	30	1.8	9.9

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-10. Upland Meadow 3 (UPL3) Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Acer negundo	box elder	native	tree	0	FAC	3
Agrostis gigantea	redtop	non-native	grass	0	FACW	3
Bromus inermis	Hungarian brome	non-native	grass	0	UPL	2
Cirsium arvense	Canada thistle	non-native	forb	0	FACU	2
Dactylis glomerata	orchard grass	non-native	grass	0	FACU	5
Daucus carota	Queen Anne's-lace	non-native	forb	0	UPL	5
Erigeron annuus	annual fleabane	native	forb	0	FACU	2
Festuca arundinacea	reed fescue	non-native	grass	0	FACU	5
Helianthus strumosus	pale-leaved woodland sunflower	native	forb	4	FACU	2
Lotus corniculatus	bird's-foot trefoil	non-native	forb	0	FACU	3
Miscanthus sacchariflorus	Amur silver grass	non-native	grass	0	UPL	2
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	3
Robinia pseudoacacia	black locust	non-native	tree	0	FACU	2
Rubus idaeus var. strigosus	American red raspberry	native	shrub	3	FAC	2
Securigera varia	crown-vetch	non-native	forb	0	UPL	5
Solidago canadensis	Canadian goldenrod	native	forb	1	FACU	4
Symphyotrichum lateriflorum	side-flowering aster	native	forb	3	FAC	2
Symphyotrichum novae-angliae	New England aster	native	forb	3	FACW	1
Symphyotrichum pilosum	frost aster	native	forb	1	FACU	2
Trifolium pratense	red clover	non-native	forb	0	FACU	2
Vitis riparia	frost grape	native	vine	2	FAC	2

FQA Metrics	Species Richness	Mean C Value	FQI
Native	9	1.9	5.7
All Species	21	0.8	3.7

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

Table D-11. Upland Woodland Species List

Scientific Name	Common Name	Nativity	Physiognomy	Coefficient of Conservatism	NC-NE Wetland Indicator	Cover Class
Acer negundo	box elder	native	tree	0	FAC	4
Acer saccharinum	silver maple	native	tree	2	FACW	4
Ageratina altissima	white snakeroot	native	forb	1	FACU	3
Ambrosia trifida	giant ragweed	native	forb	0	FAC	1
Arctium minus	common burdock	non-native	forb	0	FACU	3
Bromus inermis	Hungarian brome	non-native	grass	0	UPL	3
Dactylis glomerata	orchard grass	non-native	grass	0	FACU	4
Eriochloa villosa	Chinese cup grass	non-native	grass	0	UPL	2
Geum canadense	white avens	native	forb	2	FAC	3
Hackelia virginiana	beggar's-lice	native	forb	3	FACU	3
Juglans nigra	black walnut	native	tree	3	FACU	4
Leonurus cardiaca	motherwort	non-native	forb	0	UPL	1
Lonicera x bella	Bell's honeysuckle	non-native	shrub	0	FACU	5
Panicum dichotomiflorum	fall panic grass	native	grass	0	FACW	2
Parthenocissus quinquefolia	Virginia creeper	native	vine	5	FACU	1
Persicaria virginiana	jumpseed	native	forb	7	FAC	1
Phalaris arundinacea	reed canary grass	non-native	grass	0	FACW	2
Pilea pumila	Canadian clearweed	native	forb	3	FACW	2
Rhamnus cathartica	common buckthorn	non-native	shrub	0	FAC	2
Ribes cynosbati	dogberry	native	shrub	3	FACU	1
Robinia pseudoacacia	black locust	non-native	tree	0	FACU	5
Rubus allegheniensis	Allegheny blackberry	native	shrub	2	FACU	1
Rubus idaeus var. strigosus	American red raspberry	native	shrub	3	UPL	2
Rubus occidentalis	black-cap	native	shrub	2	UPL	2
Rudbeckia subtomentosa	sweet black-eyed Susan	native	forb	7	FACU	1
Setaria faberi	giant foxtail	non-native	grass	0	FACU	2
Solidago gigantea	giant goldenrod	native	forb	3	FACW	1
Symphyotrichum lateriflorum	side-flowering aster	native	forb	3	FAC	2
Urtica dioica	stinging nettle	native	forb	1	FAC	3
Verbena urticifolia	nettle-leaved vervain	native	forb	2	FAC	1
Viola sororia	common blue violet	native	forb	3	FAC	3

FQA Metrics	Species Richness	Mean C Value	FQI
Native	21	2.6	11.9
All Species	31	1.8	10.0

Cover Classes:	
1	<1%
2	1-5%
3	5-10%
4	10-25%
5	25-50%
6	50-75%
7	75-100%

ATTACHMENT B

		Erradication Requirements		
Botanical Name	Common Name	Low Tolerance	Medium Tolerance	High Tolerance
Abutilon theophrasti	Velvet Leaf			x
Acer negundo	Boxelder	x		
Acer platanoides	Norway Maple	x		
Acer saccharinum	Silver Maple	x		
Achyranthes japonica	Japanese Chaff Flower	x		
Aegopodium podagraria	Goutweed	x		
Agrostis gingantea	Redtop			x
Akebia quianata	Chocolate vine	x		
Allianthus altissima	Tree of Heaven	x		
Alliaria petiolata	Garlic Mustard	x		
Ambrosia artemisiifolia	Common Ragweed		x	
Ambrosia trifida	Giant Ragweed		x	
Ampelopsis brevipedunculata	Porcelain berry	x		
Anthriscus sylvestris	Wild Chervil	x		
Arctium minus	Common Burdock		x	
Artemesia absinthium	Wormwood	x		
Arundo donax	Giant Reed	x		
Bromus inermis	Hungarian brome			x
Butomus umbellatus	Flowering Rush	x		
Bunias orientalis	Hill Mustard		x	
Campanula rapunculoides	Bellflower	x		
Caragana arborescens	Siberian Peashrub	x		
Cardamine impatiens	Narrow Leaf Bittercress	x		
Carduus acanthoides	Plumeless Thistle	x		
Carduus nutans	Musk Thistle	x		
Celastrus orbiculatus	Oriental Bittersweet	x		
Celastrus loeseneri	Asian Bittersweet	x		
Centaurea biebersteinii	Spotted Knapweed	x		
Centaurea diffusa	Diffuse Knapweed	x		
Centaurea jacea	Brown Knapweed	x		
Centaurea nigra	Black Knapweed	x		
Centaurea nigrescens	Tyrol Knapweed	x		
Centaurea repens	Russian Knapweed	x		
Centaurea solstitialis	Yellow star-thistle	x		
Chelidonium majus	Celandine Poppy	x		
Chenopodium album	Lamb's Quarters			x
Cirsium arvense	Canada Thistle	x		
Cirsium palustre	Marsh Thistle	x		
Cirsium vulgare	Bull Thistle	x		
Conium maculatum	Poison Hemlock	x		

ATTACHMENT B

		Erradication Requirements		
Botanical Name	Common Name	Low Tolerance	Medium Tolerance	High Tolerance
Convallaria majalis	Lily-of-the-Valley	x		
Convolvulus arvensis	Field Bindweed		x	
Convolvulus sepium	Hedge Bindweed		x	
Conyza canadensis	Canadian horseweed		x	
Coronilla varia	Crown Vetch	x		
Cynoglossum officinale	Hound's Tongue	x		
Cytisus scoparius	Scotch Broom	x		
Cyperus esculentus	Field nut sedge	x		
Daucus carota	Queen Anne's Lace		x	
Digitalis lanata	Grecian Foxglove	x		
Dioscorea oppositifolia	Chinese yam	x		
Dipsacus fullonum	Teasel	x		
Dipsacus spp.	Teasel	x		
Dipsacus laciniatus	Cutleaf Teasel	x		
Echinochloa crus-galli	Barnyard grass			x
Eleaagnus umbellata	Autumn Olive	x		
Elytrigia repens	Quack Grass			x
Epilobium hirsutum	Hairy Willow Herb	x		
Epipactis helleborine	Broad Leaved Helleborine	x		
Erigeron annuus	Annual Fleabane			x
Erochloa villosa	Chinese cup grass			x
Euonymous alatus	Burning bush	x		
Euphorbia cyparissias	Cypress Spurge	x		
Euphorbia esula	Leafy Spurge	x		
Fallopia japonica (Polygonum cuspida	Japanese Knotweed	x		
Fallopia x bohemica	Bohemian Knotweed	x		
Festuca arundinaceae	Red fescue			x
Filipendula ulmaria	Queen of the Meadow	x		
Galeopsis tetrahit	Hempnettle			x
Galium mollugo	White Bedstraw			x
Glechoma hederacea	Creeping Charlie			x
Hackelia virginiana	Stickseed		x	
Hedera helix	English Ivy	x		
Hemerocallis fulva	Daylily	x		
Heracleum mantegazzianum	Giant Hogweed	x		
Hesperis matronalis	Dame's Rocket	x		
Humulus japonicus	Japanese Hops	x		
Impatiens glandulifera	Policeman's Helmet	x		
Impatiens balfourii	Balfour's Touch-Me-Not	x		
Iris pseudacorus	Yellow Flag Iris	x		

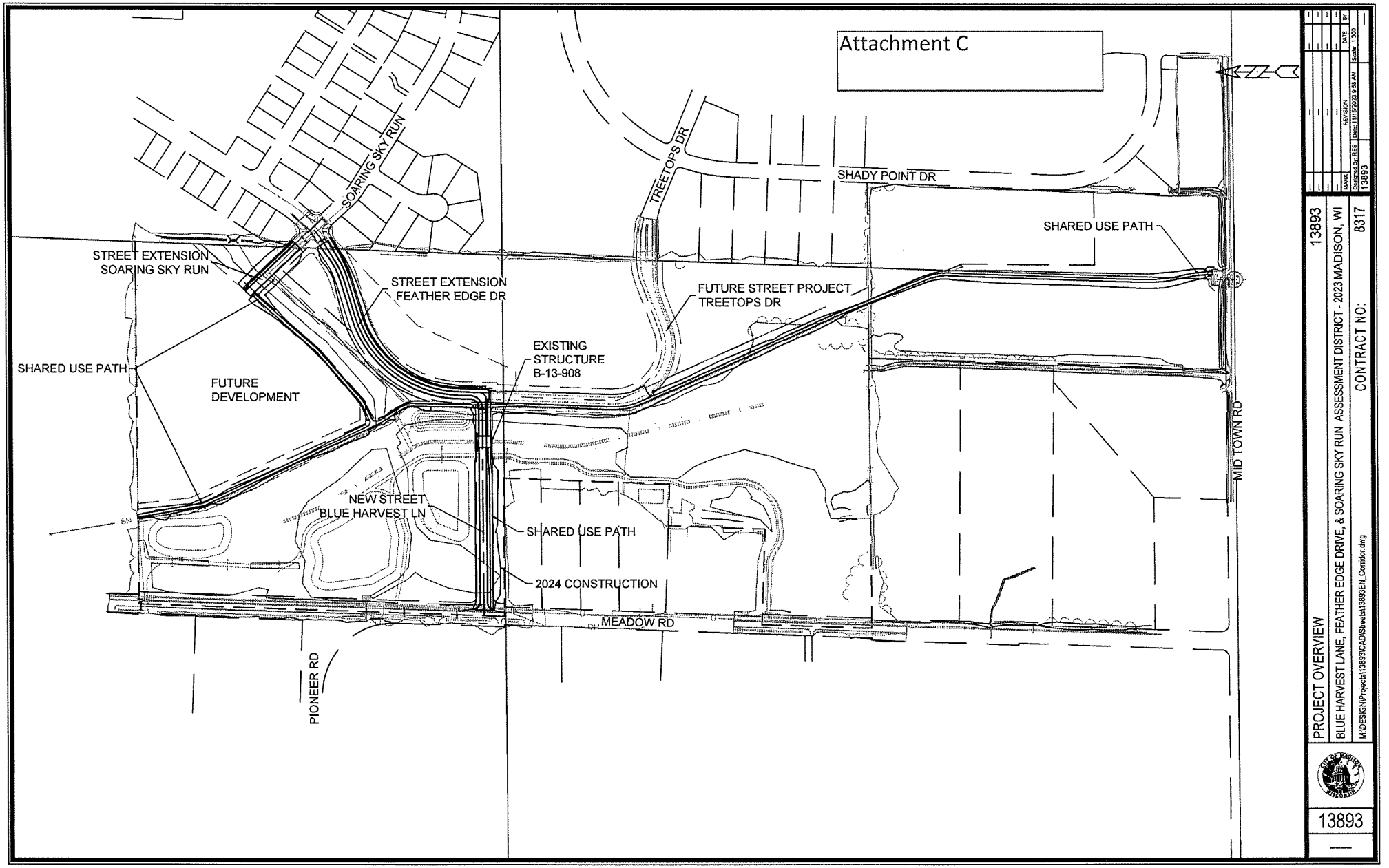
ATTACHMENT B

		Erradication Requirements		
Botanical Name	Common Name	Low Tolerance	Medium Tolerance	High Tolerance
Knautia arvensis	Field Scabious	x		
Lactuca canadensis	Wild Lettuce		x	
Lactuca serriola	Prickly Lettuce		x	
Lamiastrum galeobdolon	Yellow Archangel	x		
Lamium spp.	Deadnettle	x		
Leonurus cardiaca	Motherwort		x	
Lepidium latifolium	Perennial Pepperweed	x		
Lespedeza cuneata	Chinese Lespedeza	x		
Leymus arenarius	Lyme or Sand Ryegrass			x
Linaria dalmatica	Dalmation Toadflax	x		
Lonicera spp.	Bush honeysuckle	x		
Lotus corniculatus	Birdsfoot Trefoil	x		
Lysimachia nummularia	Moneywort	x		
Lysimachia vulgaris	Garden Yellow Loosestrife	x		
Lythrum salicaria	Purple loosestrife	x		
Lythrum virgatum	Wand Loosestrife	x		
Melilotus sp.	Sweet Clover	x		
Microstegium vimineum	Japanese Stilt Grass	x		
Morus alba	White mulberry	x		
Myosotis sylvatica	Woodland Forget-Me-Not	x		
Nasturtium officinale	Watercress	x		
Oplismenus hirtellus ssp. undulatifoliu	Wavy Leaf Basket Grass	x		
Panicum dichotomiflorum	Fall panic grass			x
Poa pratensis	Kentucky Bluegrass			x
Pastinaca sativa	Wild Parsnip	x		
Petasites hybridus	Butterfly Dock	x		
Phalaris arundinacea	Reed Canary Grass	x		
Phragmites australis	Common Reed	x		
Phytolacca acinosa	Himalayan Pokeweed	x		
Phytolacca americana	American Pokeweed	x		
Pimpinella saxifraga	Burnet Saxifrage	x		
Polygonum cupsidatum	Japanese Knotweed	x		
Polygonum perfoliatum	Mile-a-minute Vine	x		
Polygonum sachalinense	Giant Knotweed	x		
Populus deltoides	Cottonwood	x		
Populous grandidentata	Big tooth aspen	x		
Populous tremuloides	Quaking aspen	x		
Pueraria lobata	Kudzu	x		
Ranunculus ficaria	Fig Buttercup	x		
Rhamnus cathartica	Common buckthorn	x		

ATTACHMENT B

		Erradication Requirements		
Botanical Name	Common Name	Low Tolerance	Medium Tolerance	High Tolerance
Robinina pseudocacia	Black Locust	x		
Rosa multiflora	Multiflora rose	x		
Rubus armeniacus	Himalayan blackberry	x		
Rubus phoenicolasius	Wineberry	x		
Rubus spp.	Raspberries	x		
Rumex crispus	Curly Dock	x		
Salix interior	Sandbar Willow	x		
Setaria spp.	Foxtail Grasses			x
Securigera varia	Crown-vetch	x		
Solanum dulcamara	Deadly Nightshade		x	
Solidago canadensis	Canada Goldenrod		x	
Solidago sempervirens	Seaside Goldenrod	x		
Sonchus spp.	Sow Thistle			x
Sorbaria sorbifolia	False Spirea	x		
Sorghum halepense	Johnsongrass			x
Symphyotrichum subulatum	Annual Saltmarsh Aster	x		
Taeniatherum caput-medusae	Medusahead	x		
Taracacum officinale	Common dandelion			x
Tanacetum vulgare	Tansy	x		
Trifolium hybridum	Alsike clover			x
Triflorum pratense	Red clover			x
Torilis arvensis	Spreading hedgeparsley	x		
Torilis japonica	Hedge Parsley	x		
Toxicodendron radicans	Poison Ivy	x		
Tussilago farfara	Coltsfoot	x		
Typha spp.	Cattails	x		
Ulmus pumila	Siberian Elm	x		
Urtica dioica	Stinging Nettle		x	
Valeriana officinalis	Garden Heliotripe	x		
Verbascum thapsus	Mullein			x
Vinca minor	Vinca	x		
Vincetoxicum nigrum	Black Swallow-wort	x		
Vincetoxicum rossicum	European Swallow-wort	x		
Vitis spp.	Wild Grape			x
Wisteria floribunda/sinensis	Japanese/Chinese wisteria	x		

Attachment C



13893

PROJECT OVERVIEW

BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023 MADISON, WI

CONTRACT NO: 8317

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MARK | REVISION | DATE | BY

Designed By: RES | Date: 11/15/2023 9:58 AM | Scale: 1:300

13893

13893

Department of Public Works
Engineering Division
James M. Wolfe, P.E., City Engineer

City-County Building, Room 115
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703
Phone: (608) 266-4751
Fax: (608) 264-9275
engineering@cityofmadison.com
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Deputy City Engineer
Bryan Cooper, AIA
Gregory T. Fries, P.E.
Chris Petykowski, P.E.

Deputy Division Manager
Kathleen M. Cryan

Principal Engineer 2
John S. Fahrney, P.E.
Janet Schmidt, P.E.

Principal Engineer 1
Mark D. Moder, P.E.
Andrew J. Zwieg, P.E.

Financial Manager
Steven B. Danner-Rivers

12/11/2023

NOTICE OF ADDENDUM
ADDENDUM 1

CONTRACT NO. 14980
LOWER BADGER MILL PONDS RESTORATION

Revise and amend the contract document(s) for the above project as stated in this addendum, otherwise, the original document shall remain in effect.

PLANS:

- Add Sheet L-2:Phase Plan

SECTION D SPECIAL PROVISIONS:

- Add: Add sentence to **SECTION 109.2 PROSECUTION OF WORK**

  Native seeding areas in areas not disturbed in 2023 as part of contract 8875 shall not occur until fall 2024 after one completed season of restoration maintenance. Contract 8875 plans can be viewed here:
  https://www.cityofmadison.com/business/pw/contracts/docAndSpecs.cfm?ContractNumber=8875

- Add: Add sentence to **SECTION 209: TREES, SHRUBS, PERENNIALS AND GRASSES**

  Trees and shrubs shall be installed in general areas defined on the plan. The Contractor shall be responsible for determining the exact location based on existing vegetation, removals, sun/shade and soil moisture. The Engineering shall approve the final general planting locations prior to installation.

QUESTION AND ANSWER:

1. Can you provide two plans, one that only shows Phase 2 areas and one with Phase 3 areas? Alternately, CAD files with these delineated areas would work as well. It is hard to distinguish Phase areas in the current plan.

   Answer: Phasing Plan is included to clarify Phase Areas. A CAD plan will be provided to the awarded Contractor.

2. The bid appears to request native seeding within areas of existing vegetation in February 2024. Can seeding of these areas be delayed for at least one year until herbicide treatments can be completed to remove existing non-native vegetation? This would result in lengthening the restoration timeline;

however, would improve success of the native installation and reduce after planting management. Undisturbed areas are evident by the lack of erosion matting and annual rye cover crop.

Answer: The contract timeframe cannot be extended. The Contractor shall seed areas of existing vegetation, not disturbed in 2023 (as evident by the presence of erosion control matting and annual rye), in fall 2024 after one year of 2024 restoration maintenance.

3. Wetland trees and shrubs are proposed for some areas that are likely to be relatively dry (along the tops of the ponds). Additionally, wetland seed mixes appear to be proposed for some areas that do not have wetland hydrology. If awarded the contract, would we be able to discuss other species considerations or locations of designated plantings to better fit site conditions?

   Answer: The specifications have been modified with this addendum to require the Contractor for determining exact location of trees and shrubs. The City is confident in the wetland seed mixes chosen. Existing site hydrology will change. Seed mixes were selected based on stormwater modeling of proposed hydrology. More information is available here: https://www.cityofmadison.com/engineering/projects/lower-badger-mill-creek-pond

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

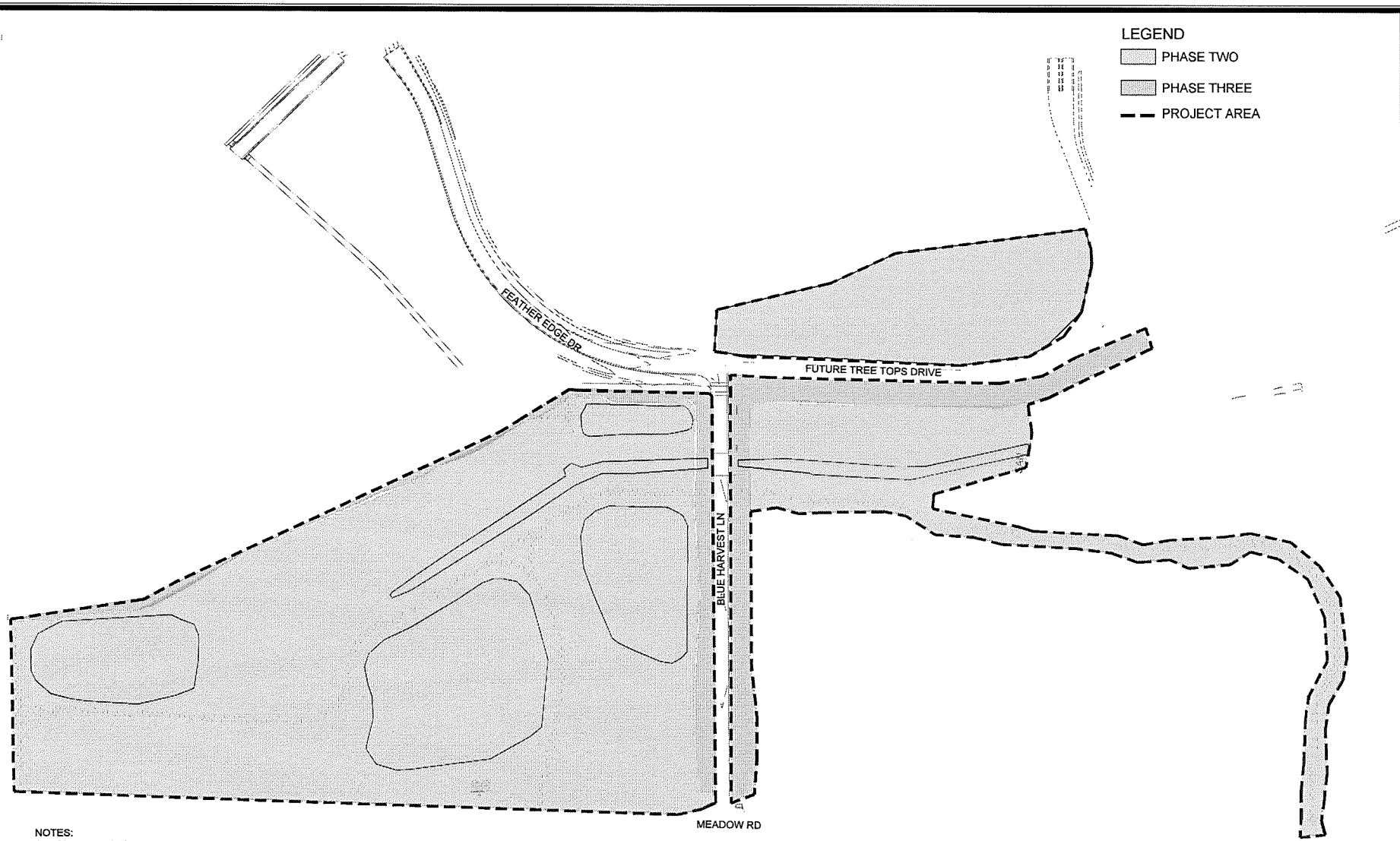
Electronic version of these documents can be found on the Bid Express website at:

http://www.bidexpress.com

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 receive the material by another route.

James M. Wolfe, City Engineer

CC:
scl



NOTES:
1. Phase One included grading and storm structures and is complete.
2. Phase One includes all areas within the project boundary that are OUTSIDE the grading limits for new the curb along Blue Harvest Lane and new asphalt path.
3. Phase Two includes all areas within the project boundary that are WITHIN the grading limits for new the curb along Blue Harvest Lane and new asphalt path.

MARK	REVISION	DATE	BY
	New Phase Plan	12/11/23	SCL

Designed By: SCL | Date: 12/11/2023 5:25 PM | Scale: 1:150 | 14980 | L-2

14980

PHASE PLAN

LOWER BADGER MILL PONDS RESTORATION

MADISON, WI

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CONTRACT NO: 9390

14980

L-2

Alt 2 - ADDA 1

SECTION E: BIDDERS ACKNOWLEDGEMENT

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2023 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda Nos. 1 through 1 to the Contract, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not acknowledge here)
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. *(IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).*
5. I hereby certify that all statements herein are made on behalf of Heartland Ecological Group, Inc. (name of corporation, partnership, or person submitting bid) a corporation organized and existing under the laws of the State of Wisconsin a partnership consisting of _____; an individual trading as _____; of the City of _____ State of _____; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

Kathryn Kraemer
SIGNATURE

President
TITLE, IF ANY

Sworn and subscribed to before me this
21st day of December, 2023.

Crystal Carpenter
(Notary Public or other officer authorized to administer oaths)
My Commission Expires 09/21/2025

CRYSTAL CARPENTER NOTARY PUBLIC STATE OF WISCONSIN

Bidders shall not add any conditions or qualifying statements to this Proposal.

Section F: Best Value Contracting (BVC) Fillable Online Form

Best Value Contracting

1. The Contractor shall indicate the non-apprenticeable trades used on this contract.

Ecological Restoration

2. Madison General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the active apprentice requirement. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin. Please check applicable box if you are seeking an exemption.

☐ **Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.**

☐ **No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.**

☐ **Contractor is not using an apprentice due to having a journey worker on layoff status, provided the journey worker was employed by the contractor in the past six months.**

☐ **First time contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.**

☐ **Contractor has been in business less than one year.**

☐ **Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.**

☐ **An exemption is granted in accordance with a time period of a "Documented Depression" as defined by the State of Wisconsin.**

3. The Contractor shall indicate on the following section which apprenticeable trades are to be used on this contract. Compliance with active apprenticeship, to the extent required by M.G.O. 33.07(7), shall be satisfied by documentation from an applicable trade training body; an apprenticeship contract with the Wisconsin Department of Workforce Development or a similar agency in another state; or the U.S Department of Labor. This documentation is required prior to the Contractor beginning work on the project site.

☑ **The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.**

LIST APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)

☐ **BRICKLAYER**

☐ **CARPENTER**

☐ **CEMENT MASON / CONCRETE FINISHER**

☐ **CEMENT MASON (HEAVY HIGHWAY)**

☐ **CONSTRUCTION CRAFT LABORER**

☐ **DATA COMMUNICATION INSTALLER**

☐ **ELECTRICIAN**

☐ **ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE**

☐ **GLAZIER**

☐ **HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER**

☐ **INSULATION WORKER (HEAT and FROST)**

☐ **IRON WORKER**

☐ **IRON WORKER (ASSEMBLER, METAL BLDGS)**

☐ PAINTER and DECORATOR

☐ PLASTERER

☐ PLUMBER

☐ RESIDENTIAL ELECTRICIAN

☐ ROOFER and WATER PROOFER

☐ SHEET METAL WORKER

☐ SPRINKLER FITTER

☐ STEAMFITTER

☐ STEAMFITTER (REFRIGERATION)

☐ STEAMFITTER (SERVICE)

☐ TAPER and FINISHER

☐ TELECOMMUNICATIONS (VOICE, DATA and VIDEO) INSTALLER-TECHNICIAN

☐ TILE SETTER

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

Small Business Enterprise Compliance Report

This information may be submitted electronically through Bid Express or submitted with bid in sealed envelope.

Cover Sheet

Prime Bidder Information

Company: Heartland Ecological Group, Inc.

Address: 506 Springdale Street, Mount Horeb, WI 53572

Telephone Number: 608-490-2450 Fax Number: _____

Contact Person/Title: Kathryn Kraemer, President

Prime Bidder Certification

I, Kathryn Kraemer (Name), President (Title) of

Heartland Ecological Group, Inc. (Company) certify that the information

contained in this SBE Compliance Report is true and correct to the best of my knowledge and belief.

Witness Signature

Bidder's Signature

12/21/23
Date

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

Small Business Enterprise Compliance Report

Summary Sheet

SBE Subcontractors Who Are NOT Suppliers

Name(s) of SBEs Utilized	Type of Work	% of Total Bid Amount
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
Subtotal SBE who are NOT suppliers:		0 %

SBE Subcontractors Who Are Suppliers

Name(s) of SBEs Utilized	Type of Work	% of Total Bid Amount
Heartland Ecological Group, Inc.	Ecological Restoration	100 %
		%
		%
		%
		%
		%

Subtotal Contractors who are suppliers: 100 % x 0.6 = 60 % (discounted to 60%)

Total Percentage of SBE Utilization: 60 %.

LOWER BADGER MILL PONDS RESTORATION

CONTRACT NO. 9390
DATE: 12/21/23

		Heartland Ecological Group, Inc.	
Item	Quantity	Price	Extension
Section B: Proposal Page			
10911 - MOBILIZATION - LS	1.00	$3,622.50	$3,622.50
90001 - BETULA NIGRA - EA	8.00	$651.03	$5,208.24
90002 - QUERCUS BICOLOR - EA	5.00	$677.07	$3,385.35
90003 - QUERCUS X SCHEUTTEI - EA	4.00	$651.03	$2,604.12
90004 - CEPHALANTHUS OCCIDENTALIS - EA	43.00	$123.70	$5,319.10
90005 - SAMBUCUS CANADENSIS - EA	20.00	$156.25	$3,125.00
90006 - SPIREA TOMENTOSA - EA	60.00	$123.70	$7,422.00
90007 - WETLAND EMERGENT PLUGS - EA	13024.00	$4.84	$63,036.16
90008 - WETLAND PLUGS - EA	3528.00	$4.84	$17,075.52
90009 - LOW GROWING NATIVE SEED MIX - SY	43275.00	$0.20	$8,655.00
90010 - GREENWAY SWALE SEED MIX - SY	6254.00	$0.47	$2,939.38
90011 - WETLAND RESTORATION SEED MIX - SY	71417.00	$0.24	$17,140.08
90012 - UPLAND NATIVE SEED MIX - SY	11759.00	$0.21	$2,469.39
90013 - ROOTSTOCK PROTECTION - SY	1839.11	$3.51	$6,455.28
90014 - 2024 RESTORATION MAINTENANCE - LS	1.00	$26,272.96	$26,272.96
90015 - 2025 RESTORATION MAINTENANCE - LS	1.00	$28,011.50	$28,011.50
16 Items	Totals		$202,741.58

SECTION G: BID BOND

LET ALL KNOW BY THESE DOCUMENTS PRESENTED, THAT Principal and Surety, as identified below, are held and firmly bound unto the City of Madison, (hereinafter referred to as the "Obligee"), in the sum of five per cent (5%) of the amount of the total bid or bids of the Principal herein accepted by the Obligee, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that, whereas the Principal has submitted, to the City of Madison a certain bid, including the related alternate, and substitute bids attached hereto and hereby made a part hereof, to enter into a contract in writing for the construction of:

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

1. If said bid is rejected by the Obligee, then this obligation shall be void.

2. If said bid is accepted by the Obligee and the Principal shall execute and deliver a contract in the form specified by the Obligee (properly completed in accordance with said bid) and shall furnish a bond for his/her faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

   If said bid is accepted by the Obligee and the Principal shall fail to execute and deliver the contract and the performance and payment bond noted in 2. above executed by this Surety, or other Surety approved by the City of Madison, all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to forfeit to the Obligee as liquidated damages the sum mentioned above, it being understood that the liability of the Surety for any and all claims hereunder shall in no event exceed the sum of this obligation as stated, and it is further understood that the Principal and Surety reserve the right to recover from the Obligee that portion of the forfeited sum which exceed the actual liquidated damages incurred by the Obligee.

   The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

Seal **PRINCIPAL**

Heartland Ecological Group, Inc.
Name of Principal

Kathryn J. Kraemer
By

December 21, 2023
Date

Kathryn J. Kraemer, President
Name and Title

Seal **SURETY**

West Bend Mutual Insurance Company
Name of Surety

Connie Easland
By

December 21, 2023
Date

Connie Easland, Attorney In Fact
Name and Title

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Provider No. 6504657 for the year 2023-24, and appointed as attorney in fact with authority to execute this bid bond and the payment and performance bond referred to above, which power of attorney has not been revoked.

December 21, 2023
Date

Connie Easland
Agent Signature

2901 W Beltline Highway, Suite 201
Address

Madison, WI 53713
City, State and Zip Code

608-828-0232
Telephone Number

NOTE TO SURETY & PRINCIPAL

The bid submitted which this bond guarantees shall be rejected if the following instrument is not attached to this bond:

Power of Attorney showing that the agent of Surety is currently authorized to execute bonds on behalf of the Surety, and in the amounts referenced above.

WEST BEND
A MUTUAL INSURANCE COMPANY

THE SILVER LINING®

Bond No. 2562914

POWER OF ATTORNEY

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

CONNIE EASLAND

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of:

Twenty Million Dollars ($20,000,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-In-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 17th day of August, 2021.

Attest Christopher C. Zwygart
Christopher C. Zwygart
Secretary

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO., WI

Kevin A. Steiner
Kevin A. Steiner
Chief Executive Officer/President

State of Wisconsin
County of Washington

On the 17th day of August, 2021, before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that is was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.

MATTHEW E. CARLTON NOTARY PUBLIC STATE OF WISCONSIN

Matthew E. Carlton
Senior Corporate Attorney
Notary Public, Washington Co., WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 21st day of December, 2023.

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO., WI

Heather Dunn
Vice President – Chief Financial Officer

Notice: Any questions concerning this Power of Attorney may be directed to the Bond Manager at West Bend Mutual Insurance Company.

SECTION H: AGREEMENT

THIS AGREEMENT made this 12th day of February in the year Two Thousand and Twenty-Four between **HEARTLAND ECOLOGICAL GROUP, INC.** hereinafter called the Contractor, and the City of Madison, a Wisconsin municipal corporation, hereinafter called the City.

WHEREAS, the Common Council of the City of Madison ("Council") under the provisions of a resolution adopted on **JANUARY 23, 2024**, and by virtue of authority vested in the Council, has awarded to the Contractor the work of performing certain public construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. **Scope of Work.** The Contractor shall perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and Agreement; perform all items of work covered or stipulated in the Proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.

3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of **TWO HUNDRED TWO THOUSAND SEVEN HUNDRED FORTY-ONE AND 58/100** ($**202,741.58**) Dollars being the amount bid by such Contractor and which was awarded as provided by law.

4. **A. Non-Discrimination.** During the term of this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

   B. Affirmative Action. The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

   If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

   The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications and application procedures and deadlines, shall be provided to the City by the opening date of advertisement and with sufficient time for the City to notify candidates and make a timely referral. The Contractor agrees to interview

and consider candidates referred by the Affirmative Action Division, or an organization designated by the Division, if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement
Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national original and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Affirmative Action Division Manager.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.

2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.

3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or ten thousand dollars ($10,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract. (In federally funded contracts the terms "DBE, MBE and WBE" shall be substituted for the term "small business" in this Article.)

5. Substance Abuse Prevention Program Required. Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.

6. **Contractor Hiring Practices.**

Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(l), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

a. **Definitions.** For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

b. **Requirements.** For the duration of this Contract, the Contractor shall:

1. Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.

2. Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.

3. Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.

4. Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.

5. Comply with all other provisions of Sec. 39.08, MGO.

c. Exemptions: This section shall not apply when:

1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or

2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

7. **Choice of Law and Forum Selection.** This Contract shall be governed by and construed, interpreted and enforced in accordance with the laws of the State of Wisconsin. The parties agree, for any claim or suit or other dispute relating to this Contract that cannot be mutually resolved, the venue shall be a court of competent jurisdiction within the State of Wisconsin and the parties agree to submit themselves to the jurisdiction of said court, to the exclusion of any other judicial district that may have jurisdiction over such a dispute according to any law.

8. **Counterparts, Electronic Signature and Delivery.** This Contract may be signed in counterparts, each of which shall be taken together as a whole to comprise a single document. Signatures on this Contract may be exchanged between the parties by facsimile, electronic scanned copy (.pdf) or similar technology and shall be as valid as original; and this Contract may be converted into electronic format and signed or given effect with one or more electronic signature(s) if the electronic signature(s) meets all requirements of Wis. Stat. ch. 137 or other applicable Wisconsin or Federal law. Executed copies or counterparts of this Contract may be delivered by facsimile or email and upon receipt will be deemed original and binding upon the parties hereto, whether or not a hard copy is also delivered. Copies of this Contract, fully executed, shall be as valid as an original.

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused this contract to be executed by its Mayor and City Clerk on the dates written below.

Countersigned:

1/23/24
Witness Date

Kate Larsen 01/23/2024
Witness Date

HEARTLAND ECOLOGICAL GROUP, INC
Company Name

Kate Larsen 01/23/2024
President Date

1/23/24
~~Secretary~~ Vice President Date

CITY OF MADISON

Satya Rhodes-Conway, Mayor — 02/12/2024
Date

Maribeth Witzel-Behl — 02/05/2024
Maribeth Witzel-Behl, City Clerk — Date

Provisions have been made to pay the liability that will accrue under this contract.

David Schmiedicke — 02/08/2024
David P. Schmiedicke, Finance Director — Date

Approved as to form:

Michael Haas — 2/9/2024
Michael Haas, City Attorney — Date

Execution of this Agreement by City was authorized by Resolution Enactment No. RES -24-00050, ID No. 81417, adopted by the Common Council of the City of Madison on Jan. 23, 2024.

SECTION I: PAYMENT AND PERFORMANCE BOND

LET ALL KNOW BY THESE DOCUMENTS PRESENTED, that we **HEARTLAND ECOLOGICAL GROUP, INC** as principal, and West Bend Mutual Insurance Company Company of West Bend WI as surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum of **TWO HUNDRED TWO THOUSAND SEVEN HUNDRED FORTY-ONE AND 58/100** ($**202,741.58**) Dollars, lawful money of the United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully perform all of the terms of the Contract entered into between him/herself and the City of Madison for the construction of:

LOWER BADGER MILL PONDS RESTORATION
CONTRACT NO. 9390

in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the prosecution of said work, and save the City harmless from all claims for damages because of negligence in the prosecution of said work, and shall save harmless the said City from all claims for compensation (under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is to be void, otherwise of full force, virtue and effect.

Signed and sealed this 24th day of January 2024

Countersigned:

Witness

~~Secretary~~ VICE PRESIDENT

HEARTLAND ECOLOGICAL GROUP, INC
Company Name (Principal)

President Seal

West Bend Mutual Insurance Company
Surety Seal

☒ Salary Employee ☐ Commission

By
Attorney-in-Fact Connie Easland

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Producer Number 6504657 for the year 2024, and appointed as attorney-in-fact with authority to execute this payment and performance bond which power of attorney has not been revoked.

January 24, 2024
Date

Agent Signature

The foregoing Bond has been approved as to form:

2/13/2024	Michael Haas
Date	City Attorney

WEST BEND
A MUTUAL INSURANCE COMPANY

THE SILVER LINING®

Bond No. 2562914

POWER OF ATTORNEY

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

CONNIE EASLAND

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of:

Twenty Million Dollars ($20,000,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-In-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 17th day of August, 2021.

Attest Christopher C. Zwygart
Christopher C. Zwygart
Secretary

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS.

Kevin A. Steiner
Chief Executive Officer/President

State of Wisconsin
County of Washington

On the 17th day of August, 2021, before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that is was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.

MATTHEW E. CARLTON NOTARY PUBLIC STATE OF WISCONSIN

Matthew E. Carlton
Senior Corporate Attorney
Notary Public, Washington Co., WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 21st day of December, 2023.

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS.

Heather Dunn
Vice President – Chief Financial Officer

Notice: Any questions concerning this Power of Attorney may be directed to the Bond Manager at West Bend Mutual Insurance Company.