

REQUEST FOR QUALIFICATIONS

Wetland Mitigation and Site Preparation Design Services

REQUEST NUMBER: 2327

DUE DATE: September 21, 2023

DUE TIME: 2:00 pm (local)

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INTRODUCTION

The Gerald R. Ford International Airport Authority (GFIAA) is requesting statements of qualifications from qualified firms to provide Wetland Mitigation and Site Preparation Design services for an existing designated wetland area (Site 16) on the campus of the Gerald. R. Ford International Airport.

The Gerald R. Ford International Airport is the second busiest airport in Michigan, serving business and leisure travelers with nonstop and connecting flights on six airlines. The Ford Airport is managed and operated by the Gerald R. Ford International Airport Authority.

SOLICITATION AND PROJECT SCHEDULE

ΑCTIVITY	DATE	
RFQ Issue Date	August 23, 2023	
Question Deadline	September 13, 2023	
Submission Due Date	September 21, 2023 at 2 pm	

GFIAA reserves the right to modify the deadline set forth in the above table in its sole discretion. Any such modifications will be stated in an addendum.

Respondents shall not communicate with the above contact for any reason other than for on-site inspection purpose. Any Respondent requesting a modification to the written specification should contact the Purchasing Department as instructed within this request.

WORK SCOPE

The purpose of this project is to provide design services for wetland and stream mitigation with the goal being to provide a graded site that will be available for future aviation development. It is estimated that approximately 60,000 cubic yards of muck/wetland soils ranging from 3 to 20 feet deep will be removed and replaced with clean fill material.

Excavated soils will be placed at an on-site waste soil stockpile location. Stormwater controls will include new underground stormwater detention and piping to mitigate the onsite stream. Final site grades will be established to promote positive drainage and future aeronautical developments.

A figure showing the approximate wetland mitigation area and stream locations is attached.



This project will design grades to support future development but does not include design of additional infrastructure (i.e., roadway, utilities, etc.) to support these planned developments.

All wetland mitigation activities will be performed under an existing permit from the Michigan Department of Environment, Great Lakes and Energy.

REQUESTS FOR INFORMATION

Questions regarding this solicitation are to be submitted in writing to *purchasing@grr.org* prior to 2 p.m. on September 13th at 2:00 pm local time.

GFIAA reserves the right to publish and respond to an inquiry, respond directly to the inquirer without publishing or not respond to the inquiry at its sole discretion. Unless otherwise indicated, all questions will be complied into one document and answers will be issued as a Questions & Answers document within 4 days after the question deadline.

It is the firm's responsibility to become familiar with and fully informed regarding the terms, conditions, and specifications of this solicitation. Lack of understanding or misinterpretation of any portions of this solicitation shall not be cause for withdrawal after opening or for subsequent protest of award.

Addendums will only be published by the GFIAA Purchasing Department and available for review at <u>www.grr.org</u>.

SUBMISSION FORMAT AND EVALUATION CRITERIA

Submissions should include and will be evaluated on the elements outlined below:

Executive Summary – One (1) page maximum

Summarize the Respondent's strong points and how experience, particularly with similar responsibilities, will benefit the stakeholders.

Business Organization – One (1) page maximum

State the full name and address of the organization and, if applicable, the branch office, consultants, or other subordinate elements that will provide or assist in providing the service. **Include phone number(s)**, **email address(s)** and Respondent's website address.

Problem Statement & Recommendation – Five (5) pages maximum

State in succinct terms the Respondent's understanding of the major issues of this request. Describe specifically the Respondent's intended process and responsibilities. Identify important steps that will be taken to meet the GFIAA's expectations and identify deliverables.



Project Staffing – Four (4) pages maximum

Provide a chart with the staff you are committing to the solicitation. Show lines of authority and communication, and provide a brief role description with responsibilities for each person as they relate to the solicitation as well as each staff member's key credentials

<u>References</u> – One (1) page maximum

Provide a minimum of three (3) relevant references, preferably for projects of similar scope and complexity. Include the names of the projects, location, completion date, project cost, and specific challenges; identify project team members and references for each project including telephone numbers and email addresses.

REQUEST FOR QUALIFICATIONS SUBMISSION

Responses may be delivered physically or electronically. To be considered, complete submissions must be received prior to the due date and time specified (local time).

• Hard copy responses can be mailed or otherwise delivered to the address below.

Submission address: Attn: AJ Nye, Procurement Specialist Gerald R Ford International Airport Authority 5500 44th St SE Grand Rapids, MI 49512

• Electronic responses can be securely uploaded as a single pdf document to:

https://www.dropbox.com/request/JNYul2kEwgRqp3j5yh1y

Electronic submissions shall be named with a form or portion of the firm's name as part of the document name.

The firm certifies the response submitted has not been made or prepared in collusion with any other respondent and the prices, terms or conditions thereof have not been communicated by or on behalf of the respondent to any other respondent prior to the official opening of this request. This certification may be treated for all purposes as if it were a sworn statement made under oath, subject to the penalties for perjury. Moreover, it is made subject to the provisions of 18 U.S.C. Section 1001, relating to the making of false statements.

Submissions may be withdrawn by written request only if the request is received on or before the opening date and time.

Submissions not meeting these criterions may be deemed non-responsive.



GFIAA is not liable for any costs incurred by any prospective firm prior to the awarding of a contract, including any costs incurred in addressing this solicitation.

AIRPORT SECURITY

It is essential that during the performance of this contract that airport security be maintained and that operations under this agreement conform to Airport security requirements.

Airport-Issued Identification Badges -

Identification badges are issued by the Airport Police Department to provide unescorted access to authorized employees performing job duties within the airport. Contractors assigned to this account must be badged to provide services within the Secure Area. GRFIAA will not provide escort. The Contractor assumes responsibility for the conduct of all personnel working on airport property. All personnel within the Secure Area must display an airport-issued identification badge or be escorted by personnel with a badge who has been granted escort privileges. Identification badges must be worn on an individual's outermost garment and above the waist at all times.

The Airport encourages all Contractor personnel to be badged. **An unbadged person is to be under escort at all times.** This will be strictly enforced.

Badges are the property of the Airport and must be returned promptly upon fulfilment of this agreement, an individual's termination or at the request of the GRFIAA. Failure to return badges may result in the Contractor being declared nonresponsive and ineligible for future Airport contracts.

Pre-Badging Requirements for General Contractor -

Contractor should coordinate badge requirements with the Airport Project Manager. DO NOT WAIT UNTIL THE LAST MINUTE. The following documents are required before the Contractor begin the badging process for themselves, their subcontractors or their employees:

1. Project Letter from Contractor – Letter must include the Project Name with Start Date and estimated End Date, PLUS a list of all Subcontractors (if any).

2. Authorized Signer Letter(s) – Contractors/subcontractors will designate one or more individuals to be Authorized Signers for badge enrollments. The Authorized Signer letter must be on company letterhead. <u>An Authorized Signer must obtain an airport badge prior to attending signatory training which is administered by the Airport Security Coordinator.</u> The badging process is outlined below.

Badging Process -

The badging process requires two visits to the Airport Police office for each applicant.

1. Badge Application and Background Checks

The process is initiated with the Authorized Signatory. They will be enrolling the applicant in the airport's SAFE Signatory Portal. Once enrolled and submitted, each applicant must make an initial appointment with the airport badging office. (www.grrbadging.as.me)



As outlined in the appointment information, each individual is required to provide 2 pieces of acceptable ID, as well as provide a completed GRR Fingerprint Application. Information about acceptable IDs and the GRR Fingerprint Application can be found on the badging services page: <u>http://www.grr.org/badging-services.php</u>

The airport will perform two background checks on the applicant:

a. A security threat assessment (STA) is a name verification background check conducted by the Transportation Security Administration (TSA).

b. A criminal history records check (CHRC) is a fingerprint-based background check to determine if personnel have been convicted of a felony within the last ten (10) years. Background check results can take anywhere from two days to two weeks to be completed.

The Contractor's Authorized Signatory will be notified once the background checks have been completed and approved. The Authorized Signatory will notify the individual and have them schedule their assigned appointment for Badge Training and Issuance.

2. Training and Badge Issuance

The applicant will make an appointment at <u>www.grrbadging.as.me</u> for their assigned training and badge issuance. Training may include the following depending on which privileges the Authorized Signatory assigned during enrollment:

- a. SIDA training
- b. Non-movement driver's training

Each training takes approximately 45 minutes to complete. Once completed and passed, the individual will receive their ID.

Training/Badging must be completed within 30 days from date of approval. Applicants who fail to complete badging within the allotted time will be assessed a resubmission fee.

3. Authorized Signatory Training (IF APPLICABLE)

If an individual will be designated as an Authorized Signatory for their company, they will need to schedule an appointment for Authorized Signatory Training with the Airport Security Coordinator. This is typically handled through communication with the original Authorized Signatory and can only be completed after they have received their badge.

All initial badging fees will be at no cost to the Contractor. If an ID badge is lost, stolen, or otherwise unaccounted for immediate notify Airport Communications at 616.233.6055. The ID badge replacement fee is \$50.00. The badge holder is responsible for the ID badge replacement fee.

TERMS AND CONDITIONS

GFIAA reserves the right to require that its standard terms and conditions apply to any actual order placed in response to a firm's submission. No attempt to modify GFIAA's Standard Terms and Conditions shall be binding, absent agreement on such modification in writing and signed by GFIAA.



No payment shall be made to the Respondent for any extra material or services, or of any greater amount of money than stipulated to be paid in the contract, unless changes in or additions to the contract requiring additional outlay by the Respondent shall first have been expressly authorized and ordered in writing by contract amendment or otherwise furnished by the GFIAA.

The intent of these specifications is to solicit a properly designed and all-inclusive response. Any requirements not in the specifications, but which are needed for such a response, are to be included in the submission.

The Gerald R Ford International Airport Authority, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The Respondent shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or disability that is unrelated to the individual's ability to perform the duties of a particular job or position.

The Respondent shall observe and comply with all applicable federal, state, and local laws, ordinances, rules and regulations at all times during the completion of any contract with the GFIAA.

The terms of this request shall be interpreted, construed and enforced pursuant to the laws of the State of Michigan, and the Parties irrevocably consent to the jurisdiction of the federal and state courts presiding in Michigan.

The GFIAA is tax-exempt and a regional airport authority organized under 2015 P.A. 95, being MCL 259.137 et. seq.

Vendor Representation and Warranty Regarding Federal Excluded Parties List: The Respondent acknowledges that the GFIAA may be receiving funds from or through the Federal Government; such funds may not be used to pay any Respondent on the Federal Excluded Parties List (EPLS). The Respondent represents and warrants to the GFIAA that it is not on the Federal EPLS. If the Respondent is in non-compliance at any time during execution or term of this agreement (including any extensions thereof), the Respondent shall be in breach and the GFIAA shall be entitled to all remedies available to it at law or equity, specifically including but not limited to recovery of all moneys paid to the Respondent, all consequential damages (including the loss of grant funding or the requirement that grant funding be returned), and attorney fees (including the costs of in-house counsel) sustained as a result of the Respondent's non- compliance with this warranty and representation.

Pursuant to the Michigan Iran Economic Sanctions Act, 2012 P.A. 517, by submitting a bid, proposal or response, Respondent certifies, under civil penalty for false certification, that it is fully eligible to do so under law and that it is not an "Iran linked business," as that term is defined in the Act.



Insurance requirements are posted on the Documents and Forms page of the GFIAA website within the Purchasing Terms and Conditions document.

Termination For Cause: Should the firm fail to perform the Work as required by and in accordance with the schedule or time requirements, or otherwise violate any of the terms set forth in the Solicitation Request, it shall constitute breach of the Contract. Other than in force majeure situations, Respondent shall have five (5) calendar days to cure a breach of the Contract (the "Cure Period") following issuance of GFIAA written notice. Failure to cure a breach of the Contract within said Cure Period shall allow the GFIAA to, without further notice to the Respondent, declare the Contract terminated and proceed with the replacement of the Respondent and the GFIAA shall be entitled to all remedies available to it at law or in equity including a claim against any required payment/performance bonds.

Termination Without Cause: Notwithstanding any other provision, at any time and without cause, GFIAA shall have the right, in its sole discretion, to terminate the contract by giving sixty (60) days written notice.

Although it is the intent to contract with one provider, the GFIAA reserves the right to contract with alternate sources if the Respondent is unable or unwilling to service its obligation, or it is deemed by GFIAA to be in its best interest to use alternate sources.

Assignment: Neither party shall assign or delegate any of its rights or obligations under this Agreement without the prior written consent of the other party.

Respondent warrants that they are an authorized provider of products or services of his/her submission.

MICHIGAN FREEDOM OF INFORMATION ACT

Information submitted in this solicitation is subject to the Michigan Freedom of Information Act and may not be held in confidence after the Respondent's submission is opened. A submission will be available for review after the project has been awarded.

GFIAA cannot assure that all of the information submitted as part of or peripheral to the Respondent's submission will be kept confidential. Any Respondent submission language designated as confidential is considered automatically invalid and void. GFIAA is subject to the Michigan Freedom of Information Act, which prohibits it from concealing information on or associated with responses, successful or unsuccessful, once they are opened.

EVALUATION, STATUS UPDATES/AWARD NOTIFICATION

The Authority reserves the right to request additional information it may deem necessary after the submissions are received.

As part of the evaluation process, Respondents may be requested to make an oral presentation, at the Respondent's expense, to an evaluation committee. Key staff to be assigned to this project must participate in this presentation unless otherwise waived by the Authority. The presentation may be followed by a question-and-answer session.

The Authority reserves the right at its discretion to waive irregularities of this solicitation process.



In the event of extension errors, the unit price shall prevail and the Respondent's total offer will be corrected accordingly. In the event of addition errors, the extended totals will prevail and the Respondent's total will be corrected accordingly. Respondent must check their submission where applicable. Failure to do so will be at the Respondent's risk. Submissions having erasures or corrections must be initialed in ink by the Respondent. Respondents are cautioned to recheck their submissions for possible errors.

The Respondent shall not be allowed to take advantage of error, omissions or discrepancies in the specifications.

The Authority, at its sole discretion, reserves the right to award to the Respondent whose response is deemed most advantageous to the Authority. The Authority, at its sole discretion, shall select the most responsive and responsible Respondent and evaluate all responses based on the requirements and criterion set forth in this solicitation while reserving the right to weigh specifications and other factors in the award. The Authority reserves the right to reject any and all submissions as a result of this solicitation.

The Authority reserves the right to award by line item when applicable and to accept or reject any or all parts of a submission.

Accelerated discounts should be so stated at the time of submission. If quick-pay discounts are offered, The Authority reserves the right to include that discount as part of the award criterion. Prices must, however, be based upon payment in thirty (30) days after receipt, inspection, and acceptance. In all cases, quick-pay discounts will be calculated from the date of the invoice or the date of acceptance, whichever is later.

Award notifications are posted on the Authority website. It is the Respondent's responsibility to monitor the website for status updates.



EXHIBITS

Exhibit A – Site Map and Wetland Area

Site Location



Wetland Mitigation Area





Exhibit B – Michigan Department of Environment, Great Lakes and Energy – Mitigation Permit

See next page.



RFQ #2327: Wetland Mitigation and Site Preparation Design Services



NOTICE OF AUTHORIZATION

Permit Number: WRP021850 v. 1 Site Name: 41-Gerald R Ford International Airport

Date Issued: April 3, 2020 Expiration Date: April 3, 2025

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division, P.O. Box 30458, Lansing, Michigan 48909-7958, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; specifically:

Part 31, Floodplain Regulatory Authority of the Water Resources Protection.

 \boxtimes Part 301, Inland Lakes and Streams.

Part 303, Wetlands Protection.

Part 315, Dam Safety.

Part 323, Shorelands Protection and Management.

Part 325, Great Lakes Submerged Lands.

Part 353, Sand Dunes Protection and Management.

Authorized activity:

Excavate approximately 68,030 cubic yards of material and place approximately 135, 630 cubic yards of fill impacting 3.49 acres of primarily emergent wetland to facilitate the airport's Master Plan and Wildlife Hazard Management Plan. The project also includes the enclosure of 1,071 feet of unnamed stream.

Wetland mitigation is proposed at a ratio of 1.5:1 (5.24 acres of wetland credits to be purchased from an approved wetland mitigation bank within the Grand River Watershed).

Stream mitigation is proposed within the Grand River Watershed on property owned by Georgetown Charter Township in accordance with the Stream Mitigation Plans dated March 17, 2020. In summary, a total a 1,075 linear feet of new stream channel is proposed (including a 943 linear-foot main channel and a 132 linear-foot tributary channel) by redirecting existing stormwater discharges. Additional stream mitigation/stabilization measures include installing toe wood structures along 650 linear feet of existing streambank and planting a minimum of 250 live-stake shrubs along an additional 100 linear feet of stream. Place approximately 1,000 linear feet of existing stream and 1,075 linear feet of new stream corridor under Conservation Easement per the attached plan.

To be conducted at property located in: Kent County, Waterbody: unnamed stream Section 30, Town 06N, Range 11W, Cascade Township

Permittee: Clint Nemeth - Gerald R. Ford International Airport Authority 5500 - 44th Street, SE Grand Rapids, Michigan 49512

Well .

Issued By:

Holly Vickers Transportation Review Unit Water Resources Division 616-295-2787

This notice must be displayed at the site of work. Laminating this notice or utilizing sheet protectors is recommended. Please refer to the above permit number with any questions or concerns.

EGLE-WRD WRP021850 v1.0 Approved Issued On:04/03/2020 Expires On:04/03/2025

EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY WATER RESOURCES DIVISION PERMIT

Issued To:

Gerald R. Ford International Airport Authority 5500 - 44th Street, SE Grand Rapids, Michigan 49512

Permit No:	WRP021850 v.1
Submission No.:	HNM-JJ3P-TN6C3
Site Name:	41-Gerald R Ford International Airport
Issued:	April 3, 2020
Revised:	
Expires:	April 3, 2025

This permit is being issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division, under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); specifically:

\boxtimes Part 301, Inland Lakes and Streams	Part 323, Shorelands Protection and Management
➢ Part 303, Wetlands Protection	Part 325, Great Lakes Submerged Lands
Part 315, Dam Safety	Part 353, Sand Dunes Protection and Management
Dart 21 Water Becourses Brotestian (Electrolain	Pogulatory Authority)

Part 31, Water Resources Protection (Floodplain Regulatory Authority)

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Authorized Activity:

Excavate approximately 68,030 cubic yards of material and place approximately 135, 630 cubic yards of fill impacting 3.49 acres of primarily emergent wetland to facilitate the airport's Master Plan and Wildlife Hazard Management Plan. The project also includes the enclosure of 1,071 feet of unnamed stream.

Wetland mitigation is proposed at a ratio of 1.5:1 (5.24 acres of wetland credits to be purchased from an approved wetland mitigation bank within the Grand River Watershed).

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Waterbody Affected:unnamed streamProperty Location:Kent County, Cascade Township, Town 06N/Range 11W/Section 30

Authority granted by this permit is subject to the following limitations:

EGLE-WRD WRP021850 v1.0 Approved Issued On:04/03/2020 Expires On:04/03/2025 Clint Nemeth, Gerald R. Ford International Airport Authority WRP021850 v.1

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31 of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with 2013 PA 174 (Act 174) and comply with each of the requirements of Act 174.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify EGLE within one week after the completion of the activity authorized by this permit by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of EGLE.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31 of the NREPA, and wetlands).
- M. In issuing this permit, EGLE has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, EGLE may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the state: (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the state, and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act, 1969 PA 306, as amended, challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, EGLE may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from EGLE. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by EGLE prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of EGLE. The permittee must submit a written request to EGLE to transfer the permit to the new owner. The new owner must also submit a written request to EGLE to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties that includes all the above information may be provided to EGLE. EGLE will review the request and, if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit v1.0

are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.

- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA).
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the water body are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the Michigan Department of Natural Resources (MDNR), Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
 - Authority granted by this permit does not waive permit or program requirements under Part 91 of the NREPA or the need to acquire applicable permits from the CEA. To locate the Soil Erosion Program Administrator for your county, visit <u>www.mi.gov/eglestormwater</u> and select "Soil Erosion and Sedimentation Control Program" under "Related Links."
 - 2. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state, or federal approval or authorization necessary to conduct the activity.
 - 3. No fill, excess soil, or other material shall be placed in any wetland, floodplain, or surface water area not specifically authorized by this permit, its plans, and specifications.
 - 4. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.
 - 5. The permit placard shall be kept posted at the work site in a prominent location at all times for the duration of the project or until permit expiration.
 - 6. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by EGLE, will be for a five-year period beginning on the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.
 - 7. Stream mitigation/monitoring and conservation easement must be completed concurrently or before the above permitted activity and documentation provided to and approved by the EGLE, per the attached plans.
 - 8. A conservation easement of the stream mitigation site shall be submitted/approved/recorded within 60 days of the mitigation site completion, per the attached conservation easement format.
 - 9. Documentation of the purchase of the wetland mitigation credits shall be provided prior to any commencement of work at the site.

help !

Issued By:

Holly Vickers Transportation Review Unit Water Resources Division 616-295-2787

cc: Cascade Township Clerk Kent County Drain Commissioner Kent CEA Josh Crane, EGLE Brandie Stefanski, EGLE Mike Worm, EGLE Melanie Burdick, USEPA Anne Garwood, EGLE Matt MacGregor, King and MacGregor Brian Gunderman, MDNR, Fisheries



SCALE : 1" = 3,000' (8 1/2" x 11" PAPER SIZE)

PROPOSED WETLAND FILL GERALD R. FORD INT'L AIRPORT LOCATION: CASCADE TOWNSHIP, KENT COUNTY, MICHIGAN, SEC 30, T6N, R11W

APPLICANT:

GERALD R. FORD INT'L AIRPORT 5500 44TH ST SE GRAND RAPIDS, MI 49512 (616) 233-6000

PROJECT LOCATION

SHEET 1 OF 7 NOV. 2018 2170627

Prein&Newhof

Engineers = Surveyors = Environmental = Laboratory

GRAND RAPIDS, MICHIGAN 49525/(616-364-8491)

3355 EVERGREEN DRIVE, N.E.

Expires On:04/03/2025

WRP021850 v1

E-WRD















The construction of wetland mitigation areas may involve known or unknown site-specific constraints that may adversely affect or limit the success of the design. Field adjustments may be necessary to the construction documents to realize the intent of the project. KME, Inc. strongly urges those parties conducting work associated with these plans to contact KME, Inc. at the intervals indicated in the plan specifications for the purposes of observing the conditions under which the construction is being carried out. KME, Inc. shall not be held responsible for the performance of the wetland mitigation if construction observation services are not

provided by KME, Inc.

Hatch Key



Riparian Corridor Seed Mix to be installed, see sheet 4

Toewood to be installed, see sheet 4



Live stakes to be installed, see sheet 4

- Culvert or Pedestrian Bridge

Existing sanitary sewer

Min. 9.5' width/span with

to remain

Approximate proposed

Conservation Easement

boundary.

natural bottom



Conservation Easement Sign

King & MacGregor Environmental In NORTH Airport Int'l Ford For: Plan 0 Mitigation **Ç** Gel



Stream Restoration E: Install 250 live stake shrubs (see specs.) for 100± LF.

Survey of existing conditions and site engineering of proposed development provided by to Georgetown Township by Summit Surveying. Only information related to the grading and planting of the wetland mitigation area is a product of KME, Inc.

Preliminary Not for Construction



Stream Restoration A



Stream Restoration B



Along southerly bank, remove concrete and install 50± linear feet toewood to establish 6' wide by 1' deep bankfull channel

Along southerly bank, install 250± linear feet toewood to establish 5'± bankfull shelf and 6' wide by 1' deep bankfull channel

Stream Restoration C



Stream Restoration D

Along northerly bank, install 150± linear feet toewood to establish 10'± bankfull shelf ~ and 6' wide by 1' deep bankfull channel

Along northerly bank, install 200± linear feet toewood to establish 5± foot wide bankfull shelf and 6' wide by 1' deep bankfull channel

Preliminary Not for Construction

King & MacGregor Control Sing & MacGregor Cand Rapids, MI 49546 Phone: (616) 957-1231 Canton, MI 48187 Phone: (734) 354-0594				
	JKIF	٦ J		
n For:	k. Ford Int'l Airport	t'l Airport Georgetown Township, Kent County, Michigan		
Mitigation Pla	ISSUED FOR:	EGLE MiWaters Site: Gerald R Ford Int		
03/00/19 11/14/19 12/17/19 2/19/20 3/17/20 P.I.C. P.M.	EGLE Review EGLE Review Client Review Client Review	v V V		
design MSP tech. FT				
	MSF			
The stream Restoration Schematics				
		- R		













Preliminary Not for Construction

General Notes

- 1. CONTRACTOR shall furnish all labor, materials, equipment, transportation, services and necessary incidental work required to complete work as shown on the Drawings and/or as specified herein.
- 2. All work shall comply with all applicable permits and ordinances.
- 3. In general the work includes: Clearing and grubbing; erosion control; earthwork; storm drainage; supply and installation of tree-based stabilization structures, supply and installation of native plant seed; and, supply and installation of trees and live stakes.
- 4. Conduct site clearing operations to insure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, and other adjacent occupied or used facilities without permission from authorities having jurisdiction. 5. Limits of work are established on the Drawings and shall be verified with the Design Consultant
- prior to any construction activities. No vehicle activity shall occur outside the limit of construction 6. Contractor is responsible for procuring and complying with any additional permits that may be
- required by any governing agency for the completion of this project, including, but not limited to, soil erosion control permits and county drain permits. . Disposal of excess excavated soil material and materials not acceptable for use as fill shall be
- place at an upland location off-site. Stockpiled excess material shall be graded and stabilized with seed to prevent erosion into any existing wetland or watercourse. 8. No work shall occur during periods of high water flow in river.

Utilities

- 1. Locations of existing underground utilities are shown as per SURVEYOR survey, but with no guarantee that indicated locations are accurate or that lines other than those shown may or may not be present.
- 2. Contractor and those subcontractors affected by site conditions shall be fully responsible for any deductions or conclusions made on the basis of this information and that of any additional site inspections, if made.
- . "MISS DIG" shall be contacted by Contractor for location of underground utilities prior to start of work. It should be understood that MISS DIG will not locate private lines, only utility company lines and the Contractor will be responsible for verifying all locations.
- 4. Conflicts between utilities and proposed work shall be reported to Design Consultant prior to construction.

- 1. Contractor shall establish and maintain grades, benchmarks, and all other significant reference line or points as shown on the drawings. Layout of elevations and alignments shall be performed by a Licensed Surveyor. Design Consultant shall review the layout of all grading areas and structure locations prior to construction.
- The Contractor shall designate a full-time Project Supervisor, who is authorized to act as his/her agent and to be responsible for all subcontractors. The Project Supervisor shall be designated by name prior to commencement of the work and shall be available for proper supervision of the project for the duration of the EGLE permit and/or contract.

Sequence of Construction

- . Hold a pre-construction meeting with all parties involved. Examine the site to ascertain the state and conditions under which the work is to be done and review conditions of all applicable permits Design Consultant and Contractor shall field-locate construction access corridor and evaluate suitability of on-site tree material for stabilization structure at this time. Install erosion control measures and tree protection to the limits shown on the drawings.
- Clear and grub woody vegetation within the limits of work, if required.
- 4. Survey and stake proposed layout for site construction. Design Consultant to review contour staking for earthwork.
- 5. Excavate and fill within the limits of work to the required sub-grade elevations. 6. Survey and stake site for sub-grade elevations. Design Consultant to review and approve the subgrade prior to the placement of topsoil.
- 7. Survey and stake proposed layout for stabilization structures. Design Consultant to review staking and shall be onsite during structure construction.
- 8. Construct stabilization structures in accordance with the EGLE permit and as shown on the drawings
- 8. Place and spread topsoil. Apply soil binding polymer to all sloped bare soil areas. Geoweb, geogrid or any specified soil erosion/stabilization fabric installation shall occur in conjunction with topsoil placement.
- 9. Stake limits of seeding/planting and provide submittals to Design Consultant prior to seed placement. Design Consultant to approve seed mix and limits of seeding.
- 10. Restore to finish grades any disturbed areas during the planting activities. 11. Provide straw mulch over seeding areas (if no erosion control blanket is specified) or apply
- erosion control blanket on slopes as shown on the drawings. Contractor to provide as-built drawings to the Design Consultant and/or Owner.
- 12. Meet with Design Consultant to review the newly created slope stabilization efforts and obtain a copy of the as-built drawings.
- 13. Remove tree protection and soil erosion control measures when approved by Design Consultant and provide site clean-up.

Grading Specifications General Notes

- . Upon issuance, all work shall comply with EGLE Permit and other issued permits. 2. The contractor is responsible for supplying all materials, labor, equipment, transportation, all all services incidental to clearing, grading, seeding, soil stabilization, and clean up of the stabilization areas.
- 3. Erosion controls are to be installed to the limits indicated on the plan and to the detail provided. Any damage to the existing wetlands not indicated on the plans shall be repaired immediately, with these areas being restored to their original character at the contractor's own expense. All pre-erosion control measures shall be removed after final acceptance of work, unless suggested by the Design Consultant to remain in place. Care shall be taken during removal to minimize the loss of the accumulated sediment. If necessary, all silt and sedimentation is to be immediately removed from adjacent wetland or water courses.
- I. All trash and debris shall be removed from the site and legally disposed of upon completion of grading activities. Repair to their original character areas outside the work limits damaged by operating under the contract. Repair shall include finish grading and seeding as required to match existing grade and conditions, and maintenance of repaired areas.

- Sub-grades in shall be six inches lower than proposed finished grade contours and spot elevations to allow for the placement of topsoil. Topsoil shall be salvaged topsoil from the stabilization area or from an approved source.
- 2. Unless indicated otherwise, grade evenly between points and contours or between such points or contours and existing grades. Acceptable grade tolerance shall not exceed three inches (0.25 feet) from proposed grades specified on the plans to accommodate minor ruts, dirt clumps, organic matter and the like. Design Consultant may adjust grades in-field based on site conditions to accommodate the intent of the slope stabilization project. Care shall be taken to not excavate below the depths indicated. Contractor shall be responsible for any unauthorized excavation and/or fill operations. Notify Design Consultant, minimum three business days, for sub-grade verification.
- 3. Remove water accumulation in excavation area (if required) to prevent soil changes detrimental to the stability of the sub-grade. Provide and maintain erosion control measures and sufficient dewatering devices such as pumps, hoses, strainers and other appurtenance required to convey the water from excavations Water shall be discharged at an upland location a sufficient distance from the excavations to prevent backflow. Care shall be taken to prevent water borne silt from dewatering operations from entering existing wetlands and watercourses.
- The stream bank shall be constructed to create a 3H:1V slope as shown on the drawings. Due to the actively eroding condition of the stream bank, the existing conditions as shown on the drawings may be different from that encountered at the time of construction. Construction of a 3H:1V slope may require the removal and disposal of excess spoil material or it may require the importation of fill material. The Design Consultant and contractor shall jointly examine the conditions during construction to determine the quantity of cut or fill soil that will be necessary to meet the design intent. Notify Design Consultant, minimum three business days, for inspection of cut or fill requirements.
- 5. Subsoil fill material (if required) shall be installed in six-inch lifts and compacted to 90% minimum. 6. Surplus excavated material or material unsuitable for filling or grading operations (including all wetland excavation material) shall be disposed of in an upland location off-site. Temporarily stockpiled excess material shall be graded and stabilized to prevent erosion into any existing wetland or watercourse.
- 7. Place and spread the approved topsoil at a minimum depth of six inches over the entire seeding area. Topsoil shall be spread roughly such that minor ruts, dirt clumps and organic matter are acceptable. Topsoil compaction during spreading operations shall occur only to the degree that shall prevent settlement beyond the specified grade tolerance. Avoid over compacting beyond that provided by the spreading equipment. Over compacted topsoil shall be thoroughly loosened by scarifying or plowing to a depth of six inches. Notify Design Consultant, minimum three business days, for final acceptance of the finished grades.

Bank Stabilization Structures

1. Contractor shall furnish all labor, materials, equipment, transportation, services and necessary incidental work required to complete work as shown on the Drawings and/or as specified herein. 2. Design Consultant shall be on-site to observe the construction of all stabilization structures. Notify Design Consultant, minimum three business days, for timing of stabilization structure installation.

Planting and Seed Specifications

General Notes

- 1. Contractor shall furnish all labor, materials, equipment, transportation, services and necessary incidental work required to complete work as shown on the Drawings and/or as specified herein. 2. Plants shall comply with the recommendations and requirements of ANSI Z60.1, "American Standard for Nursery Stock". Plants shall be healthy, vigorous stock, grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs,
- larvae and defects such as knots, sunscald, injuries, abrasions, or disfigurement. 3. Planting shall be done by a single Contractor specializing and experienced in landscape work. 4. Plant material shall be the true native genus and species shown and scheduled on the
- drawings. No hybrids or cultivars will be accepted.
- 5. See submittals for requirements of native seed. 6. Mulch shall be shredded hardwood bark mulch free from deleterious materials, sticks, twigs,
- etc., and suitable for top dressing of planting beds. 7. Warranty Period shall be at the end of the first full growing season. A full growing season is
- defined as the beginning of May through the end of October of the same year. If installation occurs after June 15, the warranty period shall be extended through the end of October of the next year so as to achieve a full growing season.

Planting

- 1. Contractor shall notify Design Consultant, minimum of three business days, prior to planting to assist in the layout of the woody plant material and provide a copy of plant material order and receipt.
- 2. Complete all live stake plantings between March 1 May 30 or October 15 November 30 or when plants are dormant or soil is not frozen. Complete all tree plantings between March 1 -June 15 or October 1 - November 30 or when plants are dormant or soil is not frozen, or provide supplemental watering if outside these planting windows.
- 3. All plugs and live stakes to be planted as shown on details. 4. Warranty shall include a 95% survival rate for each species. Replace all plants in accordance with specifications.
- 5. Plant maintenance shall be begin immediately after installation and shall continue as required until the end of the warranty period. Maintenance will include watering and cultivation.

Seeding

- 1. Stake limits of seeding and provide seed mix submittals to Design Consultant for approval. 2. Approval of Design Consultant must be obtained for seed bed preparation and staking prior to seeding.
- 3. Install seed between the dates of March 1 through May 30 or October 15 through November 30 or as conditions permit. If seeding occurs between June 15 through October 1, the Contractor is responsible to adequately water the mitigation sites on a consistent basis for seed germination and establishment. Contractor shall notify the Design Consultant for the timing of seed installation
- 4. Uniformly broadcast specified seed over the specified areas at the specified rates. Provide a carrier (silica sand or other approved material) to ensure uniform distribution of seed.
- 5. Immediately following seeding, apply specified erosion control blanket. 6. Seed warranty shall be 70% cover of the seeded areas by species contained in the seed mix at the end of the first season.

Submittals

1. Contractor shall provide to the Wetland Consultant the following submittals: a. Seed Mix

Soil Erosion Maintenance

1. Contractor is responsible for maintaining all soil erosion and sedimentation control measures. 2. Maintenance shall include any and all activities necessary for the project to remain in compliance with the Soil Erosion and Sedimentation Control permit issued for the project.



Proposed Northern Green American C-125 Erosion Control Fabric Under Boulders.





LIVE STAKES: **SPECIES**

Cornus amomum Cornus stolonifera Salix discolor Salix exigua the locations described in Live Stake Planting detail. **Riparian Corridor Seed Mix:** SPECIES Grasses & Sedges Andropogon gerardii Carex bebbii Carex vulpinoidea Elymus canadensis Elymus virginicus Panicum virgatum Scirpus cyperinus Sorghastrum nutans

Spartina pectinata Total PLS Oz per Acre Forbs Actinomeris alternifolia Allium cernuum Angelica atropurpurea Asclepias incarnata Aster novae-angliae Cassia hebecarpa Coreopsis tripteris Desmodium canadense Eryngium yuccifolium Eupatorium purpureum Geum aleppicum Helenium autumnale Helianthus strumosus Heliopsis helianthoides Heracleum maximum Hypericum pyramidatum Liatris spicata Lobelia siphilitica Monarda fistulosa Penstemon digitalis Physostegia angustifolia Pycnanthemum virginianum Ratibida pinnata Rudbeckia hirta Rudbeckia triloba

Scrophularia lanceolata

Silphium perfoliatum

Total PLS Oz per Acre

Bankfull Shelf

Width Varies

Solidago riddellii

Verbena hastata

Zizia aurea

Cover Crop

Bankfull Channel

Avena sativa

COMMON NAME Silky Dogwood Red Osier Dogwood Pussy Willow Sandbar Willow TOTAL

COMMON NAME

Big Bluestem

Fox Sedge

Switchgrass

Wool Grass

Indian Grass

Wingstem

Angelica

Wild Senna

Tall Coreopsis

Yellow Avens

False sunflower

Sneezeweed

Cow Parsnip

Bebb's oval sedge

Canada Wild Rye

Virginia Wild Rye

Prairie Cordgrass

Nodding Wild Onion

Swamp Milkweed

New England Aster

Showy Tick Trefoil

Rattlesnake Master

Sweet Joe Pye Weed

Pale-leaved Sunflower

Great St John's Wort

Foxglove Beardtongue

Narrow-leaved Obedient Plant

Marsh Blazingstar

Great Blue Lobelia

Wild Bergamot

Mountain mint

Yellow Coneflower

Black-eyed Susan

Brown-eyed Susan

Riddell's Goldenrod

Golden Alexander

Early Figwort

Blue Vervain

Seed Oats

Cupplant

QUANTITY

NOTE: Live stakes to be 36-42 inches long. Select a minimum of 3 species from list provided with no less than 100 individuals of a single species. Live stakes to be planted in groups of 10 individuals of a single species in



Not to scale

360.0

Note: This is Native Connection's Wet-Mesic Prairie Mix. 269-580-4765.

Proposed Grade

Top of Boulder to Match

Upstream Bed Elevation

Proposed Geotextile Erosion

Fabric Under Boulders.

Proposed 12" Boulders

with Flat Finish Surface

Just Beyond

Bankfull

Extend Boulders Extend Boulders To

— Edge of Belt Width

Finish Surface Along Bankfull Channel Slope

Proposed 12" Boulders With Flat

and to Edge of Belt Width





Cross Vane Weir Structure

Bankfull Channel

¹/₃ Distance

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Expires On:04/03/2

Construction

Stream Mitigation Work Plan

The proposed stream mitigation activities include stream restoration by diverting stormwater to address excessive flashiness in the flow dynamics, restoring eroding stream banks, creating a proper bankfull channel width and depth, establishment of bankfull shelves, restoration of riparian vegetation, and construction of 1,075 linear feet of new channel.

Stream Mitigation Maintenance Plan

Once constructed and stabilized, it is not anticipated that the stream mitigation areas will require ongoing maintenance. Until stability is achieved, however, maintenance may be required to insure the establishment of robust native vegetation and overall channel stability. Should instabilities be observed during the monitoring program outlined in this document, the Permittee will:

- i. Assess the problem and its probable causes;
- ii. Assess upstream and downstream impacts of the mitigation;
- iii. Develop reasonable and necessary corrective measures as a revision to original plans;
- iv. Submit proposed corrective measures, including a schedule for implementation, to EGLE for confirmation and approval within 60 days of identification of the problem; and
- v. Upon EGLE approval, implement corrective measures according to the approved schedule.

Stream Mitigation Performance Standards

Stream Mitigation performance standards are proposed as follows:

- a. Construction has been completed in accordance with EGLE's approved plans and specifications included in the permit and mitigation plan.
- b. Restoration of the stream channel to a stable pattern, dimension, and profile based on reference stream parameters and the mitigation plan. Maintenance of stable stream parameters for two bankfull (or greater) flow events and at least one flow event that results in over-bank flooding.
- c. The stream and riparian buffer mitigation area shall be free of oil, grease, debris, and all other contaminants.
- d. Any in-stream structures (i.e., cross-vanes, wood, constructed riffles, etc.) shall perform as designed. The structures shall stay in place and there shall be no bank erosion, piping, undermining, end around, or other indication of instability associated with the instream structures including no buoyancy issues with wood structures.
- e. At the end of the monitoring period, the mitigated stream shall exhibit floodplain connectivity appropriate for proper stream functioning as evidenced by a weighted Bank Height Ratio of 1.0-1.1, and a weighted Entrenchment Ratio of >2.2 for Rosgen channel types C and E, and ≥1.4 for Rosgen channel types B and Bc.
- f. At the end of the monitoring period, the mitigated stream shall exhibit bank migration and lateral stability appropriate for proper stream functioning as evidenced by a dominant Bank Erosion Hazard Index (BEHI) score and a Near Bank Stress (NBS) score combination (BEHI/NBS) of Moderate/Very Low; Low/Very Low; Low/Low; Low/Moderate; or Low/High.

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- g. At the end of the monitoring period, the mitigated stream shall exhibit an amount of Large Woody Debris (LWD) appropriate for proper stream functioning as evidenced by a LWD Index greater than 300, or a LWD Index equal to or greater than the LWD Index for a DEQ approved reference reach.
- h. At the end of the monitoring period, the mitigated stream shall exhibit a vegetated Riparian Buffer as evidenced by a weighted average buffer width, measured horizontally from the water's edge, equal to or greater than approximately 15 feet on the south and westerly side of the channel and 35 feet of the north and easterly side of the channel (total 50-foot wide corridor).
- i. Riparian Vegetation Cover: The mean percent cover of native species in the herbaceous layer of the riparian buffer zone is not less than 70 percent at the end of the monitoring period.

Extensive areas of bare soil shall not exceed five percent of the mitigation area. For the purposes of these performance standards, extensive refers to areas greater than 0.01 acre (436 square feet) in size.

The total percent cover of native species in each plot shall be averaged for plots taken in the same riparian buffer zone to obtain a mean percent cover value for the riparian buffer zone. For the purposes of this standard, total percent cover is the percent cover of the ground surface covered by vegetation, bare soil, and open water, when viewed from above. Total percent cover cannot exceed 100 percent. Plots within identified bare soil areas and areas without a predominance of native vegetation shall not be included in this average. Riparian buffer zone begins at the water's edge and extends to the outside edge of the riparian buffer as indicated on the plans.

j. Riparian Vegetation Diversity: The stream mitigation riparian buffer supports a predominance of native vegetation in each vegetative layer, represented by a minimum number of native species, at the end of the monitoring period. The minimum number of native species shall not be less than 15 species within the riparian buffer.

The total number of native plant species shall be determined by a sum of all species identified in sample plots.

k. Riparian Vegetation Density: At the end of the monitoring period, the live-stake planting area supports a minimum of:

Three hundred (300) individual surviving, established, and free-to-grow trees or shrubs per acre in the live-stake planting area that are classified as native species and consisting of at least four different species.

Physiognomic classification of trees and shrubs shall be in accordance with the Michigan Floristic Quality Assessment (Michigan Department of Natural Resources, 2001).

m. The mean percent cover of invasive species in the stream channel and associated riparian buffer including, but not limited to, *Phragmites australis* (Common Reed), *Lythrum salicaria* (Purple Loosestrife), *Frangula alnus* (Glossy Buckthorn), *Rhamnus cathartica* (Common Buckthorn), *Alliaria petiolata* (Garlic Mustard), and *Phalaris arundinacea* (Reed Canary Grass) shall in combination be limited to no more than ten

(10) percent within each riparian vegetation zone. Invasive species shall not dominate the vegetation in any extensive area of the stream channel and associated riparian buffer.

If the mean percent cover of invasive species in the stream channel and associated riparian buffer is more than ten (10) percent within any riparian vegetation zone or if there are extensive areas of the stream channel or associated riparian buffer in which an invasive species is one of the dominant plant species, the permittee shall submit an evaluation of the problem to EGLE. If the permittee determines that it is infeasible to reduce the cover of invasive species to meet the above performance standard, the permittee must submit an assessment of the problem, a control plan, and the projected percent cover that can be achieved for review by EGLE. Based on this information, the MDEQ may approve an alternative invasive species standard. Any alternative invasive species standard must be approved in writing by EGLE.

Stream Mitigation Monitoring

Stream Mitigation monitoring is proposed as follows:

The permittee shall monitor the stream mitigation for a minimum of five (5) years following grading, planting, and introduction of hydrology. A monitoring report, which compiles and summarizes all data collected during the monitoring period, shall be submitted annually by the permittee. Monitoring reports shall cover the period of January 1 through December 31 and be submitted to EGLE prior to January 31 of the following year. The permittee shall conduct the following activities and provide the information collected in the monitoring reports:

- a. Provide annual photographic documentation of the development of the mitigation stream channel and the associated riparian buffer from permanent photo stations located within the mitigated stream channel. At a minimum, photo stations shall be located at each cross-section and include each in-stream structure (i.e., crossvanes, wood, or constructed riffles, etc.), if applicable. Photos must be labeled with the location, date photographed, and direction. A map of the locations of the photo stations shall be included.
- b. Stream pattern, dimension, and profile should be measured on an annual basis by conducting longitudinal profile and cross-section surveys. A minimum of two riffles and one pool cross-section per each 100-foot section of stream channel or portion thereof shall be permanently monumented and each cross-section shall be surveyed annually. Channel sinuosity, bankfull width, depth and cross-sectional area, as well as width to depth ratio, percent riffle, pool to pool spacing ratio, pool max depth ratio, bank height ratio, and entrenchment ratio should all be reported. Current year cross-sections and profile should be presented overlaid with survey results from all previous monitoring years and as-built surveys.
- c. Sample vegetation in plots located along transects shown in the mitigation plan once between July 15 and August 31. Woody vegetation may be sampled earlier in the growing season to allow for accurate counts. The number of sample plots necessary within each riparian vegetation zone shall be determined by use of a species-area curve or other approach approved by EGLE. The minimum number of sample plots for each riparian vegetation zone shall be no fewer than five (5). Sample plots shall be located on the sample transect at evenly spaced intervals or by another approach acceptable to EGLE. If additional or alternative sample transects are needed to

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sufficiently evaluate each riparian vegetation zone, they must be approved in advance in writing by EGLE.

The herbaceous layer (all non-woody plants and woody plants less than 3.2 feet in height) shall be sampled using a 3.28-foot by 3.28-foot (one square meter) sample plot. The shrub and tree layer shall be sampled using a 30-foot radius sample plot. Plot shape may be adjusted based on width of riparian buffer zone. The data recorded for each herbaceous layer sample plot shall include a list of all living plant species, and an estimate of percent cover in five (5) percent intervals for each species, bare soil areas, and open water areas relative to the total area of the plot. The number and species of surviving, established, and free-to-grow trees and surviving, established, and free- to-grow shrubs shall be recorded for each 30-foot radius plot.

Provide plot data and a list of all the plant species identified in the plots and otherwise observed during monitoring. Data for each plant species must include common name, scientific name, wetland indicator category from the U.S. Army Corps of Engineers 2012 National Wetland Plant List for Michigan (Lichvar, R.W. 2012), physiognomic classification, and whether the species is considered native according to the Michigan Floristic Quality Assessment (Michigan Department of Natural Resources, 2001). Nomenclature shall follow in the *Flora of North America*, which can be found at <u>www.fna.org</u>.

The locations of sample transects and plots shall be identified in the monitoring report on a plan view showing the location of riparian vegetation zones. Each transect and sample plot shall be permanently and visibly staked at a frequency sufficient to locate the transect and sample plots in the field.

- d. Delineate any extensive (greater than 0.01 acre in size) bare soil areas, areas dominated by invasive species, and areas without a predominance of native vegetation, and provide their location on a plan view.
- e. Inspect the site, during all monitoring visits and inspections, for oil, grease, manmade debris, and all other contaminants and report findings. Rate (e.g., poor, fair, good, excellent) and describe the water clarity in the stream channel.
- f. Document substrate characteristics and any areas of erosion and/or deposition within the stream channel.
- g. Assess the stability and performance of any in-stream structures or large woody debris features.
- h. Provide a written summary of data from previous monitoring periods and a discussion of changes or trends based on all monitoring results. This summary shall include identification of all performance standards and whether each standard has been met. A table containing this information shall be included and shall compare current year monitoring data to data from previous years' surveys.
- i. Provide a written summary of all the problem areas that have been identified and potential corrective measures to address them.

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- j. Provide documentation that the mitigated stream channel has experienced two flow events equal to or greater than bankfull flow, and that at least one flow event during the five year monitoring period has resulted in over-bank flooding (i.e., a flow event greater than bankfull flow).
- k. The Permittee shall conduct all other measurements needed to document that performance standards are met.

EGLE will determine if the performance standards have been met. If the performance standards have not been met, EGLE may require corrective actions and subsequent annual monitoring until final approval from EGLE can be granted.

Stream Mitigation Long-term Management Plan

The stream mitigation areas will be preserved under a conservation easement in favor of the State of Michigan.

Stream Mitigation Adaptive Management Plan

During the monitoring period, any management activities will occur in accordance with the Stream Mitigation Maintenance Plan section of this document. After the monitoring period, any management activities will be in accordance with the Management Plan prepared as part of executing a Conservation Easement over the subject property.

Stream Mitigation Financial Assurances

It is anticipated that EGLE will require a bond or letter of credit to ensure that the stream mitigation is constructed, the conservation easement is recorded, monitoring is completed, and corrective actions are performed as required to comply with the mitigation requirements of an issued permit.

AGREEMENT FOR CONSERVATION EASEMENT

(This instrument is exempt from County and State transfer taxes pursuant to MCL 207.505(a) and MCL 207.526(a), respectively)

This CONSERVATION EASEMENT is created on _____, 20___, by and between

_____ (name) married/single individual [s} (*circle one*), or corporation, partnership, municipality, or limited liability company (*circle one*), whose address

(Grantor) and

the Michigan Department of Environment, Great Lakes, and Energy (EGLE), whose address is P.O. Box 30458, Lansing, Michigan 48909-7958 or Constitution Hall, 3rd Floor South, 525 West Allegan Street, Lansing, Michigan 48933 (Grantee);

County, and State of Michigan, legally described in

The Grantor is the fee simple title holder of real property located in (circle one) the Township/City of

Exhibit A.

is

The EGLE is the agency charged with administering Part 301, Inland Lakes and Streams, and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and

Permittee ______ (insert name and address of Permittee if other than Grantor) has applied for a Permit (EGLE File Number ____-P) pursuant to Parts 301 and 303 to authorize activities that will impact regulated wetlands and inland stream bottomland. EGLE evaluated the permit application and determined that a permit could be authorized for certain activities within regulated wetlands and stream bottomlands provided certain conditions are met, and

As a condition of the above-referenced permit, Grantor (*on behalf of Permittee, if applicable*) has agreed to grant EGLE a conservation easement that protects the wetlands and bottomland of ______ (*water body name*) and restricts further development to the Easement Premises legally described in Exhibit B, subject to the rights of the public and other riparian owners in and to the waters of the ______ (*water body name*). A survey map depicting the Easement Premises is attached as Exhibit C. The Conservation Easement (the Easement Premises) consists of approximately ______acre(s). A survey map depicting the Easement Premises is attached as Exhibit the county register of deeds.

ACCORDINGLY, Grantor hereby conveys unto the Grantee, forever and in perpetuity, this Conservation Easement as set forth in this Agreement, pursuant to Subpart 11 of Part 21, Conservation and Historic Preservation Easement, of the NREPA, MCL 324.2140 et seq., on the terms and conditions stated below.

COVENANTS, TERMS, CONDITIONS AND RESTRICTIONS

1. The purpose of this easement is to protect the functions and values of existing wetlands and the stream bottomland and their natural resource values on the Easement Premises, consistent with the Permit, and the protection of the benefits to the public derived from wetland and inland stream bottomland and integral

habitat, by requiring Grantor to maintain the Easement Premises in its natural and undeveloped condition, except as specified in the Permit or Management Plan approved by the Grantee EGLE.

- 2. Except as authorized under EGLE Permit Number _____-P, issued on ___/__/20____ or as otherwise provided in this Agreement, Grantor shall refrain from, and prevent any other person from altering or developing the Easement Premises in any way. This includes, but is not limited to:
 - a) Alteration of the surface topography;
 - b) Creation of paths, trails, or roads;
 - c) The placement of fill material as defined in Part 303 of the NREPA, MCL 324.30301 et seq., as amended;
 - d) Dredging, removal, or excavation of any soil or minerals;
 - e) Drainage of surface or groundwater;
 - f) Construction or placement of any structure;
 - g) Plowing, tilling, mowing or cultivating the soils or vegetation;
 - h) Alteration or removal of vegetation, including the planting of non-native species;
 - i) Ranching, grazing, farming;
 - j) Use of chemical herbicides, pesticides, fungicides, fertilizers, spraying with biocides, larvicides or any other agent or chemical treatments, unless as part of an EGLE-approved Management Plan;
 - k) Construction of unauthorized utility or petroleum lines;
 - Storage or disposal of ash, garbage, trash, debris, abandoned equipment or accumulation of machinery, bio-solids, or other waste materials, including accumulated vegetative debris, such as grass clippings, leaves, yard waste or other material collected and deposited from areas outside the Easement Premises;
 - m) Use or storage of automobiles, trucks, or off-road vehicles including, but not limited to, snowmobiles, dune buggies, all-terrain vehicles, and motorcycles;
 - n) Placement of billboards or signs, except as otherwise allowed in the Permit or this Agreement;
 - o) Use of the wetland for the dumping of untreated storm water or the directing of treated storm water to the easement premises at a volume that adversely impacts the hydrology of the wetland;
 - Actions or uses detrimental or adverse to water conservation and purity, and fish, wildlife or habitat preservation.
- 3. Cutting down, burning, destroying, or otherwise altering or removing trees, tree limbs, shrubs, or other vegetation, whether living or dead, is prohibited within the Easement Premises, except with the written permission of Grantee, expressly for the removal of trees or limbs to eliminate danger to health and safety; to reduce a threat of infestation posed by diseased vegetation, invasive non-native plant species that endanger the health of native species, or as otherwise provided in the EGLE-approved Management Plan for the Easement Premises.
- 4. Grantor is not required to restore the Easement Premises due to alterations resulting from causes beyond the owner's control, including, but not limited to, unauthorized actions by third parties that were not reasonably foreseeable, natural causes, or natural disasters, such as unintentional fires, floods, storms, or natural earth movement.
- 5. Grantor, Permittee, or its authorized agents or representatives, may enter the Easement Premises to perform activities within the Easement Premises consistent with the Permit or the mitigation requirements. Grantor or Permittee shall provide 5 days notice to the Grantee of undertaking any mitigation activity even if the mitigation project has been conceptually approved. Any activities undertaken pursuant to the Permit, a mitigation project or this Agreement shall be performed in a manner to minimize the adverse impacts to existing wetland or mitigation areas.
- 6. Grantor warrants that Grantor has good and sufficient title to the Easement Premises described in Exhibit B.
- 7. Grantor warrants that any other existing interests or encumbrances in the Easement Premises have been disclosed to the EGLE.

- 8. Grantor warrants that to the best of Grantor's knowledge no hazardous substances or hazardous or toxic wastes have been generated, treated, stored, used, disposed of or deposited in or on the property.
- 9. This Agreement does not grant or convey to Grantee or members of the general public any right to possession or use of the Easement Premises.
- 10. Grantor shall continue be responsible for the upkeep and maintenance of the Easement Premises to the extent it may be required by law.
- 11. Grantee and its authorized employees and agents, as shown in Exhibit D, may enter the Easement Premises at reasonable times to determine whether the Easement Premises are being maintained in compliance with the terms of this Agreement, mitigation, or other conditions of the Permit, and for purposes of taking corrective actions for failure to comply. If Grantee is entering the Easement Premises for the purpose of taking corrective actions, Grantor shall be provided with 14 days notice to provide the opportunity to cure the failure to comply.
- 12. This Agreement shall be binding upon the successors and assigns of the parties and shall run with the land in perpetuity unless modified or terminated by written agreement of the parties.
- 13. This Agreement may be modified only in writing through amendment of the Agreement. Any modification shall be consistent with the purpose and intent of the Agreement.
- 14. In addition to the right of the parties to enforce this Agreement, it is also enforceable by others against the owner of the land in accordance with Part 21, Subpart 11 of the NREPA, MCL 324.2140 *et seq*, as amended.
- 15. Grantor shall indicate the existence of this Agreement on all future deeds, mortgages, land contracts, plats, and any other legal instrument used to convey an interest in the Easement Premises.
- 16. A delay in enforcement shall not be construed as a waiver of the Grantee's rights to enforce the conditions of this Agreement.
- 17. This Agreement shall be liberally construed in favor of maintaining the purpose of the Conservation Easement.
- 18. If any portion of this Agreement is determined to be invalid by a court of law, the remaining provisions will remain in force.
- 19. This Agreement will be construed in accordance with Michigan law. All legal action related to this Conservation Easement must be filed and pursued in Michigan state courts.
- 20. In addition to the terms of the Permit issued by Grantee, this document sets forth the entire agreement of the parties. It is intended to supersede all prior discussions or understandings.
- 21. Within 90 days after this Agreement is executed, Grantor shall place and maintain at Grantor's expense, signs, fences, or other suitable markings along the Easement Premises to clearly demarcate the boundary of the Easement Premises, or as otherwise provided in the permit.
- 22. The terms 'Grantor' and 'Grantee' wherever used in this Agreement, and any pronouns used in place thereof, shall include, respectively, the above-named Grantor and their personal representatives, heirs, successors, and assigns, and the above-named Grantee and their successors and assigns.

LIST OF ATTACHED EXHIBITS

- **Exhibit A:** A legal description of the Grantor's property, inclusive of the Easement Premises.
- **Exhibit B:** A legal description of the Easement Premises.
- **Exhibit C:** A survey map depicting the Easement Premises that also includes identifiable landmarks such as nearby roads to clearly identify the easement site.
- **Exhibit D:** A legal description that provides a path of legal access to the Easement Premises and a map that indicates this access site that EGLE staff will use for ingress and egress to and from the Easement Premises or if the Easement is directly connected to a publicly accessible point, such as a public road, a statement is required that authorizes EGLE staff ingress and egress to and from the Easement Premises with a map that clearly indicates the connection of the public access site to the Easement Premises.
- **Exhibit E:** *If applicable*, a Cooperative Stewardship Agreement that includes baseline documentation and any vegetation and/or site Management Plans.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first above written. In signing this Agreement, the Signatory warrants that he or she has the authority to convey the Conservation Easement on behalf of the Grantor.

	GRANTOR:	
	Signature:	
	Type/Print Grantor's Name exactly as signed	
	Title (if signing on behalf of an organization	
	Organization Name (if signing on behalf of an organiz	ation)
STATE OF MICHIGAN } } ss COUNTY OF}		
IF SIGNING ON	BEHALF OF AN ORGANIZATION, THIS MU	ST BE COMPLETED:
The foregoing instrument was	acknowledged before me this day of	, 20
by	, (name[s]) the	, (title)
of partnership, municipality, or li	, (Organization name) a mited liability company (circle one), on behalf o	, (state) corporation of the organization.
	(Signature of Notary Public)	
	(Typed or Printed name of Notary Public)	
	My commission is in:	County, Michigan
	Acting in:	County, Michigan
	My Commission Expires:	
(OR) IF SIGNING AS AN INE	DIVIDUAL OR MARRIED PERSON, THIS MUS	ST BE COMPLETED:
The foregoing instrument was	acknowledged before me this day of _	, 20
by	, (name[s])	(marital status).
	(Signature of Notary Public)	
	(Typed or Printed name of Notary Public)	
	My commission is in:	County, Michigan
	Acting in:	County, Michigan
	My Commission Expires:	

GRANTEE:

} ss

STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, and ENERGY WATER RESOURCES DIVISION

Teresa Seidel, Division Director

STATE OF MICHIGAN}

COUNTY OF INGHAM}

The foregoing instrument was acknowledged before me this _____ day of _____, 20___, by Teresa Seidel, Division Director, Water Resources Division, State of Michigan, on behalf of the Michigan Department of Environment, Great Lakes, and Energy.

(Signature of Notary Public)

(Typed or Printed name of Notary Public)

Acting in: Ingham County, Michigan

My Commission is in _____ County, Michigan

My Commission Expires: _____

Form Drafted By:

AFTER RECORDING, RETURN TO:

The Honorable Dana Nessel Attorney General Department of Attorney General Environment, Natural Resources, and Agriculture Division P.O. Box 30755 Lansing, Michigan 48909 Michigan Dept. of Environment, Great Lakes, and Energy (EGLE) Water Resources Division Constitution Hall, 3rd Floor South P.O. Box 30458 Lansing, MI 48909-7958

November 1, 2009 *Rev. September 18, 2019*