**PUBLIC NOTICE**

**Publication Date:** January 8, 2020  
**IDEM ID Number:** 2019-574-45-MTM-A

**Closing Date:** January 31, 2020  
**Corps of Engineers ID Number:**

To all interested parties:

This letter shall serve as a formal notice of the receipt of an application for **Section 401 Water Quality Certification** by the Indiana Department of Environmental Management (IDEM). The purpose of the notice is to inform the public of active applications submitted for water quality certification under Section 401 of the Clean Water Act (33 U.S.C. § 1341) and to solicit comments and information on any impacts to water quality related to the proposed project. IDEM will evaluate whether the project complies with Indiana’s water quality standards as set forth at 327 IAC 2.

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
</table>
| **1. Applicant:** | Lake County Surveyor’s Office  
2293 N. Main Street  
Crown Point, IN 46407 |
| **2. Agent:** | |
| **3. Project location:** | Along Cady Marsh Ditch behind Highland High School, between Erie Street and Erie Lackawanna Bike Trail, Highland, Lake County. Latitude: 41.54855, -87.95833. |
| **4. Affected waterbody:** | Cady Marsh Ditch |
| **5. Project Description:** | Along 1350 linear feet of Cady Marsh Ditch, the applicant proposes to perform log jam removal (clearing and snagging), bank contouring, and place riprap utilize geotextile fabric and erosion control blankets for bank protection. The applicant also proposes to construct outfall pipes, use mulch seeding and install silt fence. Additional information may be found on line at [https://www.in.gov/idem/5474.htm](https://www.in.gov/idem/5474.htm) |

**Comment period:** Any person or entity who wishes to submit comments or information relevant to the aforementioned project may do so by the closing date noted above. Only comments or information related to water quality or potential impacts of the project on water quality can be considered by IDEM in the water quality certification review process.

**Public Hearing:** Any person may submit a written request that a public hearing be held to consider issues related to water quality in connection with the project detailed in this notice. The request for a hearing should be submitted within the comment period to be considered timely. The request should also state the reason for the public hearing as specifically as possible to assist IDEM in determining whether a public hearing is warranted.

**Questions?** Additional information may be obtained from Marty Maupin, Project Manager, by phone at 317-233-2471 or by e-mail at mmaupin@idem.in.gov. Please address all correspondence to the project manager and reference the IDEM project identification number listed on this notice. Indicate if you wish to receive a copy of IDEM’s final decision. Written comments and inquiries may be forwarded to:

Indiana Department of Environmental Management  
100 North Senate Avenue  
MC65-42 WQS IGCN 1255  
Indianapolis, Indiana 46204-2251 FAX: 317/232-8406
PLANS & SPECIFICATIONS FOR

2018 – Cady Marsh Ditch Bank Stabilization Project
Erie Street to Bike Path

HIGHLAND, NORTH TOWNSHIP
LITTLE CALUMET RIVER WATERSHED

PREPARED FOR
LAKE COUNTY DRAINAGE BOARD

LAKE COUNTY SURVEYOR - BILL EMERSON, JR., PE

Prepared By
The Office of Lake County Surveyor
TABLE OF CONTENTS

SPECIAL INSTRUCTIONS TO BIDDERS 4 PAGES
GENERAL INFORMATION 1 PAGE

ATTACHMENT A

TECHNICAL SPECIFICATIONS 11 PAGES
BID PROPOSAL FORM 2 PAGES
LOCATION MAP and PROJECT PLANS 2 PAGES
SPECIAL INSTRUCTIONS TO BIDDERS

A. GENERAL INFORMATION

1. It is the intention of the Lake County Drainage Board, hereinafter referred to as the Board, to secure bids for maintenance work to be performed on CADY MARSH DITCH BANK STABILIZATION hereinafter referred to as the Project, as identified and described herein and in the plans and specifications prepared by the Lake County Surveyor’s office, hereinafter referred to as the Manager.

2. All bids for the proposed work shall be submitted on a unit price or lump sum basis, as applicable, and as set forth on the bid proposal form attached herein, all in accordance with the project documents.

3. The Board intends to review all bids for the project and upon final review and determination, award the bid to the successful bidder. Among other considerations, the successful bidder will be determined by the lowest most responsive and responsible overall total bid as provided in the bid proposal form attached herein. The total quantity of work to be awarded by the Board will be based on the total dollars available at the time of contract award and the respective applicable unit prices and/or lump sums of the successful bidder.

4. The bid proposal form to the Board consisting of 2 pages, as set out hereinafter, shall be attached and submitted with Bid Form 96 and Form 95.

B. BIDDERS INFORMATION

1. It is the responsibility of all project bidders to review all bid documents to ascertain their effect on each bid.

2. It is the responsibility of all project bidders to carefully examine the project site and fully inform himself/herself with the limitations and conditions related to the work covered by his/her bid, and shall include in his/her bid a sum to cover the cost of all such items. It is the purpose and intent of the contract documents that a fully complete job be accomplished. It is the responsibility of each bidder to include all costs necessary to provide all labor, materials and equipment for the portion of the work bid upon, including incidentals, whether or not specifically called for in the project plans and specifications. Each bidder by making his/her bid represents that he/she has read and understands the bid documents and represents that he/she has visited the site and has familiarized himself/herself with all the conditions under which the work is to be performed.

3. It is the responsibility of all bidders to contact all utility companies and public and/or private agencies to become familiar with the specific locations of all existing utilities and systems that will affect the work. The successful bidder shall protect all such systems and utilities, including all other improvements which may exist within or adjacent to the work area during the prosecution of the work. All existing improvements, utilities and systems that may be damaged during construction shall be repaired and/or replaced to a condition at least equal to that prior to such damage at no additional expense to the Board. All such companies
shall be notified prior to commencement of the work in order that all such lines be located and identified by the affected companies.

4. All inquiries as to the documents, interpretations, substitutions, conflicts, discrepancies, omissions and questions shall be referred to the Manager, representative of the Board, who in turn will refer same to the Board.

5. All bidders in doubt as to the true meaning of any part of the project documents shall submit to the Manager, not less than seven (7) days before the bid deadline, a written request for interpretation and clarification.

6. Bidders are responsible for acquiring any and all issued addenda in time to incorporate them into their bid. Each bidder shall enumerate all addenda he has received in his bid.

7. All bidders and their sub-contractors, if any, shall furnish proof, satisfactory to the Board that they are in good standing and are authorized to do business in the State of Indiana and that they are licensed to perform the work within the County of Lake. All bidders shall hold a General Contractor License from the County of Lake. All bidders shall furnish a list of their sub-contractors, if any, including name, address and telephone numbers.

8. The County’s affirmative action program as adopted by the County of Lake, dated May 31, 1977, a copy of which is on file in the Lake County Auditor’s office and the office of the Board of Commissioners of the County of Lake, is a condition of the project documents. The bidder shall submit, together with his/her bid, in writing, his/her affidavit, that he/she will comply with the County’s affirmative action program.

9. It is recommended that all bidders attend any and all pre-bid conferences that may be scheduled by the Board.

10. The Lake County Surveyor, or their designated agents, will perform project supervision and periodic inspections to determine compliance with all project documents, percentages or inspections will include measurements and elevations of the completed work for compliance with the plans and specifications prior to payment recommendations to the Board.

11. The Contractor shall be permitted to submit claims for payment on a monthly basis as the work progresses, subject to a fifteen percent (15%) retainage, all as approved by the Lake County Surveyor or their designated agents. Fifteen percent (15%) of the completed value of the work shall be withheld by the Board for a period of sixty (60) days after the completion of the work and its acceptance by the Lake County Surveyor and the Engineer for the purpose of securing payment of suppliers, laborers and subcontractors, if any.

The Contractor shall be required to furnish a sworn statement of all indebtedness for labor and materials furnished, used or extended for said construction, the amount of due and to become due to each subcontractor and material supplier before issuance of any payment, and final waiver of lien and an affidavit showing all bills, on the issuance of the final payment.

Upon certifications by the Lake County Surveyor or their designated agents, the Board shall pay to the Contractor, on account of the contract, the value of labor and materials incorporated into the work.
12. A bid security in the form of a certified check/cashier's check or a bid bond from an acceptable surety made payable to the Board shall accompany each bid. The bid security shall be in the penal amount of five percent (5%) of the total bid. Bid security shall be forfeited if the bid is withdrawn after closing time on the date for receiving bids. Out of state bidders must submit a certified check of ten percent (10%) of the total bid made payable to the Board.

Upon execution of the contract, the successful bidder shall give to the Board a bond payable to the Board, in an amount fixed by the Board but not less than the amount of the bid, and with a corporate surety licensed to do business in Indiana. The bond must be conditioned on the faithful performance of the contract and the payment of all expenses and damages incurred under the contract, including payment of all suppliers, laborers, and subcontractors. However, in lieu of a corporate surety bond, the Board may accept:

1. a cash bond;
2. a property bond; or
3. a bond from a sufficiently financed private bonding company.

13. All Contractors, including sub-contractors, shall carry full insurance coverage and certificates of insurance shall be delivered to the Board, upon signing of the contract.

a. Workmen's Compensation, as required by applicable Federal and State laws.

b. Contractor's Liability, including contractual liability, form of insurance shall be comprehensive general liability and comprehensive automobile liability $500,000 CSL; for bodily injury, property damage and personal injury, including complete operations broad form; bodily injury and property damage, automobile liability, owned, non-owned and hired.

c. In addition to the above, the Contractor shall provide operations and products liability, XCU coverage and $1,000,000 umbrella liability.

d. At all times during the progress of the work, the Contractor shall maintain such insurance as will protect and save harmless the Board, and its agents, from claims under the Workmen's Compensation Act, from any and all other claims for damages for property damage, personal injury and/or death and patent infringement, which may arise from operation under the contract documents, whether such act or omission be by itself or by an employee or sub-contractor or anyone directly or indirectly employed by either of them; and certificates of such insurance as required by the project documents shall be filed with the Board.

e. Should the Board suffer any damage, cost or expense, including attorney's fees, in any manner, because of any wrongful act or negligence of the Contractor, or anyone employed by it or a subcontractor or the assertion of any claim of whatever nature which arises from operation under the contract documents, then the Contractor shall reimburse the Board for any such damage and all reasonable attorney fees and expenses related to such claim and/or reimbursement thereto, all without relief from validation and appraisement laws.
C. **RIGHT OF THE BOARD**

1. The Board reserves the right to issue addenda changing, altering or supplementing the contract documents, at any time prior to the bid deadline.

2. The Board reserves the right to reject any or all bids and to waive any information or irregularity in any bid accepted.

3. The Board reserves the right to approve or reject any sub-contractor submitted by the bidders.

4. The Board reserves the right to award all or individual projects within the scope of work.

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**APPROVED THIS 7th DAY OF November, 2018**

**LAKE COUNTY DRAINAGE BOARD**

KYLE W. ALLEN, SR., CHAIRMAN

JERRY TIPPY, VICE-CHAIRMAN

MICHAEL C. REPAY, MEMBER

**LAKE COUNTY SURVEYOR**

BILL EMERSON, JR., PE
GENERAL INFORMATION

A. INDR. COE AND STATE PERMITS

The Board will procure all necessary permits from the Indiana Department of Natural Resources, the Army Corps of Engineers and the Indiana Department of Environmental Management for the performance of the work. All such permits are considered part of the project documents and all work shall be performed in strict compliance with all provisions and conditions therein. In the event discrepancies exist between the project documents and the provisions and conditions of such permits, the Contractor shall immediately notify the Lake County Surveyor or their designated agents to resolve any such discrepancy.

B. CONSTRUCTION METHODS AND STANDARDS

All construction methods, standards and specifications, as adopted by the Board shall govern the performance of the work unless otherwise specified in the project documents.

C. WORK WITHIN EASEMENTS

All work shall be performed within the limits of the existing regulated drain easement for CADY MARSH DITCH BANK STABILIZATION, and within other access and work easements acquired by the Board as otherwise specified herein.

D. MAINTENANCE OF DRAINWAYS

All construction shall be performed in such a manner that will not interfere with existing drainage of the areas adjacent to the project. All work shall be performed in such a manner that will ensure proper drainage.

E. AUTHORIZATION TO PROCEED

No work shall be performed prior to receipt of "Authorization to Proceed" notification from the Lake County Surveyor.

F. CONTRACTOR'S SCHEDULE

The Contractor will be requested to attend a pre-construction conference to be scheduled by the Lake County Surveyor at which time the Contractor will be required to submit a construction schedule to the Lake County Surveyor prior to commencement of the work.
ATTACHMENT A

TECHNICAL SPECIFICATIONS

FOR

2018 CADY MARSH DITCH BANK STABILIZATION
Erie Street to Bike Path, Highland, North Twp., Lake County, Indiana
**LOGJAM REMOVAL (CLEARING AND SNAGGING)**

**General Requirements:** This work shall be performed as described in detail in the Indiana Drainage Handbook (Section 5.4, Practices 401 and 402). A copy of the latest version of the Handbook is available online through the IDNR at [http://www.in.gov/dnr/water/4893.htm](http://www.in.gov/dnr/water/4893.htm)

**Description:** This work shall consist of removing accumulations of logs, root wads, beaver dams, trees in danger of falling into the stream or obstructing the flow, and other debris that span the waterway using hand-operated and/or heavy equipment from the side of the channel without disturbing the ditch banks. All work shall be performed within the existing 75-foot Drainage Board easement.

**Access:** Access to and within the work site shall be within the 75’ drainage easement. Care shall be taken to limit tree removal (for the purpose of gaining access to the work site) to an absolute minimum. Access shall not cross a waterway or traverse a wetland as indicated on the jurisdictional wetland map, unless pads are used as specified in Practice 103, Temporary Wetland Crossing.

**Equipment:** Hand-operated equipment, such as axes, chain saws, and portable winches shall be used for removal of obstructions, unless determined impracticable. Where heavy equipment is necessary for removal of obstructions, only suitable equipment not equipped for excavation such as small tractors, backhoe equipped with a hydraulic thumb, bulldozer with its blade up, or a log skidder shall be used.

**Removal of Trees, Tree Parts, and Foreign Material:** The Contractor shall cut, relocate and remove from the floodplain and/or wetlands, any free logs or affixed logs, including foreign material, that are crossway in the channel. Logs shall be removed with minimal damage to vegetation and placed outside of wetlands. Limits of jurisdictional wetlands are shown on the plans and copies of maps showing floodway limits are available at the Office of the Lake County Surveyor. Isolated or single logs that are embedded, lodged, or rooted in the channel, and which do not span the channel or cause flow problems, shall not be removed, unless they are associated with or in close proximity to larger obstructions, or they pose a hazard to navigation. Severely damaged, dead, leaning or other trees, which are in immediate danger of falling into the waterway, shall be cut and removed. The root system and stump of the tree shall be left in place, Stumps shall be cut as low as possible and parallel with the slope of the bank but in no case higher than twelve inches, unless authorized by the County Surveyor's Office. Stump splinters shall also be cut off. It shall be the contractor's responsibility to walk the site and estimate the size and number of these trees to be removed. Cut stumps shall be treated with herbicide as soon as possible after cutting, preferably less than 2 hours. Stumps should be saturated, especially in the cambial area. Cut stumps shall be treated with Garlon 3A or approved equal but Tordon will not be allowed.

**Removed Tree and Tree Parts:** All trees, logs and other tree parts cut, broken, and/or removed by the contractor shall be disposed of off-site unless other written arrangements have been made with the adjacent landowner and approved by the Lake County Surveyor.

The removed trees and brush may be mulched (chipped) and spread on top of the ditch bank, outside of the flood way limits, in a manner approved by the Lake County Surveyor's office. If the contractor chooses to remove materials from the site, the materials shall be disposed of by the contractor in an approved manner at an approved disposal site, all of which must be approved by the Lake County Surveyor's office.
**Measurement and Payment:** This work shall be paid for at the contract unit price per foot for LOGJAM REMOVAL (CLEARING AND SNAGGING) which price shall include all cutting, relocation and removing of trees, tree parts and foreign material, including disposal and all other items necessary to complete the work to the satisfaction of the Lake County Surveyor.
RIPRAP BANK PROTECTION

General Requirements: This work shall be performed as described in detail in the Indiana Drainage Handbook (Section 5.5, Practice 510 and Section 5.10, Practice 1002). A copy of the latest version of the Handbook is available online through the IDNR at http://www.in.gov/dnr/water/4893.htm.

Description: This work shall consist of covering of a portion of a channel bank with a layer of stone at locations shown on the plans to protect stream bank from erosion. When completed, the worked section shall approximate the natural slope of the channel bank. All work shall be performed within the existing 75-foot Drainage Board easement.

Access: Access to and within the work site shall be within the 75' drainage easement and/or within the public right-of-way. Care shall be taken to limit tree removal (for the purpose of gaining access to the work site) to an absolute minimum. Access shall not cross a waterway or traverse a wetland as indicated on the jurisdictional wetland map, unless pads are used as specified in Practice 103, Temporary Wetland Crossing.

Materials: Materials shall consist of revetment or hand-laid riprap, preferably from local sources. Geotextile fabric or sand/gravel layer should be used for stabilization under all permanent riprap installations.

Site Preparation: This work shall include the removal of brush, trees, stumps and other debris on the slope to be dressed. The material removed shall be disposed of by a method approved by the Lake County Surveyor's Office.

Excavation and Slope Compaction: This work shall include excavation, grading/flattening of the slope and compacting the slope. Excavation shall be deep enough to accommodate the depth of filter and riprap. Slopes steeper than 2:1 (1V: 2H) shall be flattened so stone material will not become displaced. Contractor shall cut a keyway at base of slope to reinforce the toe; keyway depth should be 1.5 times the design thickness of the riprap and extend a horizontal distance equal to the design thickness (see Typical Section). Foundation toe must be properly reinforced to prevent undercutting or slumping. The excavated/prepared slope as well as any fill material shall be proposed compacted to density of surrounding natural soil before the filter and the riprap are placed.

Placement of Riprap: This work shall include the placement of filter and the riprap on a prepared slope. Contractor shall first place geotextile fabric on the slope in accordance with manufacturer's guidelines. The contractor shall spread the well-graded aggregate in a uniform layer at 18 inches in depth.

Riprap shall be placed to full thickness in 1 operation. Smaller rock shall be placed in voids to form a dense, uniform, well-graded mass. Some hand placement of material will most likely be necessary. The contractor shall blend the riprap surface smoothly with the surrounding area to eliminate protrusions or overfalls. Riprap may be either hand-placed or dumped. Riprap used must be of sized according to INDOT standard specifications and extend at least 12 inches below normal water level to provide habitat for aquatic organisms in the voids.
**Measurement and Payment:** This work shall be paid for at the contract unit price per ton for RIPRAP BANK PROTECTION which price shall include all materials including geotextile fabric, shaping, grading, compacting, use of machinery, labor and all other items necessary to complete the work to the satisfaction of the Lake County Surveyor.
NONWOVEN GEOTEXTILE FABRIC

General Requirements: This work shall be performed as described in detail in the Indiana Drainage Handbook (Section 5.5, Practice 510 and Section 5.10, Practice 1002) (Glossary of Terms page A-9). A copy of the latest version of the Handbook is available online through the IDNR at http://www.in.gov/dnr/water/4893.htm.

Description: This work shall consist of furnishing all labor, materials, tools and equipment necessary to place GEOTEXTILE FABRIC on the channel banks or as directed by the Manager.

NTPEP APPROVED - GTX-2013-01-030. US 205NW is a nonwoven needle punched geotextile made of 100% polypropylene staple filaments. US 205NW resists ultraviolet and biological deterioration, rotting, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. US 205NW will satisfy the requirements as outlined in AASHTO M-288-06 for Class 1 applications and meets the following M.A.R.V. values except where noted:

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight - Typical</td>
<td>ASTM D-5261</td>
<td>8.0 oz/sy</td>
<td>271 g/sm</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D-4632</td>
<td>205 lbs</td>
<td>912 N</td>
</tr>
<tr>
<td>Elongation @ Break</td>
<td>ASTM D-4632</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Mullen Burst*</td>
<td>ASTM D-3786*</td>
<td>350 psi</td>
<td>2,413 kPa</td>
</tr>
<tr>
<td>Puncture Strength*</td>
<td>ASTM D-4833*</td>
<td>130 lbs</td>
<td>579 N</td>
</tr>
<tr>
<td>CBR Puncture</td>
<td>ASTM D-6241</td>
<td>535 lbs</td>
<td>2,381 N</td>
</tr>
<tr>
<td>Trapezoidal Tear</td>
<td>ASTM D-4533</td>
<td>85 lbs</td>
<td>378 N</td>
</tr>
<tr>
<td>Apparent Opening Size</td>
<td>ASTM D-4751</td>
<td>80 US Sieve</td>
<td>0.180 mm</td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D-4491</td>
<td>1.35 Sec-1</td>
<td>1.35 Sec-1</td>
</tr>
<tr>
<td>Water Flow Rate</td>
<td>ASTM D-4491</td>
<td>90 g/min/sf</td>
<td>3,657 l/min/sm</td>
</tr>
<tr>
<td>UV Resistance @ 500 Hours</td>
<td>ASTM D-4355</td>
<td>70%</td>
<td>70%</td>
</tr>
</tbody>
</table>

* Historical averages (current values not available): Mullen Burst Strength ASTM D3786 is no longer recognized by ASTM D-35 on Geosynthetics as an acceptable test method. Puncture Strength ASTM D4833 is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D6241.

Method of Measurement: This work will be measured in place and the area computed in square yards.

Basis of Payment: The work will be paid for at the contract unit price per square yard for EROSION BLANKET, which price shall constitute full compensation for all labor, materials and equipment necessary to complete the work as specified.
**EROSION BLANKET**

**General Requirements:** This work shall be performed as described in detail in the Indiana Drainage Handbook (Section 5.11, Practice 1104). A copy of the latest version of the Handbook is available online through the IDNR at [http://www.in.gov/dnr/water/4893.htm](http://www.in.gov/dnr/water/4893.htm).

**Description:** This work shall consist of furnishing all labor, materials, tools and equipment necessary to place EROSION BLANKET on the channel banks or as directed by the Manager.

Single Net Erosion Control Blankets are a biodegradable product ideal for erosion control in low level areas (slopes up to 3:1), low flows or mild stabilization requirements. Typically lasting up to 12 months, these blankets can provide the support you need until vegetation and seeding is able to effectively take root. Straw Blankets are designed with interior fibers that are stabilized with exterior netting. Interiors are made from 100% wheat straw fibers, while exterior netting is made from photodegradable polypropylene.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The S75 shall meet Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration’s (FHWA) FP-03 Section 713.17 Installation staple patterns shall be clearly marked on the blanket with environmentally safe paint.

The blanket shall be the North American Green S75, or an approved equivalent. The S75 blanket shall have the following physical properties:

**Material Content**

<table>
<thead>
<tr>
<th>Material</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix</td>
<td>100% Straw (0.50 lb/yd2) (0.23 kg/m2)</td>
</tr>
<tr>
<td>Netting</td>
<td>Top side only, lightweight photodegradable</td>
</tr>
<tr>
<td></td>
<td>(1.5 lb/1000 sq ft) (0.73 kg/100 sm)</td>
</tr>
<tr>
<td>Thread</td>
<td>Photodegradable on 1.5” centers</td>
</tr>
</tbody>
</table>

The composite turf reinforcement mat shall be installed in accordance with the manufacture's recommendations. Where necessary, check slots shall be cut for any stumps or objects to remain that protrude from the ground surface.

**Method of Measurement:** This work will be measured in place and the area computed in square yards.

**Basis of Payment:** The work will be paid for at the contract unit price per square yard for EROSION BLANKET, which price shall constitute full compensation for all labor, materials and equipment necessary to complete the work as specified.
MULCHED SEEDING

**General Requirements:** This work shall be performed as described in detail in the Indiana Drainage Handbook (Section 5.11, Practice 1102). A copy of the latest version of the Handbook is available online through the IDNR at [http://www.in.gov/dnr/water/4893.htm](http://www.in.gov/dnr/water/4893.htm).

**Description:** This work shall consist of the application of seeding, plant residues or other suitable material to disturbed soil surface areas.

**Location:** Top of spoil pile and other areas disturbed by machinery, and bank restoration.

**Materials/Installation:** This work shall be in accordance with Section 621 of the Indiana Department of Transportation Standard Specifications, current edition, except the seed mixture.

Seed mixtures shall be as follows:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanic Name</th>
<th>Seeding Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Banks and Slopes (Stabilizing Matrix Species)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big Bluestem</td>
<td>Andropogon gerardii</td>
<td>5 lb/ac</td>
</tr>
<tr>
<td>Brown Fox Sedge</td>
<td>Carex vulpinoidea</td>
<td>0.25 lb/ac</td>
</tr>
<tr>
<td>Canada Wild Rye</td>
<td>Elymus Canadensis</td>
<td>5 lb/ac</td>
</tr>
<tr>
<td>Streambank Rye</td>
<td>Elymus riparius</td>
<td>1 lb/ac</td>
</tr>
<tr>
<td>Silky Wild Rye</td>
<td>Elymus vilosus</td>
<td>1 lb/ac</td>
</tr>
<tr>
<td>Virginia Wild Rye</td>
<td>Elymus virginicus</td>
<td>3 lb/ac</td>
</tr>
<tr>
<td>Torrey's Rush</td>
<td>Juncus torreyi</td>
<td>0.01 lb/ac</td>
</tr>
<tr>
<td>Evening Primrose</td>
<td>Oenothera biennis</td>
<td>0.25 lb/ac</td>
</tr>
<tr>
<td>Switch Grass</td>
<td>Panicum virgatum</td>
<td>1 lb/ac</td>
</tr>
<tr>
<td>Indian Grass</td>
<td>Sorghastrum natans</td>
<td>5 lb/ac</td>
</tr>
<tr>
<td>Prairie Cord Grass</td>
<td>Spartina pectinata</td>
<td>0.01 lb/ac</td>
</tr>
<tr>
<td>Blue Vervain</td>
<td>Verbena hastate</td>
<td>1 lb/ac</td>
</tr>
</tbody>
</table>

**Measurement and Payment:** This work shall be paid for at the contract unit price per acre for MULCHED SEEDING which price shall be payment in full for constructing this item as specified, including all materials, labor, and equipment.
SILT FENCING

General Requirements: This work shall be performed as described in detail in the Indiana Drainage Handbook (Section 5.1, Practice 105). A copy of the latest version of the Handbook is available online through the IDNR at http://www.in.gov/dnr/water/4893.htm.

Description: Temporary barrier of entrenched geotextile fabric stretched across and attached to supporting post used to intercept sediment-laden runoff from drainage areas of disturbed soil.

Location: Along creek/ditch side of spoil piles.

Materials/Installation: This work shall be in accordance with Practice 105 as referenced above and with Section 205 of the Indiana Department of Transportation Standard Specifications, current edition.

Measurement and Payment: This work shall be paid for at the contract unit price per foot for SILT FENCE which price shall be for constructing and removing this item as specified, including all materials, labor and equipment necessary to perform this work. Removal of silt fence is required when the project is complete and the disturbed areas have been stabilized, and will be considered incidental to the cost of the item.
SUPPLEMENTAL BID PROPOSAL FORM (TO BE ATTACHED AND MADE PART OF FORM 96)

PROJECT: 2018 CADY MARSH DITCH BANK STABILIZATION

The undersigned, having familiarized himself/herself/themselves with local contract documents, comprised of the following:

Project documents for the project known as 2018 CADY MARSH DITCH BANK STABILIZATION Erie Street to Bike Path, Highland, North Twp., Lake County, Indiana.

The undersigned has carefully inspected the site of the proposed work and can perform the various items of work for the unit prices/lump sums stipulated. All prices listed include any incidental work that may be necessary to complete the project in accordance with the provisions of the plans and specifications, as may be amended.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description and Calculation</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log Jam Removal (Clearing and Snagging) STA 0+00 to STA 13+50 = 1,350 LFT</td>
<td>LFT</td>
<td>1,350</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 2        | Riprap Bank Protection STA 0+00 to STA 13+50 (north side) 1,350 Lf x 10 ft (avg.) x 1.5 ft = 750 TONS  
STA 0+00 to STA 13+50 (south side) 1,350 Lf x 10 ft (avg.) x 1.5 ft = 750 TONS | TON    | 1,500    |            |         |
| 3        | Geotextile Fabric STA 0+00 to STA 13+50 (north side) (1,350')x(10') = 13,500 sf / 9 = 1,500 SY  
STA 0+00 to STA 13+50 (south side) (1,350')x(10') = 13,500 sf / 9 = 1,500 SY | SY     | 3,000    |            |         |
| 4        | Erosion Blanket STA 0+00 to STA 13+50 = 1,350 LFT (1,350'x2)(20') = 54,000 sf / 9 = 6,000 SY | SY     | 6,000    |            |         |
| 5        | Mulched Seeding STA 0+00 to STA 13+50 = 1,350 LFT (1,350'x2)(20') = 54,000 sf / 43,560 = 1.25 AC | AC     | 1.25     |            |         |
| 6        | Silt Fence STA 0+00 to STA 13+50 = 1,350 LFT                                              | LFT    | 1,350    |            |         |

Total Bid Price $
BIDDERS PROPOSAL FOR MAKING ENTIRE IMPROVEMENT

$ ____________________________

(WORDS)

This proposal submitted this _____ day of ________________, 2018.

BY:

Company Name

________________________________________

Authorize Signature

________________________________________

Printed Name                        Title

________________________________________

Address                         City   State   Zip Code

________________________________________

Phone No.                      Fax No.

________________________________________

Email