



**Consulting & Municipal  
ENGINEERS**

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December 15, 2025

Mr. Steve Bloyed  
Director of Public Works  
Township of North Brunswick  
710 Hermann Road  
North Brunswick, NJ 08902

**Re: Proposal for Professional Services for the  
Bank Stabilization at West Lawrence Street Pump Station  
Final Design, Permitting and Bid Phase  
North Brunswick, NJ  
Our File No.: 115.NO00344.P01**

Dear Mr. Bloyed:

Thank you for considering our Firm for the above referenced work and allowing us to submit this proposal for Professional Services associated with the Township's request. Our Firm and staff possess the resources, experience, and expertise necessary to successfully render the services you require in a cost-effective manner.

### INTRODUCTION

We have assisted the Township to identify necessary repairs and mitigation to secure the FEMA project funding for the Bank Stabilization at West Lawrence Street Pump Station. In addition, we completed an NJDEP pre-application phase for this Project, which included field survey, base mapping, concept design development and attendance at a pre-application meeting with the NJDEP in order to receive critical input from the Department prior to advancing the Project to the final design, permitting and bid phase.

Based on the Concept Plan developed, the input received from the NJDEP during the Pre-application meeting and our review of the remaining project scope tasks with the Township, we have organized this Proposal into the following Phases:

PHASE: 1      Final Design Phase  
PHASE: 2      Permit Phase  
PHASE: 3      Bid Phase



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Our proposal has considered the scope of services required for this Project, and our Firm has the capabilities of providing the necessary Professional Services. Accordingly, we propose the following Phases of work:

**PHASE: 1 FINAL DESIGN AND PERMIT PLANS**

**Task 1. Site work**

Concerning the site work design, we will prepare construction plans, grading plans, profiles where necessary, cross sections, earthwork calculations, construction details, pre-bid engineer's construction cost estimate and specifications.

Construction plans, specifications and an engineer's estimate will be provided to the Township for review. Technical Specifications for the proposed work will be prepared and incorporated into the Township's Standard Bid Documents. We anticipate meetings with Township Officials to review the Plans and Project requirements during the design phase. Comments received by the Township will be incorporated into the Plans prior to submission to the permitting agencies and preparation of Final Plans and Specifications.

Approximate locations of existing utilities will be prepared to support the design process. We will provide plans to the utility companies and coordinate as necessary to avoid conflicts with proposed improvements and/or facilitate any necessary utility relocations for the Project.

The Plans, Specification and Estimate (PS&E) will include the following:

- Title Sheet
- Distribution of Quantities
- Typical Sections
- Location Plan and Construction Notes
- Construction plans
- Soil Erosion and Sediment Control Details
- Soil Erosion and Sediment Control Plans
- Profiles, where necessary
- Grading Plans
- Cross Sections
- Construction Details
- Specifications
- Pre-bid engineer's construction cost estimate



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## **Task 2. Hydrology and Hydraulics**

### **Streambank Stabilization**

The proposed streambank stabilization improvements will likely consist of loose stone riprap, gabion baskets, and gabion mattresses that will extend along the limits of erosion as previously identified by the Township. The proposed measures will be designed in conformance with the soil-bioengineering techniques detailed in Chapter 16 of the Natural Resources Conservation Services (NRCS) Engineering Field Handbook for Streambank and Shoreline Protection. The design will also consider any restrictive subsurface conditions identified from a subsurface geotechnical investigation as well as live vehicular loads as portions of the proposed improvements will be adjacent to existing motor vehicle surfaces to remain. An engineering design report with descriptions for design criteria, site constraints, and associated computations will be prepared to support the NJDEP Land Use and Soil Conservation District applications. The proposed improvements to restabilize the subject streambanks will be in accordance with the Flood Hazard Area Control Act Rules set forth at N.J.A.C. 7:13 and the Standards for Soil Erosion and Sediment Control in New Jersey.

Based upon our discussions with the NJDEP at the pre-application meeting a Flood Hazard Area Verification will not be required provided that we demonstrate conformance with the flood storage displacement requirements set forth at N.J.A.C. 7:13-11.4 and the requirements for a channel modification set forth at N.J.A.C. 7:13-11.1(c)(1).

## **Task 3. Structural**

Structural design services are anticipated for the streambank stabilization improvements for a stretch of eroded streambank along the Sucker Brook. Our Structural Department will prepare details of the proposed streambank stabilization improvements necessary based upon the final design.

The proposed stabilization will be in conformance with the NJDEP rules and regulations and is anticipated to consist of a combination of loose stone riprap, grouted riprap and/or stacked gabion basket gravity retaining walls. Our scope of services includes an analysis of proposed gabion basket wall sections based on the proposed top and bottom of bank elevations. The proposed stabilization type will depend on the proximity of the stabilization areas to the adjacent existing pavement which can be subjected to heavy vehicular loading and the existing pump station building which is designated to remain.



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CME's Structural Department will prepare structural designs in accordance with the latest editions of the following design codes and specifications, as required:

1. AASHTO LRFD Bridge Design Specifications
2. ACI Building Code Requirements for Reinforced Concrete
3. ASCE Minimum Design Loads for Buildings and Other Structures
4. International Building Code, New Jersey Edition
5. NJDOT Design Manual for Bridges and Structures
6. NJDOT Specifications for Road and Bridge Construction

#### **Task 4. Geotechnical**

CME will conduct a subsurface soil exploration and evaluation of the site in order to determine existing soil and groundwater conditions. Rock coring will be performed if rock is encountered at shallow depths. We will utilize the services of a subsurface exploration company to perform one day of land-based drilling using an ATV and/or tripod-mounted rig to obtain up to two (2) borings as close as possible to the existing top of bank, drilled to a maximum depth of approximately 49 feet.

#### **PHASE: 2 PERMITS**

Concerning permit acquisition for this Project, we anticipate submitting complete applications for the permits outlined below, and our scope of services will include one (1) plan revision to comply with review agency comments. In addition, we will submit the required application fees, and we understand the Township will reimburse these expenses to CME separate from this Contract.

#### **NJDEP Flood Hazard Area (FHA) & Fresh Water Wetlands (FWW)**

The proposed bank stabilization will be regulated under the Freshwater Wetlands Protection Act Rules (as found at N.J.A.C. 7:7A) and the Flood Hazard Area Control Act Rules (as found at N.J.A.C. 7:13).

#### **Freshwater Wetland Protection Act Rules**

The proposed improvements are located within State open waters and therefore must comply with the Freshwater Wetlands Protection Act Rules. As such, the improvements will be permissible under a Freshwater Wetlands General Permit 20 – bank stabilization. A Freshwater Wetlands General Permit 20 will permit the proposed bank stabilization given all the requirements found at N.J.A.C. 7:7A-7.20 are met. This includes that vegetative or bioengineering stabilization methods are used to stabilize the eroded bank unless demonstrated that other methods will be



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required. General Permit 20 requires that the total cumulative length of water body affected by the bank stabilization activities must meet the applicable length limit, including no more than 150 LF for the placement of rip-rap or hard armoring and no more than 300 LF for soil bioengineering methods. These methods may be used contiguously. For example, the project may propose rip-rap placement on one side of the stream for 150 LF or on both sides of the stream for 75 LF and 300 LF of bioengineering stabilization methods can be used in combination for a total of 450 LF of stabilization.

#### Wetland Delineation

CME Associates conducted a site visit in May 2025 to identify the presence of freshwater wetlands or transition areas within the project area utilizing the methodologies outlined in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1989), as required by the NJDEP under the Freshwater Wetlands Protection Act Rules. The wetland/upland boundaries were determined based upon field examination of topography, hydrology, soils, and vegetation characteristics at the site. Freshwater wetlands were not identified within the project area.

#### Flood Hazard Area Control Act Rules

The proposed bank stabilization is located near and within the regulated areas of the Sucker Brook which is classified as a FW2-NT waterway by the NJDEP (according to the rules found within the Surface Water Quality standards found at N.J.A.C. 7:9B) and as a result will require a 50-foot riparian zone (as found at N.J.A.C. 7:13-4.1). The work may be located within the flood hazard area (FHA) as identified on FEMA FIRM Map 34023C0129F, dated July 6, 2010. It should be noted that the design flood elevation identified on the map will need to be increased in accordance with the amended flood hazard area regulations dated July 17, 2023. Based on discussion with the Department during the Pre-Application Meeting conducted on September 30, 2025, a Flood Hazard Area Verification will not be required and accordingly is excluded from our scope of services herein.

Any construction activities that consist of the permanent removal of riparian zone vegetation or take place within the Flood Hazard Area will require FHA permitting. The NJDEP considers permanent riparian impacts to be any permanent removal of vegetation (trees, saplings, shrubs, woody vines, and herbaceous vegetation), excluding maintained lawn. The removal of lawn area, when replaced, is not considered permanent and is not regulated under the Flood Hazard Area Control Act Rules. The proposed bank stabilization improvements will be permissible under a Flood Hazard Area Individual Permit (as found at N.J.A.C. 7:13- Subchapter 10). An Individual Permit requires a formal application to the NJDEP and requires the Project to comply with various conditions found in Subchapter 11 and 12 within N.J.A.C. 7:13. It is anticipated that the NJDEP will prohibit regulated activities from May 1<sup>st</sup> through July 31<sup>st</sup> (as found at 7:13-11.5).



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### **Soil Erosion and Sediment Control Plan Certification (SESC)**

We will prepare and submit for approval a Soil Erosion and Sediment Control Plan to the Freehold Soil Conservation District as the Project will disturb more than 5,000 square feet of total land disturbance. The following items will be prepared and submitted in support of the Soil Conservation District application:

- Soil Conservation District Application Form;
- Four (4) sets of Soil Erosion and Sediment Control Plans;
- One (1) set of Construction Plans;
- One (1) copy of the Engineering Design Report including Drainage Narrative; and
- Application Fee.

### **Exclusions**

Permits or approvals beyond those expressly outlined herein this proposal are excluded from our scope of work. In addition, permit fees are excluded and will be requested from the Township at the time the applications are prepared.

### **Phase 3. BID PHASE**

We anticipate that Bid Phase Services will generally include the furnishing of Plans and Specifications in digital format prior to Advertisement for Bids, coordination with prospective Bidders during the Bid Period, issuance of any Addenda required, attendance at the Bid Opening, and the preparation of a Report recommending Award of the Project.

### **COST PROPOSAL**

#### **Preliminary Engineer's Construction Cost Estimate**

We have preliminarily estimated the construction cost for the Proposed Bank Stabilization at West Lawrence Street Pump Station at approximately \$776,000.00 based on the Proposed Concept Plan and the acceptance received from FEMA.



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**Engineering Services:**

Accordingly, based upon the above outlined Scope of Services, we find that the necessary services can be provided based on our hourly rates for the not-to-exceed fee indicated below based upon the following breakdown:

Phase 1 – Final Design Phase	\$102,859.00
Phase 2 – Permit Phase	\$ 35,000.00
phase 3 – Bid Phase	<u>\$ 7,340.00</u>

<b>Subtotal (Phase 1, 2 &amp;3)</b>	<b>\$145,199.00</b>
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**Fixed Direct Costs for Reimbursement:**

Geotechnical Soil Boring and Lab Testing Allowance	\$ 4,750.00
Permit application – postage, copy	<u>\$ 570.00</u>

<b>Subtotal (Fixed Direct Costs for Reimbursement)</b>	<b>\$ 5,320.00</b>
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<b>Total (Phase 1,2,3 and Fixed Direct Costs)</b>	<b>\$150,519.00</b>
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**SCHEDULE**

Based upon the above Scope of Services and an authorization for design on January 21, 2026, we estimate the schedule for the Project to be as follows:

Final Design & Permit Application Documents	Friday	Feb. 13, 2026
Township Review	Friday	Feb. 20, 2026
NJDEP Submission	Monday	Feb. 23, 2026
NJDEP Review (120 days)	Tuesday	Jun. 23, 2026
Final Bid Documents	Friday	Jul. 3, 2026
Advertise for Bids	Thursday	Jul. 9, 2026
Receive Bids	Thursday	Jul. 23, 2026
Award	Monday	Aug. 31, 2026

**SUMMARY**

Our hourly rates shall be firm until January 1, 2027 after which they may be subject to re-negotiation. Invoices shall be paid within 30 days of presentation of same. In accordance with State requirements our Affirmative Action Statement and Business Registration Certificate are





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currently on file with the Township.

CME Associates represent that we have excluded from this proposal the effort to identify and/or locate unwritten easements.

Our contract documents will include wording that requires the Contractor to be responsible for all applicable OSHA and other regulatory agency requirements, as well as safety, construction means and methods, and the general requirements included in our Standard Specifications.

Our Proposal does not include the preparation of permits other than those listed that may be required for the proposed Project, nor does it include permit fees. Our Proposal does not include Right of Way / Easement acquisitions in this Proposal.

Our services do not include downstream storm sewer capacity analyses, offsite stability analyses, or the evaluation of the condition of the existing sanitary sewer, storm drainage and/or water systems within the project area or for the design of new facilities unless indicated in this Scope of Services. Should it be determined that the same is necessary; we will perform said services based upon our hourly rates subject to authorization from the Township.

Our fees do not include costs associated with Construction Administration or for the preparation of record drawings. Those services, if required, can be performed based upon our hourly rates and the actual time necessary to complete the associated tasks, which could vary greatly depending upon the Contractor performing the work.

Should you have any questions regarding this matter or require additional information, please do not hesitate to contact this office.

Very truly yours,

CME ASSOCIATES

James C. Watson, PE, PTOE  
*Township Engineer's Office*

JW:GO:mp

cc: Justine Progebin, Business Administrator