

**ATTACHMENT A**  
**BEACON HUDSON RIVER TRAIL**  
**PRELIMINARY DESIGN PHASE**  
**SCOPE OF SERVICES**

The City of Beacon (“Client”) has requested Weston & Sampson, PE, LS, LA, PC. (“Weston & Sampson”) to provide this proposal for Survey, Planning, Engineering Studies, and Design Services for the Beacon Hudson River Trail from the Beacon Metro-North Railroad Train Station to the Newburgh-Beacon Bridge and the Town of Fishkill. These services include but are not limited to the development of a topographic survey, environmental resource assessment, and preliminary design of a plans and specifications package.

**PROJECT UNDERSTANDING**

The Project area is planned to consist of a 1.25 multi-use trail from the Beacon Train Station, north to the Town of Fishkill limit and consists of four specific sections. The four sections consist of the following:

- Segment A: Proposed trailhead Beacon Metro-North Train Station to North End Parking Lot: The project originates on West Main Street and extends towards the MTA Visitor Parking Lot to a trail head at the westernmost corner of the commuter lot. This portion of the trail is estimate 0.4 miles in length, and extends the perimeter of the commuter and employee parking lots parallel to the rail line, before reaching the woodlands adjacent to the Tompkins Terrace Preservation.
- Segment B: North End of Parking Lot to Existing Pond: The second segment of the pathway extends adjacent to the woodlands of Tompkins Terrace Preservation property, extending approximately 0.3 miles parallel to the railroad tracks. A potential overlook on the northern end of this segment is proposed to provide visitors with a view of the Hudson River.
- Segment C: Existing Pond to Town of Fishkill: The third segment extends from the existing pond under the Newburgh-Beacon Bridge to the Town of Fishkill Hudson River Trail for approximately 0.25 miles. This segment includes the “pinch-point” within the corridor.
- Segment D: Connection to Newburgh-Beacon Bridge: The fourth segment extends westward from the trail connection to the Town of Fishkill parallel to the service road on the southern side of the Newburgh-Beacon Bridge. A trail head is proposed at the connection with the Trail of Two Cities, where users can connect with the Newburgh-Beacon Bridge.

Based upon your request and our understanding of the Project, Weston & Sampson proposes the following scope of work:

**SCOPE OF WORK**

**Phase A — Project Management**

**A.1 Project Management and Administration:** To begin the project, the Weston & Sampson team will participate in an initial kick-off meeting with the client, representatives from the City, and committee members to review the purpose, goals, scope, and milestones of the project. Weston & Sampson will draft and submit minutes of this meeting to document decisions and action items. As a component of the design services, this task includes time to administer the project including contracting, internal coordination, supervision, general quality control, project accounting, work coordination, monthly progress reports, and project scheduling.

**Phase A Deliverables:**

- Kick-off meeting materials & minutes
- Updated project schedules
- Monthly progress reports

**Phase B — Field Investigations**

**B.1 Boundary & Land Survey:** In preparation for the engineering design, the Weston & Sampson team will conduct a boundary field survey to locate physical features needed for boundary line analysis and mapping of the project area. The field survey will be the result of the field survey location, deed, railroad maps and/or title research information provided by the client. The railroad right-of-way and adjoining parcels survey will be prepared at a scale of 1" = 50', including all structures, rights-of-way and easements affecting the property, and will be certified to all parties of interest. As a part of this task, an aerial photograph and photogrammetric map will be prepared to generate topographical location within the project area. The strip survey will generally be 40 to 50 feet in width, and include the ground for the trail alignments. The topographic survey will depict the surface elevations of the site in the form of contour lines having a change in elevation interval of 1-foot based on the existing USGS elevations established on site from previous surveys. The location and elevation of physical features, such as drainage structures, edge of pavement, tree lines, structures, and grade positions will be performed. In addition, underground utilities, sanitary sewer lines, and storm drainage piping will be mapped based on surface evidence, and previous surveys. A topographic drawing will be prepared in AutoCAD format. *Note: This scope of work does not anticipate Metro-North Rail Road flagger, escort, or access permit fees and are therefore not included within this proposal for survey services.*

**B.2 Geotechnical Investigation:** The Weston & Sampson team will conduct a geotechnical investigation of the project area for the purposes of providing needed information for the design of pavements, structure foundation, drainage structures, and retaining walls. Weston & Sampson will perform a series of test borings along the proposed trail alignment to determine depths of rock. Coring of the rock will be performed at selected locations where cuts are expected to extend below its surface. It is anticipated that 8 to 10 test borings will be completed at roughly 200 foot intervals. One boring will be located at the railroad level if permission to access this area can be obtained. Prior to test boring, the Weston & Sampson team will mark the boring locations and contact DIG SAFELY NY to "clear" utilities in the vicinity of each boring location.

Upon review of the geotechnical borings, and laboratory test results, Weston & Sampson will perform preliminary geotechnical analyses and provide a draft preliminary report for use by the project team. The geotechnical report will include a review of existing geologic information in the vicinity of the site, a review of information from the test boring program, a description of the field exploration program and laboratory testing, boring logs, geotechnical analyses of encountered soil and rock, and provide preliminary recommendations for appropriate boardwalk foundation types and design, trail design, pavements, retaining walls, slopes, and construction considerations based on subsurface information. We will document the draft preliminary findings in a brief letter report.

**B.3 Environmental/ Cultural Resources Review:** The Weston & Sampson team will complete a preliminary assessment of existing environmental and cultural resources in accordance with National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQR), including but not limited to Clean Water Act, Endangered Species, Stormwater, Cultural, and Historic Resource Considerations. Included within this task, the Weston & Sampson team will prepare a Wetland Delineation of Waters of the U.S. (wetlands subject to federal jurisdiction under Section 404 of the Clean Water Act), and wetlands subject to Article 24 of the New York State Environmental Conservation Law (if applicable). Waters of the U.S. include wetlands, intermittent streams, natural drainage courses, lakes, and ponds. Wetlands will be delineated and flagged using the routine level, on-site determination method. The delineated wetland boundaries will be located using hand-held sub-meter GPS. A resource review memorandum will be prepared identifying existing resources, and anticipated permits, reviews, and approvals from each of the resource agencies.

**Phase B Deliverables:**

- Survey data and base mapping, with 1-ft contours at 1"=20'

- Geotechnical report
- Environmental/ Cultural Resources Memorandum with Wetland Delineation Summary

**Phase C – Preliminary Design & Public Involvement**

**C.1 Preliminary Design (60%)** Once the field investigations, and environmental documentation has been completed, the Weston & Sampson team will develop preliminary plans for the project. The Weston & Sampson team will conduct an engineering design effort that will include the following steps:

- Preliminary design of horizontal and vertical alignments of the pathway
- Typical sections for pathway improvements
- Pathway plan sheets will generally include the following:
  - Location of the proposed path/sidewalk
  - Location of fencing, and cameras (type, size, and height) or other security measures required by Metro-North or NYS Bridge Authority.
  - Location of curb and gutter
  - Location of crosswalks
  - Location and limits of structures (retaining walls, bridges, boardwalks)
  - Erosion and sediment control design
  - Signing and pavement marking
- Preliminary Opinion of Probable Cost

The plan package within this set will generally include the following type and quantity of sheets:

Sheet Title

Cover Sheet

Typical Details &amp; Sections

Cross Sections

Pathway Plan &amp; Profile

Structural Plan &amp; Profile

Erosion &amp; Sediment Control Plans &amp; Details

Signs &amp; Pavement Markings Plans &amp; Details

Construction Signage/ Maintenance of Traffic Plan

**C.2 Public Hearing/ Meeting:** The Weston & Sampson team will facilitate up to one (1) public meeting to update abutters and other interested parties on the project status and to get input on other issues that will be considered during the design process. This scope of work assumes that the Client will prepare and mail a notice of the meeting to the abutters. In addition, the Client will be responsible for advertising the meeting in local media. Decisions made during this meeting will be documented by Weston & Sampson and issued to the attendees at the conclusion of the meeting.

**Phase C Deliverables:**

- Preliminary Design Plans for Pathway and Structures.
- Preliminary Opinion of Probable Construction Cost
- Preliminary Design Review Meeting
- Public Hearing Meeting Minutes

**This scope of work assumes the following information to be completed or provided by Client**

- Title Information
- Property owner meetings (individual or group meetings)

**ADDITIONAL SERVICES**

The following services are not included in the scope of services, but can be provided as additional services if authorized by the Client. Compensation for additional services will be agreed to prior to their performance:

- Property owner meetings, Public notice/ adjoining landowner notifications of the upcoming field work for this project prior to field investigations.
- Additional topographic/ land survey, subsurface utility survey, and right-of-way/ easement platting.
- Additional geotechnical investigations
- Final Design Documents/ specifications manual (i.e., contract terms, insurance requirements, and bid forms, etc.).
- Construction phase services
- Additional archaeological investigations/curation
- FEMA Floodplain, Floodway, Hydraulic & Hydrology studies and mitigation design.
- Attendance at meetings, presentations, or coordination in addition to those described.
- Additional design reviews or submission not identified above.

### **SCHEDULE**

Weston & Sampson will provide our services as expeditiously as practicable to meet the schedule mutually agreed to by the Client and Weston & Sampson for the various elements of this project. It is anticipated that we can provide our services by November 15<sup>th</sup>, 2018, predicated upon the weather, timely review by the Client and other appropriate parties of findings, conclusions, and recommendations. It is assumed that the schedule will be refined as necessary at the project kick-off meeting.

### **FEE AND BILLING**

Weston & Sampson will perform the scope of services on a Lump Sum Fee, as outlined below. Fees will be invoiced monthly based upon the percentage of services performed as of the invoice date. Direct reimbursable expenses such as express delivery services and other direct expenses will be billed at cost. All permitting, application, and similar project fees will be paid directly by the Client. Payment will be due in accordance with our agreement.

We propose to perform the next phase of the project for the fee breakdown indicated below

Phase A – Project Management	\$ 3,000.00
Phase B – Field Investigations	\$ 34,740.00
Phase C – Preliminary Design & Public Involvement	\$ 40,560.00
Reimbursable Expenses	\$ 1,200.00
Total:	\$ 79,500.00

Note: Field survey and drilling crews will receive NYS Prevailing Wage rates, with all field work planned for normal work hours Monday through Friday between 7 am and 5 pm.

### **CLOSURE**

In addition to the matters set forth herein, this project will be subject to, and only to, the terms and conditions in the mutually agreed upon Agreement with the Client.

Thank you for the opportunity to provide our services to you for this unique project. Please contact us if you have any questions.