

April 28, 2021

Mayor David McFadden  
Village of Tuxedo Park  
80 Lorillard  
Tuxedo Park, NY 10987

Re: **Proposal for Engineering Services  
Storm System GPS Location and GIS Update Support**

Dear Mr. McFadden:

Weston & Sampson, PE, LS, LA, PC (Weston & Sampson) is pleased to submit to the Village of Tuxedo Park (Village) this proposal to provide engineering services related to GPS locating of existing stormwater assets within the Village and updating the Village's GIS mapping with stormwater system information. As a full-service firm with over 120 years of municipal consulting experience, including a dedicated GIS department, Weston & Sampson has the expertise and resources to provide efficient, cost-effective services for this project. Weston & Sampson is committed to provide you with high-quality service in support of your project. We are excited about the opportunity to collaborate with the Village on this important project.

### **PROJECT UNDERSTANDING:**

The Village owns and operates a water treatment and distribution system, wastewater collection system, and storm drainage facilities. With the assistance of Weston & Sampson, the Village maintains their infrastructure mapping using ERSI GIS software. The Village is requesting assistance in further developing their GIS mapping by GPS locating stormwater assets that have not already been mapped and importing the data to supplement their existing information. The Village has requested that Weston & Sampson focus on stormwater components within areas of close proximity to sanitary sewers and areas prone to flooding to address inflow issues within the sanitary sewer and residential flooding during large rain events. An important aspect to this project is to confirm connectivity of existing stormwater catch basins and drainage manholes. Our proposal assumes that the Village's Department of Public Works locate these structures within the target areas and clean and confirm connectivity through use of a hydraulic jetter or other means. The intent is for the drainage system configuration to be known prior to our crew's arrival to maximize the value of this contract.

It is our understanding that the Village is not interested obtaining rim elevations or inverts at this time but would like to include some basic pipe data such as diameter and pipe material. Weston & Sampson has past experience using GPS units within the Village and we understand that connection to satellites can be challenging at times within some locations. While some areas are prime for handheld GPS units, others will require the use of a two-man robotic Total Station where satellite signal is unable to be obtained. Therefore, Weston & Sampson is pleased to present the following Scope of Services:

### **SCOPE OF SERVICES:**

**Task 1: Field Data Collection and Post Processing:** The locations of stormwater assets (manholes, catch basins, inlets, outlets) will be collected in the field using a single-manned LeicaGS-14 and GS-16 Survey-grade Global Positioning System (GPS) unit within areas that satellite connections can be obtained, and Robotic Total Station equipment operated by a two-man team for areas that satellite connections cannot be obtained. This GPS unit will provide consistent sub-meter accuracy on the horizontal plane and can use real time kinematic (RTK) corrections for in-field assessments of accuracy. Vertical elevation information is not requested at this time. Following collection, the GPS points will be downloaded, post-processed, and separated into feature classes for storm sewer features.

The cost for this work which includes mobilization, field data collection, and post processing obtained data into shape files will be billed on a day rate per person basis. Below is an outline of technical assumptions and exclusions to capture when gathering GPS data, for the first run and will be modified as needed:

- No traffic control is anticipated.
- WSE staff will not open any gas valves covers or electrical manholes.
- Offset to structures with obstacles such as vehicles is acceptable.
- Inverting and/or investigating of storm and sanitary structures is not anticipated. We will indicate weather open grate storm basins require cleaning.
- Location of utility mark-outs is not included or anticipated.
- Location of power or communication manholes is not included or anticipated.
- Access to any locked structures will be arranged by the Village.
- Access to private property, if required, will be arranged by the Village.
- Village DPW will pre-determine connectivity of the storm system and the GIS maps will be updated based on DPW reporting. Additional verification will not be provided as part of this proposal.
- Real-Time-Kinetic (RTK) GPS methods will be available to establish control.
- Site is free and clear of snow and ice that may hinder the visibility of ground features and utilities.
- Horizontal datum will be NAD83 (New York state plane coordinate system).
- Vertical data is not included or anticipated in this proposal.
- Anything not specifically identified in the scope is excluded.

### Task 2: GIS System Updates

GPS data coordinates for stormwater assets will be post processed and added into the Village's existing GIS database which is maintained by Weston & Sampson. Weston & Sampson will then provide the Village with an updated .pmf file for their use in an effort to document and keep current the Village's infrastructure. The .pmf file will be accessible through the Village's ArcReader Software installed on its computers. This task will be billed as a lump sum.

### FEE SCHEDULE:

Since the quantity of stormwater assets is unknown, this proposal is constructed in a day rate format with a contract upset limit. Provided below is a summary of our proposed fee structure for engineering services for your project. The total lump sum and daily rate costs include expenses and anticipated direct costs for completing the work as described. We have provided a conservative estimate for anticipated production and the Village will only be billed on days used as part of this assignment. Our proposed fees are summarized in the table below.

Project Task	Task Fee	Est. Days	Budgetary Estimate
Task 1a: GPS 1 – Man Crew and Post Processing (Daily Rate, Per Person)	\$1,500	7	\$10,500
Task 1b: Robotic Total Station 2- man crew (Daily Rate)	\$2,500	3	\$7,500
Task 2: GIS System Updates (Lump Sum)	\$2,300	N/A	\$2,300
Estimated Total Fee			\$20,300

### PAYMENT

Weston & Sampson understands the following:

- Tasks 1a & 1b will be invoiced on a day rate/per person or crew basis.
- Project compensation will be invoiced on the basis of percent completion for lump sum tasks.
- Billing rates used will be in accordance with our approved on-call contract with the Village.

**PERFORMANCE SCHEDULE:**

Weston & Sampson is prepared to proceed with work immediately upon receipt of written notice to proceed. We a minimum of 48-hours' notice for requesting field work so we can plan accordingly. Weston & Sampson will provide the .pmf files within 14 days of the completion of the entire field assignment.

**ADDITIONAL TERMS AND CONDITIONS:**

Weston & Sampson proposes to perform the work in accordance with our existing On-Call Agreement. We are pleased to submit this offering and look forward to working with you on this project. To accept this proposal, please sign below. Once signed, return a copy of each to this office. Please feel free to call me if you have any questions.

Very truly yours,  
**Weston & Sampson PE, LS, LA, PC**



Joseph M. Zongol, PE  
Associate/Team Leader

ACCEPTED FOR: **Village of Tuxedo Park**

Accepted by: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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