

March 20, 2025

Deanna Stockton, Deputy Administrator/Municipal Engineer  
Municipality of Princeton, NJ  
400 Witherspoon Street  
Princeton, NJ 08540

**Re: Municipality of Princeton  
Scope of Services & Cost Proposal for MS4 GIS Mapping and GPS Support  
Services  
M2025**

Dear Ms. Stockton,

**REMINGTON & VERNICK ENGINEERS (RVE)** is pleased to provide the following scope of services and associated cost proposal to complete the GIS mapping of remaining outstanding stormwater infrastructure for MS4 compliance and publish the GIS data on Princeton's existing ArcGIS Online (AGOL) account.

Our proposed services include the following major work items:

- Complete the GIS mapping of remaining outstanding stormwater infrastructure for NJDEP MS4 permit compliance.
- Assist in coordinating with Princeton to obtain missing required stormwater attribute information required for NJDEP MS4 compliance that was not able to be obtained through the existing documents, files, or imagery.
- Provide as needed GPS data collection support to field locate any missing assets if needed.

All work will be performed in accordance with the current NJDEP GIS Mapping and Digital Data Standards and the NJDEP GPS Data Collection Standards for GIS Data Development, including FGDC compliant metadata.

The following three (3) phased approach will be utilized for the professional services associated with the project.

**PHASE I: COMPLETE GIS MAPPING**

RVE will map the remaining stormwater system features required by NJDEP for the MS4 permit submission utilizing the existing documents provided by the Municipality of Princeton from the Alchemy and Foveonics datasets along with provided CADD files.

We will populate the attribute table with the information required to meet the NJDEP MS4 electronic submission per the agreed upon schema.

Any additional as-builts and documents provided will be geo-referenced against aerial imagery to establish further associations and increase positional accuracy.

## **PHASE II: FIELD COLLECTION OF MISSING INFORMATION AND ASSETS**

RVE will assist with the Municipality to collect any missing assets and information needed for the NJDEP MS4 digital submission. RVE will provide services for the GPS locating of assets which need where unable to map from existing documents and imagery.

The Municipality will provide RVE with information regarding already mapped assets that are missing the required information not obtained through the existing documents, files, and imagery. This information includes, but is not limited to the following required attributes by NJDEP:

- Outfalls
  - Outfall Type
    - Open Channel
    - Pipe
    - Other
  - Receiving Surface Water Body Name
- Ground Water Discharge
  - Type
    - Constructed Infiltration (BMP)
    - Overland Flow Area
    - Other
- MS4 Interconnect
  - Interconnect Type
    - Pipe
    - Open Conveyance
    - Other
  - Upstream Entity
  - Downstream Entity
- Inlet
  - Inlet Type
    - Type A (Single Grate Inlet)
    - Type B/C (Combination Inlet)
    - Type D (Barrier Curb Combination Inlet)
    - Type E (Dual Grate Inlet)
    - Curb Cut
    - Trench Drain
    - Other
    - Unknown
  - Catch Basin Present
    - Yes
    - No
  - Inlet Labeled (Drains to Waterway)

- Yes
    - No
  - Curb Opening Retrofit Plate Present
    - Yes
    - No
    - N/A
- Conveyance
  - Conveyance Type
    - Pipe
    - Open Channel
    - Other
  - Direction of Flow (Derived in GIS)
- Manhole (no attributes required)
- Stormwater Pump Station (no attributes required)
- Stormwater Facility
  - Facility Type
    - Bioretention System
    - Blue Roof
    - Cistern
    - Constructed Wetlands
    - Dry Well
    - Extended Detention Basin
    - Grass Swale
    - Green Roof
    - Infiltration Basin
    - Manufactured Treatment Device (MTD)
    - Pervious Paving
    - Sand Filter
    - Small Scale Bioretention
    - Small Scale Infiltration
    - Small Scale Sand Filter
    - Subsurface Detention System
    - Subsurface Gravel Wetland
    - Subsurface Infiltration System
    - Vegetative Filter Strip
    - Wet Pond

This phase assumes the Municipality will provide the required attributes listed above, with RVE only providing GPS services as needed.

### **PHASE III: NJDEP MS4 SUBMISSION**

This Phase includes preparing and submitting the MS4 GIS data to NJDEP for the MS4 permit. The work completed under this phase will include:

- Exporting the required features and attribute subset into an Esri File Geodatabase, as NJDEP will only be receiving the features and attribute information which they require for submission.
- Creating required FGDC metadata for the feature classes.
- Submitting the completed GIS data to NJDEP on behalf of the Municipality of Princeton.
- Addressing any feedback, questions/comments, from NJDEP.

After the data has been submitted to NJDEP and approved, RVE will upload the current state of the Princeton stormwater system to Princeton’s AGOL for Princeton to view and use. This uploaded stormwater system will be the entire system including the additional features and attributes which were not required by NJDEP but requested by the Municipality.

**All survey field collection services and GIS utility mapping work needs to be completed under the auspices of our NJ Professional Licensed Land Surveyor and in accordance with the current State regulations and standards for the “Locations of Existing Utilities” statutes, NJSA 45:8-28(e); NJAC 13:40-1.3; NJAC 13:40-5.1(g)4, as well as the NJ Digital Mapping Computer Aided Drafting (CAD) Standards and comply with any of the WWU applicable standards and requirements.**

**UNDERSTANDING & SPECIFIC EXCLUSIONS**

The following work items are specifically excluded:

- RVE will not provide field verification of attributes alone, unless otherwise directed by the Municipality.
- GIS mapping layers beyond the limits of the areas outlined under Phase I.
- Additional services related to GIS mapping not otherwise specified in the scope of services & cost proposal herein.

If unforeseen and/or unanticipated work items arise, our office can provide a separate scope of services & cost proposal for consideration and approval by the Municipality.

**COST OF SERVICES:**

Our work efforts associated with the project will be performed on a time & material basis, not to exceed **\$123,500.00** for Phases I through III, including optional services cost(s).

The following is a summary of our time & material, not to exceed cost(s):

Phase I: Complete GIS Mapping:	\$ 96,500.00
Phase II: Field Collection of Missing Information and Assets:	\$ 22,500.00
Phase III: NJDEP MS4 Submission:	\$ 4,500.00
<b>Total Professional Services Cost(s):</b>	<b>\$ 123,500.00</b>

We are prepared to begin work immediately on this project upon receipt of formal authorization to commence work.

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*Municipality of Princeton*

*Scope of Services & Cost Proposal for GIS Coordination, Mapping and Support Services  
M2025*

If you have any questions, please contact Kevin R. Zelinsky in our Cherry Hill office at (856) 795 9595, extension 1064, or via e-mail at [Kevin.Zelinsky@rve.com](mailto:Kevin.Zelinsky@rve.com).

We look forward to working with you on this important project.

Sincerely,

**REMINGTON & VERNICK ENGINEERS, INC.**

Kevin R. Zelinsky, GISP, CMS, Senior Associate  
Tax Map/GIS/CADD Manager

KRZ/clj

cc: James J. Purcell, PE, PMP, Assistant Municipal Engineer

**Remington & Vernick Engineers Distribution List**

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