

December 20, 2022

Town of Dewey Beach

Mr. Bill Zolper, Town Manager
105 Rodney Avenue
Dewey Beach, DE 19971

Re: Phase 2-GIS Stormwater Infrastructure Management Mapping Database for the Town of Dewey Beach M2022

Dear Mr. Zolper:

Remington & Vernick Engineers (RVE) is pleased to present this proposal for the work (the “Work”) to provide the second phase of GIS Stormwater Infrastructure Mapping for the Town of Dewey Beach based on available existing information and GPS field location and data collection. The Town is interested in continuing their GIS Stormwater Infrastructure Management Mapping Database in accordance with State guidelines utilizing the latest Esri ArcGIS software applications and GIS grade GPS data collection.

BACKGROUND

RVE understands it would be in the Town’s best interest to continue to determine the current condition of the stormwater infrastructure before spending funds to address isolated problems areas. We also understand that Dewey Beach, Delaware is interested in performing the following task items:

- Task One: to identify and map the existing stormwater management facilities within a specified area of the town utilizing AutoCAD and Esri software applications and then creating into a GIS geodatabase.
- Task Two: Land Surveying and GPS Data Collection Support Services, if and where directed and needed.
- Task Three: to use televising pipe to trouble shoot an area where water is collecting and not draining properly, if and where directed and needed.
- Task Four: GIS Hosting Services/Provide Annual Maintenance of the GIS Stormwater Infrastructure Management Mapping Database.

The Town’s specific area of concern for this second phase of stormwater infrastructure mapping project is Rodney Avenue, Dickinson Avenue, Van Dyke Avenue, Collins Avenue and Anchor Way from the Coastal Highway (State Route 1) to the Rehoboth Bay. The Town desires to verify and map the stormwater pipes and the structures, including any outfalls. This area would be designated as the remaining bayside “pilot area” for review by the Town of Dewey Beach.

The Town’s goal is to continue mapping its stormwater infrastructure by obtaining any available base data for the existing stormwater management system in Dewey Beach. We need to be provided access to any existing stormwater drawings both electronic and hard copy formats.

RVE already has the phase 1 portion of the existing MS4 Storm Water Study mapping, in an Esri ArcGIS geodatabase file format with the stormwater information documented. We also have Zone Designations,

Land Use Designations and Downtown Business Districts in an Esri ArcGIS file format. We will use these resources as reference for this project.

RVE will maintain the Dewey Beach GIS (**G**eographic **I**nformation **S**ystem) data base to keep track of the condition of stormwater management system and other public works, economic development, and planning map services that RVE offers. This way Dewey Beach can take advantage of local, County, State and Federal digital data now and in the future.

The following scope of work includes the cost to inventory of Dewey Beach's stormwater infrastructure mapping for Phase 2.

SCOPE OF SERVICES

Remington & Vernick Engineers will perform the following phased scope of services outlined herein for the completion of this project.

RVE will develop and compile an inventory of all the stormwater assets, such as but not limited, to storm manholes, inlets and catch basins, outfalls using the latest Esri ArcGIS software applications, that are currently owned and maintained by the Town of Dewey Beach within the specified area of concern.

TASK ONE

A. Inventory and Compilation of Existing Data

RVE will complete a GIS base map foundation showing streets, roads, railroads, waterways and general parcel data. The new digital parcel map will serve as the foundation for the Town of Dewey Beach to be utilized as the layered base for the GIS Stormwater Infrastructure Mapping Database. RVE will also provide all available digital data from State, County and local offices be integrated with the Town's available hardcopy data as the initial foundation. The following new/current data will need to be provided/collected for the Town of Dewey Beach prior to the commencement of this project:

- Digital/hardcopy drawings, as-builts, sketches and plans of stormwater infrastructure facilities and service/franchise areas in the Town of Dewey Beach (see Item B, below)
- Existing numbering convention(s) for any/all infrastructure facilities as an Access database, (if available)
- Any/all digital mapping data, as available
- Database file containing the x/y locations of assets in the Town of Dewey Beach Public Works Department, (if available)
- Any/all tabular data regarding the wastewater infrastructure facilities in the Town of Dewey Beach Public Works Department (i.e., manufacturer information, installation date, pipe size/type, flow direction, condition, etc.)
- Any/all digital videos, photographs, shop drawings, inspection/maintenance reports and/or other data to be scanned and linked to the GIS Stormwater Infrastructure Mapping Database

RVE will contact the following agencies to obtain digital GIS data to be integrated into this project:

- ◆ Any/all Agency, Municipal GIS resource data available through data sharing agreement contracts (both electronic and hard copy)

- ◆ The Delaware Department of Natural Resources and Environmental Control
- ◆ The Delaware Department of Transportation (DELDOT)
- ◆ Sussex County [Department of Planning Services](#)
- ◆ Sussex County [Department of Public Works](#)
- ◆ Other State, County and regional organizations, as applicable
- ◆ USGS GIS Resource Data
- ◆ Nearmap Digital Aerial Orthophotography

A parcel-based foundation for the Dewey Beach GIS Stormwater Infrastructure Mapping Database will be based solely on the new digital parcel map(s) and any resource data outlined and created in GIS format utilizing the latest Autodesk AutoCAD Map and Esri ArcGIS software applications.

To georeference, or link, each infrastructure feature to its geographical location on the GIS Base Map, unique identification numbers must be assigned on a feature by feature basis. The unique identification numbers will also tie any associated tabular data to its appropriate infrastructure feature and location on the new map. The unique identification numbers will be based on the Town's existing numbering convention(s) for stormwater system infrastructure features.

B. Stormwater System GIS Mapping

The Town of Dewey Beach existing stormwater infrastructure system for Phase 2 contains approximately 43 structures and over 2,000 LF of storm sewer pipes within the specified Phase 2 area of concern, which is the focus area of this investigation for inclusion in the GIS Stormwater Infrastructure Mapping Database at this time.

The following stormwater system facilities will be mapped based on the existing hardcopy data, (if applicable):

- Storm manholes, inlets and catch basins, outfalls (rims/grates and structure identification numbers)
- Stormwater system pipes (size/type, slope, length, flow directions)
- Location of booster stations

RVE already has Phase 1 of the existing MS4 Storm Water Study mapping, in an Esri ArcGIS geodatabase file format with some stormwater information documented, which we will use as the foundation for this Geographic Information System (GIS) Digital Mapping Database. This database inventories the existing stormwater system structures, pipes, and facilities, spatially related to a base map for the Town of Dewey Beach within this area.

The existing digital mapping data will be checked for accuracy against the Town's available hardcopy as-built plans. Any/all missing as-built data will be digitally applied to the new GIS Infrastructure Map. By referencing this digital information when creating the new GIS Stormwater Infrastructure Mapping Database will save the Town some time and expense.

RVE will provide a copy of the GIS Stormwater Infrastructure Mapping Database in "draft" form to the Town of Dewey Beach for final review. Any minor changes or revisions requested by the Town will be applied to the GIS database at that time. The final draft of the new map will be based upon this review

process and will be considered complete and ready for delivery once any requested changes have been made.

The following final deliverables will be provided upon completion of the GIS Stormwater Infrastructure Mapping Database:

- One (1) 36" x 48" copy of the GIS Stormwater Infrastructure Mapping Database, in color on bond paper
- RVE One Drive link access containing a copy of the GIS mapping database file and FGDC compliant metadata
- RVE One Drive link access containing a printable PDF copy of the GIS Stormwater Infrastructure Mapping Database
- RVE ArcGIS Online link of the GIS Stormwater Infrastructure Mapping Database of Dewey Beach

TASK TWO

A. Land Surveying and GPS Data Collection Support Services

The estimated completion cost for Land Surveying and GPS Data Collection support, if and where directed (see below):

(Field survey work may be required and/or requested by the Town of Dewey Beach for support and to verify/data collect any missing/obscured assets, if and where directed, as needed. We can provide a two-person field crew and any additional survey crew field work will be performed solely at the direction of the Town of Dewey Beach for an additional per diem fee of \$1,900.00. A two-person survey field crew includes coordination at start-up, necessary research, office support, set-up, downloads and computations and travel for this project).

TASK THREE

A. Televising Pipe Work (See Map Enclosed)

The cost estimate pricing for televising pipe is provided by Standard Pipe Services, LLC. and this is the typical pricing breakdown for the DeIDOT Sinkhole Contract. This is work pertaining to the existing storm sewer within the Town of Dewey Beach specified area of concern. We can assume 600 – 800 feet per day that can be cleaned and televised. (See "Proposal of Work" from Standard Pipe Services-SPS attached).

Given this is Dewey Beach and the work would be taking place in areas fairly close to each other along with no-prevailing wages, it's safe to assume a cost reduction of 25%

ASSUMPTIONS AND EXCEPTIONS

1. RVE understands that this proposal is limited exclusively to the Scope of Services described herein and anything not expressly described shall be considered expressly excluded from the Work.

2. Once the database has been established, ownership will be transferred to the Town of Dewey Beach. Maintenance of the database is not included in this scope of services and if required will need to be determined under an additional scope of services.

ADDITIONAL WORK

Our experience indicates that certain additional items of work may be required or needed, which RVE cannot presently determine or estimate. For this reason the cost estimate for these items is not included in the provisions which follow under the cost of services. Furthermore, the performance of these items is not included in the Work unless the item is expressly described within the Scope of Work herein. These additional items of work (“Additional Work”) are generated by many factors, usually at the discretion of the Client. They may also be caused by reviewing agencies or client variance/deviation from present policies and standards of reviewing government agencies, (see “Assumptions and Exceptions” above). “Additional Work” may sometimes be referred to as extras, change orders, or add-ons, but for this Agreement all such descriptions are intended to be encompassed within the term Additional Work.

COST OF SERVICES

Based on the assumptions and exceptions as well as the current information available, RVE estimates the total fee associated with the performance of the work outlined above will be **\$44,970.00**. It is estimated that this Work will take approximately two (2) months to complete once Notice-To-Proceed has been issued by the Town of Dewey Beach and contingent on work schedules and weather conditions.

The total cost and time frame breakdown to complete the GIS Stormwater Infrastructure Management Mapping Database for the Town of Dewey Beach, as outlined above, is as follows:

- **Task One:** to identify and map the existing stormwater management facilities within the town utilizing AutoCAD and then converted into a GIS geodatabase using Esri software applications.
 - The estimated cost under Task One, will be **\$4,920.00**. It is estimated that this Task will take approximately two (2) weeks to complete.
- **Task Two:** Land Surveying and GPS Data Collection Support Services
 - The estimated cost under Task Two, will be **\$7,600.00 total (per diem fee of \$1,900.00 for 4 days total)**. It is estimated that this Task will take approximately one (1) week(s) to complete based on verifying/data collecting any missing/obscured assets, if and where directed, as needed by the Town of Dewey Beach.
- **Task Three:** to use televising pipe to trouble shoot areas where water is collecting and not draining properly. Televising pipe is also desired for this task
 - The estimated cost under Task Three, will be **\$32,450.00**. It is estimated that this Task will take approximately one (1) month to complete based on approximately 43 structures and over 2,000 LF of storm sewer pipe that is the focus area of the investigation for inclusion in the GIS Stormwater Infrastructure Mapping Database at this time, as needed, by the Town of Dewey Beach. (See “Proposal of Work” from Standard Pipe Services-SPS attached).

Additional map layers needed, which are not outlined within this proposal letter, can be proposed under a separate cover with hosting, maintenance and support included, upon request.

RVE's cost estimate for the Scope of Work herein will be based on the "Schedule of Hourly Rates 2023" (enclosed). The personnel classification listed will be multiplied by the number of hours worked by each respective person. There will be no markup for any direct expenses.

We trust the information provided meets your requirements for this project. Should you have any questions or require additional information, please do not hesitate to contact Kevin R. Zelinsky, GISP, CMS, Survey/GIS Department Manager and Senior Associate, (856) 795-9595, extension 1064. He may also be reached via e-mail at: Kevin.Zelinsky@rve.com to schedule a presentation for your review and consideration.

We look forward to assisting you with this very important project.

Sincerely,

REMINGTON & VERNICK ENGINEERS, INC.

Christopher J. Fazio, PE, CME, Executive Vice President

cc: Jim Dedes, Assistant Town Manager; Kelly Goff, PE, CFM; Sharon Marrasso, Project Analyst

SCHEDULE OF BILLABLE HOURLY RATES

2023

It has always been the firm's policy to encourage clients to contact our staff with questions or problems that need to be discussed. No fees are incurred each time the telephone is answered or a meeting is held on-site. Clients are free to discuss various projects without fear of incurring a consulting expense. Fees are all project-related, established at the initiation of the project or as the scope of the project can be defined. Prior to client authorization, a detailed proposal, including a scope of services, will be prepared for all Capital Projects. All proposals are subject to negotiation and approval.

ENGINEERING

Regional Engineer/Manager	\$175
Engineering Department Head	\$170
Certified Flood Plan Manager	\$149
Project Manager, LSRP	\$175
Project Manager/Engineer	\$163
Project Engineer	\$152
Engineer	\$149
Senior Engineering Technician	\$146
Engineering Technician	\$94
Technical Aide	\$64

PLANNING

Planning Manager	\$170
Project Planner	\$126
Senior Landscape Architect/Planner	\$146
Landscape Architect/Planner	\$126
Principal	\$180

Mileage Commensurate in accordance with IRS Regulations

CONSTRUCTION MANAGEMENT & OBSERVATION

CM & Observation Department Head	\$152
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Construction Management Personnel

Project Manager	\$132
Construction Manager	\$123

Observer Personnel

Observer Supervisor	\$152
Resident Observer NICET IV	\$132
Observer NICET II/III	\$126
Observer	\$123
Contract Administrator	\$123
NACE Certified Coating Inspector	\$150

SURVEY, CAD & GIS

Field Personnel

Surveyor	\$123
Party Chief	\$111
Transit/Rod Person	\$105
Robotic Crew	\$143

Office Personnel

Survey/CAD Department Head	\$140
Survey Manager	\$123
CAD/GIS Manager	\$140
Senior CAD/GIS Technician	\$123
CAD/GIS Technician	\$109