

**Resolution of the Demarest Governing Body**

**Resolution No. 169 -24**

**October 15, 2024**

<b>Council Member</b>	<b>Motion</b>	<b>Second</b>	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Jiang						✓
Fox		✓	✓			
Marks			✓			
Slowikowski			✓			
Reiss			✓			
Collins	✓		✓			

**TITLE: RESOLUTION AUTHORIZING ENGINEERING SERVICES FOR 2024 UNIMPROVED ROADS – PRESCOTT ST. & FOREST RD.**

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**WHEREAS**, the Borough of Demarest has a need for engineering design and bidding services related to FY2024 Paving of Unimproved Roads; and

**WHEREAS**, the Borough received a proposal dated August 9, 2024 from Colliers Engineering & Design to provide those services, attached, for the sum of \$59,750.00; and

**WHEREAS**, the appointment and the contract are exempted from the competitive bidding requirements of the Local Public Contracts Law, (NJSA 40A:11-1 et. Seq.) as "Professional Services", pursuant to NJSA 40A:11-5(1)(a); and

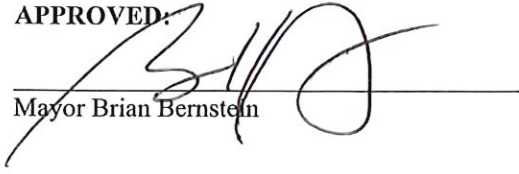
**WHEREAS**, the vendor is the currently appointed 2024 Borough Engineer for the Borough of Demarest and the Mayor and Council awarded said 2024 contract pursuant to the provisions of NJSA 19:44A-20.5; and

**WHEREAS**, the purchase was included in the 2024 Capital Budget pursuant to ordinance no. 1148-24; and

**WHEREAS**, the Chief Financial Officer has certified that funds are available in account C-04-2150-55-106-5007; and

**NOW THEREFORE, BE IT RESOLVED**, by the Borough of Demarest that the Borough Administrator is authorized to execute the agreement to authorize Colliers Engineering & Design to perform the work described herein not to exceed \$59,750.00 a copy of which is annexed to this Resolution.

**APPROVED:**



\_\_\_\_\_  
Mayor Brian Bernstein

**CERTIFICATION**

I, Julie Falkenstern, Acting Borough Clerk, of the Borough of Demarest, in the County of Bergen and the State of New Jersey, do hereby certify that the foregoing Resolution is a true copy of the original resolution duly passed and adopted by the Governing Body at the meeting on October 15, 2024



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Julie Falkenstern, Acting Borough Clerk

400 Valley Road  
Suite 304  
Mt. Arlington, NJ 07856  
Main: 877 627 3772



August 9, 2024

Julie Falkenstern, Borough Administrator  
Mayor and Council  
Borough of Demarest  
118 Serpentine Road  
Demarest, New Jersey 07627

Professional Design and Bidding Engineering Services  
2024 Unimproved Roads Project – Prescott Street & Forest Road  
Borough of Demarest, Bergen County  
Colliers Engineering & Design Proposal No.: DEB0067P

Dear Ms. Falkenstern,

Colliers Engineering & Design Inc. DBA Maser Consulting (CED) is pleased to present this agreement to provide survey, design and bidding services for the 2024 Unimproved Roads Project – Prescott Street & Forest Road. Specifically, the limits are:

- **Prescott Street** - from Lenox Avenue to the northern Terminus – approximately 225 linear feet; and
- **Forest Road** – from Hardenburgh Avenue to Orchard Road - approximately 450 linear feet.

It is our understanding that both streets are under the Borough's jurisdiction. It is also our understanding that these roadways are currently unimproved, consisting of compacted gravel driving surfaces, and are generally in poor condition. We have conducted an initial evaluation of both roadways to determine a general design approach needed to construct a full pavement section and improve the roads. CED will design both roadways with curbing and consistent roadway widths. New drainage infrastructure will be designed and installed to capture stormwater. Some minor re-grading of each roadway may be required to establish positive drainage along the curblines. A final evaluation will be conducted once survey is completed and the project is in the design phase.

Survey and Subsurface Utility Evaluation (SUE) will be performed within Prescott Street and Forest Road ROW so that CED can evaluate the existing conditions and design the new roadways with minimal disruption to existing infrastructure. In addition, any ponding or drainage issues due to low spots in existing grade elevation, failing infrastructure and/or lack of infrastructure can be identified and mitigated as part of the design. Furthermore, areas that require curbing and/or modification to the roadway grading can be designed with roadway profiles and cross sections. Accordingly, the improvements within both roadways will include drainage improvements, curbing, base repair, paving, striping, and restoration. It is our understanding that the Borough has budgeted approximately \$500,000.00 for construction and the project will be fully funded by the Borough.

CED will provide the following services:

## SCOPE OF SERVICES

### TASK 1.0 SURVEY SERVICES

#### Task 1.1 Partial Boundary Survey

CED will prepare a Partial Boundary Survey of Prescott Street and Forest Road, Borough of Demarest, Bergen County, State of NJ in accordance with the standards set forth in the Laws of the State of New Jersey Statutory Reference NJSA 45:8-28(e) and more specifically, the administrative rules and regulations promulgated by the State Board of Professional Engineers and Land Surveyors and contained in N.J.A.C. 13:40-5.1.

Included in this task of service are the following tasks:

- Public records research and pre-field records review;
- Field traverse, location survey and data collection;
- Field survey data reduction and computation;
- Boundary analysis and survey calculations.

The fee for this task is based upon the assumption that the deed mathematically closes, that there are no title problems, that there are no overlaps or gores with adjoining properties and that extraordinary research or analysis is not required. If any of the items cited in this paragraph do become issues during our survey efforts, we will discuss the necessary additional services and related costs with you prior to proceeding with the additional services.

#### Task 1.2 Topographic Survey

CED will perform a Topographic Survey of the subject areas. The limits of the survey are outlined in **red** as depicted in the two (2) Survey Limits images below:

## SURVEY LIMITS



Our office will prepare a topographic survey map that is a graphic pictorial representation of existing site features observed at the time of the field survey such as buildings, curbs, sidewalks, roadways, driveways, retaining walls, fences, individual trees four inches (4") in diameter and larger, and utility hardware. The topographic map will depict existing spot elevations and contours at a one-foot (1') contour interval. GPS surveying techniques will be used to control the survey with the resulting horizontal datum being New Jersey State Plane Coordinate System NAD83 and the vertical datum being North American Vertical Datum NAVD88.

Visible and accessible utilities and/or utility structures within the survey limits as described above will be surveyed and shown on the plan to include rim, grate and invert elevations. For the purposes of this contract, accessible utilities shall be defined as those utilities that are visible to the naked eye at ground level and are safely accessible by foot by CED field survey personnel without the need for additional safety measures and/or assistance with making pipes visible, open and clear for inspection and measuring.

We will survey the utility markout of our in-house subsurface utility engineers for services outlined in a separate task of this proposal.

Included in this task of service are the following tasks:

- Establish on-site survey control;
- Field traverse, topographic survey and data collection;
- Field measure inverts of accessible gravity structures;
- Field survey data reduction and computation;
- Preparation of topographic survey map in AutoCAD Civil 3D 2022 format.

Traffic safety protection for field survey crew and cleaning of clogged or obstructed drain and sewer structures is **not** included in the fee for this survey. If it is determined that safety protection is required for any of the survey services performed under this contract, we will advise you of the approximate cost prior to moving forward. Such additional cost would be invoiced as a reimbursable expense pursuant to prior authorization.

### Task 1.3 Utility Investigation and Mapping

CED proposes to provide the following professional Utility Investigation and Mapping Services in support of the above-named project in accordance with the project limits as indicated on the provided map and site sketch.

**Utility Records Research.** Conduct comprehensive utility records research and collect applicable utility owner records to assist in identifying utility owners that may have facilities on or be affected by the project. Includes interfacing with utility owners/operators to ascertain the availability and completeness of record documents and to obtain verbal or historical information on existing subsurface facilities and operational status. All utility records obtained through this process will be included as an attachment in the final deliverable.

**Buried Utility Mapping (Horizontal Mapping of Utilities).** Designating the presence and approximate horizontal location of subsurface utilities using geophysical prospecting techniques including electromagnetic, sonic and acoustical techniques. CED will provide the following designating services to aid the Client:

As a "Value-Added" service, to the extent possible, CED will provide electronic depth measurements at regular intervals along each designated subsurface facility. The electronic depth information will be recorded at approximate 25-foot intervals and shall be collected in the normal course of utility mapping. The collected electronic depth information will be incorporated into the project

deliverable (field sketch on aerial mapping) for the project from which utility profiles may be developed.

- Provide equipment, personnel and supplies needed for performing designating services. CED shall determine equipment, personnel and supplies needed to perform these services.
- Designate the existing underground utility pipeline facilities within the identified area as described in the Survey Limits map above. Conduct appropriate investigation of site conditions.
- Mark the horizontal position of underground utilities on the ground with spray paint to be surveyed by CED Survey team (fees for the survey are included in another Task). These utilities may include water, natural gas, electric, and telecommunications.
- Measure inverts and record data at all sanitary and storm drain structures including (but not limited to) manholes, inlets, catch basins, cleanouts. This information will be provided to the CED Survey team for inclusion in the final mapping. Sanitary and storm drain lines between structures will not be marked out.
- GPR data will be collected approximately every 50 feet of roadway to evaluate the pavement and sub-base thickness. The data will be post-processed and interpreted to determine the thickness of these materials within the project limits. This information will be included in the final deliverable.
- Formulate a field sketch on aerial mapping documenting all utilities designated with electronic depth information and notes. This will be provided to the CED Survey team who will be providing the final CAD deliverable.
- Coordinate with CED Survey team to ensure that the utility investigation results are accurately represented in their final deliverable.
- Aerial utilities are excluded from this Task.
- A final report detailing the results of the utility investigation will be provided within two (2) weeks of completion of field work. The report will include the investigation methodology and equipment used, along with a detailed summary of all the information obtained through the course of this work, including pipe sizes, materials, duct bank limits and any other pertinent information.

**GPR Assumptions/Clarifications.** GPR effectiveness and resolution is highly dependent on soil conditions within the investigation area. GPR's ability to identify or resolve subsurface anomalies may vary significantly across the investigation area. GPR resolution depths are soil dependent and can vary from zero feet (0') to eight feet (8') of penetration at infinite points across an investigation area. While GPR can be a very effective tool in locating or identifying subsurface objects or facilities (anomalies), the results are interpretive and subject to possible misinterpretation or error. SUE Provider personnel will make every reasonable effort to properly identify and interpret GPR anomalies in accordance with the performance limitations of the technology and provide recognizable markings for the Client.

**Provider Certifications.** The Utility Investigation Provider shall not be required to sign any documents, no matter by whom they may be requested, that would result in the Provider having to certify, guarantee or warrant the existence of conditions which the Provider cannot ascertain. The Client also agrees that it has no right to make the resolution of any dispute with the Provider or the payment of any amounts due to the Provider in any way contingent upon the SUE Provider signing any such certification.

## **TASK 2.0 DESIGN AND BIDDING**

CED will develop construction drawings and specifications to be utilized for public bid. Bid documents will be prepared in accordance with NJDOT requirements. The scope of improvements expressed in the bid documents will be as previously discussed with the Borough and coordinated during the design phase.

The existing site conditions will be investigated during the design; more specifically, the conditions of the curbing, sidewalk, driveway, roadway, and drainage structures. Utilizing the survey prepared in Task 1.0 above as a base map for both roadways, this information will be located, inspected for condition, and depicted on a plan that will be utilized for bidding.

The improvements will include the design of curbing along both sides of each roadway in an effort to achieve a uniform travel way width consistent with industry standards to the greatest extent feasible. A concept will be prepared and presented to the Borough to review the potential roadway widths and the impact of each. This concept will be reviewed with the Borough prior to preparation of the full design documents. Improvements will also include review of potential drainage issues toward mitigation. The installation of storm water infrastructure in the form of inlets and piping will be proposed. Runoff collected by the proposed infrastructure will be conveyed to the nearest existing infrastructure while maintaining existing drainage patterns to the greatest extent feasible. Roadway cross slopes, gutter slopes and longitudinal slopes will be evaluated, and grading will be designed, as feasible, to improve slopes and associated drainage. Where applicable, the vertical profile and cross sections of the proposed roadway will be modified in an effort to meet industry standards while minimizing drainage issues and impact to the surrounding properties.

Accordingly, for both roadways curbing, drainage structures, milling, paving, replacement of inlet grates and curb pieces, reconstruction of storm inlets to remain, pavement base repair as needed, striping, and restoration of landscape areas are included as part of the project. Based on a preliminary review of the roadways, ADA ramps are not anticipated as part of the project. In addition, modifications to gutter profiles may require re-design of certain driveway aprons. While tree removals and/or utility pole relocations are not anticipated based on a preliminary review, during design it may be necessary for us to recommend these removals/relocations to facilitate the proposed improvements. We will advise accordingly.

CED will prepare the base mapping, title sheet, general notes and legend, estimate of quantities, construction plans and the construction details. CED will also prepare the supplemental and technical specifications for the site improvement items that are specified on our construction drawings for incorporation into the overall bid specifications. The specifications will be prepared in



the latest NJDOT format, as amended. As this project develops, and the Construction Cost Estimate (CCE) is closer to completion during the design phase, the Borough will be updated with the status of design and whether alternate bids are recommended.

The project limits may be adjusted by utilizing alternate bids based upon the budget approved by the Borough. CED will prepare the CCE based on the quantity required for each alternate bid and finalize the design in order for the project to remain within the construction budget. Bidding services will be coordinated through our Mount Arlington office.

Specifications will be developed in accordance with NJDOT Standard Specifications for Road and Bridge Construction, as currently amended. An Engineer's Estimate will be prepared and submitted to the Borough. NJDOT Bureau of Local Aid along with an Engineer's Design Certification, plans, and specifications. Upon completion of the design documents, we will coordinate with the Borough regarding public advertisement of the bid documents.

#### **FEE AGREEMENT**

For your convenience, we have broken down the total estimated cost of the project into the categories identified within the Scope of Services.

TASK 1.0	SURVEY SERVICES	\$16,750.00
TASK 2.0	DESIGN AND BIDDING	\$43,000.00
<b>TOTAL LUMP SUM FEE</b>		<b>\$59,750.00</b>

The above engineering services will be provided on a lump sum basis not to exceed the listed amount. This contract and fee schedule are based upon the Borough Engineering Contract, authorized by the Borough. Please note, Construction Administration and Observation Services are not included in this agreement. A separate agreement for said services will be prepared and provided to the Borough upon opening of contractor bids.

#### **PROJECT SCHEDULE**

The following is the anticipated project schedule:

	<b>Anticipated Duration</b>
Mayor & Council Award of Professional Services	Anticipate Authorization August 2024
Survey and SUE Services	To be completed within 45 days of Authorization
Preparation of Design Plans and Specifications	To be completed within 120 days of Authorization
Bidding of Project	Anticipate 30 days for bidding process

Contractor Award	TBD
Construction (Anticipated)	TBD – Anticipate Spring 2025
Project Closeout (Anticipated)	To occur post construction – Anticipate Spring 2025

### **PROJECT DELIVERABLES**

During the design process, CED will provide the Borough with one (1) set of drawings for review during the design phase. Bid packages will be distributed and coordinated through our Mount Arlington office. Two (2) final bid documents will be provided prior to bidding.

### **PLAN REVISIONS AND EXTRA SERVICES**

Any revision requested by the Borough or review agencies that is a major redesign or not an error or omission on the part of CED will be billed on an hourly basis in accordance with our current contract. Please note that a separate agreement will be provided prior to the pre-construction meeting specific to Construction Administration Services.

### **REIMBURSABLE EXPENSES**

Reimbursable expenses including delivery, printing, copying, postage, and other reproducible costs for the above-mentioned deliverables are included within this agreement and are included in the project cost.

### **EXCLUSIONS**

Services relating to the following items are not anticipated for the project or cannot be quantified at this time. Therefore, any service associated with the following items is specifically excluded from the scope of professional services within this agreement.

- Services not specifically outlined above;
- Modifications of or additions to the completed survey map after it has been distributed. If additional survey requirements or other form of survey certification is requested, a separate fee will be negotiated for performing such service;
- Roadway Cross Sections;
- Stream Cross Sections;
- Property title search;
- Traffic studies and/or analyses;
- Ecological due diligence;
- Permit submissions other than Soil Conservation District;
- Construction stakeout services;
- Wetland delineation, reports or surveys;
- Tree Location Plan and/or surveys;
- Subdivision or Consolidation Plans and/or Parcel Maps;

- Security clearance and/or site access protocol.

If any item listed herein, or otherwise not specifically mentioned within this agreement or the Borough Engineering Agreement, is deemed necessary, then CED may prepare an addendum to this agreement for your review, outlining the scope of additional services and associated professional fees with regard to the extra work. Unanticipated additional services shall be in accordance with the Schedule of Hourly Rates for the number of hours that the Construction Administrator or Engineer is on-site. No extra engineering services will be performed without authorization from the Borough.

Please forward a copy of the Resolution of Approval or approved Purchase Order to this office. This will constitute approval of the proposed services and we shall initiate the engineering design services as discussed within this correspondence.

We thank you very much for the opportunity to offer our services and look forward to working with you on this and future projects. In the meantime, should you have any questions regarding this agreement, please feel free to contact me.

Sincerely,

Colliers Engineering & Design



Nick Chelius, P.E.  
Borough Engineer Representative



Jamie Giurintano, P.E.  
Geographic Discipline Leader

cc: Michael Greco, Deputy Borough Clerk (via email)  
Deena Rosendahl, Esq. Borough Attorney (via email)  
Peter Suh, Borough CFO (via email)  
Patrick Jamieson, (CED via email)  
James Priolo, PE (CED via email)