

January 19th, 2023

Ms. June Hamal
Project Engineer
Augusta Engineering Department
452 Walker Street, Suite 110
Augusta, Georgia, 30901



**Re: *Proposal for Construction Materials Testing & Construction Management Services
Greene Street Improvements from 5th Street to E. Boundary Street (Phase 1)***

Dear Ms. Hamal:

Pursuant to your email request on January 10th, Matrix Engineering Group, Inc. {MATRIX} is pleased to submit our proposal for the provisions of Construction Materials Testing Services for the Greene Street Improvements project from 5th Street to E. Boundary Street. Based on the total schedule of 540 actual days (estimate 385 works days), and the construction drawings that were provided, Matrix will perform the materials testing services for a total estimated fee of **Two Hundred & Forty-Two Thousand, Seven Hundred and Thirty-Five Dollars (\$242,735)** and perform Construction Management services on both projects for an estimated total fee of **One Hundred Forty-One Thousand, Six Hundred and Eighty Dollars (\$141,680).**

Matrix inspectors utilize a proprietary, cloud-based reporting, scheduling, and document management system {*Matrix | Sequence*}, that connects the construction team to the project's Schedule of Special Inspections (SSI). This robust tool uniquely synchronizes the entire construction team on our findings including a dynamic open item record that gives a barometer of the status of the various inspections. Our staff also leverages *Filio*, a cutting edge, geospatial photo management software that captures and geo-tags photographs which document the inspected activities. Through machine learning and artificial intelligence, the photographs are searchable by date and type of activity or observation.

We appreciate the opportunity to submit this proposal and look forward to providing the testing services on these important and exciting projects.

Sincerely,

MATRIX ENGINEERING GROUP, INC.

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INTRODUCTION

This proposal is presented for the provisions of Construction Materials Testing Services and Construction Management for the Greene Street Improvements project from 5th Street to E. Boundary Street. Our scope includes preparing daily reports to document area of work and quantities, soils testing, reinforcing steel inspections, bearing capacity determination, GAB testing, asphalt documentation, subgrade evaluations, related laboratory testing and Professional Engineer consulting and recommendations.

SCOPE OF SERVICES

Our scope of services was developed to meet the testing requirements, as defined by the project specifications and GDOT specs and guidelines. The following sections detail our scope of services. The most cost-effective services will be achieved through our strategic allocation of experienced manpower, our quality approach to providing the required services, and our competitive rates.

CONSTRUCTION MATERIALS TESTING SERVICES

- Monitor and document progress of work on daily basis and schedule construction inspections as required by the project specifications
- Subgrade evaluation of existing materials: Proof-roll and/ bearing capacity evaluation
- Geotechnical Engineer to provide evaluation & recommendations for Stabilization, as needed
- Monitoring of over excavation and quantification
- Backfill monitoring and testing of structural fill
- Backfill monitoring and testing of pipe backfill on storm drain lines, water lines and site walls
- Subgrade inspections of finished grades for pavements and sidewalks on both sides of the roadway
- Concrete testing on sidewalks on both sides of the roadway (8' wide and 6' wide), and Curbs/Gutters, and structures.
- GAB Compaction testing and Proof-roll testing
- Asphalt Testing
- Laboratory testing
 - Soil Proctors tests
 - GAB Proctors
 - Asphalt testing
 - Concrete Testing
 - Gradations
- Professional Engineer for report review, consultation, site visits and recommendations

CONSTRUCTION MANAGEMENT / ADMINISTRATIVE SERVICES

- Review project drawings, specifications and contracted scope of work
- Review contacts, schedules, and quality control/quality assurance plans
- Manage pre-construction and progress meetings: Present agenda, scope, schedule and special conditions applicable to the project
- Review submittals, RFI's, and communicate with Project Stakeholders (Design / Owner / Contractor) regarding approvals, feedbacks and change orders in a timely manner
- Weekly meetings/conferences with the project stakeholders.
- Keep logs of Open and Corrected Items for follow-up with contractor on resolution to changes and/or corrective measures
- Engage Owner for items that require change in design and/or contract provisions.
- Review change orders and manage approval process
- Review monthly pay applications and resolve issues with contractor prior to approval for payment
- Assist in project closeout by reviewing punch list items with contractors and finalize documentation prior to project close out and release of retainage

COMPENSATION

The following table provides a breakdown of the costs associated with the requested inspection and testing services. It is anticipated that inspections will be required on a daily basis. In developing the following budget, we have taken into consideration the overlapping nature of the construction activities. Therefore, it is impractical to separate the costs of testing services for each individual task. We have estimated the testing budget based on the estimated construction schedule and the required inspection services. Any additional services that may be required will be based on the unit fees provided in the Schedule of Fees and upon your prior authorization. Matrix will perform the materials testing services for a total estimated fee of **Two Hundred & Forty-Two Thousand, Seven Hundred and Thirty-Five Dollars (\$242,735)**. We estimated a budget of **One Hundred & Forty-One Thousand, Six Hundred and Eighty Dollars (\$141,680) for this project as shown in Table 2, below.** The work will be billed on a monthly basis in accordance with our annual contract with the City of Augusta.

TABLE 1:
SCHEDULE OF FEES – CONSTRUCTION MATERIALS TESTING

DESCRIPTION OF SERVICES	QUANTITY X UNIT PRICE	COST (\$)
ITEM 1 – Senior Tech for Construction Materials Testing: <ul style="list-style-type: none"> Attendance of weekly site meetings Subgrade evaluations Soil Backfill monitoring Soil Backfill Compaction Testing Bearing Capacity Evaluations GAB Testing Nuclear Gauge Density testing Asphalt Temperature Determination 	4 hrs/day x 385 days x \$62*/hr	\$95,480.00
ITEM 2 – Staff Engineer & Professional Engineer: <ul style="list-style-type: none"> Staff Engineer for documentation of construction activities Geotechnical Engineer to provide evaluations and recommendations for stabilization Geotechnical Engineering Consultation & Recommendations PE for Report Review and Certification of Reports 	4 hrs/day x 385 days x \$85/hr 1 hr/wk x 77 weeks x \$115/hr	\$130,900.00 \$8,855.00
ITEM 3 – Laboratory Testing for Soils / Asphalt <ul style="list-style-type: none"> Soil Standard Proctors Gradations Atterberg Limits Asphalt Specific Gravity Testing 	LUMP SUM	\$2,500.00
ITEM 4 –Laboratory Testing for Concrete Cylinders <ul style="list-style-type: none"> Concrete Cylinder Pick-Ups & transportation to lab Compressive Strength Testing 	LUMP SUM	\$5,000.00
Estimated Maximum Fee:		\$ 242,735.00

**The total does not include costs associated with re-testing of areas that fail to meet the project specifications upon initial inspection, nor any additional assignments that are requested by the owner that are beyond the scope of work provided herein. All testing services are assumed to occur during regular work hours. Services exceeding 40 hours per week and work on weekends will be billed at 1.5 times the hourly rates listed above. Shop Visits are not included in this estimate.*

***Senior Technician rate is based on daily rate of \$496 divided by 8 hours*

TABLE 2:
SCHEDULE OF FEES – CONSTRUCTION MANAGEMENT SERVICES

DESCRIPTION OF SERVICES	QUANTITY X UNIT PRICE	COST (\$)
<u>Construction Management Services for Greene Street Improvements:</u>	77 weeks x 16 hrs/week x \$115/hour	\$141,680.00
Estimated Maximum Fee:		\$ 141,680.00

TABLE 3:

**CONSTRUCTION MATERIALS TESTING & CM SERVICES
FOR GREENE STREET IMPROVEMENTS**

DESCRIPTION OF SERVICES	COST (\$)
<u>Construction Materials Testing Services for Greene Street Improvements (Phase 1 from 5th Street to E. Boundary Street):</u>	\$242,735.00
<u>Construction Management Services for Greene Street Improvements (Phase 1 from 5th Street to E. Boundary Street):</u>	\$141,680.00
Estimated Maximum Fee:	\$ 384,415.00