



January 20, 2022

Mr. Teige Elliott  
Stormwater Utility Manager  
City of Sumter  
PO Box 1449  
Sumter, SC 29151

**RE: Proposal for Civil Engineering Services  
Lafayette Stormwater Improvements (Phases 1 - 4)  
City of Sumter, SC**

Dear Mr. Elliott:

AECOM Technical Services, Inc. (AECOM) is pleased to submit to the City of Sumter (Owner / Client) this proposal for civil engineering services related to the Lafayette Stormwater Improvements. AECOM proposes to complete the project as outlined in the enclosed Scope of Work and in accordance with the Master Services Agreement dated August 28, 2018.

If this Proposal is acceptable, please sign the letter in the space provided below and return a copy to Kevin Krick. If you have any questions, please contact Kevin Krick at (803) 254-4400 or [kevin.krick@aecom.com](mailto:kevin.krick@aecom.com).

Sincerely,

AECOM Technical Services

Gary Freeman, PE  
Vice President  
South Carolina Water Department Manager

cc: Kevin Krick, P.E., AECOM

Enclosure

This Agreement is accepted by the CITY OF SUMTER, this	
<u>28<sup>th</sup></u>	day of
<u>February</u>	2022.
By:	<u>Quinn Witzend</u>
Title:	<u>City Manager</u>

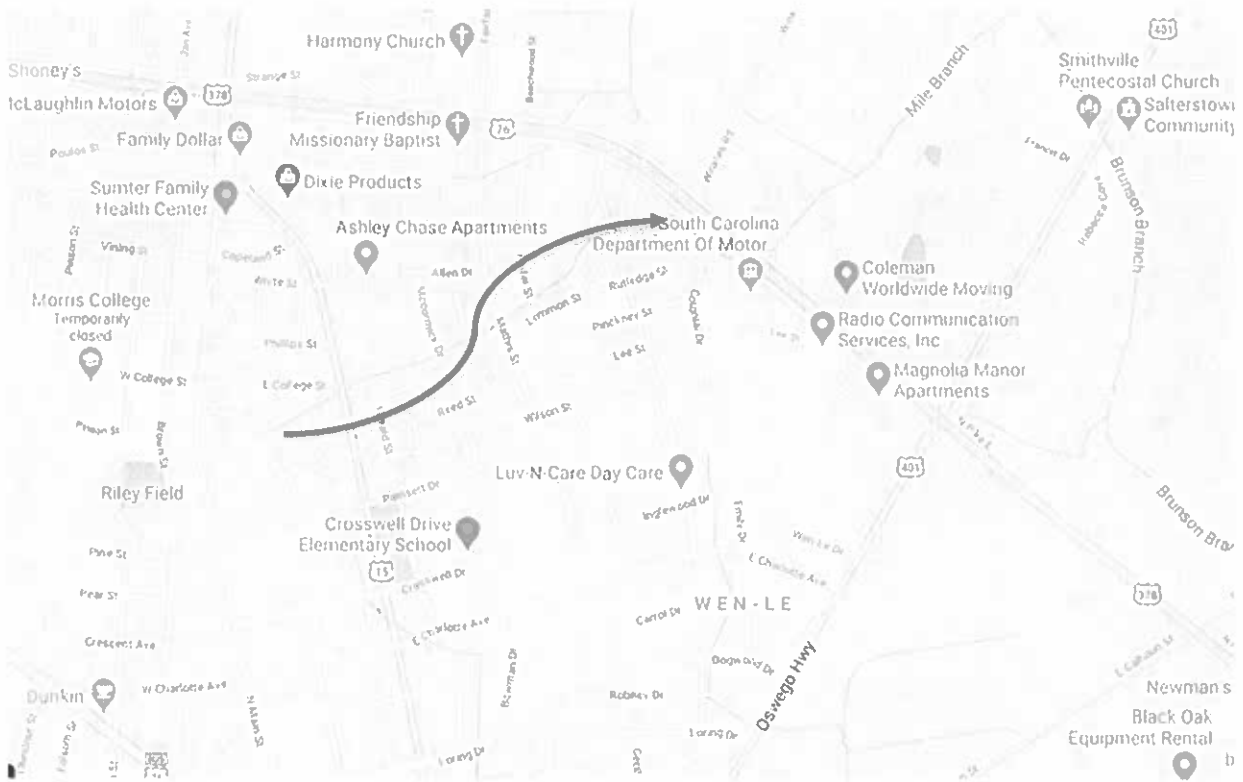
## SCOPE OF WORK Lafayette Stormwater Improvements City of Sumter

January 20, 2022

AECOM Technical Services, Inc. (AECOM) is pleased to submit to the City of Sumter (Owner / Client) this scope of work for engineering services related to the **Lafayette Stormwater Improvements**.

### Project History

The residential area along Mile Branch between Lafayette Drive and US Highway 76 floods on a regular interval due to urbanization. In addition, the outfall from this area is undersized. The proposed flood mitigation includes the design, permitting, and construction of a new stormwater conveyance system of approximately 3,900 linear feet in the area illustrated below.





## **Scope of Work**

AECOM is pleased to provide the following detailed scope of work to develop flood mitigation designs for the projects outlined above.

### **Task 1 – Field Work and Data Collection**

This task addresses the necessary activities to be undertaken by AECOM to complete the collection of base information for the purposes of the detailed stormwater design. AECOM will initiate a Public Utility Protection Service (PUPS) investigation to collect utility line information, including, but not limited to, water, sewer, electrical, fiber optic, gas, telephone, and cable. This information will then be collected as part of the topographic survey.

#### ***Topographic Survey***

AECOM will complete a topographic survey of the project area within the specific project limits. The survey will include previously marked utilities, aboveground features such as power poles, fire hydrants, etc., edge of pavements and driveways, existing stormwater ditches, and other pertinent infrastructure within the project areas. The following data will be collected as part of this site survey:

- Ground elevations at appropriate intervals to create a topographic surface to be used in design of stormwater improvements
- Location of aboveground and underground utilities
- Location of structures (fences, parking pads, edge of pavement, sidewalks patios, walkways, bridges, etc.)
- Location of drainage structures, including:
  - Inverts
  - Catch basins
  - Pipe type
  - Pipe diameter
- Location of building faces and structures
- Location of open ditches and stormwater channels

Should AECOM encounter catch basins with solid concrete tops, we assume that the City of Sumter will provide support staff and equipment to provide AECOM access to these structures to collect invert elevations and pipe size information on these structures within the project corridor.

Additionally, should any of the existing stormwater ditches or catch basins be located on private property, we assume the City will provide authorized access through coordination with the property owner. Boundary surveying of individual lots is not included in this scope of services. Should the City require boundary surveys for the acquisition of property, AECOM will negotiate a scope and fee at a later time.



### ***Site and Condition Assessment***

AECOM stormwater engineers will conduct a site visit to verify the elements of the survey, identify important drainage features, site constraints, and perform existing conditions evaluation of the drainage structure within the project area.

### **Task 2 – Engineering Design**

AECOM will develop detailed Construction Plans for the project. AECOM will provide the City with 50% and 100% plans suitable for permitting and construction bidding. AECOM will work closely with City staff throughout the design process to obtain input and recommendations with respect to the design. Final submittal will include plans and specifications suitable for bidding and construction and meeting the requirements of the City and permitting agencies having authority over the project.

### ***Project Meetings***

AECOM will conduct a Project Kick-off Meeting with City staff to review the scope of services and schedule. At this initial meeting, the team will review sub-tasks, project expectations and completion timeframes. The purpose of the kickoff will be to define timeframes and develop a comprehensive project schedule. This task also includes monthly progress meetings with the City throughout the design process and a final presentation of the construction documents to the team.

### ***Public Engagement***

AECOM will conduct a Public Meeting early in the design phase to solicit input regarding stormwater flooding in the project area. This information will be used to better calibrate the hydrology model and make better decisions during design. At the completion of the design phase, AECOM will conduct a second Public Meeting to present the design and explain the upcoming construction phase.

### ***Hydrologic/Hydraulic Analysis***

AECOM will perform a detailed Hydrologic and Hydraulic (H&H) Analysis of the stormwater designs to determine stormwater runoff rates for the 5, 10, 25, 50, and 100-year storm events. A detailed hydraulic analysis will then be utilized and incorporated to determine design flows and ditch and pipe network configurations for the modeled storm event. This information will be used to develop design parameters for proposed drainage improvements within the project area. The hydrologic/hydraulic analysis will also be the basis of design and submitted to the South Carolina Department of Health and Environmental Control (SCDHEC) and the South Carolina Department of Transportation (SCDOT) as part of the permitting process.

### ***Construction Plans***

AECOM will develop construction plans for the stormwater system improvements throughout the project areas. The construction plans are likely to include the following:

- **Cover Sheet** – This sheet will include the name of the project, location map, and other items required for permitting.
- **Existing Conditions** – This plan will be based upon the topographic survey to illustrate existing conditions of the project areas. The plan will show existing pavements, curbs, storm drain boxes, utility lines, etc.
- **Site Clearing and Demolition Plans** – These plans will be created to illustrate clearing limits, trees to be protected (if any), and any structures or utilities to be demolished, relocated, and/or removed.
- **Grading and Drainage Plans** – These plans will illustrate the existing and proposed grades of the stormwater drainage system, designed to allow positive drainage away from buildings and roadways. These plans will include detailed stormwater design for the open and closed drainage system which will convey runoff to their ultimate outfalls. These plans will include stormwater pipe profiles to minimize the potential for unexpected conflicts with existing utilities in the project area.
- **Erosion Control Plans** – These plans will illustrate erosion control features to minimize the potential for sediment migrating off-site. They will be prepared in accordance with SCDHEC requirements and include details of the Best Management Practices (BMPs) used, including grassing, silt fence, inlet protection, and temporary construction entrances/exits.
- **Details** – These sheets will illustrate the details necessary for the contractor to adequately construct the project and include items such as storm drainage pipe bedding, catch basins, detention pond outlet structures, pavement replacement details, etc.

### ***Project Manual and Technical Specifications***

AECOM will prepare a Project Manual that will include both procurement documents that bidder's must comply with and technical specifications outlining the materials to be used, construction methods and procedures, and quality standards to be followed. The Project Manual will be prepared in accordance with the City's procurement policies.

### ***Preliminary Construction Cost Estimates***

AECOM will prepare a Class 2 preliminary estimate of construction costs. This estimate will be based on our experience on similar projects, actual costs for projects recently bid, and on the specific quantities outlined in the construction plans. The preliminary estimate will be compared with the project budget to determine if the various phases of the project need to be adjusted or if value engineering options need to be considered prior to bidding.

## **Task 3 – Permitting**

AECOM will prepare the necessary permit application packages (including application forms, maps, and calculations) and submit them to the appropriate agencies. This will include stormwater calculations from the H&H Analysis to confirm that the proposed stormwater improvements have adequate capacity to minimize the potential for both upstream and downstream flooding. Additionally, we will prepare a Stormwater Pollution Prevention Plan (SWPPP) describing the implementation of best management practices which will be used to reduce pollutants in the stormwater discharge during construction.

At this time, we are aware of the following permits that will be required:

- South Carolina Department of Health and Environmental Control (SCDHEC) – Stormwater / Land Disturbance Approval
- South Carolina Department of Transportation (SCDOT) – Driveway & Utility Encroachment Permit

## **Task 4. Construction Administration Services**

AECOM will act as the City's representative and provide construction administration services during the construction period. For this scope, the assumed construction duration is to be twelve (12) months.

- ***Bidding Services*** - AECOM will prepare Bid Documents and follow the City's bidding policies and procedures. AECOM will respond to Bidders' questions and create addenda as necessary. AECOM will review bids received to determine if each is responsive and responsible. AECOM will prepare a Bid Tabulation and Comparison. AECOM will make a recommendation to the City to award the project.
- ***Preconstruction Conference*** – AECOM will conduct a preconstruction conference to discuss contract requirements, establish communication protocols and other related construction issues for the project. AECOM will prepare and issue agenda for the meeting and prepare minutes after the meeting.
- ***Shop Drawings*** – AECOM will review and approve shop drawing submittals.
- ***Pay Requests*** – AECOM will review contractor's pay requests and make recommendations to the City for payment. The City will be responsible for all requests for payment and reimbursements from the funding agencies.
- ***Change orders*** – AECOM will prepare and submit change order requests to the City and the funding agencies for approval as necessary.
- ***Progress Meetings*** – AECOM will meet on site with City staff and contractor on a monthly basis to review project progress and resolve construction issues that arise. For this proposal, it is assumed that no more than twelve (12) meetings will be required.



- **Record Drawings** – AECOM will prepare and provide hard copy record drawings and one (1) electronic copy in PDF format showing the project as constructed based on field observation and information provided by the contractor.
- **Funding Administration** – AECOM will assist the City as required to administer the requirements of the various funding agencies. AECOM will prepare monthly construction progress reports for the City to submit to the South Carolina Office of Resilience (SCOR). AECOM will collect and review certified payrolls from the contractor and provide copies to the City to submit to SCOR. AECOM will meet with the City and SCOR during the monitoring and closeout process.

### **Task 5. Construction Observation Services**

AECOM will act as the City’s representative and provide construction observation services during the construction period. For this scope, the assumed construction duration is to be twelve (12) months.

- **Construction Observation** – AECOM will make site visits at intervals appropriate for the various stages of construction to observe the progress and quality of the work being performed. For this proposal, it is assumed that no more than ten (10) hours per week of onsite time will be required. Observation by AECOM is to provide the City with greater confidence that the project is being constructed in accordance with the contract documents but does not guarantee the performance of the contractor. AECOM will not supervise, direct or have control over the contractor’s performance.

### **Schedule**

AECOM is prepared to begin work immediately upon receipt of a signed contract. The following schedule encompasses each work task detailed previously in the scope of work and provides durations for each task. Some of these tasks may be completed simultaneously. Estimated schedules for permitting are dependent upon the regulatory agencies reviewing the project and are based on our previous experiences.

<b>Task</b>	<b>Duration</b>	<b>Estimated Completion</b>
Task 1 – Field Work & Data Collection	2 months	March 2022
Task 2 – Engineering Design	4 months	July 2022
Task 3 - Permitting	4 months	September 2022
Task 4 – Construction Administration	12 months	December 2023
Task 5 – Construction Observation	12 months	December 2023



**Compensation**

Compensation is based upon our understanding of the project and our experience on projects similar in scope. All fees required for the permitting of the project will be paid to the regulatory agency directly by the City of Sumter. Compensation to AECOM for the proposed scope of work outlined above will be a lump sum fee as follows:

<b>Task</b>	<b>Engineering Fees</b>
Task 1 – Field Work & Data Collection	\$ 14,000
Task 2 – Engineering Design	\$ 94,000
Task 3 - Permitting	\$ 12,000
Task 4 – Construction Administration	\$ 52,000
Task 5 – Construction Observation	\$ 60,000
<b>Total:</b>	<b>\$ 232,000</b>

***Additional Services***

Throughout the project, changes and additions to the scope of work may be necessary. Any design changes will be changed by amendment which will include scope, fee, and signature by the client.

***Assumptions & Exclusions***

The following items are not included in this scope of services; however, they can be performed as an additional service based on a signed agreement with the Client. Any additional services or changes/revisions will be negotiated prior to the work commencing.

- FEMA Flood studies;
- Design of stormwater pumping systems;
- Design of underground stormwater detention systems;
- Geotechnical exploration;
- Property or right-of-way acquisition;
- Boundary surveying or the preparation of plats and easements;
- Permitting / review fees.