

Department of Engineering  
Tim Bryan, P.E., County Engineer

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**MEMORANDUM**

November 12, 2020

To: Sheila Jones, Supervisor, District I  
Trey Baxter, Supervisor, District II  
Gerald Steen, Supervisor, District III  
Karl Banks, Supervisor, District IV  
Paul Griffin, Supervisor, District V


From: Tim Bryan, P.E.  
County Engineer

Re: Engineering Contract with Waggoner Engineering, Inc.  
Madison County Comprehensive Watershed-Based Stormwater Management Program

The Engineering Department requests the Board approve this Engineering Contract with Waggoner Engineering, Inc. for the Madison County Comprehensive Watershed-Based Stormwater Management Program for a fee not to exceed \$535,800.00.

**Waggoner Engineering, Inc.  
And Madison County Board of Supervisors  
Task Order Form**

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<b>Task Order No. 2</b>	
<b>Additional Pages Attached:</b> <u>  6  </u>	
<b>Date of Task Order:</b> _____, 2020	
<b>TASK ORDER TO THE GENERAL SERVICES AGREEMENT BETWEEN WAGGONER ENGINEERING, INC. AND MADISON COUNTY, MS BOARD OF SUPERVISORS</b>	

This Task Order to the General Services Agreement between Waggoner Engineering, Inc. and Madison County Board of Supervisors dated   July 6, 2020  , is a part of, and is subject to all the terms and conditions of the Agreement unless specifically provided otherwise herein.

1. **Project Name:** Madison County Comprehensive Watershed-Based Stormwater Management Program
  
2. **Project Number:**
  
3. **Project Manager for Client:** County Engineer  
Tim Bryan, PE
  
4. **Project Manager for Waggoner:** Zoffee Dahmash, PE and Darion Warren, CFM
  
5. **Method of Compensation:** Lump Sum
  
6. **Task Order Compensation:** \$535,800
  
7. **Scope of Work (see additional pages attached):** In the attached Proposal, the Scope identified as PHASES I, II, III, and IV

8. **Schedule of Performance**      18 MONTHS  
(see additional pages  
attached):

9. **Approved Subconsultants:**      n/a

10. **Special Provisions:**              n/a

**IN WITNESS WHEREOF**, the parties hereto have caused this Task Order to be executed by their duly authorized representatives effective as of the date set forth above.

**MADISON COUNTY BOARD OF SUPERVISORS    WAGGONER ENGINEERING, INC.**

\_\_\_\_\_  
By: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_

Title: \_\_\_\_\_



# Madison County Board of Supervisors

## Comprehensive Watershed-Based Stormwater Management Program

### SCOPE OF SERVICES

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Madison Co, MS

07.16.20

The Madison County Board of Supervisors (MCBOS) has expressed the desire to collaborate in the development of a ***Comprehensive Countywide Watershed Based Stormwater Management Program (Program)*** to identify, analyze, quantify, prioritize, and develop a short and long term implementation plan for both capital and maintenance requirements needed to address drainage-related deficiencies throughout unincorporated and incorporated areas of the County. The project scope will encompass all thirty three (33) of the County watersheds delineated at the 12 digit Hydraulic Unit Code (HUC-12) level and will include site assessment and evaluations for up to one hundred (100) sites. Following is a proposed Scope of Work to accomplish the Program:

#### PHASE I – PROGRAM INVENTORY AND CONCEPT DEVELOPMENT (8 MOS.)

1. **Data Collection and Analysis**
  - a. Inventory existing stormwater-related planning data, floodplain management ordinances, watershed data, and other related documents from available sources including, but not limited to, Madison County, Incorporated areas of Madison County, MDEQ, USACE, NRCS, and MDMR.
  - b. Inventory county-wide base mapping data (in GIS format) available through Madison County and other available sources, including orthoimagery, hydrography, topography, stormwater related assets, ground contours, planimetrics, building footprints, and property ownership.
  - c. Inventory data, documents, and mapping products available through MDEQ and/or FEMA related to the most recently delineated special flood hazard areas, flood insurance rate maps and regulatory products, flood insurance claims and repetitive loss data within the County and Incorporated areas, and other related data.
  - d. Prepare a county-wide base-map based on existing, available data suitable for presentation purposes at 24"x36" and 11"x17" sizes.
  
2. **County Situational Site Needs Assessment**
  - a. Conduct interviews with and/or review information previously collected from County Supervisors, City Public Works staff, or other knowledgeable individuals to obtain information related to existing drainage issues in Madison County, such as:
    - i. Areas experiencing recurrent flooding of properties;
    - ii. Areas experiencing persistent erosion, scour, or sedimentation problems;
    - iii. Poorly-drained areas that allow water to pond for several days following a rain event;

- iv. Locations where existing drainage infrastructure is in disrepair or in need of maintenance or replacement;
- v. Residential areas or critical facilities that are prone to being isolated by floodwaters making access impassible; and
- vi. Other drainage related issues not specifically described above that may be of interest to the County.

This preliminary information will be supplemented with follow-up interviews and/or written questionnaires in order to more fully develop, understand, and document the specific location, extents, and nature of the Supervisors' areas of concern. The details obtained through follow-up inquiries and questionnaires will hopefully facilitate an objective overall prioritization of the identified drainage issues for further evaluation in the Program.

3. **County Stormwater Asset Management System Needs Assessment**

- a. Conduct a GIS Needs Assessment for the development of a stormwater Asset Management System. Asset management is a strategic approach to maintaining and sustaining infrastructure in order to meet the needs of a community at the lowest overall life cycle cost.
  - i. Meet with GIS Staff & planning staff to evaluate existing processes and data status and to determine the amount and quality of available data.
  - ii. Inventory existing digital and hard copy data to review completeness, spatial accuracy, and other attributes.
  - iii. Analyze samples of existing record drawings to determine the level of digitizing required.
  - iv. Review samples of maintenance records for any applicable data.
  - v. Develop a scope, inventory, budget, and implementation plan needed to complete a functioning GIS-Based Asset Management System.

4. **County Community Rating System (CRS) Needs Assessment**

- a. Conduct a needs assessment for the development and/or enhancement of Community Rating Systems. CRS provides a framework and a variety of technical resources to help participating communities implement a comprehensive flood risk management program designed to reduce and avoid flood losses and to strengthen the insurance aspects of the National Flood Insurance Program NFIP. In return, flood insurance rates for existing policyholders community-wide are discounted to reflect the reduced flood risk resulting from community actions.
- b. Quantify to the extent possible through analysis of existing, available data encroachments of regulatory floodplains and floodways within the County and Incorporated areas. The intent of this exercise is not to identify individual properties but, rather, to gain an approximation of the extent to which floodplain management, or the lack thereof, is problematic within the County.
- c. Develop a scope, inventory, budget, and an implementation plan needed to establish and/or enhance existing functionalities of Community Rating System(s).

5. **Data Analysis**

- a. A county-level watershed based analysis of the gathered information shall be conducted to identify sites for proposed improvements. The initial information gathered, and all mapping and field investigation data shall be evaluated to propose conceptual solutions for each site identified. Data will be reviewed on a watershed-level to better understand the entire extent of the issues and in order to identify holistic conceptual solutions with the aim of not shifting issues to other locations within the watershed and/or County.
6. **Preliminary Report: Compilation of Drainage Issues & Recommendations**
- a. Based on the inventory of known existing drainage issues obtained and analyzed in Steps 1, 2, and 3, compile and characterize a Preliminary Hazard Prioritization Ranking of the drainage problems throughout the incorporated and unincorporated areas of the County.
    - i. Review data, information, and prioritization of areas of concern gathered and analyzed and conduct field investigations of subject locations as appropriate to more fully understand the problems identified;
    - ii. Review current and proposed drainage projects planned or already in design;
    - iii. Develop separate, preliminary ranking of drainage issues or needs, based on potential hazards or other impacts posed to human health, personal property, and welfare of Madison County citizens, using questionnaire responses and other acquired information.
  - b. Generate Initial Report and Preliminary Recommendations
  - c. Prepare county-wide maps and other visual aids suitable for presentation purposes at 24"x36" to accompany the Initial Report and Preliminary Recommendations.

## **PHASE II – DEVELOPMENT OF PROGRAM (8 MOS.)**

1. **Development of Program Priorities**
  - b. Conduct presentation meetings with County (and City) representatives, as appropriate, to present Program findings and receive feedback on preliminary ranking of drainage issues from Phase I.
  - c. Develop and complete, in collaboration with stakeholders, a decision matrix to assess the preliminary rankings to finalize an objectively-based prioritization of improvements or other corrective actions under the Program.
  - d. Prepare a Short-Term Priorities Action Plan to cover the 0-5 year implementation timeframe.
  - e. Prepare a Long-Term Priorities Action Plan to cover the 5-10 year and beyond implementation timeframe.
2. **Identification of Proposed Improvements**
  - a. Develop concepts for structural and/or non-structural solutions to address the Short-Term Priorities identified in the previous tasks, including conceptual scopes, schedules and opinions of development cost. Site reconnaissance may be performed in support of the solution development, however detailed field survey is not anticipated as part of this effort.
3. **Evaluation of Existing Ordinances & Policies**
  - a. Review existing County ordinances, including stormwater management, floodplain development, zoning ordinances, and subdivision development.

- b. Recommend modifications to existing ordinances, as necessary, to assist in achieving the goals of the Program priorities identified.
  - c. Assess institutional and governance arrangements to aid in facilitating Program development and implementation.
  - d. Assess the issues of comprehensive watershed management and sustainable watershed management and what institutional and/or policy recommendations might offer potential benefit to Madison County.
4. **Identification of Proposed Maintenance Schedule**
- a. Coordinate with the County to structure a maintenance schedule to address Program priorities for drainage related maintenance activities to be carried out by the County. This work will include the development of conceptual scopes, schedules and budgets.
5. **Implementation and Resource Strategies**
- a. Develop feasible alternatives for funding structural and non-structural drainage system improvements in the unincorporated and incorporated areas of Madison County, including traditional state and federal sources, as well as innovative short-term or long-term financing options.
  - b. Evaluate sources of sustainable funding for ongoing drainage maintenance activities.
  - d. Identify and evaluate potential institutional solutions for sustainable funding, such as special assessment districts and drainage/taxation districts.

**PHASE III – DEVELOPMENT OF IMPLEMENTATION PLAN (2 MOS.)**

1. **Implementation Plan**
- a. Establish a timeline of actions to be taken to implement the most feasible solutions identified.
  - b. Prepare a Madison County Comprehensive Watershed Based Stormwater Management Implementation Plan document in narrative and graphic format that captures and summarizes in sufficient detail the essence of the previous items in the Scope of Work. The plan will offer policy recommendations and institutional arrangements for effective Program implementation.
  - c. Deliver Master Plan documents to County for review and comment.
  - d. Incorporate results of County review into final Plan documents.
  - e. Deliver seven (7) hard copies of the final Madison County Comprehensive Watershed Based Stormwater Management Implementation Program documents including electronic media with each hard copy.

**PHASE IV – PROGRAM SUPPORT SERVICES (18 MOS.)**

- 1. Identify potential state and federal funding opportunities associated with fulfilling the objectives, missions, and interests of the County's drainage priorities.
- 2. Assist the County in development of policy and funding requests and supporting advocacy initiatives to advance Program objectives, including research and drafting legislative language.
- 3. Advance the County's Program priorities through supporting informational activities directed to elected officials and government agencies associated with state and federal funding opportunities.

## **Program Deliverables**

The following products will be delivered to Madison County for their collective review and acceptance at identified milestones in the program schedule.

1. Tabulation of issues identified through communications with County officials and review of data and previous documents prepared by and for the County – at completion of Phase I, Scope items 1, and 2.
2. Preliminary Report and Recommendations – at completion of Phase I, Scope items 3 (County Stormwater Asset Management System Needs Assessment).
3. Preliminary Report and Recommendations – at completion of Phase I, Scope items 4 (County Community Rating System (CRS) Needs Assessment).
4. Preliminary Report and Recommendations – at completion of Phase I, Scope items 5 and 6 (Data Analysis and Compilation of drainage issues and Recommendations)
5. Prioritized Program of Short-term and Long-term Improvements – at completion of Phase II, Scope item 1.
6. Proposed Program of Capital Improvements and Maintenance Activities – at completion of Phase II, Scope items 1 through 4
7. Summary recommendations for improvement of County-wide stormwater/drainage development ordinance – at completion of Phase II, Scope item 3.
8. Final Implementation Plan – at completion of Phase III, Scope item 1 – incorporating final outcome of components in Phases I through IV.
9. County-wide maps and other visual aids suitable for presentation purposes at 24"x36" size- at completion of Phase I and Phase III.



**SCHEDULE OF COMPENSATION**

Waggoner will invoice for its services related to the Program on a lump sum percent complete basis subject to the Total Budget Amount shown below. Individual task amounts are for budgeting purposes only and may vary within the Total Budget Amount. If complications or other unforeseen factors cause a change in the scope of work which may cause Waggoner to exceed the established budget, Waggoner shall promptly notify the County in advance of performing additional work.

<b>Task</b>	<b>Budget<sup>(1)</sup></b>
Phase I – Program Inventory & Concept Development (mos. 1-8)	\$156,800
Phase II – Development of Program (mos. 9-16)	\$196,500
Phase III – Development of Implementation Plan (mos. 17-18)	\$148,500
Phase IV – Program Support Services (mos. 1-18)	\$34,000
<b>Total (Duration 18 mos.)</b>	<b>\$535,800<sup>(2)</sup></b>

<sup>(1)</sup> Budget is based on a total number of sites not to exceed 100. Additional charges at a rate of \$5,000 will be assessed for every additional site.

<sup>(2)</sup> Waggoner will submit invoices to County on a monthly basis for work completed during the billing period. County shall pay Waggoner within 45 days after receipt of Waggoner’s monthly billing. The payment shall not be contingent or dependent upon any action or undertaking of the County other than those conditions, if any, specifically set forth in this Agreement. Waggoner will submit monthly status reports with each invoice.