


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

Task Order No. 10	
Additional Pages Attached: <u> 8 </u>	
Date of Task Order: <u> April 2 </u> , 2024	
TASK ORDER TO THE GENERAL SERVICES AGREEMENT BETWEEN WAGGONER ENGINEERING, INC. AND MADISON COUNTY, MS BOARD OF SUPERVISORS	

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 Broadband Initiative Phase 2
2. **Project Number:** WEI Project #021227.000
3. **Project Manager for Client:** County Administrator
Greg Higginbotham
4. **Project Manager for Waggoner:** Darion Warren, CFM
5. **Method of Compensation:** Lump Sum
6. **Task Order Compensation:** \$308,720
7. **Scope of Work (see additional pages attached):** See attached

8. **Schedule of Performance** See Attached
(see additional pages
attached):

9. **Approved Subconsultants:** Horrocks

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: _____

Background and Objectives

The Madison County Board of Supervisors (MCBOS) has identified the need for provision of fiber to home (FTH) broadband service to a largely rural area in the northwest portion of the county. This area was divided into two sections, with the first starting at the intersection of Madison, Attala, and Leake County, and following the south boundary to the intersection of MS 43 and continuing southwest to Honeysucker Rd. This boundary then follows MS 17 near Camden and extends northwest to US 51 and south to Bill Presley Rd. The second section starts at the intersection of Madison and Yazoo County and follows MS 16/ I-55 south to Heindl Rd and continues east towards King Ranch Road near the city of Canton municipal boundary. This section then follows MS 22 southwest near Catlett Rd before continuing along the Madison/Hinds County border back to the start location. The rural areas within this northwest portion of the County includes approximately 6,127 housing units. The MCBOS has identified this initiative as the Madison County Broadband Program Phase 2

The MCBOS wishes to engage Waggoner Engineering, Inc. to provide assistance with defining the scope and requirements of the Program, procuring a third-party vendor to provide the facilities and service, and implementing the Program, all in accordance to and in compliance with the guidelines associated with the prospective Broadband Expansion and Accessibility of Mississippi (BEAM) office and other potential sources of capital funding.

Following is the Waggoner Program Delivery Team's (PDT) proposed scope and approach for assisting Madison County with the implementation of the Madison County Broadband Program Phase 2.

Program Element 1 – Northwest Madison County Broadband Assessment

The purpose of this element of the Program is to assist the MCBOS by identifying, evaluating, and recommending the most effective alternative, financially and operationally, for providing broadband service to the target area, in accordance with the objectives of the Program. This initial Program element will consist of three tasks, as follows.

Task 1 – Strategy Session & Assessment

1.1 Kickoff Meeting

The PDT will facilitate a Strategy Session as a kickoff to the project, to include representatives of the MCBOS, county staff as required, and other community stakeholders if identified by the MCBOS.

The Strategy Session is the foundation for establishing relationships between key stakeholders and gathering critical data that sets the entire process's scope and tempo and should be structured as an interactive, in-person working time to communicate opinions, ask questions, and share knowledge.

During the meeting, participants will review project goals and guidelines for communications, tracking, and deliverables. Outcomes from this session and subsequent decisions at each Task are critical to determine logistics for the project.

The PDT will rely on MCBOS for information related to facilities and infrastructure. This may include access to employees of the County who can assist with data collection and access to GIS data or shapefiles containing infrastructure details. The PDT will also rely on MCBOS to foster communication between other beneficial parties that can contribute to the project's success.

1.2 Mapping Tool

The PDT shall use different software solutions and processes throughout the lifetime of the program. Because of its versatility and functionality for gathering, managing, and analyzing information represented in a geospatially accurate graphic interface, the PDT will begin by creating and populating a Geographic Information Systems (GIS) database. The PDT will coordinate closely with the County's existing GIS-based personnel and assets in order to make the most and best use of available data, as well as to facilitate beneficial use of the data by County staff post project.

1.3 Local Broadband and Telecommunications Assessment

The PDT will evaluate current broadband infrastructure and services available from incumbent competitive telecommunications service providers in market, including wireline and local and regional middle-mile telecommunications infrastructure and services. This shall also include a survey and assessment of technology applications being utilized by the county, local businesses, and residents including non-profit agencies, schools, churches, and other groups to identify the technical and functional objectives of the Program.

1.4 Gap Analysis

As part of the examination from the PDT, many different aspects of a community will be evaluated. Broadband-based services are key components to not only improving the tax

base and revenue of a community, but also for promoting stability through growth and quality of living for the residents. The PDT shall provide observations related to the community as viewed through the lens of broadband, limited to challenges that can be improved through better broadband solutions. With each challenge, or gap, the PDT will recommend actionable solutions that can reduce the impact of the problem or resolve the challenge.

After reviewing demographics, economics, policy, and budget, the PDT will identify gaps in the community that can be improved through broadband solutions. The gap analysis and recommendation section of the report will address each deficiency and offer possible solutions that can be implemented.

1.5 Assessment of Regulatory Environment

The PDT will perform a review and assessment of potential regulatory requirements or restrictions that may become applicable or impactful to Program objectives. This may include:

- current and anticipated federal and state legislative actions or legal requirements that may impact decisions;
- application and certification requirements through the Federal Communications Commission (FCC) necessary to create an FCC Registration Number (FRN) if the County determines an interest in attaining Tier 1, Tier 2, or Tier 3 service provider status; and/or
- utility registrations with Federal, State, County, and City agencies for placement of infrastructure encroaching the public Right of Way or access to other utility infrastructure including joint-use agreements with the pole owner (or owners), electrical cooperative, telecommunications company, or municipality.

Task 2 – Preliminary Planning

2.1 Data Collection

Collect and Incorporate Local Data

Data from utility companies (power, water, gas, sewer), public entities (City, County, State, or Federal), or other open sources will be combined into the GIS platform. This data incorporation may include a geospatial realignment process for inaccurate data. The time to complete this task is dependent on the accuracy, currency, and accessibility of the required data. The PDT will rely on the County to provide as much available utility data as possible, as well as GIS, such as census information, parcel data, municipal buildings, County-owned real estate, etc.

Address Verification

Because serviceable locations account for the value of the network through revenue generation, a thorough address verification process is one of the most critical imperatives for Program success. Even with support from public entities (such as county parcel data), utility billing information, and other third-party sources, existing address data typically is inaccurate and incomplete. This may apply to address types and geographic locations for residences, businesses, municipal services, other utility services, and candidate small cell or wi-fi locations as designated during the strategy session and planning phases. This is an essential aspect of creating an expandable and sustainable long-term strategy.

The PDT will depend on the County to provide or assist in obtaining the most accurate and current address data available.

Real Estate Review

Whether applicable to the placement of a large data center or a small cabinet to support the network, the site location and acquisition of private or public property is a commonly overlooked aspect. Addressing and assessing real estate needs and options at the forefront of the project is a key component of the project's overall success.

The PDT will depend on the County to provide or assist in obtaining the most accurate and current property location and ownership data available.

2.2 Network Architecture and Requirements

The PDT will collaborate with the County to define the preferred network architecture, minimum service thresholds, and fiber testing and network validation standards. Based on experience working with the Incumbent Local Exchange Carriers (ILECs) and partnering with telecommunications equipment and technology vendors, the PDT has a thorough understanding of the evolution of different network architectures (point-to-point, active ethernet, GPON, NGPON2, XGPON, etc.), and insight in the latest products and processes available.

2.3 Schema Creation

The PDT will develop the schema and data dictionary for new features that will be incorporated into the GIS database. Features with attributes may be incorporated through both LiDAR collection and extraction, and through a software-supported "Boots on the Ground" (BOG) process. With features added through the preliminary and detailed design process, this information can be stored and delivered in KMZ, SHP, or GDB formats and would be geo-referenced to use with private or public GIS data.

Task 3 – Conceptual Design

3.1 Conceptual Design

The PDT will develop a conceptual design to best enable a data driven analysis of the costs and major impacts of various deployment strategies including:

- Route planning for network architecture and constructible path;
- The amount of fiber, material, and equipment needed;
- Optimal construction methods to maximize deployment speed and savings;
- Active electronic equipment and sites;
- Long lead permit avoidance;
- Minimization of necessary traffic control;
- Ease of maintenance; and/or
- Minimization of utility strikes.

The conceptual design will reside in the GIS database, where it can be both desktop- and field-assessed and will be revised as needed throughout the duration of the planning, serving as the foundation for the execution of the subsequent detailed design, construction packages, and permit and make ready engineering documents.

3.2 Constructability Review

Based on initial conceptual design output, the PDT will perform a Constructability Review to analyze outside plant infrastructure placement for constructability, cost, and schedule efficiency. Due to costs, weather conditions, accessibility, or physical obstructions, there are inherent limitations to the implementation of LiDAR-collected field data. Therefore, the PDT may employ traditional field data collection commonly referred to as “Boots on the Ground” (BOG). To maintain speed, accuracy, and uniformity in its comprehensive field data collection, the PDT will use a variety of tools and processes during BOG activities (such as field-noting editable features and attributes in a tablet-based remote-access GIS application) so that the final data are consistent in content and format in the GIS database.

3.3 Make Ready Assessment (MRA)

The Constructability Review may also include Make Ready Assessment (MRA), a high-level visual check of poles for proposed strand attachment or over lash. This process is intended to classify poles into a category to best determine total make ready effort and costs. Make Ready classification can be adjusted based upon information from the local market during the Strategy Session. Classification of poles could fall into the following categories:

- Green – No moves required, ready for attachment;
- Yellow – Communication moves required;
- Blue – Power violations, multiple communication moves and possible power rearrangement;
- Red – complete pole change-out, possibly including major power equipment reconfiguration;
- Black – High cost / prohibitively problematic.

3.4 Permit Review

Throughout the route planning and conceptual design process, the PDT will take note of potential roadblocks or opportunities as a result of needing access to public Right-of-Way (ROW), areas that require special application or abnormally long durations, or private easement avoidance.

- Standard Right of Way (ROW) - This may be applicable to encroachment permits for underground construction and installation or for temporary use of the ROW for aerial construction and installation. The PDT will research the requirements of the approving agency and will perform an initial desktop route review, incorporating available utility data, planimetric data, and parcels into the detailed GIS design database.
- Long Lead - This may be applicable to work areas for entities requiring specialty or long lead approval permits, including agencies such as the Mississippi Department of Transportation (MDOT), Railroads, bridge or water crossings, Centralized Business District (CBD), or protected environmental habitats. Though the PDT uses due diligence and value engineering during the conceptual design phase to avoid these areas if possible, by selecting an alternative construction path, long lead or special permits are typically unavoidable throughout an entire market area.

Information obtained through the Pre-CRO, MRA, and Permit review processes will be used to enhance and improve the Conceptual Design.

3.5 Opinion of Probable Cost (Materials and Labor)

The PDT will use the preliminary modeling of the proposed conceptual networks to calculate required material units and provide general information regarding projected capital requirements as applied to current unit costs and pricing for optical cable, conduit, active electronics, and other associated structures and hardware.

Cost of construction and engineering labor for various build methods (aerial construction, directional bore, open trench, micro trench, etc.) will also be factored into the cost analysis for various potential routes to maximize value engineering throughout the network.

This information shall be incorporated into a Preliminary Bill of Materials (Pre-BoM) for use in assessing projected values and duration for mobilization and procurement.

Task 4 - Presentation and Report

The PDT will facilitate a work session with representatives of the MCBOS to present the results of the comparative evaluation of alternatives and recommendations for implementation. Upon the County's approval of the presentation findings and adoption of an approach for implementation, the PDT will prepare a final report for submittal to MCBOS, to include next steps, budget for pre-implementation, and the Master Program Schedule developed earlier.

Program Element 2 – RFP Preparation, Evaluation of Proposals, and Assistance with Selection

The purpose of this element of the Program is for the PDT to assist MCBOS with procurement of an Internet Service Provider (ISP), including preparation of the request for proposals (RFP) and related documentation, evaluation of respondents, and recommendations for award. This program element will consist of the following tasks:

Task 1 – Development of Request for Proposals (RFP)

The PDT will collaborate with the MCBOS to establish scope and define goals of the RFP. Technical specifications and criteria will be developed so that a meaningful RFP can be developed that will solicit the best possible responses from prospective ISPs. Due to the various solutions available in the marketplace, the RFP will invite each prospective vendor to provide their proposed approaches to offering value-added alternative solutions. The investment and operations models should provide a range of options for combining public and private involvement. The models should also offer options for the way networks will operate and the services they will offer.

The PDT will collaborate with the MCBOS, including its designated administrative and legal representatives to prepare the RFP documentation in accordance with relevant state statutory requirements, as well as guidelines and/or regulations published in association with relevant programmatic funding sources.

During the advertised procurement period, the PDT will assist the County with responding to requests for information from prospective respondents. Specific services will include:

- a. Preparation of technical specifications and evaluation criteria for Request for Proposals (RFP).
- b. Consult with and advise the Count as to the acceptability of minimum requirements and criteria.

- c. Send notifications to the general market about the RFP.
- d. Conduct and attend RFP Pre-Submission Conference to discuss and clarify project scope.
- e. Receive and compile questions received from potential respondents.
- f. Prepare and issue Addenda to Madison County as appropriate to interpret, clarify, or expand the RFP. Madison County will issue Addenda to known procurer of the RFP.
- g. Assist the MCBOS with assessment and scoring of proposals.
- h. Assist with interview of proposal finalists.

Schedule for Program Element 1 & 2

The PDT will perform and complete all work associated with Program Element 1 six (6) months following the approval of Task Order 10.

The PDT will perform and complete all work associated with Program Element 2 four (4) months following the approval of work performed under Program Element 1.

Budget for Program Element 1 & 2

The PDT will perform the services for Program Element 1 & 2 described above on a Lump Sum basis. Individual task amounts are for budgeting purposes only and may vary within the total budget amount. Any additional services and reimbursables will be billed on an hourly basis. The estimated cost for the work described above is as follows:

Task	Compensation Terms	Proposed Budget
Program Element 1 – Broadband Assessment		\$263,720
<ul style="list-style-type: none"> • Task 1 – Strategy Session & Assessment 		\$87,075
<ul style="list-style-type: none"> • Task 2 – Preliminary Planning 		\$37,650
<ul style="list-style-type: none"> • Task 3 – Conceptual Design 		\$109,075
<ul style="list-style-type: none"> • Task 5 – Presentation & Report 		\$29,920
Program Element 2 – RFP Preparation, Evaluation of Proposals, and Assistance with Selection		\$45,000
Program Element 3 – Program Implementation		TBD
Program Element 4 – Funding and Grant Application Assistance		TBD
Total (Program Elements 1 & 2 Only)	Lump Sum	\$308,720

Based on the results of Program Element 2, Program Element 3 could be conducted by the Program Delivery Team at the request of the Madison County Board of Supervisors.