

EMERGENCY RESOLUTION NO. 22-2014

A RESOLUTION GRANTING CONSENT TO THE OHIO DEPARTMENT OF TRANSPORTATION AND AUTHORIZING THE CITY MANAGER TO ENTER INTO A CONTRACT FOR BRIDGE INSPECTION PROGRAM SERVICES, AND DECLARING AN EMERGENCY.

WHEREAS, Council has determined the need for the project described as "Bridge Inspection Program Services, including, but not limited to bridge load rating calculations, scour assessments, bridge inspections, and fracture critical plan development."

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF MONROE, STATE OF OHIO, THAT:

SECTION 1: Being in the public interest, the City of Monroe (LPA) gives consent to the Director of Transportation to complete the project described as "Bridge Inspection Program Services, including, but not limited to bridge load rating calculations, scour assessments, bridge inspections, and fracture critical plan development.

SECTION 2: The City of Monroe shall cooperate with the Director of Transportation in the within described project as follows:

The State shall assume and bear 100% of all cost for Bridge Inspection Program Services requested by the City and agreed to by the State. Eligible Bridge Inspection Services are describe in the Consultant's Scope of Services Task Order Contract (Exhibit A).

The LPA agrees to pay 100% of the cost of those features which are not included in Exhibit A.

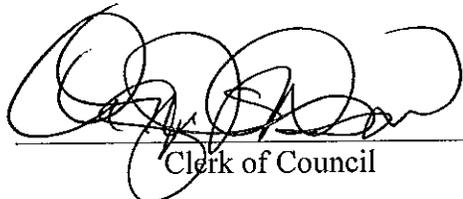
SECTION 3: The City of Monroe agrees that all right-of-way required for the described project will be made available in accordance with current State and Federal regulations.

SECTION 4: The City Manager is hereby empowered on behalf of the City of Monroe to enter into contracts with the Director of Transportation which is necessary to complete the above described project.

SECTION 5: This measure is hereby declared to be an emergency measure necessary for the immediate preservation of the public peace, health, safety and welfare and further for the reason that Council desires to expedite the within described project and promote bridge safety. Therefore, this measure shall take effect and be in full force from and after its passage.

PASSED: April 22, 2014

ATTEST:



Clerk of Council

APPROVED:



Mayor

This legislation was enacted in an open meeting pursuant to the terms and provisions of the Sunshine Law, Section 121.22 of the Ohio Revised Code.

"I, the undersigned Clerk of Council of the City of Monroe, Ohio, hereby certify that the foregoing (ordinance or resolution) was published as Required by Section 7.16 of the Charter of the City of Monroe.



Clerk of Council
City of Monroe, Ohio"

Scope of Services Meeting Date: **/**/**
Approved Final Scope of Services Minutes Date: **/**/**

GENERAL ENGINEERING SERVICES Central Office, Office of Structural Engineering Scope of Services

The CONSULTANT may be required to perform the following services on a task order type basis for bridges designated by regulation or by agreement as City or Village inspection responsibility. Consultants must be prequalified for major bridge inspection services, which may include but are not limited to the following:

Task 1 - Scour Tasks

- Task 1A - Scour Critical Assessment
- Task 1B - Scour Plan-of-Action

Task 2 - Load Rating Tasks

- Task 2A - Field Measurements for Load Rating
- Task 2B - Load Rating Calculations
- Task 2C - Field Measurements for Gusset Plates
- Task 2D - Load Rating and Analysis of Gusset Plates

Task 3 – SMS/BMS Structure Inventory and Review

Task 4 – Inspection Procedures

- Task 4A - Fracture Critical Plan
- Task 4B – Underwater Inspection Procedures

Task 5 - Bridge Inspection

- Task 5A – Routine Bridge Inspection
- Task 5B – Fracture Critical Inspection
- Task 5C – Underwater Dive Inspection

General Engineering Services Scope of Services
 Central Office, Office of Structural Engineering
 PID No. 97103

Project: SP02 - District (4, 11, & 12), Total Structures = 416

Type	Span =< 20	20' < Span =< 60	60' < Span =< 200'	Span > 200'	Total
Single Span	31	112	26	0	169
Multi-Span	0	7	54	45	106
Culvert	100	33	2	0	135
Truss	1	2	4	4*	6
Underwater Inspection	0	0	1	4	5
Fracture Critical Inspection	2	1	3	5	11

* Includes 4 movable steel truss structures

Project: SP03 - District (5, 6, & 10), Total Structures = 576

Type	Span =< 20	20' < Span =< 60	60' < Span =< 200'	Span > 200'	Total
Single Span	86	103	29	0	218
Multi-Span	1	6	42	34	83
Culvert	181	81	6	0	268
Truss	0	0	7	0	7
Underwater Inspection	0	0	0	0	0
Fracture Critical Inspection	0	0	11	5	16

Project: SP04 - District (7, 8, & 9), Total Structures = 594

Type	Span =< 20	20' < Span =< 60	60' < Span =< 200'	Span > 200'	Total
Single Span	57	121	29	0	207
Multi-Span	2	9	63	56	130
Culvert	155	90	5	0	250
Truss	0	0	5	2	7
Underwater Inspection	0	0	2	8	10
Fracture Critical Inspection	0	1	7	4	12

Please note that the total numbers of structure types is estimated based on current BMS data and may be adjusted. The estimated contract price value for each project is as follows:

- SP01 \$217,000
- SP02 \$221,000
- SP03 \$262,000
- SP04 \$300,000

shall complete structure inventory information in SMS/BMS with applicable scour updates.

Task 1B - Scour Plan-of-Action - The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection Appendix H for the scope of this task. Deliverables include a completed Scour Plan-of-Action, field notes, calculations, and any other reference material needed by bridge owner to maintain bridge files. As applicable, CONSULTANT shall complete Structure Inventory forms and SMS/BMS with applicable scour updates for submittal to ODOT.

TASK 2 – LOAD RATING TASKS

Task 2A - Field Measurements for Load Rating - Should no plans exist or if additional information is required, each main member shall be field measured for load rating. The condition of the member should be noted on the field documentation. All measurements shall be included in the load rating report.

Task 2B - Load Rating Calculations - The bridge carrying vehicular traffic shall be rated to determine the safe load carrying capacity. The CONSULTANT shall review existing bridge plans and inspection reports and other inspection information such as photographs and estimates of section loss for bridge members and connections. The analysis shall be performed for AASHTO HS20-44 [MS 18] (truck & lane) loading for both inventory and operating levels, and for four Ohio Legal Loads (2F1, 3F1, 4F1, and 5C1) at operating level. The CONSULTANT shall complete the Load Rating Analysis utilizing:

- Hand-calculations
- Spreadsheet(s); or
- ODOT- approved bridge analysis computer programs as listed in BDM Section 900 (PC Bars, VIRTIS, other software).

All programs other than PC Bars, VIRTIS, or spreadsheets shall be approved by the ODOT Office of Structural Engineering. Other computer programs which are approved by the Office of Structural Engineering shall include input and output data files as a deliverable to the City or Village.

AASHTO Load Factor Rating (LFR) shall be utilized for all bridges not designed by load and resistance factor design. AASHTO Load and Resistance Factor Rating (LRFR) shall be utilized for all structures designed by the load and resistance factor design method.

Load Rating Report Submittal to the City or Village shall include:

- c. A description of all deficiencies and recommendations of maintenance repairs needed.
- d. Photographs of bridges showing defects which require repairs.

The CONSULTANT shall provide one printed copy and one digital copy of the detailed measurements report to the City or Village.

Task 2D – Load Rating and Analysis of Gusset Plates - The CONSULTANT shall perform gusset plate analyses according to FHWA Publication FHWA-IF-09-014 to determine gusset plate capacity including the welded, bolted or riveted connections. This document is available on the ODOT Office of Structural Engineering web site. The gusset plate/connection capacity will be compared to the gusset plate/connection strength requirements for the maximum DL+LL+I forces created by the critical truck. If the gusset plate controls the bridge rating, the report will indicate as such and give the recommended rating for the critical truck. If the gusset plate and connections exhibit sufficient or excess capacity the analysis shall reflect the amount of excess capacity. The analysis shall reflect the existing condition of the gusset plates and connection, including ultrasound tests (UT) performed on gusset plates to determine the amount of section loss on the members.

If the gusset plate analysis is required to be performed by the CONSULTANT and the bridge load rating has been performed already by the City or a previous CONSULTANT, the City shall provide the load rating information including the analysis to the CONSULTANT performing the gusset plate analysis. If the load rating of the bridge has not been performed previously, the CONSULTANT shall load rate the bridge (see **Task 2b** of this document) as well as perform the gusset plate analysis.

Gusset plate analysis deliverables for each gusset plate analyzed shall include all calculations including, but not limited to, hand-calculations, spreadsheets and/or ODOT-approved computer analysis in hard copy and a reproducible data (.pdf, .doc, and/or .xls).

TASK 3 – SMS/BMS STRUCTURE INVENTORY AND REVIEW

The scope of this task includes a limited review of the structure inventory data in the ODOT SMS/BMS. In general, the CONSULTANT shall review specific existing ODOT bridge inventory records (as provided by the City and approved by ODOT) of the designated bridge. The CONSULTANT may download the inventory report, which contains inventory data for each bridge on file with ODOT from the ODOT website. The CONSULTANT shall verify this data and determine if the ODOT SMS/BMS structure file information needs changing. If no changes are necessary then no SMS/BMS inventory needs to be filled out. If changes are necessary, the scope of this task shall also include completing and filing inventory updates (and supplements, as needed) with the ODOT Office of Structural Engineering and providing the City or Village with copies of submittals. Only the information requiring changing or updating

Task 5A.1 – Condition Rating Inspection for non-NBI or NBI but not classified as NHS

Task 5A.2 – Element Level Inspection for NBI classified as NHS

Task 5B – Fracture Critical Inspection - Perform a fracture critical field inspection of fracture critical items. The CONSULTANT shall update the FCM inspection procedure with current photos and descriptions. The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection for additional details on the scope of this task.

Task 5C – Underwater Dive Inspection – Perform Underwater/ In-Water inspection of substructure units according to the cycle shown in SMS/BMS. Emergency underwater inspection may arise for specific structures over the duration of the contract period. Work shall be done in accordance with the reference manuals and inspection procedure. Scour risk shall be evaluated after field and data collection.

- F. Central Office will authorize the CONSULTANT to proceed with the task.

III. Task Order Identification and Numbering

- A. The task order numbering system shall be a two component series consisting of the City or Village FIPS Code number and a number identifying subsequent task orders. Subsequent task orders could be either continuing task or a modification due to changes in the scope of a previously authorized task order.
 - 1. For example, the first task order issued in the City of Columbus would be numbered 18000-1.
 - a. Continuing task orders on that project would be numbered 18000-2, 18000-3, etc.
 - 2. A new task order number shall be assigned rather than increase the fee of an existing task order.

IV. Invoice and Project Schedule Requirements

- A. The CONSULTANT shall provide monthly invoices and project schedules in the format transmitted with the executed agreement. Each invoice shall include all task orders authorized, a summary of the total amount authorized, the total amount invoiced and appropriate project schedules.

Please address your written acknowledgment of this communication to:

Omar Abu-Hajar
Office of Structural Engineering
Ohio Department of Transportation
1980 West Broad Street
Columbus, OH 43223-1102

Respectfully,

Attachments:
cc: file

**General Engineering Services Scope of Services
Central Office, Office of Structural Engineering
PID No. 97103**

If you have any questions or comments regarding this request, please contact this office prior to submitting your proposal.

Respectfully,

Attachments:

cc: file