ORDINANCE NO. 66-14

AN ORDINANCE AUTHORIZING THE MAYOR TO EXECUTE PRELIMINARY LEGISLATION WITH THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) TO PERFORM BRIDGE INSPECTION SERVICES FOR MUNICIPAL OWNED BRIDGES.

WHEREAS: ODOT is launching a new program to help municipalities across the state in achieving full compliance with FHWA's bridge metrics which will be fully funded by ODOT.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF MEDINA, OHIO:

SEC. 1: That the Mayor be and is hereby authorized and directed to execute a Preliminary Legislation Agreement with the Ohio Department of Transportation (ODOT) to perform bridge inspection services for municipal owned bridges.

SEC. 2: That a copy of said Preliminary Legislation Consent Agreement is marked Exhibit A, attached hereto and incorporated herein.

SEC. 3: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of this Council and any of its committees that resulted in such formal action, were in meetings open to the public, in compliance with the law.

SEC. 4: That this Ordinance shall be in full force and effect at the earliest period allowed by law.

PASSED: April 28, 2014

SIGNED: John M. Coyne, III
President of Council

ATTEST: Kathy Patton
Clerk of Council

APPROVED: April 29, 2014

SIGNED: Dennis Hanwell
Mayor

PRELIMINARY LEGISLATION

Consent

Rev. 6/26/00

Ordinance/Resolution # : 66-14

PID No. : 97103

County/Route/Section : _____

The following is a/an Ordinance (Ordinance/Resolution) enacted by the City of Medina (Local Public Agency) of Medina County, Ohio, hereinafter referred to as the Local Public Agency (LPA).

SECTION I – Project Description

WHEREAS, the (LPA) has determined the need for the described project:

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 ordained by the City of Medina (LPA) of Medina County, Ohio.

SECTION II – Consent Statement

Being in the public interest, the LPA gives consent to the Director of Transportation to complete the above described project.

SECTION III – Cooperation Statement

The LPA shall cooperate with the Director of Transportation in the above described project as follows:

The State shall assume and bear 100% of all of the cost for Bridge Inspection Program Services requested by the City and agreed to by the State. Eligible Bridge Inspection Services are described 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.

PID No.: 97103

SECTION IV – Utilities and Right-of-Way Statement

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

SECTION V Authority to Sign

I, _____ of said _____ is hereby empowered on behalf of the
(Contractual Agent) (LPA)
_____ to enter into contracts with the Director of Transportation which is necessary to
(LPA)
complete the above described project.

Passed: _____, 2_____.
(Date)

Attested: _____ _____
(Clerk) (Contractual Agent of LPA – title)

Attested: _____ _____
(Title) (President of Council)

The _____ is hereby declared to be an emergency measure to expedite the highway project and
(Ordinance/Resolution)
to promote highway safety. Following appropriate legislative action, it shall take effect and be in force immediately upon its passage and approval, otherwise it shall take effect and be in force from and after the earliest period allowed by law.

PID No.: 97103

CERTIFICATE OF COPY
STATE OF OHIO

City of Medina of Medina County, Ohio
(LPA)

I, Kathy Patton, as Clerk of the City of Medina
(LPA)
of Medina County, Ohio, do hereby certify that the foregoing is a true and correct copy of
Ord. 66-14 adopted by the legislative Authority of the said
(Ordinance/Resolution)
City of Medina on the _____ day of _____, 2____.
(LPA)
That the publication of such Ord. 66-14 has been made and certified of record according to
(Ordinance/Resolution)
Law; that no proceedings looking to a referendum upon such _____ have been taken;
(Ordinance/Resolution)
and that such _____ and certificate of publication thereof are of record in 2014,
(Ordinance/Resolution)
Page _____.
(Record No.)

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal, if applicable, this _____ day of _____ 2_____.

_____
(Clerk)

(CITY SEAL)

_____ of _____ County, Ohio
(LPA)

(If the LPA is designated as a City then the "City Seal" is required. If no Seal, then a letter stating "No Seal is required to accompany the executed legislation.)

The aforegoing is accepted as a basis for proceeding with the project herein described.
For the _____ of _____ County, Ohio.
(LPA)

Attested: _____ _____ Date _____
(Contractual Agent)

For the State of Ohio

Attested: _____ _____ Date _____
(Director, Ohio Department of Transportation)

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

Services shall be conducted in accordance with the following:

- ODOT Manual of Bridge Inspection, Latest Version
- Hydraulic Engineering Circulars 18, 20 and 23
- The Manual for Bridge Evaluation, Second Edition 2011 interim with revisions, AASHTO Publication
- Bridge Inspector's Reference Manual, FHWA NHI **Publication Number:** 03-001
- Underwater Bridge Inspection, **FHWA Publication Number:** FHWA NHI-10-027, Publication Year: 2010
- ODOT Bridge and Appraisal Coding Guide, Latest Version
- ODOT Bridge Design Manual, Latest Version

All work shall be performed on an actual cost basis. The CONSULTANT shall maintain a project cost accounting system that will segregate costs for individual task orders.

The duration of the agreement will be thirty-six (36) months from the authorization date of the agreement.

The Department will be performing an annual Quality Assurance Review (QAR) for each selected consultant in accordance with Manual of Bridge Inspection to ensure accuracy and consistency of the inspection and documentation in SMS/BMS.

The project will be divided in to four sub-projects (SP). A CONSULTANT will be selected for each sub-project. Municipalities will have the option to opt into or out of this program. The sub-projects have the following general geographic areas, general characteristics, and maximum contract values for all municipal bridges with municipal inspection responsibility obtained from BMS data as of October 2013:

Project: SP01 - District (1, 2, & 3), Total Structures = 530

Type	Span =< 20	20' < Span =< 60	60' < Span =< 200'	Span > 200'	Total
Single Span	78	137	33	0	**248**
Multi-Span	3	6	50	31	**90**
Culvert	154	35	1	0	**190**
Truss	0	1	1	0	**2**
Underwater Inspection	0	0	0	2	**2**
Fracture Critical Inspection	0	0	2	0	**2**

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

The total amount of the four (4) agreements associated with this project shall not exceed $1,000,000.00. CONSULTANT shall clearly designate in the letter of intent the SP(s) they wish to be considered for.

Three copies of the letter of intent shall be submitted. The letter of intent shall demonstrate that the CONSULTANT has a clear understanding of the scope of services.

UNDERSTANDING

1. Inspections shall be completed by firms prequalified with ODOT for major bridge inspection with full time staff qualified for bridge inspection according to Manual of Bridge Inspection.

2. All reports and records compiled under this agreement shall become the property of the City or Village and shall be housed in the City or Village. CONSULTANT shall submit copies of all reports and calculations, both hard copy and electronic, to the City or Village for inclusion in their bridge records. This includes, as applicable, a printed copy of the inspection report, Scour Plan-of-Action, Fracture Critical Plan, load rating report, gusset plate analysis, inspection procedures, and field measurement notes, digital pictures as well as a reproducible digital data file (.pdf, .doc, and .xls formats).

3. Copies of all transmittal letters related to this Task Order shall be submitted to Central Office, Office of Structural Engineering. CONSULTANTS shall not submit reports to ODOT unless specifically requested to do so.

Price Proposal Due Date: **//****

Services to be furnished by CONSULTANT may include:

TASK 1 - SCOUR TASKS

Task 1A – Scour Assessment - The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection for the scope of this task. Deliverables include field notes, a completed Scour Critical Assessment Checklist as per Appendix I of the 2013 Manual of Bridge Inspection, and any other reference material needed for the bridge owner to properly maintain their bridge files. As applicable, CONSULTANT

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:

1. Two (2) printed copies and one electronic copy of the Load Rating Report for each bridge.

    a. The Load Rating Report shall be prepared and signed by a registered or non-registered engineer and checked, signed, sealed and dated by an Ohio Registered Professional Engineer.

    b. The Load Rating Report shall explain the method used to calculate the load rating of each bridge.

    c. The electronic deliverable shall include an Excel spreadsheet for each bridge which shall include the member areas, member capacities both with and without section loss, influence lines (can be the ordinates or graph of the lines), dead loads and dead load stresses in members, live loads and live load stresses in members for all truck loadings and the load ratings of the members. Truck loadings to be used for the ratings are specified in BDM Section 900.

2. Final summary of inventory and operating ratings for each member and the overall ratings of the structure shall be presented for each live load truck. An acceptable format is ODOT form BR-100.

3. The inventory and operating ratings shall be coded as per the most recent version of the ODOT Bridge Inventory Coding Guide.

4. Analysis program input files. Both input and output files shall be submitted when programs other than PC Bars, VIRTIS, or spreadsheets are used.

5. All calculations related to the load rating.

6. Completed SMS/BMS Structure Inventory forms with applicable load rating updates for submittal to ODOT.

Task 2C - Field Measurements for Gusset Plates - Gusset Plate analysis shall reflect the existing condition of the gusset plates and connections. As such, an ultrasound test (UT) shall be performed on gusset plates to determine the amount of section loss on the members.

CONSULTANT shall prepare and submit a gusset plate measurement report to the City, including, as applicable:

a. A minimum of one portal view and one elevation view photograph of each structure shall be provided. The reference photographs will provide a basis for determining present condition and future changes for the record.
b. The truss layout and table of gusset plate dimensions with percentage of section loss noted.

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

shall be filled out. The CONSULTANT shall refer to the ODOT Office of Structural Engineering Inventory and Coding Guide of SMS/BMS for inventory coding details.

TASK 4 – INSPECTION PROCEDURES

Task 4A – Fracture Critical Plan – A Fracture Critical Member Plan and inspection procedure shall be developed. For more details, refer to Chapter 4: Inspection Types in the Manual of Bridge Inspection. It shall include:

1. Sketch(es) of the superstructure with locations of all fatigue and fracture prone details identified.
   a. Use framing plan or schematic with detail locations labeled and a legend explaining each labeled item on the scheme.
   b. Use an elevation view for trusses.
   c. Classify similar fatigue/fracture prone details as types (e.g. end of partial cover plate).

2. A table or location of important structural details indicating:
   a. Type of detail (e.g. end of partial cover plate, short web gap, etc.)
   b. Location of each occurrence of detail
   c. AASHTO Fatigue Category of detail
   d. Identify retrofits previously installed

3. Risk Factors Influencing the inspector access.

Photos and sketches shall be properly referenced. The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection for additional details on the scope of this task.

Task 4B – Underwater Inspection Procedures – An underwater inspection procedure shall be developed. For more details, refer to Chapter 4: Underwater Inspections in the Manual of Bridge Inspection.

TASK 5 – BRIDGE INSPECTION

Task 5A – Routine Bridge Inspection (SMS/BMS Input) - Perform a routine field inspection of the structure to determine the general condition. The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection for additional details on the scope of this task. Section 1111 of the Moving Ahead for Progress in the 21st Century Act (MAP-21) modified 23 U.S.C.144, requires Ohio to report bridge element level data for NBIS bridges on the National Highway System (NHS) to FHWA. A condition rating or element level inspection will be assigned.

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.

Agreement Administration Procedures

I. Type I Task Order Notification and Authorization Procedures for task orders less than $10,000 with a well-defined scope of services

A. Central Office will identify a task order, assign a task order number and develop a detailed scope of services.

B. Central Office will authorize the CONSULTANT to perform the task by standard authorization letter that includes:
   1. A detailed scope of services for the task order.
   2. The completion time from authorization.
   3. The maximum compensation (including net fee).
      a. The net fee shall be calculated as 11% of actual cost (labor + overhead + direct non-salary expenses). Subconsultant net fees shall be calculated in the same manner but the prime CONSULTANT shall not earn net fees on subconsultant costs.

II. Type II Task Order Proposal Request, Review and Authorization Procedures for task orders greater than $10,000

A. Central Office will identify a task order, assign a task order number and develop a detailed scope of services

B. Central Office will prepare a request for a task order proposal in the format included herein and transmit it to the CONSULTANT. Review of the task order request and task order proposal preparation are allowable costs and shall be shown as a separate line item in the proposal.

C. Standard Proposal Format - Each Task Order Proposal shall include the following elements:
   1. Letter of transmittal with reference to include:
      a. Central Office General Engineering Services Agreement
      b. PID No.
      c. Agreement No.
      d. Task Order No.

      The project for which the task order is being performed shall NOT be in the letter of transmittal reference, but shall be referenced in the body of the letter.
   2. All other proposal requirements shall conform to Chapter 6, Price Proposals for Agreements and Modifications, of the current Specifications for Consulting Services.
   3. Appendix A of the CONSULTANT's proposal shall include the task order proposal request transmitted to the CONSULTANT by the District.

D. Central Office will review the CONSULTANT's proposal for:
   1. Adherence to submittal requirements.
   2. Compliance with the scope of services.
   3. Mathematical accuracy.
   4. Labor hours and rates.
   5. Net fee percentage.

E. Central Office will resolve any issues with the CONSULTANT and obtain a revised proposal (if necessary).

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.

Authorization to Proceed - Type I Task Order

Consultant Name and Address

Re: Central Office, Office of Structural Engineering
General Engineering Services Agreement
PID No.
Agreement No.
Task Order Number (FIPS Code) - (Number)

Dear Consultant:

Effective this date you are hereby authorized to proceed with the subject task order.

Project Identification

a. Bridge List
b. Tasks required on each bridge

Services Requested

(Detailed description of services required.)

Documents Furnished by the Agency (attached)

Additional Scope of Services Notes

Task Order Completion Time

___ days from Notice to Proceed.

Prime Compensation

The State agrees to compensate the CONSULTANT for the performance of the task order specified in accordance with Agreement No. _____, as follows:

Actual costs plus a net fee. The Maximum Prime Compensation shall not exceed _____ ($). The net fee shall be calculated as 11% of actual cost (labor + overhead + direct non-salary expenses). Subconsultant net fees shall be calculated in the same manner but the prime CONSULTANT shall not earn net fees on subconsultant costs.

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

Request for Task Order Proposal - Type II Task Order

Consultant Name and Address

Re: Central Office, Office of Structural Engineering
General Engineering Services Agreement
PID No.
Agreement No.
Task Order Number (FIPS Code) - (Number)

Dear Consultant:

Please provide a cost proposal for the subject task order as follows:

Project Identification

a. Bridge List
b. Tasks required on each bridge

Services Requested

(Detailed description of services required.)

Documents Furnished by the State (attached)

Additional Scope of Services Notes

Task Order Completion Time

___ days from Notice to Proceed.

Due date for Cost Proposal:

Please submit your proposal to:

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

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

Respectfully,

Attachments:

cc: file

Authorization to Proceed - Type II Task Order

Consultant Name and Address

Re: Central Office, Office of Structural Engineering
General Engineering Services Agreement
PID No.
Agreement No.
Task Order Number (FIPS Code) - (Number)

Dear Consultant:

Reference is made to your task order proposal dated _____, requesting compensation for the identified task.

Effective this date you are hereby authorized to proceed with the subject task order.

Prime Compensation

The State agrees to compensate the CONSULTANT for the performance of the task order specified in accordance with Agreement No. _____, as follows:

Actual costs plus a net fee of _____ ($). The maximum prime compensation shall not exceed _____ ($).

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,

cc: file