

ROAD COMMISSION FOR IONIA COUNTY

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October 26, 2018

REQUEST FOR PROPOSAL FOR DESIGN ENGINEERING & CONSTRUCTION ENGINEERING SERVICES

Removal and Replacement of: SN 4035: Long Lake Road over Dickerson Creek, Otisco Township, Ionia County

The Ionia County Road Commission (ICRC) is seeking proposals for the cost of design engineering and construction engineering services for removal of the existing bridge and construction of a new bridge/structure with related approach work. The design must be in accordance with Federal Highway Administration (FHWA) and Michigan Department of Transportation (MDOT) standards and specifications and AASHTO LRFD Bridge Design Specifications incorporating HL-93-mod live loading. The proposal must include all necessary work for plan and proposal acceptance by the ICRC and MDOT.

LOCATION:

Long Lake Road over Dickerson Creek is located near the center of section 31, Otisco Twp, T8N, R8W, east of the City of Belding and just east of the intersection of Hock Road.

The original multiple span structure was built in 1950 with a superstructure consisting of 3 steel I-Beam spans with a cast-on-place reinforced concrete deck with a bituminous wearing surface, concrete posts with steel beam railing, on pile supported concrete wall abutments and 2 steel I-beam piers also pile supported. Average Daily Traffic in 2016 was 1,273 with an average of 4% commercial traffic. The bridge is currently posted for a load restriction of 33 tons.

This bridge is not on the eligible historic bridge listing.

This project has been approved for \$1,609,000 in the 2020 fiscal year Local Bridge Program. The ICRC and MDOT will be involved in final approval of plans, etc., and acceptance of completed construction.

Provide a proposal for preliminary engineering and related services. The construction proposal and plans must be completed and approved by the ICRC and MDOT in order for a **January 2020 bid letting** (at the latest). The work included within the preliminary engineering proposal shall include, at the minimum, the following:

1. Complete all plans and specifications. They shall be developed to the most current edition of the Michigan Standard Specifications for Construction.
2. Determine in cooperation with the ICRC and MDOT, appropriate design criteria that will govern all design elements for the approach, superstructure replacement, abutment repairs, and scour countermeasures.

3. Surveys and field investigation including, but not limited to, surveys for the design, road alignment, property lines of adjacent riparian owners, river and flood plain cross sections necessary to develop hydraulics for MDEQ permit, topography, establish section line alignments and any other needed information designs, analysis, and applications for obtain any information needed for environmental studies, permits, etc. Northing and Easting coordinates shall be in NAD83 Michigan State Plane South – International Feet. NAVD88 elevations shall be used. It shall also include the location and staking of all horizontal and vertical control points for construction staking, i.e., benchmarks, POT's, PC's, PT's, PI's, section and 1/4 section corners with witnesses, etc. Report all control points with Northing, Easting, Elevation, Station and Offset.
4. Soil borings for abutment investigation and capacity analysis, will be the full responsibility of the consultant, including necessary traffic control, and shall be included in the proposal. Soil borings shall be included on the plans and include any gradation test results, shear tests, etc. Soil borings shall be made for each substructure location.
5. The Preliminary Design shall include a foundation load analysis for proposed structure and scour countermeasures. Also included shall be cost comparison recommendations for alternate designs using AASHTO LRFD Bridge Design Specifications incorporating the HL-93-mod live loading for the following types of structures:
 - Pre-stressed concrete I-Beams with cast in place deck
 - Concrete spread box beams with cast in place deck
 - Alternative recommended structures
6. The consultant shall prepare and submit any and all MDOT & FHWA program applications, all other applications, permits, and reports for environmental, hydraulic analysis, archaeological studies if required, assessments, reviews, etc. as may be required by FHWA, MDOT, Michigan Department of Natural Resources, Michigan Department of Environmental Quality, (SHPO to be performed by the ICRC), County Drain Commissioner, or any other Federal, State, or Local Agency involved in the project.
7. Prepare and submit type, size and location (TS&L) plans using the most current MDOT TS&L requirements list, specifications and an estimate of probable construction costs to the ICRC and MDOT for review, comment and approval. Attend the TS&L meeting, if one is necessary.
8. Prepare Preliminary Plans including engineer's opinion of cost, special provisions and additional information required by MDOT. Submit to the ICRC and MDOT for approval. Determine additional right-of-way requirements for the ICRC and prepare property descriptions and documents for any needed grading permits, easements or property acquisition. Provide any necessary staking required for ROW permits, easements or acquisitions. The ICRC will be responsible for appraisals, grading permits, easements and acquisitions of additional ROW.
9. Attend the grade inspection meeting.
10. Prepare Final Design plans, estimate (including electronic MERL) and special provisions in

accordance with the ICRC, MDOT and FHWA recommendations and requirements. Final plans shall be submitted electronically to the ICRC and MDOT for approval. Final electronic plans shall be complete with all necessary information and quantities ready for bid letting by MDOT.

11. If any public hearing is held for the project, the Consultant is expected to prepare any required information; attend and participate in the hearing.
12. Contact, coordinate with, and inform all utilities. ICRC will provide the consultant a list of utilities and contact information.
13. The proposal shall include: proposed bridge/structure type assumption along with the estimated construction cost; and a detailed breakdown of the estimated hours and hourly rates for the various design stages for each proposed bridge/structure type.

Provide a proposal for construction engineering and related services. Consider a construction schedule of 24 weeks in 2020 construction season. This schedule will include all pre-construction and project closeout requirements. The work included within the construction engineering proposal shall include, at the minimum, the following:

1. The preparation and operation of the pre-construction meeting.
2. Review and approval of the contractor's progress schedule.
3. Construction staking – control and as needed staking.
4. Inspection including inspector's daily reports, pay estimates, and contract modifications
5. Storm water and soil erosion and sedimentation control reviews, inspections, quality assurance, and onsite modifications.
6. Construction engineering
 - pile driving calculations
 - shop drawing review
 - fabrication inspection of beams, railing, and other prefabricated materials
 - materials testing
 - new bridge inspection
 - updating of the SI&A form
 - additional as-needed services
7. Final project inspection, completion of any incomplete or out of specification items.
8. The completion and closing out of the project files and related MDOT required documentation.

Any proposed cost increases for engineering shall be approved by the Road Commission before the costs are incurred.

Sealed proposals will be received until 2 p.m. on Thursday, November 29th, 2018 at 170 E. Riverside Drive, P.O. Box 76, Ionia, Michigan, 48846. Telephone: (616) 527-1700. Emailed proposals will also be accepted at spitzleyp@ioniacountyroads.org.

A decision as to whether to make award of the contract will not be made until the Road Commission and Township Boards meet and decide upon further action. This may require approximately two months before notification.

Professional liability insurance is required.

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PDF copies of this RFP, most recent Structure Inventory and Appraisal Form 1717A, Bridge Safety Inspection Report Form P2502, Bridge Inspection Reports, Load Analysis, Scour Analysis, recent photos, and old plans (attached as well) are available on our website at www.ioniacountyroads.org under the "Doing Business" tab. For additional information, please contact Paul Spitzley, County Highway Engineer, by phone at (616) 527-1700, or by email at spitzleyp@ioniacountyroads.org.