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Date: March 29, 2021

Subject: **Letters of Interest & Qualifications (LIQ) No. 61626**
Fiber Optic Backbone Engineering Design Services
Metra Electric Main and South Chicago Districts
Addendum No. 2

Dear Prospective Proposer:

Addendum No. 2 is being issued to provide Metra's response to questions submitted by potential proposers. Addendum No. 2 outlines all written questions submitted and Metra's responses to these questions.

Addendum No. 2 shall replace Exhibit 1-A, Scope of Services, Page 7 of 17 and Page 8 of 17 with the enclosed revised Exhibit 1-A, Scope of Services, Page 7 of 17 and Page 8 of 17 marked Addendum No. 2 dated March 29, 2021.

The proposal due date has been extended to April 9, 2021 at 4:00 P.M. LPT. Proposals received after this date and time will not be accepted.

All addenda must be acknowledged on page 25 of the Professional Services Agreement. Failure to acknowledge an addendum may be cause for the proposal to be considered non-responsive.

Sincerely,

Alexis Karas
Department Head
Professional Services Procurement

AK/nj

Question 1: I am going through the attached RFP and noticed that it is protected so I am not able to fill out the forms within the RFP…is there any way you can unprotect it or send the password? Or let me know if there is somewhere on the website where I can access the forms?

Metra Response: No, the LIQ document is locked as it is the actual contract and cannot be modified or altered. Please print the forms, complete them and submit them with the proposal.

Question 2: Given this is essentially a telecommunications project for fiber engineering design services, will Metra consider a minimum of ten (10) years of experience managing similar telecommunications and fiber projects as a substitute for the requirement of the Lead Project Manager having experience managing railroad specific infrastructure projects?

Metra Response: Ten years experience managing similar projects will be considered. However, railroad specific infrastructure experience is preferred.

Question 3: Per Addendum No. 1 Question 8 and corresponding Metra Response, if Network Design is not part of the scope of project then are Item #3 under Section A and Item #2 under Section B for XX. QUALIFICATIONS AND EXPERIENCE still applicable and required?

Metra Response: Yes, the qualifications and experience are still applicable and required as specified in the LIQ. Although this is a Dark Fiber project, the expertise required for fiber design is a critical part of the contract.

Question 4: Is there a quality specification for the survey? If not, would you accept a map grade survey? Is there a horizontal and vertical accuracy requirement for field survey work, e.g., sub-centimeter or sub-foot? Map grade survey accuracy would be sub-meter.

Metra Response: Map grade survey is acceptable if this refers to LiDAR mapping. Metra stationing is measured in feet not meters. Each station is equal to 100 ft. The horizontal and vertical accuracy for field survey design shall be within a 0.3 ft tolerance. Since LiDAR mapping will require a Hi-rail vehicle, Consultant's equipment should be capable of being attached to Metra's Hi-rail. Metra will coordinate Hi-rail activity with the awarded Consultant. Third-party vehicles will not be allowed on Metra tracks at this time. Sub-meter accuracy is acceptable.

Question 5: Collection is subject to access availability. Often collection happens during non-revenue hours, for example 10:00pm to 4:00am, we would like confirmation on this. Metra will require either a pilot or pilot vehicle to accompany the Mobile Automated Field Survey HiRail team. With Covid restrictions still in place, we request a Metra support person to ride in the pilot vehicle leading the mobile acquisition team along the assigned alignment.

Metra Response: Track access availability is between the hours of 9:00 a.m and 3:00 p.m., however, may be subject to change. Metra will not allow 3rd party pilot vehicles on Metra tracks. Metra will provide a Hi-rail for the awarded Consultant, if required. Consultant's equipment can be mag-mounted to the roof of Metra's Hi-rail. Due to COVID-19 no more than two people can occupy a vehicle. Facial masks are required when riding with or without Metra staff on Metra's property or in Metra's Hi-rail vehicle.

Question 6: Mapping from r/w to r/w will require multiple acquisition passes and acquisition days. There are areas of 6 or more tracks; are all tracks within the corridor managed by Metra? If multiple governing organizations will be responsible for granting access and providing flagging/pilot protection, who will provide the necessary contact information and coordinate the schedules?

Metra Response: Yes, Metra owns and operates all tracks on the Metra Electric. Metra will provide flagging on Metra's right-of-way. A right of access will be provided to the awarded Consultant.

Question 7: If images are required for this project daytime access (during revenue periods) will be required, ambient light is needed for all imagery. What would the estimated working schedule be for a daytime collection?

Metra Response: Normal access hours if a crew is fouling the track is between 9:00 a.m. and 3:00 p.m. All access to the Metra right-of-way will require Metra lookout and/or flagger to be present.

Question 8: Metra has a safety program we (the collection team) will need to pass and be certified to work on the active track. Are there any other safety courses and certifications we will need to access the corridor beyond what is specified in the LIQ?

Metra Response: Safety requirements are specified in the LIQ. All other safety requirements not specified in the LIQ will be explicitly defined further to the awarded Consultant.

Question 9: The scope describes installation, termination and testing of fiber cabling but does not indicate any connections to existing terminating equipment. Is this correct?

Metra Response: Yes, this is correct. Testing is required to verify end to end clearance of the fiber and no obstructions in the fiber line at each termination point. Termination points are handholes.

Question 10: What will the accuracy requirement be for this project? Is there a horizontal and vertical accuracy requirement for field survey work, e.g., sub-centimeter or sub-foot? Map grade survey accuracy would be sub-meter.

Metra Response: Sub-centimeter accuracy is acceptable. Please refer to Metra's Response to Question 4 for further information.

Question 11: There is the Randolph station on the far north. Will we have access to this underground area? If so, will a diesel-powered vehicle be required? Access would be for Millennium Station to allow surveying to be performed. The survey equipment would be mounted to the vehicle. It has been our experience some rail companies only allow diesel-powered vehicles in certain tunnels and underground facilities.

Metra Response: Access to the underground area at Randolph Station on the far north will be granted. Metra will provide a Hi-rail vehicle if underground access is required. Diesel-powered equipment is not required. Gas or diesel is acceptable. Please refer to Metra's Response to Question 4 for further information.

Question 12: There is a short tunnel at the transition or spur to South Chicago 93rd st station. Will a diesel-powered vehicle be required for this? Access would be to allow surveying to be performed. The survey equipment would be mounted to the vehicle. It has been our experience some rail companies only allow diesel-powered vehicles in certain tunnels and underground facilities.

Metra Response: South Chicago 93rd St. Station is not part of the Metra Electric Fiber design. The design encompasses Millennium Station to University Park (Metra Electric Main Line). Metra will provide a Hi-rail vehicle. Diesel equipment is not required. Gas or diesel is acceptable. Please refer to Metra's Response to Question 4 for further information.

Question 13: Is there a standardized list of fixed RR equipment with additional attributes (ex.: type, size, description, etc.) that will help us identify or is required to be recorded in our survey? If so, will you supply this prior to the survey?

Metra Response: The Milepost markers will be used as reference for survey stationing. Stationing should start at Milepost 0.

Question 14: Is the survey area the top of the ballast or deck where the rails reside, or do you also require the slopes or sides of the bridges and fence line?

Metra Response: Yes, the slope ratio shall be included where a slope is encountered during survey and the proposed design is including the slope or incline in the design. Normal survey stationing is on a horizontal plane.

Question 15: Are all communications or power pole attachments to be recorded in the survey?

Metra Response: Yes, all structures on the route should be included since the structures can be used to reference stationing alignments in the design.

Question 16: Will field survey by use of Survey Drones be an acceptable means to capture data?

Metra Response: Yes, if you are referring to drones attached to the top of Hi-rail vehicles. Flying drones are not allowed.

XII. SCOPE OF SERVICES

Consultant shall provide all qualified staff and any other items necessary to complete design specification documents for the equipment, materials, and fiber spans including all drawings required for procurement and burial installation of the fiber optic backbone along right-of-way of Metra Electric District Main and Metra Branch South Chicago from Millennium Station to University Park in accordance with the requirements outlined in this LIQ. Consultant shall provide support and any necessary revisions to bid documents during the bid phase services.

XIII. CONTRACT REQUIREMENTS

The Consultant shall provide all expertise, labor and deliverables to complete the work required. The elements listed in this Section are considered the major scope elements. The Consultant shall identify and include all other work requirements necessary to successfully complete the design as required, even those work items not specifically listed in this Section.

A. Provide design of dark fiber optic cable backbone to support all using departments of Metra. Design will start at Millennium Station and proceed to the end of the Metra Electric line at University Park. The combined dark fiber design of both operating districts will cover approximately 35.7 miles of right-of-way with the miles per district as follows:
   1. Metra Electric Main District – 31.5 miles
   2. Metra Electric South Chicago Brach – 4.2 miles

B. The Project scope and overview are as follows:
   1. Fiber optic backbone design per Metra requirements:
      a. Design of a 288 strand single mode fiber optic backbone cable system for fiber optic cable routing will be required along the entire right-of-way including under grade crossings and over bridges.
      b. The design will accommodate for two 7-way micro-ducts. One micro-duct will incorporate the 288 strand single mode fiber in one (1) tube of the 7-way micro-duct and the remaining six (6) tubes will remain empty. The second 7-way micro-duct will also remain empty. A 4" conduit will be part of the fiber design. The 4" conduit is for future signal use.
      c. Handholes/vaults or other communication housing shall be located at signal bungalows, signal cabins, depots, Voice of Metra (VOM) cabinets, grade crossing and various other locations as deemed necessary along the right-of-way to provide fiber cable access.
      d. Fiber optic breakout cable coils shall be located within handholes.
      e. Stations are to be routed to external VOM depot cabinets. At stations where an external VOM depot cabinet does not exist, modifications will be necessary to route and design external VOM demarcation.

   2. Fiber termination locations:
      a. Stations.
      b. Train control interlockings.
      c. Signal Huts
      d. VOM Huts
      e. PTC Wayside locations.
      f. Metra facilities.
      g. Trailers/Temporary facilities.
      h. Grade crossings.
      i. Pedestrian) (ped-way) crossings.
      j. PTC and ASE Base stations.

k. Other strategic locations as deemed necessary.

3. Field Site Survey:
   a. Perform physical survey and inspection of the suggested cable route(s) and all fiber termination locations.
   b. Utilize Global Positioning Satellite (GPS) Maps when applicable.
   c. Specify all hardware and tools necessary for requisition.
   d. Book and prints of all surveys.

4. The Consultant shall prepare the field verification report 45 days from NTP. The 30% (3 months from NTP), 60% (6 months from NTP), 90% (8 months from NTP), and 100% (final) (9 months from NTP) milestone submittals.
   a. Metra will review and provide comments within 7 calendar days of receipt of submittals.
   b. The Consultant shall respond in writing and/or incorporate comments within one (1) week of receipt of comments. All comments received by the Consultant must be incorporated into the 100% (final) documents prior to its issuance to Metra.
   c. These milestones will be the basis for payments to the Consultant.

C. The Consultant is responsible directly to Metra's Telecommunications Engineering Division and shall report to the assigned Metra Project Manager in charge of the project.

D. Complete field inspections of railroad right-of-way condition as it relates to track, signals, bridges, retaining walls, drainage structures, highway grade crossings and other rail infrastructure adjacent to the Project sites.

E. Provide Project cost estimates to include construction cost estimates for any anticipated land acquisition costs, in original and FTA Standard Cost Categories (SCC) formats, at all Project milestones. These estimates should be based on Metra's previously established unit costs for capital construction with updates or modifications where necessary. Compile a total project cost estimate that includes cost estimates for railroad costs such as flagging, etc. Include contingencies based on the level of design and escalate costs for targeted year(s) of construction. Capital costs shall include all related infrastructure improvements (PTC adjustments, signals, etc.) A cost estimate shall be provided for each line (Metra Electric Main District from Millennium Station Chicago to University Park and Metra Electric South Chicago Branch) as well as for the total project.

F. Provide plans and specifications to Metra. Provide technical memoranda summarizing any proposed site improvements and costing information. Design plans and cost estimates shall be modified as need to respond to review comments.

G. Follow and document in accordance with Metra's Quality Management Program. Metra has developed the Third Party Contracts Quality Management Plan (TPCQMP) which is consistent with the Metra Corporate Quality Management Plan and the Federal Transit Administration (FTA) Quality Management System Guidelines FTA-PA-27-5194-12.1. The TPCQMP incorporates the applicable elements of a quality program as required by the FTA document. The current version of the Metra TPCQMP is available at https://metrarail.com/engineering, under "Quality."