



REQUEST FOR PROPOSAL TO PROVIDE DESIGN SERVICES

CREATE EW2/P2 Preliminary Signal Design Services
Belt Railway Company
September 28, 2022

Belt Railway Company (BRC) is issuing a Request for Proposals to provide preliminary signal design services for the EW2 and P2 CREATE projects. This preliminary engineering Signal consultant will provide the CREATE partners and the railroads with the appropriate scoping of the signal work to be coordinated with the current design elements of EW2 and P2. Time is critical; once on board, the consultant is expected to process with the work quickly and without delay.

Project Overview and Background

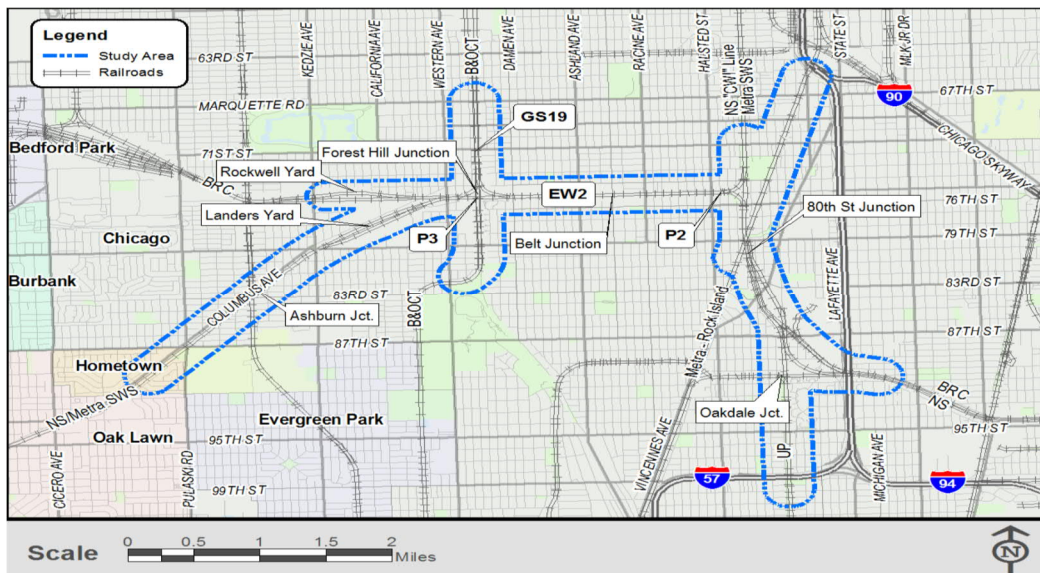
The EW2 project is part of the 75th Street Corridor Improvement Project (CIP) in Chicago that extends from the Ashburn Interlocking at the west end to the Dan Ryan Expressway at the east end. The EW2 project also extends down to south of Oakdale near 91st Street. The intent of the project is to improve mobility for rail passengers, freight, and roadway users by reducing rail-rail conflicts, reducing local mobility problems, and improving rail passenger transit service.

The EW2 project includes improvements to existing track, signals, bridges, retaining walls, and viaducts, as well as new bridges, retaining walls, and noise walls to accommodate the added Norfolk Southern Landers Main track and to accommodate the Metra P2 Flyover structure.

The Metra P2 project consists of a proposed flyover structure that will connect the SouthWest Service (SWS) line near Belt Junction with the Rock Island District (RID) line near 73rd Street.

The 75th Street CIP also includes the construction of a new rail flyover for B&OCT over the 75th Street Interlocking/Forest Hill Junction and 71st Street. These improvements comprise the P3 and GS19 projects and are under construction.

The limits of this design package are identified in the below location sketch:



Scope of Work Summary

Preliminary engineering services are required for the preparation of final contract plans, project specifications, and construction cost estimates for signal design as described below. The work listed herein will be accomplished using track staging concepts provided by BRC. The final work product will include a summary of all remaining signal work, including the schedule and cost estimate. Bid and Force Account construction contract packages will be required.

CREATE EW2/P2 Preliminary Signal Design Scope and Estimate will include:

1. BRC will hire one firm to do all the preliminary signal design and interface with other involved railroads (Metra, Norfolk Southern, Union Pacific) along with their consultants that are designing the track and structural infrastructure.
2. Construction Overview depicting existing and future phases of work.
3. Complete preliminary signal design in 12 months.
4. Adjust level of effort to support civil and track design.
5. Route and Aspect charts
6. Safe braking analysis.
7. Signal locations including any bridges, cantilevers, high mast signals, or other.
8. Signal and communication case(s), cabin(s), and tower locations. The preliminary engineering consultant (railroad) must verify at each submission these elements stay within the CREATE Environmental Survey Request (ESR) footprint limits.
9. Underground cable plan as needed by each railroad.
10. Summary of power drops, natural gas, and all utilities requirements at each location.
11. Construction estimates for power, gas line and other required utilities such as drainage or communication for each of the locations.
12. Signal construction phasing plan estimated based on track construction plans and requirements. The Phasing plan should clearly depict each railroad's involvement in each stage. It is important to understand how this work will be built and each railroad's timing for interfaces to existing and/or new infrastructure.
13. Signal construction cost estimate for each of the railroads for Bid and Force Account (BRC, Metra, Norfolk Southern, Union Pacific) including proper construction management, construction contingency, inflation, and management reserve per CREATE requirements.
14. Survey of existing and future signal locations.

Required Project Management and Coordination

- Project planning and scheduling of the preliminary signal design
- Stakeholder Coordination and Communications which may include, but is not limited to Norfolk Southern, BRC, Metra, Union Pacific, Chicago Department of Transportation (CDOT), Cook County Department of Transportation and Highways (CCDoTH), Illinois Department of Transportation (IDOT), and Federal Highway Administration (FHWA).
- Coordination with the operating railroads in the project area, including but not limited to interfacing with their operations and engineering teams and abiding by each of the individual railroad's design standards.
- Coordination on site layout and track geometry with railroad design consultants as they progress with track, civil, and structural design
- CREATE Program document control and ensuring process compliance

Location-Specific Scope of Work

The EW2 and P2 work involves reconfiguring and constructing additional tracks through 80th Street Junction, constructing a rail flyover on new alignment to connect the Metra SWS to the Metra RID line, and constructing a second through track for Metra along Columbus Avenue. The magnitude of the signal work can be seen on Attachment 1 – EW2-P2 Staging Schematic dated 3/19/2021 and Attachment 2 – 75th St CIP Signal Connections dated 10/24/2018. Attachment 1 depicts the existing condition and the preliminary engineering for phasing of the P2 and EW2 work from a track and structural perspective. Attachment 2 depicts the required signal connections at the various Control Points within the 75th Street limits. The table below is a table showing the approximate quantities of signal and track components for which preliminary signal design will need to be completed. Note this table only depicts approximate quantities and don't include any temporary work that will need to be accounted for with this preliminary engineering effort.

ITEM NUMBER	ITEM DESCRIPTION	TOTALS
1	SIGNAL HOUSE	30
2	SIGNAL MAST	21
3	SIGNAL CANTILEVER	26
4	SIGNAL BRIDGE	7
5	#9 / #10 TURNOUTS	6
6	#15 TURNOUTS	17
7	#20 TURNOUTS	4
8	#15 CROSSEVERS	39
9	#20 CROSSEVERS	7
10	POWER OPERATED SWITCH MACHINE	116
11	COMMUNICATION FEED (BUNGALOW to OFFICE)	30
12	POWER FEED (to BUNGALOWS AND SIGNALS)	84
13	NATURAL GAS FEED (LINE)	30
14	SNOW PROTECTION	116
15	BACKUP GENERATOR	30

Anticipated Deliverables

- Phase II Report(s) per the CREATE Phase II manual for both Bid and Force Account work where applicable. Phase II report(s) shall include identifying required permits.
- Route and Aspect charts
- Safe braking analysis
- Utility matrix, schedule, and cost estimate
- 30%, 60%, 90%, and 100% preliminary signal design submittals
 - A disposition of comments for each of these submittals, tracking all railroad comments as well as comments from IDOT reviews
 - Construction cost estimates will need to be provided with each of these submittals, including Bid and Force Account estimates and specialized services for each of the railroads involved.
 - Estimates of construction schedule will be needed starting at 60%.
- Specifications in accordance with each of the railroads involved in operations

BRC will furnish the awarded signal consultant with the following items:

- Approved CREATE Phase I project report (for information only as some scope items have changed). This includes proposed track geometry and preliminary signal design.
- Phase I schematics
- Available existing signal and track drawings and plans as they are available and developed
- Proposed final track geometry, structural, and staging plans for each railroad as they are available and developed
- Existing survey data and/or CADD files
- Fly map data from 2018 as available
- Geotechnical reports
- Environmental reports including ESR boundaries
- CREATE P2 Approved TS&L Plans
- Agency or third-party coordination documents
- BRC Right of Entry Access Agreement
- Links to the CREATE Phase I, II, and III Manuals

Expectations

Interested firms will be required to comply with certain State and Federal policies, such as Equal Employment Opportunity, Disadvantaged Business Enterprise (DBE) participation, and Davis-Bacon Act.

Insurance requirements (subject to change):

- Commercial General Liability insurance consisting of primary and umbrella and/or excess policies and such combined policy limits shall be \$10 million per occurrence and \$10 million in the aggregate per annual policy period
- BRC requires that the railroad be named as an additional insured
- Policy must not be changed, cancelled, terminated, or not renewed without at least thirty (30) days advance written notice from the insurance carrier to BRC

- Policy shall not contain an exclusion for injuries or damage occurring on or near railroad property
- Policy is subject to BRC approval, which shall not unreasonably be withheld
- More details can be found in BRC's Right of Entry Access Agreement

Qualifications and Experience of the Firms/Subcontractor(s) Key Personnel (Team):

- The Project Manager(s) (including subcontractors) shall have at least ten (10) years of directly applicable experience on at least three (3) comparable signal system projects related to Class I Railroads and Metra.
- Signal Engineer(s) (including subcontractors) shall have at least seven (7) years of directly applicable experience in Railway Signal and Communication Systems on at least three (3) comparable projects for Class I Railroads or Metra; a minimum of three (3) years of Class I Railroad along with Metra signals and communication systems, operations, and maintenance experience.
- The Consultant shall have a minimum of fifteen (15) years of experience working with the following design standards:
 - Rules and Regulations Governing Railroad Signal and Train Control Systems, Department of Transportation, FRA, current edition
 - Grade Crossing Signal System Safety Regulations, Department of Transportation, FRA, current edition
 - Manual on Uniform Traffic Control Devices, FHWA, current edition including Illinois Supplement
 - American Railway Engineering & Maintenance-of-Way Association, Communication and Signal Group, Signal Manual of Recommended Practice, current edition
 - General Code of Operating Rules, effective 4-1-2020 Eighth Edition
 - The State of Illinois, Illinois Commerce Commission, 92 Illinois Administrative Code, Part 1535, Crossing of Railroads and Highways, current version, and Part 1500 Minimum Clearances applicable to Tracks, Structures, Fixtures, and other Appurtenances of railroads, current edition.

Qualifications and Experience of the Firm

- The Firm shall have at least ten (10) years of directly applicable experience on at least three (3) comparable signal system projects related to Class I Railroads and Metra.
- Successfully completed similar projects that are operational and functional as engineered for at least five (5) years in the last fifteen (15) years.

Contractor safety orientation training and employee participation in the e-RailSafe program, or other railroad safety programs as needed, is required. The selected team will be required to provide a Quality Management Plan to BRC.

This project involves inspection, design, and construction of railroad facilities, which requires compliance with railroad safety requirements. Signal Consultants should take extra care to familiarize themselves with these additional requirements for railroad safety which are detailed in the BRC Right of Entry Access Agreement.

DBE Spending Goal

A DBE spending goal of 5% has been established for this design package for the project. If this spending goal is not met or exceeded, documented evidence of good faith efforts is required. DBE firms must be currently listed on the Illinois Unified Certification Program (UCP) directory which can be found at <https://webapps.dot.illinois.gov/UCP/ExternalSearch>.

The method that will be used to meet or exceed the minimum DBE goal should be outlined in the proposal.

Proposal Requirements

This is a request for proposal and not an offer to purchase. BRC shall have no obligation to any company submitting a proposal and is not liable for any costs incurred in the preparation of a proposal. Teams and joint ventures will be allowed to submit proposals. The organizational structure of teaming agreements and sub-consultant relationships shall be clearly indicated in the proposal. A single point of contact should be identified for the organization.

Proposals are limited to 30 pages total and shall include the following items:

- Cover Letter to include proposed team (identifying subconsultants/roles, DBE), (limited to 2 pages)
- Project Understanding and Approach (limited to 5 pages)
 - Demonstrate the firm's understanding of the project and key issues, and the firm's familiarity of the project area.
 - Describe the firm's approach to the project and anticipated scope of work for completing design engineering, ensuring project eligibility for construction letting based on compliance with federal project development procedures.
- Team Organizational Chart (showing sub-consultants) (may be formatted for 11"x17" size)
- Team's Qualifications/Capabilities (limited to 20 pages)
 - Demonstrate the firm's qualifications and capabilities to complete the signal design services presented above.
 - Identify staff availability for this project.
 - Include at a minimum the resumes of key personnel identified above under Expectations (2 pages each)
 - Contact information and a short biography for the primary Project Manager that would work on this project
 - Contact information and a short biography for the primary signal design engineer that would work on this project
- Project Experience (limited to 5 project descriptions, 1 page each)
 - Provide an overview of firm's experience with the administration of public private partnership projects, including familiarity working with the City of Chicago and IDOT; additional familiarity with FHWA and FRA grants is a plus
- Proposed Schedule (may be formatted for 11"x17" size)
 - Provide a design schedule for completion of engineering services assuming a December 2022 notice to proceed.
- Provide scope of work with estimated hours broken down by task.

- Provide a health and safety plan, including compliance with Federal, State, and City COVID-19 orders.

Proposals shall be compliant with FHWA 1273 as applicable.

All participating firms, including subconsultants, shall be absent from the Illinois Delinquency Debt List. If the consultant or any of their subconsultants are identified as delinquent, they will be able to remedy their situation, but must do so prior to contract execution.

The following items shall also be provided:

- Valid and completed lobbying certification by proposed prime consultant or all partner firms in proposed joint ventures
- Debarment forms from all participants
- Completed response to DBE goal (DBE firms are only qualified if they are named on the current IDOT UCP list)

Evaluation Criteria

Proposals will be evaluated based on the following criteria:

- Project Experience
 - Experience with management, design, and construction of railroad signal projects involving Class I railroads and Metra, and IDOT-sponsored Railroad Projects.
 - Experience with projects with public funding sources, project monitoring, inspection, and reporting requirements involving public private partnerships, including familiarity working with the City of Chicago and IDOT.
- Technical Approach
 - The team shall demonstrate understanding of the project challenges and goals, and provide a technical approach to executing design engineering services to minimize risk
- Personnel Qualifications and Capabilities
 - Commitment to effective communication and teamwork
 - Education, licensure, and relevant experience of key personnel
- Local Presence & Availability
 - Proximity of team to project site
 - Availability for site visits and coordination meetings
 - Commitment of staff to project schedule
 - Adequacy of resources to execute multiple awards simultaneously (if applicable)
- DBE Participation
 - Ability to achieve the DBE spending goal for the project
 - Demonstrated history of successful working relationships with DBE firms
 - Prior working relationships with proposed DBE firms
 - Proximity of DBE firms to project location

BRC will review the various proposals and score each company according to the chart below. The maximum point score is 100 points. The company with the highest score will be selected by BRC to enter into negotiations with respect to one or more definitive agreements related to the work on this project.

Experience with Class I Railroad and Metra Projects	30 Points
Signal Design Technical Approach	25 Points
Personnel Qualifications and Capabilities	30 Points
Local Presence and Availability	5 Points
DBE Participation	10 Points

Submittals

A mandatory virtual preproposal meeting is scheduled for 9:00 am (CDT) on October 7, 2022. Email Scott Schiemann at sschiemann@beltrailway.com by 5:00 pm (CDT) on October 5, 2022 to be registered for the virtual preproposal meeting and you will receive a link for the meeting.

Questions shall be submitted electronically to sschiemann@beltrailway.com by 12:00 noon (CDT) on October 14, 2022. All questions and answers will be issued in an addendum by 5:00 pm (CDT) on October 21, 2022.

Proposal documents must be received before 12:00 noon (CDT) on November 11, 2022. Only electronic submittals emailed to sschiemann@beltrailway.com by the deadline will be considered.

Please include your firm's name and "CREATE Project BRC Signal Design" in the subject line. Selection is expected in December 2022.

For more information about the CREATE Program, please go to <http://www.createprogram.org/>

The CREATE Phase II Manual can be found at the following address:

<https://idot.illinois.gov/Assets/uploads/files/Transportation-System/Manuals-Guides-&-Handbooks/DPIT/CREATE/CREATE%20Phase%20II%20Manual.pdf>

Please contact Scott Schiemann at Email: sschiemann@beltrailway.com to request an FTP link for the following attachments (for information only):

- Attachment 1 – EW2-P2 Staging Schematic dated 3/19/2021
- Attachment 2 – 75th St CIP Signal Connections dated 10/24/2018
- Attachment 3 – BRC Right of Entry Access Agreement dated October 2020

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