



REQUEST FOR PROPOSAL TO PROVIDE DESIGN SERVICES

**CREATE EW2 Design Package #1
Norfolk Southern Railway Company
November 25, 2021**

Norfolk Southern Railway (NSR) is issuing a Request for Proposals to provide services as the Engineering Service Provider (ESP) for **EW2 Design Package #1** for the rehabilitation and/or replacement of the existing rail structures listed below, new structures identified in the supplemental documents, and additional improvements noted in the Scope of Work Summary section below.

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 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 track, signals, bridges, retaining walls, and viaducts. Within the EW2 limits, the project will improve 36 viaducts to increase local mobility by roadway resurfacing or reconstruction, sidewalk replacement, ADA improvements, lighting upgrades, drainage improvements and bridge rehabilitations or replacements. In addition to viaduct improvements, the project also includes new bridges, retaining walls and noise walls to accommodate the added NSR Landers Main track and to accommodate the Metra P2 Flyover structure.

The NSR EW2 Design Package #1 includes a segment of the overall EW2 proposed improvements as further discussed below. Proposals for a total of four EW2 Design Packages will be requested simultaneously. Consultants are permitted to pursue, and may be selected for, more than one package (2 max).

The limits of this design package are identified in the attached location sketch (Appendix A).

Scope of Work Summary

Design engineering services are required for the preparation of final contract plans, project specifications, construction cost estimates, and estimates for repair, rehabilitation, removal and/or replacement of select railroad structures listed below. The work listed herein will be accomplished using track staging concepts provided by NSR. Multiple construction contract packages may be required. The following is a list of anticipated minimum scope items included in this package:

Project Management and Coordination

- Project planning and scheduling
- Stakeholder Coordination and Communications which may include, but is not limited to NSR, Belt Railway of Chicago (BRC), Metra, UPRR, CDOT, IDOT, and private property owners.

- Coordination with other planning and engineering consultants related to portions of EW2 not included within this specified package.
- Development of bid documents for proposed bridge and civil/roadway design, including development of bid sheet with estimated quantities at each structure and viaduct. Estimates may be further separated by funding source.
- Construction cost estimate at 30% milestone and detailed construction cost estimate at 60%, 90%, and 100% milestones
- Permitting
- Development of Phase II Report, including assembly of prior developed components
- CREATE Program document control and ensuring process compliance
- Project accounting and billing analysis
- Adherence to the Quality Management Plan provided by NSR
- Comment dispositions for NSR, BRC, Metra, IDOT, CDOT, and FHWA design reviews.
- Documentation of changes to and/or updates to bridge scope at 30%, 60%, 90%, and 100% milestones

Survey

- ESP shall provide supplemental topographic survey:
 - within the ESR limits as shown in the Phase 1 Design Report at roadway level in the vicinity of the bridge location and;
 - at track level at each bridge location and bridge approaches within the right-of-way limits of railroad(s) from railroad right-of-way to right-of-way and;
 - at retaining wall locations and;
 - detailing the location of bridge elements such as beams, bearings, columns, etc. to complete design and construction staging plans and;
 - determining the existing vertical clearance(s).

Geotechnical

- ESP shall provide and determine the type and number of geotechnical investigations, structural borings, and Structural Geotechnical Report (SGR) in accordance with IDOT and AREMA requirements.
- Wherever soil borings occur, the ESP shall conduct soil borings to extend a minimum depth of ten feet below the anticipated design depth for base of excavation or bottom of deep foundation. ESP shall conduct survey and test for contaminated soils. Test soil samples for identification of contaminated or hazardous solid waste.

Civil/Roadway

ESP shall provide design services for the following items:

- Field review based on CDOT evaluation criteria to determine design scope at each viaduct
- Design services for viaducts using CDOT's design by specification
- Roadway resurfacing or reconstruction within the ESR limits
- Sidewalk replacement and ADA Improvements within the ESR limits

- Electrical / Lighting upgrades within the ESR limits
- Drainage improvements within the ESR limits, including as noted in Drainage “Areas of Concern” from Phase 1 Drainage Report and Summary of Viaduct Improvement Recommendations
- Cleaning and televising sewer lines within ESR limits. Develop repairs required for sewer system within these limits. The condition of the sewer is to be verified before and after construction work.
- Maintenance of traffic and/or detours
- Identification of, and development of cost estimates for, public and private utilities to be relocated. Design of public utility relocation shall be coordinated with CDOT.
- Civil/Roadway design will comply with IDOT and/or CDOT standards, requirements, and directives as appropriate.

Structural/Bridge

Design services shall cover the following items:

- Structural steel bridge repairs to structures to remain and for temporary track staging on structures to be removed
- Concrete spalling and crack repairs of substructures
- Bearing replacements
- Steel superstructure and/or substructure replacement
- Concrete encasement of substructure at roadway level
- Deck replacement, waterproofing and bridge deck drainage
- Staged construction and required temporary works details
- New steel multi-span bridge on new piers and new foundations
- New superstructure protection and/or warning system
- New retaining wall(s)
- Field bridge inspection & superstructure rating for staging and final design
- Field evaluation of existing abutments and pier foundations to confirm absence of substructure settlement issues for reuse
- Field evaluation of existing abutments to identify visible deficiencies such as cracks, spalls, and leaking joints to be repaired
- Field evaluation of existing abutments using nondestructive techniques such as concrete hammer sounding to determine non-visible deficiencies and, if necessary, concrete coring to obtain concrete properties for areas to be repaired
- Field evaluation and design of repairs to existing abutment backwalls
- The ESP will test for lead-based coatings on existing structures and address in the plans and specifications as necessary.
- The ESP will determine the presence of asbestos at existing structures per IDOT BLR form 10220.
- Structural/Bridge design will comply with NS, BRC, Metra, Amtrak, UP, IDOT, CDOT and/or Cook County standards, requirements, and directives as appropriate.
- New low steel elevation shall not be lower than existing surveyed low steel elevation. Vertical clearance provided under structures, including proposed bridge widening, shall

be equal to or exceed the greater of the existing surveyed clearance and the proposed clearance on the PTS&L in the approved CREATE EW2 Phase 1 project report or as approved by local jurisdictional agency. Where possible, increase the low steel elevation to increase vertical clearance over the roadway. The current Coordination/Commitment matrix documenting IDOT/CDOT requirements will be provided to the selected engineering team at project NTP.

- The ESP shall participate in OUC/CDOT Deep Foundation coordination and shall provide complete plans, specifications, and calculations as needed to obtain OUC/CDOT Deep Foundation permit authorization. ESP is advised that this task duration will extend through the construction with contractor(s) obtaining CDOT permit(s) for construction activities.

The following structures are included in this project:

#Package-#Structure [IDOT Structure No. / NSR Bridge No. (Description)]

- #1.1 S.N. 016-0885 / C-11.40 (RR over 79th St & Kedzie Ave)
- #1.2 S.N. 016-9940 / C-11.40 (RR over 79th St.)
- #1.3 S.N. 016-9941 / C-11.40 (RR over Kedzie Ave)
- #1.4 S.N. 016-6318 / C-10.25 (RR over Western Ave)
- #1.5 S.N. NA / B-518.31 (RR over Damen Ave)
- #1.6 S.N. NA/NA (RR over Damen Ave)
- #1.7 S.N. 016-3038 / B-517.80 (RR over Ashland Ave)

Location Specific Scope of Work (Package #1)

Structures #1.1, 1.2, and 1.3: Railroad over 79th St and Kedzie Ave (S.N. 016-0885, 016-9940, 016-9941)

The existing bridge is located just east of the intersection of 79th St and Kedzie Ave and consists of multiple through plate girder bridge spans. The bottom flange of the through plate girders and some floor beams are damaged due to vehicular impacts. The ESP shall evaluate and provide repair details for each impacted element, as required, including high-level fatigue analysis of existing structural steel elements. Other structural repairs include concrete spalling and crack repairs to the existing abutments and columns. Exposed steel surfaces, including the girder faces and underside of the bridge shall be blast-cleaned and painted. In addition to the structural repairs, roadway resurfacing, lighting upgrades, and ADA improvements are to be included.

Structure #1.4: Railroad over Western Ave (S.N. 016-6318)

The existing south half of the structure will be replaced with a new, 4-span, ballasted, deck beam bridge on new steel bents/foundations, evaluate existing abutments for re-use and design modifications or new abutments as required. The proposed bridge is widened to the south to improve track geometry and provide an access road along the south edge. A new retaining wall is proposed along the south right-of-way line, adjacent to an existing building, on the east side

of Western Ave to accommodate the wider bridge. The existing northern half of the bridge is a steel through plate girder bridge fully encased in concrete that will receive structural repairs as required. The ESP shall perform high-level fatigue analysis of existing structural steel elements. The roadway is to be resurfaced, sidewalks replaced, and ADA improvements added where applicable. The ESP shall evaluate how the proposed bridge and retaining wall may impact the existing adjacent buildings and specify a monitoring program to be carried out by the contractor as necessary.

Structure #1.5: Railroad over Damen Ave

The existing bridge is a historic structure comprised of six separated through plate girder roadway spans with two common concrete sidewalk spans. The structural system for the roadway span consists of a concrete-filled deck resting on floor beams, which frame into through plate girders. The structural system for the two sidewalk spans is reinforced concrete slabs. The structural scope of work at this location includes replacing bottom lateral bracing in select locations, concrete spalling and crack repairs, and widening the bridge to the north through the addition of a new through plate girder structure and shifting existing through plate girders to accommodate new track alignments while maintaining the crossing's historical architectural appearance through preservation, incorporation and/or duplication of existing stylistic features. The widening will also include new sidewalk spans, pier extensions and wingwall modifications. The ESP shall develop the general procedure to jack and shift the through plate girder spans. The ESP shall also design and determine the location of any temporary attachments to the spans as required to jack the bridge and evaluate the bridge bearings for re-use. The ESP shall design any extensions/modifications to the existing piers and sidewalk spans to accommodate the shifted through plate girder spans. The ESP shall perform high-level fatigue analysis of existing structural steel elements when determining repairs to the bridge. Exposed steel surfaces, including the girder faces and underside of the bridge shall be blast-cleaned and painted. Additional scope includes roadway resurfacing, sidewalk repairs, and lighting upgrades, as required.

Structure #1.6: Railroad over Damen Ave

The existing bridge is a single span, single bay, steel through plate girder bridge spanning the roadway and sidewalks. This bridge will be used as a future access road, open only to vehicular loads. The ESP is expected to perform a structural inspection, complete a bridge condition report including load ratings for existing and proposed conditions, propose required repairs, and complete construction plans, specification and estimates to complete the repairs and convert the bridge to an access road. Exposed steel surfaces, including the girder faces and underside of the bridge shall be blast-cleaned and painted.

Structure #1.7: Railroad over Ashland Ave (S.N. 016-3038)

The existing bridge is a 4-span structure consisting of a concrete deck atop steel beams supported by steel bents on shallow concrete spread foundations and concrete gravity abutments. The bridge will be rehabilitated including deck replacement and new deck waterproofing, replacement of roadway and sidewalk beams, replacement of all cross girders and columns, structural steel and concrete repairs, and bridge deck drainage. The existing

column spread foundations will need to be rehabilitated along with the existing abutments. In addition to the structural scope of work, the roadway is to be resurfaced or reconstructed as determined by the ESP, with sidewalk replacements, ADA improvements, and lighting upgrades.

The ESP is responsible for identifying any additional scope of work associated with that presented above, necessary to complete the project and proceed to construction letting.

The ESP is responsible for ensuring the proposed work does not exceed the Phase I ESR limits.

Track & Signal design, land acquisition, and public outreach is not included in this design package. Bridge Condition Reports will not be required except as noted for Structure #1.6.

Anticipated Deliverables:

- Phase II Report(s) per the CREATE Phase II manual
- Bridge Type, Size and Location Plans
- Structural and Civil/Roadway Plans
- Structural Calculations
- Specifications
- Separate Structure and Viaduct Cost Estimates
- Estimates of Time at milestones identified in the Quality Management Plan (QMP)
- Structural Geotechnical Report(s)
- Drainage Study and Report
- Environmental Report(s)
- Permit Application Packages(s)
- Proposed bid tab sheet with anticipated quantities for construction (including FA and BD tabulations)

NSR will furnish the ESP with the following items:

- Approved CREATE EW2 Phase 1 project report (for information only as some scope items have changed)
- Bridge Condition Reports prepared in CREATE EW2 Phase 1
- Available existing structure drawings and plans
 - Only partial plan sets are available. Level of completeness varies by location.
- Proposed final track geometry and staging plans
- Existing survey data and/or CADD files
- Abbreviated geotechnical report and boring logs.
- CREATE P2 Approved TS&L Plans & Geotechnical Report
- 75th Street CIP EIS Technical Memorandum Attachment F: EW3 and 75th CIP/EW2 Noise Barrier Discussion
- Link to NS Public Projects Manual
- Agency or third-party coordination documents.

The completion date for this contract will be 15 months after notice to proceed.

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 combined single limit \$2M per occurrence
- Automobile Liability combined single limit \$2M per occurrence
- Employers' Liability Insurance
- Workers' Compensation Insurance
- Professional Liability Insurance with limits of \$10M per claim and in the annual aggregate
- NSR requires that the railroad be named as an additional insured.
- Insurance coverage cannot be denied within 50 feet of a railroad

Firms proposing on this project as the prime firm shall be prequalified by the State of Illinois Department of Transportation in **Structures (Railroad)**.

The individual assuming the duties at Project Manager for the ESP shall be a Licensed Professional Engineer in the State of Illinois and shall have a minimum of 10 years of design experience with similar projects. The individual designated as Project Manager must be committed for the duration of the project.

The individual(s) performing structural design and plan preparation shall be a Licensed Structural Engineer in the State of Illinois and shall have a minimum of 10 years of design experience with similar projects.

The individual(s) performing construction permitting shall be a Licensed Professional Engineer in the State of Illinois and have a minimum of 10 years of permitting experience with similar projects.

The individual in charge of survey must be a Licensed Professional Land Surveyor in the State of Illinois and the firm must be prequalified in **Special Services (Surveying)**.

If firms elect to pursue more than one of the advertised EW2 Design Package RFP's, they must demonstrate that they have the sufficient expertise and resources to execute multiple packages simultaneously.

Contractor safety orientation training and employee participation in the e-RailSafe program is required.

The selected team will be required to follow the Quality Management Plan as provided by NSR.

This project involves inspection, design, and construction of railroad facilities, which requires compliance with railroad safety requirements. ESPs should take extra care to familiarize themselves with these additional requirements for railroad safety which are detailed in the Norfolk Southern Standard Form of Contract which will be included with the solicitation.

The ESP will be required to include design plans for track improvements, provided by and sealed by others, into their bid plans for construction letting.

ESP will participate as part of the corresponding job showing(s) should this project proceed to bidding for construction.

ESP will participate in corresponding bid technical review(s) and analysis(es) should this project proceed to construction.

ESP will coordinate with Lead Engineer prior to beginning design to confirm proposed track plans and elevations.

DBE Spending Goal

A DBE spending goal of 30% 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. NSR 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 40 pages total and shall include the following items:

- Cover Letter to include proposed ESP contact, proposed team (identifying subconsultants/roles, DBE), (limited to 2 pages)
- Project Understanding and Approach (limited to 10 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 30 pages)
 - Demonstrate the firm's qualifications and capabilities to complete the engineering 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 structural design engineer that would work on this project
- Contact information and a short biography for the primary permitting engineer that would work on this project
- Project Experience (limited to 15 project descriptions 1 page each plus 20 additional listed projects)
 - 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
 - Provide a list and/or description of similar projects completed in the last 10 years, along with client contact information.
- Proposed Schedule (may be formatted for 11”x17” size)
 - Provide a design schedule for completion of engineering services assuming a May 2022 notice to proceed.
- Provide scope of work with estimated hours broken down by task.
- Provide commitment of team to participate in one or more of the following programs, which your firm would work with CPS WBL representatives to tailor a program to introduce Chicago Public Schools students to career opportunities in engineering.
 - a. Job Shadow Week
 - b. CPS’ Guest Speaker Series
 - c. Site Visit Week
 - d. Soft Skills Month
 - e. Career and Technical Education Training (CTE) Summer Internship Program
- Provide a health and safety plan, including compliance with Federal, State, and City COVID-19 orders.

For more information about work-based learning programs, go to <https://www.cps.edu/academics/work-based-learning> . For further information contact Angela Acevedo, CTE Work-Based Learning Specialist For, Architecture, Construction, Manufacturing, Pre-Engineering, Transportation, Chicago Public Schools at amacevedo6@cps.edu .

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)

Proposals shall be compliant with FHWA 1273 as applicable. All participants shall be absent from the Illinois Delinquency List.

ESP firms may be required to give a brief presentation about their proposals and qualifications.

If a consultant desires to be selected on more than one of four packages (2 max), they must demonstrate that they have sufficient expertise and resources to execute multiple packages simultaneously. To propose on more than one package, consultants are asked to submit a proposal for each package individually and include language indicating how the team will execute both packages effectively and efficiently.

Evaluation Criteria

Proposals will be evaluated based on the following criteria:

- Project Experience
 - Experience with management, design, and construction of track supporting structures projects involving Class I railroads, 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)
 - Commitment of team to participate in one or more Chicago Public Schools work-based learning programs for students seeking career opportunities in engineering.
- 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
- Overall proposal completeness

Project Experience	Up to 30 Points
Technical Approach	Up to 20 Points
Personnel Qualifications & Capabilities	Up to 25 Points
Local Presence	Up to 5 Points
DBE Participation	Up to 15 Points
Overall Proposal Completeness	Up to 5 Points

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

Submittals

Questions shall be submitted electronically to jeff.page@nscorp.com by 12:00 noon (CST) on **December 9, 2021**. All questions and answers will be issued in an addendum by 5:00 pm (CST) on **December 16, 2021**.

A mandatory preproposal meeting is scheduled for 9:00 am (CST) on **December 2, 2021** at Kennedy-King College – U Building, Theatre at 740 W 63rd Street, Chicago, IL 60621. All attendees must follow City of Chicago Public Health Order No. 2021-1 while attending this meeting.

Proposal documents must be received before 12:00 noon (CST) on **January 14, 2022**. Only electronic submittals emailed to jeff.page@nscorp.com by the deadline will be considered.

Please include your firm's name and "CREATE Project NSR EW2 ESP – Package #1" in the subject line. Selection is expected in February 2022.

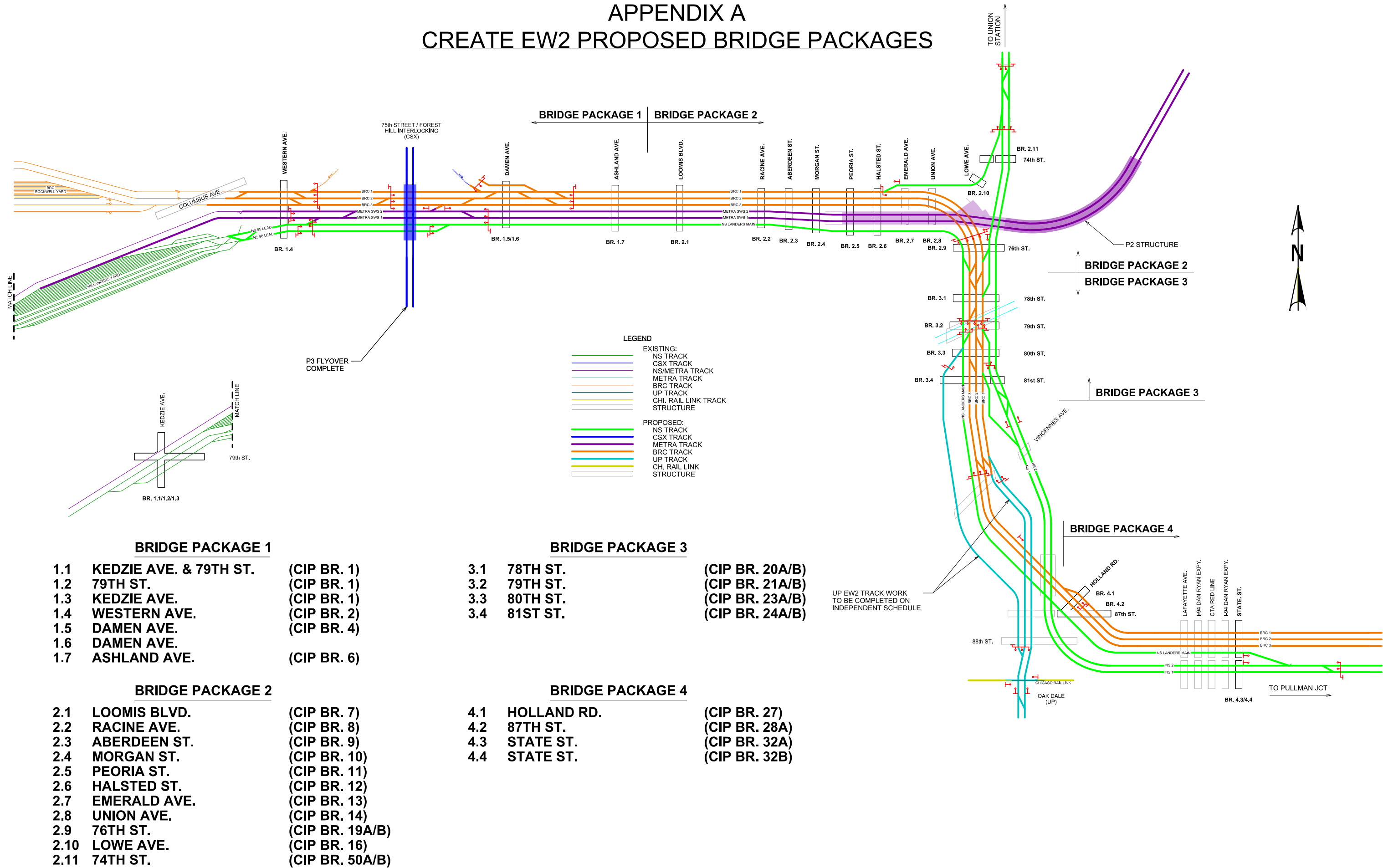
For more information about the CREATE Program and the CREATE Phase II manual, please go to <http://www.createprogram.org/>

Please contact Richard Conrath at Email: rconrath@benesch.com to request an FTP link for the following attachments (for information only):

1. Existing Bridge Plans
2. Proposed Track Staging Plans
3. Approved Phase 1 Report
4. Bridge Condition Reports
5. CREATE P2 Approved TS&L Plans
6. Geotechnical Report
7. Quality Management Plan

[End of Document]

APPENDIX A CREATE EW2 PROPOSED BRIDGE PACKAGES



- LEGEND**
- EXISTING:
 - NS TRACK
 - CSX TRACK
 - NS/METRA TRACK
 - METRA TRACK
 - BRC TRACK
 - UP TRACK
 - CH. RAIL LINK TRACK
 - STRUCTURE
 - PROPOSED:
 - NS TRACK
 - CSX TRACK
 - METRA TRACK
 - BRC TRACK
 - UP TRACK
 - CH. RAIL LINK
 - STRUCTURE

BRIDGE PACKAGE 1

- 1.1 KEDZIE AVE. & 79TH ST. (CIP BR. 1)
- 1.2 79TH ST. (CIP BR. 1)
- 1.3 KEDZIE AVE. (CIP BR. 1)
- 1.4 WESTERN AVE. (CIP BR. 2)
- 1.5 DAMEN AVE. (CIP BR. 4)
- 1.6 DAMEN AVE. (CIP BR. 4)
- 1.7 ASHLAND AVE. (CIP BR. 6)

BRIDGE PACKAGE 2

- 2.1 LOOMIS BLVD. (CIP BR. 7)
- 2.2 RACINE AVE. (CIP BR. 8)
- 2.3 ABERDEEN ST. (CIP BR. 9)
- 2.4 MORGAN ST. (CIP BR. 10)
- 2.5 PEORIA ST. (CIP BR. 11)
- 2.6 HALSTED ST. (CIP BR. 12)
- 2.7 EMERALD AVE. (CIP BR. 13)
- 2.8 UNION AVE. (CIP BR. 14)
- 2.9 76TH ST. (CIP BR. 19A/B)
- 2.10 LOWE AVE. (CIP BR. 16)
- 2.11 74TH ST. (CIP BR. 50A/B)

BRIDGE PACKAGE 3

- 3.1 78TH ST. (CIP BR. 20A/B)
- 3.2 79TH ST. (CIP BR. 21A/B)
- 3.3 80TH ST. (CIP BR. 23A/B)
- 3.4 81ST ST. (CIP BR. 24A/B)

BRIDGE PACKAGE 4

- 4.1 HOLLAND RD. (CIP BR. 27)
- 4.2 87TH ST. (CIP BR. 28A)
- 4.3 STATE ST. (CIP BR. 32A)
- 4.4 STATE ST. (CIP BR. 32B)

UP EW2 TRACK WORK TO BE COMPLETED ON INDEPENDENT SCHEDULE

