U.S. Department of Transportation
Federal Railroad Administration
Fiscal Year 2021 Consolidated Rail Infrastructure and Safety Improvements (CRISI) Grant Program
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<th>COVER TABLE</th>
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<tr>
<td>Project title.</td>
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<tr>
<td>Applicant.</td>
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<tr>
<td>Project track.</td>
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<tr>
<td>Was a Federal grant application previously submitted for this project?</td>
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<tr>
<td>If yes, state the name of the Federal grant program and the title of the project in the previous application.</td>
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<tr>
<td>Is this a rural project? What percentage of the project cost is based in a rural area?</td>
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<td>Is this a project eligible under 49 U.S.C. 22907(c)(2) that supports the development of new intercity passenger rail service routes including alignments for existing routes?</td>
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<tr>
<td>Is this for a Capital Project or engineering solution targeting trespassing?</td>
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<td>Is this for a safety program to reduce trespassing through targeted law Enforcement Activities?</td>
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<tr>
<td>Is this for a safety program to reduce trespassing through targeted law Enforcement Activities? Yes/No. Is this for a safety program to implement or expand an Outreach Campaign for reducing railroad trespassing suicide?</td>
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<td>City(ies), State(s) where the project is located.</td>
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<td>Urbanized area where the project is located.</td>
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<td>Population of the urbanized area.</td>
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<tr>
<td>Is the project currently programmed in the SRP, SFP, TIP, STIP, MPO LRTP, SLRTP?</td>
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ONLINE REPOSITORY

This application narrative and all attachments can also be accessed online. Selected reference materials are linked from within this narrative to files in the above webspace.

Weblink: https://www.createprogram.org/resources/grants/crisi2021/

POINT OF CONTACT

John Oimoen, Deputy Director of Rail
Illinois Department of Transportation (IDOT)
Hanley Building, 2300 S. Dirksen Parkway
PROJECT SUMMARY

A 1.9-mile-long high-density rail corridor in central Chicago provides critical connectivity for regional and national freight rail traffic. This segment is in declining condition and lacks the capacity to efficiently manage current and future demand. The segment is controlled by verbal dispatch amongst multiple railroads. Speed is restricted to less than 10 mph with an average speed of 6.5 mph, limiting capacity and slowing the movement of trains. The most urgent problem is 18 aging viaducts at the end of their useful lives. Many of these structures are expected to decline to the point of unacceptable operational risk by 2028. The bridges are of similar advanced age and poor condition, leading to a scenario of accelerating rolling major closures causing great disruption and emergency repairs at extremely high cost. This dynamic will conclude with so many bridges in such close physical proximity having become unreliable and potentially unsafe that the segment would be forced out of service. The rerouting of traffic will take far less efficient and longer paths imposing significant costs on the railroads and the public.

WA1, the Ogden Junction Project will remove two of these viaducts, rehabilitate two and replace the remaining fourteen. The corridor will be equipped with centralized traffic control. The track rehabilitation includes replacing ties, surfacing, constructing new track and connections. Funding is included to support capital improvements for disadvantaged communities near the line. This includes new lighting, new sidewalks, improved bus stops, new roadway paving, elimination of many rusty piers and support structures. Procurement will target meaningful economic opportunities for local and union workers and disadvantaged and minority businesses and create meaningful opportunities to achieve workforce diversity. The bid portion of the project includes a substantial DBE goal (yet to be determined). All construction bid and railroad performed work is by union members.

The project will preserve the critical connectivity this segment provides for capacity and fluidity in the Chicago region. This project is part of the CREATE Program, a public-private partnership between the State of Illinois, the City of Chicago, Cook County, and freight and passenger rail operators in Chicago. Additional support is provided by the US DOT including FHWA and FRA along with other government entities. Since 2003 CREATE has worked to make Chicago’s railroad network safer, more efficient, and better able to accommodate growth in freight and passenger traffic with FHWA providing US DOT oversight to the program.

**Concurrent application information**

Funding for this project has not been applied for under any other active federal grant program.

**PROJECT FUNDING**

WA1 has been in development through the CREATE process since 2005. Tasks 1 and 2 – PE/NEPA and FD represent previously incurred investments of $6.7 million. The remaining costs
to complete WA1 are shown below, these are the “future eligible” cost basis on which the matching calculations are presented.

<table>
<thead>
<tr>
<th>CRISI Task #</th>
<th>Task name/ project component</th>
<th>Cost</th>
<th>% of total cost</th>
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<tr>
<td>3</td>
<td>Construction (&quot;Phase III&quot;)</td>
<td>$170,000,000</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total project cost (future eligible expenditures)</td>
<td>$170,000,000</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Federal funds received from previous grant</td>
<td>$ -</td>
<td>0.0%</td>
<td></td>
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<tr>
<td>CRISI 2021 federal funding request</td>
<td>$70,000,000</td>
<td>41.2%</td>
<td></td>
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<tr>
<td>Non-federal funding match: cash, Railroad Funds</td>
<td>$50,000,000</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>Non-federal funding match: cash, Non-Federal Public Funds</td>
<td>$50,000,000</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>Non-federal funding match: in-kind</td>
<td>$ -</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Portion of non-federal funding from the private sector</td>
<td>$50,000,000</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>Portion of total project costs spent in rural areas</td>
<td>$ -</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Pending federal funding requests: none</td>
<td>$ -</td>
<td>0.0%</td>
<td></td>
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</tbody>
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The matching funds will be provided by the State of Illinois, the City of Chicago, Cook County, and the freight and passenger rail operator project partners. These funds will be available upon award as required to provide as match pro rata to the federal funds. This project is a wholly urban project. All construction activities and spend will take place within the Chicago Urbanized Area.

**APPLICANT ELIGIBILITY**

The applicant, IDOT, is eligible for fiscal year 2021 CRISI funding under the notice of funding availability sections C(1)(a) *A State* and C(1)(d.)*A public agency or publicly chartered authority established by one or more States.*

**PROJECT ELIGIBILITY**

The proposed Project is eligible under 49 USC 22907 and the notice of funding opportunity section C.3.a *Project Eligibility* per subsections: iii. *a capital project necessary to address congestion challenges affecting rail service* and vi. *A rail line relocation and improvement project.*

**DETAILED PROJECT DESCRIPTION**

**Project background and users**

A 1.9-mile-long high-density freight rail corridor in central Chicago provides critical connectivity for regional and national freight traffic. This segment is an element of the Department of Defense-designated Strategic Rail Corridor Network (STRACNET) and straddles the territory of three Class I railroads. It hosts between 20 to 30 freight trains daily. The Corridor is at the center of the Chicago Terminal, a dense high-capacity mesh network of rail lines carrying more than 180,000 freight trains and almost 300,000 passenger trains annually. The Project Corridor provides critical connectivity within this network for through trains as well as providing local connectivity for major rail facilities immediately to the south, the Global 1 Intermodal Terminal and the Ashland Avenue Yard. The Project Corridor does not carry Metra, but their traffic is impacted on the north...
end by the presently slow speeds of freight trains that exit the Metra route hosted on the UPRR’s Geneva Subdivision. A video of operations on the project corridor is available [here].

**Transportation challenge and the no-build scenario**

The railroad track on this segment is in declining condition and the configuration lacks the capacity to efficiently manage current demand. There is insufficient connectivity between tracks and all switches are manually thrown. The segment is controlled by verbal dispatch amongst multiple railroads. These factors restrict speeds to less than 10 miles per hour, limiting capacity and slowing the movement of trains on this routing through Chicago and impacting the efficiency of adjacent connecting lines. The most urgent problem is that this segment includes 18 aging viaducts that are at the end of their useful lives. The railroads estimate one or more of these structures will decline to the point of unacceptable operational risk by 2028.

The bridges are of similar age and poor condition, leading to an expected scenario of rolling major closures for repair and maintenance. Such outages would force the segment out of service, rerouting trains, first within the Terminal, until unacceptable levels of operational delay on the already busy alternate routes are reached. At that point more than four of those rerouted trains per day would have to be pushed as far out of the way as Kansas City. Having a segment carrying close to 10,000 trains per year unexpectedly and repeatedly reroute within such a complex and high-density regional operation is unsustainable given overall capacity constraints and the need for the terminal to maintain predictable fluidity. In the absence of the proposed project, one or more of the bridges are expected to have to be taken out of service for safety reasons before 2030. This scenario of permanent closure of the segment would impose significant costs on the public and the railroads, including on the environment, commerce, and safety.
Figure 3: Viaducts nearing end of life on the Rockwell Subdivision

Figure 4: Project-area tracts as national percentiles predominantly Black populations

Figure 5: Project-area tracts as national percentiles low-income populations
The Rockwell subdivision bisects neighborhoods that are mostly low income and heavily minority, with some of the poorest and predominantly Black neighborhoods in the metro region lying immediately to the west within nearby walking distance to the corridor. The viaduct elements of the project provide the critical connectivity through this major rail corridor for users of multiple modes of transportation: commercial and passenger vehicles, bicyclists, and pedestrians.

As illustrated in the accompanying photographs, these viaduct structures are at the end of their lifespans with visible signs of extreme age and significant wear. The connections they provide to traversing users are poorly lit, overgrown with vegetation, and aesthetically unpleasant. Many of the built surfaces are in obvious decline and some have drainage elements requiring repair. A few areas do not fully meet today’s pedestrian accessibility standards.

**Proposed project description**

The term “phase” references the IDOT terminology for stages of completion of a project. This framework is used by the CREATE partners, encompassing concept through completion of construction and delivery of the assets. This statement of work reflects all work necessary to complete the project with the expected independent utility. All work is reviewed environmentally, designed, and constructed per the CREATE Phase I, II and III manuals.
1. Preliminary Design and Environmental Studies (“Phase I”)

Task 1.1 Preliminary Design and Environmental Studies

Feasibility analysis, identification of project purpose and need. Alternatives analysis and selection. Environmental impact analysis and identification of policy and design exceptions. Land and right-of-way studies, project plans, cost estimates and schedule. These tasks are complete. **Deliverables:** CREATE Program feasibility (amended 2011); Phase I Project Reports approved 11/22/2010; Environmental Class of Action Determination of a CATEX approved by FHWA 8/17/09.

2. Design (“Phase II”) and ROW

Task 2.1 Design

Track and civil and bridge designs are complete and have been approved by UPRR. Signal design is complete but will need to be refreshed prior to construction. A plan, specifications, and estimate package (PS&E) is being prepared with the track/civil, bridge and signal designs included for IDOT and FHWA approval. Phase II NEPA reevaluation is underway, described in “environmental readiness.”

**Major task deliverables:** IDOT-approved PS&E package for track/civil, bridge and signal design elements (approval pending); Bridge Approvals; CDOT EFP Phase 2 Review: All plans were submitted to CDOT OUC Dept. for Existing Facilities Protection review. All utility reviewers were provided with an opportunity to review the plans for utility conflicts. All conflicts identified were considered when developing the final design presented in the current set; CDOT DEO Review: All lighting plans were reviewed by CDOT Dept. of Electrical Operations. All comments from the DEO resolved and plans approved; IDOT Review completed; CDOT Engineering comments addressed; IDOT is completing a sec. 104 review/documentation of some structures of historical significance; NEPA Phase II reevaluation report; FHWA approvals.

Task 2.2 Detailed Project Work Plan, Budget, and Schedule

The Grantee will prepare major task deliverables including the detailed project work plan, budget, and schedule; project agreements

Task 2.3 Right-of-way acquisition

Property was required to relocate a city alley near Maypole Ave. in Chicago. The alley had to be relocated in conjunction with the road closure, removal of the existing viaduct and constructing cul-de-sacs. A vacant lot parcel of 1,890 square feet was acquired in fee by UPRR in early 2021. No other land acquisition is necessary to carry out the project.

3. Construction (“Phase III”)

Task 3.1 WA1 Track and Civil Work

![Figure 10: UP Rockwell Subdivision mileposts](image-url)
Prepare track subgrade and place 12” of subballast between MP 0.68 and 2.69 where new track is to be built and existing track is to be shifted. UPRR forces will construct 10,308 track feet of new track consisting of 136 LB CWR with wood ties at 19.5” spacing with 12” ballast under ties. 31,000 track feet will be shifted with 30% wood tie renewal with 12” of ballast. Additional track constructed between Taylor and 15th. The grading contractor will supply equipment rental and submit the SWPPP (permit) to the Illinois EPA. Construct: 4 #15 POTO; 13 #15 POXO; 1 #11 POTO; 2 #9 HTTO; 2 #9 HTXO; 1#11 HTTO; 1 #11 PTXO.

**Task 3.2 WA1 Signal Work**

**3.2.1 UPRR Signal Work**

Three solid state control points will be installed - CPY001 (Taylor Street), CPY002 (Ogden Avenue) and CPY930 (16th Street) using Electrolog IXS. CTC will begin at MP 1.8 and continue through the NS and the CSX mainlines. Updates of the communications system will support auto routing of trains between involved railroads.

**3.2.2 Norfolk Southern Signal Work**

Install interface shelter and repeater shelter at CP 16th St (UPRR) and changes at NS CP Cermak to signalize NS mainlines between Cermak and 16th Street. Relocation of the 2-track AEI scanner at UW-5.08 is included.

**3.2.3 CSX Transportation Signal Work**

Installation of a CSX repeater shelter at CP 16th St (UPRR) and changes at CSX CP 22nd Street to signalize CSX mains between CP 22nd Street and 16th Street

**Task 3.3 WA1 Bridge Work**

Bridges are described from north to south. Due to track elevation, the access road must be maintained for the entire length. Sequencing and staging of the bridge replacement will be planned to minimize temporary impacts on the community. The bridge work will be bid for the IDOT local training program and DBE discussion. All replaced bridges in this scope will feature sacrificial beams to protect the structures from over-height vehicle impacts. All the viaduct elements will include brush and vegetation removal. For all the replaced viaducts north of Ogden Avenue, the proposed concrete abutments are supported on driven steel piles behind the existing masonry abutments to remain to satisfy the community request to maintain the historical significance of the locations. The lighting on all the abutments and piers on the viaducts will be replaced with modern, energy-efficient fixtures providing comprehensive and aesthetically pleasing illumination of the roadways and sidewalks. The viaduct replacements will be phased so the corridor retains active tracks to carry train traffic during most of the work and coordinated with CDOT to minimize neighborhood impacts.

**3.3.1 Replace UPRR over Fulton St. at Rockwell Sub MP 0.68**

The existing three-span railroad bridge over Fulton Street will be replaced with a like design. The proposed piers are concrete piers founded on drilled micropiles in the sidewalks of Fulton St. Fulton St. will remain at existing profile, be repaved and sidewalks replaced under the bridge.
3.3.2 Replace UPRR over Lake Street at Rockwell Sub MP 0.83
The proposed three-span through plate girder and beam span railroad bridge replaces the existing three-span railroad bridge over Lake Street and under the CTA. The proposed piers are concrete piers founded on drilled micropiles which are in the sidewalks of Lake Street. Fulton Street will remain at the existing profile however it will be repaved, and the sidewalks replaced under the bridge. An access bridge will be built as part of this project along the west side of the proposed railroad bridge for railroad use.

3.3.3 Remove UPRR over Maypole Avenue at Rockwell Sub
The existing single span through plate girder railroad bridge at this location will be removed. The opening will be filled to close Maypole Avenue and the railroad track relayed. The roadway will be modified to become a cul-de-sac on either side of the tracks. The track embankment fill will provide room for the tracks as well as an access road to the west side of the tracks. The water and sewer lines under the railroad will be modified and protected as necessary to satisfy City requirements. Streetlights, topsoil, and seeding will be included in the project.

3.3.4 Replace UPRR over W. Washington Blvd. at Rockwell Sub MP 0.93
The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge over Washington Boulevard. An access bridge will be built as part of this project along the west side of the proposed railroad bridge for railroad use.

3.3.5 Replace UPRR over W. Warren Boulevard at Rockwell Sub MP 0.99
The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge over Warren Boulevard. An access bridge will be built as part of this project along the west side of the proposed railroad bridge for railroad use.

3.3.6 Replace UPRR over W. Madison Street at Rockwell Sub MP 1.06
The proposed single-span through plate girder railroad bridge replaces the existing three-span railroad bridge. An access bridge will be built along the west side of the bridge for railroad use. The street will be repaved, and the sidewalks replaced under the bridge.

3.3.7 Replace UPRR over Monroe Street at Rockwell Sub MP 1.12
The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge. The proposed concrete abutments are supported on driven steel piles behind the existing masonry abutments. An access bridge will be built alongside the track for railroad use.

3.3.8 Replace UPRR over W. Jackson Boulevard at MP 1.31
The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge. An access bridge will be built along the west side of the proposed railroad bridge for railroad use.

3.3.9 Replace UPRR over W. Van Buren St. at Rockwell Sub MP 1.41
The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad span over Van Buren Street. The existing concrete pier between Van Buren Street and the
Eisenhower Expressway will remain in place and support the other side of the proposed span. An access bridge will be constructed along the west side of the bridge for railroad use.

3.3.10 Improve UPRR over Eisenhower Expwy (I-290) at Rockwell Sub MP 1.42

Steel deck modifications shall be made to the existing bridge over the Eisenhower Expwy to allow for the existing tracks to be realigned to their proposed location as part of this project. Deck waterproofing shall be applied to the modified deck surface. In addition, the ballast retainer on the west side of the existing bridge shall be modified to allow for the construction of the access road along the west side of the UPRR property. No work is proposed on Eisenhower Expwy, however traffic will be protected from construction activities by way of protective shielding and moving lane closures.

3.3.11 Replace UPRR over W. Congress Parkway at Rockwell Sub MP 1.48

The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad span over Congress Parkway. The existing concrete pier between Congress Parkway and the Eisenhower Expressway will remain in place and support the other side of the proposed span. An access bridge will be built along the west side of the proposed railroad bridge for railroad use.

3.3.12 Replace UPRR over Harrison Street at Rockwell Sub MP 1.56

The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge over Harrison Street. An access bridge will be built along the west side of the line for railroad use.

3.3.13 Replace UPRR over W. Polk Street at Rockwell Sub MP 1.75

The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge over Polk Street. An access bridge will be built along the west side of the proposed railroad bridge for railroad use.

3.3.14 Replace UPRR over W. Taylor Street at MP 1.87

The proposed single-span through plate girder railroad bridge replaces the existing single-span railroad bridge over Taylor Street. The proposed bridge carries three tracks at this location. An access bridge will be built along the west side of the proposed railroad bridge for railroad use.

3.3.15 Improve UPRR over Roosevelt Road at Rockwell Sub MP 2.06

Bridge remains in place at Roosevelt Rd. however steel repairs done as necessary to prepare the bridge for realigned railroad tracks. Most repairs will consist of replacement of the steel column bases for the existing steel bent columns. Other steel repairs are proposed in the existing steel bent elements. The existing sidewalks will be repaired in the areas of the repaired steel column bases.

3.3.16 Replace UPRR/CSX/NS over Ogden Avenue

The proposed three-span beam span railroad bridges replace the existing six-span railroad bridge over Ogden Avenue. The proposed bridges carry a total of six proposed tracks at this location. The proposed concrete piers will be supported on driven steel piles. The spans will be built with a width that allows for a future access road along the west side of the line for railroad use. Sidewalks will be replaced, and the roadway resurfaced under the viaduct.

3.3.17 Remove CSX/NS over 15th Street
The existing four-span beam span railroad bridge at this location will be removed and the opening filled to close 15th Street. The roadway will be modified to become a cul-de-sac on the east side of the railroad and a curb end treatment on the west side of the railroad. The proposed track embankment fill will provide room for the proposed railroad tracks as well as an access road to the west side of the proposed tracks. The water and sewer lines under the railroad will be modified and replaced in steel encasement for protection necessary to satisfy City requirements. Streetlights, topsoil and seeding will be included in the project.

3.3.18 Replace CSX/NS over 16th Street

The proposed two-span beam span railroad bridges replace the existing four-span railroad bridge over 16th St. The proposed bridge carries four tracks at this location. The proposed concrete abutments are supported on driven steel piles behind the existing concrete abutments which will remain in place. The proposed concrete piers will be supported on drilled micropiles. The proposed bridges will be built with a width that allows for an access road along the west side of the structure for railroad use. Sidewalks will be replaced, and the roadway resurfaced beneath the viaduct.

3.3.19 Project Closeout and Final Performance Report

The Final Performance Report will be submitted within 90 days of the end of the grant’s period of performance and shall describe the cumulative activities of the project, including a complete description of the Grantee’s achievements with respect to the project objectives and milestones.

3.3.20 Community Engagement Tasks

Community engagement will occur throughout construction and beyond for this project. Community engagement by CREATE partners is an ongoing feature of the relationship between the operating railroads, units of government and the residents in the vicinity of the program. Specific WA1 community engagement tasks will include formal community briefings to inform residents and secure feedback before, during and after construction. Engagement will include measures to attract participation in economic opportunities associated with the project, and more generally with project sponsors, for local workers and businesses, including disadvantaged business enterprises.

**Project schedule**

The project schedule takes into consideration all permitting, permitting and environmental requirements, time to reach grant agreement with FRA, procurement processes, climate and other constraints on construction, and all federal, state, and local reporting and closeout obligations.
Build scenario benefits & beneficiaries

The project build scenario will see this heavy-haul rail corridor brought to a state of good repair and bring an improved level of operational capacity in terms of speed limits and fluidity, increasing freight mobility for the nation, region, the State, County and City. The freight railroads using the Project corridor, and the Chicago Terminal, will benefit operationally from the continued availability of this most efficient routing option through the Chicago Gateway. This benefit will extend to the operations in the entire Chicago Terminal, as precious freight capacity on already busy alternative routings will be preserved, enhancing the flexibility and resilience of the Gateway in the face of future disruptions, such as through demand surges or climate and weather events. Freight rail customers will benefit from avoidance of increased Gateway delay that imposes significant costs on their operational logistics, particularly inventory-related costs. Preserving the optimal routing option over the Project Corridor improves safety by avoiding unnecessary out-of-route freight rail mileage. Preservation and optimization of this most-efficient routing supports overall fluidity of national freight logistics.

The current routings over the Project Corridor and the diversion routings through the Gateway, are important lines in STRACNET, where capacity is a critical resource during any large-scale military contingency mobilization. This Project will protect and preserve a key portion of that capacity for future conflict scenarios during which massive amounts of equipment and material – literal megatons - will have to be flushed through the rail lines of the Chicago Terminal, within an
extremely condensed time window of only weeks, moving between military bases, civilian shipper facilities, and maritime deployment ports. In such a scenario every train slot and route mile saved matters. This freight logistics capacity, enabling rapid replenishment of forward-positioned overseas stockpiles, before they can be depleted in combat, is fundamental to securing victory in any future major regional conflict.

The local community will benefit from opportunities to secure good-paying, project-specific employment and general railroad employment in meaningful positions that provide career development, including a wide array of union jobs. The improvements to the viaducts will maintain critical east-west connectivity through this major freight mobility corridor, enhancing the experience for local road vehicle, pedestrian and non-motorized modal users, improving aesthetics of the infrastructure and supporting community efforts to bring development jobs and housing to the neighborhood. Air quality gains in the region will be preserved because significant additional emissions from rerouted and delayed trains will be avoided, emissions that would otherwise occur in the absence of the Project.

**Proposed project performance measures**

Various performance measures could be used to measure outcomes for this project. Train volumes on the line, average speeds and segment transit times, relative to baselines, are potential measures, some of which have been utilized for past CREATE projects receiving federal grant funds. IDOT looks forward to working with FRA to select appropriate performance measures for WA1. We have a great opportunity to achieve workforce diversity on this project. While the force account work is by owned by the rail unions under existing labor agreements, we estimate that 50% or more of the work will be contract work and we will track the diversity of both contractors and those they’ve employed.

**PROJECT LOCATION**

The Project is in Chicago, Cook County, Illinois. The northernmost point of the Project limits is in the vicinity of station Kedzie at the Union Pacific Rockwell Subdivision’s MP 0.0, just north of West Fulton Street. Project southern limits are just south of West 16th Street, connecting the BNSF Chicago Subdivision to the CREATE Western Avenue Corridor. The Project area is bounded by South Rockwell Street to the west and South Western Avenue to the east. This north-south corridor is centered approximately on coordinates longitude 41.8754264665908, latitude -87.69157219661557. The Project occurs within the jurisdiction of the Chicago Metropolitan Agency for Planning (CMAP), FHWA’s Illinois Division, the FRA’s Region 4, EPA Region 5 and Illinois DOT’s District 1. The construction footprint is within Illinois’ 7th Congressional District. The Project corridor and the entire Rockwell Subdivision is a component of the Strategic Rail Corridor Network (STRApANET), composed of rail lines designated by the Department of Defense as critical to supporting national defense deployment and peacetime needs.

The Project corridor is fully grade separated from road traffic, carried over 20 roads by means of viaducts. These roads range in size from local streets to a major interstate highway, I-290. The corridor is carried over the CTA Blue Line at the viaduct over I-290 and runs under the CTA Green Line at the West Lake Street viaduct. There are three recommended federally designated
Opportunity Zones directly on the Project alignment: 17031843300 (poverty rate 46%, unemployment rate 24.6%), 17031842900 (poverty rate 42%, unemployment rate 25%) and 17031280900 (poverty rate 47%, unemployment rate 27%). There are another 16 such zones within less than a mile.

The Project corridor has immediate connections to two major rail facilities. In the north the corridor connects with the Union Pacific Geneva Subdivision serving the Western Avenue complex of rail yards immediately to the north of the wye junction between the Geneva and Rockwell Subdivisions, a facility with an east-west track orientation. An immediately adjacent and directly connected element of this yard is focused on supporting Metra, having a northwestern track orientation.

The Geneva Subdivision hosts Metra commuter rail service that passes east-west through the connection of the two subdivisions. Together these combined yard facilities have some 60 tracks supporting a combination of switching, interchange storage and repair functions providing key support to freight and passenger operations occurring in and passing through Chicago. The southern end of the project corridor hosts Union Pacific’s Global 1 Intermodal Terminal, a 24-hour facility for the transload of containers between rail and truck, handling and providing rail connectivity for truck freight traffic moving to and from the greater Chicago area. The Project corridor provides northward connectivity to the national freight rail network for the Global 1 Intermodal Terminal and Ashland Yard complex. Global 1 has nearby access via local roads for its truck customers to reach Interstates 55, 90 and 290.
EVALUATION AND SELECTION CRITERIA

The benefit case for the proposed Project assumes that, in absence of the proposed investments the Project Segment is taken out of service due to poor bridge conditions. In this “no-build” case, the between 20 and 30 freight trains per day, and future growth of that volume, are rerouted onto the next most efficient paths in the Chicago Terminal with capacity to handle more trains. This diversion analysis was performed under several key assumptions, or constraints.

1. Diverted freight rail traffic must accommodate any Metra or Amtrak passenger services; freight trains are not allowed to interfere with passenger trains.
2. Diverted freight rail traffic would not operate in a fashion that would result in increased gate down time at crossings, such as by slower movement or halting within crossing blocks.
3. A diversion scenario was not allowed to be created where delay on the line or in the Gateway would accrue to such a degree as to potentially flush cargoes off of rail and onto truck that otherwise would have remained on rail. For this reason, this is a “rail only” diversion case. Creation of an operational scenario that would push thousands of trucks onto Chicagoland road network was assumed to be unrealistic.
4. Aggregate amounts of train delay within the Chicago Terminal would not be allowed to rise to the level of triggering STB “circuit breakers” established to monitor fluidity and efficiency of the Gateway.

The primary output of the diversion analysis performed was of increased delay accrued within the Gateway. Initial analyses of diversion routings were selected through initial corridor level analyses to determine which pathways could viably accommodate the diverted trains without accruing unacceptable levels of delay. Not all pathways in the Gateway can accept any additional trains due to current capacity or physical constraints. Of those that could accept diverted trains, they were unable to accept all trains before the aggregate delay threshold was reached. At this point, the additional volume, some 4 freight trains per day, were assumed to be driven “off Gateway” during their long-distance trajectory. A diverse array of train services with many origins and destinations pass over the Rockwell Subdivision today. The operating team decided that a routing for those trains, between Elkhart, Indiana and North Platte, Nebraska via Kansas City rather than Chicago, was a reasonable and conservative proxy for the array of “Chicago Bypass” approaches the different Class I network traffic management teams might take to keep those trains as efficiently as possible on route to their destinations.

The outputs driving the costs accordingly were time and distance. Time measured included delay time accrued within the Gateway when it was assumed that trains where halted awaiting a slot to open up enabling them to proceed. Time in transit was also analyzed, identifying the additional time trains would spend moving in diversion, within or outside of the Gateway. Distance was also evaluated, where trains would take different or longer paths due to diversion than they would have in the project build case. Speed in the diversion model was another constant. It was assumed that current operating speeds would not be allowed to decline to accommodate diverted traffic, in part because of the constraints on not impacting passenger traffic or grade crossings through the diversions.
This “rail only” diversion case is conservative. The traffic growth rate was set at 0.14%, the bottom range of recent historical national and Gateway-specific physical volume indicators. This projection can be thought of as presenting an accounting in a major part of the costs that would accrue to railroads, shippers and the public in the situation where Rockwell is lost and the railroads are the entities primarily absorbing the impacts in order to preserve the fluidity and capacity of the Chicago Terminal for all modes, while avoiding massive public costs that would be seen if interference with passenger rail or truck diversions were allowed, or excessive delay accrued.

Figure 15: Build/no-build cases current and diversion routings

This approach imposes significant costs on the railroads and shippers, as can be seen quantified in the benefit-cost analysis. It mitigates impacts to the public of a diversion scenario, but does not eliminate those costs, which remain substantial.

System and service performance

Maintenance costs

Railroad track and structure maintenance costs were evaluated over the forecast period as a function of freight train ton-miles. In the no-build scenario, trains generating ton-miles are moved from their current paths to the diversion paths. The maintenance costs imposed on the new routings are a benefit that is avoided in the project build scenario. The ton-miles avoided on the current
paths, that loses those trains, are a disbenefit that is subtracted ("netted") from the previous calculation. This net value was calculated to be $36 million over the 30-year forecast period.

**Residual value**

The estimated project cost is $177 million, including development and engineering costs to date. The lifespans of the assets to be constructed were determined in consultation with the railroad engineering departments and the capitalized value of those assets was distributed over the forecast period. The projected remaining value, the residual provides some indication of the flows of benefits from the project that are still to come following the end of the 30-year analysis period. The present value of the residual of this project is expected to be $1.4 million.

**State of good repair**

The project corridor is an example of a large legacy infrastructure asset with many elements reaching the end of their useful life. Thirteen of these viaducts are over 120 years in age. The project brings this heavily trafficked corridor to a state of good repair with a track configuration optimized for modern freight rail operations, a centralized traffic control system in place of manual and verbal traffic control and bridges built to modern standards with modern materials. This project provides the foundation for this segment to provided high capacity service for another century.

**Safety, competitiveness, reliability, trip/transit time and resilience**

**Reliability and transit time**

The benefit-cost analysis supporting this model is focused primarily on the variable of delay in the rail system of the Chicago Gateway. Delay – and congestion – are key metrics of this terminal area since weather events paralyzed the rail network in 1997. This event affected rail traffic across the continent, revealing fundamental issues in the capacity and resiliency of the Chicago rail network, and was the genesis of the CREATE program. The railroads, in partnership with STB and local authorities, closely monitor and manage delay and capacity across the network. In our modeling accrual of delay drove the cascading of trains across different alternate routes in the no-build scenario. When adding trains to a diversion segment tripped an accumulated delay threshold for that infrastructure, the remaining trains for assignment would then be allocated to the next available, though even less optimal path. The physical length of the current versus the diversion segments is quite similar but the delay characteristics of running 26 trains per day on one set of paths are fundamentally different. The paths involving the project segment are the most efficient and generate the least delay. The diversion paths have physical characteristics and existing traffic patterns that cause disproportionate growth in delay when additional large freight trains are dropped onto them. Delay in the model represents time diverted trains spend holding in idle, outside of junctions or crossings, waiting for a slot to open for passage. This incurs many costs such as crew and equipment time and the impacts on shippers of delay to the cargoes moving by rail. In the model the cost of delay time avoided by performing the project – keeping these trains on the most efficient route - was $966 million, of which just under half was attributed to logistics delay cost borne by rail shippers.
Safety

America’s freight railroads have a tremendous safety record relative to their scale of activity. However, freight rail is a heavy industrial activity interacting with weather, tens of thousands of employees and many other variables that can result in hazardous situations. Though low, there is an inherent level of risk associated with each train-mile operated. We calculated the additional train miles in the no-build scenario and their associated safety costs. We estimate that performing the project avoids $36 million in accident and incident costs outside of at-grade crossings. Please see the section on at-grade crossings to follow for those identified safety benefits. Another safety benefit is the reduction in hand-throw switches. A net of nineteen power switches will be installed and the number of hand-throw switches will be reduced. This will reduce employee physical exposure to train operations activity and slip and fall hazards.

Resilience

One element of resilience is reducing the burden of human activities on a system most important for the well-being of the global population – the climate. Performance of the project reduces the time heavy haul diesel locomotives spend idling producing emissions and the time spent in motion – generating significantly more emissions – running over longer routes than they would in the project build scenario. This avoids emissions of criteria pollutants such as fine particulates, nitrous oxide and sulfur dioxide, emissions with known impacts on human health. This is a particular concern for some of the low-income and predominantly Black neighborhoods in Chicago that would be exposed to greater amounts of these pollutants in the case the project doesn’t occur. Locomotives also generate carbon dioxide, a greenhouse gas contributing to climate change. We estimate the avoided costs from these pollutants to be $82 million.

Improved integration with other modes

This project occurs on a rail corridor that only carries heavy haul freight trains, but this corridor is critical to the adjacent modes. This corridor serves as the northern route in and out of the Global 1 intermodal terminal, a major facility for truck to rail transload. The loss of the corridor in the no-build scenario forces Global 1 traffic to route and from the south of the facility, and this accounts for some of the accumulated delay and impacts in the model.

There are important multimodal accommodation characteristics of the traffic diversion model approach that was taken. First, diverted trains were not permitted to be assumed to halt and idle waiting for slot clearance in a block that would trigger at-grade crossing gates. This reduces available capacity for that train on that line and so increased delay: the diverted freight trains were not allowed to increase at-grade crossing impacts. Second, the delay in the model was not allowed to increase on any diversion routing to a level that would be thought to trigger shippers to redirect their cargoes from rail-rail interchange to rail-rubber tire – rail interchange or earlier diversion to truck for longer drays. Thirdly, diverted freight trains were not allowed to impact existing intercity passenger rail (Amtrak) and commuter rail (Metra) services. They had to route around the capacity absorbed by those. In short, the model was designed to make the fundamental assumptions that are the CREATE partners rules for operating the Gateway: the freight traffic must operate around the other modes and bear the cost of doing so. In this way the delay calculations represent the cost of
not interrupting other modes borne by the freight railroads attempting to deal with the no-build scenario and the loss of the Project segment.

**Ability to meet existing or anticipated demand**

Demand for freight rail has been sluggish in past years, in part due to secular declines in coal traffic, to some degree offset by growth in other categories such as intermodal. The diversion model was run at a conservative 0.14% growth rate, reflecting the bottom of a range of historical indicators including continental traffic levels and physical rail system performance measures of the Chicago Terminal as reported to the STB. The project segment is critical to the capacity of the Gateway. The model demonstrates this because, even at this low level of demand, a diversion case created enough unacceptable system delay that roughly four trains per day were forced “off-gateway” on a regional reroute. Higher growth rates were tested which forced higher numbers of diverted trains off-gateway. This speaks to the importance of the project segment to Gateway capacity.

**Departmental objectives**

**Safety**

The current routes including the project segment and the diversion routes contain similar numbers of at-grade crossings, 38 and 39, respectively. The characteristics of the crossings differ, in terms of forecast highway traffic demand, and the projections of daily trains passing through the crossings in the build and no-build scenarios. We used FRA’s GradeDec modeling software to calculate the impacts of the build and no-build scenario differentials in freight train traffic on these crossings. One current route crossing, 71st Street, was excluded as it is fully funded for near-term grade separation. Like other calculations in the model there were disbenefits created at crossings seeing a reduction in train traffic and benefits at crossings seeing more trains due to diversion, in the sense that those costs are avoided in the build scenario. We estimated the net benefits within the Chicago Terminal at crossings to be $5.5 million, including avoided costs such as accidents, motorist delay and emissions. Due to time limitations the impacts on crossings of the forecast regional diversions were not calculated. This would involve over 1,460 trains per year hitting perhaps hundreds of crossings in the no-build scenario and would generate significant costs that are avoided by carrying out the project.

**Equitable economic strength and improving core assets**

These topics were addressed previously in the discussion of lading delay cost impacts on shippers and asset state of good repair improvements.

**Buy America**

The 2021 Infrastructure Investment and Jobs Act (PL 117-58) has strengthened domestic content requirements for federally supported infrastructure spending. The CREATE partners have extensive experience successfully complying with federal domestic content requirements. The iron and steel, manufactured products, and construction materials to be used in the project will be compliant. No domestic content requirements waiver requests are anticipated for WA1.
Racial equity and economic inclusion

Community support, development and job creation

The railroad partners are heavily engaged in the region to help residents secure meaningful employment and develop their communities. These efforts support CREATE-project-specific opportunities like Ogden Junction, broader efforts to bring in candidates for good-paying permanent jobs with the railroads, including union jobs, as well as efforts to more generally support community employment and development in a range of fields. The contracted work element of the Ogden Junction Project will include elements to carry out targeted area employment, carried out in partnership with local community groups and elected officials. Some examples of recent railroad partner community engagement related to CREATE include:

- CREATE Ogden Junction partner CSX has hosted three live sessions with its HR team in the past year in partnership with the Dawson Technical Institute in Chicago and hired individuals for full employment or had subcontractors hire. This is during the design phase of the project more are sessions are planned during the construction phase. In addition, in 2021, CSX co-hosted a 10-week certification program at the Daley College in Chicago.
- CSX is the largest sponsor of the Cook County Forest Preserve “Citizen Scientist Program” and Summer Training program. This has included investment at the Dan Ryan Woods at 83rd and Western. Many youths have moved onto jobs in forestry because of CSX sponsorship. This program provides access to group outdoor learning activities to student populations who don’t have traditional access to recreation.

As highlighted in recent Congressional testimony, the most recent data for the CREATE Program shows that of a targeted goal for disadvantaged business enterprise (DBE) participation on ten completed projects of 21% was exceeded. $37 million in contracts were carried out by DBE’s, representing 23% of the work performed. IDOT and the railroad partners are presently working on a procurement analysis for WA1 that will enable setting of project specific DBE and local hiring goals. The most recent CREATE Program workshop to recruit small and disadvantaged businesses and local workers to take advantage of program contracting and hiring opportunities was hosted in April of this year. Another workshop will be held specifically in support of WA1.

Viaduct closures and community connectivity

The railway corridor infrastructure of the project area on the Rockwell Subdivision was originally constructed over a hundred years ago with the fundamental design objective of enhancing community connectivity. At the time the existing railroad structures were originally built, community disruption due to railroads operating at grade was a major civic concern in the City of Chicago. By elevating this segment of railroad over local city streets, the existing viaduct structures enable unimpeded access for people.
walking, bicycling, driving, and moving freight across this major freight rail corridor. A fundamental goal of the WA1 project is to preserve and improve these critical connections that today serve communities that are predominantly minority and low-income.

Two of the eighteen viaducts along the corridor, at Maypole Avenue near the northern end of the project area and at 15th Street near the southern end, cross local streets that are not critical points of community connectivity and will be closed as part of the project. This is a mixed residential and commercial neighborhood. The decision to close and fill these viaducts was made with great care, consideration, and stakeholder consultation to ensure community connectivity would not be negatively impacted by the closures. Local officials, including the Chicago Aldermen with jurisdiction over the viaducts in question, were involved in the decision-making process.

The viaduct at Maypole Avenue serves a short, low traffic residential street that is not used for through access within the community. It is located approximately 250 feet (less than a minute walking distance) from Lake Street to the north and Washington Boulevard to the south, both of which have viaducts that will remain open. As part of the WA1 project both adjacent viaducts will also receive improved lighting and sidewalks. The figure below illustrates the immediate connectivity that is retained north and south of Maypole.

The viaduct at West 15th Street is in a formerly industrial neighborhood – which is now home to a gated movie studio and Lagunitas Brewery – both accessible from the West, North and South. In 2019 the segment of 15th Street immediately west of the viaduct was vacated at the request of the adjacent property owners and closed to public access. This street vacation rendered the viaduct structure obsolete, and the remaining segment of 15th Street to the east of the viaduct was reconfigured with a cul-de-sac and the portion of the street under the railroad structure was fenced off and closed to all public access (see image below). Given this existing condition, no negative community impact is anticipated from removing and filling this viaduct.

At both of these locations, the WA1 project will reconstruct the affected local streets with standard cul-de-sac treatments to accommodate turnaround activity by motor vehicles, as well as new sidewalks, street drainage, street lighting, connecting alleyway improvements, and landscaping as needed.

**Resilience and addressing climate change**

These topics were previously addressed. The EJ Screen reports attached to this application emphasize the sensitivity of many of the neighborhoods that would be impacted in the no-build scenario and the emissions reductions advantages of the project.

**Transformation of our nation's transportation infrastructure**

This asset connects rather than disconnects communities. Through the Project the viaducts connecting these low-income and heavily minority communities will be improved.
**Benefits summary**

The detailed benefit cost analysis developed in support of the application for funding shows that the proposed project will result in significant benefits to the operation of the railroad and to the public. The BCA identified $1.01 billion in net benefits over the 30-year forecast period with a benefit-cost ratio of 9.53

**Supplementary analysis**

We ran a supplementary analysis of the benefits from the project of increasing the speed on the project segment from an average of 6.5 mph today to 13 mph that is expected after the project. This generates $17 million in benefits from factors including reduced fuel consumption and emissions, crew, rail equipment and lading time. This is a different scenario than summarized in the BCA and not comparable within that model, so is not included in the net benefits or B/C ratio. However, we thought this alternative view of benefits from increasing the speed limits relative to today’s restrictions would be of value to reviewers.

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<th>Project benefits and costs by category, diversion case</th>
<th>Present value (2019$)</th>
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<tbody>
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<td>Costs</td>
<td>Construction costs</td>
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<table>
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<tr>
<th>Benefits</th>
<th>Time value factors</th>
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<tbody>
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<td>Total cost of construction emissions ex. CO2 (disbenefit)</td>
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Total discounted benefits $1,126,384,252

| Total discounted net benefits $1,008,161,018 |
| Benefit-to-cost ratio 9.53 |

**PROJECT IMPLEMENTATION AND MANAGEMENT**

**Project management and organization**

Each CREATE project is managed by an individual sponsor, which leads procurement, engineering, and construction activities. All projects have followed federal guidelines through Phase I and II to ensure eligibility for federal funds. In its role as grant administrator, IDOT will coordinate closely with affected railroad owners, operators, funding partners and FHWA.

The project has completed preliminary engineering, NEPA and final design. The Phase I study for WA1 performed by IDOT was completed in 2010. A Phase II reevaluation of the NEPA determination is underway. The design criteria are based on specifications developed by the

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**Figure 18: Benefits summary charts and table**
railroads and agreed to by IDOT. The cost estimate is based on historical railroad unit costs and professional engineer experience. The CREATE Program utilizes a standardized cost estimation procedure that was used here for the development of the construction costs per the CREATE Form 3.1, provided as an attachment to this application. Normally the estimate includes 10 percent “Confidence of Estimate” contingency factor, 5 percent for construction management costs, and 5 percent project management reserve. The contingency and management reserve serves to mitigate budget risks. In this case the plan is to use a 20% contingency for the bridge and structure bid work partially due to material cost uncertainty and continued impact of COVID.

WA1 will use CREATE processes and procedures unique to this type of investment in the areas of engineering, design, and procurement. The CREATE Program has a proven record of successfully and expeditiously managing grant funding, particularly through its obligation of PNRS, TIGER, INFRA and CRISI grant funds.

The project will require a significant amount of coordination to ensure that rail network capacity and access is not hindered for extended periods of time, and will set an example of balancing the needs of multiple stakeholders and users, as detailed in various CREATE Program Partnerships agreements. After CREATE was initiated, many new procedures and policies were developed to govern this complex Program, which involves freight and passenger rail investments.

CREATE partners will release all Requests for Proposals (RFPs) for design and bids for construction using established federally approved processes. Most of the track and signal construction will be “force account” and performed directly by the railroads per union agreement. Most of the scope and spending in this particular project is on the viaduct elements and will be contracted or bid out. The project and all respective components will adhere to FRA, partner agencies, and railroad standards, along with all other federally recognized guidelines pertaining to the project, and the CREATE Partnerships and Management Practices.

Finally, portions of the work will be made available for bid by qualified local and DBE firms. CREATE has compiled DBE guidance from CREATE partners to help these firms successfully partner and bid on CREATE projects. The Program has a history of awarding successful contracts to these firms. Seventy-five various DBE contracts have been awarded for work on design and construction for CREATE projects over the last 10 years. This project will have goals for DBE participation in construction activities as per IDOT’s requirements.

**Project implementation team**

The expected organization of the project management team is illustrated in the provided chart.
PLANNING READINESS

Alignment with local planning
The Ogden Junction Project is programmed within the CMAP e-TIP transportation improvement plan as project 01-05-0011 which covers elements of the larger Western Avenue Corridor initiative within the CREATE Program. The CREATE Program is featured prominently in the current versions of the Illinois State Rail Plan, the State Freight Plan and the Long Range Transportation Plan. Implementation of CREATE is a core goal stated in the City of Chicago’s latest Transportation Strategy Report (page 31). Cook County’s Long-Range Transportation Plan emphasizes the importance of CREATE as “…a path-breaking effort, recognized nationally as a public-private approach for maintaining and growing the region’s status as a continental freight hub. (Page 42).

Stakeholder support
Support from public and private stakeholders at the national, regional, and local levels is an important foundation for successful project planning and execution. The following support letters have been attached to this application.

- Chicago Mayor Lightfoot
- Alderman Burnett (27th Ward)
- Alderman Ervin (28th Ward)
- Alderman Rodriguez (22nd Ward)
- Local Initiatives Support Corp Chicago
- Lawndale Christian Dev. Corp.
- Preservation of Affordable Housing, Inc. (POAH)
- Near West Side Community Dev. Corp.
ENVIRONMENTAL READINESS

For the Phase I NEPA study, an Environmental Class Action Determination (ECAD) was prepared, and a Categorical Exclusion determination was approved by FHWA on August 17, 2009. A copy of this ECAD has been attached to this application. Though Phase I is complete, the Phase I ECAD required reevaluation prior to construction because of the time elapsed since the original environmental document was approved as well as design changes made to the project since Phase I was completed, including realignment of mainline tracks, replacement/rehabilitation of bridges, and property acquisition. The ECAD reevaluation was initiated in 2015 and is substantially complete. It documents that the environmental conditions and conclusions in the Phase I ECAD remain accurate and valid, as well as consistent with applicable environmental laws, regulations, and/or policies. The original environmental commitments from the Phase I ECAD remain in effect, and the CREATE partners will adhere to the additional environmental commitments made during the ECAD reevaluation process. These are: Property Acquisition; Special waste studies, including Preliminary Environmental Site Assessment and Preliminary Site Investigation; Section 106 Memorandum of Agreement Mitigation Measures (MOA), including Historic Illinois Engineering Record (HIER) Level III Recordation and Video Documentation and Dissemination; Coordination with the State’s natural resource and historic agencies.

Property acquisition is complete and IDOT has certified that acquisition was done in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC § 4601), the IDOT Land Acquisition Manual, and the CREATE Phase II Manual. The special waste studies are underway and substantially complete. The Section 106 MOA was executed by FHWA on February 5, 2021 and mitigation measures are underway and substantially complete. Additional studies or mitigation measures are not recommended. Coordination with the State’s natural resource and historic agencies is underway and additional environmental commitments are not anticipated as the work under review relates to utility connections and sidewalk repair required for bridge rehabilitation and replacement. These remaining environmental items are scheduled to be complete in advance of the construction phase as required.