Appendix C: Project Background

This appendix presents additional background information on the Chicago to St. Louis High-Speed Rail Program (HSR Program) to provide context for the Elwood to Braidwood Track Construction Project (proposed Project). This appendix also presents additional details on the No-Build Alternative, Build Alternative 1B, and Build Alternative 2A.

High-Speed Rail Program History

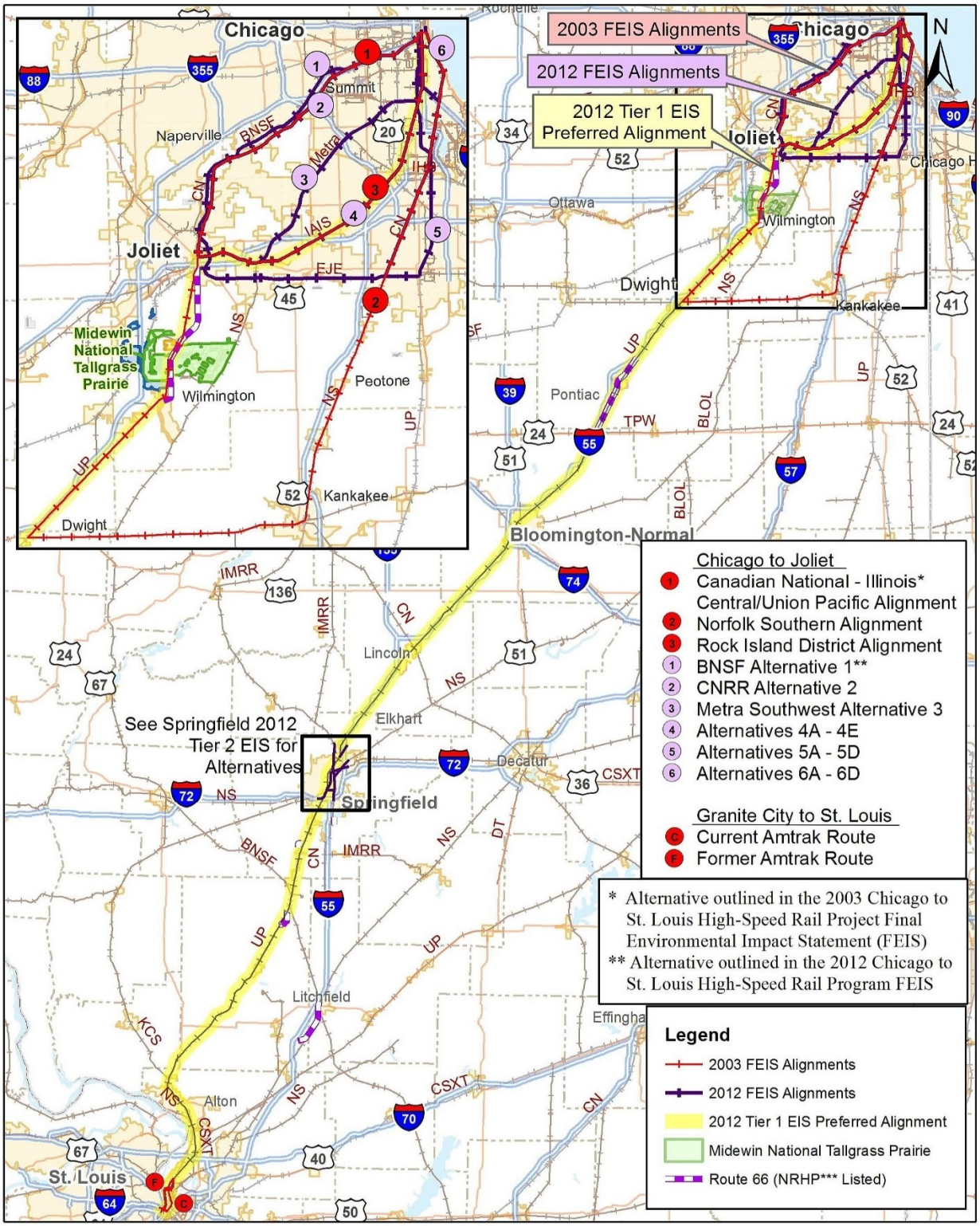
The proposed Project is one component of the HSR Program assessed in a Tier 1 Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) approved in 2012 (see Exhibit C-1) to add a second track to the Chicago to St. Louis rail corridor (double track program). Some of the high-speed rail (HSR)-related improvements were associated with the HSR Program from Chicago to St. Louis documented in a 2003 Tier 1 FEIS/2004 Tier 1 ROD (as well as improvements documented in a 2011 Environmental Assessment [EA] and Finding of No Significant Impact (FONSI) for improvements between Joliet and Dwight) that calls for improvements to the existing single track to increase speed and on-time performance for existing passenger trains (single track program). These HSR-related planned improvements are shown in Exhibit C-1 and Exhibit C-2. These projects are in various stages of completion:

- Joliet to Dwight Track Improvement Project assessed in a Categorical Exclusion (CE) signed by Federal Railroad Administration (FRA) in November 2014. Construction improvements by Union Pacific Railroad (UPRR) between Joliet and Dwight include fencing, culvert/drainage, and grade crossing improvements for the single track mainline between Elwood and Braidwood. Construction between Joliet and Dwight was finished in 2018.

- Illinois Department of Transportation (IDOT) District 1 – Group 1 Complex Crossing Improvements assessed in a CE signed by FRA in October 2015. Construction improvements by IDOT at the Stripmine Road and Coal City Road grade crossing were undertaken to increase crossing safety. The scope of this Project included improvement of roadway approaches to the grade crossing, signal work, signage, culvert work, fencing, drainage ditch improvements, and new crossing protection devices (including four-quadrant gates). Construction was completed in 2017.

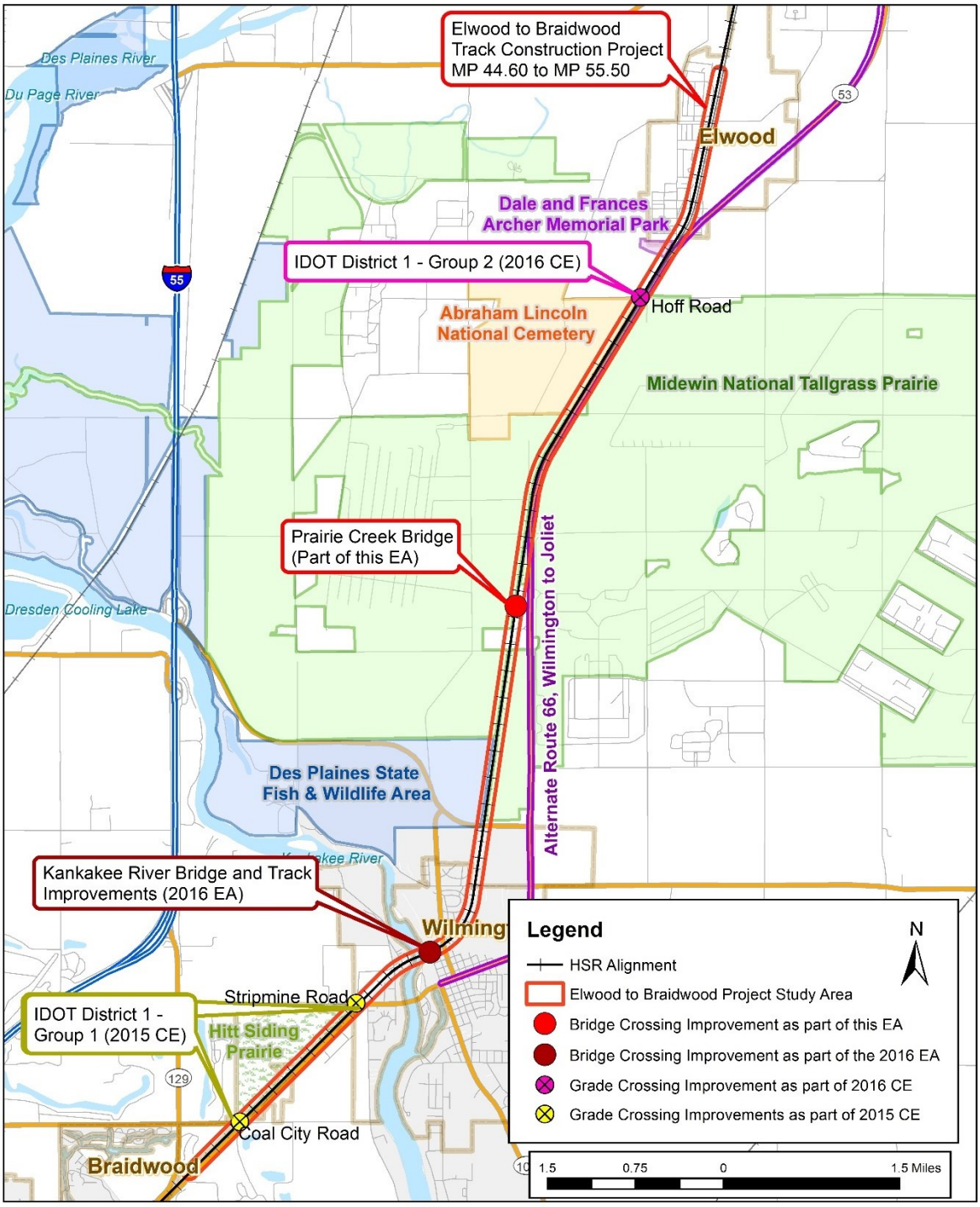
- IDOT District 1 – Group 2 Complex Crossing Improvements assessed in a CE signed by FRA in May 2016. IDOT recently completed improvements at the Hoff Road grade crossing within the project study area. These improvements were undertaken to increase crossing safety and the turning capacity of the adjoining IL-53 and Hoff Road intersection. The scope of this Project included the installation of turn lanes on IL-53, improvement of roadway approaches to the grade crossing, signal work, signage, culvert work, drainage ditch improvements, utility relocation, and new crossing protection devices (including four-quadrant gates). Fencing was also installed along the railroad corridor within UPRR right-of-way (ROW). With approval of the CE in 2016, construction was completed in mid-2017.

Exhibit C-1. Other High-Speed Rail Program Projects



Key: ***NRHP = National Register of Historic Places, CNRR = Canadian National Railway.

Exhibit C-2. Other Nearby High-Speed Rail Program Projects



Adjoining the proposed Project is a project in Wilmington between two sections of the proposed Project (Milepost [MP] 51.88 to MP 53.19) called the Kankakee River Bridge and Track Improvement Project. It includes components associated with the single track program (2004 ROD) and the double track program (2012 ROD). This project was assessed in an EA released August 2015, a Supplemental EA released April 2016, and a FONSI signed by FRA in 2016.

2003 HSR Program Purpose and Need (Single Track)

The Chicago to St. Louis corridor is part of the Midwest Regional Rail System plan to develop and implement a 21st century regional passenger rail system. The Midwest, state-wide, and regional planning context for the HSR plan is described in Section 2.1.2 of the 2012 Tier 1 FEIS. The purpose of the HSR Program is to enhance the passenger transportation network in the corridor by improving high-speed passenger rail service, resulting in a more balanced use of travel options by diverting trips made by automobile and air to rail.

The existing transportation network consists of highway (automobile and bus), air, and passenger rail travel. Currently, nearly all trips made annually within the Chicago to St. Louis corridor are accomplished by automobile. According to ridership estimates prepared in the 2011 *Chicago to St. Louis and Revenue Forecast Report*, the mode split between transportation modes of travel for annual person trips in the corridor is 97.5 percent for automobile, 1.1 percent for air, 1.3 percent for rail (Amtrak), and 0.2 percent for bus. This modal imbalance contributes to high congestion, reduced overall traveler safety, increased air pollutant emissions and energy consumption, travel delays, and increased travel unreliability. To achieve a more balanced transportation system in the corridor, either a new transportation mode must be introduced or improvements to an existing, less frequently used transportation mode, such as passenger rail, must be made. The conditions that would attract travelers from automobile and air travel to a new or improved mode of transportation are reduced travel time, service reliability, increased frequency of trips, and safety.

Passenger rail needs to demonstrate reduced travel times, improved service reliability, increased frequency of trips, and increased track capacity to improve the modal balance in the corridor.

2012 HSR Program Purpose and Need (Double Track)

Consistent with the 2003 EIS purpose and need, the double track program assessed in the 2012 Tier 1 FEIS/ROD has the project purpose of enhancing the passenger transportation network by providing a more balanced use of travel modes by diverting trips made by automobile and air to rail.

From 2007 to 2010, rail passenger ridership between Chicago to St. Louis increased 34 percent (Steer Davies Gleave, 2011). Amtrak, the current passenger rail service provider, operates exclusively on track owned by private freight carriers in the Chicago to St. Louis corridor. The single track between Joliet and St. Louis greatly reduces operational flexibility along the line, often relegating Amtrak trains to wait on passing sidings while freight trains pass. This affects the reliability of Amtrak service, delaying rail passengers and hindering on-time performance.

In addition, the single-track configuration constrains train frequency and travel speeds, limiting the ability to add daily trips to the corridor at conventional speeds and the capacity to implement high-speed passenger service. With expected projected increases in freight traffic, retaining a single track likely would exacerbate the issues with passenger rail performance in the corridor and hinder the ability to increase high-speed passenger rail service between Chicago and St. Louis.

Train speeds and travel times are affected by the present condition of existing track, switches, and signals, as well as characteristics of at-grade crossing protection systems.

With the proper infrastructure in place, rail is inherently more reliable than other land and air-based travel modes. Automobile travel, which represents 97.5 percent of the trips within the corridor, is the least safe mode of transportation when compared to air, rail, and bus travel. Therefore, more reliable and safer alternative modes of transportation along the corridor are needed.

Applicable Regulations

The following statutes and orders apply to the proposed action and were considered during preparation of the EA:

- Endangered Species Act, 50 Code of Federal Regulations (CFR) Part 17
- Public Law 91-190, National Environmental Policy Act (NEPA) of 1969, 42 United States Code (USC) § 4321 et seq., signed January 1, 1970
- Public Law 95-217, Clean Water Act (CWA) of 1977, 33 USC § 1251-1376
- Sections 9 and 10 of the Rivers and Harbors Act of 1899, 33 USC § 401
- Section 106 of the National Historic Preservation Act of 1966, as amended, 16 USC § 470
- Section 4(f) of the U.S. Department of Transportation Act of 1966, 49 USC § 303
- Section 404 of the Federal Water Pollution Control Act (CWA), 33 USC § 1344
- Section 6(f) of the Land and Water Conversation Act of 1965, 16 USC § 460
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 USC Chapter 61, 49 CFR part 24
- Executive Order (EO) 11988, Floodplain Management, 42 *Federal Register* (FR) 26951, signed May 24, 1977
- EO 11990, Protection of Wetlands, 42 FR 26961, signed May 24, 1977
- EO 13166, Improving Access to Services for Persons with Limited English Proficiency, 65 FR 50121, signed August 11, 2000

- FRA, Procedures for Considering Environmental Impacts, 64 FR 28545 (May 26, 1999)
- Federal Register, Use of Locomotive Horns at Highway-Rail Grade Crossings; Final Rule, 49 CFR Parts 222 and 229, April 27, 2005
- Illinois Environmental Protection Act of 1970 (415 Illinois Combined Statutes [ILCS] 5)
- Illinois Interagency Wetland Policy Act of 1989 (20 ILCS 830)
- "Implementation Procedures for the Interagency Wetland Policy Act of 1989" (17 Illinois Administrative Code [IAC] 1090)
- IDOT Wetlands Action Plan
- Illinois Department of Natural Resources Water Resources, Construction in Floodways of Rivers, Lakes and Streams (17 IAC Ch. I, Part 3700)
- Compliance 70 ILCS 405 Soil and Water Conservation Districts Act

Logical Termini and Independent Utility of the Proposed Project

A Tier 1 FEIS and ROD were prepared and issued by FRA for two different HSR programs between Chicago and St. Louis: the single track program in 2003/2004 and the double track program in 2012. These two programs propose: (1) improvements to the existing single track to increase speed and on-time performance for existing passenger trains (single track program), and (2) the addition of a second track so additional passenger trains can be added to support increased passenger volumes, while maintaining a high level of on-time performance (double track program). The single track program includes new sidings and areas of double track to ensure the program meets the need to improve on-time performance, increase in average speeds, and shorten trip times for existing passenger trains. In the project study area, the single track program is the Joliet to Dwight Track Improvement Project covered by a CE in 2014.

The proposed Project was assessed in the 2012 Tier 1 FEIS and ROD as part of the overall double track program and other individual projects. Based on the prior analysis, the following subsections detail how the proposed Project has logical termini and independent utility.

Connects Logical Termini and is of Sufficient Length to Address Environmental Matters of a Broad Scope

It is logical to separate the Elwood to Braidwood section of the HSR Program as its own project because the project connects into sections of two parallel tracks assessed in previous Tier 2 environmental documents (Joliet to Dwight Track Improvement Project and Kankakee River Bridge and Track Improvement Project). In addition, these four termini encompass all the Build Alternatives' physical features.

To ensure environmental matters of a broad scope are addressed, the environmental impact assessment documented in this EA goes beyond these Project limits at its connection with the

northern end of the Kankakee River Bridge and Track Improvement Project. The Kankakee River Bridge and Track Improvement Project ROD indicates that if adjustments to that second track were needed to avoid or minimize impacts in the proposed Project's study area, such adjustments and consideration of their impacts would be made in association with this EA. Because of that commitment, in the assessment of potential Section 4(f) resource avoidance and harm minimization alternatives north of Wilmington in Appendix D.3, end points of these alternatives extend south of MP 51.88 (this proposed Project's southern terminus) to MP 52.40 to encompass a curve north of Forked Creek that is a reasonable location for switching the side of the UPRR ROW where the second track is placed.

Therefore, given its direct connection to earlier track improvement projects, it makes sense to separate this section of the HSR Program as its own project. The project study area for the assessment of potential environment impact was determined based on the project termini and is consistent with standards used for the assessment of impacts of railroad improvement projects. The project study area also considers the second track connection to the Kankakee River Bridge and Track Improvement Project to ensure environmental matters of a broad scope are addressed.

Independent Utility or Independent Significance

The proposed Project is one segment of the double track program assessed in the 2012 Tier 1 FEIS. The second track added in association with the proposed Project would provide added flexibility to the scheduling of existing trains even if no additional rail improvements are made in the area beyond those included in the No-Build Alternative. Therefore, the proposed Project has independent utility. As a contributor to advancing the HSR Program and meeting its purpose and need, the proposed Project is a reasonable expenditure of transportation funds.

Does Not Restrict Consideration of Alternatives

As described above, the proposed Project adjoins other Tier 2 railroad improvement projects in four locations: MP 44.60, MP 51.88, MP 53.19, and MP 55.50. In the case of MP 44.60 and MP 55.50, the proposed Project would connect into two existing tracks built in the context of the Joliet to Dwight Track Improvement Project. In the case of MP 51.88 and MP 53.19, the proposed Project would connect into two tracks being built in the context of the Kankakee River Bridge and Track Improvement Project. The trackwork design for the Kankakee River Bridge and Track Improvement Project and the proposed Project were developed at the same time, with the desire to minimize the impact of both projects.

When approaching MP 44.60 in Elwood, the second track of the proposed Project is on the east side of the existing track. When approaching MP 53.19 and MP 55.50 in Wilmington, the second track of the proposed Project is on the west side of the existing track. In all three cases, the location of the second track creates a tangent (straight) connection to the two tracks adjoining the proposed Project. This configuration is preferred from a train operations perspective. As noted in the impact assessment in Chapter 3, making the connection does not create notable impacts that would make consideration of other alternatives to this preferred manner of connection appropriate.

When approaching MP 51.88 in Wilmington, the second track of the proposed Project is on the east side of the existing track, also creating a preferred tangent (straight) connection to the two tracks associated with the Kankakee River Bridge and Track Improvement Project. As indicated above, potential Section 4(f) resource avoidance and harm minimization alternatives north of Wilmington are assessed in Chapter 5. To not restrict the consideration of these alternatives, the end points of these alternatives extend south of MP 51.88 to MP 52.40 to encompass a curve north of Forked Creek that is a reasonable location for switching the side of the UPRR ROW where the second track is placed. When shifting the location of the new second track from one side of the existing track to the other, it is desirable from the perspective of sound engineering practice to make the transition in an existing curve rather than along a tangent (straight) track.

Therefore, based on the above findings, the project termini do not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements or the consideration of alternatives for the proposed Project.

Alternatives

This subsection presents additional details on the No-Build Alternative, Build Alternative 1B, and Build Alternative 2A. The limits of the alternatives are along the UPRR between Elwood (MP 44.60) and Braidwood (MP 55.50). The section within Wilmington that lies between MP 51.88 and MP 53.19 also makes up the Kankakee River Bridge and Track Improvement Project and was documented in a separate EA/FONSI (Kankakee River Bridge and Track Improvement EA/FONSI, 2017).

No-Build Alternative

The No-Build Alternative includes the single track in its existing configuration with periodic track sidings to allow trains to pass each other (See Exhibit C1-1). The existing ROW is 100 feet wide. The No-Build Alternative also includes past committed improvements as part of the April 2011 EA for the UPRR Track Improvement Project from Joliet to Dwight, and its associated November 2011 FONSI, as well as three subsequent approvals: the November 2014 CE for track improvements from Joliet to Dwight, the October 2015 CE for grade crossing improvements at Coal City Road and Stripmine Road, and the May 2016 CE for grade crossing improvements at Hoff Road. These improvements have all been constructed and include:

- Signal improvement of eight existing at-grade crossings by installation of four-quadrant gates and warning devices (see Table C-1)
- Roadway approach improvements at three existing at grade crossings: Hoff Road, Stripmine Road, and Coal City Road
- Culvert improvements and replacements (see Table C-2)
- Signal system upgrades to a Centralized Traffic Control signal system, including a Positive Train Control (PTC) overlay
- New urban and rural ROW fencing in select areas

Exhibit C1-1. No-Build Alternative along UPRR Right-of-Way (Facing North) Near Kankakee River Drive

Table C-1. Grade Crossing Improvements with No-Build Alternative

Mile Post	Street	Jurisdiction	Existing Warning Device	Future Warning Device
45.77	Mississippi Street	Village of Elwood	2-quadrant gates	4-quadrant gates
46.64	Hoff Road	Illinois Division of Highways	2-quadrant gates	4-quadrant gates
48.62	Private – Joliet Arsenal Road	Private	2-quadrant gates	4-quadrant gates
49.91	Private – Damien Mills Road	Private	Crossbuck with stop sign and private crossing sign	4-quadrant gates
51.46	River Road	Will County	2-quadrant gates	4-quadrant gates
53.42	Stripmine Road	Will County	2-quadrant gates	4-quadrant gates
54.85	Coal City Road	Illinois Division of Highways	2-quadrant gates	4-quadrant gates

Note: These improvements were covered by the 2014 CE for the Joliet to Dwight Track Improvement Project. Hoff Road, Stripmine Road, and Coal City Road roadway improvements were covered by the 2015/2016 CEs for the IDOT District Complex Crossings.

Table C-2. Culvert Improvements with No-Build Alternative

Mile Post	Existing Structure Type	Proposed Work
45.30	Culvert, buried, unknown material	1-36″ SSP J&B 3-36″ SSP Extension
45.70	Culvert, concrete	3-36″ SSP
45.90	Culvert, concrete	1 cast-in-place3′x48′, pending design
46.09	Culvert, metal pipe	2-36″ SSP Extension
46.95	Culvert, stone	1-48″ SSP Extension
49.20	Culvert, buried, unknown material	1-36″ SSP
51.57	Reinforced Concrete Structure Bridge – 13′	1-60″ CSP 1-60″ SSP
53.45	Culvert – unknown material	2 VCP – 1.5′x25′, pending design
54.20	Culvert, metal pipe	2-36″ SSP Extension

Note: These improvements were covered by the 2014 CE for the Joliet to Dwight Track Improvement Project. The 2011 EA considered these improvements in general terms indicating site specific assessments would be completed in later environmental documentation (the 2014 CE). Key: J&B = jack and bore, SSP = Smooth Steel Pipe, CIP = cast-in-place, CSP = corrugated steel pipe, and VCP = vitrified clay pipe.

The new grade crossing signal devices would accommodate the increased train speed, including four-quadrant gates. The Hoff Road/IL-53 intersection design improvements include additional turn lanes on IL-53 to meet geometric and safety requirements. The Coal City Road/Stripmine Road intersection design includes roadway approach improvements to meet geometric and safety requirements.

Existing and anticipated future rail service is shown in Table C-3Table C-3. Currently, this corridor serves 10 passenger trains daily (nine during the day and one at night) with a maximum speed of 79 miles per hour (mph), and five freight trains per day with a maximum speed of 60 mph. The No-Build Alternative would not increase the number of passenger trains and assumes maximum speed planned for track improvements (as presented in the 2004 ROD and the 2014 Joliet to Dwight CE) of 110 mph for eight of the 10 passenger trains and 79 mph for the remaining two.

Table C-3. Existing and Future Rail Service per Day

Train Traffic Information	Texas Eagle Passenger Train Traffic			Lincoln Service Passenger Train Traffic			Freight Trains		
	Existing	Future No-Build (2040)	Future Build (2040)	Existing	Future No-Build (2040)	Future Build (2040)	Existing	Future No-Build (2040)	Future Build (2040)
Daytime train volumes (7 am to 10 pm)	2	2	2	7	7	14	3	7	7
Nighttime train volumes (10 pm to 7 am)	0	0	0	1	1	2	2	4	4

Train Traffic Information	Texas Eagle Passenger Train Traffic			Lincoln Service Passenger Train Traffic			Freight Trains		
	Existing	Future No-Build (2040)	Future Build (2040)	Existing	Future No-Build (2040)	Future Build (2040)	Existing	Future No-Build (2040)	Future Build (2040)
Number of locomotives per train	1	1	1	1	2	2	2	2	2
Number of cars per train	5	5	5	5	5	5	50	50	50
Maximum train speed (mph)	79	79	100	79	110	110	60	60	60

The number of freight trains is expected to grow at a rate independent of the proposed Project. Freight traffic is more dependent on markets and demand than capacity and is influenced in part by growing rail traffic at the Joliet Intermodal facility in Joliet. Projected freight train operation assumptions are estimated to be seven morning trains (7 am to 10 pm) and four nighttime trains (10 pm to 7 am) with train speeds of 60 mph by 2040. Freight traffic can increase without a second track because freight trains do not have to meet a timetable schedule with consistent on-time performance like passenger trains. UPRR can adjust freight movements to accommodate increased freight demand on the existing single track; however, the existing single track between Chicago and St. Louis does not have the capacity to handle additional passenger trains without interfering with UPRR's freight operations.

Build Alternatives

Details of the two build alternatives are described below, including the physical features, construction methods, and operating characteristics. The full design drawings of the alternatives can also be found in the Appendix A.

Physical Features

Physical features that are the same for both build alternatives include:

- A second mainline track constructed generally west of the existing track at a separation of 20 feet along the entire section length, and the existing track shifted at some locations to accommodate the new track. The second main track would be on the east side of the existing track from MP 44.60 to MP 46.00. General parameters used in selecting the location of the second track included avoiding the need to alter an existing pedestrian overpass, IL-53, and existing connections to local roads.

- The vertical grade of the existing main track between MP 55.24 and MP 55.50 smoothed out.

- Universal crossovers added at MP 44.80, MP 55.12, and MP 55.24 to allow trains to switch from one track to the other; signal improvements provided in association with track

improvements; the siding and associated turnouts from MP 44.97 relocated to approximately MP 45.52; and the existing turnout (MP 46.60) serving an industrial siding north of Hoff Road relocated to the new west track.

- Second track crossings added at Private - Joliet Arsenal (MP 48.62), Private - Damien Mills Road (MP 49.91), River Road (MP 51.46), and Stripmine Road (MP 53.42). For these three crossings, the grading, signal placement, and track panels for the second track will be completed in the context of the single track project under the No-Build Alternative.

- A new Prairie Creek railroad bridge (MP 49.52) constructed along with a second access road bridge span west of the Prairie Creek Bridge. At Prairie Creek, the existing structure would be replaced in kind utilizing the existing abutments and pier for both alternatives. The new abutments would be in the same location as the existing abutments and would span the entire creek. The Prairie Creek Bridge would have new substructure elements including new abutments, fill slopes leading from the creek bottom to the new abutments, and two new piers.

- 3,203 feet of previously abandoned track removed between Wilmington and Braidwood that is no longer needed.

- New HSR fencing installed in select areas as shown in Appendix A on both sides of the tracks.

- New or extended culverts constructed at the following locations:

  - MP 45.30: two 36- inch SSP J&B culvert and three 36-inch SSP extensions constructed

  - MP 45.70: three 36-inch SSP extensions constructed

  - MP 45.90: inlet moved to an existing storm sewer pipe and an existing storm sewer pipe plugged

  - MP 46.09: two 36-inch SSP extensions constructed

  - MP 46.74: two 84-inch SSP culverts constructed to replace an existing concrete arch culvert

  - MP 46.95: one 48-inch SSP extension constructed

  - MP 47.30: one 96-inch corrugated steel pipe (CSP) culvert and two 72-inch SSP J&B culverts constructed to replace an existing stone arch culvert

  - MP 48.80: one 72-inch SSP J&B culvert constructed to replace an existing CIP concrete box culvert

  - MP 48.90: one 78-inch CSP extension constructed

  - MP 49.20: one 36-inch SSP extension constructed

- MP 51.57: one 60-inch CSP and one 60-inch SSP extension constructed
- MP 53.45: two VCP culverts constructed measuring 1.5 feet by 25 feet
- MP 54.20: two 48-inch SSP culvert extensions constructed

Unique elements of each build alternative are described below.

Build Alternative 1B:

- a 10-foot maintenance access facility constructed with associated driveways (connecting to local roads) and turnarounds at endpoints along the entire Project length (See Appendix G for design of the access facility). The maintenance access facility would be used for equipment access during construction and future maintenance. Tubular steel gates would be installed at the entrance to all access road driveways.
  - North of Damien Mills Road (MP 49.91), the maintenance access facility would be constructed on the west side of the existing track.
  - South of Damien Mills Road, the access road would be constructed on the east side of the existing track.
- A sheet pile retaining wall with a concrete surface constructed for approximately 1,500 feet on the west side of a proposed access road, at MP 48.15. The maximum height of the wall would be 7 feet. The purpose of the retaining wall is to avoid exposing an existing buried gas line that parallels the tracks.
- Two sections of earthen berm wall constructed at approximately MP 48.80 (220 linear feet) and MP 48.75 (70 linear feet) to avoid encroaching on the parallel IL-53 (NRHP listed Alternate Route 66).

Build Alternative 2A:

- A 10-foot-wide maintenance access facility with associated driveways (connecting to local roads) and turnarounds constructed at endpoints along the entire Project length on the east side of the existing tracks. The maintenance access facility would be used for equipment access during construction and future maintenance. Tubular steel gates would be installed at the entrance to all access road driveways.
- A series of retaining walls constructed to reduce the need to slope the land on Midewin Tallgrass Prairie (MNTP) property. The maximum height of the wall would be up to 24 feet tall. The surface of the wall would be concrete.

Right-of-Way and Easements

Build Alternative 1B would require an additional 16.0 acres of ROW. The ROW would be a mix of private properties and state and federally managed land. The design drawings in Appendix G show the location of the required ROW. Build Alternative 1B would also require 1.0 acre of

highway grading permit (i.e., an IDOT-specific permit required whenever temporary easements are needed on state highways), 11.5 acres of temporary construction easement, and 0.5 acres of permanent easement. Build Alternative 2A would require 10.7 acres of ROW acquisition, as well as 8.5 acres of highway grading permit, 11.1 acres of temporary construction easement, and 0.3 acres of permanent easement. Temporary construction easements generally would be obtained to allow for re-grading in the form of cuts or fills that help accommodate grade changes within the UPRR ROW, construction equipment access, and construction staging. Permanent easements would be used during construction in the same manner as temporary easements, for access to inspect and maintain culverts passing under the UPRR ROW. Easements would be revegetated after construction is complete.

Construction

Construction is expected to last 18 to 24 months for Build Alternative 1B and 24 to 30 months for Build Alternative 2A. In general, the new track would be built first, rail traffic would be shifted to the new track, then improvements to the existing track would be made. Construction work would be confined to the existing and new railroad ROW, new permanent easements, temporary construction easements, and track crossing public road ROW. The construction period for Alternative 2A would be longer because of constructability challenges associated with retaining wall construction and construction staging along IL-53.

During construction, coordination would occur between the contractor and the UPRR, wayside industries, local municipalities, Will County, Abraham Lincoln National Cemetery, and the Logistics Park Chicago (LPC) Intermodal Facility to minimize construction period transportation impacts, such as access restrictions or detours during improvement of at-grade crossings and modifications to the industrial spur lines.

Prairie Creek Bridge construction would be completed in phases. The bridge would have new substructure elements including new abutments, fill slopes leading from the creek bottom to the new abutments, and two new piers. Piles associated with the new abutments and piers would be driven or cast-in-place concrete drilled shafts with a precast concrete back wall for the new abutments. The two fill slopes would be behind the existing abutments. The existing pier in the center of the stream would be removed. An application would be submitted for a partial causeway permit to place temporary fill in the creek for construction access. Cofferdams would be used for removal of the existing pier and construction of the two new piers. To minimize sedimentation during construction of the permanent substructure, the use of inflatable bladders or similar non-erodible materials would be considered for use as cofferdams. These methods would not require driving sheet piling for the cofferdams. Once the cofferdams are installed, they would be dewatered using pumps to create a dry work environment and the footings would be constructed.