



ILLINOIS
HIGH-SPEED RAIL
CHICAGO TO ST. LOUIS

Tier 2: Springfield Rail Improvements Project

Volume II



prepared by:



U.S. Department of Transportation
Federal Railroad Administration



Illinois Department
of Transportation

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Tier 2 Evaluation:

Springfield Rail Improvements Project

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FINAL

SUMMARY



S.1 Tier 2 Evaluation: Springfield Rail Improvements Project (Volume II) Summary

S.1.1 Springfield Background

Multiple alignment options are available for the High-Speed Rail corridor through Springfield. In addition, the existing and projected rail traffic on the three north-south corridors through Springfield causes vehicle traffic congestion, safety risks and other problems. These problems are primarily related to the multiple at-grade crossings in the three north-south corridors. The crossings block vehicle traffic, increase risk of crashes and require trains to blow horns. Concurrent with the Tier 1 analysis, the Tier 2 analysis through Springfield analyzed alternatives for enhancing UP rail line capacity and to accommodate and reduce the effects of the increasing high-speed passenger and freight train traffic on the on the three north-south rail corridors in Springfield.

The north limit of the Springfield project is the south right-of-way line of Sangamon Avenue. The structure over Sangamon Avenue would not be affected by any of the Springfield alternatives and provides an easily recognized project limit for the public.

The south project limit is the north right-of-way line of Stanford Avenue. The track arrangements and rail operations are the same for all alternatives at this point, and it provides an easily recognized project limit for the public. The Springfield Project includes an evaluation of vehicle congestion, public safety and other problems along all three of the north-south rail lines through Springfield.

S.1.2 Springfield Purpose and Need

The purpose of the Springfield Rail Improvements Project is to enhance rail line capacity to accommodate and reduce the effects of the increasing high-speed passenger and freight train traffic on the three north-south rail corridors that pass through Springfield: the Union Pacific (UP), Norfolk Southern (NS), and Canadian National (CN)/Illinois & Midland (I&M) (Exhibit S.8-1). The purpose includes reducing rail line effects by improving safety, reducing congestion, and enhancing community livability and supporting commercial activity.

Based on the need for the Springfield Rail Improvements Project, the following goals and objectives were established.

- Provide a route through Springfield that achieves the purpose of the Chicago to St. Louis High Speed Rail Program.
- Enhance rail line capacity and provide for future capacity needs to accommodate growing passenger train traffic.
- Improve safety and reduce congestion by reducing the number of at-grade street crossings in the study area with a focus on those streets with the highest traffic volumes.

- Improve livability and commercial activity by reducing train horn noise throughout Springfield and reducing the barrier effect of the rail lines on neighborhoods, downtown and the Medical District.
- Minimize rail operational issues, impacts to existing development, operations, maintenance, rehabilitation, and capital costs, and impacts to social and economic resources due to the recommended alternative.



Exhibit S.1-1. Existing Railroad Corridors

S.1.3 Springfield Alternatives Considered

Two alternatives, later refined to five sub-alternatives, were carried from the Tier 1 screening to Tier 2 screening for additional analysis.

Alternative 1 – Double track the existing 3rd Street corridor to accommodate UP freight & passenger (HSR) traffic. This alternative includes three sub-alternatives, each of which includes an alternative specific combination of grade separations and grade crossing closures.

- 1A – Double track UP on 3rd – grade separation at passenger station.
- 1B – Double track UP on 3rd – some grade separations on UP corridor only.
- 1C – Double track UP on 3rd – some grade separations on all corridors.

Alternative 2 – Relocate UP freight and passenger (HSR) traffic to the 10th Street corridor. This alternative includes two sub-alternatives, each of which includes a specific combination of grade separations and grade crossing closures.

- 2A – Relocate UP to 10th – some grade separations on 10th and 19th.
- 2B – Relocate UP to 10th – grade separation or closure of all crossings on 10th south of North Grand Avenue, some grade separations on 19th.

The alternatives were compared as to how well they achieve the project purpose and need, primarily related to safety, traffic delays, horn noise, costs and number of at-grade street crossings. They were also compared as to number of residential and commercial displacements (Tables S.8-1 to S.8-4).

Based on this analysis, Alternatives 1A, 1B and 1C were determined to be not reasonable and Alternatives 2A and 2B were carried forward for more detailed analysis.

S.1.4 Summary of Springfield Impacts

Table S.1-1. Environmental Impact Summary of Alternatives 2A and 2B

Impact Category	Alternative		No-Build Alternative
	2A	2B	
Right-of-Way Acquisition (Acres)	42.0	42.6	0
Displacements			
Residential	117	117	0
Commercial	53	56	0
Access Changes	28	40	0
Farmland Conversion (Acres)	0	0	0

Impact Category	Alternative		No-Build Alternative
	2A	2B	
Cultural Resources			
National Register Listed (or Eligible) Sites	0	1 ⁽³⁾	0
Known Archaeological Sites	0	0	0
Noise Receptors Affected			
Moderate Impact	9	9	5,978
Severe Impact	9	9	1,789
Natural Resources			
Threatened/Endangered Species (Number of Species)	0	0	0
Natural Areas (Number)	0	0	0
Native Vegetation (Acres)	0	0	0
Affected Lakes and Streams	0	0	0
100-yr. Floodplains Crossings	0	0	0
Wetlands (Acres)	0	0	0
Parks (Number)	0	0	0
Special Waste Sites (Number within one block)			
CERCLIS ⁽¹⁾	2	2	0
LUST ⁽²⁾	20	20	0
Capital Cost (Million)	\$315	\$338	\$0

⁽¹⁾Comprehensive Environmental Response, Compensation and Liability Information System.

⁽²⁾Leaking Underground Storage Tank.

⁽³⁾ Current access to the Great Western Railroad Depot will be relocated to the west along the same block. Therefore, there will be no permanent impact to this structure.

Only those categories with impacts are discussed below.

S.1.4.1 Land Use/Socioeconomic Impacts

The number of residential and commercial displacements is shown in Table S.1-1. These relocations are a result of about 42 acres of right-of-way required for the additional railroad tracks and grade separations. Springfield has sufficient comparable housing and commercial space available for these relocatees. Right-of-way purchases would be conducted in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Relocation Act) (Title 42 United States Code Sections 4601-4655), as amended, and the U.S. Department of Transportation implementing regulations, which apply to all federal or federally assisted activities that involve the acquisition of real property or the displacement of residences or businesses.

Also shown are the number of properties which would have their existing street access changed. Most of these access changes are because of grade separations and would reduce the number of access points to the property.

Residential and business relocations will likely affect a small percentage of minority and/or low-income individuals; however the cumulative impacts are not anticipated to be disproportionate for the retained alternatives (2A or 2B).

S.1.4.2 Cultural Resources

The Great Western Railroad Depot at Monroe and 10th Street is a two-story, brick, Italianate-style structure. It was constructed in the 1850s that considered eligible for the National Register under Criteria A (commerce), B (in relation to Lincoln), and C. The property abuts the existing railroad R.O.W., but this presents no change from its historic setting. Vibration studies have assessed no structural impact to the property for the retained alternatives. However, Alternative 2B would provide an underpass along Monroe Street which would relocate the existing access to the Depot further to the west within the same block. Since Alternative 2A is the Preferred Alternative, the effects assessment on this property is “No Adverse Effect.”

S.1.4.3 Noise

Noise impact assessments were made for each of the retained alternatives, and the number of moderate and severe noise impact locations was calculated using the Federal Transportation Administration (FTA) guidance manual is Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06, May 2006). Moderate and severe noise impacts are based on absolute and relative decibel levels and are defined by the FTA.

S.1.4.4 Special Waste

Alternatives 2A and 2B both affect the same number of CERCLIS and LUST sites. However, these sites are not anticipated to present significant impairments to rail improvements associated with Alternatives 2A or 2B.

S.1.4.5 Travel Benefits and Transportation Impacts

There are no differences among the Springfield alternatives regarding:

- Rail service alternatives
- Travel time
- Service levels/frequencies
- Ridership/revenue

S.1.5 Environmental Justice

Executive Order 12898 (EO 12898), *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), directs FRA to identify and address any disproportionate and adverse impacts on minority and/or low-income populations that could result from the implementation of the Preferred Alternative proposed in Volume II of the Environmental Impact Statement. In addition,

an Environmental Justice Analysis Technical Report was prepared pursuant to the U.S. Department of Transportation (DOT) Order 5610.2(a), Final DOT Environmental Justice Order, issued May 2, 2012.

Environmental Justice communities are known to occur along the Preferred Alternative and Alternative 2B based on the most recent census data.

Build Alternatives

Consolidating UP rail traffic onto the 10th Street Corridor would result in adverse disruption to communities of concern, in that unlimited access across the track would no longer exist in the study area and road closures would cut off access. Rail traffic has long existed on the 10th Street Corridor, and the proposed action, while accommodating the predicted increase in rail traffic, would remain on an existing rail alignment except for the section between Ridgely Avenue and Phillips Street.

Improvements at remaining at-grade crossings and construction of new grade separations would offset adverse impacts from road closures along the 10th Street corridor by creating safer railroad crossings for vehicles and pedestrians with four quadrant gates that won't allow crossing while trains are present. Grade separations will eliminate delays caused by train traffic, as well as safer crossings.

Relocations likely would affect about 23 minority residences and five minority-owned businesses; comparable housing for the displaced residents is available within close proximity to the railroad corridor. Available space is also within close proximity for businesses which choose to relocate in the same vicinity.

Minority displacements are about 20 percent of the total residential displacements, and minority-owned businesses likely to be displaced are about 10 percent of total business displacements. Included in the commercial designation for both the Preferred Alternative and Alternative 2B are three government or non-profit establishments: the Illinois Environmental Protection (EPA), the Salvation Army, and Planned Parenthood. Nearby property appears to be available for these facilities to relocate. The Salvation Army is moving to a new location at 100 N. 9th Street independently of this project.

Positive impacts to Springfield, the communities of concern and neighborhoods would result from the elimination of 32 at-grade crossings, improvements to remaining at-grade crossings, and the elimination of train horn blowing. Benefits from these actions center on increased safety, reduced delays and general noise reduction city-wide. New grade separations would increase safety not only for vehicular traffic but also pedestrians traveling across these railroad crossing locations. Safety would also increase for vehicular and pedestrian traffic from proposed improvements to at-grade crossings remaining along the 10th and 19th Street Corridors. The proposed at-grade crossing treatments would support elimination of blaring noise from train horns traveling through Springfield's communities.

The Preferred Alternative or Alternative 2B would allow for the creation of quiet zones throughout Springfield that would greatly enhance livability for all residents. Safety will also be enhanced for motorists, bicyclists and pedestrians by the construction of nine grade separations on the most highly traveled roadways. The remaining at-grade crossings would have four-quadrant railroad crossing gates so that access across the track is secured while trains are present. The construction of the nine grade separations and the abandonment of the 3rd Street tracks would greatly reduce delay times for traffic traveling east or west through Springfield.

The relocation of the 3rd Street Corridor to the 10th Street Corridor under the Preferred Alternative or Alternative 2B would encourage potential opportunities for commercial expansion and development of businesses around the Medical District along 3rd Street. Other opportunities would also be possible along the abandoned 3rd Street Corridor, such as a city-wide pedestrian/bike path or parkway for additional green space. This enhancement to the community could provide the opportunity for businesses to cater to needs of additional visitors to the Downtown area and the Lincoln sites.

In addition, a multimodal facility, consisting of a train station and transit hub for buses and taxi service, has been planned by Springfield for the 10th Street Corridor. This facility is intended to provide services and jobs to Springfield's east side. This complex is proposed to be constructed on about four city blocks and may contain restaurants, shops, office space, a daycare facility, meeting rooms, and parking. This facility conforms to Springfield's Downtown Redevelopment Plan and Springfield's 2030 Comprehensive Plan.

Therefore, because the benefits to communities of concern in the project area were determined to outweigh the adverse effects to these communities, no disproportionately high and adverse human health and environmental effects to Environmental Justice populations are anticipated to result from implementation of the project.

S.1.6 Springfield Preferred Alternative

Alternative 2A is the Preferred Alternative for the following reasons:

- Alternative 2A would have lower capital cost than Alternative 2B.
- Alternative 2B would have lower delays and crash rates, but this results primarily from constructing new grade separations at Monroe and Washington Streets and closing Capitol Avenue and Enos Streets. The grade separations both have a benefit/cost ratio much less than 1.0. The grade separations and street closures create undesirable access and adverse travel issues.
- Alternative 2B would require more right-of-way acquisition, and would result in more commercial displacements and more parcels with a change in access.
- There are no other anticipated differences between the impacts for Alternatives 2A and 2B including environmental justice concerns, Section 4(f) properties, noise or vibrations impacts.

S.1.7 Summary of Mitigation

Table S.1-2. Mitigation

Resource Impacted	Mitigation
Land Use	IDOT would implement the provisions of the State of Illinois Relocation Assistance Plan in accordance with the Uniform Relocation Act as mitigation action where ROW acquisitions and land use changes occur.
Social/Economic	Any adverse impacts of the proposed project would not be disproportionately borne by minority or low-income populations yielding no need for mitigation action.
Cultural	The Section 106 process would continue with Memoranda of Understanding for any adverse effects to National Register or National Register eligible sites pending SHPO's review of this Draft Document.
Natural Resources	Avoidance, minimization, and best management practices implementation would reduce adverse impacts. Section 7 of the Endangered Species Act consultation would be ongoing to protect threatened and endangered species in the project area.
Air Quality	IDOT's Standard Specification on dust control would be implemented during construction to limit dust emissions during construction.
Noise and Vibration	Quiet zones would be enacted throughout the City on all rail corridors traversing the town.
Water Quality/Resources	Best Management Practices would be utilized to protect water quality. Almost all runoff from construction would be diverted directly into the City's combined sewer system during and after construction and treated by the Springfield Metro Sanitary District.
Visual and Aesthetic Quality	Views of trains and new rail lines would be considered a minor adverse visual impact. IDOT would determine potential ways to help reduce minor impacts, such as planting vegetation screens or providing aesthetically pleasing features as part of the design.
Special Waste	Special waste sites purchased for additional right-of-way would be remediated prior to construction of the proposed action.