

Chapter 4

Community and Social Analysis

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4 COMMUNITY AND SOCIAL ANALYSIS

4.1 Introduction

Chapter 4 summarizes the social characteristics and conditions in the West Lake Corridor Project (Project) Study Area. Potential impacts of the Project Alternatives are also described. The Study Area is defined for each topic area discussed. The information is presented for the No Build Alternative as a point of comparison with the impacts of the National Environmental Policy Act (NEPA) Preferred Alternative (Hammond Alternative Option 2) and the other Build Alternatives. The analyses contained herein comply with NEPA (41 United States Code [USC] § 4321) and specific laws, regulations, and executive orders that apply to the evaluation of community and social impacts, such as residential and business displacements, cultural resources, parklands, safety and security, and environmental justice. Any additional statutory or regulatory laws related to each resource are provided within the regulatory context subsections, as appropriate. Supporting technical memoranda were prepared for resource areas, where appropriate, and incorporated by reference in this Draft Environmental Impact Statement (DEIS). The following were analyzed for potential community and social impacts:

- Land Use and Zoning
- Land Acquisitions and Displacements
- Socioeconomics and Economic Development
- Neighborhoods and Community Resources
- Cultural Resources
- Visual Resources
- Safety and Security
- Environmental Justice

4.2 Land Use and Zoning

Land use broadly refers to the different functions of human use of land (e.g., residential, commercial, industrial) and is influenced by development patterns and activity centers, population and employment levels, growth potential and trends, local and regional land use policies, and other factors that affect area growth. This section describes land use and land use policy in the Study Area and the potential effects of the alternatives on land use. Population and employment data related to the land uses described in this section are presented in **Section 4.4** of this DEIS. Effects to neighborhoods and community resources are discussed in **Section 4.5**. See the *West Lake Corridor Land Use, Neighborhoods, and Community Resources Technical Report* in **Appendix H** for more information.

4.2.1 Regulatory Setting

The Council on Environmental Quality (CEQ) (40 Code of Regulations [CFR] § 1502) contains regulatory requirements for describing the affected environment and environmental consequences for general resources, which include land use, zoning, and local plans. Chapter 4 of the Indiana State Code establishes the authority of municipalities for planning and zoning, and subsequent local zoning regulations govern the land development process. Similarly, Chapter 55 on Counties and Chapter 65 on Municipalities of the Illinois State Code establish zoning authority locally within the state.

4.2.2 Methodology

The Study Area considered for this analysis includes the area within ½ mile on either side of the proposed alignment. The following items were analyzed and are discussed in the following sections:

- Current land use and zoning
- Local plans and regulatory environment, including zoning regulations
- Upcoming corridor development projects

The land use impact assessment focused largely on how the alternatives considered would affect land use and development patterns within the Study Area compared to the No Build Alternative. The assessment evaluated future conditions in the region as set forth in the local jurisdictions' land use plans and zoning ordinances and the consistency of Project Alternatives with those plans.

4.2.3 Affected Environment

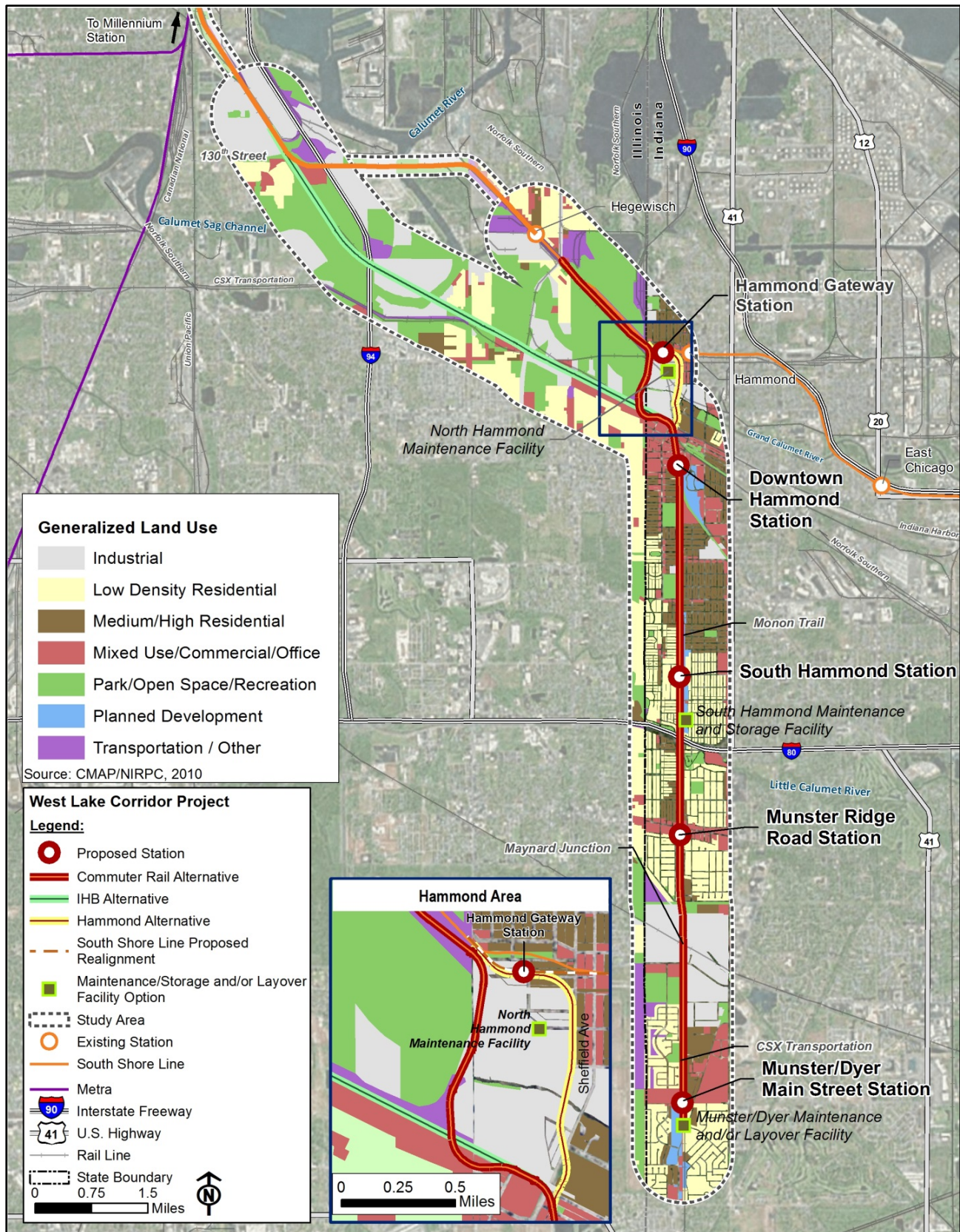
4.2.3.1 Existing Land Uses and Zoning

Current land use in the Study Area generally transitions from rural and suburban in the community of Dyer in the south, to increasingly dense suburban development around south Hammond to the urban environment of the City of Chicago. Zoning designations generally mirror and support the existing land use patterns. Generalized land use types are shown on **Figure 4.2-1** and **Figure 4.2-2**. Each of the municipalities and counties within the Study Area has distinct zoning districts as established in their respective local zoning regulations; a C-1 commercial zone in Munster is similar, but not identical, to a B-2 commercial zone in Dyer, for example. The specific zoning designations for each Project element (e.g. alignments, stations) are listed in **Table 4.2-1** by jurisdiction. These are the specific zoning designations in each municipality or county within the Study Area and are listed from south to north.

Table 4.2-1: Existing Land Use Patterns and Zoning in the Study Area

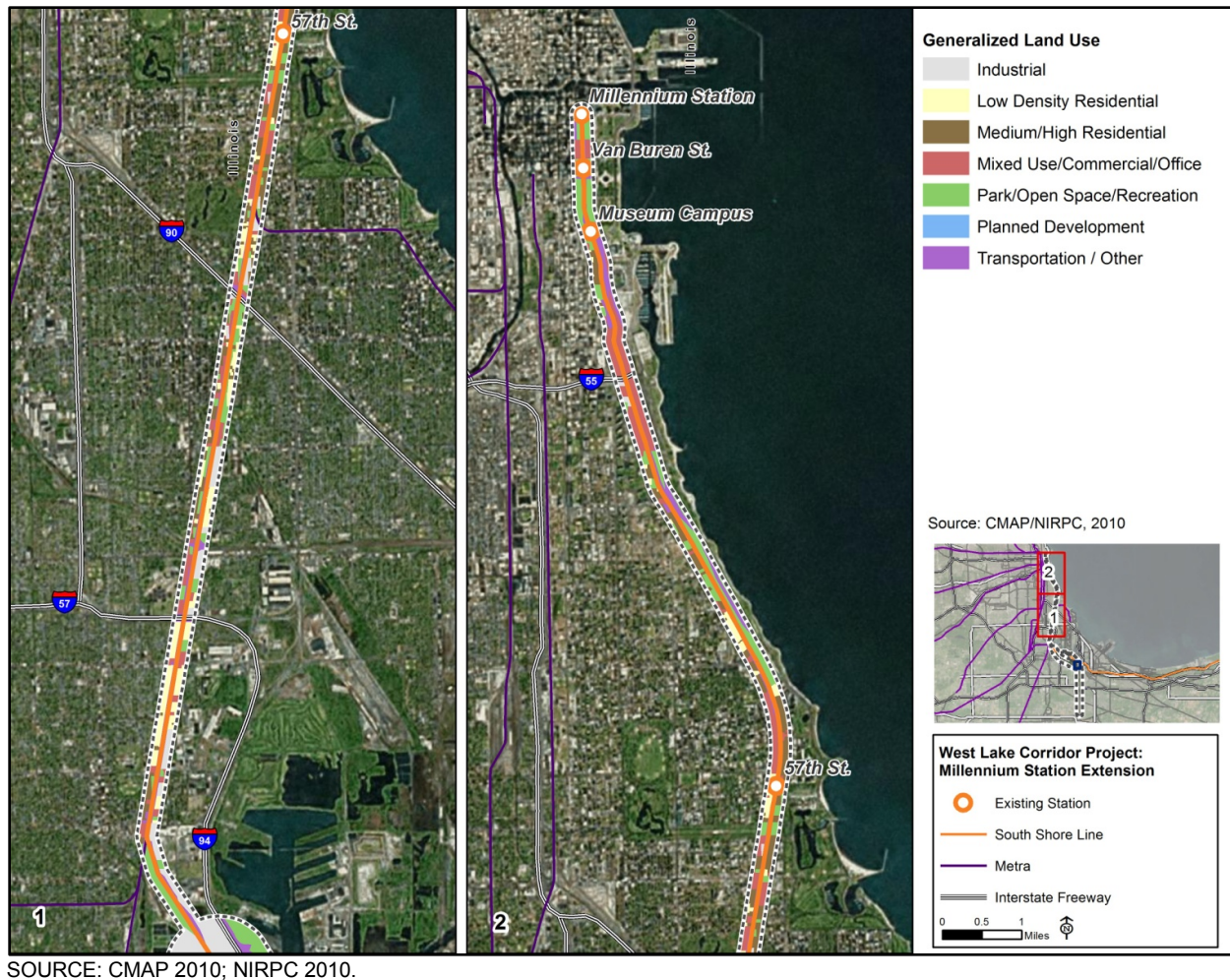
Jurisdiction	General Land Use/ Patterns Description	Predominant Local Zoning Districts
Dyer	Medium-density suburban residential	R-1 single-family (SF) Residential, R-2 SF Residential, B-2 Business, Light Industrial, Special Use District, PUD (Planned Unit Development); RD (Rural Development District)
Munster	Medium-density suburban residential interspersed with an industrial park, some commercial, golf course, vacant site with new streets in a planned subdivision that is mostly undeveloped, and a rail trail	R-1 SF Residential, R-2 SF Residential, O-1 Office, Manufacturing, Public lands, C-1 Commercial, R-3 Multi-family Residential
Hammond	Medium- to high-density residential of mostly SF homes on small lots; downtown Hammond in the northern stretch of the Study Area; some vacant, undeveloped land and industrial uses. Monon Rail Trail exists along this alignment section.	R1-U Urban SF Residential, C-3 Commercial, PUD, S-1 Open Space, R-1 SF Residential, C-3 Central Business District, I-1 Light Industrial
Chicago	Existing rail alignment passes along a golf course and transitions into a mix of urban uses; stretch of industrial land near Hegewisch transitions to a mix of high density residential neighborhoods with areas of mixed commercial uses; some areas of industrial uses interspersed throughout; major recreation/ entertainment/job destinations	I-2 Industrial, R1-U Urban residential mixed-use zones including PD - mix of residential and commercial and MU-CI (mixed commercial and industrial), HDR (high density housing); large areas of OS for parks and OS to the east between the rail line and the waterfront
Cook County Portion	Vacant land along Little Calumet River transitioning to industrial land uses and then to high density multi-family residential and a high school complex.	Calumet City – Heavy and Light Industrial; Chicago - Predominantly I-2 Industrial, R1-U Urban residential; Cook County portion – data unavailable

SOURCE: NIRPC 2010; CMAP 2010.



SOURCE: CMAP 2010; NIRPC 2010.

Figure 4.2-1: Existing Land Uses in the Study Area



SOURCE: CMAP 2010; NIRPC 2010.

Figure 4.2-2: Existing Land Uses along the Existing MED/SSL

4.2.3.2 Land Use Plans and Development Projects

The long-range vision for land use and development in the Study Area is articulated in the master plans for each jurisdiction. The potential for land use change is reflected in the planned and programmed development projects within the Study Area. For this analysis, such projects include those that have municipal or county endorsement, are in the pipeline to acquire development/zoning approval, or are under construction. The master plans that encompass the Study Area are summarized below:

- **Dyer:** The *Town of Dyer Comprehensive Plan* (Dyer 2012): The plan includes a policy of maintaining the current patterns of land use with over 50 percent of the community in residential use. It also notes the need to plan to enhance the transportation system in anticipation of commuter rail service, primarily by making the existing system more multi-modal and with greater connectivity. A Dyer Amtrak Station site, which is in the Study Area, is designated on the future land use plan with mixed use development surrounding it.
- **Munster:** *A Vision for the 21st Century: 2010 Comprehensive Plan* (Munster 2010): The plan focuses on sustainable growth of which a sound and strong transit system is seen as a critical part. The plan directly supports a new West Lake Line with a Munster/Dyer Main Street Station location and proposes transit-oriented development (TOD) to complement this.

Redevelopment/TOD opportunity areas are also envisioned surrounding one of the potential station locations, Munster Ridge Road.

- **Hammond:** *City of Hammond Comprehensive Land Use Plan* (1992 and reprinted in 2013): The future land use plan shows the Study Area as light industrial usage at the gateways to Hammond, and a mix of mostly low-density residential usage with some commercial areas in between. It supports the implementation of commuter rail in the Study Area with the rail line routed near Hammond's central business district.
- **Regional Plan:** *2040 Comprehensive Regional Plan, A Vision for Northwest Indiana* (Northwestern Indiana Regional Planning Commission [NIRPC] 2011): A key strategy in NIRPC's Comprehensive Regional Plan 2040 for Northwest Indiana is the Livable Communities Initiative, which aims to focus growth and revitalization around existing communities. The program provides funding support for development and redevelopment projects that are community-based transportation/land use projects that bring vitality to downtown areas, neighborhoods, station areas, commercial cores, and transit corridors. NIRPC has identified four "neighborhood" livable centers near the Downtown Hammond, South Hammond, Munster Ridge Road, and Munster/Dyer Main Street Stations. Livable Centers have the following characteristics (NIRPC 2013):
 - Support existing communities, leverage public investment, and encourage efficient growth patterns
 - Are compact in form with a vibrant mix of uses in a concentrated area
 - Promote ease of movement between the mix of uses, requiring coordinated planning of public and private investments
 - Promote regional connectivity, including public transportation
 - Promote walkability and offer alternative modes of transportation
- **Regional Plan:** *Pilot Program for TOD Planning:* The Northwest Indiana Regional Development Authority (RDA) has a strong focus on fostering TOD opportunities in the Study Area. For proposed station areas, RDA and the Northern Indiana Commuter Transportation District (NICTD), in coordination with Hammond, Dyer, and Munster, will direct a Federal Transit Administration (FTA)-funded Pilot Program for TOD Planning. Through this program, NICTD and RDA will examine ways to improve economic development and ridership, foster multi-modal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near the proposed Project stations.

Land use plans that cover the existing Metra Electric District (MED)/South Shore Line (SSL) portion of the Study Area are listed below. Each supports improved transit service and connectivity as a means to facilitate economic vitality and strengthen and sustain neighborhood character. The plans recognize that Chicago and the surrounding communities comprise an economically co-dependent metropolitan area and endorse investment in multi-modal travel options, particularly transit, to improve quality of life and economic sustainability. Additionally, they encourage transit-supportive land use forms.

- **Calumet City:** *The Calumet City Comprehensive Plan* (Teska Associates, Inc., Barron Chisholm, Inc., and Business Districts, Inc. 2014)
- **Chicago:** *State Wabash & Michigan Plan* (Chicago Metropolitan Agency For Planning [CMAP] 2000), *Central Area Plan* (CMAP 2003), *Reconnecting Neighborhoods Plan* (CMAP 2009), *A Plan for Economic Growth and Jobs* (CMAP 2012)
- **Cook County:** *PARTNERING FOR PROSPERITY, An Economic Growth Action Agenda for Cook County* (Cook County 2013)

➤ **Regional Plan:** *GO TO 2040 Comprehensive Regional Plan* (CMAP 2014c).

Local planners and economic development officials were consulted for information on any major planned or programmed land development projects within the Study Area. For the purposes of this Project, a major development is defined as one that encompasses 10 acres or more, includes 25 housing units or more, including those developed as public-private partnerships, or is a municipal project for parks, facilities, or new institutions. Most of the jurisdictions consulted reported no major developments with the exception of Munster and Chicago. The following is a list of planned developments in the Study Area. Planned and programmed transportation infrastructure projects are listed in **Chapter 2** of this DEIS.

- Redevelop the 72-acre Lake Business Center site into a mixed use, retail and office center in Munster
- Central Station Planned Development in Chicago's South Loop
- Event center at McCormick Place
- East side of King Drive between 31st and 35th Street (Planned Development #1169)
- City Hyde Park residential development
- Obama Presidential Library

A limited number of new subdivisions are currently planned or under construction in Dyer and Munster; however, they do not meet the above criteria for a major planned or programmed development project, therefore, they have not been included as part of this evaluation.

4.2.4 Environmental Consequences

The following section describes the environmental consequences of the Project Alternatives on land use and zoning. The railroad was part of the historic setting of the communities in the Study Area and construction of the Project would be compatible with the historic use of the Study Area. Few differences would occur among Build Alternatives because all proposed alignment options generally lie within the same area. All Build Alternative Options would result in permanent conversion of existing land uses to transportation-related use.

4.2.4.1 Long-Term Operating Effects

No Build Alternative

The No Build Alternative would be a continuation of existing conditions; therefore, it would have no direct impact on existing land uses, land use patterns, the character and intensity of existing development, or compatibility with zoning. Additionally, the No Build Alternative would not result in any beneficial transportation effects. The lack of enhanced transit service would, instead, constrain improvement to regional multi-modal access.

The No Build Alternative would limit the potential for TOD, which is dependent on access to transit and generally occurs surrounding a rail or transit station or hub with frequent commuter services. The No Build Alternative would not include the new rail line or any new stations; regional Amtrak service and the existing MED/SSL would be the only passenger rail service that would operate in the Study Area. Under the No Build Alternative, therefore, the impetus for TOD would not be created.

Additionally, the No Build Alternative would not be consistent with most regional, county, and municipal comprehensive plans. With the exception of Calumet City, all regional, county, and municipal plans directly support enhanced transit/commuter rail service and TOD.

NEPA Preferred Alternative

The NEPA Preferred Alternative is generally consistent with the vision and goals expressed in the local, county, and regional comprehensive plans for the communities in the Study Area. North of Kensington on the existing MED/SSL to Millennium Station, land uses would not be affected since no new construction would be required. Location-specific impacts are discussed in the following text.

Right-of-Way (ROW): Between Dyer and Maynard Junction, the Project would acquire its own ROW adjacent to the CSX freight line, which is used for freight and Amtrak service. Since CSX and Amtrak operations were in existence prior to the current development in the area, introducing new rail infrastructure that is adjacent to the CSX ROW would be compatible with this historic use. From Maynard Junction to downtown Hammond, the Project would use the abandoned ROW of the defunct Monon Railroad, which has been in public ownership (i.e., NICTD, Munster, and Hammond) since the 1990s. This previous freight rail use, which included major rail vehicle maintenance shops near 173rd Street in Hammond, influenced the historic development pattern of the Study Area. Hammond and Munster constructed the Monon Trail with the understanding that the trail would eventually coexist with commuter rail passenger service in the future. Portions of the existing trail would need to be relocated within the publically-owned ROW to accommodate the Project, although the new infrastructure would not alter land uses substantially.

Stations: Changes in transportation systems can influence nearby land uses. Although the Project would convert land to transportation-related uses, it would not adversely affect surrounding land uses. All Build Alternatives would be located near some residential areas, but are not expected to result in changes in residential land use patterns because the alternatives would not create new physical divisions or barriers between residential areas; many of the residential areas are already adjacent to railroad ROW. In these areas, the Project service would add to an existing transportation corridor, but would not change the function or interaction of adjacent land uses. Although visual impacts would change in some areas where the guideway would be elevated, they would not change land use patterns and would likely result in improvements in station areas. The potential land use effects in proposed station areas are described below:

- The **Munster/Dyer Main Street Station** on the east side and parking area on the west side of the CSX freight line would be incompatible with surrounding residential land uses and inconsistent with the suburban residential zoning. The tract of vacant land on the west side of the CSX freight line, which is used for agricultural purposes, was previously proposed for development. Both Dyer and Munster are active participants in the FTA-funded Pilot Program for TOD Planning being directed by RDA and NICTD, and are looking to transform the area to fully exploit the opportunities that would be afforded by a commuter rail station.
- **Munster Ridge Road Station** would be situated between a developed residential neighborhood and Ridge Road, a commercial arterial. The station and parking could be incompatible with adjacent residential uses, but would be supportive of the high-density residential zoning for that area. Additionally, the optional surface parking lot west of the tracks, which was earmarked for overflow parking, would be incompatible with existing residential uses and zoning at that location; although the station and parking areas would not substantially alter access or land use patterns. The station would provide access to shopping, restaurants, and services located in the vicinity of the Project.
- The **South Hammond Station** would not conflict with existing land uses, but the station and parking would be incompatible with adjacent areas zoned for high-density residential. No changes to overall land use patterns are anticipated; however, the proposed parking area would increase traffic congestion in peak periods, making travel across the tracks slightly less convenient at 173rd Street. Hammond is an active participant in the FTA-funded Pilot Program for TOD Planning.

- The **Hammond Gateway Station** and parking area would be located in an area of mixed residential and vacant land. The new uses would not conflict with existing land uses and zoning in the area. Although there would be displacement of residences associated with the station, this would not impact the existing predominant land use pattern in the surrounding area, which is industrial. Several changes to the local street network are proposed (i.e., Hammond's Chicago Street Widening and Reconstruction Project) that would complement the Hammond Gateway Station and would have a beneficial effect on access for the residential neighborhoods and nearby businesses. There is moderate potential for TOD at this proposed station site. The surrounding street system has a walkable environment and there is some vacant land available.
- **North Hammond Maintenance Facility:** The North Hammond Maintenance Facility would require the acquisition of 21 acres, most of which are industrial properties. The land use and zoning is generally compatible. There would be no disruption to the predominant land use pattern in the area. The North Hammond Maintenance Facility would not facilitate TOD development.

Commuter Rail Alternative Options

All Commuter Rail Alternative Options are generally consistent with the vision and goals expressed in the local, county, and regional comprehensive plans for the communities in the Study Area.

ROW: South of downtown Hammond, the compatibility of all Commuter Rail Alternative Options with nearby land uses and zoning would be the same as for the NEPA Preferred Alternative. North of downtown Hammond, the new infrastructure would not alter land uses substantially. The S-curve in the tracks at the Indiana-Illinois state line would result in direct impacts to the existing pattern of commercial/retail use because of business displacements and new elevated tracks and the catenary system. The Project ROW would result in the closure of two local roadways to through traffic, creating new cul-de-sacs at Russell Street near the Downtown Hammond Station, and at State Street, between Hohman Avenue and Sibley Street due to the S-curve track. Access to land in each location would be less convenient. Additionally, increased rail operations as a result of the Project would generally make at-grade crossings throughout the Study Area slightly less convenient.

Stations: The Downtown Hammond Station for all Commuter Rail Alternative Options would be compatible with local plans and existing surrounding land use and zoning, although the proposed surface parking lot would disrupt the pattern of densely developed downtown areas and would limit opportunities for infill development and TOD at the currently vacant properties at the site. The station would result in the closure of Russell Street; however, two other at-grade crossings would be improved, so there would be minor impacts to access overall. The proposed station would be in close proximity to numerous community assets: public buildings and government offices, a grocery store, pharmacy, and Franciscan St. Margaret Hospital.

Potential impacts at the South Hammond and Munster Ridge Road Stations for all Commuter Rail Alternative Options would be the same as the NEPA Preferred Alternative. The following describes the options associated with the Munster/Dyer Main Street area.

- **Commuter Rail Alternative Option 1:** Option 1 would have the same impacts described above, except at Munster/Dyer Main Street Station and the proposed South Hammond Maintenance and Storage Facility at 173rd Street in Hammond. The Munster/Dyer Main Street Station and parking area on the east side of the CSX freight line would be incompatible with the suburban residential zoning. The proposed maintenance and storage facility at 173rd Street would be incompatible with nearby densely developed residential uses and would conflict with the high-density residential zoning. The South Hammond Maintenance and Storage Facility would not increase the potential for TOD. No impacts to land use patterns are anticipated from either the station or the South Hammond Maintenance and Storage Facility for Commuter Rail Alternative Option 1.

- **Commuter Rail Alternative Option 2:** Commuter Rail Alternative Option 2 would have the same impacts as described above, except at the Munster/Dyer Main Street Station. The Munster/Dyer Main Street Station on the east side and parking area on the west side of the CSX freight line would be incompatible with the suburban residential zoning. In this option, Main Street would be extended under the CSX freight line. The potential effects of the South Hammond Maintenance and Storage Facility at 173rd Street would be the same as described under Commuter Rail Alternative Option 1. No impacts to land use patterns are anticipated from either the station or the South Hammond Maintenance and Storage Facility for Commuter Rail Alternative Option 2.
- **Commuter Rail Alternative Option 3:** Commuter Rail Alternative Option 3 would have the same impacts as Commuter Rail Alternative Option 1, except at the Munster/Dyer Main Street Station and the Munster/Dyer Maintenance and Storage Facility. The Munster/Dyer Main Street Station and parking area on the east side of the CSX freight line would be incompatible with the suburban residential zoning. The proposed Munster/Dyer Maintenance and Storage Facility south of the station would be incompatible with surrounding agricultural and residential land uses and residential zoning. The Munster/Dyer Maintenance and Storage Facility would not increase the potential for TOD. No impacts to land use patterns or access are anticipated under Commuter Rail Alternative Option 3.
- **Commuter Rail Alternative Option 4:** Commuter Rail Alternative Option 4 would have the same impacts as Commuter Rail Alternative Option 2, except at the Munster/Dyer Main Street Station. The Munster/Dyer Main Street Station and parking area on the west side of the CSX freight line would be incompatible with the suburban residential zoning. In this option, Main Street would be extended under the CSX freight line. No impacts to land use patterns are anticipated under Option 4.

IHB Alternative Options

All IHB Alternative Options would be consistent with local and regional plans, which support improvements to commuter rail into and serving Chicago. South of Sibley Street in downtown Hammond, the land use impacts for all IHB Alternative Options would be the same as those described for the Commuter Rail Alternative Options. No stations, parking lots, or maintenance facility are proposed for the IHB Alternative Options north of Hohman Avenue; land use impact differences north of Sibley Street are limited to the new rail and ROW.

For all IHB Alternative options, the IHB ROW with partially elevated rail infrastructure would generally not conflict with existing land uses and there would be no change to existing zoning. Four property acquisitions would occur between Hohman Avenue and Sibley Street, and some loss of businesses and/or associated parking would have a minor disruptive effect on localized land use patterns along State Street and Sibley Street. Therefore, all IHB Alternative Options would have some minor impacts to land use patterns. All IHB Alternative Options have no potential to stimulate TOD development because no stations are proposed in this section, and there would be no substantive changes to access or planned/programmed developments.

Hammond Alternative Options 1 and 3

Hammond Alternative Options 1 and 3 would have the similar impacts as the NEPA Preferred Alternative, even though the exact placement of the station, parking, and layover tracks at the Munster/Dyer Main Street Station is slightly different for the Hammond Alternative Options 1 and 3.

Maynard Junction Rail Profile Option

Locating the rail line at-grade in this area would have no impacts on land use or zoning in addition to those already described for any of the applicable alternative options (i.e., NEPA Preferred Alternative,

Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1).

4.2.4.2 Short-Term Construction Effects

The No Build Alternative would have no construction impacts as the Project would not be built. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects. All Build Alternatives would have limited temporary, construction-related impacts on access to properties as well as land use compatibility from construction activities; there would be no construction-related impacts on zoning. No effects to land use patterns or consistency with community plans are anticipated during construction.

Temporary impacts would include potential increases in noise levels, dust, fumes, traffic congestion, visual changes, and potential difficulty accessing residential, commercial, and other land uses. Although some businesses may experience hardship due to these effects during construction, this would not alter land use type unless the property became vacant. Temporary construction easements may also be required that could result in changes to parking and access or closures of some areas of the affected properties or adjacent properties.

4.2.5 Avoidance, Minimization, and/or Mitigation Measures

4.2.5.1 Long-Term Operating Effects

No mitigation measures are proposed for the No Build Alternative since there would be no impacts. For all Build Alternatives, the following mitigation measures would be employed where there is potential for long-term impacts to land use:

- Where the parking facilities may contribute to localized traffic congestion and potential impacts to access, these would be mitigated as outlined in **Chapter 3** of this DEIS.
- Where the rail activity would create safety, noise, and vibration concerns that would be disruptive to land use patterns, these would be mitigated as outlined in the evaluations for those resources as detailed in **Sections 4.8, 5.2, and 5.3** of this DEIS.
- Where large surface parking facilities are developed in association with the proposed stations and that have potential to disrupt land use patterns and compatibility with surrounding neighborhoods, NICTD would engage in ongoing coordination and collaboration with community stakeholders. NICTD would work with local elected officials, the state and county transportation departments, and the community as the Project design advances to address site-specific issues and concerns.
- While state and federal projects are exempt from local zoning, the final design for the Project would take conflicts with zoning into consideration. Where the Project would be incompatible with existing zoning designations, NICTD would work with local officials during the Engineering phase to make it compatible with the intended purposes and design standards of the applicable zoning to the extent feasible and practical.

4.2.5.2 Short-Term Construction Effects

No mitigation measures are proposed for the No Build Alternative as there would be no construction impacts. For the construction of any of the Build Alternatives, NICTD would develop a Maintenance and Protection of Traffic Plan to address disruptions to travel. Through this and NICTD consultation with affected property owners, access closures and temporary disruptions due to use of land for construction staging are expected to be minimal. Specifically, maintenance of traffic flows and sequence of construction would be planned and scheduled so as to minimize traffic delays and

inconvenience.

In addition, best management practices (BMPs) for minimizing noise, dust, and fumes and maintaining safety of construction sites would be implemented. These BMPs would buffer the construction activities from surrounding land uses and minimize adverse temporary effects to the extent feasible and practical.

4.3 Land Acquisitions and Displacements

This section describes the potential property acquisitions and displacements for the Project Alternatives. For more detailed information about the potential acquisitions and displacements, see the *West Lake Corridor Acquisitions and Displacements/Economic Assessment Technical Report* in **Appendix H**.

4.3.1 Regulatory Setting

The ROW acquisition and relocation assistance program would be conducted in accordance with the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, as amended, commonly known as the Uniform Act (42 USC § 4601 et seq.) This act identifies the process, procedures, and timeframe for ROW acquisition and relocation of affected residents or businesses. The requirements of the Uniform Act apply whenever a project uses federal dollars in any phase of a project. In addition, states receiving federal aid funding from the Highway Trust Fund are required to maintain (updated every 5 years) a manual outlining their ROW policies and procedures as outlined in 23 CFR § 710.

4.3.2 Methodology

Properties to be fully or partially acquired were identified based on the Project footprint, or limit of disturbance (LOD). The LOD is the boundary within which construction, materials storage, grading, landscaping, and related activities would occur. Aerial photography, project engineering design, and county land parcel data were used to determine the properties, or portions of properties, within the LOD and to determine the extent of impact on each property. For partial acquisitions, a determination was made whether acquisition would affect the use of the property as currently designed and/or whether modifications to the property would be required to maintain use. When assessing the number and size of full and partial acquisitions, the properties were grouped into three categories: Residential, Commercial, and Other. The Other category includes parcels with no available record¹, industrial property, government offices, religious institutions, and charitable organizations.

Full acquisitions entail the purchase of an entire parcel, whereas “**partial acquisitions**” entail the purchase of a portion of a parcel.

Displacements occur when a full acquisition is necessary, or when a partial acquisition would result in an impact that would affect the continued economic viability or use of a property. Owners and renters displaced as a result of the project may be eligible for relocation assistance according to federal, state, and local laws and regulations.

¹ No information is available for the assessed values of these properties; therefore, their value was assumed to be \$0. As their acreage is known, they are included in the acquisitions assessments.

The following types of real estate transactions and impacts are discussed in this section:

- **Full Acquisition:** This is the purchase of all fee simple land ownership rights of a property.
- **Partial Acquisition:** This is the purchase of a portion of an overall property. A partial acquisition would include fee simple or easement acquisitions.
- **Displacement:** Displacement results from full acquisitions and the conversion of the existing land use to a transportation use. Displacements are measured by housing unit or business, not tax parcel. For example, the acquisition of an apartment building on a single tax parcel with six units would result in six residential displacements. Displacements are defined as non-vacant property of which over 50 percent would be acquired for the project.

4.3.3 Affected Environment

Lake County's industrial market is a choice location for businesses given its proximity to interstate highways and freight rail lines. In addition, relatively low tax rates have made this area attractive to many businesses. The industrial vacancy rate is 6.8 percent (NAI Hiffman 2016). According to the US Census Bureau's American Community Survey (ACS) 5-year estimates (2009-2013), 13 percent of housing units in Lake County were vacant. Cook County's vacancy rate stood at 11 percent. The ease of relocating individuals and businesses affected by project acquisitions depends in part on the vacancy rates for residential and commercial/industrial properties, although NICTD would compensate affected property owners in accordance with the Uniform Act, regardless of prevailing vacancy rates. See **Section 4.2** for a description of the land uses in the Study Area.

4.3.4 Environmental Consequences

This section describes the potential environmental impacts of the Project Alternatives. The Project Alternatives would require land acquisitions for rail line ROW, stations, parking areas, layover facility, and a vehicle maintenance and storage facility. It is estimated that new ROW needed for the Project would affect between 185 and 343 parcels, depending on the alternative.

4.3.4.1 Long-Term Operating Effects

No Build Alternative

The No Build Alternative consists of the existing corridor with no acquisitions or displacements. As such, there would be no acquisitions or displacements with the No Build Alternative.

NEPA Preferred Alternative

Implementing the NEPA Preferred Alternative would require acquiring property and displacing residential, commercial, and properties currently used for other uses. Over 139 acres would be acquired for the NEPA Preferred Alternative. Vacant property, including parcels of vacant land, accounts for 49 percent of total acreage acquired. A total of 243 full acquisitions and 76 partial acquisitions are estimated under the NEPA Preferred Alternative. Most acquisitions would be residential. The proposed rail alignment, Munster/Dyer Main Street Station, and North Hammond Maintenance Facility would require the most land, and the proposed rail alignment and Munster Ridge Road Station would result in the most displacements. **Table 4.3-1** provides a summary of the number of acquisitions by land use for the NEPA Preferred Alternative. **Table 4.3-2** lists the number of displacements by land use type.

Table 4.3-1: Acreage and Acquisitions for the NEPA Preferred Alternative

Acquisitions	NEPA Preferred Alternative
Full Acquisition Area (acres)	113.50 acres
Partial Acquisition Area (acres)	25.90 acres
Total Acquisition Area (acres)	139.40 acres
Full Acquisitions	
Full Residential Parcels	147
Full Commercial Parcels	14
Other Full Parcels ¹	82
Total Full Acquisitions	243
Partial Acquisitions	
Partial Residential Parcels	42
Partial Commercial Parcels	11
Other Partial Parcels ¹	23
Total Partial Acquisitions	76
Total Parcel Acquisitions	319

SOURCE: AECOM 2016.

Note: ¹Other may include freight railroad property.

Table 4.3-2: Displacements for the NEPA Preferred Alternative

Type of Displacement	Number of Displacements
Residential Displacements	91
Commercial Displacements	14
Industrial Displacements	9
Municipal Displacements	57
Other Displacements ¹	3
All Displacements	174

SOURCE: AECOM 2016.

Note: ¹Other displacements may include freight railroad property.

Commuter Rail Alternative Options

The Commuter Rail Alternative Options would require additional land beyond that dedicated to transportation purposes. **Table 4.3-3** provides a summary of the number of acquisitions by land use that would be required under the Commuter Rail Alternative Options. **Table 4.3-4** lists the number of displacements by land use type.

Table 4.3-3: Acreage and Acquisitions for the Commuter Rail Alternative Options

Acquisitions	Option 1	Option 2	Option 3	Option 4
Full Acquisition Area (acres)	75.98 acres	86.49 acres	78.28 acres	86.54 acres
Partial Acquisition Area (acres)	36.79 acres	36.79 acres	36.51 acres	35.05 acres
Total Acquisition Area (acres)	112.78 acres	123.29 acres	114.80 acres	121.60 acres
Full Acquisitions				
Full Residential Parcels	75	51	102	41
Full Commercial Parcels	31	31	32	31
Other Full Parcels ¹	71	71	70	69
Total Full Acquisitions	177	153	204	141
Partial Acquisitions				
Partial Residential Parcels	14	14	8	2
Partial Commercial Parcels	11	11	10	5
Other Partial Parcels ¹	39	39	39	43
Total Partial Acquisitions	64	64	57	50
Total Parcel Acquisitions	241	217	261	191

SOURCE: AECOM 2016.

Note: ¹Other may include freight railroad property.

Table 4.3-4: Displacements for the Commuter Rail Alternative Options

Displacements	Option 1	Option 2	Option 3	Option 4
Residential Displacements	17	16	29	27
Commercial Displacements	11	11	11	10
Industrial Displacements	15	15	15	15
Municipal Displacements	54	54	54	50
Other Displacements ¹	1	1	1	1
All Displacements	98	97	110	103

SOURCE: AECOM 2016.

Note: ¹Other displacements may include freight railroad property.

Commuter Rail Alternative Option 1: Under Commuter Rail Alternative Option 1, 177 full acquisitions, 64 partial acquisitions, and 98 displacements are anticipated. Over 112 acres would be acquired for Commuter Rail Alternative Option 1. Vacant property, including parcels of vacant land, accounts for 52 percent of the total acreage that would be acquired. The proposed rail alignment (i.e., the area that would be needed for the track) would require the most acreage and result in the most displacements. Of the stations, the South Hammond Station would require the most acreage, while the proposed Munster Ridge Road Station would result in the most displacements.

Commuter Rail Alternative Option 2: Under Commuter Rail Alternative Option 2, 153 full acquisitions, 64 partial acquisitions, and 97 displacements are anticipated. Over 123 acres would be acquired. Vacant property, including parcels of vacant land, accounts for 56 percent of the total acreage that would be acquired. The proposed rail alignment (i.e., the area that would be needed for the track) would require the most acreage and result in the most displacements. Of the stations, the Munster/Dyer Main Street Station would require the most acreage, while the proposed Munster Ridge Road Station would result in the most displacements.

Commuter Rail Alternative Option 3: Under Commuter Rail Alternative Option 3, 204 full acquisitions, 57 partial acquisitions, and 110 displacements are anticipated. Over 114 acres would be acquired for Commuter Rail Alternative Option 3, of which 45 percent is vacant property. Most of the displacements would be residential. The proposed rail alignment, South Hammond Station, and the

Munster/Dyer Maintenance and Storage Facility would require the most land. The proposed rail alignment, the Munster Ridge Road Station, and the Downtown Hammond Station would result in the most displacements.

Commuter Rail Alternative Option 4: Under Commuter Rail Alternative Option 4, 141 full acquisitions, 50 partial acquisitions, and 103 displacements are anticipated. Over 121 acres would be acquired under Commuter Rail Alternative Option 4, of which 54 percent is vacant land. The proposed rail alignment, Munster/Dyer Main Street Station, and South Hammond Station would require the most land. The proposed rail alignment, Munster Ridge Road Station, and Downtown Hammond Station would result in the most displacements.

IHB Alternative Options

The IHB Alternative Options would require additional land beyond that dedicated to transportation purposes. **Table 4.3-5** provides a summary of the number of acquisitions by land use for each IHB Alternative Option. **Table 4.3-6** lists the number of displacements by land use type.

Table 4.3-5: Acreage and Acquisitions for the IHB Alternative Options

Acquisitions	Option 1	Option 2	Option 3	Option 4
Full Acquisition Area (acres)	86.95 acres	97.46 acres	89.25 acres	97.51 acres
Partial Acquisition Area (acres)	45.47 acres	45.47 acres	45.19 acres	43.73 acres
Total Acquisition Area (acres)	132.42 acres	142.93 acres	134.44 acres	141.24 acres
Full Acquisitions				
Full Residential Parcels	79	55	106	45
Full Commercial Parcels	12	12	13	12
Other Full Parcels ¹	81	81	80	79
Total Full Acquisitions	172	148	199	136
Partial Acquisitions				
Partial Residential Parcels	13	13	7	1
Partial Commercial Parcels	12	12	11	6
Other Partial Parcels ¹	38	38	38	42
Total Partial Acquisitions	63	63	56	49
Total Parcel Acquisitions	235	211	255	185

SOURCE: AECOM 2016.

Note: ¹Other may include freight railroad property.

Table 4.3-6: Displacements for the IHB Alternative Options

Displacements	Option 1	Option 2	Option 3	Option 4
Residential Displacements	17	16	29	27
Commercial Displacements	8	8	8	7
Industrial Displacements	14	14	14	14
Municipal Displacements	41	41	41	37
Other Displacements ¹	28	28	28	28
Total Displacements	108	107	120	113

SOURCE: AECOM 2016.

Note: ¹Other displacements may include freight railroad property.

IHB Alternative Option 1: Under IHB Alternative Option 1, 172 full acquisitions, 63 partial acquisitions, and 108 displacements are anticipated. Over 132 acres would be acquired, of which 43 percent is vacant land. The proposed rail alignment and the South Hammond Station would require the most land, while the proposed rail alignment and Munster Ridge Road Station would result in the most displacements.

IHB Alternative Option 2: Under IHB Alternative Option 2, 148 full acquisitions, 63 partial acquisitions, and 107 displacements are anticipated. Over 142 acres would be acquired, 48 percent of which is vacant land. The proposed rail alignment, Munster/Dyer Main Street Station, and South Hammond Station would require the most land, while the proposed rail alignment and Munster Ridge Road Station would result in the most displacements.

IHB Alternative Option 3: Under IHB Alternative Option 3, 199 full acquisitions, 56 partial acquisitions, and 120 displacements are anticipated. Over 134 acres would be acquired, 38 percent of which is vacant land. Most of the displacements would be residential. The proposed rail alignment, South Hammond Station, and Munster/Dyer Maintenance and Storage Facility would require the most land. The most displacements would occur because of the proposed rail alignment, Munster Ridge Road Station, and Downtown Hammond Station.

IHB Alternative Option 4: Under IHB Alternative Option 4, 136 full acquisitions, 49 partial acquisitions, and 113 displacements are anticipated. Over 141 acres would be acquired, 46 percent of which is vacant land. The proposed rail alignment, Munster/Dyer Main Street Station, and South Hammond Station would require the most land. The proposed rail alignment, Munster Ridge Road Station, and Downtown Hammond Station would result in the most displacements.

Hammond Alternative Options 1 and 3

Hammond Alternative Options 1 and 3 would require additional land beyond that dedicated to transportation purposes. **Table 4.3-7** provides a summary of the number of acquisitions for Hammond Alternative Options 1 and 3. **Table 4.3-8** lists the number of displacements by land use type.

Table 4.3-7: Acreage and Acquisitions for Hammond Alternative Options 1 and 3

Acquisitions	Option 1	Option 3
Full Acquisition Area (acres)	102.99 acres	105.89 acres
Partial Acquisition Area (acres)	25.90 acres	42.95 acres
Total Acquisition Area (acres)	128.89 acres	148.84 acres
Full Parcel Acquisitions		
Full Residential Parcels	171	129
Full Commercial Parcels	14	14
Other Full Parcels ¹	82	80
Total Full Acquisitions	267	223
Partial Parcel Acquisitions		
Partial Residential Parcels	42	38
Partial Commercial Parcels	11	5
Other Partial Parcels ¹	23	27
Total Partial Acquisitions	76	70
Total Parcel Acquisitions	343	293

SOURCE: AECOM 2016.

Note: ¹Other may include freight railroad property.

Table 4.3-8: Displacements for Hammond Alternative Options 1 and 3

Acquisition Type	Option 1	Option 3
Residential Displacements	92	94
Commercial Displacements	14	13
Industrial Displacements	9	9
Municipal Displacements	57	54
Other Displacements ¹	3	3
All Displacements	175	173

SOURCE: AECOM 2016.

Note: ¹Other displacements may include freight railroad property.

Hammond Alternative Option 1: Under Hammond Alternative Option 1, 267 full acquisitions, 76 partial acquisitions, and 175 displacements are anticipated. Over 128 acres would be acquired, 45 percent of which is vacant land. Most of the displacements would be residential. The proposed rail alignment and the North Hammond Maintenance Facility would require the most land. The proposed rail alignment and the Munster Ridge Road Station would result in the most displacements.

Hammond Alternative Option 3: Under Hammond Alternative Option 3, 223 full acquisitions, 70 partial acquisitions, and 173 displacements are anticipated. Over 148 acres would be acquired, 44 percent of which is vacant land. Most of the displacements would be residential. The proposed rail alignment and the North Hammond Maintenance Facility would require the most land. The proposed rail alignment and the Munster Ridge Road Station would result in the most displacements.

Maynard Junction Rail Profile Option

No additional property acquisitions would be required for the Maynard Junction Rail Profile Option based on current information. Therefore, it would not alter the land acquisitions and displacements described for any of the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1).

4.3.4.2 Short-Term Construction Effects

There would be no construction impacts as a result of the No Build Alternative. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects. Construction activities of any of the Build Alternatives would result in short-term impacts to additional properties primarily due to activities requiring temporary construction easements. The easement areas would be needed by the Project for a variety of potential uses, including drainage, stormwater management, utilities, storage of materials and equipment, access to construction areas, or other Project-related needs. For temporary easement needs, the use of the property would be for the duration of construction activity. The locations of potential temporary easements would be determined as part of the construction plan that would be developed as part of the Final Environmental Impact Statement (FEIS)/Record of Decision (ROD).

4.3.5 Avoidance, Minimization, and/or Mitigation Measures

4.3.5.1 Long-Term Operating Effects

Acquisitions

No mitigation measures are proposed for the No Build Alternative since there would be no impacts. For all Build Alternatives, FTA and NICTD would conduct the acquisition process in accordance with

the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC § 4601), as amended. The Act requires that property owners be paid fair market value for the acquired property as well as equitable compensation normally associated with relocating.

It is possible that property acquisitions and displacements would affect some property owners and tenants whose primary language is not English. Accordingly, property acquisition and relocation discussions would be conducted in alternate languages whenever necessary. Following a decision to acquire property, a general overview of the acquisition process is as follows:

- Each real property owner or the owner's representative would be contacted in order to explain the acquisition process, including the right to accompany the appraiser during inspection of the property, and provide the owner with a written notice of NICTD's intent to acquire.
- The owner would be provided with a written offer of the approved estimate of just compensation for the real property to be acquired and a summary statement of the basis for the offer.
- The property owner would be given an opportunity to consider the offer for at least 30 days.
- Negotiations without any attempt to coerce the property owner into reaching an agreement would be conducted.
- The property owner/tenant would be provided at least 90 days written notice to vacate prior to taking possession.

If negotiations with property owners are not successful, NICTD may acquire the property through eminent domain. If eminent domain is necessary, NICTD would follow the procedures set forth under state laws including Indiana Eminent Domain (Indiana Code [IC] § 32-24) and Relocation Assistance (IC § 8-23-17) and Illinois Eminent Domain Act (735 Illinois Compiled Statutes [ILCS] 30/) and Displaced Person Relocation Act (310 ILCS 40/).

Displacements

There would be no displacements as a result of the No Build Alternative. As such, no mitigation measures are proposed for the No Build Alternative. For the Build Alternatives, any relocation of a displaced use would also be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC § 4601). Ample notice would be given to those being relocated to allow for any planning contingencies that may arise. In accordance with Title VI of the Civil Rights Act of 1964, NICTD would provide relocation advisory assistance to all eligible persons without discrimination.

Displaced persons would be offered the opportunity to relocate in areas at least as desirable as their original property with respect to public utilities and commercial facilities. Rent and sale prices of replacement property offered to those displaced would be within their financial means, and replacement property would be within reasonable access to displaced individuals' places of employment. Relocations are not expected to remove individuals from their community activities. It is anticipated that comparable decent, safe, and sanitary (DS&S) housing would be available on the real estate market to relocate those who would be displaced from their residences. However, if comparable housing cannot be offered, last resort housing assistance would become available to displaced persons. According to 49 CFR § 24.404, last resort housing is additional alternative assistance when comparable replacement dwellings are not available within the monetary limits for displaced owner-occupants and tenants. Additionally, relocation planning and services would be provided to businesses. These relocation services include the following:

- Site requirements, current lease terms, and other contractual obligations

- Outside specialists to assist in planning and moving assistance for the actual move, and the reinstallation of machinery and other personal property
- Identification and resolution of personal property/real property issues
- An estimate of time required for the business to vacate the site
- An estimate of the anticipated difficulty in locating replacement property
- An identification of any advance relocation payments required for the move

4.3.5.2 Short-Term Construction Effects

There would be no construction impacts as a result of the No Build Alternative; as such, no mitigation measures are proposed. For construction of the Build Alternatives, temporary easements would be required for a variety of potential uses, including storage of materials and equipment, access to construction areas, or other construction-related activities. Short-term impacts such as dust and noise could result in temporary displacement. NICTD would restore properties affected through a temporary easement to an acceptable pre-construction condition following construction activities, in accordance with the individual easement agreements.

4.4 Socioeconomics and Economic Development

This section describes the existing socioeconomic characteristics (population, housing, and employment) of the Study Area. To ensure that potential effects to people and communities are integrated into the decision-making process for transit investments, NEPA specifically requires the consideration of social and economic impacts of the Project. Note that minority and low-income populations are specifically discussed in **Section 4.9** of this DEIS. Further information about the socioeconomic and economic analysis can be found in *the West Lake Corridor Project Acquisitions and Displacements/Economic Assessment Technical Report* in **Appendix H**.

4.4.1 Regulatory Setting

The CEQ's regulations for implementing the procedural provisions of NEPA (40 CFR § 1500-1508) state that the "Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment."

4.4.2 Methodology

The Study Area considered for this analysis includes the area within ½ mile on either side of the centerline of the proposed alignments for the Build Alternatives. Socioeconomic information was derived from the following sources using the most current data available, including:

- 2010 US Census
- 2013 ACS – 5-Year averages (2009-2013)
- 2014 CMAP subzone data
- 2015 NIRPC Traffic Analysis Zone (TAZ) data

Comparable data included in state, local, and regional plans were also reviewed to further inform the assessment of demographic data. Economic development trends were identified through coordination with the municipalities and CMAP and NIRPC. Impacts to socioeconomic conditions and economic development were qualitatively assessed for the No Build Alternative and the Build Alternatives.

To estimate the fiscal effects of the Build Alternatives, government finance and tax sources were reviewed, in particular property taxes. Data on properties that would be acquired by the Project were obtained from the Lake County and Cook County Property Assessors. For this analysis, the anticipated change in the tax base because of property acquisitions for the Project was estimated.

The Bureau of Economic Analysis (BEA) Regional Input-Output Modeling System (RIMS) II Series 2013 (updated in 2015) multipliers were used to estimate jobs and earnings effects resulting from construction and operations of the Build Alternatives. The multipliers are constructed to reflect the structure of economies of Lake County, Indiana, and Cook County, Illinois. Derived from the BEA RIMS, the multipliers measure the total change (direct + indirect effects) in output, employment, and earnings that results from an incremental change to a particular industry. They represent the most updated version available at the time this analysis was prepared.

4.4.3 Affected Environment

4.4.3.1 Population

In 2010, the population in the Study Area was almost 100,000 with 59 percent living in the Indiana portion of the Study Area and 41 percent living in Illinois. The population is relatively evenly distributed across the Study Area with denser clustering near the proposed station locations in Hammond and the lowest density of persons per square mile along the northern end of the IHB Alternative.

Table 4.4-1 summarizes the CMAP population projections for 2010 to the 2040 horizon year and projections for 2015 to 2040 available from NIRPC. No single source of projections was available across the entire Study Area for the same years and using the same projection methodology. Consequently, the most current estimates are shown separately by state. Still, some trends in population growth can be observed. The data indicate that both the Indiana and Illinois portions of the Study Area will grow in population steadily through to 2040. The strongest population growth would be in the north Hammond area in Indiana (IHB segment in Indiana).

Table 4.4-1: Population Projections in the Study Area

Area	2015	2040	Percent Change
Indiana (NIRPC)			
Dyer	18,352	21,725	18%
Munster	24,163	26,499	10%
Hammond	87,927	99,207	13%
IHB – Indiana	10,410	14,847	43%
NIRPC Region	799,626	938,683	17%
Area	2010	2040	Percent Change
Illinois (CMAP)			
Chicago West/IHB portion	25,110	29,450	18%
Chicago Existing MED/SSL	123,133	152,423	24%
Cook County - Portion	159,648	194,013	22%
CMAP Region	8,304,113	10,677,414	29%

SOURCE: NIRPC 2015, CMAP 2014c.

4.4.3.2 Housing

Table 4.4-2 presents the housing characteristics of the Study Area. Home ownership is highest in Dyer at almost 89 percent. Traveling north in the Study Area, the percentage of home ownership declines steadily and the percentage of rental housing units changes to a high of 63 percent at the Project terminus in Chicago. The exception to this steady transition is Hammond, which demonstrates home ownership at rates similar to the City of Chicago, which is around 55 percent.

Table 4.4-2: Housing Characteristics in the Study Area

Area	Total Housing Units	Housing as % of Municipal Total	Housing that is Owner Occupied	Housing that is Renter Occupied	Vacant Housing	Average HH Size	HH without Vehicle
Dyer	3,611	36%	89%	11%	7%	3	2%
Munster	4,872	54%	86%	14%	4%	3	4%
Hammond	10,001	30%	55%	45%	16%	3	16%
Chicago West/IHB portion	7,389	1%	47%	54%	18%	3	28%
Chicago MED/SSL portion	71,855	6%	37%	63%	16%	3	20%
Cook County portion	9,955	NA	59%	41%	14%	3	11%
Study Area Total	10,625	NA	50%	50%	15%	3	17%
NIRPC Region	323,602	NA	69%	33%	14%	3	9%
CMAQ Region	3,369,908	NA	64%	37%	10%	3	14%
State of Illinois	5,307,222	NA	66%	44%	13%	3	22%
State of Indiana	2,829,532	NA	70%	30%	14%	3	17%

SOURCE: US Census Bureau ACS 2009-2013.

Note: HH: Household

Household size remains essentially constant across the Study Area. An average household size of about three persons, along with the age cohort data, suggests families with one or more children. Similar to the rental housing data, the number of households without a personal vehicle rises from the southern end of the Study Area to the northern end with the greatest number of households without a vehicle in Chicago. The existing MED/SSL portion of the Study Area has a relatively high concentration of transit-dependent workers. By contrast, the southern end of the Study Area has a very low percentage of households without a vehicle available.

4.4.3.3 Employment and Income

Employment projections are available from CMAQ and NIRPC, which are summarized in **Table 4.4-3** (CMAQ employment projections for 2010 to the 2040 horizon year and NIRPC projections for 2015 to 2040). As with the population projections, no single source of projections was available across the entire Study Area for the same years and using the same projection methodology. Consequently, the most current estimates are shown separately by state. Still, some trends in employment growth can be observed. The data indicate that employment across the Study Area will grow steadily. The variation among jurisdictions in employment growth will not be substantial, except in the area of the IHB Alternative alignment in Illinois, which is expected to see the strongest growth in the Study Area at 36 percent. Overall the data suggest that employment will grow the most in the area from Hammond to just across the state line into Illinois, particularly along the IHB Alternative alignment.

Table 4.4-3: Employment Forecasts in the Study Area

Area	2015	2040	% Change
Indiana (NIRPC)			
Dyer	5,212	5,836	12%
Munster	13,655	15,992	17%
Hammond	29,609	38,014	28%
IHB – Indiana	8,640	10,199	18%
NIRPC Region	290,206	353,315	22%
Area	2010	2040	% Change
Illinois (CMAP)			
IHB-Illinois	3,992	5,416	36%
Chicago Existing MED/SSL	107,026	124,527	16%
Cook County – Portion	112,051	132,266	18%
CMAP Region	3,806,256	4,992,117	31%

SOURCE: NIRPC 2015; CMAP 2014.

Table 4.4-4 summarizes employment and income characteristics of residents in the Study Area. Unemployment is comparatively low in Dyer and Munster. It rises sharply in Hammond, the Cook County portion, and Chicago at more than double the percentage of each of the two southern-most communities. Similarly, with the exception of Hammond, median household income is higher at the southern end of the Study Area and declines towards the northern end of the Study Area in Chicago. The data for Hammond, Chicago, and the Cook County portion, along with the housing data described above, collectively indicate that these areas are more economically distressed than the balance of the Study Area. Despite this and the relatively high unemployment rate in Hammond (16 percent), the highest density of employment in the Study Area after Cook County and pockets along the existing MED/SSL corridor is also in Hammond. This is reflective of the fact that Hammond is more densely developed in general than the rest of the Indiana portion of the Study Area.

Table 4.4-4: Employment and Income in the Study Area

Geography	Total Employed	Employed Persons as Percentage of Municipal Total	Unemployed	Median Household Income
Dyer	4,289	40%	5%	\$ 73,697
Munster	5,636	52%	6%	\$ 79,503
Hammond	9,145	28%	16%	\$ 39,282
Chicago West/IHB portion	5,350	1%	22%	\$ 31,467
Chicago Existing MED/SSL portion	51,974	22%	20%	\$ 59,469
Cook County portion	9,661	NA	18%	\$ 41,755
Study Area Total/Average	87,654	NA	58%	\$ 52,189
NIRPC Region	339,022	NA	13%	\$ 49,654
CMAP Region	4,013,150	NA	12%	\$ 64,518
State of Illinois	5,209,070	NA	13%	\$48,737
State of Indiana	2,555,979	NA	10%	\$57,166

SOURCE: US Census Bureau 2010; ACS 2009-2013.

4.4.4 Environmental Consequences

The potential direct impacts of the Project Alternatives in terms of socioeconomic conditions and economic development are discussed below.

4.4.4.1 Long-Term Operating Effects

No Build Alternative

The No Build Alternative would be a continuation of existing conditions. As such, it is not expected to have direct impacts on socioeconomic conditions or trends. It would also have a neutral effect on economic vitality and no impact on access to developable land. At the same time, the No Build Alternative would not offer any beneficial effects. It would not provide enhanced transit service and as such would not offer enhanced multi-modal access for jobs or access to developable land. It would not support economic development initiatives in Hammond. In particular, the No Build Alternative would limit the potential for TOD as an economic development strategy because no new rail line or stations would be built. Intercity Amtrak service and the existing SSL would be the only passenger rail service that would operate in the Study Area. Therefore, the impetus for TOD would not be created.

NEPA Preferred Alternative

Socioeconomics and Demographic Effects: The NEPA Preferred Alternative is not expected to increase or decrease population, housing, or employment from the regional perspective. However, it is anticipated to shift and focus where growth would occur. Overall, the NEPA Preferred Alternative would have a direct beneficial impact on access to employment opportunities, particularly for those who are transit-dependent, as the availability of options for commuting to work in downtown Chicago would improve. The NEPA Preferred Alternative complements the trend of job growth in downtown Chicago and anticipated limited job growth in the suburban communities of Hammond, Dyer and Munster by connecting these areas. Additionally, the Project would provide a beneficial effect by creating more modes of access to developable land throughout the Study Area.

Government Finance and Tax Sources: When private property is acquired by a public entity, the property is no longer subject to property taxes and is removed from the tax base. This analysis presents the total assessed value of the properties that would be acquired for the NEPA Preferred Alternative as documented in **Section 4.3** of this DEIS. The acquisition of private property, which would be necessary to build the NEPA Preferred Alternative, is anticipated to result in a decrease in the property tax base for Lake County. The total taxable value of property that would be removed from the tax base after deductions would be over \$7.3 million (2015\$), assuming a maximum deduction.² This value does not include the value of any land that would be removed from properties that are exempt from tax such as religious organizations or public property, as these would not impact the tax revenues generated.

Based on the property tax rates for Lake County, assuming a minimum deduction, the annual revenue that would be lost under the NEPA Preferred Alternative would be \$326,960 (2015\$), or 0.044 percent loss in the tax base. Therefore, the NEPA Preferred Alternative would not have any substantial negative fiscal impacts for Lake County. This decrease in the property tax base represents a conservative (high) estimate because it does not account for any relocation or replacement of the value elsewhere within the county. In addition, likely increases in the property tax base due to redevelopment in the transit station areas are not accounted for.

²Properties for which no information was available were assumed to be valued at \$0.

Operation and Maintenance Economic Impacts: The Project is expected to create jobs and earnings associated with operation and maintenance of the North Hammond Maintenance Facility. Operation and maintenance of the NEPA Preferred Alternative would create an estimated 226 total job-years annually, with earnings of \$7.3 million (including weekend operations), or an average of \$32,300 per job-year.

Job-years is defined as one job for one person for one year. For example, three job-years are equal to three people doing a job for one year, or one person doing a job for three years.

Commuter Rail Alternative Options

Socioeconomics and Demographic Effects: The socioeconomic and demographic effects of all Commuter Rail Alternative Options would be the same as the NEPA Preferred Alternative. The existing MED/SSL alignment would not result in any changes to socioeconomic conditions, employment access, or economic vitality.

Government Finance and Tax Sources: The total taxable value of property that would be removed from the tax base and the annual tax revenues that would be lost for the Commuter Rail Alternative Options due to property acquisitions are shown in **Table 4.4-5**. The values do not include the value of any land that would be removed from properties that are exempt from tax, such as religious organizations or public property, as these would not impact the tax revenues generated. The decreases in the property tax base represent a conservative (high) estimate because the estimates do not account for any relocation or replacement of the value elsewhere within the counties. In addition, likely increases in the property tax base due to redevelopment in the transit station areas was not considered.

Table 4.4-5: Taxable Value of Property Removed from Tax Base after Deductions¹ and Annual Tax (2015\$) - Commuter Rail Alternative Options

Option	Total Taxable Value of Property Removed From Tax Base ²		Annual Revenue Lost (Percentage of Tax Base)	
	Lake County	Cook County	Lake County	Cook County
1	\$4,567,441	\$64,506	\$184,719 (0.025%)	\$16,774 (0.005%)
2	\$4,290,974	\$64,506	\$175,132 (0.024%)	\$16,774 (0.005%)
3	\$5,874,751	\$64,506	\$226,640 (0.031%)	\$16,774 (0.005%)
4	\$8,510,694	\$64,506	\$323,486 (0.044%)	\$16,774 (0.005%)

SOURCE: AECOM 2016.

Notes: ¹Assumes minimum deductions.

²After deductions; Properties for which no information was available were assumed to be valued at \$0.

Operation and Maintenance Economic Impacts: Operations and maintenance aspects of the Commuter Rail Alternative Options would have a positive impact on the regional and local economy due to the generation of new employment opportunities. Operation and maintenance of each Commuter Rail Alternative option would create 214 total job-years annually with earnings of over \$6.9 million, or an average of \$32,200 per job-year.

IHB Alternative Options

Socioeconomics and Demographic Effects: The socioeconomic and demographic effects of all IHB Alternative Options would be the same as the NEPA Preferred Alternative. The existing MED/SSL

corridor would not result in any changes to socioeconomic conditions, employment access, or economic vitality.

Government Finance and Tax Sources: The total taxable value of property that would be removed from the tax base and the annual tax revenues that would be lost for the IHB Alternative Options due to property acquisitions are shown in **Table 4.4-6**. The values do not include the value of any land that would be removed from properties that are exempt from tax such as religious organizations or public property, as these would not impact the tax revenues generated. The decreases in the property tax base represent a conservative (high) estimate because the estimates do not account for any relocation or replacement of the value elsewhere within the counties. In addition, likely increases in the property tax base due to redevelopment in the transit station areas was not considered.

Table 4.4-6: Taxable Value of Property Removed from Tax Base after Deductions¹ and Annual Tax (2015\$) – IHB Alternative Options

Option	Total Taxable Value of Property Removed From Tax Base ²		Annual Revenue Lost (Percentage of Tax Base)	
	Lake County	Cook County	Lake County	Cook County
1	\$4,007,117	\$40,861	\$157,501 (0.021%)	\$9,693 (0.003%)
2	\$3,763,639	\$40,861	\$148,991 (0.020%)	\$9,693 (0.003%)
3	\$5,347,416	\$40,861	\$200,499 (0.027%)	\$9,693 (0.003%)
4	\$7,983,359	\$40,861	\$297,345 (0.040%)	\$9,693 (0.003%)

SOURCE: AECOM 2016.

Notes: ¹Assumes minimum deductions.

²After deductions; Properties for which no information was available were assumed to be valued at \$0.

Operation and Maintenance Economic Impacts: Operations and maintenance aspects of the IHB Alternative Options would have a positive impact on the regional and local economy due to the generation of new employment opportunities. Operation of each IHB Alternative option would result in over 213 total job-years annually and earnings of over \$6.9 million, or an average of \$32,300 per job-year.

Hammond Alternative Options 1 and 3

Socioeconomics and Demographic Effects: The socioeconomic and demographic effects of Hammond Alternative Options 1 and 3 would be the same as the NEPA Preferred Alternative. The existing MED/SSL alignment would not result in any changes to socioeconomic conditions, employment access, or economic vitality.

Government Finance and Tax Sources: The total taxable value of property that would be removed from the tax base and the annual tax revenues that would be lost in Lake County due to property acquisitions under Hammond Alternative Options 1 and 3 are shown in **Table 4.4-7**. There would be no acquisitions in Cook County under the Hammond Alternative Options 1 and 3. The values in the table do not include the value of any land that would be removed from properties that are exempt from tax such as religious organizations or public property, as these would not impact the tax revenues generated. The decreases in the property tax base represent a conservative (high) estimate because the estimates do not account for any relocation or replacement of the value elsewhere within the counties. In addition, likely increases in the property tax base due to redevelopment in the transit station areas was not considered.

Table 4.4-7: Taxable Value of Property Removed from Tax Base after Deductions¹ and Annual Tax Revenues Lost (2015\$) - Hammond Alternative Options 1 and 3

Option	Total Taxable Value of Property Removed From Tax Base ²	Annual Revenue Lost (Percentage of Tax Base)
1	\$7,760,062	\$336,548 (0.046%)
3	\$11,455,849	\$469,480 (0.064%)

SOURCE: AECOM 2016.

Notes: ¹Assumes minimum deductions.

²After deductions; properties for which no information was available were assumed to be valued at \$0.

Operation and Maintenance Economic Impacts: Operation of Hammond Alternative Options 1 and 3 on weekdays would result in up to 226 total job-years annually, and earnings up to \$7.3 million. This includes operation of the Hammond Alternative Options 1 and 3 weekend shuttles, or an average of \$32,300 per job-year.

Maynard Junction Rail Profile Option

No additional full property acquisitions would be required for the Maynard Junction Rail Profile Option for any of the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1). As such, it would not affect the socioeconomic conditions described for the applicable alternative options.

4.4.4.2 Short-Term Construction Effects

There would be no construction impacts as result of the No Build Alternative. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects. Short-term, construction-related impacts related to all Build Alternatives on socioeconomic conditions and economic vitality would relate to the generation of construction jobs and construction costs as well as increased trade at local retail and service businesses during construction. The jobs that would be created by the construction of Alternative Options are summarized below:

- **NEPA Preferred Alternative:** The NEPA Preferred Alternative (including construction and professional services activities) would create approximately 4,871 total job-years, with earnings of over \$240 million, or an average of \$49,200 per job-year.
- **Commuter Rail Alternative Options:** The Commuter Rail Alternative Options would create between 4,578 and 5,209 total job-years, with earnings of between nearly \$225 and \$256 million, or an average of \$49,200 per job-year.
- **IHB Alternative Options:** The IHB Alternative Options would create between 4,756 and 5,386 total job-years, with earnings of between \$234 and \$265 million, or an average of \$49,200 per job-year.
- **Hammond Alternative Options 1 and 3:** Hammond Alternative Options 1 and 3 would create between 4,454 and 4,874 total job-years, with earnings of between \$219 and \$240 million, or an average of \$49,200 per job-year.

Construction of the Project would be a substantial capital investment in the local economy; however, there would be no long-term economic impacts generated by the capital expenditures. Construction-related impacts would last for the duration of the Project's construction cycle.

Other short-term impacts would result from temporary disruptions to business access from construction equipment or activities as well as from noise, dust, and/or fumes that would disrupt business operations. Temporary construction easements may also be required, which could result in changes to parking and access, or closures of some areas of affected properties or adjacent properties. Although some businesses may experience hardship due to these construction effects, this would not alter localized economic vitality unless some properties become vacant.

4.4.5 Avoidance, Minimization, and/or Mitigation Measures

4.4.5.1 Long-Term Operating Effects

No mitigation measures are proposed as a result of the No Build Alternative since no impacts are anticipated. For the Build Alternatives, the redistribution of growth in population, households, and employment that could be generated by the Project is consistent with local plans and policies, as described in **Section 4.2**. The Project is not expected to result in negative effects to economic output, job creation, or income. Therefore, mitigation measures would not be warranted.

The tax revenue losses due to property acquisitions because of the Build Alternatives would be minimal in comparison to the overall tax base, and anticipated longer-term development would help replenish the tax revenue. Mitigation efforts would include the identification and promotion of redevelopment, infill, and economic development opportunities by the affected municipalities. Mitigation efforts would also include proactive policies to relocate businesses near their existing location to offset any potential property tax revenue loss. NICTD's role in promoting transit-supportive development in proximity to station areas is to encourage jurisdictions that have land use decision-making controls to maximize the benefits of the transit investment. NICTD's successful effort at winning an FTA Pilot Program for Transit-Oriented Development Planning grant is evidence of their willingness to champion this role.

4.4.5.2 Short-Term Construction Effects

There would be no construction impacts as a result of the No Build Alternative; as such, no mitigation measures are proposed. For construction of any of the Build Alternatives, temporary and short-term socioeconomic impacts would be mitigated through the following measures:

- Coordination with individual businesses to identify business usage, delivery, and shipping patterns, as well as critical times of the day or year for business activities to aid in developing worksite traffic control plans and to ensure that critical business activities are not disrupted
- Notification of property owners, businesses, and residences of major construction activities on a real-time basis
- Coordination with the affected utilities to minimize disruption of service
- Coordination with local businesses to ensure reasonable access to businesses during regular operating hours

4.5 Neighborhoods and Community Resources

This section describes the existing neighborhoods and community facilities in the Study Area and assesses the effects of the Project Alternatives on these resources. Detailed descriptions of neighborhoods and community resources in the Study Area are included in the *West Lake Corridor Land Use, Neighborhoods and Community Resources Technical Report* in **Appendix H**.

4.5.1 Regulatory Setting

CEQ (40 CFR § 1502) contains regulatory requirements for the description of the affected environment and environmental consequences for general resources, including neighborhoods and community facilities.

4.5.2 Methodology

As FTA does not have neighborhood impact assessment guidelines, the Federal Highway Administration's (FHWA's) *Community Impacts Assessment: A Quick Reference for Transportation* (1996) was used as a guide to assess the potential impacts to community resources and neighborhoods from the Project.

The Study Area considered for this analysis includes the area within ½ mile on either side of the proposed alignment. The neighborhoods that are wholly or partially (i.e., 50 percent of the neighborhood or more) within the Study Area were identified through municipal websites as well as through discussions with municipal planning or economic development staff from the Study Area communities.

The potential for impacts to community resources and neighborhoods was qualitatively assessed for the No Build Alternative as well as the Build Alternatives considering the following potential effects:

- Changes in neighborhood quality of life and human health
- Changes in community cohesion
- Loss of community resources or institutions
- Changes in access to/from community resources or institutions
- Changes in safety and security.

Community resources provide basic needs and services to communities and neighborhoods:

- Emergency services including police, fire, and ambulance/EMS stations
- Schools, colleges, and universities
- Religious institutions/places of worship and cemeteries
- Cultural institutions (e.g., libraries, museums)
- Hospitals
- Recreation areas/parks/trails
- Community/senior centers

4.5.3 Affected Environment

4.5.3.1 Neighborhoods

Neighborhoods are generally defined three ways. First, they can be identified by municipal governments for planning, urban renewal, political, or service purposes (such as sewer service areas). Secondly, neighborhoods are commonly defined by residents who live there and who identify themselves as living within a cohesive area where they have a sense of belonging or closeness. Such neighborhoods, as identified by residents, may have distinct geographic boundaries or may be informally or loosely understood, such as by virtue of being within a residential area with an internal network of local/residential streets and housing of generally cohesive architectural style. Finally, neighborhoods may also be defined by formal homeowner or business owner associations encompassing a discrete area in a community.

The Study Area traverses low-density suburban neighborhoods at its southern terminus in Dyer, and then travels through more densely-developed, urban neighborhoods near its northern terminus at Millennium Station in downtown Chicago. As the Study Area travels through the more suburban southern communities, neighborhoods tend to take the form primarily of housing subdivisions, and are informally defined, if defined at all. More well-defined neighborhoods within Indiana tend to occur in the communities closer to Chicago. While neighborhoods in the Cook County portion of the Study Area are informally defined, the Chicago neighborhoods have recognized boundaries with place names. The neighborhoods that are wholly or partially within the Study Area are shown on **Figure 4.5-1** and **Figure 4.5-2**.

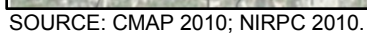
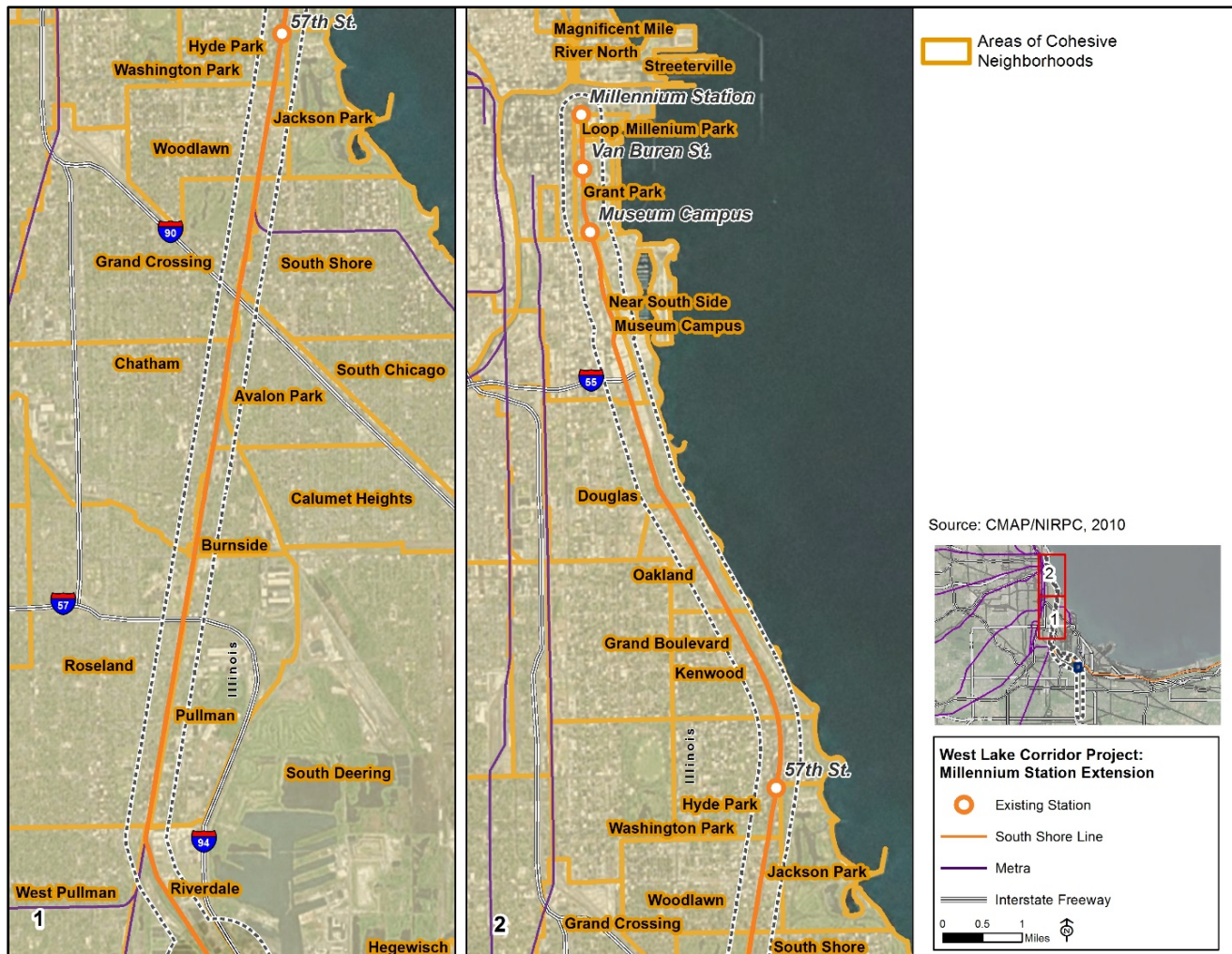


Figure 4.5-1: General Neighborhood Locations in the Study Area



SOURCE: CMAP 2010; NIRPC 2010.

Figure 4.5-2: General Neighborhood Locations along the Existing MED/SSL

4.5.3.2 Community Resources

Community resources are facilities that provide a broad spectrum of services for public benefit and contribute to a sense of place, including civic, educational, and health care services; religious and cultural institutions; and public open space. There are more than 100 community resources including parks located wholly or partially within the Study Area. **Table 4.5-1** provides a summary of the number of community resources by type located in the Study Area. They are shown on **Figure 4.5-3** and **Figure 4.5-4**.

Table 4.5-1: Summary of Aggregate Community Resources in the Study Area

Location	Emergency Services	Schools	Religious Institutions & Cemeteries	Cultural Institutions	Hospitals	Recreation Areas/Parks
Dyer	4	3	6	0	1	14
Munster	4	2	3	3	1	9
Hammond	4	10	25	2	2	12
Cook County portion	0	6	6	0	0	9
Chicago- Millennium/SSL portion	4	89	43	26	3	6
TOTAL	16	110	83	31	7	50

SOURCE: Google Earth; ESRI 2014.

Note: No community resources occur in the IHB Alternative portion of the Study Area.

4.5.4 Environmental Consequences

The potential direct impacts from the Project Alternatives are summarized below.

4.5.4.1 Long-Term Operating Effects

No Build Alternative

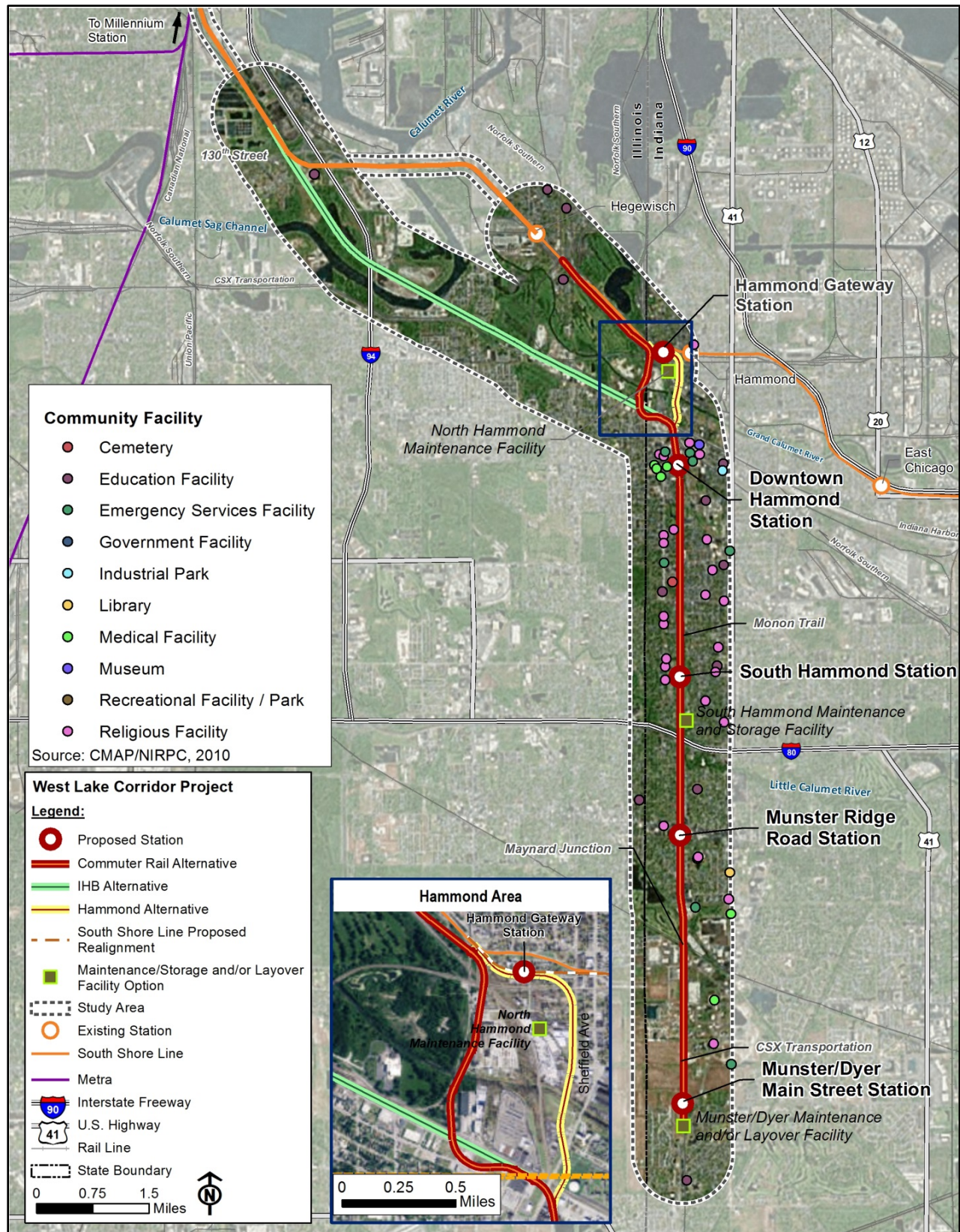
The No Build Alternative would not have direct impacts on neighborhoods or community resources.

NEPA Preferred Alternative

Neighborhoods

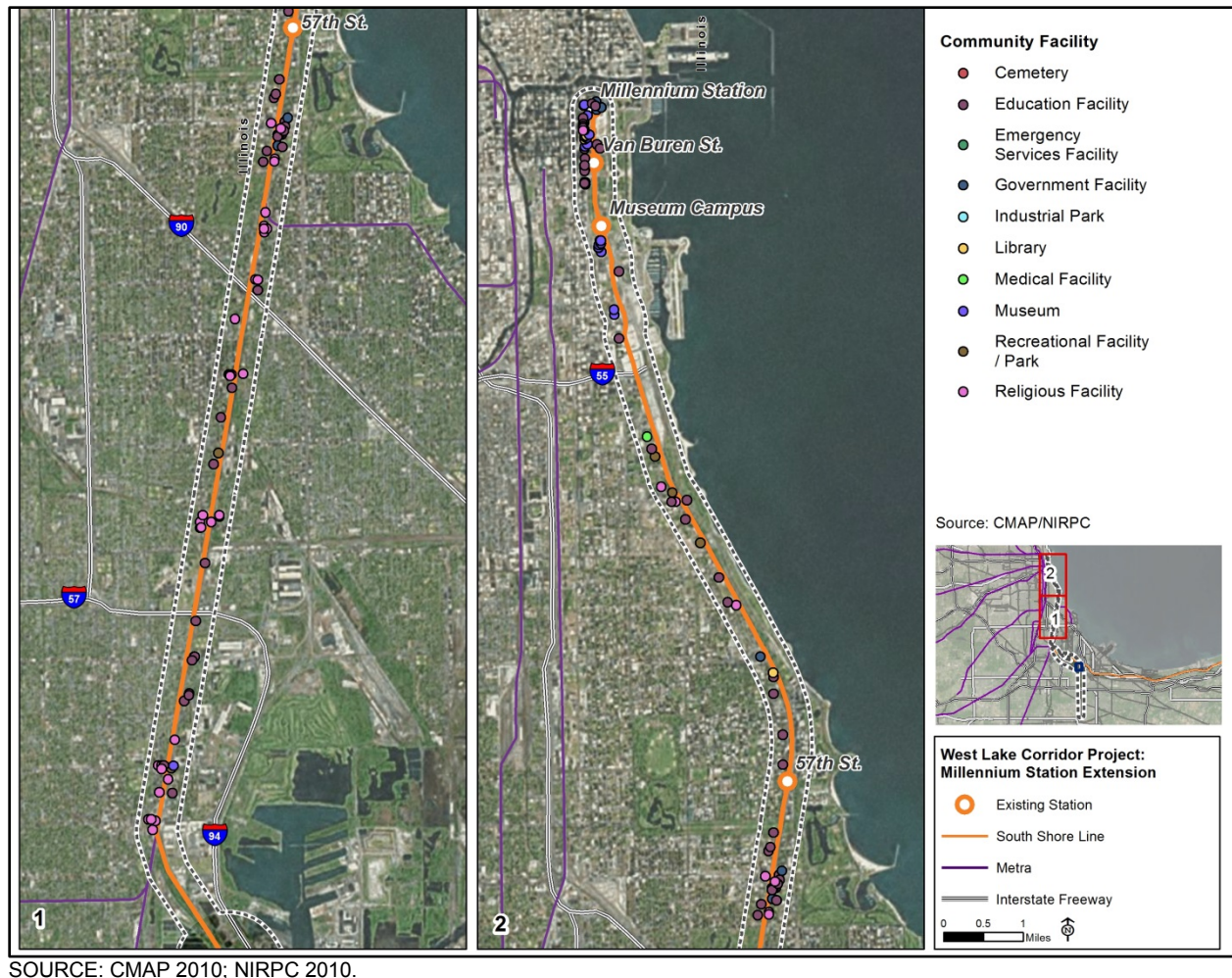
ROW: Between Dyer and Maynard Junction, the Project would acquire its own ROW adjacent to the existing CSX freight line, an active freight and Amtrak route. Since CSX freight and Amtrak operations are already in existence, widening the existing rail alignments to include Project infrastructure would not create new barriers in the community. From the Maynard Junction to downtown Hammond, the Project would use the abandoned ROW of the defunct Monon Railroad, which has been in public ownership (i.e., NICTD, Town of Munster, and City of Hammond) since the 1990s. This previous freight rail use, which included major rail vehicle maintenance shops near 173rd Street in Hammond, influenced the historic development pattern of the Study Area. Munster and Hammond developed the existing Monon Trail on the abandoned ROW with the understanding that the Trail would eventually coexist with commuter passenger rail service in the future. The introduction of commuter rail service from Maynard Junction to downtown Hammond may affect the perceived or actual connectivity for neighborhoods where no rail operations and associated noise currently occurs.

Stations: The proposed Munster/Dyer Main Street Station and layover facility would cause minor impacts to quality of life to neighborhoods located on the west side of the tracks due to the presence of the commuter parking lot. Potential impacts would include increased noise, visual effects, potential public safety concerns and increased traffic to and from the site.



SOURCE: CMAP 2010; NIRPC 2010.

Figure 4.5-3: Community Resources in the Study Area



SOURCE: CMAP 2010; NIRPC 2010.

Figure 4.5-4: Community Resources along the Existing MED/SSL

Parking for the Munster Ridge Road Station would require acquisition of a cluster of 18 single-family homes at the end of Garfield Avenue, which would have a direct but limited effect on neighborhood cohesion due the abundance of homes in the neighborhood. Station parking would create localized noise, traffic, safety, light, and glare impacts, which would affect nearby housing.

The proposed South Hammond Station would not displace any homes or businesses. It would, however, create a visual barrier between the neighborhoods on either side of the tracks, creating a minor effect. The station parking would be located near small-lot houses, and would create localized noise, light, and glare impacts.

The Hammond Gateway Station would be constructed in an urban neighborhood as part of a joint facility with a relocated SSL Hammond Station. The proposed station would require some displacements of homes and businesses, but this is not expected to create a gap in the neighborhood cohesion, and there are no anticipated impacts to quality of life due to the presence of an active rail line and the urban nature of the neighborhoods in this portion of the Study Area. The proposed station would be coordinated with Hammond's Chicago Street Widening and Reconstruction Project.

The North Hammond Maintenance Facility would displace six residences, four industrial properties, and one business. No impacts on neighborhood cohesion or changes in quality of life are anticipated. There would be some lost opportunity to redevelop existing land where the maintenance facility is

proposed that could be more compatible with the neighborhood to the east, although the elevated alignment to the west of Sheffield Avenue would form a physical boundary to that neighborhood.

For all Alternative Options, there would be no physical changes in the area north of Kensington along the existing MED/SSL corridor; therefore, no impact to communities or neighborhoods is anticipated.

Community Resources

Partial property acquisitions for ROW would result in loss of property areas for some of the community resources listed below along the proposed alignment. Although small areas of property would be acquired that would affect some parking, no other impacts would occur to the Family Christian Center Church, West Lakes Park, or Pennsy Greenway in Munster. Some community resources near the proposed stations would benefit from improved access that would be provided by the NEPA Preferred Alternative.

- Users of the existing Monon Trail between Fisher Street in Munster and the connection to the Erie Lackawanna Trail near Douglas Street in Hammond would experience visual changes associated with the proposed commuter rail related infrastructure (e.g., track and catenary equipment). More information on the visual effects is described in **Section 4.7.4**.
- The proposed alignment would abut the playing fields and lawn for Eggers Middle School in Hammond, which would change the background noise (e.g., from trail users, nearby existing freight rail traffic, and vehicular traffic) and introduce new visual elements. The Project would introduce noise from the 24 passenger trains per day. Commuter rail-related infrastructure (e.g. track and catenary equipment) would alter the existing visual character of views toward the proposed alignment. More information on the visual effects is described in **Section 4.7.4** and on the noise effects is described in **Section 5.2.4**. Safety fencing would address potential safety concerns.
- Harrison Park in Hammond would abut the proposed alignment as it previously abutted active rail service on the alignment. Train operations would change the background noise characteristic, but would not substantially impair the ability to use the park for its intended purpose. Wayside horns would be used at grade crossings when a train passes, such as at the Waltham Street grade crossing. The warning sound is focused at the actual train crossing, which reduces noise impacts traditionally associated with train horns. Trains would cross Waltham Street near the park 24 times per day resulting in wayside horn noise, but for a minimal amount of time as the train approaches and travels through the crossing. More information on the noise effects in **Section 5.2.4**. Fencing the rail line would address potential safety concerns.
- The proposed alignment would abut Oak Hill Cemetery in Hammond on its east side as previous rail operations have done. Train activity would change background noise characteristics and introduce new visual elements associated with the commuter rail.
- The Erie Lackawanna Trail along the proposed alignment between Condit and Sibley Streets in Hammond would be aligned adjacent to the proposed rail line, which would change the experience for trail users with the introduction of new visual elements associated with the commuter rail infrastructure (e.g. track and catenary equipment). Users near grade crossings would hear warning horns when trains approach, which would occur 24 times per day, but for a minimal amount of time as the train approaches and travels through the crossing. More information on the visual effects is described in **Section 4.7.4** and the noise effects in **Section 5.2.4**. Safety fencing would address potential safety concerns.

Commuter Rail Alternative Options

Neighborhoods

Commuter Rail Alternative Option 1: The potential impacts described for the NEPA Preferred Alternative would be the same under Commuter Rail Alternative Option 1 with the following exceptions. The proposed Munster/Dyer Main Street Station would not directly impact community cohesion. There would be minor direct impacts to quality of life to the neighborhood located on the east side of the tracks due to the presence of the station and parking lot with increased noise, visual effects, and public safety concerns.

There would be no displacements as a result of the proposed South Hammond Maintenance and Storage Facility at 173rd Street and it would not directly impact community cohesion. Neighborhoods located to the east of the South Hammond Maintenance and Storage Facility and across the tracks to the west of the facility may be affected by increased noise, vibration, and public safety concerns. No displacements would occur due to the Downtown Hammond Station, and direct impacts to community cohesion would be minor. No impacts to community resources or environmental quality are anticipated.

Commuter Rail Alternative Option 2: The potential impacts of Commuter Rail Alternative Option 2 would be similar to those described for Commuter Rail Alternative Option 1 with the exception of the proposed Munster/Dyer Main Street Station. The extension of Main Street under the rail tracks to provide access to parking on the west may increase noise, vibration, and public safety concerns due to increased traffic to and from the site.

Commuter Rail Alternative Option 3: The potential impacts of Commuter Rail Alternative Option 3 would be similar to those described for Commuter Rail Alternative Option 2 with the exception of the proposed Munster/Dyer Maintenance and Storage Facility. With the proposed Munster/Dyer Maintenance and Storage Facility, eight residences would be displaced, but overall community cohesion would not be affected. Neighborhoods east of the proposed Munster/Dyer Maintenance and Storage Facility and across the tracks to the west may be affected by increased noise, visual effects, and public safety concerns due to the presence of the facility, however it would have minor direct effects on neighborhood quality of life.

Commuter Rail Alternative Option 4: Impacts under this option for the Munster/Dyer Main Street Station would be the similar to those described for Commuter Rail Alternative Option 2, and impacts of the proposed South Hammond Maintenance and Storage Facility would be the same as those described for Commuter Rail Alternative Option 1.

Community Resources

The potential impacts described for the proposed alignment under the NEPA Preferred Alternative would be the same for all Commuter Rail Alternative Options. There would be no additional impacts to community resources as a result of the proposed stations and South Hammond Maintenance and Storage Facility under Commuter Rail Alternative Options 1, 2, and 4 or the Munster/Dyer Maintenance and Storage Facility under Commuter Rail Alternative Option 3.

IHB Alternative Options

Neighborhoods

For all IHB Alternative Options, impacts south of Sibley Street would be the same as those described for the Commuter Rail Alternative Options. North of Sibley Street the proposed track improvements are expected to have limited impacts on neighborhood quality of life. Overall, given the urban nature of the limited neighborhoods in this portion of the Study Area, as well as the presence of an already active rail line, all IHB Alternative Options would result in no impacts to cohesion and minimal impacts from noise, vibration, and safety issues.

Community Resources

The proposed alignment of the IHB Alternative Options would cross Beaubien Woods and come in close proximity to Flatfoot Lake, as well as be adjacent to the Burnham Prairie Nature Preserve. At these locations, a new track would be constructed to the south and west of the existing single track and would be used for the current freight operation. The existing freight track would be upgraded for exclusive passenger use. Overall, given the urban nature of the limited neighborhoods in this portion of the Study Area, as well as the presence of an already active rail line, all IHB Alternative Options would result in no impacts to community resources.

Hammond Alternative Options 1 and 3

Hammond Alternative Options 1 and 3 would have the same impacts as the NEPA Preferred Alternative, except for variations in station and parking locations at the proposed Munster/Dyer Main Street Station. The proposed Munster/Dyer Main Street Station would not directly impact community cohesion or community resources. There would be minor effects to quality of life to the neighborhood located on the east side of the tracks due to the presence of the station and parking lot, including increased noise, visual effects, and public safety concerns.

Maynard Junction Rail Profile Option

There would be no direct impact to neighborhoods with the Maynard Junction Rail Profile Option for any of the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1). The area is commercial/ industrial with no cohesive neighborhoods. Therefore, it would not alter the neighborhood and community resource impacts described for the applicable alternative options.

4.5.4.2 Short-Term Construction Effects

Under the No Build Alternative, no construction impacts would result from the development of the Project. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects. The NEPA Preferred Alternative, Commuter Rail Alternative Options, IHB Alternative Options, Hammond Alternative Options 1 and 3, as well as the maintenance and storage facility and station alternatives would have similar construction effects, as described below.

Although temporary in nature, construction phase impacts may affect neighborhoods and community facilities. Traffic detours may increase traffic through residential neighborhoods or change access to community facilities. Similarly, sidewalk closures and detours may affect pedestrian traffic patterns. Construction impacts such as increased levels of noise and dust may temporarily affect neighborhood character, primarily in relatively quiet areas. The presence of large construction equipment may be perceived as visually disruptive and cause temporary effects to community character, particularly in

residential settings. Residences and community resources may also experience short-term disruptions of utility services during construction activities, as utilities need to be moved or replaced.

4.5.5 Avoidance, Minimization, and/or Mitigation Measures

4.5.5.1 Long-Term Operating Effects

No mitigation measures are proposed as part of the No Build Alternative as there would be no impacts. For all Build Alternatives, where there is potential for long-term impacts to neighborhoods and community resources, the following mitigation measures would be implemented:

- Where the rail activity would create noise and vibration concerns, these impacts would be mitigated as outlined in the evaluations for those resources in the *West Lake Corridor Project Noise and Vibration Technical Report* in **Appendix H**.
- Where the proposed alignment is in close proximity to community resources and would diminish their value to residents or pose a nuisance, NICTD would conduct ongoing coordination and collaboration with community stakeholders and local elected officials as the Project Engineering phase advances to address site-specific issues and concerns.
- Where the added parking may contribute to localized traffic congestion and impacts to access, these impacts would be mitigated as outlined in the evaluations for traffic and transportation in the *West Lake Corridor Project Traffic Technical Report* in **Appendix H**.
- Where large surface parking lots would be developed in association with the proposed stations with the potential to disrupt neighborhood cohesion, NICTD would engage in ongoing coordination and collaboration with community stakeholders. NICTD would work with local elected officials, state and county transportation departments, and the community as the Project design advances to address site-specific issues and concerns.
- The displaced residences would be relocated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 CFR § 24). NICTD would continue to coordinate with affected residents, businesses, and community facilities to identify strategies to minimize the effects.

4.5.5.2 Short-Term Construction Effects

There would be no construction impacts as a result of the No Build Alternative; as such, no mitigation measures are proposed. For construction of any of the Build Alternatives, temporary use of land for construction staging and temporary disruptions to neighborhood access would be mitigated with the use of maintenance of traffic plans. Maintenance of traffic and sequence of construction would be planned and scheduled so as to minimize traffic delays and inconvenience. In addition, BMPs for minimizing noise, dust, and fumes and maintaining safety of construction sites would be implemented. These BMPs would buffer the construction activities from surrounding neighborhoods and minimize adverse temporary effects to the extent feasible and practical.

4.6 Cultural Resources

This section describes the potential impacts of the Project on historic properties, which include historic architectural resources and archaeological resources such as historic districts, sites, buildings, structures, and objects that are listed in or eligible for listing in the National Register of Historic Places (NRHP). Concurrent with the environmental review process under NEPA, the Project is under review per Section 106 of the National Historic Preservation Act of 1966 (NHPA) as amended (54 USC § 306108) and its implementing guidelines (36 CFR § 800), which identifies impacts as effects on

historic properties. This section presents quantitative data regarding the presence of historic properties in an Area of Potential Effects (APE) and the Project Alternatives' effects on these historic properties, in reference to NHPA requirements. Also discussed are mitigation measures FTA and NICTD would undertake to reduce adverse effects, and the consultation FTA and NICTD has undertaken with the affected property owners and consulting parties as defined by NHPA.

FTA initiated Section 106 consultation on September 29, 2014. Through the Section 106 review process, FTA and participating consulting parties reached an agreement on appropriate mitigation measures to resolve adverse effects on historic properties. The agreed upon measures are detailed in the draft Memorandum of Agreement (MOA) between FTA and the Indiana State Historic Preservation Officer (SHPO), represented by the Indiana Department of Natural Resources' (INDNR) Division of Historic Preservation and Archaeology (DHPA) (see **Appendix E**). The MOA will be executed prior to completion of the combined FEIS/ROD. FTA is responsible for implementation of the mitigation measures on the schedule established in the MOA. Additional information regarding the effects assessment is presented in the *West Lake Corridor Historic Property Report* (see **Appendix E**). The West Lake Corridor Archaeological Reconnaissance Survey reports for Indiana and Illinois are confidential and are on file with FTA.

4.6.1 Regulatory Setting

Under NEPA, in considering whether an action may "significantly affect the quality of the human environment," an agency must consider, among other things, the unique characteristics of the geographic area, such as proximity to historic or cultural resources [40 CFR § 1508.27(b)(3)], and the degree to which the action may adversely affect districts, sites, linear features, landscapes, buildings, structures, or objects listed, or eligible for listing, in the NRHP, or may cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR § 1508.27(b)(8)]. Section 106 of the NHPA, requires federal agencies to consider the effects of their undertakings on historic properties, which are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP [36 CFR § 800.16 (I)(1)]. Section 106 also provides an opportunity for the Advisory Council on Historic Preservation (ACHP) and interested parties to comment on federal undertakings that may affect historic properties. To determine whether an undertaking (the Project) would result in adverse effects on historic properties, the federal agency applies the Criteria of Adverse Effect (36 CFR § 800.5). Through Section 106 consultation, adverse effects may be avoided, minimized, mitigated, or resolved through agreement between the consulting parties.

4.6.2 Methodology

Section 106 requires consultation with the SHPO, federally recognized Native American tribes with an interest in the area, local governments, and other consulting and interested parties (36 CFR § 800.2). In accordance with the Section 106 process, the responsible federal agency (FTA is the lead federal agency for this undertaking) shall do the following:

- Identify the Project's APE and any historic properties within the APE
- Assess the effects of the Project on those historic properties
- Resolve adverse effects by exploring alternatives that avoid, minimize, or mitigate the adverse effects through Project design, consultation with Section 106 consulting parties, and development of a Section 106 agreement document for resolution of adverse effects to historic properties

4.6.2.1 Section 106 Consultation

On September 29, 2014, FTA sent a letter to the INDNR DHPA and the IHPA to initiate Section 106 consultation for the Project. FTA invited tribes and several stakeholder organizations to participate as Section 106 consulting parties on October 3 and October 8, 2014, respectively. The following participants have accepted:

- Richard M. Lytle, Hammond Historical Society
- Brian Poland, Hammond Historic Preservation Commission
- Cynthia Stacy, Peoria Tribe of Indians of Oklahoma
- Tiffany Tolbert, Indiana Landmarks, Northwest Field Office
- Bruce Woods, Lake County Historian, Lake County Historical Society

A consultation meeting was held June 22, 2016, to review FTA's Preliminary Determination of Effects on the undertaking. Consultation will continue with the consulting parties per Section 106 requirements until the Section 106 process is terminated (36 CFR § 800.6). On November 7, 2016, FTA sent letters to the SHPOs and consulting parties to obtain their input on the draft MOA as well as requesting concurrence from the SHPOs on FTA's determination of eligibility and effects for the Build Alternatives. Correspondence between these parties, NICTD, and FTA can be found in **Appendix E**.

4.6.2.2 Area of Potential Effects (APE) Identification

An APE for historic architecture was identified that encompasses all areas where the Project could impact historic properties as defined in 36 CFR § 800.16(l)(1) and is termed "Architectural APE." The Architectural APE considered potential physical, visual, noise/vibration, and/or functional changes to historic properties (see **Appendix E**).

An APE for archaeological resources was also defined to address the potential for effects on NRHP listed/eligible archaeological sites and is termed the "Archaeological APE." INDNR DHPA and the IHPA concurred with the APEs in April 2016.

Area of Potential Effects (APE): The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. Separate APEs have been defined for historic architectural properties and archaeological sites.

A large segment of the Project in Illinois within the existing MED/SSL corridor currently accommodates train service, and will require core capacity improvements that are planned separately from the Project. The Project would not involve any alterations to the ground along the existing commuter rail line, and is unlikely to have any indirect effects on properties adjacent to the existing commuter rail line. Therefore, the Architectural APE and the Archaeological APE do not address historic properties in this segment. For the NEPA Preferred Alternative, the Commuter Rail Alternative Options, and Hammond Alternative Options 1 and 3, the excluded segment extends from Burnham Avenue and South Brainard Avenue in Burnham, Illinois, north to Millennium Station in downtown Chicago. For the IHB Alternative Options, the excluded segment extends from just north of East 130th Street and the I-90 Interchange in Chicago north to Millennium Station.

Architectural APE

FTA defined the Architectural APE as the Project footprint including all alignment alternatives and design options that may have direct impacts on historic properties, and additional areas where indirect impacts may affect historic properties in terms of their visual or contextual environment. The Architectural APE covers the Project footprint within which tracks and ancillary facilities would be built,

and the footprints of the proposed stations, maintenance facility, layover track, and parking areas. Additionally, for architectural/historic resources, the Architectural APE encompasses parcels adjacent to the proposed railroad alignment where new above-ground infrastructure and facilities have the potential to alter the visual/contextual environment of historic properties.

Archaeological APE

FTA determined the Archaeological APE to be the geographic area within which the undertaking may directly or indirectly cause alterations of archaeological sites. As such, the Archaeological APE is comprised of the commuter rail track alignments, including the alignment design options, with a width of approximately 30 feet (9.14 meters), except where some additional land area is included due to proposed parcel acquisitions; space needed for access; as well as the footprints of the proposed Project stations, parking areas, maintenance/storage facilities, and layover facility options. The Archaeological APE covers the proposed Project footprint to identify resources that may be directly affected by construction and operational activities.

4.6.2.3 Identification of Historic Architectural Resources

The historic architectural survey included a review of previous surveys in the Architectural APE, historic maps encompassing the APE and vicinity, and aerial photographs; an intensive survey of the buildings, structures, and other above-ground features in the Architectural APE; and an evaluation of resources under the NRHP criteria. The Indiana Department of Transportation (INDOT)'s *Cultural Resources Manual* (2015) was followed for guidelines to complete the historic property survey for portions of the Project in both Indiana and Illinois, per guidance from INDNR DHPA and the IHPA.

Background Research and Previous Surveys

A literature review was conducted to identify known historic resources within the Architectural APE as defined by FTA. Records that were checked included the NRHP database, Indiana Historic Sites and Structures Inventory (IHSSI), Indiana's State Historic Architectural and Archaeological Research Database (IN SHAARD), Indiana's Historic Bridge Inventory, Illinois's Historic and Architectural Resources Geographic Information System (IL HARGIS) system, and historic maps.

Field Survey Methodology

A field survey of the Architectural APE was conducted on November 19 through 22, 2014, and on December 29, 2015. The survey was conducted according to the guidelines set forth in *National Register Bulletin 24: Guidelines for Local Surveys: A Basis for Preservation Planning* (United States Department of the Interior [USDOI] National Park Service [NPS] 1977) and INDOT's *Cultural Resources Manual* (2015) for intensive survey of above-ground resources. The Architectural APE was surveyed for resources that are or appear to be 45 or more years old. Every building in the Architectural APE, regardless of age, was observed and noted. Resources were digitally photographed. Information from the literature review, including the IHSSI results and historic maps, was reviewed for field verification. A historic context was compiled to relate historical events and themes relevant to the development of the Architectural APE. Buildings less than 45 years old were examined for the potential to meet NRHP Criteria Consideration G for resources under 50 years of age that have exceptional significance.

Assessment of Effects

The analysis of impacts, or potential effects, on historic resources was based on the Criteria of Adverse Effect described in regulations implementing Section 106 of the NHPA (36 CFR § 800.5). Under these regulations, an undertaking has an effect on a historic property when the undertaking

may alter, directly or indirectly, the characteristics of the property that may qualify the property for inclusion in the NRHP (36 CFR § 800.5(a)). An effect is considered adverse when it diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Consideration was given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's NRHP eligibility. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative. Adverse effects on historic properties include physical destruction of or damage to all or part of the property; alteration of a property that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR § 68) and applicable guidelines; removal of the property from its historic location; change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance; introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; neglect of a property, which causes its deterioration, with certain exceptions; and transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR § 800.5(a)(1)-(2)).

4.6.2.4 Identification of Archaeological Resources

The archaeological studies included a review of previous archaeological sites and surveys in the vicinity of the Project and Archaeological APE; a review of historic plat maps/atlasses, topographic maps, and aerial photographs of the Archaeological APE; a site visit/windshield survey of the Archaeological APE; and systematic field surveys (as necessary). The guidelines used for conducting the archaeological studies and surveys were in accordance with the guidelines established by INDNR DHPA and IHPA.

Background Research and Previous Surveys

An archaeological records check of previous sites and surveys was conducted using the online resources for professional archaeologists administered by INDNR DHPA and IHPA. These include the SHAARD in Indiana and the Inventory of Illinois Archaeological Sites (IIAS) in Illinois. The resources were consulted prior to initiating Archaeological APE visits in December 2014, July 2015, November 2015, December 2015, and February 2016. The resources were reviewed for previously-conducted archaeological studies and surveys and previously-recorded archaeological sites within a ½-mile radius of the Archaeological APE.

For the Indiana portion of the Project, historical Lake County plats and atlases, historical topographic maps, Sanborn Fire Insurance (Sanborn) Maps, and aerial photographs were consulted for the Archaeological APE. The historical maps and aerial photographs were reviewed for evidence of historic period buildings, farmsteads, or other structures located within the Archaeological APE and current or historical cemeteries. In addition to the above-listed historical sources, several books and websites chronicling Monon Railroad history were consulted as part of the Monon Railroad survey in Indiana.

For the Illinois portion of the Project, historical Cook County plats and atlases, historical topographic maps, and aerial photographs were consulted for the Archaeological APE. The historical maps and aerial photographs were reviewed for evidence of historic period buildings, farmsteads, or other structures located within the Archaeological APE and current or historical cemeteries.

Field Survey Methodology

For Indiana, visits to the Archaeological APE occurred on November 19, 2014, and February 1, 2016, to conduct a windshield survey and preliminary observation. For Illinois, visits to the Archaeological APE occurred on November 19, 2014, and on February 1 and 11, 2016. The Project APE was visited to determine whether the Project areas or components either were developed and/or disturbed by modern development, or whether a formal, systematic archaeological survey was warranted to identify historic properties.

In 2014, the Project components in the Archaeological APE at the proposed Munster/Dyer Main Street Station Project Areas west of the existing CSX freight line (proposed station parking and proposed Maintenance and Storage Facility) were determined to warrant a formal, systematic archaeological field survey. The survey was completed in December 2014. In 2015 and 2016, new Project components were visited for this purpose. In addition, a formal archaeological survey of the former Monon Railroad located in the Archaeological APE, which is an abandoned segment of the Monon Railroad from Maynard Junction in Munster north to Hammond, was completed in August 2016.

Assessment of Effects

The analysis of potential effects is based on the background research and field surveys that were conducted in order to determine whether there would be a potential to affect historic properties of an archaeological nature.

4.6.3 Affected Environment

4.6.3.1 Historic Architectural Resources

As a result of the survey, 469 resources that are or appear to be more than 45 years old were identified within the Architectural APE. Of the 469 resources surveyed, 43 resources had characteristics that were potentially significant under the NRHP eligibility criteria and required further research and evaluation. The other 426 resources surveyed did not exhibit potential significance or adequate integrity to meet the NRHP criteria. Of the 43 evaluated resources, 31 resources, all located in Hammond, Indiana, are recommended eligible for the NRHP, as shown in **Table 4.6-1**. Of the 31 eligible resources, 8 resources are individually eligible and 23 resources are contributing properties to existing or potential historic districts. No eligible resources were identified in Illinois or in other areas of the Architectural APE. Additional information regarding historic properties is presented in the *West Lake Corridor Historic Property Report* (see **Appendix E**). FTA has requested concurrence on its determinations of eligibility and effects from INDNR DHPA and IHPA in separate correspondence to both agencies dated November 7, 2016. Concurrence has not yet been received from INDNR DHPA or IHPA.

Table 4.6-1: NRHP-Eligible Resources

Name/ Description	Address	Date	Style	NRHP Evaluation
Straube Piano Company	252 Wildwood Road, Hammond	c.1904-1925	Renaissance Revival	Eligible, Criterion A
Apartment Building ¹	6136 Lyman Avenue, Hammond	1918	Vernacular	Eligible - Contributor
House ¹	267 Dyer Boulevard, Hammond	1923	Bungalow	Eligible – Contributor
House ²	266 Detroit Street, Hammond	1912	Bungalow	Eligible – Contributor
House ²	266 Highland Street, Hammond	1917	Bungalow	Eligible – Contributor
House ²	5973 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House ²	5969 Park Place, Hammond	1915	American Four-Square	Eligible – Contributor
House ²	5967 Park Place, Hammond	1918	Bungalow	Eligible – Contributor
House ²	5963 Park Place, Hammond	1917	Bungalow	Eligible – Contributor
House ²	5959 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House ²	5957 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House ²	5949 Park Place, Hammond	1913	Bungalow	Eligible – Contributor
House ²	5945 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House ²	5943 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
Harrison Park ²	5728–59 Lyman Avenue, Hammond	1898	Park	Eligible – Contributor
House ²	265 Webb Street, Hammond	1913	Bungalow	Eligible – Contributor
Duplex ²	255–257 Carroll Street, Hammond	1907	Chicago two-flat	Eligible – Contributor
House ²	256 Williams Street, Hammond	1900	Gable-front	Eligible – Contributor
House ²	253 Williams Street, Hammond	1911	Gable-front	Eligible – Contributor
Duplex ²	256 Doty Street, Hammond	1907	Chicago two-flat	Eligible – Contributor
House ²	255 Doty Street, Hammond	1907	Gable-front	Eligible – Contributor
House ²	255 Ogden Street, Hammond	1920	Queen Anne	Eligible – Contributor
Minas Parking Garage	442 & 462–64 Sibley Street, Hammond	1960	Brutalism	Eligible, Criterion C
Hotel Hammond	415 ½ -417 Sibley Street, Hammond	1919	Commercial Vernacular	Eligible, Criterion A
P.H. Mueller Sons Hardware	416-18 Sibley Street, Hammond	1902	20 th century commercial	Eligible, Criterion A
Commercial Building ³	424 Willow Court, Hammond	1907	Commercial Vernacular	Listed – Contributor
Hotel Goodwin ³	422 Willow Court/5109 Bulletin Avenue, Hammond	1915	Commercial Vernacular	Listed – Contributor
Simplex Railway Appliance Company	4831 Hohman Avenue, Hammond	1898	Industrial Vernacular	Eligible, Criterion A
O.K. Champion Building	4714 Sheffield Avenue, Hammond	1905 to 1914	Industrial Vernacular	Eligible, Criterion A
Federal Cement Tile Company	24 Marble Street, Hammond	1909	Industrial Vernacular	Eligible, Criterion A
Hammond, Whiting, and East Chicago Railway Building	304 Gostlin Street, Hammond	1895	Commercial/ Industrial Vernacular	Eligible, Criterion A

SOURCE: AECOM 2016.

Notes: ¹ Within Dyer Boulevard Historic District; ² Harrison Park Historic District; ³ within State Street Commercial Historic District
NRHP = National Register of Historic Places

4.6.3.2 Archaeological Resources

Based on the research completed for this DEIS, 14 previous cultural resource surveys have been conducted within a ½-mile radius of the Study Area in Indiana. These studies include three that cross or are within the proposed Project. None of the locations of proposed stations, parking areas, and maintenance and storage facility options had been previously surveyed for archaeological resources (SHAARD 2014, 2015, 2016). According to SHAARD, there are no previously recorded archaeological sites within the APE. None of the previous studies and surveys reviewed resulted in the discovery of archaeological resources. The results of the review of the 14 previous archaeological surveys and sites are presented in **Table 4.6-2**:

According to the IIAS database, nine previous cultural resource surveys have been conducted within a 1 mile radius of the Illinois portion of the Study Area. These studies include one study that appears to include portions of the Archaeological APE (IIAS 2014, 2015, 2016). This study is discussed further below. According to the IIAS database, there is one previously recorded archaeological site with the potential to be located in the Archaeological APE. A total of 14 additional previously recorded archaeological sites are located within ½ mile of the Archaeological APE (IIAS 2014, 2015, 2016). Illinois State Museum (ISM) Site Forms were reviewed for each site. The results of the review of the previous archaeological surveys are presented in **Table 4.6-3**.

One of the studies listed in **Table 4.6-3** resulted in the discovery of archaeological resources in the Beaubien Woods Forest Preserve (Keene and Karamanski 1980). Based on the IIAS database and the ISM Site Form, one site (11Ck247) appears to be located in close proximity to the existing IHB ROW. If the site extends into the ROW, its easternmost limits would be within the Project Archaeological APE.

One archaeological site was located in the Archaeological APE during formal systematic field survey. The abandoned segment of the former Monon Railroad alignment from Maynard Junction in Munster north to Hammond has been surveyed and recorded as an archaeological site (Site No. 12La0707). Site No. 12-La-0707 was evaluated under NRHP criteria and determined not eligible for the NRHP. No other archaeological resources were identified as a result of the formal surveys.

Table 4.6-2: Previous Archaeological Studies in Indiana

SHAARD Report No.	Report Author	Report Name	Report Date	Crosses APE (Y/N)	Archaeological Resources (Y/N)
60c40	Evans, D and Cochran, Donald R.	Archaeological Records Review, Main Street/53 rd Avenue, Near Dyer, Lake County, Indiana	1990	No	No (N/A)
60c77	Helmkamp, R. Criss	Archaeological Records Check: INDOT Project ST-019-6 Des. No. 11465, 41-45-7745, Replacement of US 41 Bridge Over the Grand Calumet River, Lake County, Indiana	1993	No	No (N/A)
6258e/992143	Helmkamp, R. Criss	Archaeological Records Check: INDOT Project ST-019-6, Road Rehabilitation on US 41 From I-80/I-94 to US 12/US 20, Lake County, Indiana	1999	No	No (N/A)
619e5/RTP-010-2 625a3/2001 2270	Helmkamp, R. Criss	Archaeological Records Check: Historic Grand Calumet Walking Trail Development Project, Lake County, Indiana	2001	No	No (N/A)
60c&a/2005 1396	McAlpine, Thomas	Archaeological Records Check, Lake County Bridge #262, Lake County, Indiana	2005	No	No

Table 4.6—2: Previous Archaeological Studies in Indiana (cont.)

SHAARD Report No.	Report Author	Report Name	Report Date	Crosses APE (Y/N)	Archaeological Resources (Y/N)
625a0/20062851	Sills, Scott and McGowan, Kevin	Phase Ia Archaeological Reconnaissance for a Proposed Telecommunications System at 636 Sheffield Avenue in Dyer, Lake County, Indiana	2006	Yes	No
56157/20131384	Stillwell, Larry	An Archaeological Field Reconnaissance of the Proposed Chicago Street Widening Project from White Oak Avenue to South Brainard Avenue in Hammond, Lake County, Indiana	2013	Yes	No
5d13f/20131760	Robertson, Charlie and Stillwell, Larry	An Archaeological Field Reconnaissance of Proposed Wetland Mitigation Area in Munster, Lake County, Indiana	2013	No	No
7278a/20141397	Favret, Amy C. and Kaye Grob	Phase Ia Archaeological Records Review and Reconnaissance for the Calumet Avenue and 45 th Street Realignment and Grade Separation, Lake County, Indiana	2014	No	No
Document on file at the IDNR, DHPA	DeRegnaucourt, Robert A. (Tony)	Archaeological Reconnaissance of Projects M-N 152 (1&2) and M-N 058 (1&2), Calumet Avenue Extension and Sheffield Avenue Improvements between Munster and Dyer in Lake County, Indiana	1982	No	No
Document on file at the IDNR, DHPA	Draeger, Cathy	Archaeological Records Review for the Munster Grant Project, Lake County, Indiana. Archaeological Resources Management Services, Ball State University, Muncie, Indiana	2001	Yes	No
Document on file at the IDNR, DHPA	Ryder, Keith G.	Archaeological Reconnaissance of Borrow Site (Extension of Site A, Little Calumet River Project), Lake County, Indiana U.S. Army Corps of Engineers Chicago District	1985	No	No
Document on file at the IDNR, DHPA	Sick, Rebecca	Lakewood Park, Lake County, Indiana Archaeological Records Review.	2000	No	No
Document on file at the IDNR, DHPA	Zoll, Mitch	Archaeological Field Reconnaissance Main Street/53 rd Avenue, Lake County, Indiana	1991	No	No

SOURCE: AECOM 2016.

Table 4.6-3: Previous Archaeological Studies in Illinois

IIAS Report No.	Report Author	Report Name	Report Date	Crosses APE (Y/N)	Archaeological Resources (Y/N)
Survey No. 85	Ryder, Keith G.	Archeological Reconnaissance of the MSD Landfill Site (Waste Management Permit), Cook County, Illinois	1985	No	No
Survey No. 570	Keene, David J. and Karamanski, Theodore J.	Cultural Resource Survey of the Cook County Forest Preserve Palos, Calumet Divisions	1980	Yes	Yes
Survey No. 1465	Ryder, Keith G.	Cultural Resources Reconnaissance of Proposed Burnham Nature and Conservation Park, Grand Calumet River, Cook County, Illinois	1984	No	No
Survey No. 1530	Markman, Charles W.	Hegewisch Commuter Train Station Project Phase I Archeological Reconnaissance	1987	No	No
Survey No. 3118	Keene, David J.	Archeological Survey Report: Phase I	1990	No	No
Survey No. 16415	Wright, David	Cultural Resource Reconnaissance of the Proposed KMIP 138 th Street Meter Station with Work Areas in Cook County, Illinois	2007	No	No
Survey No. 99999	Unknown	Linear Project (Report Not Available)	Not available	No	Unknown
Survey No. 8072	Unknown	Report Not Available	Not available	No	Unknown
Indiana Report No. 60c5e	Kralovec, Beverly and David J. Keene	Phase I Archeological Survey Report GSA - Hammond Federal Building - Lake County, Indiana	1992	No	No

SOURCE: AECOM 2016.

4.6.4 Environmental Consequences

This section discusses the potential effects the Project Alternatives would have on historic properties located in the Project's Architectural and Archaeological APEs.

4.6.4.1 Long-Term Operating Effects

No Build Alternative

Under the No Build Alternative, there would be no changes to the existing corridor within either APE as a result of this Project. Therefore, the No Build Alternative would have no effects on historic properties.

NEPA Preferred Alternative

Historic Architectural Resources

The Project Build Alternatives would affect historic properties within the Architectural APE as listed in **Table 4.6-4**. The following table summarizes the effects assessment of each build alternative.

Table 4.6-4: Summary of Effects on Historic Properties

Name/ Description	Address	Project Activity	Effect Determination	Alternative
Straube Piano Company	252 Wildwood Road, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Apartment Building ¹	6136 Lyman Avenue, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ¹	267 Dyer Boulevard, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	266 Detroit Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	266 Highland Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5973 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5969 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5967 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5963 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5959 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5957 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5949 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5945 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	5943 Park Place, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Harrison Park ²	5728–59 Lyman Avenue, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	265 Webb Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Duplex ²	255–257 Carroll Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	256 Williams Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	253 Williams Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Duplex ²	256 Doty Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	255 Doty Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
House ²	255 Ogden Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Minas Parking Garage	442 & 462–64 Sibley Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Hotel Hammond	415 ½ - 417 Sibley Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
P.H. Mueller Sons Hardware	416-18 Sibley Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All

Table 4.6-4: Summary of Effects on Historic Properties (cont.)

Name/ Description	Address	Project Activity	Effect Determination	Alternative
Commercial Building ³	424 Willow Court, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Hotel Goodwin ³	422 Willow Court/ 5109 Bulletin Avenue, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	All
Simplex Railway Appliance Company	4831 Hohman Avenue, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	NEPA Preferred and Hammond Options 1 and 3
O.K. Champion Building	4714 Sheffield Avenue, Hammond	Demolition	Adverse Effect – Direct	NEPA Preferred and Hammond Options 1 and 3
Federal Cement Tile Company	24 Marble Street, Hammond	Demolition	Adverse Effect – Direct	Commuter Rail Options
Hammond, Whiting, and East Chicago Railway Building	304 Gostlin Street, Hammond	New above-ground infrastructure to be built adjacent to property	No Adverse Effect	NEPA Preferred and Hammond Options 1 and 3

SOURCE: AECOM 2016.

Notes: ¹Within Dyer Boulevard Historic District; ²Harrison Park Historic District; ³Within State Street Commercial Historic District

Three historic districts are within in the Architectural APE south of Willow Court in Hammond: the NRHP-listed State Street Commercial Historic District, the NRHP-eligible Dyer Boulevard Historic District, and the Harrison Park Historic District.

The northwest boundary of the State Street Commercial Historic District is adjacent to the proposed NEPA Preferred Alternative alignment, and two of the District's contributors are within the Architectural APE. Although the District retains its historical integrity as a whole, current aerial photography indicates that 9 of the 28 properties identified as contributors when the District was listed have been demolished, including 3 in the portion of the District within the Project Architectural APE. The locations of two of those properties are now vacant lots and the other building was demolished along with three other contributing buildings outside the Project Architectural APE to construct the First Baptist Church and associated parking lot in 2002. In addition, the southwest façades of the two extant contributors in the Architectural APE, which face toward the Project, have recently been sheathed in stucco. The setting of the portion of the State Street Commercial Historic District within the Project Architectural APE has already been altered by modern development, and the above-ground features of the Project that would be visible from the District would generally be of a scale similar to existing street lighting, overhead utility poles, the Hohman Avenue overpass, and other existing infrastructure. The NEPA Preferred Alternative is not expected to diminish the integrity of the District, and the Project would have no adverse effect on the historic qualities that make the State Street Commercial Historic District eligible for the NRHP.

The eastern boundary of the Harrison Park Historic District is adjacent to the NEPA Preferred Alternative, and 19 of the District's contributors are within the Project Architectural APE. The proposed NEPA Preferred Alternative alignment would be within the former Monon Railroad corridor. The Monon Railroad existed in this location from 1882 until 1967. Because the contributing buildings and park were constructed in the late nineteenth and early twentieth centuries, the railroad was part of the District's historic setting and construction of the Project would be compatible with the historic use in the former Monon Railroad corridor. Railroad elements were removed from the former Monon Railroad corridor when the City acquired it. In 2012, Hammond built the Monon Trail, a shared-use path. Although the Project would alter the current setting and views east of the District, this setting is a recent development. In addition, all the primary façades of the District's contributing buildings in the

Architectural APE face north, south, or west, which is away from the proposed alignment to the east. The NEPA Preferred Alternative is not expected to diminish the integrity of the NRHP-eligible District and the Project would have no adverse effect on the historic qualities that make the Harrison Park Historic District eligible for the NRHP.

The Dyer Boulevard Historic District is also adjacent to the NEPA Preferred Alternative, and two of the district's contributors are within the Architectural APE. The proposed NEPA Preferred Alternative alignment would be within the former Monon Railroad corridor that was developed with a railroad in this location from 1882. Because the contributing buildings were constructed in the early twentieth century, the railroad was part of the district's historic setting, and construction of the Project would be compatible with the historic use of the corridor. The NEPA Preferred Alternative would alter the current setting and views east of the District, which now includes the shared-use path constructed in 2012. The District is oriented with a focus on Dyer Boulevard, which is perpendicular to the NEPA Preferred Alternative alignment, and whose primary contributors face north or south, not towards the Project corridor to the east. The NEPA Preferred Alternative is not expected to diminish the integrity of the NRHP-eligible District and the Project would have no adverse effect on the historic qualities that make the Dyer Boulevard Historic District eligible for the NRHP.

The remaining historic properties in the Architectural APE south of Willow Court include the Straube Piano Company, the Minas Parking Garage, Hotel Hammond, and the P.H. Mueller Sons Hardware Building. These have previously altered settings, and the introduction of new infrastructure would not alter character-defining features of these properties, and would not result in adverse effects.

The proposed North Hammond Maintenance Facility and the Hammond Gateway Station would result in the demolition of a historic property, the O.K. Champion Building. Through demolition, the NEPA Preferred Alternative would result in an adverse effect to this historic property.

In addition, the Simplex Railway Appliance Company and Hammond, Whiting, and East Chicago Railway Building are within the Architectural APE of the proposed Hammond Gateway Station, the North Hammond Maintenance Facility, a parking lot, and other features associated with the Project. These properties have substantially altered settings due to modern development that does not date to their respective periods of significance, and the introduction of new infrastructure would not alter character-defining features of these properties or diminish their integrity. The NEPA Preferred Alternative would not result in adverse effects to these properties.



SOURCE: AECOM 2015

O.K. Champion Building

Archaeological Resources

Based on the studies conducted for the NEPA Preferred Alternative, no archaeological resources that are historic properties were identified in the Archaeological APE. The majority of the Indiana portion of the Archaeological APE is unlikely to have intact, subsurface archaeological resources due to previous modern disturbance and development in the Archaeological APE. Additional survey may be warranted to verify disturbance prior to construction and would be conducted during the Engineering phase when more information on the Project design is determined. Additionally, the Munster/Dyer Main Street Layover Facility portion of the Archaeological APE in Dyer, Indiana, located to the east of the existing CSX freight line, was not subject to formal, systematic survey due to a lack of landowner permissions. This portion of the Archaeological APE appears to warrant systematic Phase I archaeological survey due to its lack of prior modern disturbance. A Phase I archaeological survey would be conducted during the Engineering phase when more information on the Project design is

determined. For the NEPA Preferred Alternative, there would be no archaeological historic properties affected.

Commuter Rail Alternative Options

Historic Architectural Resources

For all Commuter Rail Alternative Options, the potential impacts south of Willow Court would be the same as those described for the NEPA Preferred Alternative. Therefore, all Commuter Rail Alternative Options would result in no adverse effects on historic properties south of Willow Court. In the Architectural APE north of Willow Court in Hammond, all Commuter Rail Alternative Options would have an additional impact on the Federal Cement Tile Company. The alternative includes a flyover structure to carry the alignment through Hammond to the Indiana-Illinois state line. As a result of this action, the Federal Cement Tile Company would be demolished. This would result in an adverse effect to the historic property.



SOURCE: AECOM 2015

**Federal Cement Tile Co. and
Storage Building & Coal Room**

Archaeological Resources

The archaeological effects described for the NEPA Preferred Alternative would be similar for Commuter Rail Alternative Options 1 and 3 in Indiana. No additional effects are anticipated. For Commuter Rail Alternative Options 2 and 4, the Munster/Dyer Main Street Station and parking portion of the Archaeological APE in Indiana located to the west of the existing CSX freight line was subject to formal, systematic survey and no archaeological resources were found at that location. Therefore, no further work would be necessary in that portion of the Archaeological APE. The archaeological effects described for the NEPA Preferred Alternative would be the same for all Commuter Rail Alternative Options in Illinois.

IHB Alternative Options

Historic Architectural Resources

For all IHB Alternative Options, the no adverse effect findings south of Willow Court would be the same as those for the Commuter Rail Alternative. All IHB Alternative Options would have no impacts on historic properties north of Willow Court.

Archaeological Resources

The archaeological effects described for the NEPA Preferred Alternative would be the similar for the IHB Alternative Options in Indiana. No additional effects are anticipated. In Illinois, while the majority of the proposed alignment of the IHB Alternative Options would have no effect on the archaeological resources, further archaeological study is warranted and anticipated regarding previously-recorded Site 11Ck247 in Beaubien Forest Preserve in Illinois. Coordination with the Forest Preserve District of Cook County to discuss Site 11Ck247 and the IHB ROW is anticipated if any of the IHB Alternative Options are advanced.

Hammond Alternative Options 1 and 3

Historic Architectural Resources

For Hammond Alternative Options 1 and 3, the effect findings would be the same as those described for the NEPA Preferred Alternative.

Archaeological Resources

For Hammond Alternative Options 1 and 3, the effect findings would be similar to those described for the NEPA Preferred Alternative. One exception is Hammond Alternative Option 3, which would have the Munster/Dyer Main Street Station, Parking, and Layover Facility portions of the Archaeological APE in Indiana located to the west of the existing CSX freight line, where a systematic survey was completed and no archaeological resources were found. Therefore, no further work would be necessary in this portion of the Archaeological APE.

Maynard Junction Rail Profile Option

Historic Architectural Resources

No historic properties in the Architectural APE are located in proximity to the Maynard Junction Rail Profile Option; therefore, no additional historic properties would be affected in addition to what has been identified for any of the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1).

Archaeological Resources

For any of the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1), no potential resources of archaeological significance are anticipated in the Archaeological APE for the Maynard Junction Rail Profile Option as a result of the Phase Ia Archaeological Reconnaissance, due to previous modern disturbance and development, including an active rail line. No further archaeological investigations of the Archaeological APE are anticipated for the Maynard Junction Rail Profile Option.

4.6.4.2 Short-Term Construction Effects

Under the No Build Alternative, no project-related construction consequences would occur. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

Historic Architectural Resources

Under the Build Alternatives, construction-related noise, vibration, visual, and traffic impacts could be experienced. These impacts would be short-term and temporary, and would not result in adverse effects on historic properties with implementation of noise and vibration control measures by the construction contractor.

Archaeological Resources

The potential effects to archaeological resources are described in **Section 4.6.4.1**.

4.6.5 Avoidance, Minimization, and/or Mitigation Measures

To resolve adverse effects to historic properties, FTA consulted with the INDNR DHPA, IHPA, ACHP, and other consulting parties to develop an MOA for the NEPA Preferred Alternative, which includes provisions for the resolution of adverse effects. The draft MOA is provided in **Appendix E**. The MOA will be executed prior to completion of the combined FEIS/ROD.

4.6.5.1 Long-Term Operating Effects

Historic Architectural Resources

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. Recommended mitigation to resolve adverse effects for the NEPA Preferred Alternative, Commuter Rail Alternative Options, and Hammond Alternative Options 1 and 3 includes the following measures. No mitigation measures are proposed for the IHB Alternative Options since there would be no adverse effects on historic properties.

- **Archival Documentation:** A full recording of the historic properties selected for demolition, consistent with the standards of the (NPS) Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) documentation will be prepared.
- **Educational Materials:** In concert with HABS/HAER documentation, display and/or interpretive material for public exhibition concerning the historic properties affected by the Project will be prepared.
- **NRHP Amendment:** The NRHP-listed State Street Commercial Historic District, partially located within the APE, has undergone significant alteration since it was listed in 1999. The nomination for the District will be amended to reflect its current condition.
- **NRHP Nomination:** To offset the unavoidable demolition of a historic property representative of Hammond's significant industrial history, either the O.K. Champion Building or the Federal Cement Tile Company, an NRHP nomination for a similar historic property in the vicinity of the demolished property will be prepared.

While these mitigation measures would not eliminate adverse effects to historic properties, they will be implemented to reduce adverse effects to historic properties. FTA and NICTD will undertake these measures as stipulated in the draft MOA that is under development between FTA, NICTD, DHPA, IHPA, and other Section 106 consulting parties (see **Appendix E**). The MOA will be executed prior to completion of the combined FEIS/ROD. FTA is responsible for implementation of the mitigation measures on the schedule established in the MOA.

Archaeological Resources

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. No archaeological historic properties were identified in the Archaeological APE for the NEPA Preferred Alternative or any of the other Build Alternatives. The draft MOA identifies measures required to mitigate impacts to archaeological historic properties, if any are identified during future archaeological Phase I or Phase II studies. The draft MOA (see **Appendix E**) also states that an unanticipated discovery or unanticipated effect would be addressed in accordance with 36 CFR § 800.13(b)(3) if such a discovery were to occur.

4.6.5.2 Short-Term Construction Effects

Historic Architectural Resources

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. For all Build Alternatives, appropriate noise and vibration control measures and BMPs are recommended for implementation by NICTD's construction contractors to minimize temporary impacts caused during construction of the Project. All noise control measures and BMPs would be confirmed during later stages of design when the details of the Project construction activities are developed and finalized as part of the construction bid contracts.

Archaeological Resources

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. For all Build Alternatives, subsequent to the recommended surveys/studies stated in **Section 4.6.4.1**, the Construction phase of the Project would not impact archaeological resources except in the unlikely event of an unanticipated discovery. If such an event were to occur, the draft MOA for the Project (see **Appendix E**) stipulates the recommended surveys/studies, and that an unanticipated discovery or an unanticipated effect would be addressed in accordance with 36 CFR § 800.13(b)(3).

4.7 Visual Resources

This section describes the effect of the Project on visual resources. It discusses the methodology used, identifies existing visual resources in the Study Area, and discusses long- and short-term impacts of the Project, including minimization strategies and mitigation measures.

4.7.1 Regulatory Setting

NEPA forms the general legal framework for the consideration of impacts to the human environment. CEQ regulations require a description of the affected environment and the environmental consequences for general resources, including visual and aesthetic considerations. Further, Section 106 of the NHPA and Section 4(f) of the US Department of Transportation Act require that visual impacts be addressed for the protection of publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historical sites.

4.7.2 Methodology

Since FTA does not have visual assessment guidelines, the FHWA *Visual Impact Assessment for Highway Projects* (FHWA 1981) was used in this analysis. The visual resource inventory and assessment of potential impacts include the evaluation of visual character, visual quality, and viewer response to Build Alternative conditions. Data were collected from several sources, including aerial photography, field reviews, public input, and other planning documents.

Visual character, or landscape character, is the physical appearance of the landscape, including the natural, physical, and architectural/cultural features that give it an identity and "sense of place." It is a value-free measure in that the changes in the visual character are neither "good" nor "bad."

Visual quality, or attractiveness, is determined by evaluating the overall character and diversity of the landform vegetation, water, and cultural or manmade feature in a given landscape. Typically, more complex or distinct landscapes have higher visual quality. The following characteristics were considered in the evaluation of the landscapes (FHWA 1981):

- **Vividness:** The memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern
- **Intactness:** The integrity of visual order in the natural and man-built landscape, and the extent to which the landscape is free from visual encroachment
- **Unity:** The visual coherence and harmony of the landscape when considered as a whole

The landscapes in the Study Area were then assigned a “low,” “medium,” or “high” rating based on a combination of the above elements as follows (FHWA 1981):

- **Low:** Areas that have low visual quality may have features that seem visually out of place, lack visual coherence, do not have compositional harmony, and contain eyesores.
- **Medium:** These areas can be generally pleasant in appearance but may lack distinctiveness, memorability, drama, and compositional harmony, or may simply be common and ordinary landscapes.
- **High:** These areas may be memorable, distinctive, unique (in a positive way), intact natural or park-like areas, or urban areas with strong and consistent architectural and urban design features.

The extent to which a viewer would be affected by the Project depends on how noticeable visual changes are to the landscape character. Viewing variables such as vegetation or terrain screening, daytime versus nighttime conditions, and visual absorption capability of a landscape can make the Project more or less obvious. Viewer sensitivity is determined by evaluating type of use, user attitude, number of viewers, and duration of views. The sensitive viewers present within the Study Area include the following entities:

- **Monon Trail Users:** Located in NICTD’s ROW, the former Monon Railroad alignment, recreational trail users would be sensitive to the views of and from the trail.
- **Residential:** Residents with views of the Project would be sensitive to visual changes.
- **Roadway Travelers:** Travelers on roadways with views of the Project elements would be sensitive to visual changes, but to a lesser degree than the foregoing viewers because the duration of roadway traveler views would be short.

Visual impacts are the combination of (1) changes to visual resources and (2) viewers’ responses to those changes. Changes may be perceived as detracting from or enhancing visual resources. To analyze the potential visual effects of the Build Alternatives on the visual environment, the elements of the Build Alternatives were examined to determine whether they would affect the visual environment of any sensitive areas within the Study Area. Effects were rated based on the potential for viewers to discern the visual change, considering existing visual character and quality of the affected area. Effects were rated as low, moderate, or high as defined below, based on a composite assessment of visual character, quality, sensitivity, and the changes introduced by the Build Alternatives:

- **Low Visual Effect:** A slight change in visual character or quality, with no substantive effect on a visually sensitive area. New visual elements would be generally compatible with existing visual character, and little to no viewer response to visual changes is expected.
- **Moderate Visual Effect:** Either (1) a slight change in visual character or quality, resulting in a high level of viewer response, or (2) an extensive change in visual character or quality with a minimal viewer response. New visual elements would be somewhat compatible with existing visual character and quality.
- **High Visual Effect:** An extensive change to visual character or quality, or substantial effect on a visually sensitive area. New visual elements would be generally incompatible with existing visual character and quality, resulting in a high level of viewer response.

4.7.3 Affected Environment

The visual setting of the Study Area is that of a primarily suburban environment and becomes increasingly urban as the Project approaches the City of Chicago. Land use transitions from primarily residential in Dyer, Munster, and the southern portion of Hammond to commercial/industrial in the northern portion of Hammond. Natural areas, where present, are scattered and often isolated. These include several preserves as part of the Calumet Open Space Reserve within the Illinois portion of the Study Area – Powderhorn Prairie and Marsh Nature Preserve, Calumet City Prairie and Marsh Nature Preserve, and the Beaubien Woods Forest Preserve. Other natural features include the Little Calumet and Grand Calumet Rivers. In addition, the Monon Trail is located in the Study Area from Fisher Street in Munster to downtown Hammond within the abandoned ROW of the defunct Monon Railroad. The Monon Trail is owned by NICTD, the Town of Munster, and the City of Hammond. The Town of Munster and the City of Hammond developed the existing Monon Trail with the understanding that the trail would eventually coexist with commuter passenger rail service in the future. The assessment of visual quality for each of the Project features is summarized in **Table 4.7-1**. The majority of the existing visual quality in the Study Area is “medium.” The landscapes are generally intact and visually coherent. There is little diversity and few distinct features within the Study Area, except for the Calumet Open Space Reserve and the Monon Trail.

The regional landscape is largely flat, with the majority of the Study Area composed of developed land. Trees line a number of streets and, in places, separate the Study Area from bordering development. As a result, the majority of views from the Project are limited to roadways and development adjacent to the proposed alignment. Project views may extend beyond adjacent properties where the Project is elevated. The views in five distinct areas of the Study Area include:

- **Dyer:** This portion of the Study Area includes an existing active railroad corridor adjacent to the proposed alignment. The landscape is primarily medium-density suburban residential. Within the residential area is a large agricultural field planned for development. The area is determined to have medium visual quality.
- **Munster:** The Monon Trail occupies this portion of the proposed alignment (north of Maynard Junction). The Study Area around the proposed alignment has medium-density suburban residential landscapes with an industrial park and golf course. Trees line much of the proposed alignment, which is located along an existing active railroad corridor for 1.8 miles (south of Maynard Junction). Adjacent homes both face towards or away from the proposed alignment. The area is determined to have medium visual quality.
- **Hammond:** The Monon Trail also occupies this portion of the proposed alignment. The Study Area is medium- to high-density residential of mostly single-family homes. Downtown Hammond, at the north, is primarily commercial, residential, and institutional uses. The Study Area north of downtown Hammond is comprised of industrial and transportation uses with both occupied and vacant properties. The visual quality is medium throughout the residential areas, but low in the industrial portions.
- **IHB:** The Study Area around this corridor is urban with primarily industrial uses. The Calumet City Prairie and Marsh Nature Preserve and Beaubien Woods Forest Preserve are adjacent to the proposed alignment. The visual quality is low, with the exception of the nature preserve and forest preserve. The visual quality of the preserves is medium.
- **Chicago:** The Study Area around the existing SSL/MED corridor passes along a golf course and the Powderhorn Prairie and Marsh Nature Preserve, and transitions to urban industrial and residential uses. The visual quality is low, with the exception of the nature preserves. The visual quality of the nature preserve is medium.

Table 4.7-1: Summary of Project Visual Quality and Viewer Sensitivity





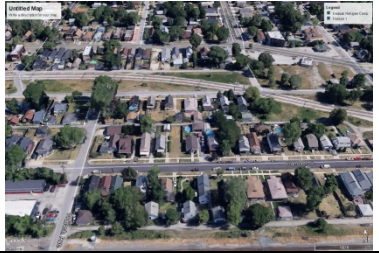


Jurisdiction	Corridor Geography	Description	Visual Quality	Viewers	Examples of Existing Conditions
Dyer	Dyer Study Area Portion	Medium-density suburban residential.	Medium	Residential; Roadway Travelers	
Munster	Munster Study Area Portion	Medium-density suburban residential interspersed from south to north with an industrial park, golf course, and the Monon Trail along the proposed alignment.	Low-Medium	Residential; Monon Trail Users; Roadway Travelers	
	Munster/Dyer Maintenance and/or Layover Facility	Agricultural field; single family homes adjacent to maintenance site.	Low-Medium	Residential; Roadway Travelers	
	Munster/Dyer Main Street Station	Vacant site with new streets – planned subdivision yet mostly undeveloped. Homes face away from the proposed alignment.	Low-Medium	Residential; Roadway Travelers	
	Munster Ridge Road Station	Commercial intersection with various restaurants and small businesses.	Low-Medium	Commercial; Roadway Travelers	

Table 4.7-1: Summary of Project Visual Quality and Viewer Sensitivity (cont.)

Jurisdiction	Corridor Geography	Description	Visual Quality	Viewers	Examples of Existing Conditions
Hammond	Hammond Study Area Portion	Medium-to high-density residential – downtown Hammond and along the proposed Hammond Alternative alignment is primarily commercial and industrial. The Monon Trail runs along the proposed alignment from downtown to the Munster-Hammond border.	Medium	Monon Trail Users; Residential, Roadway Travelers	
	South Hammond Station	Vacant, undeveloped land; few residences to the west face the proposed alignment. Trees separate homes backing corridor on the east side.	Medium	Residential; Roadway Travelers	
	South Hammond Maintenance and Storage Facility	Vacant, undeveloped land with water tower at north end. Single family homes would face maintenance site on both the east and west side. I-80/I-94 bridge structure with tall sound walls at south end of site is an imposing visual feature.	Medium	Monon Trail Users; Residential; Roadway Travelers	
	Downtown Hammond Station	Vacant industrial building.	Low	Monon Trail Users; Residential; Roadway Travelers	
	North Hammond Maintenance Facility	Industrial buildings, vacant lots with debris.	Low	Roadway Travelers	

Table 4.7-1: Summary of Project Visual Quality and Viewer Sensitivity (cont.)

Jurisdiction	Corridor Geography	Description	Visual Quality	Viewers	Examples of Existing Conditions
	Hammond Gateway Station	Vacant and single-family residential land at the edge of a transportation corridor.	Low	Residential	
Cook County	IHB Alignment	Calumet City Prairie and Marsh Nature Preserve and vacant land along Little Calumet River transition to industrial.	Preserve – Medium Industrial – Low	Nature Preserve Visitors; Roadway Travelers	
Chicago - Existing MED/SSL Alignment	Chicago Study Area Portion	proposed alignment passes along a golf course and Powderhorn Prairie and Marsh Nature Preserve, and transitions to industrial and then urban to Millennium Station.	Preserve – Medium Industrial/Urban - Low	Nature Preserve Visitors; Roadway Travelers	

SOURCE: AECOM 2015.

4.7.4 Environmental Consequences

The potential visual and aesthetic impacts of the Project Alternatives are discussed below.

4.7.4.1 Long-Term Operating Effects

No Build Alternative

The No Build Alternative would result in no direct change in visual character or quality because the transportation projects in the No Build Alternative would not introduce or substantially change visual elements in the Study Area.

NEPA Preferred Alternative

The NEPA Preferred Alternative would result in changes to the visual environment from the introduction of new visual elements or the removal or replacement of existing elements. These new elements could negatively affect visually sensitive resources by altering the view to and/or from the resource, or by adding an element that would be out of scale or character of the existing visual context. These elements would include electric multiple unit (EMU) vehicles and tracks; the overhead contact system (OCS), which includes the poles supporting the wires to power the EMU vehicles; stations, sidewalks, and parking; ramps or pedestrian bridges; traction power substations (TPSS); existing ROW modifications; bridges and retaining walls; maintenance facility; and layover facility. These new visual elements cannot be avoided and, in most locations, some elements, such as ROW modifications and the OCS would not be anticipated to result in an adverse effect as they would not be vastly different from a roadway or the existing utility infrastructure. The tracks in or adjacent to a roadway would not be a substantial visual impact in an area of low or moderate sensitivity. Stations and TPSS would also be new visual elements in the Study Area. TOD around stations would add a new mixed-use visual element to the suburban-style visual character of existing residential areas. Potential visual impacts by section of the proposed alignment are described below:

Dyer South of Main Street: Visual impacts in this area would be high and viewer sensitivity would be high for area residences and medium for roadway travelers. Two areas would be particularly affected by the NEPA Preferred Alternative, including the east side of the CSX freight line, where the proposed layover facility, crew quarter building, and employee parking lot would be located on a site currently used for residences. The residential care facility on the east side of Sheffield Avenue and Sheffield travelers would have the greatest visual impacts. Lighting would be aimed towards the facility to reduce spillage onto neighboring properties and adjacent roadways. The area immediately west of the CSX freight line is currently vacant; the site is screened by a tree line along the track. **Figure 4.7-1** shows the layout of the current conditions and a rendering of the proposed changes where the Munster/Dyer Layover Facility would be located. The Munster/Dyer Main Street Station would include parking on the west side of the CSX freight line, which would affect existing single-family home sites south of the proposed site (and north in Munster). The proposed parking facility would have a high visual impact to the low density character of the area. See **Figure 4.7-2**.



SOURCE: American StructurePoint Inc. 2015

Figure 4.7-1: Proposed Munster/Dyer Layover Facility



SOURCE: Google Earth 2015.

Figure 4.7-2: Proposed Munster/Dyer Main Street Station and Parking Footprint

Munster/Dyer Main Street Station to Maynard Junction: The Munster/Dyer Main Street Station would be constructed on a vacant parcel in a suburban setting with low density surrounding development. The facility would be visible to some residential properties. The parking and layover impacts described for Dyer would be comparable to Munster. Visual impacts would be high and viewer sensitivity would be high for area residences and medium for roadway travelers. The proposed alignment would be located on the east side of the CSX freight line in its own ROW. As such, the visual impacts would not be substantially different from that of the CSX freight line. The Project would include OCS wires and poles that would look similar to the existing electrical wires and poles along the CSX freight line.

To avoid crossing Maynard Junction at-grade, the Project would be elevated over the existing freight rail lines. This would require the proposed alignment to also be elevated over 45th Street and the Pennsy Greenway, introducing a new visual element. The proposed alignment would then transition back to ground level after crossing south of 45th Street and before reaching Fisher Street (to the north). Visual impacts and visual sensitivity for users of the Pennsy Greenway would be high.

Maynard Junction to Hammond City Line: North of Fisher Street, the NEPA Preferred Alternative would run alongside the existing Monon Trail, which has been used as a bicycle and pedestrian trail since the 1980s. While visual impacts from the introduction of the new service would be high and viewer sensitivity for residences and trail users would be high, Munster and Hammond developed the existing Monon Trail with the understanding that the trail would eventually coexist with a future commuter rail passenger service (see **Appendix F** for a copy of the agreement). **Figure 4.7-3** shows a typical section of the proposed alignment alongside the Monon Trail. A photo of the Monon Trail today located to the east of the proposed alignment is also provided. Residences to the east of the Project would have views of the required overhead wires and poles, which would be similar to the electrical wires that currently exist.



SOURCE: Google Streetview 2013 and AECOM 2015.

Figure 4.7-3: Proposed Alignment adjacent to Monon Trail

The Munster Ridge Road Station would be located on the east side of the Project south of Ridge Road. A small station building and a 150-stall parking lot in a suburban residential and commercial area would be involved. The proposed facility would be set back behind commercial buildings along Ridge Road, and would be visible to a small number of single-family residences to the east and south of the proposed parking facility (see **Figure 4.7-4**). The two multiple family buildings to the west along Manor Avenue would be screened by an existing line of trees. The visual impacts of the proposed station would be moderate; the proposed station would largely be compatible with the existing conditions in the area. Viewer sensitivity would be high for residences and low for roadway travelers.



SOURCE: Google Earth 2015.

Figure 4.7-4: Proposed Munster Ridge Road Station and Parking Footprint

Munster Town Limit to Downtown Hammond: The proposed improvements over this stretch of the Study Area would include visual impacts associated with the Monon Trail described above. The proposed South Hammond Station would be located on a large linear tract of open land that previously served as the Monon Railroad's maintenance facility. The station and parking site would be screened from residences east of the site by a tree line. The station – a building with a relatively low profile – would be visible to a handful of residences across Lyman Avenue. It would include a 700 vehicle surface parking lot (see **Figure 4.7-5**). Visual impacts would be high and viewer sensitivity would be high for residences and users of the Monon Trail, and medium for roadway travelers.



SOURCE: Google Earth 2015.

Figure 4.7-5: Proposed South Hammond Station and Parking Footprint

Starting at Douglas Street, the ROW would begin to elevate so as to span the NS and IHB freight rail tracks east of Hohman Avenue. This elevated ROW would be on the east side of downtown Hammond, and would be visible to many of the downtown uses (e.g., federal and county courthouses), as shown on **Figure 4.7-6**. Just north of downtown Hammond, the proposed alignment would be adjacent to the Hohman Avenue overpass, an imposing structure in the area (**Figure 4.7-7**). The elevated alignment would not alter views that are already obstructed by the overpass. Visual impacts would be moderate and viewer sensitivity would be low for roadway travelers.

Further north, views west from the single-family residences along Sheffield Avenue between Hanover Street and Hoffman Street and multi-family residences along Hohman Avenue between the Grand Calumet River and Willow Court would be obstructed by the Project's proposed elevated alignment generally west of Sheffield Avenue. As shown on **Figure 4.7-8** and **Figure 4.7-9**, the current views are of haphazard industrial uses and junked vehicles. The elevated ROW through this area would serve to screen this industrial area from the view of residents east of Sheffield Avenue. Visual impacts would be moderate and viewer sensitivity would be low for roadway travelers.



SOURCE: Google Earth 2015.

Figure 4.7-6: NEPA Preferred Alternative Alignment, East of Downtown Hammond



SOURCE: Google Earth 2015.

Figure 4.7-7: NEPA Preferred Alternative Alignment at Hohman Avenue Overpass



SOURCE: AECOM 2015.

Figure 4.7-8: View from Chicago Street looking West of Sheffield Avenue



SOURCE: Google Streetview 2013.

Figure 4.7-9: View from Chicago Street Looking West at Sheffield Avenue

The elevated Hammond Gateway Station would be located adjacent to the realigned SSL and visible from commercial and industrial properties, as well as from surrounding roadways (see **Figure 4.7-10**). A surface parking lot with 700 stalls would be constructed along a realigned Chicago Street in Hammond within view of a small number of residential properties. Visual impacts would be low and viewer sensitivity in this area would be low.



Figure 4.7-10: Renderings of the Proposed Hammond Gateway Station

The elevated alignment along Sheffield Avenue would screen the North Hammond Maintenance Facility, which would be visible to the scattered industrial uses to the west and south of the facility. Visual impacts and viewer sensitivity would be low.

Commuter Rail Alternative Options

As with the NEPA Preferred Alternative, the Commuter Rail Alternative Options would primarily use former railroad ROW. As such, direct impacts to visual quality would be the same as described for the NEPA Preferred Alternative. The existing visual environment of the active portions of the Study Area is unlikely to be altered as part of the Project. Potential visual effects would be limited to properties adjacent to the Project where no railroad train service currently exists or where new rail line facilities would be constructed. The Commuter Rail Alternative Options would run alongside the Monon Trail, which would introduce new visual elements that have not been in place since the 1980s. Visual impacts in this area would be high.

Elevated tracks in Hammond would connect the Project to the existing SSL. The tracks would rise approximately 30 feet above grade. The Project would be visible to adjacent industrial and commercial properties. Unlike the NEPA Preferred Alternative, the alignment east of downtown Hammond would be at surface grade, and would not elevate until after crossing under the Hohman Avenue overpass. The State Street Commercial Historic District is east of the Project, which at this location would be at-grade and separated by the active NS freight tracks. Both visual quality and viewer sensitivity in this location are low, and are dominated by the Hohman Avenue overpass. Visual impacts at proposed station areas and maintenance facilities would be similar to those described for the NEPA Preferred Alternative.

Under Commuter Rail Alternative Options 1, 2, and 4, visual impacts would be high and viewer sensitivity would be high for the residential areas and users of the Monon Trail and medium for roadway travelers at the proposed South Hammond Maintenance and Storage Facility. Single-family homes would face the maintenance site on both the east and west side, with unobstructed views of the maintenance facility.

The Downtown Hammond Station under all options would be consistent with the existing industrial and commercial character of the landscape. The visual effect would be low as the proposed station would visually improve the vacant industrial property currently in disrepair. Viewer sensitivity would be high for users of the Monon Trail and medium for roadway travelers.

IHB Alternative Options

The proposed alignment for the IHB Alternative Options would utilize the existing, active freight corridor, and as such, visual impacts would be minor. The existing visual environment of the active corridor is unlikely to be altered as part of the Project. Visual impacts in the southern part of the proposed alignment and at proposed station areas and maintenance facilities would be similar to that described for the NEPA Preferred Alternative.

Hammond Alternative Options 1 and 3

Hammond Alternative Options 1 and 3 would have similar effects as the NEPA Preferred Alternative.

Maynard Junction Rail Profile Option

Under the Maynard Junction Rail Profile Option the proposed alignment would cross Maynard Junction in Munster in an at-grade profile instead of an elevated profile. The proposed alignment would then remain east of the CSX freight line ROW. The visual impacts of the Maynard Junction Rail Profile Option would be low. This impact would occur instead of the visual impacts of a grade separation as described for the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1).

4.7.4.2 Short-Term Construction Effects

The No Build Alternative would result in no direct change in visual character or quality because there would be no construction of new facilities and no property acquisitions that would change the existing visual environment. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects. The Project Build Alternatives would have limited temporary, construction-related impacts to sensitive viewers. Short-term impacts would result from the presence of construction equipment, dust and emissions from construction equipment, and construction lighting.

4.7.5 Avoidance, Minimization, and/or Mitigation Measures

4.7.5.1 Long-Term Operating Effects

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. For all Build Alternatives, high-quality design and construction of the Project would be important mitigation tools to minimize negative visual effects. As the Project advances, NICTD would coordinate with affected viewers and consider the following strategies to avoid or minimize and mitigate visual effects of the Project. NICTD would coordinate with the local communities and responsible agencies to create visual design guidelines for the Project.

- Planting vegetation, street trees, and landscaping in and around the Project where reasonably feasible
- Giving special consideration to the design of alternatives that could result in visual impacts to highly sensitive viewers
- Designing station and maintenance facility lighting to reduce impacts from glare
- Aiming lighting towards the maintenance and layover facilities to reduce spillage onto neighboring properties and adjacent roadways
- Minimizing structural bulk where reasonably feasible
- Designing the facilities to complement or blend with the surrounding communities

4.7.5.2 Short-Term Construction Effects

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. For all Build Alternatives, short-term construction impacts to the visual environment would be minimized or mitigated by careful management of those construction activities. Particular techniques that would be employed include minimizing Project-related lighting during nighttime work, limiting work to daytime hours in the vicinity of particularly sensitive receptors, and restoring staging areas following Project completion.

4.8 Safety and Security

This section describes the general safety and security considerations related to the design and operation of the Project. Where applicable, it includes a discussion of proposed transit services, vehicles, park-and-ride lots, track alignment, at-grade crossings, stations, bridges, ROWs, layover facility, and maintenance and storage facility that would be associated with the Project Alternatives. The Project would feature safety and security systems and procedures similar to those currently utilized by NICTD to protect passengers, workers, and adjacent communities.

4.8.1 Regulatory Setting

NICTD, as the owner and operator of the Project, follows safety and security policies that establish minimum requirements for facilities based on local, state, and federal codes or standards, including those for fire protection, building codes, American National Standards Institute (ANSI), and American Society for Testing and Materials International (ASTM) standards. In addition, FTA provides safety and security oversight for major capital projects (*Safety and Security Guidance for Recipients with Major Capital Projects*, covered under 49 CFR § 633, "Project Management Oversight"). The design of the Project would meet the following minimum objectives:

- Design for minimum hazard through the identification and elimination of hazards through the use of appropriate safety design concepts and/or alternative designs.
- Use of fixed, automatic, or other protective safety devices to control hazards that cannot be eliminated.
- Use of warning signals and devices if neither designs nor safety devices can effectively eliminate or control an identified hazard.
- Provide special procedures to control hazards that cannot be minimized by the aforementioned devices.

The Federal Railroad Administration (FRA) would be the responsible agency to ensure compliance with federal railroad safety regulations, covering vehicles, operating practices, signal and train control, and track.

4.8.2 Methodology

The following NICTD documents were reviewed to describe the existing safety and security procedures that are currently in place for the analysis of the affected environment and No Build Alternative:

- System Safety Program Plan (SSPP), April 2015
- Written Hazard Communications Program, January 2014
- Personal Protective Equipment Program, February 2016
- Fall Protection Program for General Industry, September 2012
- Control of Hazardous Energy (Lock-out/Tag-out) Program, February 2014
- Passenger Safety Guidelines brochure for the South Shore Line

At this time, safety and security policies and procedures have not been developed specifically for the Project. During the Engineering and Construction phases, prior to operations, the Project would be guided by a Project Management Plan (PMP). The PMP would set forth requirements to be met for the design and construction process and results. The PMP would be supported by a Safety and Security Management Plan (SSMP) prepared specifically for the project. The SSMP would detail the steps to be taken during design and construction to ensure safety and security concerns are addressed adequately through proper design and operational planning. This would include the development of safety and security design criteria, and a subsequent certification process to confirm the criteria are met.

NICTD would work with FTA to provide regular updates to the PMP, Project safety and security activities, organizational updates, work scope changes, and changes to the assignments of responsibilities among Project participants based on FTA feedback. NICTD would continue to assess

whether adequate provisions have been made for safe and secure operations and what design features would be included to avoid, minimize, or mitigate vehicular, transit, and pedestrian accidents.

Potential effects for the alternatives are assessed in this section by identifying the following:

- Whether adequate provisions for safe and secure operations would be made with the introduction of a Project alternative
- Whether the alternatives would be expected to alter existing patterns of vehicular, transit, and/or pedestrian accidents and what design features would be included to avoid, minimize, or mitigate these accidents
- Whether the alternatives would improve safety and security compared to the existing conditions in the Study Area

4.8.3 Affected Environment

Public safety and security within the Study Area is currently provided by the police, fire departments, and emergency response units of the communities adjacent to the alignment. The Project alternative alignments would pass through the Towns of Dyer and the cities of Munster, Hammond, and Chicago, and through unincorporated portions of Lake County, Indiana, and Cook County, Illinois. Each municipality and unincorporated area has a system for responding to emergencies such as weather, fire, rescue incidents, hazardous materials issues, and homeland security. Emergency services located within the Study Area are identified in **Section 4.5** of this DEIS.

Concerns related to the safety of neighborhood children, trail users, pedestrians, motorists, bicyclists, and transit commuters were identified during the Scoping process. Scoping comments also expressed concerns related to crime and safety at station locations.

Existing safety features employed by NICTD are contained in the SSPP, which states that, “The mission of the Northern Indiana Commuter Transportation District (NICTD) is to provide safe, reliable, efficient and convenient passenger rail transportation.” In addition to the passenger safety elements contained in the SSPP, NICTD distributes a Passenger Safety Guidelines brochure that outlines passenger safety features of the railroad and instructs passengers on actions to take in emergency situations as well as general safety actions. NICTD also promotes safety and security through passenger on-board announcements and other public awareness programs (e.g., Operation Lifesaver).

The SSPP also provides the framework for ensuring passenger and employee safety on NICTD property and leased facilities. The plan details safety actions and functions to be observed by all NICTD employees along with facility maintenance and inspection guidelines. These include regular inspection and audits of stations and other facilities as well as detailed audit and reporting procedures followed by NICTD.

The NICTD Police Department has the primary responsibility to monitor and ensure the safety and protection of life and property throughout the Study Area. A Chief of Police, who reports directly to the General Manager, heads NICTD’s Police Department of seven full-time police officers. Strong cooperative relationships have been developed with all law enforcement agencies throughout the Study Area. NICTD trains operate through 26 jurisdictional police districts, including the four-county Northwest Indiana area and the greater Chicago area, which includes relationships with the Chicago Police and Metra Police departments.

4.8.4 Environmental Consequences

The impacts to safety and security from the NEPA Preferred and other Build Alternatives in comparison to the No Build Alternative are discussed in the following sections.

4.8.4.1 Long-Term Operating Effects

No Build Alternative

No positive or adverse impacts to safety and security are anticipated to result from the No Build Alternative.

NEPA Preferred Alternative

New at-grade crossings would be included as part of the NEPA Preferred Alternative south of Douglas Street in Hammond. North of Douglas Street in Hammond, the NEPA Preferred Alternative would be elevated, which would result in fewer at-grade crossings than the number that would occur under the Commuter Rail Alternative Options or IHB Alternative Options. All grade crossings would be designed to include appropriate warning and control devices as required by FRA and other agencies. **Figure 4.8-1** shows a grade-crossing where Project warning and control devices would be installed at Highland Street in Hammond (note that the original Monon Railroad rails can still be seen). **Figure 4.8-2** provides an example of the warning and control devices that currently exist at the SSL crossing of Sheffield Avenue in Hammond.



SOURCE: Google Streetview 2013.

Figure 4.8-1: Highland Street at Monon Trail in Hammond View West



SOURCE: Google Streetview 2013.

Figure 4.8-2: Existing SSL Crossing Protection, Sheffield Avenue in Hammond

The NEPA Preferred Alternative would run adjacent to nearby activity areas, including schools, parks, churches, and residential developments. The proposed alignment would also be adjacent to pedestrian and bicycle trails, including the Monon Trail from Fisher Street in Munster to its junction with the Erie Lackawanna Trail in Hammond, and the Erie Lackawanna Trail to Sibley Street in Hammond. Some reconstruction of the trails would be necessary to accommodate the NEPA Preferred Alternative and to maintain continuity and connectivity. Fencing would be utilized to discourage general access to the railroad ROW and to direct pedestrians and bicyclists to areas of safe crossing where appropriately-designed crossing locations would be provided to maintain community connectivity. At the crossing of the programmed Pennsy Greenway south of Fisher Street, the Project would include an opening in the elevated Project ROW to provide uninterrupted and safe use of this portion of the future trail. Where the proposed alignment is coaligned with freight rail operations, no safety impacts are anticipated. NICTD is in the process of implementing federally-mandated positive train control (PTC), which would be in place prior to the start of the proposed service. Further, the proposed service would for the most part operate independently of freight traffic on separate track and separate crossings. The proposed service would share the existing SSL tracks with the Chicago South Shore & South Bend (CSS) freight operation, which would also have PTC.

Positive Train Control (PTC) is a set of advanced technologies designed to make rail transportation safer by automatically stopping a train before certain types of accidents occur, such as train-to-train collisions, over speed derailments, incursions into established work zone limits, and the movement of a train through a main line switch in the improper position (FRA 2016). The Rail Safety Improvement Act of 2008 (RSIA) mandated that PTC be implemented across a significant portion of the Nation's rail industry by December 31, 2015 (Public Law 110-432).

The proposed North Hammond Maintenance Facility, located immediately south of the Hammond Gateway Station, would be located within an area of primarily industrial land use and would, therefore, not introduce new safety concerns to a residential environment. The facility would provide for maintenance of rail vehicles. Major car overhauls or rehabilitations would not be performed at the site, nor would a paint booth be included. Applicable safety and security precautions associated with the maintenance facility would be outlined in the SSMP and Safety and Emergency Preparedness Plan (SEPP).

At the southern terminus for the NEPA Preferred Alternative at the Munster/Dyer municipal boundary, a small layover facility would be included on the eastern side of the alignment and a park-and-ride lot would be placed on the western side of the CSX freight line. Access to the parking facility would occur via an underpass along an extended Main Street, so no new at-grade crossing would be introduced in this location. Grade-separated access for pedestrians would also be provided to permit safe passage under the CSX freight line. The layover facility would be utilized for overnight storage, daily light cleaning, and staging of trains. No safety or security impacts are anticipated.

Station areas would be designed according to best practices for safety. Stations would include public address systems and digital message boards, video monitoring, and emergency telephones. A public address system, with both speakers and signs, would convey information to people with disabilities in compliance with Americans with Disabilities Act (ADA) requirements. Speakers and signs would be positioned to be clearly audible and visible. To deter vandalism, the speakers and signs would be out of public reach. Closed circuit television would record activity at ticket vending areas, if applicable, and platforms. Camera locations would be coordinated with the locations of other equipment such as lighting, audio equipment, and signage. Cameras would be visible to the public but not readily accessible. Stations would incorporate an emergency telephone on or near the platform for use in emergency situations.

General illumination of station areas as well as vehicular and pedestrian circulation lighting would be consistent with established guidelines. Emergency lighting would be provided in all public areas, including platforms. Pedestrian lighting would be located along walkways, crosswalks, ramps, stairs, and bicycle storage areas. Vehicular traffic areas within station boundaries, such as bus loading and unloading zones, would be illuminated. Lighting would also be provided for park-and-ride facilities.

Based on current track and system design, no specific safety or security issues have been identified concerning the TPSS facilities. The facilities would be contained within enclosed buildings that are not accessible to the public. Applicable safety and security precautions would be outlined in the SSMP and SEPP and would be overseen by the NICTD Police in cooperation with local law enforcement authorities.

As a part of the train signaling control system for the NEPA Preferred Alternative, and all other alternative options, the federally mandated safety overlay system Positive Train Control (PTC) would be included. PTC uses communication-based/processor-based train control technology that provides a system capable of reliably and functionally preventing train-to-train collisions, over speed derailments, and the movement of a train through a main line switch in the wrong position (FRA 2016).

Commuter Rail Alternative Options

New at-grade crossings would be included as part of the Commuter Rail Alternative Options. In addition to the at-grade crossings discussed under the NEPA Preferred Alternative south of Douglas Street, the Commuter Rail Alternative Options would include new at-grade crossings in Hammond, since the proposed alignment would be at-grade through this area instead of elevated. Some street closures would also be necessary as described in **Section 3.5** of this DEIS.

The Commuter Rail Alternative Options would run adjacent to nearby activity areas, including schools, parks, churches, and residential developments. The proposed alignment would also be adjacent to pedestrian and bicycle trails including the Monon and Erie Lackawanna Trails in Munster and Hammond.

Under Commuter Rail Alternative Options 1, 2, and 4, the proposed maintenance and storage facility would be located east of the proposed alignment and immediately south of 173rd Street in south

Hammond. It would be immediately adjacent to an area of primarily residential land use and would; therefore, have the potential to introduce new safety concerns to the area. The facility would provide for maintenance and daily cleaning of rail vehicles, but no major car overhauls or rehabilitations would be performed at the site, nor would a paint booth be included.

Under Commuter Rail Alternative Option 3, the proposed maintenance and storage facility would be located south of the proposed Munster/Dyer Main Street Station, on the east side of the existing freight line. The facility would provide for overnight storage, maintenance, and daily cleaning of rail vehicles, but major car overhauls or rehabilitations would not be performed at the site, nor would a paint booth be included. The proposed maintenance facility would have the potential to introduce new safety concerns for area residents and travelers. Applicable safety and security precautions associated with the maintenance and storage facility would be outlined in the SSMP and SEPP. Safety and security issues associated with station areas, parking lots, and TPSS locations would be the same as those described for the NEPA Preferred Alternative.

IHB Alternative Options

New at-grade crossings would be included as part of the IHB Alternative Options. The IHB Alternative Options would include the same at-grade crossings referenced under the NEPA Preferred Alternative south of Douglas Street. New at-grade crossings in downtown Hammond would be the same as for the Commuter Rail Alternative Options. The IHB Alternative Options would run adjacent to nearby activity areas, including schools, parks, churches, and residential developments. The proposed alignment would also be adjacent to pedestrian and bicycle trails including the Monon and Erie Lackawanna Trails in Munster and Hammond.

The IHB Alternative Options for maintenance and storage facilities would be the same as described under the Commuter Rail Alternative Options. Safety and security issues associated with station areas, parking lots, and TPSS locations would be the same as those described for the NEPA Preferred Alternative.

Hammond Alternative Options 1 and 3

Safety and security impacts under Hammond Alternative Options 1 and 3 would be as described under the NEPA Preferred Alternative. Although Hammond Options 1 and 3 would alter the locations for the southern terminus layover or parking facilities, no unique safety and security impacts would occur.

Maynard Junction Rail Profile Option

The Maynard Junction Rail Profile Option would result in a new at-grade interface between passenger and freight rail tracks at the Maynard Junction as well as at-grade highway/rail crossings at Fisher Street and at 45th Street. These additional at-grade crossings would introduce new potential conflict points between passenger and freight trains as well as between passenger trains and roadway users. This option was not selected as preferred due to the potential conflict with freight trains associated with this optional configuration. This impact would be in addition to the safety and security concerns described for the applicable alternative options (i.e., NEPA Preferred Alternative, Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Option 1).

4.8.4.2 Short-Term Construction Effects

No construction impacts are anticipated as part of the No Build Alternative. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of

the planning for those projects. For all Build Alternatives, public safety, particularly the encroachment of pedestrians, bicyclists, and other spectators near open excavations and other construction activity, would be an issue to be resolved by the creation, proper timing, and placement of protective safety programs, public information efforts, and selected protective measures. Access to construction sites would be limited by fencing and security gates to prevent inadvertent access by those without access clearance. The use of construction equipment, delivery of materials, and other construction site activity may have temporary negative safety impacts on adjacent roadways and pedestrian areas.

4.8.5 Avoidance, Minimization, and/or Mitigation Measures

4.8.5.1 Long-Term Operating Effects

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. For all Build Alternatives, system safety and security oversight for the Project would be achieved through implementation of a SEPP by NICTD. The primary purpose of the plan is to consider safety and security, operational staff training, and emergency response measures. The SEPP specifies actions and requirements of the NICTD Police to maintain continuation of safety and security during Project construction and implementation of transit operations. Applicable safety and security precautions would be specified in the SSMP and SEPP and would be overseen by NICTD in cooperation with local law enforcement and emergency response personnel.

4.8.5.2 Short-Term Construction Effects

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated. For all Build Alternatives, NICTD and its contractors would provide construction barriers and fencing to secure construction sites and staging areas and evaluate the need for additional security measures such as guards, if needed.

4.9 Environmental Justice

This section describes the environmental justice (EJ) populations in the Study Area and identifies potentially disproportionately high and adverse EJ impacts (i.e., impacts that could affect low-income and minority populations more than other population groups). It also documents coordination efforts with EJ communities and describes the mitigation measures NICTD would undertake to offset any potential disproportionately high and adverse effects. The section is organized in the following manner:

- Methodology
- Affected Environment
- Outreach to EJ Populations
- Environmental Consequences
- Mitigation
- Assessment of Disproportionately High and Adverse Effects

Further detail regarding the analysis is documented in the *West Lake Corridor Environmental Justice Technical Report* in **Appendix H**.

EJ populations are defined as minority and low-income populations.

FTA Circular 4703.1 defines **minority populations** as:

- American Indian and Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander

Low-income populations are defined as any individual or household with income at or below the US Census poverty thresholds. As suggested by FTA Circular 4703.1, all individuals whose family income is at or below 150 percent of the poverty line were considered low-income.

4.9.1 Regulatory Setting

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was signed by President Clinton on April 11, 1994. This EO directs federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse environmental effects of federal agency actions (including transportation projects) on minority and low-income populations (EJ populations). The following guidance documents were used to conduct this EJ analysis:

- FTA Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients* (USDOT FTA 2012)
- Updated Final Order on Environmental Justice, 5610.0(a) (USDOT 2012)

4.9.2 Methodology

The following process was used to address EO 12898 in the Study Area. The process is based on guidance provided in FTA Circular 4703.1 (USDOT FTA 2012)

- Identify areas with minority and low-income populations within the Study Area
- Identify the key issues for EJ populations
- Identify DEIS results for all populations without mitigation
- Identify DEIS results for all populations with mitigation
- Provide an overview of the efforts that NICTD has made to involve EJ populations in the Project's development
- Assess whether the Project Alternatives would result in disproportionately high and adverse environmental impacts to EJ populations, taking into consideration mitigation and enhancement measures and Project benefits, as appropriate

Study Area: The Study Area for the EJ analysis includes the US Census block groups and tracts that are wholly or partially (i.e., 50 percent or more of the block group) within ½ mile on either side of the centerline of the alternative rail alignments, station areas, and maintenance facilities.

Identifying Minority, Low-Income Populations: EJ populations were identified through analysis of US Census ACS 5-year average data for 2009-2013. Other data sources were used to confirm the location of minority and low-income populations and included information and data from NIRPC and CMAP. The poverty threshold used in this analysis is approximately \$11,500 annual income, which is based on the United States Department of Health and Human Services (USDHHS) 2013 poverty guidelines. Households in the geography with incomes below this threshold were considered to be poor households. In order to identify all low-income populations, FTA guidance (USDOT FTA 2012) recommends including individuals whose family income is at or below 150 percent of the poverty line in addition to persons living below the poverty level. Therefore, for the purposes of this analysis, low-income EJ populations also include those households with annual incomes of \$17,200 or less.

Determining Potential for Disproportionately High and Adverse Impacts: The evaluation of the potential for disproportionately high and adverse environmental impacts to EJ populations considered the following factors relative to the Project Alternatives (i.e., considered the balance of effects once mitigation has been implemented) (USDOT FTA 2012):

- Increased traffic congestion and loss of safety
- Loss of availability of or access to community resources and services

- Loss of employment opportunities
- Displacement of people or homes
- Disruption of community cohesion caused by physical gaps or new barriers to interaction created within a community
- Environmental effects, such as exposure to noise, vibration, poor air quality, visual resources, or safety and security, that are described in other sections of this DEIS

4.9.3 Affected Environment

The majority of the Study Area includes US Census block groups with an EJ population consisting of either low-income populations, minority populations, or both. The occurrence of EJ populations generally increases from the southern end of the Study Area to its northern end. The exception is the Hegewisch neighborhood, which appears to be generally wealthier and less diverse than the Chicago neighborhoods that surround it and the rail corridor farther north.

Low-income and minority populations in the Study Area are most concentrated in Hammond, along the northern end of the proposed IHB alignment in Chicago, and in extensive pockets along the existing MED/SSL line in the Chicago area. There is more poverty at the northern limits of the Study Area than in the remainder. The presence of households at 150 percent of the poverty level is the predominant income factor identifying low-income EJ concentrations for the majority of the Study Area.

Table 4.9-1 indicates percentages of minorities by race and ethnicity in the Study Area, municipalities in the Study Area, the regions, and the states of Indiana and Illinois. Minority populations are most concentrated in Hammond, along the proposed IHB alignment in suburban Illinois, and along the existing MED/SSL alignment in Chicago. The southern end of the Study Area tends to be less racially diverse, with the lowest minority population of 9 percent occurring in a Dyer block group. In some block groups of suburban Illinois and Chicago, the minority population represents 90 to 100 percent of the total local population. **Figure 4.9-1** and **Figure 4.9-2** illustrate the distribution of minority populations in the Study Area and the existing MED/SSL, respectively.

Table 4.9-2 shows percentages of low-income populations. Minority populations are prevalent throughout the Study Area in varying concentrations. Low-income populations are distributed throughout the Study Area in much the same way as the minority population. In fact, in many cases the block groups identified as having high minority populations also have a high concentration of low-income populations. The highest concentration of poverty levels occurs in Hammond, along the proposed IHB alignment in suburban Illinois, and along the existing MED/SSL in Chicago. **Table 4.9-2** illustrates the distribution of individuals at or below 150 percent of the poverty level. **Figure 4.9-3** and **Figure 4.9-4** illustrate the distribution of populations at or below 150 percent poverty level in the Study Area and the existing MED/SSL, respectively.

Table 4.9-1: Race and Ethnicity in the Study Area

Study Area Geography	Total Population	White, Non-Hispanic	Hispanic	African-American	Asian	American Indian/Native Alaskan	Two or More Races	Other	Minority
Dyer	14,886	86%	5%	3%	3%	0%	1%	1%	9%
Hammond	23,737	49%	40%	26%	1%	1%	4%	27%	47%
Munster	12,304	82%	9%	6%	9%	1%	3%	6%	16%
Chicago West/IHB Portion	16,988	43%	27%	54%	1%	1%	2%	4%	54%
Chicago MED/SSL Portion	125,841	15%	4%	76%	6%	0%	2%	1%	82%
Cook County Portion	23,708	21%	16%	73%	1%	0%	1%	6%	45%
Study Area Total	221,323	30%	13%	56%	4%	1%	2%	6%	67%
NIRPC Region	770,951	66%	13%	28%	1%	1%	2%	6%	34%
CMAQ Region	8,432,516	63%	21%	23%	7%	1%	2%	9%	37%
State of Illinois	12,859,995	77%	16%	14%	5%	0%	2%	2%	27%
State of Indiana	6,619,680	86%	6%	9%	2%	0%	2	3%	15%

SOURCE: US Census Bureau ACS 2009-2013.

Note: Census data indicate that there are no Native Hawaiian/Pacific Islanders located in the Study Area, the regions, or states.

Table 4.9-2: Median Household Income and Poverty in the Study Area

Geography	Median Household Income	Percent of Population at or Below Poverty	Percent of Population at or Below 150% of Poverty
Dyer	\$76,776	3%	6%
Hammond	\$40,379	23%	39%
Munster	\$82,367	7%	14%
Chicago West/IHB Portion	\$50,133	23%	36%
Chicago MED/SSL Portion	\$42,364	27%	36%
Cook County Portion	\$59,140	18%	27%
Study Area Total	\$44,962	26%	38%
NIRPC	\$50,391	19%	30%
CMAQ	\$66,076	15%	24%
Illinois	\$56,798	14%	23%
Indiana	\$48,248	15%	25%

SOURCE: US Census Bureau ACS 2009- 2013.

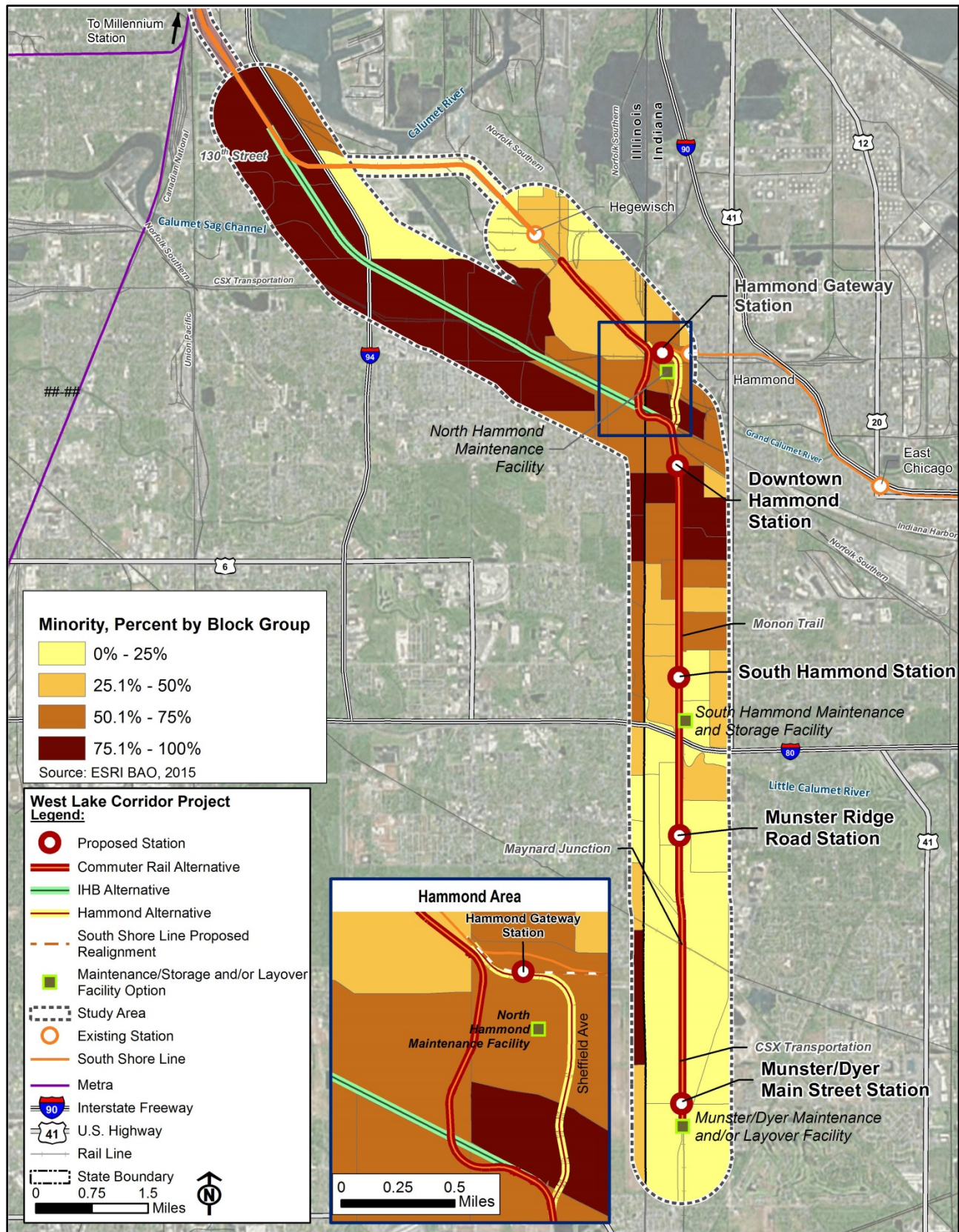


Figure 4.9-1: Minority Populations in the Study Area

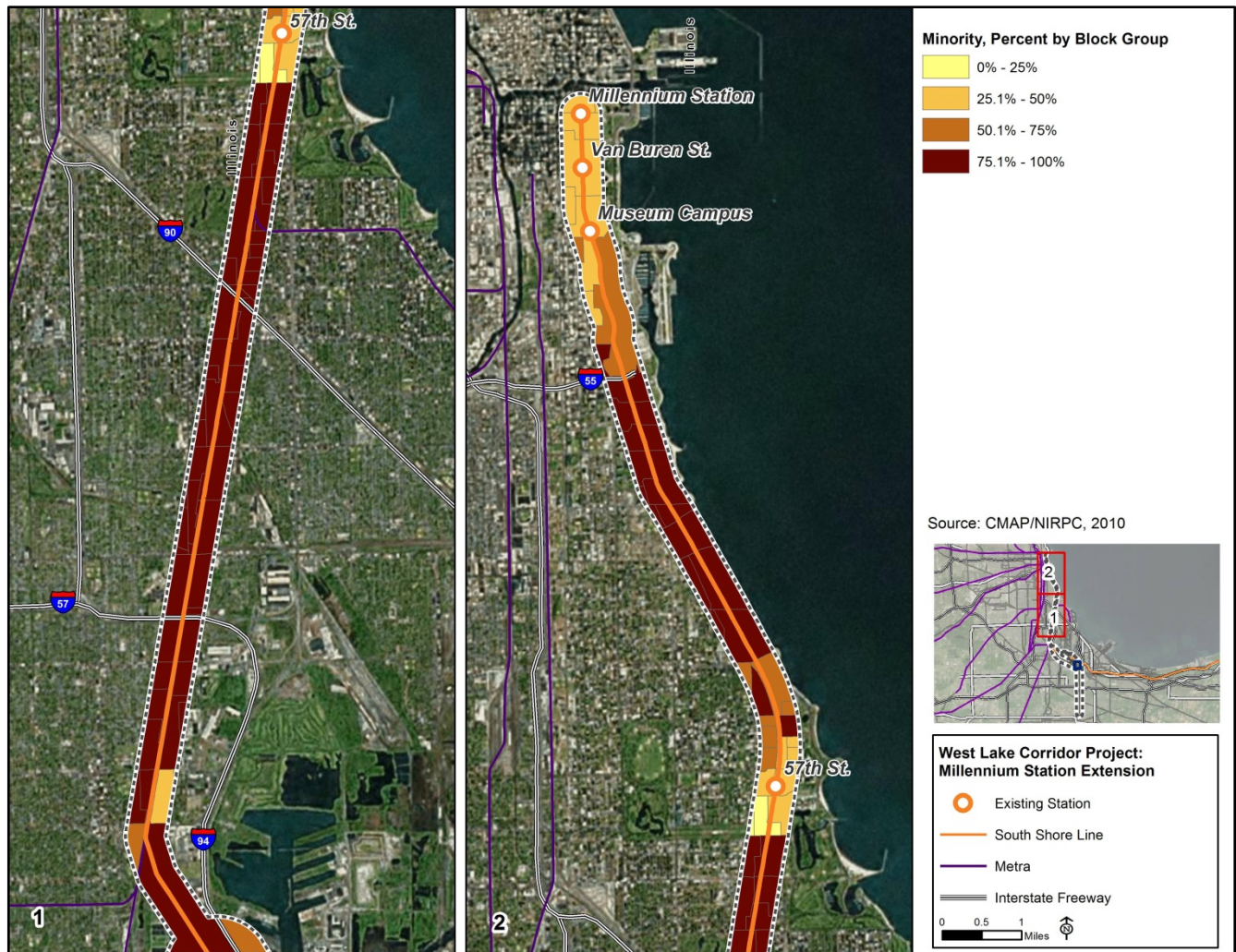


Figure 4.9-2: Minority Populations along the Existing MED/SSL

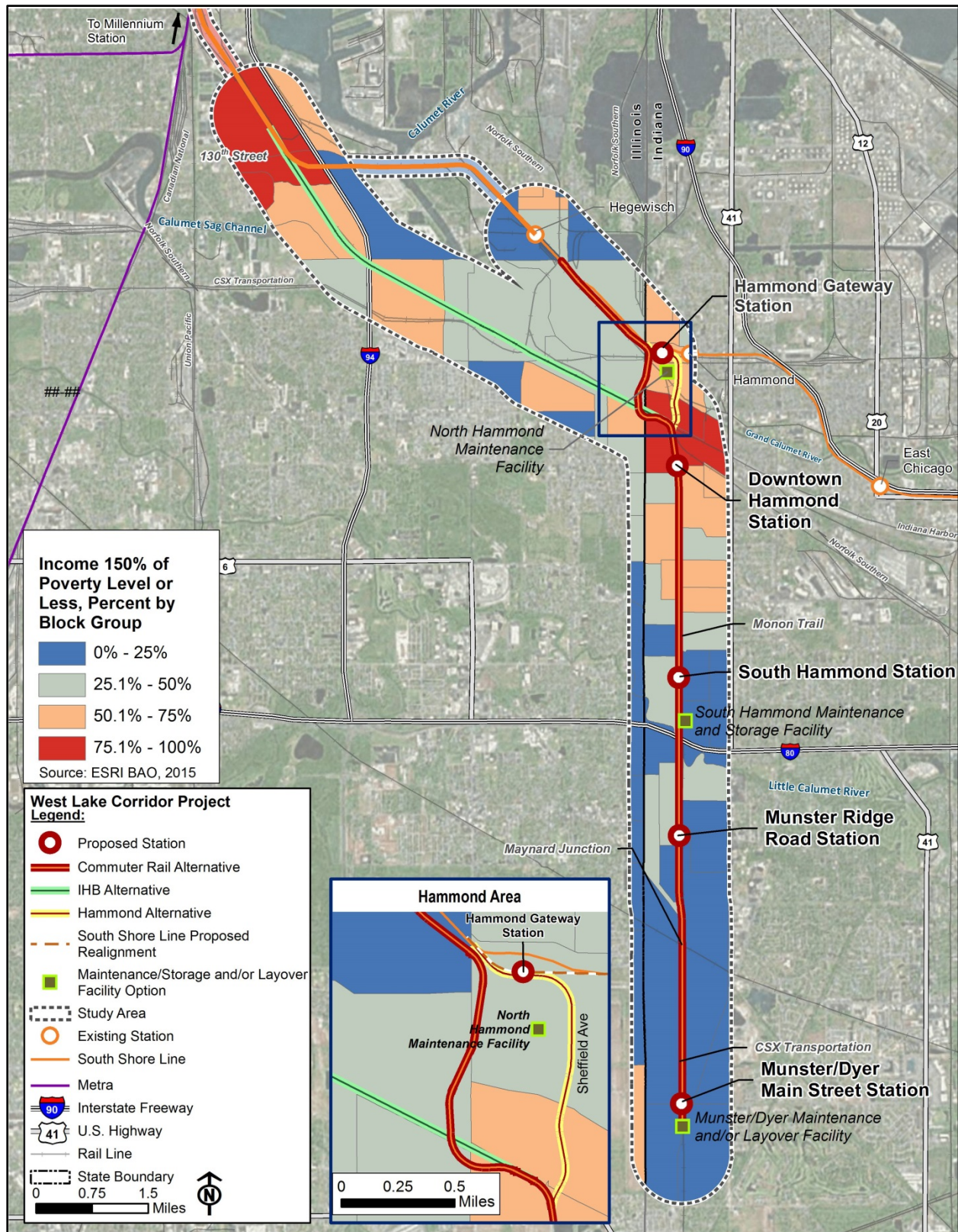


Figure 4.9-3: Populations at or Below 150% Poverty Level in the Study Area

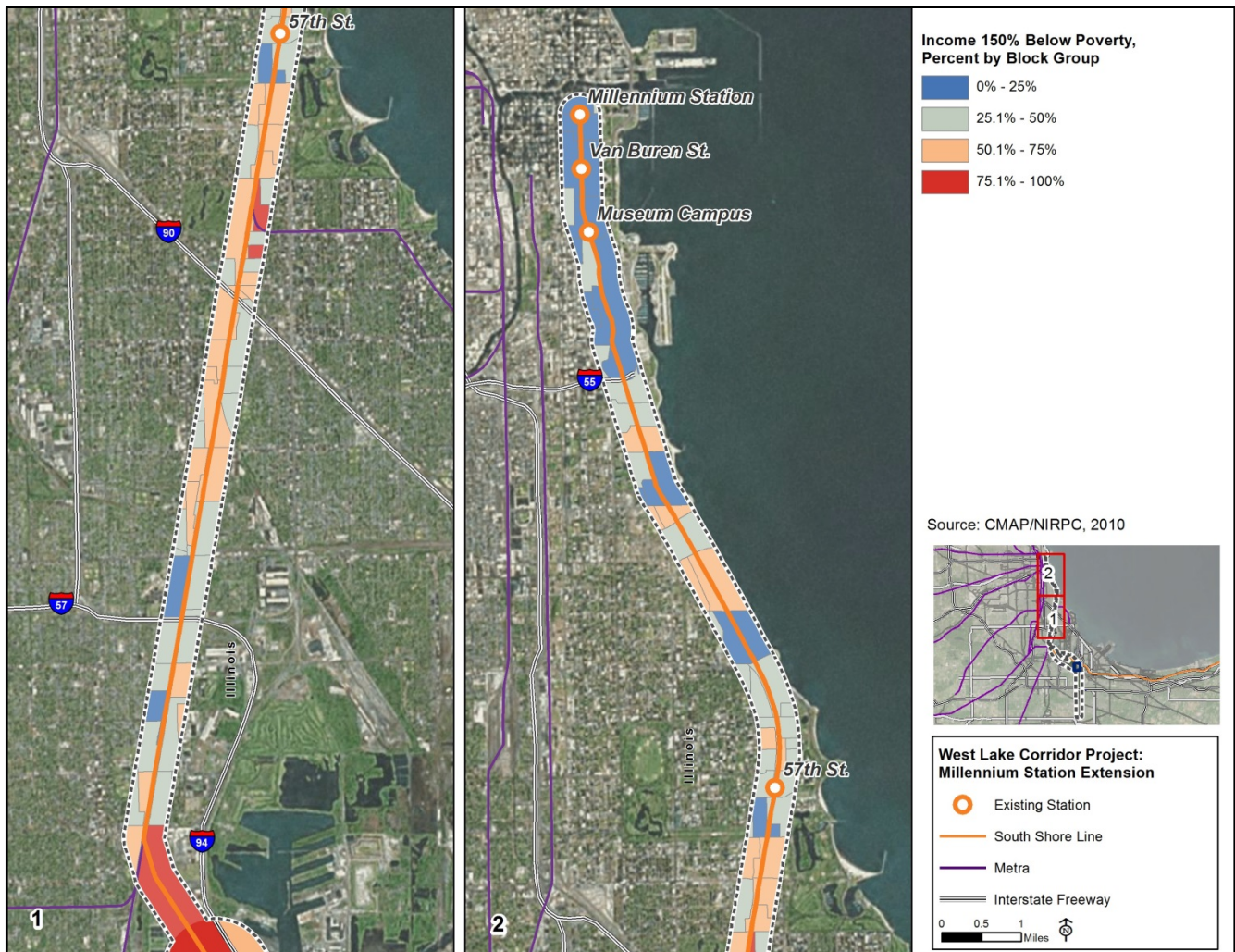


Figure 4.9-4: Populations at or Below 150% Poverty Level along the Existing MED/SSL

4.9.4 Public Outreach

The engagement of local residents, business owners, and other stakeholders began with Scoping in 2014, and is ongoing. The outreach program was conducted in accordance with the *West Lake Corridor Project Public Involvement Plan* (see **Appendix F**), EO 12898, and guiding principles contained in FTA Circular 4703.1.

Outreach efforts were designed to provide all community members with equal and meaningful opportunities to engage in the decision-making process. The public outreach process included the formal Scoping process along with several public workshops to encourage participation by residents throughout the Study Area. The public Scoping meeting was held in October 2014 at the Center for Visual and Performing Arts in Munster. Additionally, NICTD hosted four workshops in November 2015. Each meeting and workshop was announced on the Project website and through emails to contacts in the Project database. For more information, see **Chapter 9** of this DEIS.

To reach EJ populations and obtain their input on the Project, email invitations were prepared for organizations that represent EJ communities. In addition, to facilitate EJ population involvement in the Project and obtain their input during public comment periods, NICTD reached these organizations by phone in advance of the Scoping meeting and the public workshops. A total of 27 EJ organizations, listed below, were contacted:

- Active Transportation Alliance
- Baptist Ministers
- Bishop Tavis Grant II
- Boys and Girls Club Northwest Indiana
- City of Gary
- City of Michigan City
- Civic Leaders
- Deaf Services, Inc. - Tradewinds
- Dyer Redevelopment Commission
- Gary Chamber of Commerce
- Gary Public Transportation Corporation
- Hammond Hispanic Community Committee
- Hammond Redevelopment Commission
- Hoffman Street Baptist Church
- Interfaith Clergy Council
- Michigan City Housing Authority
- Michigan City Human Rights Department
- National Association for the Advancement of Colored People - Gary Chapter
- North Central Community Action Agencies
- Northwest Indiana Baptist Association
- Northwest Indiana Deaf and Hard of Hearing
- Northwest Indiana Federation of Interfaith
- Northwest Indiana Hispanic Chamber of Commerce
- Porter County Aging and Community Service
- Unity Foundation of LaPorte County
- Urban League of Northwest Indiana
- Vocational Rehabilitation Services of Gary

The November 2015 workshops included a formal presentation followed by an informal open house. Information stations and display boards provided participants with information about the planning process, Project overview, and proposed alternatives. Attendees were encouraged to ask questions and provide feedback to Project team members in attendance. Attendees were also provided with the opportunity to submit written comments on site or later through email, the Project's website, mail, or verbally via the automated Project phone line. In all, 324 people attended the workshops. Public input

received from EJ populations and non-EJ populations informed the design of the Build Alternatives and the development of measures to minimize and mitigate potential impacts.

4.9.5 Environmental Consequences

This section includes discussion of Project impacts and benefits, and the potential for disproportionately high and adverse effects on EJ populations in the Study Area. An impact would be disproportionately high and adverse if the effect (1) would be predominantly borne by an EJ population or (2) would be suffered by the EJ population and would be appreciably more severe or greater in magnitude than the adverse effect suffered by the non-EJ population.

A discussion of the potential impacts related to construction is provided in each respective section of **Chapters 3, 4, and 5**, and the potential secondary and cumulative effects of the Project are discussed in **Chapter 6** of this DEIS. More detailed analysis and discussion of the type and location of impacts and benefits are included in **Chapters 3, 4, and 5** of this DEIS.

While the No Build Alternative would result in few impacts, the substantial benefits related to improved transit access would also not be realized. The Project would provide an additional and affordable transit option for travel in the Study Area. Overall, Project benefits would include improvements to connectivity and mobility; access to jobs, services, education, and entertainment; access to other transit services; travel time savings; and reliability. In those areas where stations are proposed, there is the potential for economic opportunities through associated development. Other benefits of the Project include the following:

- Employment opportunities due to construction and operations, as well as the potential for job-based redevelopment/development opportunities in the areas surrounding stations.
- Shortened distance that passengers travel in accessing stations. This would reduce the overall door to door commute time for Project riders, and reduce congestion on north/south roadways, particularly in EJ areas.
- Increased efficiency provided to the transportation network in Northwest Indiana. The Project would have a reduction of over 100,000 VMT per year (122,350 for the NEPA Preferred Alternative) from the region's transportation network. Lower VMT levels would reduce congestion, saving those who use the roads both time and money.
- Economic benefits to the region by connecting Northwest Indiana residents to the high wage jobs in Chicago. Though residents may work in Chicago, wages would return to Northwest Indiana and be used to purchase homes, enroll in school, and buy goods and services. Allowing residents to take advantage of Chicago wage premiums while also benefiting from Indiana's lower cost of living presents very desirable economic opportunities for Northwest Indiana (Policy Analytics LLC 2014).
- Competitive advantages for existing and future businesses located in the Study Area due to the additional transportation capacity.
- Reduced transit travel time and more reliable, more frequent, and higher capacity service for transit riders.
- Improved mobility through the Project vicinity and improved connections to employment, education, shopping, medical services, recreation, and cultural opportunities.
- Reduced air emissions.
- Opportunities for improved overall health of the users of the Project by increasing opportunities to walk and bicycle to stations and other parts of the Study Area.

While all populations within the Project's service area would realize these benefits, they would accrue to a higher degree to minority and low-income populations within the Study Area due to a higher

reliance on transit in these communities. The NEPA Preferred Alternative and other Build Alternatives would improve accessibility for all communities, including low-income and minority populations. See the discussion of potential indirect effects in **Section 6.4**. Having a station in one's neighborhood would provide access and mobility improvements for EJ populations. Three of the proposed five stations considered for the Build Alternatives would be located in areas with high concentrations of EJ populations.

For the purposes of analyzing the potential impacts to EJ populations, the levels of impact associated with all resource areas are presented. Only those resources with adverse effects after mitigation are evaluated for disproportionately high and adverse impacts to EJ populations. Additional information on the impacts and proposed mitigation for each resource is included in the respective section of **Chapters 3, 4, and 5**.

Resources with Limited or No Adverse Impacts: The Build Alternatives would have no impacts or limited impacts on the following resources as shown in **Table 4.9-3**:

- Parking
- Land Use and Zoning
- Air Quality
- Energy
- Public Transportation

Resources with No Adverse Impacts after Mitigation: The Build Alternatives would have no impacts after mitigation on the following resources as shown in **Table 4.9-3**:

- Freight Rail
- Bicycle and Pedestrian
- Traffic
- Land Acquisitions and Displacements
- Socioeconomics and Economic Development
- Cultural Resources
- Safety and Security
- Noise
- Vibration
- Soils, Geologic Resources, and Farmlands
- Water Resources
- Biological Resources (Wildlife and Habitat, and Threatened and Endangered Species)
- Hazardous Materials
- Utilities

Resources with Adverse Impacts after Mitigation: The only resources with adverse impacts after mitigation, as shown in **Table 4.9-3**, include:

- Neighborhood and Community Resources: Long-Term Operating Effects
- Visual Resources: Long-Term Operating Effects

Table 4.9-3: Summary of Effects after Mitigation

Resource	Alternatives			Analyze for Potential High and Adverse Impacts on EJ Communities
	No Build Alternative	NEPA Preferred Alternative	Other Build Alternatives	
Public Transportation (Section 3.2)	**	**	**	No
Freight Rail (Section 3.3)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Bicycle and Pedestrian (Section 3.4)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Traffic (Section 3.5)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Parking (Section 3.6)	**	**	**	No
Land Use and Zoning (Section 4.2)	**	**	**	No
Land Acquisitions and Displacements (Section 4.3)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Socioeconomics and Economic Development (Section 4.4)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Neighborhoods and Community Resources (Section 4.5)	**	Adverse impact after mitigation	Adverse impact after mitigation	Yes
Cultural Resources (Section 4.6)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Visual Resources (Section 4.7)	**	Adverse impact after mitigation	Adverse impact after mitigation	Yes
Safety and Security (Section 4.8)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Noise (Section 5.2)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Vibration (Section 5.3)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Air Quality (Section 5.4)	**	**	**	No
Energy (Section 5.5)	**	**	**	No
Soils, Geologic Resources, and Farmlands (Section 5.6)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Water Resources (Section 5.7)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Biological Resources (Wildlife and Habitat, and Threatened and Endangered Species) (Section 5.8)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Hazardous Materials (Section 5.9)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No
Utilities (Section 5.10)	**	No disproportionate adverse impacts after mitigation.	No disproportionate adverse impacts after mitigation.	No

**No disproportionate adverse effect before mitigation (no mitigation required).

4.9.5.1 Long-Term Operating Effects

No Build Alternative

The No Build Alternative is not expected to result in negative environmental impacts to EJ populations. However, EJ populations would also not receive the benefits of commuter rail service or commuter rail construction, operations, or maintenance job opportunities if the Project is not constructed. The No Build Alternative would not improve transit travel-time savings, enhance regional mobility, or boost employment opportunities.

NEPA Preferred Alternative and Other Build Alternative Options

In general, each Build Alternative would have similar levels of potential adverse effects, although there would be some variation in the potential impacts among the various options for each Build Alternative. Measures to reduce harm (through avoidance, minimization, mitigation, or enhancement) would be employed in all affected areas to the extent reasonably feasible. After mitigation, potential impacts from the Project would exist for neighborhoods and community resources as well as visual resources. These resource categories were examined further in this EJ analysis. The Maynard Junction Rail Profile Option was not included in this analysis because, when it is included with the applicable Build Alternative Options, it would not materially change the level of potential adverse effect for these Build Alternative Options.

Neighborhoods and Community Resources

The Build Alternatives would have potential long-term adverse impacts on neighborhoods and community resources that cannot be entirely mitigated due to the permanent presence of the proposed commuter rail related infrastructure. **Section 4.7.5** describes the proposed mitigation, which includes designing facility lighting at proposed stations and the maintenance and/or storage facility to reduce impacts from glare, reduce spillage of light onto neighboring properties and adjacent roadways, and design facilities to complement or blend with surrounding communities.

Introduction of commuter rail service would affect the perceived or actual connectivity of neighborhoods where no rail operations currently exist, primarily between Fisher Street in Munster and downtown Hammond. Neighborhood housing would be affected by localized changes in noise, light, and glare from adjacent commuter rail related facilities (e.g., proposed stations, or a maintenance facility). These improvements are spread over the length of the proposed alignment and the effects are distributed across the Study Area, affecting both EJ and non-EJ populations.

The Build Alternatives would be adjacent to community resources within the Study Area, such as trails, parks, and schools. In instances where the proposed alignment is in close proximity to community resources, users of the resources could experience changes in the visual context and/or noise levels; however, the Project would not substantially impair the use of community resources.

By reducing transit travel time and providing more reliable, more frequent, and higher capacity service for transit riders, the Project would improve connections to employment, education, shopping, medical services, recreation, and cultural opportunities. The Build Alternatives would offer the potential for reduced air emissions, economic development around proposed stations, and economic benefits from connecting Northwest Indiana residents to the high wage jobs in Chicago. Therefore, the Build Alternatives would provide important benefits for the neighborhoods and communities within the Study Area, including EJ populations.

Visual Resources

The Build Alternatives would introduce new commuter rail related elements such as track and catenary infrastructure to the Study Area. Of these elements, the track and catenary structure would be located throughout the Study Area, which would change the visual character. While these project elements cannot be avoided, they would not be vastly different from existing transportation or utility infrastructure. In the cases of elevated alignment and commuter rail related facilities, the visual impact would be greater. The Project would be elevated at the Maynard Junction in Munster and north of Douglas Street in Hammond. The portion over the Maynard Junction would be visually consistent with other elements in the area (e.g., existing freight rail lines and the high-tension power lines). Similarly, while the elevated portion north of Douglas Street would introduce a new visual element, it would not be dissimilar from the existing Hohman Avenue overpass in this area.

While the visual effects from the Project would be minimized through context-sensitive design, they would not be completely mitigated. For instance, landscaping would only partially reduce the visibility of the track, passing trains, and the catenary infrastructure. There would be visual effects throughout the Study Area, affecting both EJ and non-EJ populations.

4.9.5.2 Short-Term Construction Effects

No construction-related impacts are anticipated as part of the No Build Alternative. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

Construction-related impacts are anticipated to be similar among each Build Alternative. Communities near construction areas may also experience temporary limited access or detours during construction. These impacts are likely to be felt throughout the Study Area, north of downtown Hammond during construction of the elevated rail structure and south of Hammond during development of new stations, maintenance and storage facilities, parking access, and track improvements.

4.9.6 Conclusion

The benefits, impacts, and mitigation measures associated with the Project Build Alternatives would occur throughout the Study Area, affecting both EJ and non-EJ populations alike. The adverse effects remaining after mitigation for neighborhood and community resources as well as visual resources would not be predominantly borne by EJ populations, nor would impacts be appreciably more severe or greater in magnitude on EJ populations than on non-EJ populations.

As previously stated, mitigation measures identified throughout **Chapters 3, 4, and 5** of this DEIS address impacts from commuter rail operations and construction activities. These mitigation measures would be applied consistently throughout the Study Area to areas with EJ and non-EJ populations. The Project offers substantial benefits that would accrue to all resident populations, including EJ populations. Although the Build Alternatives would still have adverse impacts on EJ populations, these impacts would not be disproportionately high and adverse. Therefore, no EJ-specific mitigation measures have been identified beyond the mitigation measures already identified in this DEIS.

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