

# **Chapter 2**

## **Alternatives Considered**

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## 2 ALTERNATIVES CONSIDERED

### 2.1 Introduction

**Chapter 2** describes the alternatives development process, the alternatives that are under consideration in this Draft Environmental Impact Statement (DEIS), and the alternative that was selected as preferred (the National Environmental Policy Act (NEPA) Preferred Alternative). The alternatives development process builds upon prior Northern Indiana Commuter Transportation District (NICTD) studies that examined a broad range of alignments, technologies, and transit modes within the Study Area. Over the decades a number of studies evaluated transportation improvement options to address the growing travel demand in Lake and Porter Counties south of the historic developed areas along Lake Michigan and the South Shore Line (SSL). The studies concluded that a rail-based service between the Munster/Dyer area and Metra's Millennium Station in downtown Chicago would best meet the transportation needs of the Study Area. Thus, NICTD advanced a commuter rail service for more detailed analysis in this DEIS. NEPA also requires consideration of a No Build Alternative to provide a basis for comparison to the Build Alternatives. Related plans and projects in the Study Area that could affect the configuration, layout, and costs of the Project are also included in this chapter.

### 2.2 Alternatives Development Process

The opportunity for extending the SSL was identified more than 30 years ago when NICTD, the City of Hammond, and the Town of Munster purchased a 5-mile segment of railroad right-of-way (ROW) from CSX Transportation, formerly Monon Railroad. This segment of railroad ROW, near the Indiana-Illinois state line, was deemed essential to any rail option in the Study Area. Over the years, the development of alternatives focused on this section of ROW as part of a larger corridor. The key studies, white papers, and reports that identified the need for the proposed extension are summarized in this section. More detailed information on the alternatives development process can be found in the *West Lake Corridor Existing Conditions Report* (NICTD 2014b), *Identification and Initial Screening of Alternatives* (NICTD 2014a), and *Second Screening of Alternatives* (NICTD 2015c).

#### 2.2.1 Previous Studies

Starting in 1989, a number of studies have been conducted that included extensive coordination with stakeholders and members of the public to develop, evaluate, and refine a range of transportation alternatives within the Study Area. The key studies, white papers, and reports that identified the need for the proposed extension are summarized in this section. All included use of the Monon Railroad ROW as an integral element of larger corridors, with potential terminals that included Lowell to the south and Valparaiso to the east.

##### 2.2.1.1 West Lake County Transportation Corridor Study (NIRPC 1989)

This study by the Northwestern Indiana Regional Planning Commission (NIRPC) examined ways of improving travel between areas of Lake County and downtown Chicago, including upgrades to existing facilities, exclusive busways, light rail, and commuter rail. The study concluded that commuter rail would have the lowest capital costs and the highest ridership, and would be the best long-term option for improving mobility and spurring economic development. The study also recommended the establishment of a local funding source and preservation of ROW. This recommendation precipitated

the purchase of a segment of the abandoned Monon Railroad Corridor between Munster and Hammond to preserve ROW for potential passenger rail service.

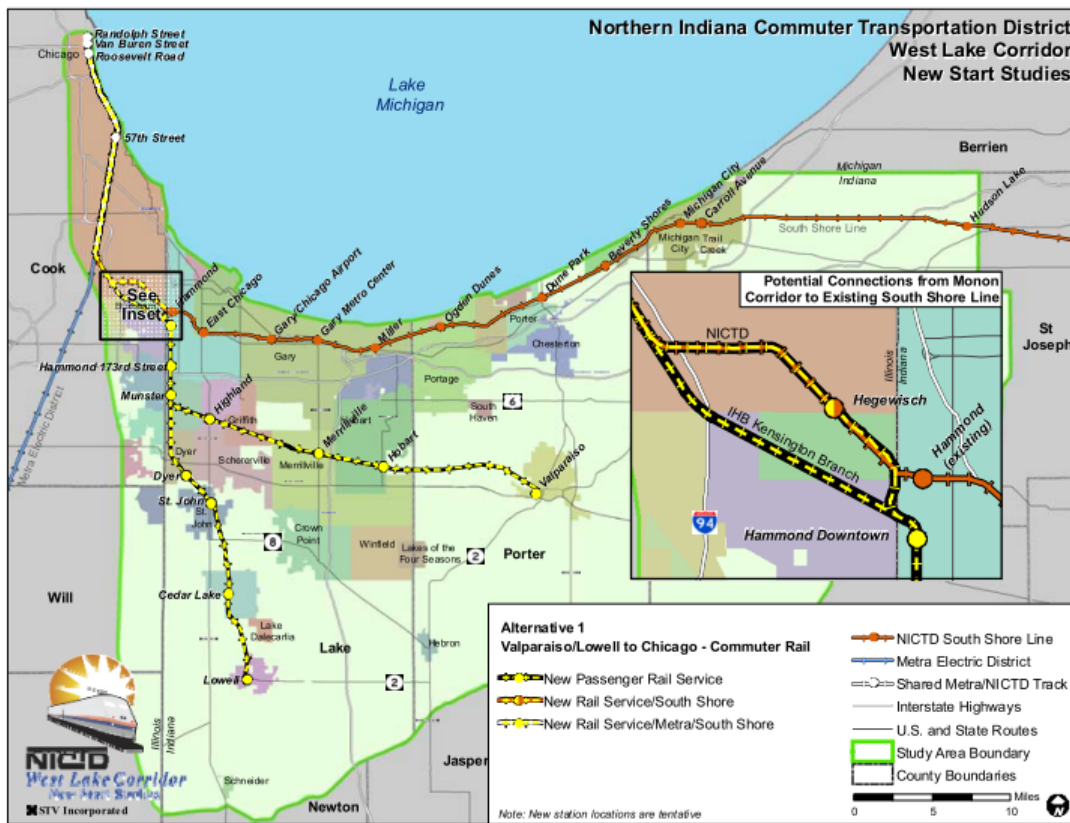
### 2.2.1.2 West Lake Corridor Major Investment Study (NICTD 2000)

This major investment study (MIS) addressed justifications for, and potential impacts of, commuter rail expansion in Northwest Indiana. It established the history and current network of commuter rail service in Northeast Illinois and Northwest Indiana. The study documented expected population growth in Lake and Porter Counties as the basis for investing in commuter rail. An extensive public involvement process revealed a high level of public support for the expansion of commuter rail into central Lake and Porter Counties.

### 2.2.1.3 West Lake Corridor Study (NICTD 2006, 2011)

The major update of the 2000 study examined several new variations on the alternatives identified in the prior MIS, which were iterated and analyzed in two phases. The alternatives considered in this study included modified, combined, and further detailed versions of the alternatives from the 2000 study, as well as a Transportation Systems Management (TSM) alternative that involved regional buses (NICTD 2006). The rail-based corridors examined are depicted on **Figure 2.2-1**.

The study concluded that any expansion to Valparaiso in Porter County would suffer from the proximity to the existing SSL; therefore, NICTD's concentration should be on expansion within Lake County. As a follow-up to the 2006 report, NICTD developed options to connect a rail alignment using the Monon Railroad Corridor to the existing SSL (NICTD 2011). These options defined the West Lake Corridor as extending along the Indiana-Illinois state border from central Lake County, Indiana, to Millennium Station in downtown Chicago.



SOURCE: NICTD 2011.

**Figure 2.2-1: Commuter Rail Alternatives from Lowell and Valparaiso**

#### 2.2.1.4 A Review of the West Lake Extension and the New Starts Initiative for NICTD (University of Illinois at Chicago Urban Transportation Center 2012)

After the completion of the West Lake Corridor Study, NICTD evaluated in greater detail the alternatives and ridership projections associated with qualifying for Federal Transit Administration (FTA) New Starts funding. The study concluded that, in light of NICTD's current operational and capital demands, the declining availability of state and federal funding, and the current pipeline backlog of New Starts projects, a concerted local and state political and financial effort would be needed to build the Project in any form. The report also discussed potential funding strategies for NICTD to pursue to fund the Project.

#### 2.2.1.5 NICTD 20-Year Strategic Business Plan (NICTD and RDA 2014)

In 2014, NICTD undertook a strategic planning process to prioritize and plan for future capital and operating expenditure scenarios. In addition to cost profiles for planned maintenance and operation expansion of the SSL, the *20-Year Strategic Business Plan* covered the proposed West Lake Corridor Project, reconciling its expense with other major priorities. Further, it laid out a timeline for the Project with completion targeted for 2023.

### 2.2.2 DEIS Alternatives Development Process

Following the planning studies previously performed, the identification of alternatives to advance in this DEIS involved a two-step analysis and evaluation process to identify and screen a wide range of possible alignments and design options that could meet the Purpose and Need of the Project. The results of these efforts were used in the launch of the environmental review process. Additions, deletions, and refinements to the initial set of alternatives from the two-step screening process were made during the course of the NEPA process.

#### 2.2.2.1 Initial Identification and Screening of Alternatives

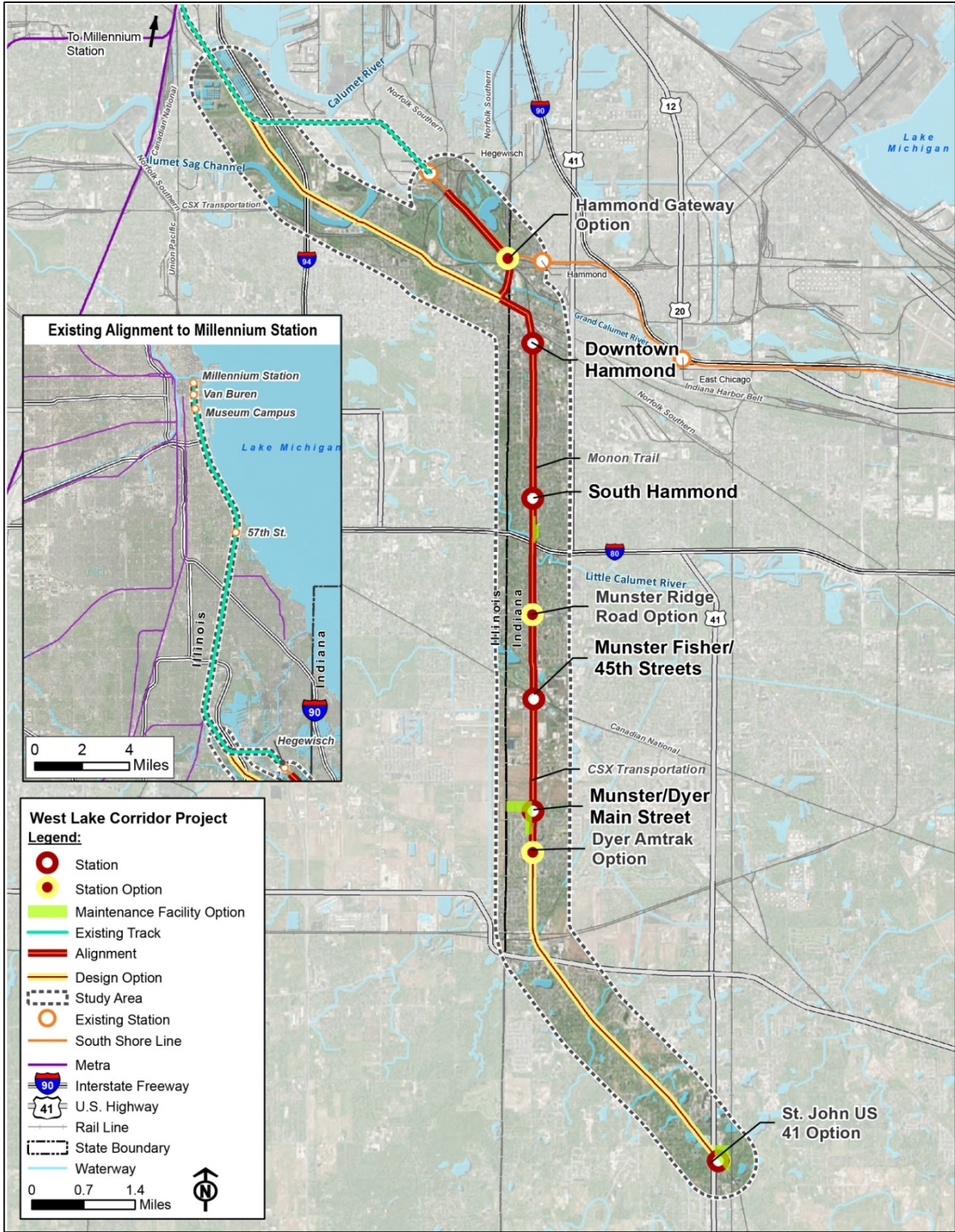
In the first step of the research, NICTD identified a wide range of potential alignment alternatives for the Project. These alternatives were then evaluated to identify the alignment alternatives that would be practical and feasible to finance, construct, and/or operate efficiently. NICTD then performed an initial fatal flaw and significant concern evaluation of the alignment alternatives using the following criteria:

- Consistency with the Project Purpose and Need
- Physical feasibility, including constructability and reasonable cost
- Operational capacity and compatibility
- Service quality, including speed and reliability

The alignment alternatives that met the criteria were then recommended for further analysis in the second stage of screening. The range of alternatives was narrowed down from 19 alternatives to 3 alternatives, which were advanced to the second stage of screening (see **Figure 2.2-2**):

- Dyer, Indiana, to Millennium Station with connection to the SSL near the Hegewisch Station in Chicago, Illinois (Commuter Rail Alternative)
- Dyer, Indiana, to Millennium Station via Indiana Harbor Belt (IHB) Kensington Branch with connection to the SSL near 130<sup>th</sup> Street in Chicago, Illinois (IHB Design Option)
- St. John, Indiana, to Millennium Station via IHB Kensington Branch with connection to the SSL in Chicago, Illinois (St. John Design Option)

All three alternatives follow the same alignment between Dyer and downtown Hammond.



SOURCE: AECOM 2015.

**Figure 2.2-2: Alternatives Advanced to Second Screening Stage**

### 2.2.2.2 Second Screening of Alternatives

The follow-up research to the initial identification and screening involved an assessment of the alignments of three short-listed alternatives, as well as Project elements covering motive power, maintenance and storage facility locations, flyovers (i.e., grade separation from existing transportation resources such as railroad tracks), and stations. The conclusions, which served as the basis for the environmental analysis, are discussed below.

#### Alignment

The alignments by alternative were evaluated from cost, feasibility, and freight railroad acceptability perspectives. The analysis concluded that the alignment between Dyer and St. John should be dropped from further consideration primarily because the estimated capital cost would have exceeded the funding that has been identified for the project. It was understood that an extension to St. John could be considered in the future. For the two remaining alignments, the following was determined about the area of similar alignment:

- **Dyer to Maynard Junction:** Input from CSX Transportation determined that sharing the freight carrier's ROW would be infeasible, which led to a recommendation that ROW be acquired adjacent to the CSX freight line ROW for the exclusive use by the Project. The Project would be entirely separated physically and operationally from freight and Amtrak services on the CSX Monon Subdivision freight line.
- **Maynard Junction to Downtown Hammond:** The alignment would use the former Monon Railroad ROW that is publically owned. The Monon Trail currently uses this ROW, which would need to be relocated in portions of the ROW to accommodate the Project.

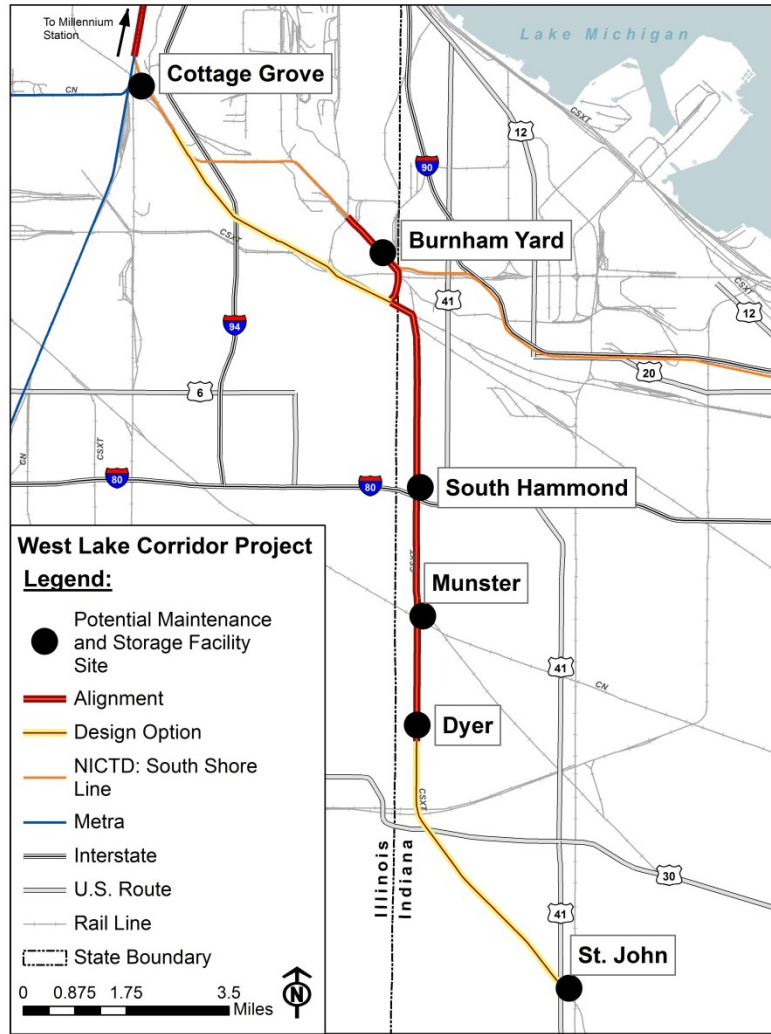
The IHB alignment was initially recommended to be dropped from further consideration following the second phase of screening due to cost and development issues. However, further design refinement alleviated some of these issues and, therefore, it was determined to include the IHB alignment as a Build Alternative in the NEPA analysis.

#### Motive Power

Nine rolling stock technologies, including combinations of different vehicle types, were evaluated. From this assessment, three categories of motive power were subjected to further review: (1) electric multiple units (EMU), (2) dual-mode locomotives, and (3) a combination of diesel locomotives and EMUs. Given the emphasis on using vehicles consistent with the current NICTD SSL fleet, the use of EMUs was recommended.

#### Maintenance and Storage Facility

NICTD's existing Michigan City Shops facility was determined to be an infeasible location for the Project fleet because that site cannot be expanded. Six potential locations were investigated for maintaining and storing Project vehicles (see **Figure 2.2-3**). Following the second screening, the South Hammond Station location was recommended for further consideration.



**Figure 2.2-3: Maintenance and Storage Facility Locations (Second Screening)**

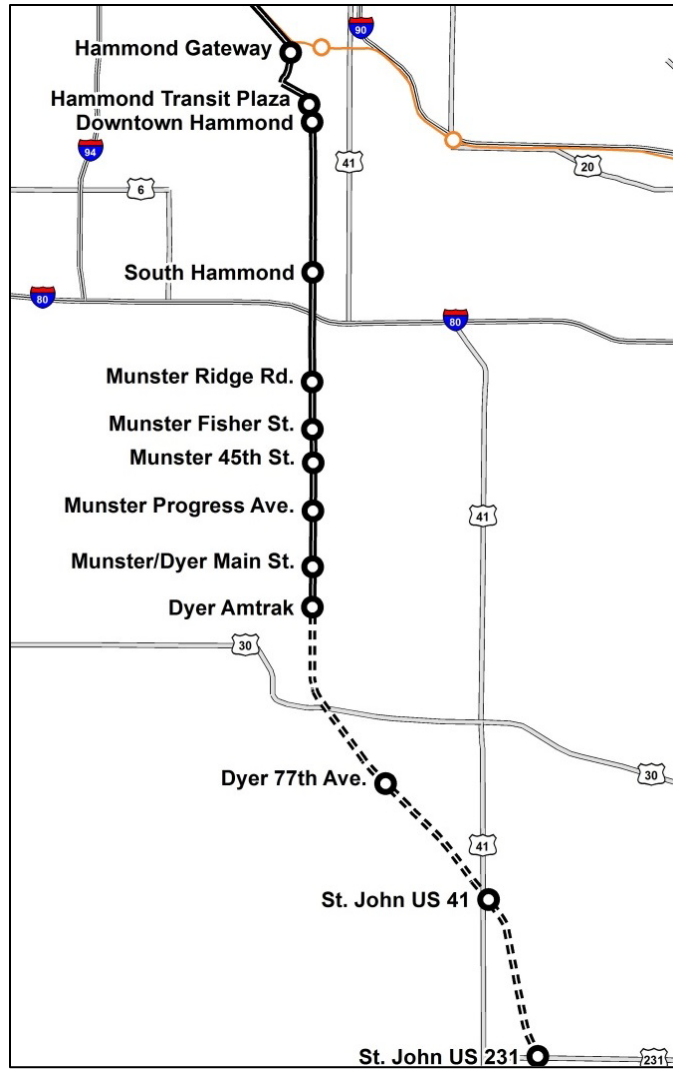
**Flyover Placement**

Alignment alternatives that survived the first screening would cross several existing rail lines. The second screening evaluated the locations of these potential crossings and whether flyovers (i.e., grade separations) would be needed. Flyovers would eliminate the interaction of the Project service with freight rail operations. Based on the evaluation, locations for potential flyovers included crossing of the Canadian National (CN) freight line (now owned by CSX) in Munster at the Maynard Junction, and over various railroads north and west of downtown Hammond as part of the Project connection to the existing SSL.

**Stations**

Thirteen station sites were evaluated in the second screening, with eight locations recommended to advance into the environmental review process (see **Figure 2.2-4**). Two station sites – Munster Fisher Street and Munster 45<sup>th</sup> Street – were combined into a single station site because of the proposed flyover at the Maynard Junction.





SOURCE: AECOM 2015.

**Figure 2.2-4: Station Sites Considered in Second Screening**

The second screening evaluation recommended four baseline station sites, and three optional station locations, which met basic evaluation criteria but are in close proximity to baseline sites. **Table 2.2-1** lists the recommended station locations.

**Table 2.2-1: Recommended Station Sites (Second Screening)**

Station Site	Distance from Dyer Amtrak (miles)	Status
Dyer Amtrak	0.0	Option
Munster/Dyer Main Street	0.5	Baseline
Munster Fisher Street/45 <sup>th</sup> Street	1.7	Baseline
Munster Ridge Road	3.2	Option
South Hammond	4.5	Baseline
Downtown Hammond	6.8	Baseline
Hammond Gateway	7.5	Option

SOURCE: AECOM 2015.

### 2.2.2.3 Further Refinement of Alternatives

#### Alignment

During the course of the NEPA process, another alignment was identified and carried into this DEIS. This alignment involved several flyovers including the IHB/Norfolk Southern (NS) freight lines crossing (immediately east of the Hohman Avenue overpass), Hohman Avenue north of downtown Hammond at Michigan Street, and the CSX Barr Subdivision freight line north of Chicago Street in Hammond. A connection to the existing SSL would be made at the state line. This route became the Hammond Alternative, which would have a similar alignment to the Commuter Rail Alternative south of downtown Hammond to Dyer. The Hammond Alternative along with the Commuter Rail and IHB Alternatives were moved forward for inclusion in this DEIS. All three of the Build Alternatives involve commuter rail service between the Munster/Dyer area and downtown Chicago, as shown on **Figure 2.2-5**.

#### Maintenance and Storage Facility

The Hammond Alternative provided the opportunity to consider siting a maintenance facility in north Hammond, combined with an overnight layover facility at Main Street in Dyer. In addition, a maintenance and storage facility in Munster/Dyer at Main Street was identified for further consideration in this DEIS. These two sites, along with the South Hammond Maintenance and Storage Facility site recommended from the second screening, were moved forward for inclusion in this DEIS.

#### Flyover Placement

The Hammond Alternative would involve flyovers of the IHB/NS freight lines crossing and the CSX freight line crossing in north Hammond. In addition, it was decided later to evaluate an at-grade crossing option of the CSX Elsdon Subdivision freight line at the Maynard Junction because of costs associated with construction of a flyover in this area.

#### Stations

Following further conceptual development and refinement of the alternatives subsequent to the completion of the second screening, it was decided to drop the Munster Fisher Street/45<sup>th</sup> Street Station and the Hammond Gateway Station on the Commuter Rail Alternative. Both were eliminated on the basis of capital cost.

The Hammond Gateway Station that was considered for the Commuter Rail Alternative would not have been at a location where the Project and SSL would have been co-aligned to allow for a convenient transfer between the two services. Consideration of a station location where the Commuter Rail Alternative alignment would be adjacent to, or sharing, SSL tracks was examined. Due to the need to avoid the Chicago South Shore & South Bend (CSS) freight yard west of the state line, the first opportunity for a joint station would be the SSL Hegewisch Station. While it would be feasible to allow transfers at this existing station, NICTD was reluctant to add off-peak commuter traffic to the shared NICTD/CSS trackage. The operational understanding between the two railroads is that CSS avoids freight operations during the peak periods, and NICTD minimizes commuter operations during the off-peak periods.



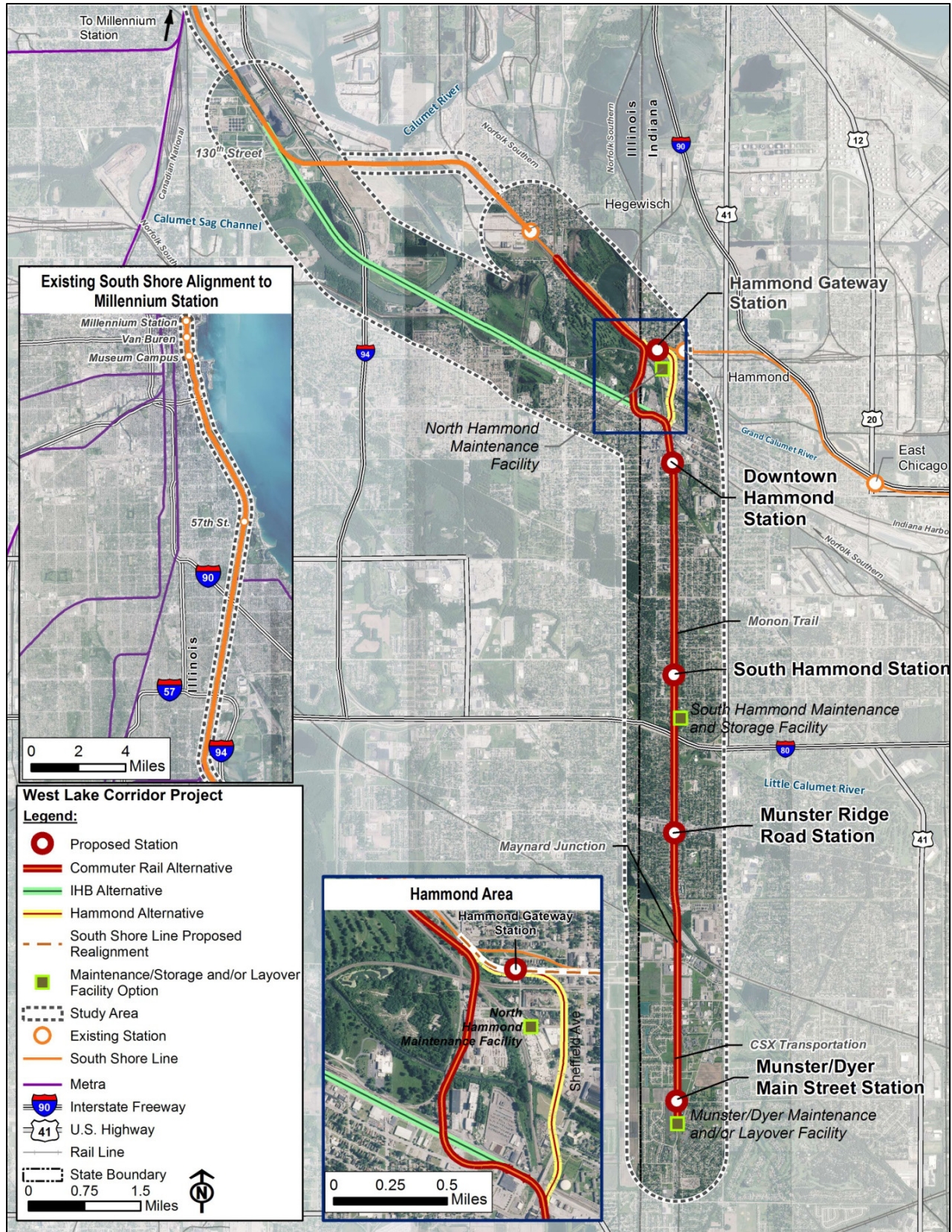
Figure 2.2-5: Regional Setting for West Lake Corridor Project

## 2.2.2.4 Alternatives Carried Forward to the DEIS

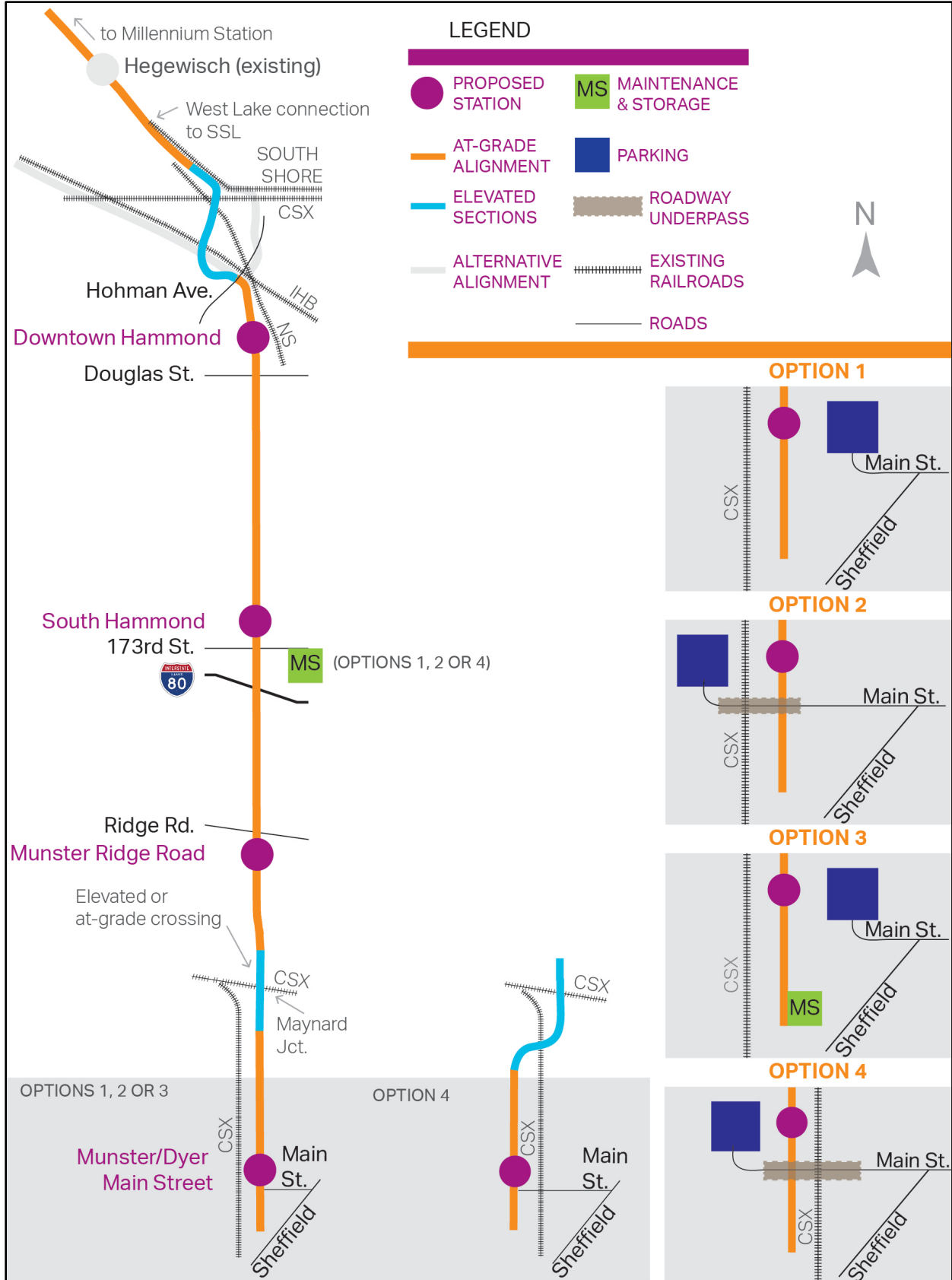
### Commuter Rail Alternative

The Commuter Rail Alternative would involve the operation of commuter rail service trains on an approximately 9-mile southern extension of NICTD's existing SSL between Dyer and Hammond, Indiana (see **Figure 2.2-6**). Heading north from the southern terminus near Main Street at the Munster/Dyer municipal boundary, this alternative would include new track on a separate to-be-acquired ROW adjacent to the CSX Monon Subdivision freight line in Dyer and Munster. North of the proposed elevated crossing over the CSX Elsdon Subdivision freight line at the Maynard Junction, the proposed Commuter Rail Alternative alignment would use the publically-owned former Monon Railroad corridor in Munster and Hammond. North of downtown Hammond, the track alignment would turn west under Hohman Avenue (see **Figure 2.2-7**), and then continue north on new elevated track generally along the Indiana-Illinois state line until it turns west to become parallel to the existing SSL. The alignment would then turn northwest on unused NS ROW to connect to the existing SSL southeast of the Hegewisch Station in Chicago. Project trains would operate on the existing MED line for their final 14 miles, terminating at Millennium Station in downtown Chicago. Station locations for the Commuter Rail Alternative include Munster/Dyer Main Street, Munster Ridge Road, South Hammond, and downtown Hammond. There are four design options to the Commuter Rail Alternative near the southern Project terminus, as follows:

- **Commuter Rail Alternative Option 1:** Under this design variation, parking for the Munster/Dyer Main Street Station would be located on the east side of the station, and a vehicle maintenance and storage facility would be located south of 173<sup>rd</sup> Street in Hammond near the South Hammond Station (see **Figure 2.2-7**).
- **Commuter Rail Alternative Option 2:** Under this design variation, parking for the Munster/Dyer Main Street Station would be located on the west side of the existing CSX freight line. Main Street would be extended west from Sheffield Avenue using an underpass to cross the CSX freight line and Project ROW. The vehicle maintenance and storage facility would be located south of 173<sup>rd</sup> Street in Hammond near the South Hammond Station (see **Figure 2.2-7**).
- **Commuter Rail Alternative Option 3:** Under this design variation, the vehicle maintenance and storage facility would be located south of the Munster/Dyer Main Street Station, on the east side of the existing CSX freight line, at Munster/Dyer Main Street, instead of south of the South Hammond Station. Parking for the Munster/Dyer Main Street Station would be located on the east side of the station (see **Figure 2.2-7**).
- **Commuter Rail Alternative Option 4:** Under this design variation, the rail alignment would be routed over the CSX freight line at the Maynard Junction, to land on the west side of the CSX freight line, and then continue south to the Munster/Dyer Main Street area. The Munster/Dyer Main Street Station and parking would be located west of the existing CSX freight line. A Main Street extension west under the CSX freight line and Project ROW would be required. The vehicle maintenance and storage facility would be located south of 173<sup>rd</sup> Street in Hammond near the South Hammond Station (see **Figure 2.2-7**).



**Figure 2.2-6: Project Study Area**

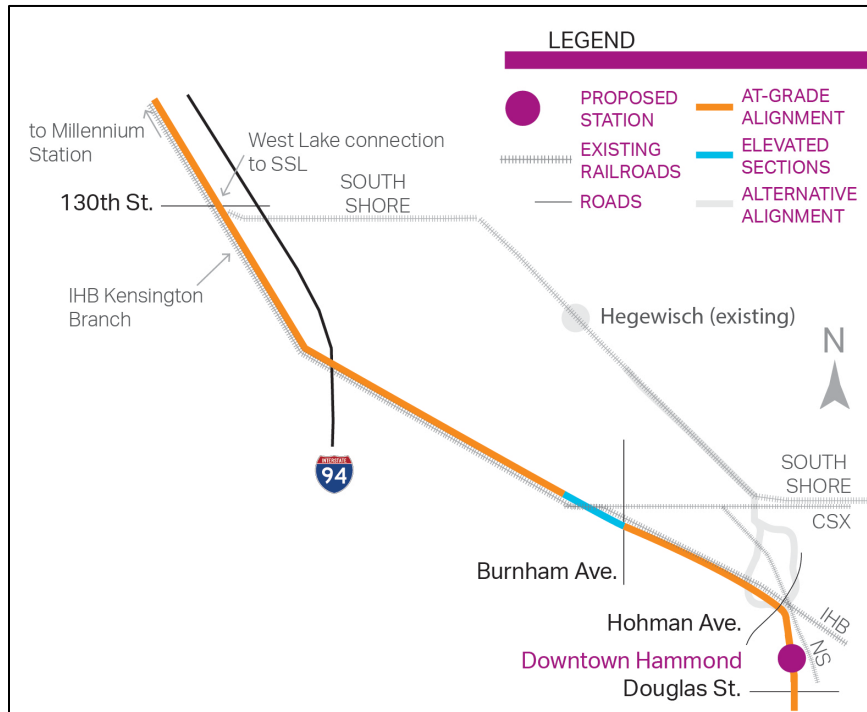


**Figure 2.2-7: Commuter Rail Alternative Options**

There are two variations to the Commuter Rail Alternative related to the proposed alignment, which are the IHB Alternative and the Hammond Alternative as follows. See **Figure 2.2-8, 2.2-9, and 2.2-10.**

### Indiana Harbor Belt (IHB) Alternative

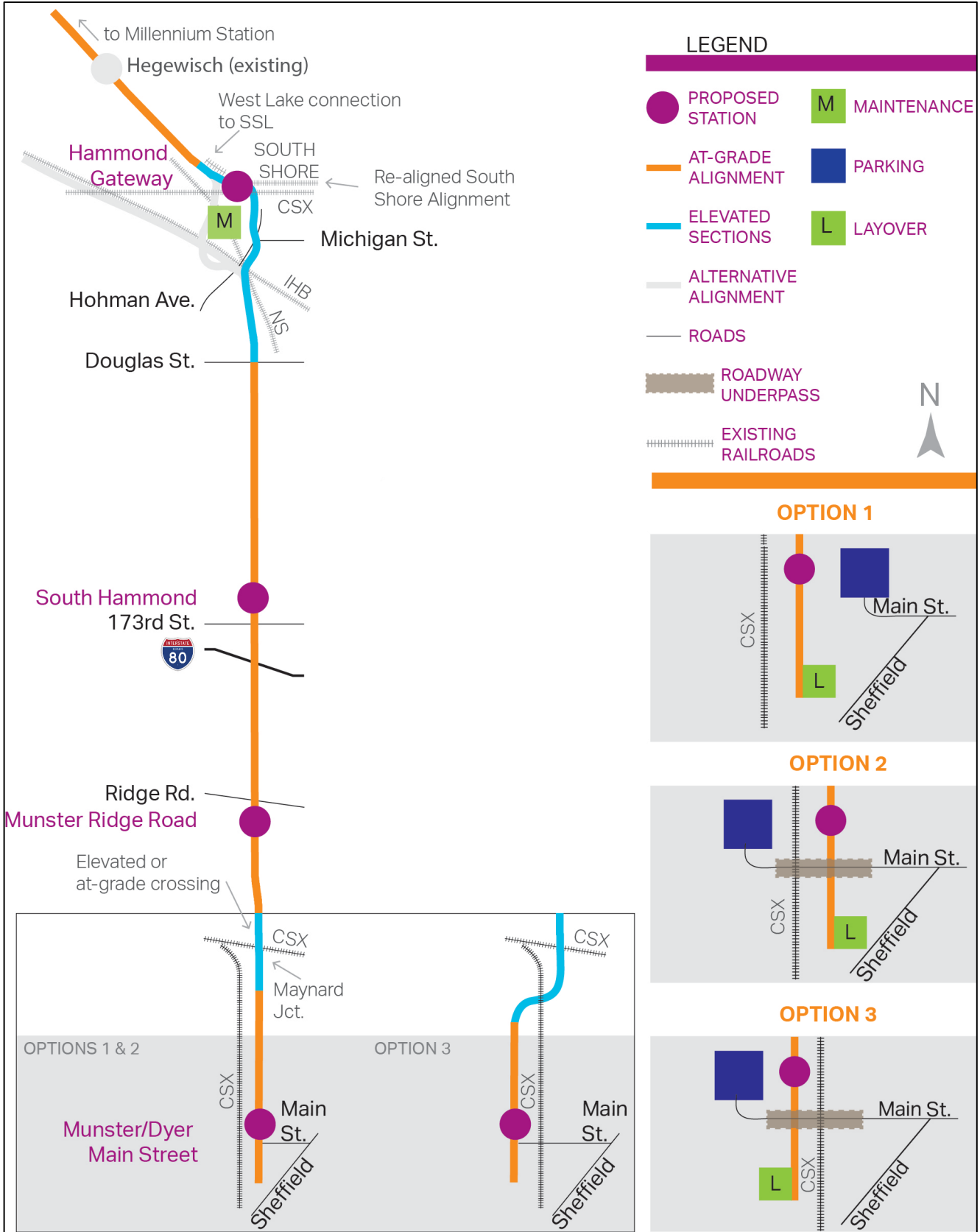
The IHB Alternative is a variation to the Commuter Rail Alternative, with the main difference being the use of the IHB freight line ROW (see **Figure 2.2-8**). South of Douglas Street in Hammond, the IHB Alternative duplicates the Commuter Rail Alternative and the options described above. From downtown Hammond north of Douglas Street, the alignment of the IHB Alternative would turn west under Hohman Avenue in Hammond and would be constructed in the IHB freight line ROW west through Calumet City, Burnham, and Chicago, Illinois. West of Burnham Avenue, the IHB Alternative would bridge over the IHB and CSX freight lines, landing in the IHB Kensington Branch freight line ROW, where the Project would relocate and reconstruct the existing IHB freight line on new adjacent track within the existing railroad ROW. Upgrades to the existing track would be constructed for the Project to the east of this relocated freight track. The Project would then continue northwest to the proposed connection with the existing SSL near I-94 and 130<sup>th</sup> Street in Chicago.



**Figure 2.2-8: IHB Alternative**

### Hammond Alternative

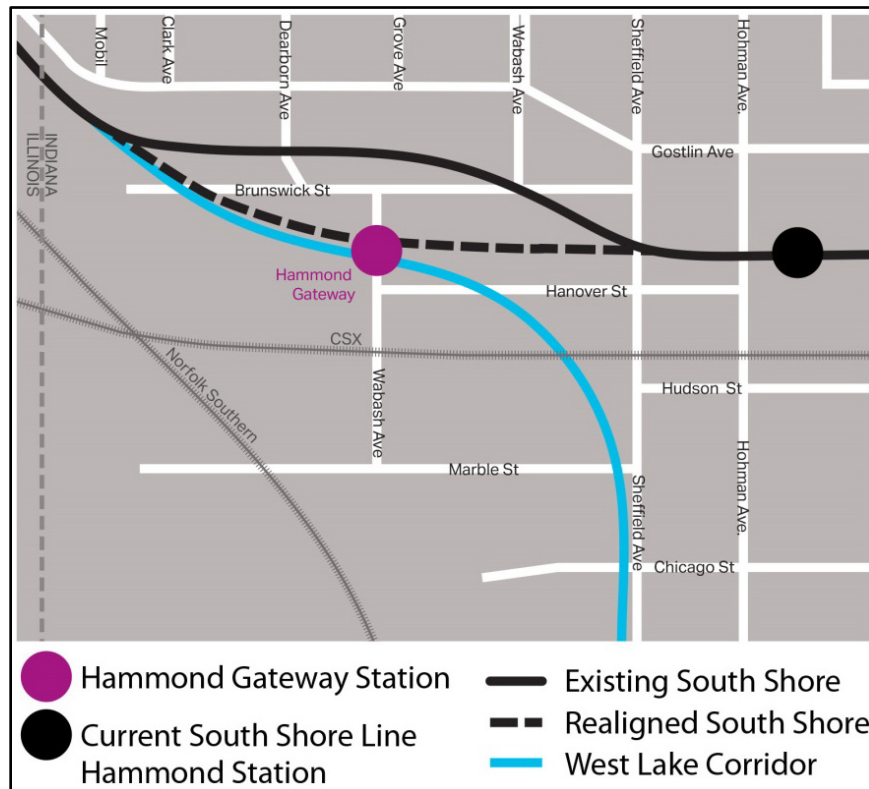
The Hammond Alternative is a design variation to the Commuter Rail Alternative, with the main difference between the two alternatives being the rail alignment and station location in the north part of Hammond (see **Figure 2.2-9**). South of Douglas Street, the Hammond Alternative is similar to the Commuter Rail Alternative described above. From downtown Hammond north of Douglas Street, the Hammond Alternative would extend north on embankment and use bridges crossing over the IHB and NS) freight lines immediately east of the Hohman Avenue overpass. The alignment would then extend northward and cross over Hohman Avenue just south of Michigan Street. The alignment would then continue north and west, crossing over the CSX freight line, and connect with the existing SSL.



**Figure 2.2-9: Hammond Alternative Options**



Under the Hammond Alternative, the Hammond Gateway Station would be constructed adjacent to the relocated SSL Hammond Station (approximately 1/3 of a mile to the west of its current location, see **Figure 2.2-10**). The Hammond Alternative assumes that the existing SSL track would be relocated between the existing SSL Hammond Station and the Indiana-Illinois state line, as illustrated on **Figure 2.2-10**. The alignments of both routes would be adjacent to one another at the Hammond Gateway Station, allowing passengers to transfer between services. During non-peak times, Project trains would operate as shuttles between the Munster/Dyer Main Street Station and the Hammond Gateway Station, making timed connections with SSL service.



**Figure 2.2-10: South Shore Line Proposed Realignment**

A maintenance facility would be located immediately south of the Hammond Gateway Station. A separate layover facility at the southern end of the proposed alignment, near the Munster/Dyer Main Street Station, would also be constructed, as shown on **Figure 2.2-9**. There are three design variations on how the layover facility, the Munster/Dyer Main Street Station, and the parking would be configured under the Hammond Alternative, as follows:

- **Hammond Alternative Option 1:** The Munster/Dyer Main Street Station, layover facility, and parking would be on the east side of the existing CSX freight line (see **Figure 2.2-9**).
- **Hammond Alternative Option 2:** The Munster/Dyer Main Street Station and layover facility would be on the east side of the existing CSX freight line, and the parking would be west of the CSX freight line. A Main Street extension west under the CSX freight line and Project ROW would be required (see **Figure 2.2-9**).
- **Hammond Alternative Option 3:** This Option would involve routing the Project rail alignment above the existing CSX freight line at Maynard Junction, landing on the west side of the CSX freight ROW, and continuing south to the Munster/Dyer Main Street area. The Munster/Dyer Main Street Station, layover facility, and parking would be located west of the existing CSX freight line.

- A Main Street extension west under the CSX freight line and the Project ROW would be required (see **Figure 2.2-9**).

### Maynard Junction Rail Profile Option

One design variation is being considered for each Build Alternative — the Maynard Junction Rail Profile Option. Under this design variation, at Maynard Junction in Munster, the alignment would cross the existing CSX freight line in an at-grade profile instead of an elevated profile. The Project would be east of the CSX freight line ROW for Commuter Rail Alternative Options 1, 2, and 3 as shown on **Figure 2.2-7**, the IHB Options 1, 2, and 3, and Hammond Alternative Options 1 and 2 as shown on **Figure 2.2-9**. The Maynard Junction at-grade Option would not be considered for Commuter Rail Alternative Option 4, IHB Alternative Option 4, and Hammond Alternative Option 3. These exceptions are to avoid crossing the CSX freight line connecting track in the southwest quadrant of the Junction.

## 2.3 Definition of Alternatives in the DEIS

A No Build Alternative and the NEPA Preferred Alternative (Hammond Alternative Option 2) were advanced for further study in this DEIS. The NEPA Preferred Alternative includes four stations, a maintenance facility, and a layover facility. Other Build Alternatives were considered and evaluated in this DEIS, but not selected as preferred due to the associated impacts and/or stakeholder and public comment. These include alternative alignments, station alternatives, maintenance and storage facility site locations, and flyover alternatives:

- Alternative Alignments (Commuter Rail Alternative Options 1 to 4, IHB Alternative Options 1 to 4, and Hammond Alternative Options 1 and 3)
- Alternative Station (Downtown Hammond Station)
- Alternative Maintenance and Storage Facility Sites (South Hammond Maintenance and Storage Facility, Munster/Dyer Maintenance and Storage Facility)

### 2.3.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system, plus any committed transportation improvements included in NIRPC's *2040 Comprehensive Regional Plan, A Vision for Northwest Indiana* (CRP) (NICTD 2011) and CMAP's *GO TO 2040 Comprehensive Regional Plan* (CMAP 2014c) through the planning horizon year 2040. It also includes capacity improvements to the existing MED line and Millennium Station as part of NICTD's and the Northwest Indiana Regional Development Authority's (RDA) *20-Year Strategic Business Plan* (NICTD and RDA 2014).

A No Build Alternative serves as a baseline, or benchmark, against which the Project will be evaluated. In addition to representing the existing transportation system, the No Build Alternative includes committed improvements. A useful source for transportation projects that are in the pipeline for implementation is the Transportation Improvement Program (TIP) of the respective Metropolitan Planning Organizations (MPO). The TIPs list all federally funded projects and regionally significant, non-federally funded projects programmed for implementation in the next four years. **Table 2.3-1** and **Table 2.3-2** include projects located within the Study Area or that intersect with the Project.

**Table 2.3-1: NIRPC Transportation Improvement Program Projects, 2016-2019**

Type	TIP ID	Sponsor	Municipality	County	Project
Bicycle	1173707	Munster	Munster	Lake	Construct Pennsy Greenway Trail, from Fisher Street at Timrick Drive to Calumet Avenue north of 45 <sup>th</sup> Street
Bicycle	1173595	Schererville	Schererville	Lake	Pennsy Greenway Phase 2 (Transportation Enhancement Funds), Main Street to 137 <sup>th</sup> Avenue
Bicycle	1500416	Hammond	Hammond	Lake	Construct Bike/Ped Bridge over Calumet Avenue (US 41) at Conkey Street
Bicycle	1173597	Munster	Munster	Lake	Bike/Ped Trail Connector: Erie Lackawanna & Pennsy Greenway Trails at Cady Ditch and Marsh Ditch
Highway	1382722	INDOT	Dyer	Lake	Install Railroad Protection on Sheffield Avenue at CSX Railroad
Highway	100987	INDOT	Hammond & Munster	Lake	I-80 Illinois State Line to Calumet Avenue W Ramps (Bi-State work by Illinois - #62114)
Highway	1500221	Hammond	Hammond	Lake	Reconstruct relinquished SR 312 from IN/IL State Line to Marble Street Phase 1.
Highway	1500222	Hammond	Hammond	Lake	Reconstruct relinquished SR 312 from Marble Street to Baltimore Street Phase 2
Highway	1500724	Hammond	Hammond	Lake	SR 312 R Advance Clearing (IN/IL State Line to US 41)
Highway	710056	Munster	Munster	Lake	45 <sup>th</sup> Street: Reconstruct on New Alignment; includes railroad underpass (extends 0.2 miles west of Calumet Avenue)
Highway	1500319	Munster	Munster	Lake	Construct Grade Separation Structure (45 <sup>th</sup> Street beneath Railroad)
Transit	Pending	NICTD	Chicago	Cook	Engineer & Construct Extra Track - Millennium Station Boarding Platform
Transit	Pending	NICTD	Various	multiple	Positive Train Control
Transit	Pending	NICTD	Various	multiple	West Lake Preliminary Engineering
Transit	Pending	NICTD	Various	multiple	Double Track Project - Add second track between Gary & Porter-LaPorte County Line

SOURCE: NIRPC TIP 2016-2019.

**Table 2.3-2: CMAP Transportation Improvement Program Projects, FY2014-2019**

Type	TIP ID	Sponsor	Municipality	County	Project
Bicycle	01-00-0036	Illinois Department of Natural Resources	Chicago	Cook	Bike Facility, Burnham Greenway from William Powers Conservation Area to Brainard Avenue
Highway	01-09-0032	IDOT	Chicago	Cook	I-55 Stevenson Expressway from I-94 to Lake Shore Drive Improvements
Highway	01-12-0038	IDOT	Chicago	Cook	Circle Interchange - Add Lanes to Road; Reconfigure Bridge; Reconstruct Road; Replace Bridge; Work on Miscellaneous Project

SOURCE: CMAP TIP FY2014-2019.

## 2.3.2 NEPA Preferred Alternative

Under current federal regulations (40 Code of Federal Regulations [CFR] § 1502.14(e)), a NEPA EIS must include identification of the preferred alternative. NICTD and FTA have selected Hammond Alternative Option 2 as the NEPA Preferred Alternative. Identifying the NEPA Preferred Alternative involved consideration of the factors discussed in this DEIS and summarized in **Chapter 10**, including the ability to achieve the Project Purpose and Need, responsiveness to Project goals and objectives, performance ratings for engineering factors, transportation and environmental consequences, and public and agency input. Since the No Build Alternative would fail to achieve the Project Purpose and Need and is ineffective at responding to the Project goals and objectives, only one of the Build Alternatives can be considered the NEPA Preferred Alternative.

As the Build Alternatives all perform similarly in achieving the Project Purpose and Need, and meeting Project goals and objectives, other factors became important to select the NEPA Preferred Alternative. The engineering, transportation, and environmental ratings indicated variable performance among the alternatives depending on the factor considered. Factors of particular importance to NICTD included freight railroad impacts, operational perspectives, and community preferences.

FTA and NICTD propose the NEPA Preferred Alternative as the overall best performer among the alternatives considered in this DEIS. In considering the tradeoffs between benefits and effects, the NEPA Preferred Alternative would cause the least damage to the biological and physical environment and it best protects, preserves, and enhances cultural, historic, and natural resources.

A more complete basis for the selection of this alternative as preferred is provided in **Chapter 10**.

### 2.3.2.1 Alignment of the NEPA Preferred Alternative

The following sections describe the characteristics of the NEPA Preferred Alternative, including the proposed alignment, stations, and associated infrastructure.

### 2.3.2.2 Guideway

The Project would operate in a dedicated guideway within new or existing ROW. The guideway would include a single track throughout, with one 2,000-foot siding track near the center of the proposed alignment. South of Douglas Street in Hammond, the alignment would generally be at-grade, while north of Douglas the alignment would be elevated (elevated structure or retained fill). The proposed alignment would also be elevated at the Maynard Junction, crossing over the CSX Elsdon Subdivision freight line as well as 45<sup>th</sup> Street in Munster. The proposed alignment would be designed to operate completely separated from any freight rail operations.

### 2.3.2.3 Vehicle Technology and Traction Power

The preferred vehicle type is EMU, which would be electrically powered by an overhead contact system (OCS) using poles to support overhead wires. The EMU vehicle would have a passenger seating capacity of approximately 100 per vehicle, and would operate in train consists of up to eight cars. It is proposed that the Project fleet would be comprised of 36 rehabilitated SSL vehicles.

The OCS and traction power substations (TPSS) are an integral element of the NEPA Preferred Alternative. Recommendations on pole spacing and designs would be made in the Engineering phase, consistent with NICTD standards and specifications. Substations would be placed at 3- to 5-mile intervals along the proposed alignment to supply electrical power to the traction power networks. The proposed locations of the TPSSs are included in **Appendix G**.

### 2.3.2.4 Stations in the NEPA Preferred Alternative

There are four proposed stations that would contain walkways, ramps, or stairways as necessary. A station building would serve waiting passengers, and may include a vendor. The station platforms would be high-level (level with car floors) and would generally accommodate trains eight cars in length (i.e., minimum of 680 feet long). Stations would be supported by parking, which would vary in size based on demand and the availability of land.

- **Munster/Dyer Main Street Station** would be located north of an extended Main Street in Munster, and would serve as the Project's terminal station. The station site is 29 miles from Millennium Station. The station building and platform would be on the east side of the CSX freight line and would be accessed from Sheffield Avenue/Columbia Avenue. The station's parking area would be designed for up to 1,850 parking spaces and would be located on the west side of the CSX freight line. Vehicle access to the parking area would require an underpass of the Project and CSX freight line ROWs. The underpass would also include a walkway for pedestrians.
- **Munster Ridge Road Station** would be located east of the proposed alignment and south of Ridge Road. The station location is 26 miles from Millennium Station. The primary station access would be from Ridge Road, using an entrance at Harrison Avenue. Parking would be located east of the proposed alignment with an optional, overflow parking lot between Ridge Road and Broadmoor Avenue on the west side of the rail corridor. The main parking area would be designed for up to 500 parking spaces.
- **South Hammond Station** would be located east of the track and north of 173<sup>rd</sup> Street. The station location is 24 miles from Millennium Station. The station would be accessed on the north end from 169<sup>th</sup> Street and on the south from 173<sup>rd</sup> Street. The parking area would be designed for up to 1,000 parking spaces.
- **Hammond Gateway Station** would be located in north Hammond, adjacent to the relocated SSL Hammond Station, which would be moved approximately 1/3 of a mile west. The combined SSL/ Project Station would be designed to serve passengers transferring between the two services. The Project portion of the combined station would have one boarding platform accommodating four cars, due to the shorter length of the platform. The platform length would be restricted in length due to physical constraints of the track grade in this area. The adjacent SSL station would have two platforms that would each serve eight cars. The Project station platform would be at a higher elevation, and would be connected via elevators and stairs to the existing SSL station platforms. The station is 21 miles from Millennium Station. The parking area would be designed for 700 spaces and would be located to the north of the station. Roadway access would be facilitated by the City of Hammond's project to realign Chicago Street (i.e., Chicago Street Widening and Reconstruction Project) (City of Hammond 2016), which is currently in development. See **Figure 2.3-1** for a rendering of the proposed Hammond Gateway Station.



Figure 2.3-1: Proposed Hammond Gateway Station Rendering, View South

### 2.3.2.5 Proposed Service and Operating Plan

The proposed service plan for the NEPA Preferred Alternative involves two different service patterns. Trains in the peak period would through-route to and from downtown Chicago with most trains operating in the peak direction (i.e., AM Peak to Chicago; PM Peak from Chicago). Weekday peak periods would be from 5:30 a.m. to 9:00 a.m. and 4:00 p.m. to 7:30 p.m.; off-peak times would be 9:00 a.m. to 4:00 p.m. and 7:30 p.m. to 12 a.m. A reverse peak train during each peak period is primarily designed to enable one trainset/crew to operate two peak direction trips during each peak period. The second service pattern would involve one trainset that would shuttle during off-peak periods between Munster/Dyer Main Street Station and Hammond Gateway Station, where timed connections to SSL trains would allow passengers to transfer to continue their trip. This would also give Project riders the opportunity to travel either west to Chicago or east towards South Bend. **Table 2.3-3** shows the number of proposed trains by service period and station pairs. The number of shuttle trains proposed on weekends (i.e., 20) would be the same on Saturdays and Sundays.

Table 2.3-3: NEPA Preferred Alternative Service

Period <sup>1</sup>	Direction	Stations	Trains per Weekday	Trains per Weekend
Weekday Peak Period	Peak	Munster/Dyer Main Street - Millennium	10	--
	Reverse	Munster/Dyer Main Street - Millennium	2	--
Weekday Off-Peak	Both	Munster/Dyer Main Street - Hammond Gateway	12	
Weekend	Both	Munster/Dyer Main Street - Hammond Gateway		20
<b>Total</b>			24	20

SOURCE: AECOM 2016.

Note: <sup>1</sup>Peak: 5:30 a.m. to 9:00 a.m. and 4:00 p.m. to 7:30 p.m.; Off-Peak: 9:00 a.m. to 4:00 p.m. and 7:30 p.m. to 12 a.m.; Weekend: 6:00 a.m. to 1:00 a.m.

Proposed operating hours for the new service would be generally from 5:30 a.m. to 12:00 a.m. on weekdays and 6:00 a.m. to 1:00 a.m. on Saturdays and Sundays. Travel times between the Munster/Dyer Main Street Station and Millennium Station would range from 42 to 46 minutes,

depending on the stop pattern. Running time for the shuttle trip between the Munster/Dyer Main Street Station and Hammond Gateway Station would be 14 minutes.

The operating plan assumes that vehicles would be stored overnight at the Munster/Dyer Layover Facility, where service would be initiated each day. Three of the trainsets providing service to Millennium Station on weekdays would be stored during the day in Chicago, at or near Millennium Station. Cars from one trainset would return to the Hammond Gateway Station to operate the shuttle. The operating plan would also include a weekly cycle of equipment into the North Hammond Maintenance Facility for maintenance and inspection. Daily required inspections and testing would occur nightly at the Munster/Dyer Layover Facility. The proposed service would require 30 cars, comprised of three 8-car train consists and one 6-car consist. A consist is a set of cars that make up a train. The fleet of cars available for Project service would include 6 spares, for a total of 36 EMU cars.

### **2.3.3 Commuter Rail Alternative**

In addition to the NEPA Preferred Alternative, alignments for the Commuter Rail Alternative (Options 1 to 4) were evaluated. This alternative includes the Downtown Hammond Station rather than the Hammond Gateway Station and a different siting for the maintenance and storage facility options. This alternative was not selected as preferred because of impacts to freight railroads, lower projected ridership, and the unfavorable maintenance facility site (i.e., the choices would be the South Hammond or Munster/Dyer Main Street, which were not preferred by the City of Hammond or the Town of Munster). In addition, the weekday off-peak and weekend proposed shuttle train service would not be feasible because this alternative does not include a transfer station in Hammond.

### **2.3.4 IHB Alternative**

The IHB Alternative (Options 1 to 4) is similar to the Commuter Rail Alternative except for the portion of the alignment north of downtown Hammond. That stretch of the IHB Alternative would operate adjacent to IHB freight traffic and would require the construction of new track for IHB operations. This alternative was not selected as preferred because of lower projected ridership, and impacts on freight railroads.

### **2.3.5 Hammond Alternative Options 1 and 3**

The Hammond Alternative Option 1 (Munster/Dyer Main Street Station and parking east of the CSX freight line) was not selected due to community concerns. Hammond Alternative Option 3 (Munster/Dyer Main Street Station and parking west of the CSX freight line) was not selected due to potential impacts to Munster's West Lakes Park, community concerns, and additional length to the Maynard Junction flyover to elevate over the CSX freight line.

### **2.3.6 Maynard Junction Rail Profile Option**

Designing the crossing of the Project to be at the same grade as the CSX Elsdon Subdivision freight line would avoid the need for a long structure over the Maynard Junction and Pennsy Greenway. An at-grade option would also avoid potential conflicts with high tension power lines. However, it could result in the degradation of service reliability due to the conflicts with crossing freight traffic. For this reason the Maynard Junction Rail Profile Option was not selected as part of the NEPA Preferred Alternative. However, it was decided to carry it into the environmental process in the event that there is a need later to reduce Project capital costs. Note that this Option is associated with Commuter Rail Alternative Options 1, 2, and 3, IHB Alternative Options 1, 2, and 3, and Hammond Alternative Options 1 and 2.

## 2.4 Related Plans and Projects

This section describes the related plans and projects in the Study Area that could affect the configuration, layout, and costs of the Project. The proposed or planned projects are used as the basis for the cumulative effects analysis and include the committed transportation improvements in the NIRPC's *2040 CRP* (2011) and CMAP's *GO TO 2040 Comprehensive Regional Plan* (2014) through the planning horizon year 2040, as previously listed under the No Build Alternative. Information was also obtained from the cities, towns, villages, and other agencies in the Study Area, as appropriate.

- **NICTD 20-Year Strategic Business Plan (NICTD and RDA 2014):** Several proposed capital improvements to the SSL described in the *20-Year Strategic Business Plan* may influence the evaluation of the Project. These include:
  - **Double Tracking the SSL between Gary and Michigan City:** This portion of the SSL is currently a single-track. Double-tracking this section of the SSL would offer more flexibility, reliability, and capacity in the operation of the SSL.
  - **Double Track Access to Platform at Millennium Station:** Providing double-track access into Millennium Station platform for NICTD would provide improved flexibility, reliability, and capacity for NICTD's operations.
  - **Michigan City Realignment and Station Consolidation:** The proposed improvements include improved track, a new station, and the closing of 16 existing at-grade crossings. The sum of these improvements would result in reduced travel time, more flexible and reliable operations, and an enhanced American with Disabilities Act (ADA) accessible station.
  - **South Bend Realignment:** The proposed realignment would eliminate 16 at-grade crossings and would provide a more direct route to the South Bend Airport.
- **Indiana Department of Transportation (INDOT) State Rail Plan (INDOT 2011b):** The INDOT State Rail Plan (2011) is primarily a summary document, especially as it pertains to any potential expansion of NICTD's service. Most sections that address NICTD are a review of its current performance or recap of the plans and studies described in this report. While no new ideas for construction or funding are presented, the plan has value in that it characterizes, in detail, the freight and passenger network within Indiana, as well as potential developments for both modes. Further, the document summarizes the organization and funding sources for rail within Indiana and details on ongoing funding dedicated for NICTD capital projects (not including expansion). Though the plan does not specifically endorse or critique any of the alternatives or ideas proposed through 2011, there are valuable insights into current and future system characteristics that could have an impact on the Study Area.
- **2040 Comprehensive Regional Plan (NIRPC 2011):** NIRPC's 2040 CRP provides a vision for Northwest Indiana (i.e., Lake, Porter, and LaPorte Counties). The Plan provides a planning framework that integrates federal and state planning and investment resources with local and regional strategies. The public transportation section offers a vision for a regional transit framework that includes local funding support for transit improvement and expansion. The plan specifically addresses the West Lake Corridor Project, providing solid justifications for regional and state interest in the expansion and support of commuter rail.
- **GO TO 2040 Comprehensive Regional Plan (CMAP 2014c):** The CMAP's *GO TO 2040 Comprehensive Regional Plan* established a planning framework for the seven-county Northeastern Illinois region. The section addressing regional mobility lists major capital projects. The Chicago Transit Authority's (CTA) extension of the Red Line is included in the fiscally constrained project list, whose impact is described below. The fiscally unconstrained list of projects included Metra's SouthEast Service (SES) and the Chicago Department of



Transportation's (CDOT) South Lakefront Corridor projects. The impact of these projects is described below.

- **SouthEast Service (SES) Alternatives Analysis (Metra 2011):** Metra has pursued expanding its network in the southern area of the region, specifically near the Indiana border. This 2011 alternatives analysis report describes the initial alternatives proposed and covers the process through to the selection of a Locally Preferred Alternative (LPA). The report outlines the route and potential operating plans and ridership forecasts, as well as lays out next steps to develop the SES. While the Study Area from this report does not directly cover the stated Study Area for the Project, the potential interplay between the Study Area and the SES Corridor is important to consider. The SES Corridor is included in CMAP's *GO TO 2040 Comprehensive Regional Plan* on the list of fiscally unconstrained major capital projects.
- **Red Line Extension Environmental Impact Statement (CTA 2014b):** CTA is proposing an extension of the existing Red Line from 95<sup>th</sup> Street south to 130<sup>th</sup> Street. Currently, CTA is preparing an Environmental Impact Statement (EIS) for the proposed extension. The extension would reduce travel times for residents in the greater Roseland community and replace a bus-rail trip with a rail-only trip from 130<sup>th</sup> Street. The Red Line Extension is included in CMAP's *GO TO 2040 Comprehensive Regional Plan* on the list of fiscally constrained major capital projects.
- **Chicago-Detroit Passenger Rail Corridor Program Tier 1 DEIS (Michigan Department of Transportation 2014):** The Michigan Department of Transportation is considering passenger rail improvements between Chicago and Detroit/Pontiac. The proposed Route 9 passes through Hammond, Indiana, and is within the vicinity of the Study Area. The Tier 1 DEIS evaluates the potential impacts of passenger rail improvements for the Chicago-Detroit/Pontiac corridor.
- **Comprehensive Economic Development Plan (RDA 2007):** The Northwest Indiana RDA serves Lake and Porter Counties by funding projects to promote economic development. This economic development plan focused on several project areas, including the Project. The report highlights the benefits of addressing area highway congestion and providing convenient access for area residents to higher paying jobs in Chicago.
- **Town of Dyer Comprehensive Plan (Dyer 2012):** The Town of Dyer completed their comprehensive plan in 2012, which describes the town primarily as a residential community with residents traveling outside of the community for work. Over half of Dyer's population is employed in the Indiana cities of Hammond, Gary, and East Chicago, or Illinois. The comprehensive plan also recognizes the shifting population trends from the northern part to the central and southern parts of Lake County; in part due to the reduction in industrial activity along the lakefront. Dyer's comprehensive plan argues that, "transportation planning now needs to anticipate commuter rail" and indicates that the land use effects of commuter rail service would be advantageous to Dyer.
- **Town of Munster Comprehensive Plan (Munster 2010):** The Town of Munster adopted a Comprehensive Master Plan in 2010 that places much emphasis on the Project as a cornerstone for future economic and community development efforts. The town envisions transit-oriented, mixed-use redevelopment that focuses on a walkable community of residents and businesses, and creates an activity destination for surrounding neighborhoods and the region. The Transit Framework section suggests station sites based on NICTD requirements and local community amenities. The plan foresees the catalytic effects of future transit service in its downtown area.
- **City of Hammond Comprehensive/Land Use Plan (City of Hammond 1992):** The City of Hammond completed a comprehensive plan and land use study in 1992. Only a few years earlier in 1989, the alternative analysis study of transportation improvement options between Lake County and downtown Chicago was completed. The Hammond Comprehensive/Land Use Plan recommends the Project as one of the projects to support their goal of improving transportation in Hammond. The plan notes that feeder buses were suggested in the alternative analysis study to operate in conjunction with the potential new commuter rail line.

- **City of Hammond Chicago Street Widening and Reconstruction Project (City of Hammond 2016):** The City of Hammond is developing a federal-aid project to reconstruct and widen Chicago Street (formerly known as State Route (SR) 312) through the city from South Brainard Avenue, on the Indiana border with Illinois, to White Oak Avenue, at the eastern limits of the city. Former SR 312 coincides with three separate streets, including Gostlin Street, Sheffield Avenue, and Chicago Street. The project limits, from west to east, begin at the intersection of Gostlin Street and South Brainard Avenue and continue east along Gostlin Street to the intersection of Gostlin Street and Sheffield Avenue, where the project continues south along Sheffield Avenue to the intersection of Sheffield Avenue and Chicago Street. At this intersection, the project turns east along Chicago Street to the eastern terminus at the intersection of Chicago Street and White Oak Avenue.