

3. Transportation

Chapter 3 is the first of two chapters describing the affected environment, the environmental consequences in the NLX study area and the proposed avoidance, minimization and mitigation measures. Chapter 3 discusses the existing transportation conditions in the NLX study area, which serve as a baseline for comparing the potential transportation impacts of the No Build Alternative and the Build Alternative. Chapter 4 addresses the remaining social, economic and environmental conditions, the environmental consequences in the NLX study area and the proposed avoidance, minimization and mitigation measures.

In general, the NLX study area is the construction limits of the proposed project. The construction limits consist of the existing rail line and the area impacted by additional infrastructure needs to implement the NLX Project as described in Section 2.3.1 and shown in **Appendix D**. The following improvements are included:

- Track infrastructure improvements (tracks, sidings, turnouts and crossovers)
- Bridge and culvert improvements (new bridge construction, modification of bridge superstructure from open deck to closed deck, culvert extensions)
- Signal system improvements (control points, CTC with a new PTC system overlay)
- Roadway and grade crossing improvements (grade modifications, warning devices)
- Station, and maintenance and layover facilities

The review and evaluation of transportation factors was completed in accordance with federal and state regulations and guidelines, including NEPA (42 USC 4321-4347), FRA's *Procedures for Considering Environmental Impacts* (64 FR 28545), regulations published by CEQ on implementing NEPA (40 CFR 1500), MEPA (Minn. Stat. 116D) and WEPA (Wisconsin Administrative Code Chapter Trans 400).

The following transportation factors are addressed in this chapter:

- Freight and passenger rail operations
- Transit (intercity buses and local commuter rail and buses)
- Traffic circulation in station communities, including at NLX Project crossings
- Bicycle and pedestrian travel

This chapter includes the following:

- Regulatory Context and Methodology – Describes the applicable federal and state regulations, the methodology pertinent to the analysis and coordination regarding transportation
- No Build – Describes effects on transportation if the NLX Project is not implemented

- Build Alternative [by transportation factor] – For each transportation factor, the Build Alternative discussion is organized as follows:
 - Affected Environment – Describes existing conditions of each transportation factor
 - Impacts (Operations and Construction) – Describes the potential impacts on each transportation factor during both operations and construction
 - Avoidance, Minimization and Mitigation Measures – Summarizes potential avoidance, minimization and mitigation measures for each transportation factor
- Summary – Presents the revised impacts for the NLX Tier 2 EA analysis

Operations include the daily operation of the NLX Service as well as routine maintenance activities for safe and reliable passenger rail service. Construction includes the building of NLX Project track and related infrastructure as described in **Table 2-1**, stations, the maintenance facility and the layover facility. Operations, maintenance and construction activities associated with the NLX Project are described in Chapter 2 Alternatives, Sections 2.3.2.1 and 2.3.2.11. These operations, maintenance and construction activities form the basis for impact analysis in the Tier 2 EA. In general, impacts associated with operation and maintenance of NLX passenger service are expected to be similar to operating and maintaining the existing BNSF freight rail system.

The Tier 1 EA transportation information is the basis for the analyses presented in this chapter. The Tier 1 EA concluded that the NLX Project would expand travel options along the NLX Project corridor by connecting to other modes of transportation. It would improve safety at railroad crossings and improve passenger and freight operations. No significant impacts on the transportation system along the NLX Project were identified in the Tier 1 EA. Only temporary disruptions to transportation modes in the NLX Project corridor would occur during construction, and 14 private at-grade crossings would be permanently closed. This chapter analyzes the impacts of the NLX Project based on updated operations and proposed construction limits that have been refined since the Tier 1 EA. However, because the impacts on transportation modes go beyond the construction limits, the NLX study area for transportation is expanded as described in **Table 3-1**. **Table 3-2** presents an overview and comparison of the transportation impacts from the Tier 1 EA and the Tier 2 EA.

Table 3-1: NLX Study Area

NLX Study Area Definition	Basis for NLX Study Area
Construction limits from preliminary engineering plus a 0.25-mile buffer at stations and maintenance and layover facilities.	Physical conditions would vary at infrastructure construction locations. At stations and maintenance and layover facilities, a 0.25-mile buffer includes adjacent transportation infrastructure.

Table 3-2: Transportation Comparison – NLX Tier 1 Service Level EA and NLX Tier 2 Project Level EA

Identified Impacts in Tier 1 Service Level EA	Identified Impacts in NLX Tier 2 Service Level EA
Freight and Passenger Rail: Proposed track work and system improvements support joint passenger and freight operations.	No substantial impacts on freight or passenger rail operations. Temporary service outages are expected to occur during construction of new or replaced infrastructure.
Transit: Connections to other modes of transportation expand travel options. No substantial impacts on transit.	<p><u>Intercity Regional Bus</u> Provides opportunities for multimodal connections to intercity bus services.</p> <p>Potential temporary disruptions or detours may occur where rail grade crossings are closed for reconstruction or installation of new crossing warning devices.</p> <p><u>Station Community Transit</u> Provides opportunities for local transit connections.</p> <p>Potential temporary disruptions or detours may occur where rail grade crossings are closed for reconstruction or installation of new crossing warning devices.</p>
Traffic Circulation and Parking: Temporary impacts on at-grade crossings and more circuitous travel during construction.	No substantial long-term impact on traffic operations at stations. Temporary impacts on at-grade crossings and more circuitous travel during construction.
Rail Grade Crossings: No permanent closure of public at-grade crossings identified in service level NEPA. Closure of up to 14 private at-grade crossings.	No permanent closures of either public or private at-grade crossings.
Rail Grade Crossings: Safety improvements at at-grade crossings.	Safety improvements at at-grade crossings.
Bicycles and Pedestrians: Temporary impacts on at-grade crossings, and more circuitous travel during construction.	<p>Provides opportunities for multimodal connections for bicycles and pedestrians at NLX stations.</p> <p>Potential temporary disruptions or detours may occur where grade separation construction or rail grade crossings are closed for reconstruction or installation of new crossing warning devices.</p>

As appropriate and necessary, this Tier 2 EA would be refined through future supplemental NEPA documentation as the final design advances and funding is secured for the NLX Project. Future supplemental environmental documentation is identified as appropriate throughout this chapter.

Unless otherwise stated, locations described in this chapter are in Minnesota.

3.1 Regulatory Context and Methodology

No specific laws or executive orders regulate the consideration of transportation impacts as part of preparing NEPA review documents. NEPA (41 USC 4321), MEPA (2016 Minn. Stat. 116D) and WEPA (Wisconsin Administrative Code Trans 400) form the general basis of consideration for discussing transportation impacts. Local, Metropolitan Planning Organization (MPO) and statewide plans create policies and plans for the development and maintenance of the transportation system.

The NLX study area is the construction limits from preliminary engineering plus a 0.25-mile buffer at stations and maintenance and layover facilities. Review of this NLX study area allows for a general understanding of the modes of transportation along the NLX Project that could be affected by the NLX Project.

The methodology for evaluating transportation impacts involved an inventory of the transportation modes that interface with the NLX Project to determine potential conflicts and benefits. Inventories were developed for local and intercity transit services; traffic and roadways; bicycle and pedestrian facilities; and freight and passenger rail services. Analysis of impacts includes both temporary impacts during construction and long-term impacts from operations. Additional information about the methodology for traffic impacts at station and maintenance and layover facility sites is discussed under Section 3.5.1.

3.2 No Build Alternative

Under the No Build Alternative, the NLX Project would not occur and would not alter current conditions. There would be no changes except planned and programmed actions that are independent of the NLX Project as identified in Chapter 2 Alternatives, Section 2.2.1.

3.3 Build Alternative – Freight and Passenger Rail Operations

This section evaluates the existing freight and passenger rail operations, along with potential impacts associated with NLX Project operations and construction activities. NLX Project operations include regular daily operations and maintenance activities in the existing BNSF right of way described in Chapter 2. In general, impacts associated with operation and maintenance of NLX passenger service are expected to be similar to

operating and maintaining the existing BNSF freight rail system. Construction impacts are temporary and related to anticipated typical construction activities described in Chapter 2 to install new and replace existing infrastructure, update signal systems and grade crossings, construct new stations and construct new maintenance and layover facilities.

3.3.1 Existing Freight Rail Operations

The NLX Project would operate within the existing BNSF right of way on tracks that are actively used for freight operations. The number of freight trains operating in the NLX study area varies widely depending on the segment of track. Approximately 90 freight trains per day traverse the most congested segment of track between Minneapolis Junction in Minneapolis and I-694 in Fridley. Approximately 10 freight trains per day travel between Coon Creek Junction (just north of Coon Rapids Boulevard in Coon Rapids) and Boylston, Wisconsin. Approximately 20 freight trains per day travel between Boylston and Superior, Wisconsin. Other freight and passenger railroads that also operate within the BNSF right of way include the Canadian Pacific Railway, the Union Pacific Railroad, the Canadian National Railway, the Twin Cities and Western Railroad, the St. Croix Valley Railroad, Amtrak, Northstar Commuter Rail and the NSSR.

3.3.2 Existing Passenger Rail Operations

The NLX Project would operate on sections of track also used by Northstar Commuter Rail service and Amtrak. Northstar operates on BNSF tracks between Target Field Station and Big Lake (see Section 3.4.2.1 for a detailed discussion of this transit service). The NLX Project would operate on the same tracks as the Northstar service between Target Field Station and Coon Creek Junction.

Amtrak's long-distance Empire Builder provides service between Chicago, Illinois, and Seattle, Washington, and Portland, Oregon, with a stop in St. Paul. The Empire Builder operates one round trip per day, 7 days per week. The westbound trip departs St. Paul Union Depot at 10:28 p.m. daily and the eastbound trip departs St. Paul Union Depot at 8:00 a.m. daily. Amtrak operates on BNSF tracks roughly between University Avenue and Coon Creek Junction. The NLX Project would operate on this same segment of track.

The NSSR, a tourism-based passenger railroad service, is owned by the St. Louis and Lake Counties Regional Railroad Authority (RRA) and operated by the Lake Superior Railroad Museum. The service operates out of the historic Union Depot in Duluth. The NSSR uses the tracks to store trains for the Lake Superior Railroad Museum and to operate scenic rail tours. The NLX Project would share track with NSSR for approximately 2,500 feet south of the proposed Duluth Station. From its home base at Union Depot, the Lake Superior Railroad Museum operates two to five NSSR trains daily between May and October. Ticket sales and a waiting area use a former Amtrak passenger station, located at the back of Union Depot. The rail lines at the back of Union Depot are

owned by BNSF and leased by the RRA. The RRA and the Lake Superior Railroad Museum have an operating agreement in place to allow NSSR operations on the track.

More information about the NSSR can be found at the NSSR website:

<http://www.northshorescenicrailroad.org/Home.html>

3.3.3 Freight Rail Impacts

The following sections summarize freight rail impacts under the Build Alternative. Impact analysis considered all track, roadway, bridge, station and maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and short-term construction impacts as described in Section 3.3. Avoidance, minimization and mitigation measures are described in Section 3.3.5.

3.3.3.1 Operations

Infrastructure improvements needed to accommodate the proposed NLX Project would be highly dependent on the amount of freight trains operating in a given segment and the existing infrastructure in that segment. MnDOT coordinated with BNSF to develop models of existing and proposed conditions in the NLX study area. The models helped define appropriate infrastructure to accommodate the proposed NLX Project.

As a result of new sidings, improved crossing safety devices, enhanced switching and additional track capacity, the enhancements under the Build Alternative would provide long-term operational benefits to the BNSF freight service, additional efficiency to the local businesses relying on it, and improved safety at crossings. Proposed infrastructure improvements for the NLX Project are summarized in Chapter 2 Alternatives, Section 2.3.2 and **Table 2-1**.

Impacts on BNSF operations due to NLX operations at stations and maintenance and layover facilities would be avoided through implementation of these infrastructure improvements prior to the start of NLX Service. The proposed signal system would be designed considering the location of the stations and facilities, and would allow freight trains to operate as efficiently as possible while NLX trains are stopped to load and unload passengers and enter and exit facility locations. Additionally, proposed infrastructure was coordinated with the NLX Project train schedule to allow freight trains to meet at sidings, which would also minimize freight train delays.

There are 126 public and 39 private rail grade crossings in the NLX Project. The NLX Project proposes improvements to public rail grade crossings, including installation of active warning devices, reconstruction of

approach roadways, installation of medians and rail infrastructure improvements, such as construction of an additional track across the roadway. Improved crossings and crossing warning devices would benefit freight operations and safety by potentially reducing the risk for crashes at crossings. (See **Appendix E** for construction proposed at each crossing.) The NLX Project is not proposing to close any public rail grade crossings. Private rail crossings are not under the jurisdiction of MnDOT; any changes to private rail crossings would be addressed by BNSF and the adjacent property owners.

Daily freight operations and maintenance activities would not change as a result of the NLX Project. The NLX Project would be operated and maintained in accordance with an operating agreement and a construction and maintenance agreement with BNSF. These agreements would be completed during final design.

3.3.3.2 Construction

Impacts on BNSF train operations during construction of proposed improvements to accommodate the NLX Project are anticipated. Some work would be performed without impact on train operations, such as right of way fencing and some drainage work. Currently, construction is anticipated to last 3 years, with procurement of long lead time materials occurring before that. Section 2.3.2.11 provides a detailed description of construction activities.

For the NLX Project, it is expected that BNSF would construct the majority of the proposed improvements needed for track infrastructure within the BNSF right of way. As such, it is expected that BNSF would schedule the work to be completed for the NLX Project in a comprehensive construction schedule and in the proper sequence.

When construction activities would affect train operations, BNSF would schedule the various construction projects along the NLX Project corridor to maximize the productivity of each track outage, using measures such as adding more crews and equipment to expedite several tasks simultaneously to replace turnouts and grade crossings. MnDOT would coordinate the construction of station, maintenance and layover facilities with BNSF to avoid impacts on BNSF operations.

3.3.4 Passenger Rail Impacts

The following sections summarize passenger rail impacts under the Build Alternative. Impact analysis considered all track, roadway, bridge, station and maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and short-term construction impacts as described in Section 3.3. Improved crossings and crossing warning devices

would benefit passenger operations and safety by potentially reducing the risk for crashes at crossings. Avoidance, minimization and mitigation measures are described in Section 3.3.5.

3.3.4.1 Amtrak

Operations

The proposed NLX Project train schedule was coordinated with the existing Amtrak schedule to ensure efficient operation of the two services on the segment of track they would share: between University Avenue and Coon Creek Junction. Additionally, the proposed infrastructure improvements at Coon Creek Junction would accommodate all freight and passenger service. Daily operations and maintenance activities would not change as a result of the NLX Project. The NLX Project would be operated and maintained in accordance with an operating agreement and a construction and maintenance agreement with BNSF. These agreements would be completed during final design.

Construction

Amtrak operates over an area of track where infrastructure is proposed to accommodate the NLX Project. This area is near Coon Creek Junction, where various signal improvements, track construction and the Coon Rapids Station construction would occur. Construction impacts are expected to be like those described in Section 3.3.3.2. Construction of proposed track improvements would not require cessation of train service between downtown Minneapolis and Coon Creek Junction. Therefore, there would be no impact on Amtrak operations.

3.3.4.2 North Shore Scenic Railroad

Operations

Given the complexities of the multilevel and multiple uses at the historic Union Depot in Duluth, MnDOT completed an architectural feasibility study to determine the types of building modifications that may be required to accommodate the NLX Project passenger flows and avoid impacts on ongoing functions at Union Depot, including NSSR operations. The recommended architectural concept would create a new independent passenger rail building that is separate from, but adjacent to Union Depot. The new building would replace the existing NSSR ticket office.

The proposed passenger waiting area would be a minimum of 2,600 square feet. This would accommodate peak passenger flows for the NLX Project and the NSSR. The waiting area would contain unmanned ticket kiosks, seating, restrooms and storage space. It would also contain a ticket booth for the NSSR.

The new passenger rail building would be accessible from a new ADA-compliant entrance on the north side of Union Depot. This entrance would provide a direct path to the new passenger waiting area that would separate rail passengers from existing functions at Union Depot. New stairs and an elevator would be installed inside the passenger rail building to provide access from the entrance to the track level waiting area. The passenger waiting area would also be accessible from track level drop-off point along the new public road accessed under the 5th Avenue bridge.

To accommodate the NLX Project and NSSR service, tracks in back of Union Depot would be modified and a new 500-foot-long platform for the NLX Project would be constructed, with an option to extend the platform to 600 feet in the future. The NLX Project would not impact the NSSR service. The NSSR would continue to board passengers in its current location at track level. The new NLX platform would be constructed at Union Depot to the east of the existing boarding and alighting area for the NSSR. Daily operations and maintenance activities would not change as a result of the NLX Project. The NLX Project would be operated and maintained in accordance with an operating agreement and a construction and maintenance agreement with BNSF. These agreements would be completed during final design.

Construction

Construction of NLX Project track improvements at Union Depot could impact NSSR operations. An outage of NSSR service at the station could occur. However, work could be scheduled when NSSR service is not in operation.

The NLX platform construction at the station would not impact NSSR service.

3.3.5 Avoidance, Minimization and Mitigation Measures

The NLX Project would continue to avoid, minimize and mitigate impacts through final design. Through ongoing coordination with BNSF, Metro Transit, Amtrak and NSSR, the proposed infrastructure improvements described above maintain freight and passenger service levels and infrastructure capacity during NLX Project operations. As the NLX Project moves into implementation, MnDOT would continue coordination with freight and passenger rail stakeholders to secure agreements to operate the NLX Project within the BNSF right of way.

BNSF would minimize construction impacts by comprehensive and integrated project scheduling and close coordination and cooperation between its maintenance, operations and train dispatching forces. BNSF would

also coordinate with the other railroads whose trains operate over BNSF right of way. MnDOT would schedule construction activities to minimize the impact on NCSR operations, including potential service outages. For instance, the outage could be scheduled when NCSR service is not in operation.

3.4 Build Alternative – Transit

To assess the potential effects of the NLX Project on transit, information was gathered on the existing regional and local transit services available along the NLX Project. Urbanized communities such as Minneapolis, Coon Rapids, Superior, Wisconsin, and Duluth provide fixed route transit service using buses. In addition, the Minneapolis area provides commuter rail and light rail transit opportunities typical of a large metropolitan area. Hinckley and Cambridge, because of their rural context, rely on intercity regional bus service or on-demand bus service for transit needs. NLX Project operations include regular daily operations and maintenance activities in the existing BNSF right of way described in Chapter 2. In general, impacts associated with operation and maintenance of NLX passenger service are expected to be similar to operating and maintaining the existing BNSF freight rail system. Construction impacts are temporary and related to anticipated typical construction activities described in Chapter 2 to install new and replace existing infrastructure, update signal systems and grade crossings, construct new stations and construct new maintenance and layover facilities.

3.4.1 Intercity Regional Bus Service

3.4.1.1 Existing Conditions

There are several intercity, regional bus services offered throughout Minnesota. These services allow people to move from one metropolitan area to another without using airline service. MnDOT performed a detailed analysis of the intercity bus offerings in the *Minnesota Intercity Bus Study* (MnDOT, 2014). A map of the routes that were offered in 2014 is shown in **Figure 3-1**. Since 2014, Greyhound added service between Duluth and Minneapolis.

Jefferson Lines provides the most extensive intercity bus service throughout Minnesota and offers direct service between the Twin Cities and Duluth, as well as communities within the NLX study area. In Minneapolis, there is a stop 0.3 mile south of Target Field Station, where the NLX Project would terminate. In Duluth, there are several stops, including a stop at the University of Minnesota Duluth and the Downtown Transit Center, located approximately 0.3 mile from Union Depot. This service can be used to travel from either Duluth or Minneapolis directly to Hinckley, where it stops at Tobies Restaurant located at I-35 and MN 48 (Fire Monument Road). Tobies Restaurant is located approximately 1.5 miles west of the Grand Casino and approximately 1.25 miles east of the proposed downtown Hinckley Station. Fares vary and are unique

depending on supply and demand, but can range from \$25.00 to \$30.00 one-way, similar to the proposed NLX one-way fare of \$30.00 between Target Field Station and the Duluth Depot. Detailed information about Jefferson Lines service can be found at www.jeffersonlines.com.

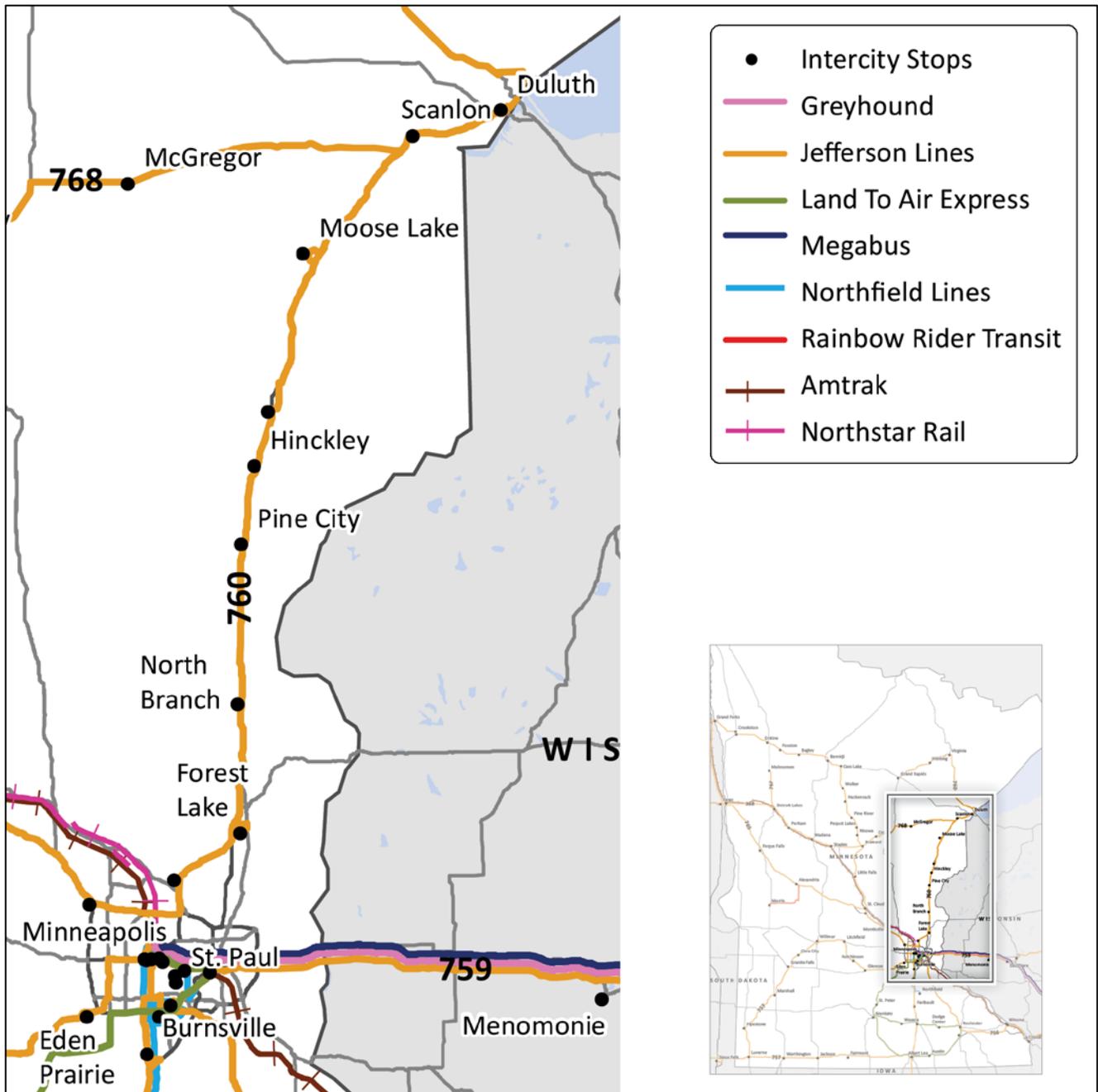
Greyhound offers intercity bus service between Minneapolis and Duluth. The Greyhound stop in Minneapolis is in the same location as the Jefferson Lines stop, 0.3 mile south of Target Field. There are two stops in Duluth, one at the University of Minnesota Duluth and one near the I-35 and U.S. 2 Interchange. Both are located approximately 4.0 miles from the proposed Duluth Station. Greyhound stops at Tobies Restaurant in Hinckley. One-way tickets between Minneapolis and Duluth can be as low as \$25.00, but prices increase for trips from Minneapolis to Hinckley or Duluth to Hinckley. Travel times for both Greyhound and Jefferson Lines range from 3 hours to 3 hours and 35 minutes, depending on direction and if service is an express route or makes intermediate stops. Detailed information about Greyhound service can be found at www.greyhound.com.

Skyline Shuttle is an intercity van service that serves NLX station cities. The route travels between the MSP and Mall of America and the Duluth area. There are several stops in Duluth, including the Duluth Entertainment Convention Center parking lot across I-35 from Union Depot. The Skyline Shuttle fare includes up to 3 weeks of free parking to customers at this parking lot. Longer stays require fees handled directly with the Duluth Entertainment Convention Center. The route includes a stop in Hinckley at Tobies Restaurant. The price for Skyline Shuttle between Minneapolis and Duluth is \$42.00 one-way, and \$78.00 round trip. For trips to or from Hinckley, the cost is \$30.00 one-way and \$58.00 round trip. Discounts may apply for multiple riders. In the Twin Cities, Skyline Shuttle stops only at MSP and Mall of America, tailoring its services to riders specifically destined to these locations. Detailed information about Skyline Shuttle service can be found at www.skylineshuttle.com/scheduleandrates.

Rally Bus, a nationwide crowd-powered, on-demand charter bus service, has been used for past events at the Grand Casino Hinckley. Event organizers reserve a bus in advance by creating a custom route with multiple origins and destinations. Every trip requires a minimum number of riders (usually 25) for a trip to be scheduled, making it most widely used for large events and destinations. Detailed information about Rally Bus service can be found at www.rallybus.net/about.

As shown in **Figure 3-1**, the additional intercity service providers including MegaBus, Land To Air Express, Northfield Lines and Rainbow Rider Transit do not serve the NLX station cities. Indian Trails (not on map) provides service between Duluth and Michigan with a stop in Superior, Wisconsin, but its connections to Minneapolis are via Jefferson Lines.

Figure 3-1: 2014 MnDOT Intercity Bus Services Map



Source: MnDOT, 2014.

3.4.1.2 Impacts

The following sections summarize intercity regional bus service impacts under the Build Alternative. Impact analysis considered all track, roadway, bridge, station and maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and short-term construction impacts as described in Section 3.4. Avoidance, minimization and mitigation measures are described in Section 3.4.3.

Operations

The NLX Project would provide benefits and some competition to intercity bus service. In terms of benefits, the proposed NLX Project would strengthen network connectivity by serving additional cities and increasing service to existing stops. NLX stations would also strengthen intercity network connectivity by providing facilities for connections between the NLX Project and intercity bus service traveling outside the NLX study area. Within the NLX study area, the NLX Project would provide some competition to existing intercity bus service. While fares for the NLX Project are anticipated to be slightly higher than intercity bus fares, NLX would provide faster and more reliable service. Based on MnDOT 2016 ridership estimates, approximately 4 to 6 percent of forecasted NLX ridership consists of trips diverting from the existing intercity bus service. Intercity bus providers would likely be able to offset the actual amount of diversion by adjusting bus service schedules and routes to complement the NLX Project. Skyline Shuttle and Rally Bus serve niche group ridership destinations and travel patterns, and the NLX Project is not anticipated to benefit or affect them. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and jurisdictional agencies and communities, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Minimal construction period impacts on intercity bus service would occur. Depending on service routes, temporary disruptions or detours may occur where rail grade crossings would be closed for reconstruction or installation of new crossing warning devices.

3.4.2 Station Community Transit Service

The following sections summarize the existing transit services in each station community along the NLX study area and the potential impacts of the NLX Project on local transit. The sections summarizing transit service impacts under the Build Alternative in station communities considered all track, roadway, bridge, station and

maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and short-term construction impacts as described in Section 3.4. Avoidance, minimization and mitigation measures are described in Section 3.4.3.

3.4.2.1 Target Field Station, Minneapolis

Existing Conditions

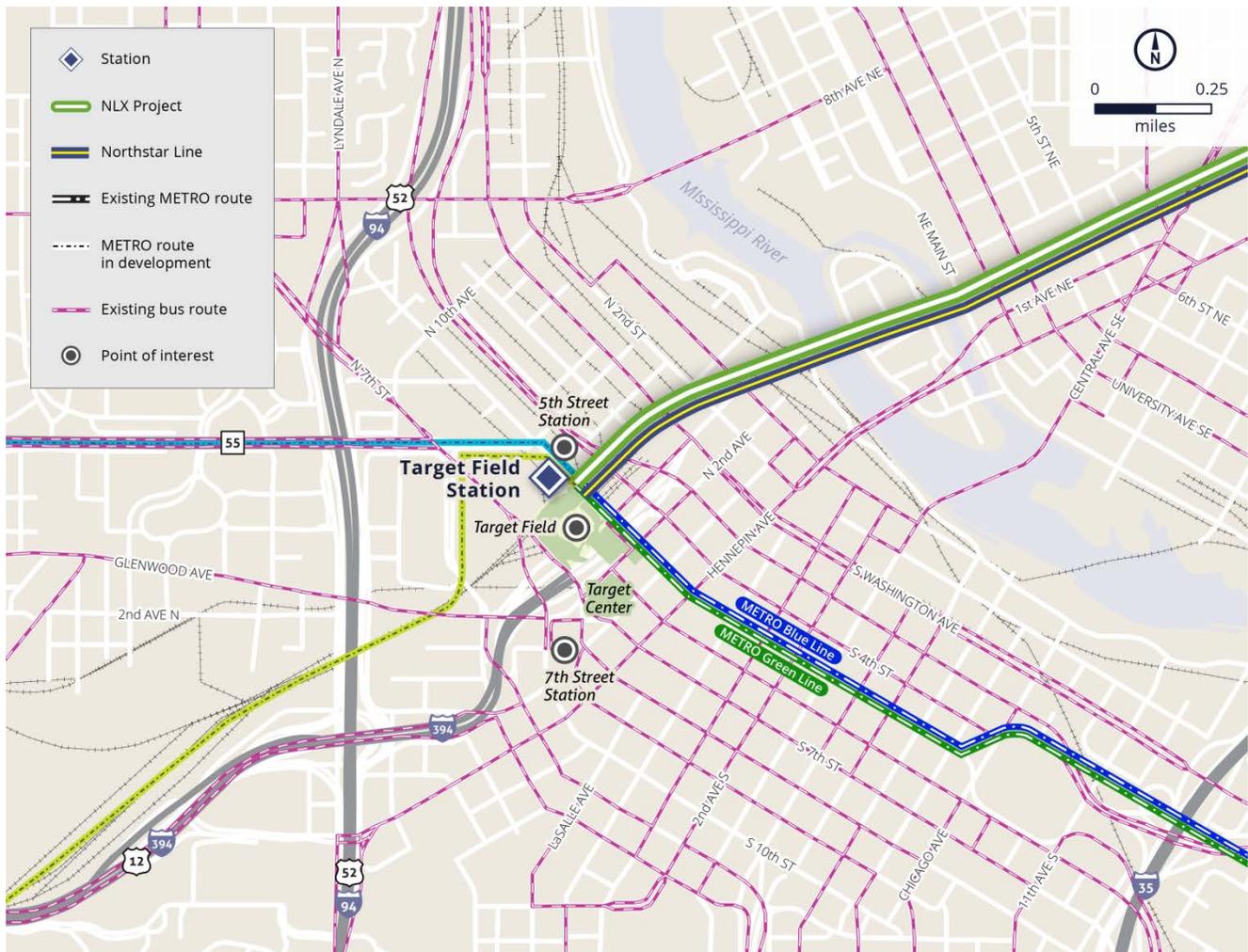
The NLX Project at Target Field Station would be integrated with existing Metro Transit service in the station area. As shown in **Figure 3-2**, existing Metro Transit service consists of commuter rail, light rail and local bus service.

The Northstar service has a platform at Target Field Station. Northstar is commuter rail service between Minneapolis and Big Lake, which is located approximately 45 miles northwest of Target Field. Target Field Station currently includes track and platforms for the Northstar service and a mainline track for BNSF freight rail operations. Northstar uses the two tracks on either side of the existing platform and BNSF uses a single track on the northwest side. Currently, the freight rail traffic using the BNSF mainline is coordinated with Northstar operations.

Metro Transit operates the Northstar service, which provides regular and rush-hour service weekdays for fares up to \$6.00 between Minneapolis and Big Lake. Station-to-station fares are \$3.00 and seniors and youth are offered at reduced rates. Northstar service accepts Metro Go-To Cards, allowing riders to transfer between buses and light rail connections in the Minneapolis area. Weekdays, the Northstar Line operates five southbound and one northbound train between 5:00 a.m. and 7:18 a.m. and five northbound and one southbound train between 3:57 p.m. and 6:15 p.m. On weekends, the fares are slightly lower with only one southbound and northbound train in the morning and two trains in each direction in the afternoon on Saturday. On Sundays, the service operates three trains: two southbound and one northbound in the morning and one southbound and two northbound in the afternoon.

Target Field Station includes a Metro Transit light rail station serving the Blue and Green Lines. The Blue Line runs south to the airport and Mall of America, while the Green Line runs east to the University of Minnesota, the State Capitol complex, and downtown St. Paul. The Blue and Green Lines are part of the high frequency transit network and operate at least every 15 minutes, weekdays from 6:00 a.m. to 7:00 p.m. and 9:00 a.m. to 6:00 p.m. on Saturdays. Future expansion plans include extending the Blue Line 13 miles northwest from downtown Minneapolis to Brooklyn Park, extending the Green Line 14 miles southwest from downtown Minneapolis to Eden Prairie, and adding the 17-mile Orange Line Bus Rapid Transit, which would travel along 2nd Avenue and Marquette from the south and stop within walking distance to Target Field Station.

Figure 3-2: Target Field Station Area Transit



Target Field Station provides access to Metro Transit local bus service. Route 20 provides a connection between the Northstar service and downtown Minneapolis. Stops for major local bus routes including Routes 5, 19 and 22 are located one block south of Target Field. These routes intersect with the Blue and Green Line light rail stations for convenient access between Target Field and the broader Metro Transit service area. Metro Transit and Northstar service information is available at the Metro Transit website (www.metrotransit.org).

Impacts

Operations

The NLX Project would complement existing and planned transit service in Minneapolis. No impacts are anticipated on existing light rail and bus transit service. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, jurisdictional agencies and the City of Minneapolis, as needed, and no additional impacts from the NLX Project are anticipated.

The NLX Project would not substantially affect Northstar service. The NLX Project and Northstar would serve different travel markets, and the proposed NLX Project train schedule would be coordinated with the existing Northstar train schedule to ensure efficient operation of the two services on the 13-mile segment of track they would share between Target Field Station and Coon Creek Junction, as shown in **Figure 3-3**. At Target Field Station, the NLX Project would extend the existing Northstar platform 490 feet to the northeast, to just south of the Washington Avenue Bridge, to accommodate NLX trains on the northwest side of the platform. New track would be constructed on the southeast side of the extended platform to accommodate Northstar trains. Since NLX and Northstar would share the platform, additional coordination for operations would be required to ensure that the two services would not conflict with each other. Additionally, the proposed infrastructure improvements at Target Field Station and between the station and Coon Creek Junction would accommodate all freight and passenger services. Daily operations and maintenance activities are currently coordinated between BNSF and Northstar, and no additional impacts from the NLX Project are anticipated.

Figure 3-3: Northstar and NLX Project Train Schedules at Target Field Station

Train	901	903	905	907	7003	909	7007	7009	911	7013
Service	N/S	N/S	N/S	N/S	NLX	N/S	NLX	NLX	N/S	NLX
Arrival Time	05:52	06:40	07:10	07:40	07:55	08:10	12:06	16:17	17:55	20:51
Train	902	7002	7006	904	906	908	7010	910	912	7014
Service	N/S	NLX	NLX	N/S	N/S	N/S	NLX	N/S	N/S	NLX
Departure Time	06:15	08:35	12:46	15:57	16:27	16:57	17:20	17:30	18:15	21:31

N/S = Northstar Commuter Rail train; NLX = Northern Lights Express intercity passenger train
 Times are shown in Continental Time (24-hour clock)

Construction

Construction activities for platforms and track infrastructure would occur where Northstar Commuter Rail operates between Target Field Station and Coon Creek Junction.

MnDOT would coordinate with the construction contractor to develop means and methods of construction and coordinate work efforts with BNSF and Northstar to avoid and minimize impacts on freight and commuter service. Construction activities on BNSF track are described in Sections 2.3.2.11 and 3.3.3.2. Further detail on NLX improvements in the City of Coon Rapids is provided in Section 3.4.2.2.

3.4.2.2 Coon Rapids

Existing Conditions

Coon Rapids, located 15 miles north of Minneapolis, is served by Metro Transit. Two express bus routes, the 850 and 852, stop at the existing Foley Boulevard park and ride in Coon Rapids, as shown in **Figure 3-4**. Both express routes run north-to-south between Anoka and Minneapolis. On weekdays, Route 850 provides 26 trips, spaced every 7 to 10 minutes, southbound between 5:20 a.m. and 9:00 a.m., and northbound between 3:15 p.m. and 7:00 p.m. Route 852 provides 11 weekday trips, spaced every 7 to 10 minutes during rush hour, southbound between 5:35 a.m. and 11:35 a.m., and northbound, spaced approximately every 30 minutes between 12:15 p.m. and 10:18 p.m. Non rush hour service is spaced hourly for both directions. Route 852 also includes Saturday service, but this service does not include the Foley Boulevard park and ride, and no service is provided on Sunday. Additionally, bus routes 805 (local bus) and 860 (express to St. Paul) serve the Anoka-Coon Rapids area. The proposed Coon Rapids Station would be located directly north of the Foley Boulevard park and ride facility, across Foley Boulevard.

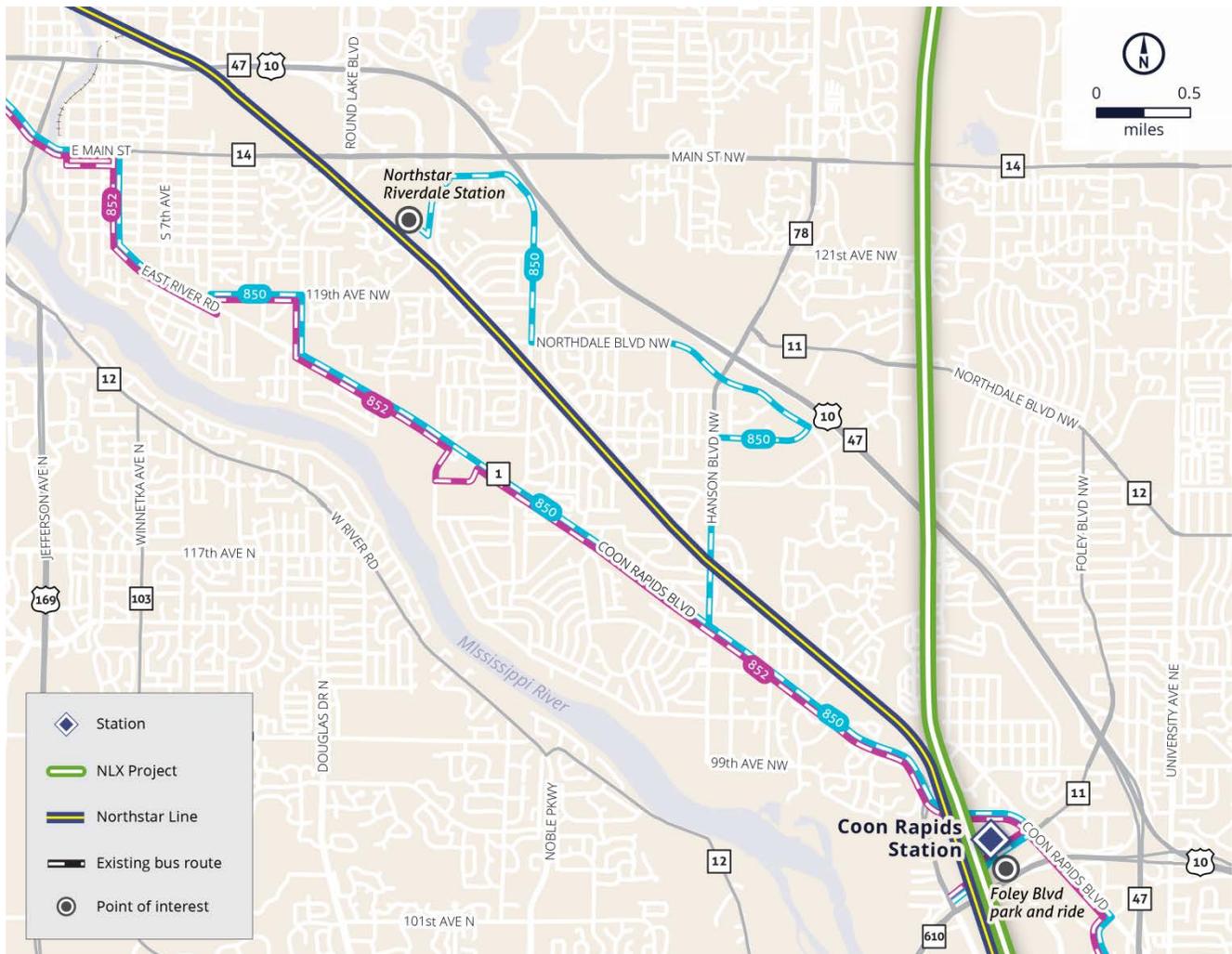
The Northstar service stops in Coon Rapids at Riverdale Station, located approximately 5.0 miles northwest of the proposed NLX Coon Rapids Station. Northstar service is described in Section 3.4.2.1.

Impacts

Operations

The NLX Project would support transit connections at the proposed Coon Rapids Station, and may encourage increased transit ridership. No substantial impacts are anticipated to existing transit service. Diversion from the existing Metro Transit bus routes and the Northstar service to NLX would likely be minimal as these existing transit options provide rush hour schedules and more frequent service to Minneapolis desirable by commuters travelling between Minneapolis and the suburbs. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, jurisdictional agencies and the City of Coon Rapids, as needed, and no additional impacts from the NLX Project are anticipated.

Figure 3-4: Coon Rapids Station Area Transit



Construction

Construction of a new entrance road to the station and the Foley Boulevard grade crossing reconstruction may cause temporary traffic disruptions. The railroad grade crossing at Foley Boulevard would be reconstructed to accommodate track shifts and the additional third track. Warning devices would be relocated, and new sidewalks would be installed for pedestrian traffic using the existing park and ride lot.

During construction, transit service impacts would be temporary and could include changes to travel times for those routes that are required to detour around crossings temporarily closed for reconstruction or installation of crossing warning devices. Impacts on transit could also include temporary access and egress changes to the

Foley Boulevard park and ride as part of NLX station construction to create a new access point along Foley Boulevard (see also Section 3.4.2.1 for discussion of potential impacts on Northstar service).

3.4.2.3 Cambridge

Existing Conditions

Isanti County and neighboring Chisago County are served by the Heartland Express, which is a rural on-demand, reserve-a-ride bus service offered to anyone within either county. The service is curbside to curbside with same-day reservations generally available. Within Cambridge, it operates Monday through Friday 8:00 a.m. to 5:00 p.m. In-city fares are \$1.50 for one-way trips. Connections to surrounding communities range between \$2.00 to \$3.50 one-way depending on the location.

The Heartland Express also provides a fixed route between Cambridge and East Bethel where riders meet the Route 865 Metro Transit express bus traveling into Minneapolis and St. Paul (three outbound morning buses and three inbound evening buses). The Heartland Express route operates between 5:00 a.m. and 7:00 a.m. weekdays with return service between 5:00 p.m. and 7:00 p.m. The fares are \$2.00 one-way. More information about Heartland Express is available at www.co.chisago.mn.us or www.co.isanti.mn.us.

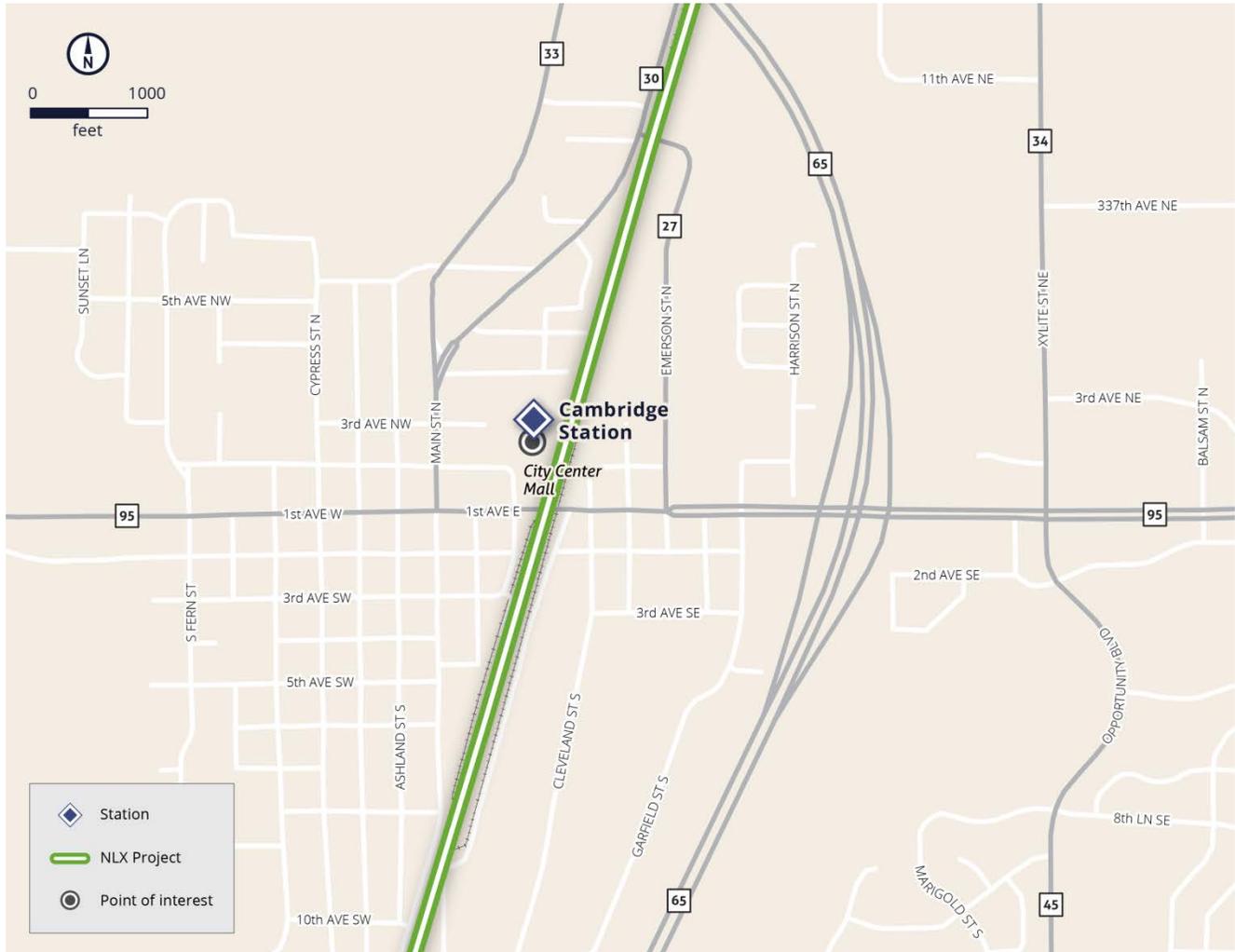
Impacts

Operations

The NLX Project would support local bus connections at the proposed Cambridge Station. No impacts on existing transit service are anticipated, and the NLX Project may encourage increased transit ridership. MnDOT estimates that more than 80 percent of NLX ridership would consist of drivers diverted from automobiles. Some of these drivers may park at the Cambridge Station, shown in **Figure 3-5**, but others may choose to use the Heartland Express service to connect to the station from their starting points in the surrounding community. Riders currently using Heartland Express service between Cambridge and East Bethel may divert to the NLX Project if they prefer travel to downtown Minneapolis via Target Field Station. Based on MnDOT 2016 ridership estimates, approximately 4 to 6 percent of forecasted NLX ridership consists of trips diverting from the existing intercity bus service. However, Heartland Express and the NLX Project would provide different service intervals, and diversion to the NLX Project is expected to be minimal. Existing users of the Heartland Express Route that connect to Route 865 would likely continue to take advantage of the service's rush hour schedules and more frequent stops (five stops) that Route 865 offers. Heartland Express would likely be able to also offset the actual amount of diversion by adjusting bus service schedules and routes to complement the NLX Project. Daily operations and maintenance activities that may require temporary grade

crossing closures are currently coordinated among BNSF, jurisdictional agencies and the City of Cambridge, as needed, and no additional impacts from the NLX Project are anticipated.

Figure 3-5: Cambridge Station



Construction

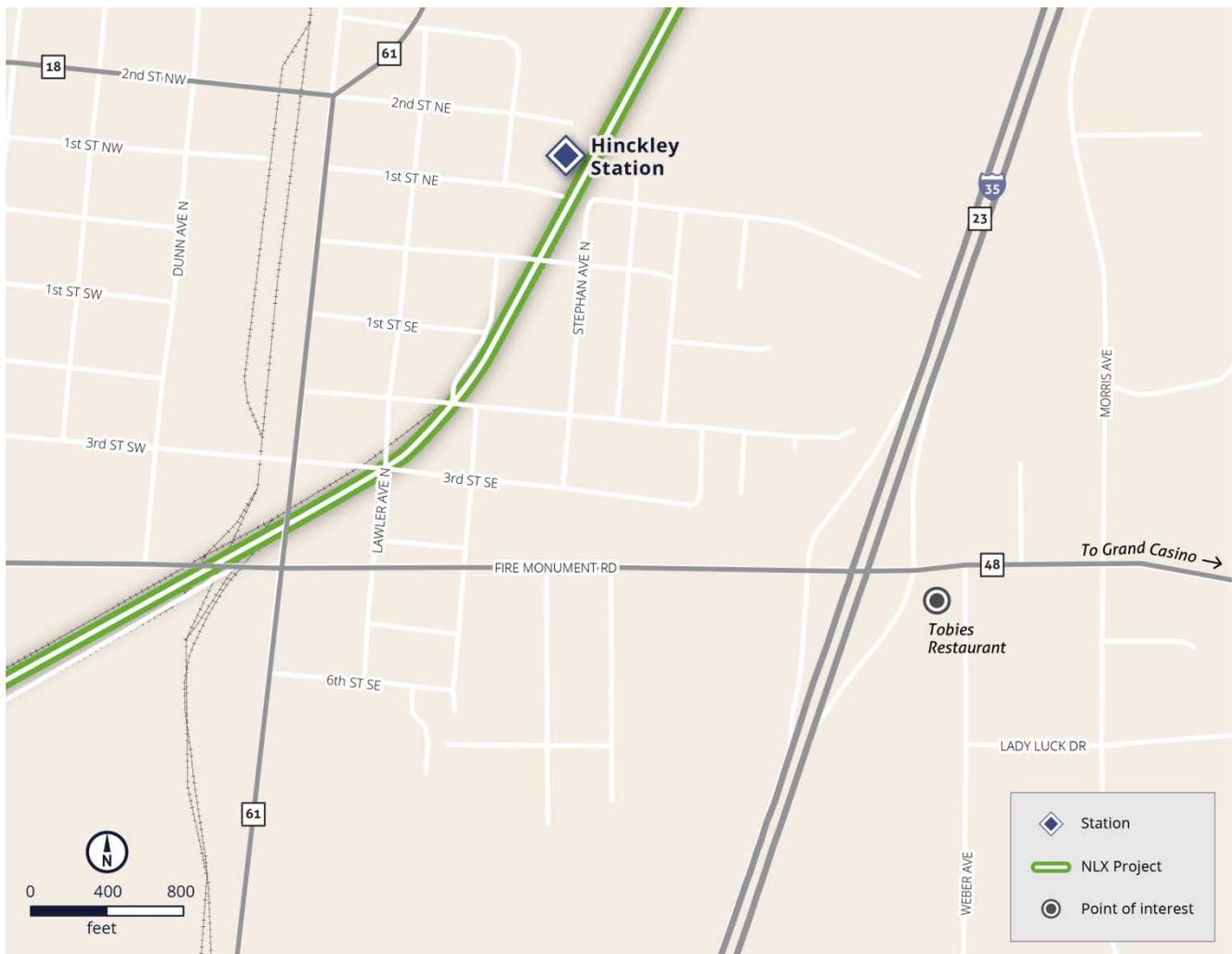
During construction, impacts on the Heartland Express would be temporary and could include small changes to travel times for those routes that are required to detour around crossings temporarily closed for reconstruction or installation of crossing warning devices. Cambridge Station construction activities would occur primarily inside, and in back of City Center Mall, such that transit services would not be affected.

3.4.2.4 Hinckley

Existing Conditions

Local transit within Hinckley is focused on the Grand Casino, which is located approximately 3.0 miles east of the proposed Hinckley Station, as shown in **Figure 3-6**. The casino operates buses to shuttle passengers between Tobies Restaurant (a regional bus stop), local hotels, and the casino 24 hours per day, 7 days per week. Riders call to arrange drop-off and pick-up. Other than the casino hotel shuttles, there is no regularly scheduled local transit in Hinckley.

Figure 3-6: Hinckley Station



Arrowhead Transit, located in Pine City (14 miles south of Hinckley), is a dial a ride service, with a stop in Hinckley on Wednesdays and Thursdays and the first Fridays of the month. One-way fares for the service are \$2.40 (\$4.50 for Friday round trip service) and routes require at least five scheduled riders to operate. As noted in Section 3.4.1.1, Hinckley is also connected by intercity bus service to Duluth and Minneapolis.

Impacts

Operations

No impacts on transit service are anticipated. The NLX Project and facilities would support local transit connections at the proposed Hinckley Station. NLX riders arriving at the Hinckley Station would potentially increase demand for connections to Arrowhead Transit services, as well as the casino shuttle service. The Grand Casino has indicated they would provide shuttle service between the station and casino in coordination with the train schedule. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, jurisdictional agencies and the City of Hinckley, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Construction impacts on transit are not anticipated because there is currently no fixed-route transit service operating in the vicinity of the proposed station, or at any of the existing Hinckley-area roadway crossings of the NLX study area.

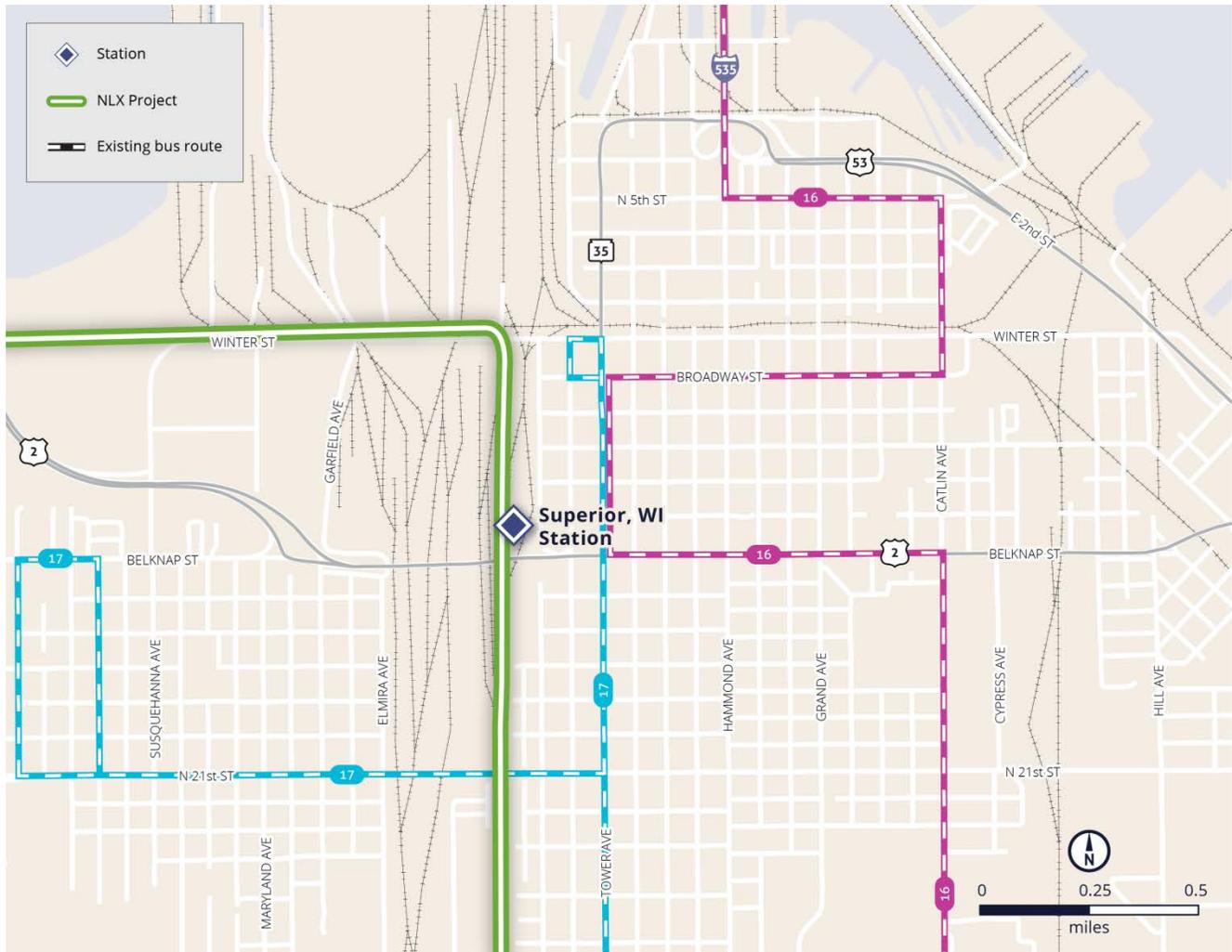
3.4.2.5 Superior, Wisconsin

Existing Conditions

The Duluth Transit Authority (DTA) provides transit services for the City of Superior, Wisconsin, via bus routes 16 and 17. Both of these fixed routes travel along Tower Avenue, located four blocks (0.14 mile) east of the proposed Superior, Wisconsin Station and within walking distance, as shown in **Figure 3-7**. DTA maps and schedules are available at www.duluthtransit.com/timetable.

DTA Route 16 connects downtown Duluth to Superior, Wisconsin, including East End Superior, Wisconsin. Route 16 provides 20 weekday trips to the Tower Avenue and 14th Street stop with spacing approximately every 30 minutes starting at 6:18 a.m. and ending at 7:08 p.m. for this stop. This route provides hourly weekend service starting at 8:12 a.m. on Saturday and 11:12 a.m. on Sunday and ending at 7:10 p.m. both days.

Figure 3-7: Superior, Wisconsin Station Area Transit



DTA Route 17 is primarily a north and south route along Tower Avenue connecting downtown Superior, Wisconsin, Billings Park and South Superior, Wisconsin with stops along Tower Avenue. Route 17 provides 17 weekday trips to the Tower Avenue and 14th Street stop with spacing less than 30 minutes during the rush hour and hourly off peak starting at 5:55 a.m. and ending at 6:27 p.m. On weekends, 11 trips run hourly to this stop starting at 8:15 a.m. and ending at 6:40 p.m.

Impacts

Operations

Local bus routes 16 and 17 would not be directly affected by the NLX Project. However, local bus services may modify routes or schedules to complement the NLX Project and improve multimodal connections. Bus service that would directly interchange with the trains would divert to the station and would need extra time included in route schedules to account for station service. The Superior, Wisconsin Station is designed to accommodate transit vehicles. As a result, both routes 16 and 17 may benefit from passengers arriving at the Superior, Wisconsin Station and using local transit to reach their final destinations within Superior, Wisconsin. Conversely, NLX passengers would be able to use local bus services to reach the Superior, Wisconsin Station. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, jurisdictional agencies and the City of Superior, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Construction impacts on transit are not anticipated as there is currently no transit service in the immediate vicinity of the proposed station.

3.4.2.6 Duluth

Existing Conditions

The DTA provides a system of 20 local bus routes throughout the city. The Downtown Transit Center located on West Michigan Street between West 2nd and West 3rd Avenues, serves as the system's central business district transit hub and is located 0.3 mile northeast of the proposed Duluth Station, as shown in **Figure 3-8**. None of the existing DTA routes serve Union Depot where the Duluth Station would be located. The nearest bus service operates on Superior Street, one block north of Union Depot. A DTA system map and routes and schedules are available at www.duluthtransit.com/riderguide/faresandpasses.

The NSSR is a seasonal attraction that operates out of the lower level of the historic Union Depot in Duluth. The NLX Project proposes to construct a new Duluth Station adjacent to the historic Union Depot, in place of the existing NSSR waiting and ticketing area. The new station would serve both NSSR and NLX passenger operations. See Section 3.3.2 for more information on NSSR service.

Figure 3-8: Duluth Station Area Transit



Impacts

Operations

The NLX Project provides an opportunity for future connections at the proposed Duluth Station, which would include a new drop-off and pick-up location along West Michigan Street for both local and regional bus. No impacts are anticipated on existing transit service and the NLX Project could encourage increased transit ridership for passengers arriving at or departing from the Duluth Station via transit. See Section 3.3.4.2 for discussion of operational impacts on NSSR service. Daily operations and maintenance activities that may

require temporary grade crossing closures are currently coordinated among BNSF, jurisdictional agencies and the City of Duluth, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

No construction impacts on transit are anticipated because existing routes currently use Superior Street, one block west of the proposed Duluth Station. See Section 3.3.4.2 for discussion of construction impacts on NSSR service.

3.4.3 Avoidance, Minimization and Mitigation Measures

The NLX Project would continue to avoid, minimize and mitigate impacts through final design. No mitigation measures would be required for Hinckley and Duluth, Minnesota, and Superior, Wisconsin station communities.

3.4.3.1 Intercity Regional Bus Service

Prior to construction, MnDOT would communicate with intercity bus providers to provide information on temporary crossing closures during construction.

3.4.3.2 Station Community Transit Service

Minneapolis

Prior to construction, MnDOT would coordinate construction activities with BNSF and Metro Transit to ensure that freight and commuter rail service are not impacted. MnDOT would negotiate agreements with BNSF and Metro Transit to complete platform construction and operate the NLX Project.

Coon Rapids

Prior to construction, MnDOT would coordinate with the City of Coon Rapids and Metro Transit to determine construction schedules that would minimize disruption of local traffic for intersection reconstruction at Foley Boulevard, the Foley Boulevard park and ride and the station access road.

Cambridge

Prior to construction, MnDOT would coordinate with Heartland Express to determine construction schedules that would minimize disruption of service routes.

3.5 Build Alternative – Traffic Circulation in Station Communities

3.5.1 Methodology

To assess the potential impacts on the local road network as a result of the NLX Project, a series of assumptions were made for each proposed station using the NLX train schedule and ridership data. The MnDOT ridership estimates (see **Appendix C**) were used to calculate the potential for additional vehicle trips to and from each station. Riders were converted to vehicle-trips based on the same modal split assumptions used in the ridership estimates. These included passengers that would drive themselves and park, those being dropped off and/or picked up by others, those using taxi or transit service if available, or those renting a vehicle. Passengers walking to and from the station were also considered, as were the potential for carpooling based on the number of business or leisure travelers from the ridership estimates.

The methodology focused on determining the greatest potential impact period, which generally occurs in either the morning or evening commuting times (peak hour). The vehicle trips anticipated for each station were added to the existing traffic in either the morning or the evening peak hour depending on which peak hour had the most riders. Riders were allocated to trains based on the proposed train schedule to determine if they would be arriving or departing a station during the peak hour. See **Appendix F** for ridership model results.

The NLX schedule was also used to determine the number of trains that would stop at a given station during the peak hour. This ranged from one to three trains per station per peak (see **Figure 3-9**). Each of these stops represents a point in time when vehicular traffic could increase in the vicinity of a station due to the NLX riders arriving and departing.

Figure 3-9: Proposed NLX Schedule

Read Down	7003	7007	7009	7013	Train	7002	7006	7010	7014	Read Up
	5:25	9:31	1:42	6:16	Duluth	11:10	3:21	7:55	12:01	
	5:39	9:45	1:56	6:30	Superior, Wisconsin	10:58	3:09	7:43	11:49	
	6:41	10:52	3:03	7:37	Hinckley	9:51	2:02	6:36	10:47	
	7:11	11:22	3:33	8:07	Cambridge	9:21	1:32	6:06	10:17	
	7:37	11:48	3:59	8:33	Coon Rapids	8:55	1:06	5:40	9:51	
	7:55	12:06	4:17	8:51	Minneapolis	8:35	12:46	5:20	9:31	
	2h 30m	2h 35m	2h 35m	2h 35m	Trip Time	2h 35m	2h 35m	2h 35m	2h 30m	

PM times in **bold**

The local traffic circulation, based on evaluation of the added vehicle trips for each station, is described in terms of both the added vehicles and trips from the model and a broader look at the existing local networks. The level of detailed analysis varies for each station as the contexts of the proposed stations vary greatly between the station cities. Potential impacts are discussed in the following sections.

The two proposed maintenance and/or layover facility site alternatives in Duluth and Sandstone were not included in this analysis as it is anticipated that relatively few additional trips would occur as a result of the small numbers of employees (three employees anticipated) who would be located at these facilities. In addition, maintenance and layover activities would likely occur outside of the normal peak traffic periods as the trains would be in service during those times (see **Appendix B** for more information on maintenance and layover facilities site analyses).

The traffic analysis also considered potential impacts from daily operations and construction for the NLX Project. NLX Project operations include regular daily operations and maintenance activities in the existing BNSF right of way described in Chapter 2. In general, impacts associated with operation and maintenance of NLX passenger service are expected to be similar to operating and maintaining the existing BNSF freight rail system. Construction impacts are temporary and related to anticipated typical construction activities described in Chapter 2 to install new and replace existing infrastructure, update signal systems and grade crossings, construct new stations and construct new maintenance and layover facilities.

3.5.2 Traffic Analysis

The following sections summarize the existing traffic conditions in each station community along the NLX study area and the potential impacts of the NLX Project on traffic circulation. The sections summarizing traffic circulation impacts under the Build Alternative in station communities considered all track, roadway, bridge, station and maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and short-term construction impacts as described in Section 3.5.1. Avoidance, minimization and mitigation measures are described in Section 3.5.3.

3.5.2.1 Target Field Station, Minneapolis

Existing Conditions

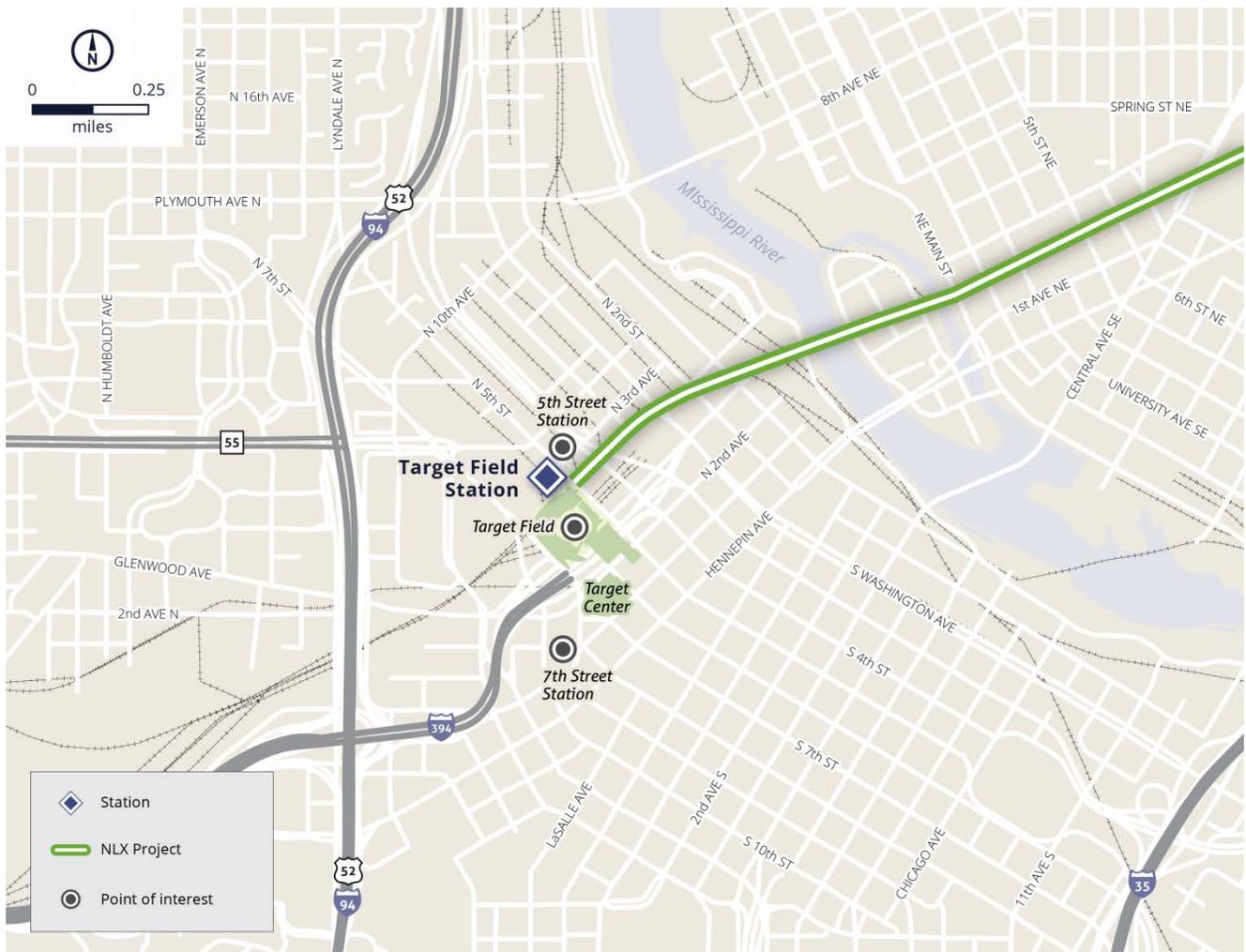
The existing Target Field Station is situated in the North Loop neighborhood of downtown Minneapolis and is accessed from the suburbs primarily via I-94, I-394 and MN 55 (Olson Memorial Highway). The area features a dense transportation network that accommodates bicyclists, pedestrians and vehicular travel. The immediate surroundings include trails, transit service (bus and rail), surface streets and the nearby interstate system.

Target Field Station is located approximately 0.5 mile northeast of the I-94 and I-394 interchange, as shown in **Figure 3-10**. From that interchange, I-394 travels directly toward and past the station, running along the southeast side of the block and passing under several of the downtown arterials. Entrance and exit ramps to the freeway are located within a block of the station.

West of Target Field Station, North 7th Street is a minor arterial and surface street, which provides access to and from I-94, crosses over I-394, and then runs along the southwest side of Target Field. This is a four-lane divided highway with a bicycle lane that extends from the core of downtown across I-94 to North Minneapolis.

On the northeast side of Target Field Station, North 5th Street shares right of way with the Metro Transit Blue and Green Lines. This street also provides access to the Target Field Station underground parking ramp with convenient connections to and from other area arterial roadways.

Figure 3-10: Target Field Station



On the southeast side of the Target Field Station are 2nd and 3rd Avenues, with 3rd Avenue North located directly adjacent to Target Field and 2nd Avenue North one block southeast. While these provide less capacity than North 7th Street, I-394 runs between the two with several exit and entrance ramps on these streets that provide access in and out of the area.

Impacts

Operations

Target Field Station is projected to have two trains during the morning peak (one arriving, one departing) and two trains during the evening peak (one arriving, one departing). The trips added from these five trains range from approximately 250 for the 8:40 a.m. train with passengers headed northbound out of Minneapolis to approximately 690 trips generated by the 5:20 p.m. northbound train.

The predicted NLX ridership and associated uptick in vehicular volumes surrounding Target Field Station would not have noticeable effects on local traffic circulation. The existing high-capacity, multimodal urban transportation network would accommodate the approximately 690 potential trips generated by the NLX Project during the PM peak period. Vehicles arriving at and departing from the station are coming in and out at various locations on the local street grid, which has adequate capacity to accommodate station drop-off and pick-up traffic. The extensive downtown grid network east of Target Field of mostly one-way streets¹ have average annual daily traffic volumes (AADTs) ranging from 7,500 to more than 20,000. Vehicle trips to and from nearby parking garages would also be distributed across the street grid. Of the numerous parking options in the area, there are three public off-street garages with a combined total of more than 5,000 spaces that are conveniently located in the immediate vicinity of the station. All the garages have multiple local-street and arterial routes leading to and from the area. The existing and planned multimodal services and associated parking provide ample circulation capacity for the station site for arrivals and departures.

Daily operations and maintenance activities would occur at the track level, which is separate from the street network, and no operations impacts from the NLX Project are anticipated. Specifically, trains that are parked in the station for loading or unloading would not block any grade crossings and therefore would not have an impact on traffic or the operation of emergency vehicles.

Construction

Construction is anticipated to occur at the track and platform level, which are separate from the street network. The rail lines in the general vicinity of Target Field are also separate from the local street network. No impacts on traffic circulation and access are anticipated during the construction period.

¹ A pair of one-way streets generally has more capacity than a pair of two-way streets with an equal number of lanes.

3.5.2.2 Coon Rapids

Existing Conditions

The proposed Coon Rapids Station is located in the City of Coon Rapids, a northern suburb of the Minneapolis area. The station is surrounded by several suburban neighborhood areas. Thus, the existing roadway network is comprised of a series of arterials and connector roadways favoring travel by automobile as the primary travel mode. The proposed station sits at Foley Boulevard, an arterial street that varies between a four-lane undivided, four-lane divided, and five-lane with two-way-left-turn-lane cross-section near the station location. Using the most recent data from year 2015, the AADT volumes are 4,050 west of and at the station and 7,200 east of the station. Considering the local streets and the surrounding terrain, primary access to the station by automobile, transit or walking is via Foley Boulevard.

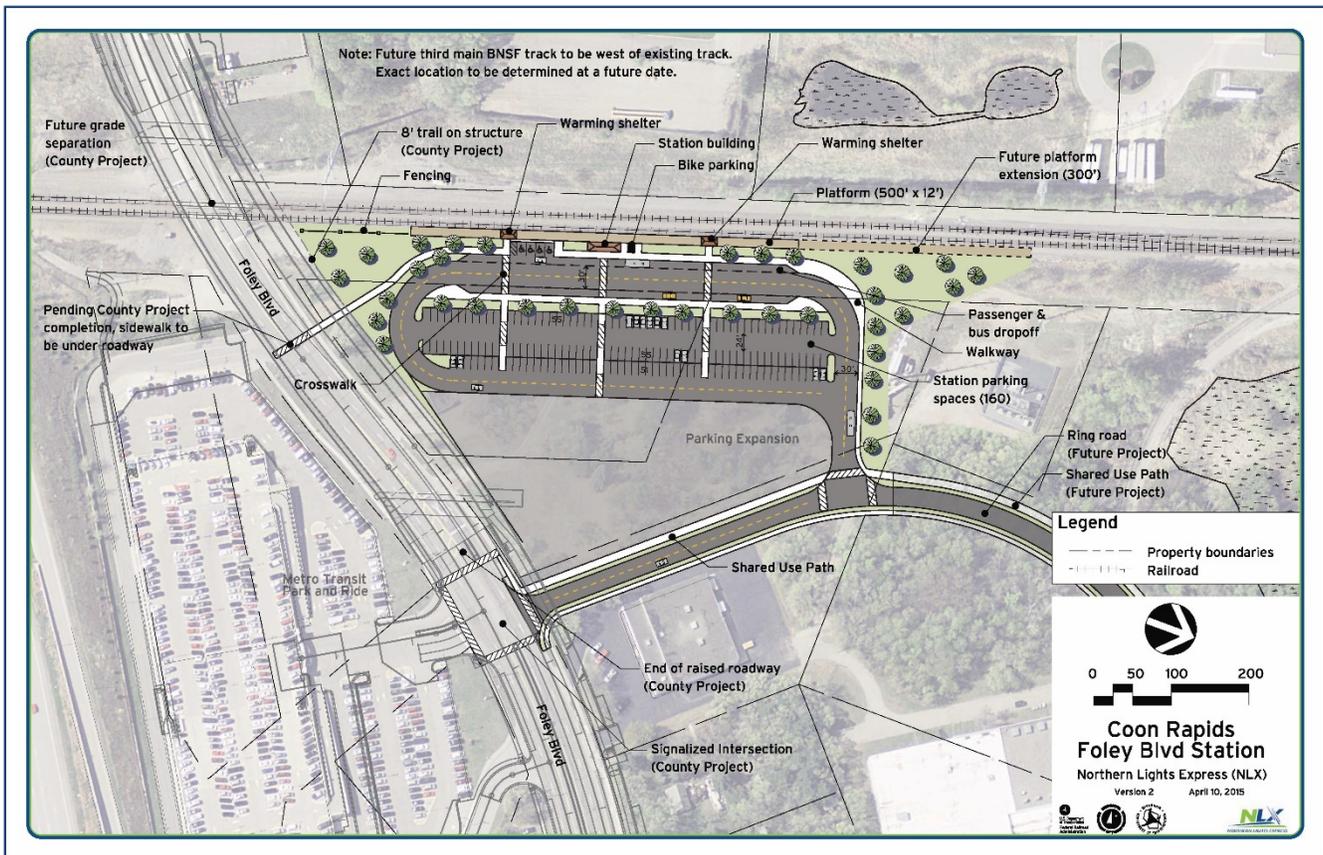
Two similar arterials intersect Foley Boulevard nearby, and would provide access to the area before eventually entering the station via Foley Boulevard. These are East River Road, which intersects Foley Boulevard approximately 0.2 mile west of the proposed NLX station, and Coon Rapids Boulevard, which intersects Foley Boulevard 0.4 mile east of the station. Access points to MN 610 (both entrances and exits) are located within 0.5 mile of the proposed station.

The NLX station would be configured to complement the following independent city and county funded projects, as shown in **Figure 3-11**.

Anoka County proposes to construct a grade-separation of Foley Boulevard over the BNSF railroad tracks and is not part of the NLX Project. The overpass would allow for construction of a pedestrian connection between the NLX station and the existing Foley Boulevard park and ride and bus transit station. The existing intersection at the Foley Boulevard park and ride and Foley Boulevard would be upgraded with a traffic signal as part of the Foley Boulevard construction project. The Anoka County grade-separation project is not currently funded or scheduled for construction.

The City of Coon Rapids proposes to construct a ring road extending north from the Foley Boulevard intersection to the Coon Rapids Station that would also serve any future development in the area. The ring road project is not currently funded. Construction of portions of the road may occur when the Anoka County grade-separation project is funded, or as development occurs in the vicinity of the station.

Figure 3-11: Coon Rapids Station Design Concept



Impacts

Operations

The proposed NLX schedule has four total trains arriving at Coon Rapids during either peak. Two trains would arrive in the morning and two in the evening. The highest passenger presence would occur for the northbound train arriving at 5:40 p.m., which would add up to an estimated 340 vehicular trips to the network. All of these vehicles would use the Foley Boulevard intersection.

Foley Boulevard, with its four- and five-lane cross-sections, would have capacity to accommodate the additional traffic to and from the station. A four-lane highway with characteristics similar to Foley Boulevard in the vicinity of the station, typically can accommodate an annual average traffic volume as high as 33,350 AADT before operations become unacceptable. Section 3.5.2.2 notes that the existing AADT for Foley Boulevard is

less than 10,000. Therefore, no impacts on area roadways are expected as a result of the NLX station operations.

Signal design and intersection geometry at the Foley Boulevard and ring road intersection would be determined from a detailed traffic study conducted as part of the final design and construction of the station. MnDOT would coordinate with both Anoka County and the City of Coon Rapids to design the intersection and traffic signalization to accommodate station traffic. If the proposed grade-separation or ring road project (independent of the NLX Project and not currently funded) is not constructed in advance of station construction, MnDOT would coordinate with the City of Coon Rapids to develop an agreement regarding signal installation and to construct an access road from the Foley Boulevard intersection to the station.

If the grade separation proposed by Anoka County is in place prior to implementation of the NLX Project, there would be no grade crossing impacts. If the Foley Boulevard grade separation is not in place, the NLX platform would be located such that trains parked in the station for loading or unloading would not block any grade crossings either through the physical blocking of the crossing by the train equipment or by activating the grade crossing warning devices and therefore would not have an impact on traffic or the operation of emergency vehicles. Maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, the City of Coon Rapids and Anoka County, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Construction impacts on traffic in the vicinity of the station would be temporary and similar to those already discussed in Section 3.4.2.2.

3.5.2.3 Cambridge

Existing Conditions

The existing traffic circulation around the Cambridge Station, located in the City Center Mall, was studied due to the congestion that currently occurs during peak hours. Turning movement counts were conducted for three intersections in the mall area:

- Main Street North and 3rd Avenue Northeast
- Main Street North and 2nd Avenue Northeast
- 1st Avenue East and Buchanan Street

These three intersections, as well as the Main Street North and 1st Avenue East intersection, were evaluated using the Synchro model.

To represent the worst case scenario for vehicular traffic volumes, it was assumed that the evening peak hour traffic was present at each intersection. The existing conditions showed that while some delay was occurring in the westbound direction of the 1st Avenue East and Buchanan Street intersection, both of the signalized intersections (Main Street and Buchanan Street) were performing at a Level of Service (LOS) C, which represents acceptable performance. The westbound approach of the 1st Avenue East and Buchanan Street intersection operates at LOS D, with estimated vehicle queues occasionally extending to and beyond the at-grade rail crossing. MnDOT considers LOS D an acceptable operation in urban settings. The Main Street and 2nd Avenue Northeast and 3rd Avenue Northeast intersections are two-way-stop-controlled, with dedicated left-turn lanes on Main Street, that currently operate with minimal delays.

Impacts

Operations

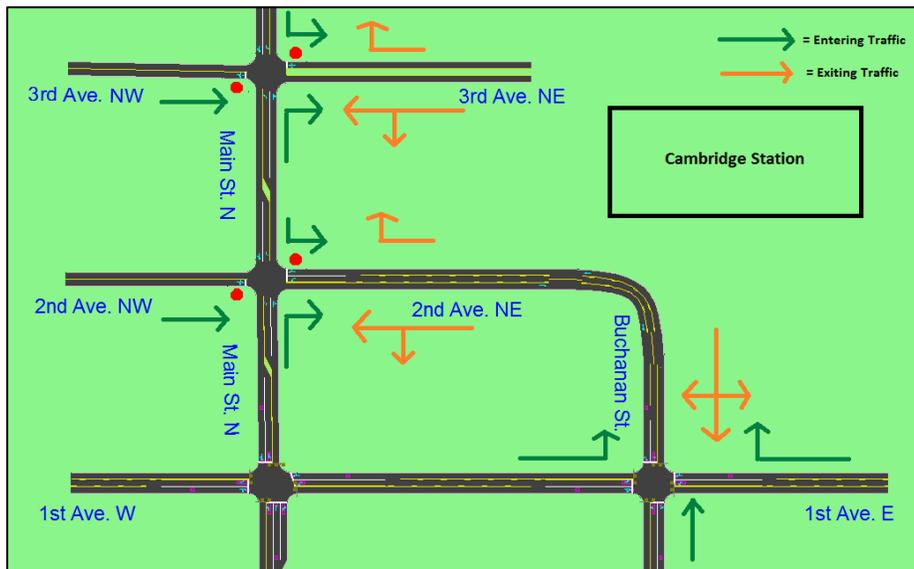
After verifying the existing traffic network is performing at an acceptable level, the next step combined these results with the results from the ridership model. **Appendix G** shows the detailed model results. Cambridge is projected to have three trains in the morning peak (two southbound, one northbound) and one northbound train during the evening peak. The 1st Avenue East and Buchanan Street intersection represents the worst case conditions when compared to the other intersections and times of day; therefore, the results from the PM model represented the greatest traffic impact potential and were applied to the network.

The northbound train would arrive at Cambridge at 6:06 p.m., adding approximately 320 vehicles and 470 vehicle trips to the road network surrounding the station. The peak hour (highest traffic) measured at the 1st Avenue East and Buchanan Street intersection occurred between 4:15 p.m. and 5:15 p.m. To represent a worst-case scenario and to prepare for potential scheduling changes, the ridership model results for the 6:06 p.m. train were applied to the evening peak hour traffic volumes measured at 4:15 p.m. (Note that the ridership model uses projections for 2040, while the turning movement counts were performed in 2015).

To add the NLX-based vehicles to the PM Synchro model, it was assumed that access to the station would be available at the 3rd Avenue Northeast, 2nd Avenue Northeast and Buchanan Street intersections. To enter the station parking lot, a vehicle must travel eastbound on 3rd Avenue Northeast, eastbound on 2nd Avenue Northeast, or northbound on Buchanan Street. Alternatively, traveling along these roads in the opposite direction are the only ways to leave the proposed station parking lot, as illustrated in **Figure 3-12**. The turning movement counts that resulted in vehicles using these entering and exiting approaches were used to distribute the added trips proportionally (e.g., 50 percent of the entering volume travels north on Buchanan

Street. Sixty-nine percent of those vehicles using Buchanan Street make the westbound-to-northbound right turn from 1st Avenue East, 19 percent make the eastbound-to-northbound left turn, and 12 percent travel straight northbound through the intersection on Buchanan Street).

Figure 3-12: Cambridge Station Entering and Exiting Turning Movements



To account for vehicles and trips entering and exiting the station, it was assumed that the added vehicles would all enter the station parking lot during the road network peak. These vehicles were all distributed to the entering and exiting routes as described above. For Cambridge during the PM peak, this resulted in approximately 150 vehicles entering and 320 vehicles exiting. These vehicles were then distributed to the relevant turning movements in the Synchro model according to the existing proportions. **Figure 3-13** shows turning movements at modeled intersections with existing PM peak hour traffic volumes combined with projected trips associated with the NLX Project.

Figure 3-13: 2014 Counts with Forecasted NLX Vehicles Added (PM Peak Hour)



With the vehicles added at the 1st Avenue East and Buchanan Street intersection, and after re-optimizing the signal timings, the intersection would maintain the original LOS C in the PM peak hour, although the average delay would increase by over 6 seconds per vehicle. More green time was given to the Buchanan Street southbound movements due to the increased demand for vehicles exiting the station and mall area. The delays for vehicles on the westbound approach on 1st Avenue East would increase by over 10 seconds per vehicle, with corresponding increases in queue lengths, although it would continue to operate at LOS D. According to the current traffic counts and the Synchro model, westbound vehicle queues are currently extending into the existing BNSF railroad crossing located 230 feet east of the intersection. During the evening peak hour, westbound traffic currently extends 280 feet on average (50 feet past the crossing). Additional NLX station

traffic would lengthen the average westbound queue to 364 feet (130 feet past the crossing). The added NLX station traffic would not substantially affect traffic operations compared to existing conditions, but Section 3.5.4.2, discusses potential measures to improve traffic queues at the rail grade crossing for either the existing condition or with added NLX traffic.

The two-way-stop-controlled intersections on Main Street, at 2nd Avenue Northeast and 3rd Avenue Northeast would continue to operate at an acceptable LOS. Delays to traffic exiting the station and mall area at 2nd Avenue Northeast or 3rd Avenue Northeast would increase by a few seconds per vehicle due to additional NLX-generated traffic, and remain below 20 seconds per vehicle on average. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Cambridge, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

The NLX platform at the Cambridge Station would be located such that trains parked in the station for loading or unloading would not block any grade crossings either through the physical blocking of the crossing by the train equipment or by activating the grade crossing warning devices and therefore would not have an impact on traffic or the operation of emergency vehicles. Maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, MnDOT, the City of Cambridge and Itasca County, as needed, and no additional impacts from the NLX Project are anticipated.

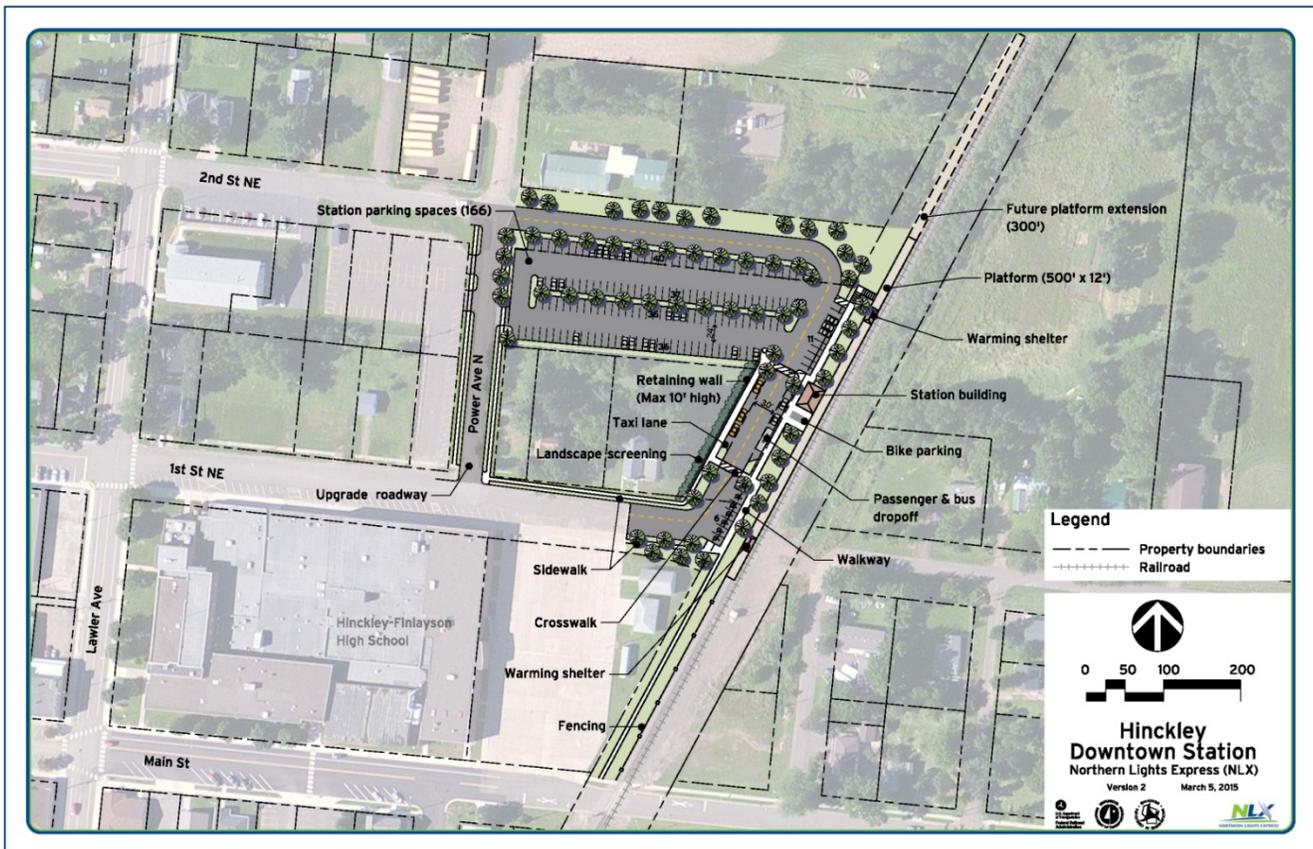
3.5.2.4 Hinckley

Existing Conditions

Turning movement counts were conducted in the proposed Hinckley Station area, shown in **Figure 3-14**. The station would be located adjacent to the Hinckley-Finlayson High School and Trinity Episcopal Church, and within two blocks of downtown Hinckley. Traffic volumes were gathered at the following two intersections:

- Lawler Avenue North and 1st Street Northeast
- Lawler Avenue North and 2nd Street Northeast

Figure 3-14: Hinckley Station Design Concept



Indicative of traffic patterns near schools, the peak hours for both intersections occur between 7:30 a.m. and 8:30 a.m. and 2:45 p.m. to 3:45 p.m. 1st Street Northeast has higher volumes throughout the day due to its location next to the school and within one block of Main Street businesses. There is also public parking along the south side of 1st Street Northeast between Lawler Avenue and Power Avenue North. During the morning peak, turning movements are distributed evenly at both Lawler Avenue and 1st Street Northeast and Lawler Avenue and 2nd Street Northeast intersections, with the exception being a lower westbound volume at both intersections. It appears that student drop-offs do not strongly influence turning movements at the two intersections and it is likely that student drop-off locations are distributed throughout the area. In the afternoon peak, westbound volumes are slightly higher, but there are very few vehicles entering these eastern approaches at either intersection. There is a parking lot attached to the eastern edge of the school, with entrances to both Main Street and 1st Street Northeast, and this is likely the driving factor behind incoming and outgoing peak volumes on the eastern approaches.

Generally, the volumes measured here were low and the intersections are both two-way-stop-controlled. The network is performing satisfactorily, and with much of the volume being school related, substantial volume growth is not anticipated. For these reasons, it was deemed unnecessary to model the network in Synchro for further quantitative analysis.

Impacts

Operations

Vehicles arriving at the proposed Hinckley Station would be able to enter via 1st Street Northeast, 2nd Street Northeast, or Power Avenue North. As part of the proposed NLX station improvements, both 1st Street Northeast and 2nd Street Northeast would be extended to provide a continuous through lane in each direction in and out of the NLX station parking lot. Power Avenue North would also be resurfaced between 1st Street Northeast and 2nd Street Northeast as part of the proposed parking lot and station construction.

The proposed NLX schedule shows two trains arriving during the morning peak, at 6:41 a.m. and 9:51 a.m. With the heaviest portion of existing morning traffic peak period occurring at approximately 8:00 a.m., the added vehicles due to the NLX Project would not conflict with the heaviest school traffic. In the evening, evening peak trains are expected to arrive from opposite directions at 3:03 p.m. and 6:36 p.m. The heaviest portion of the afternoon traffic peak hour would occur at approximately 3:15 p.m. The only train arriving close to the existing PM peak would arrive at 3:03 p.m., which would still avoid most school-related traffic. Although traffic count data were not available for this time of day, base traffic in the area would be less than the peak traffic, and traffic circulation is not expected to be substantially impacted by station traffic. Upon implementation of the NLX Project, traffic in the vicinity of the NLX station and the high school would be monitored, and if necessary, there would be coordination between the school and MnDOT to minimize potential traffic impacts associated with train and school schedules.

The NLX platform at the Hinckley Station would be located such that trains parked in the station for loading or unloading would not block any grade crossings either through the physical blocking of the crossing by the train equipment or by activating the grade crossing warning devices and therefore would not have an impact on traffic or the operation of emergency vehicles.

Maintenance activities that may require temporary grade crossing closures are currently coordinated among BNSF, the City of Hinckley and Pine County, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Impacts during station construction would include temporary closure or lane reductions to resurface Power Avenue North. The extension of 1st Street Northeast would not have short-term construction impacts on traffic circulation as closure would not be required. Some informal parking that occurs in front of Trinity Church along 1st Street Northeast would be eliminated or reconfigured. Currently, 2nd Street Northeast provides access to four garage doors along three metal structures north of the street. A utility also has access to equipment from 2nd Street Northeast. Access to buildings on the north side of 2nd Street Northeast may be temporarily disrupted during construction. The City-owned building located on the south side of 2nd Street Northeast would be acquired as part of station construction.

Railroad infrastructure construction impacts on traffic in the vicinity of the station may require temporary rail grade crossing closures.

3.5.2.5 Superior, Wisconsin

Existing Conditions

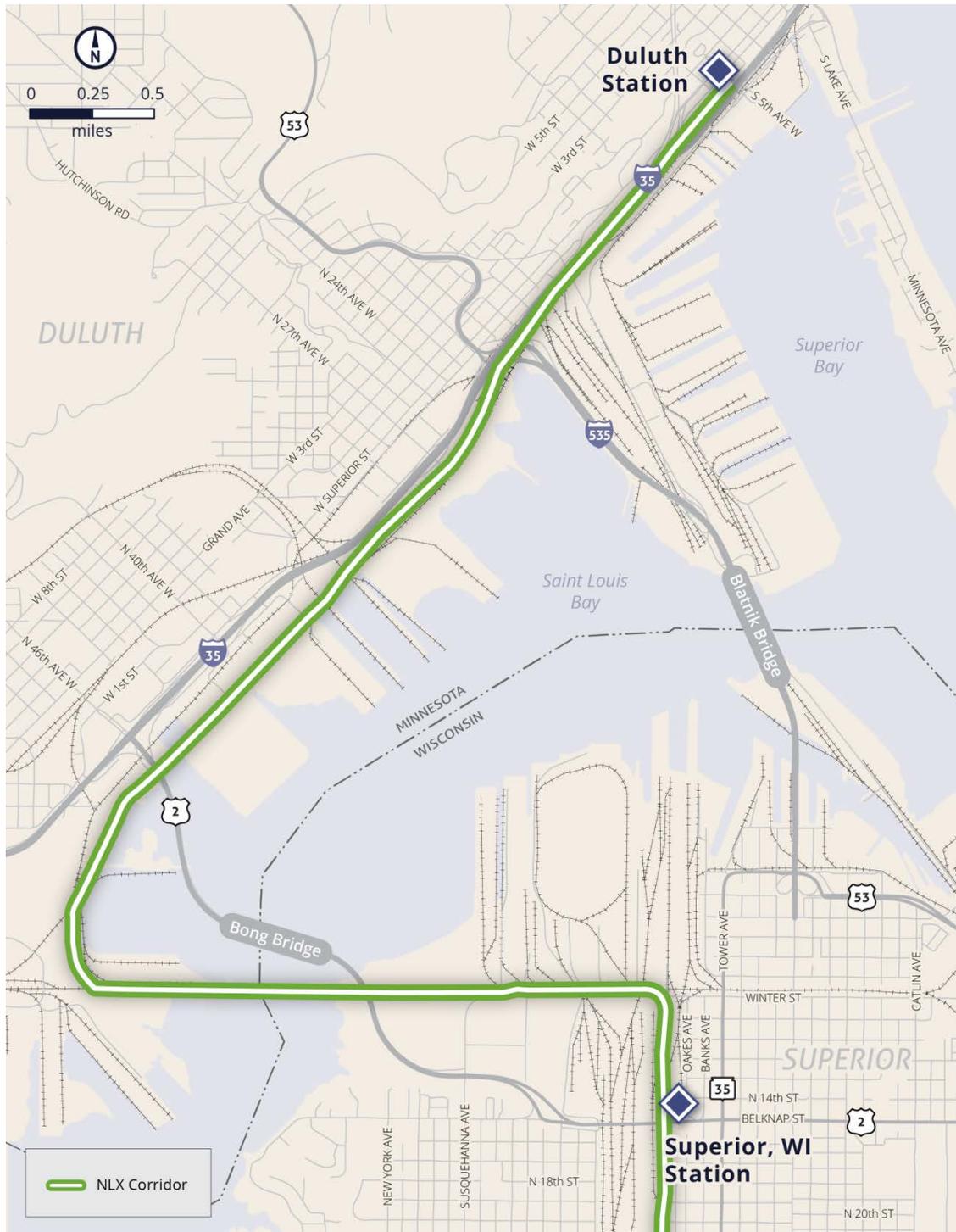
The proposed Superior, Wisconsin Station is located on the west side of downtown Superior, Wisconsin at the Oakes Avenue and North 14th Street intersection, just north of U.S. 2 (Belknap Street), which in this location is a four-lane undivided highway bridging the railroad yards. Access and general travel throughout the city is dominated by two arterials, U.S. 2 (east and west) and Tower Avenue (WIS 35 [north and south]). Tower Avenue (WIS 35), intersects Belknap Street (U.S. 2) two blocks east of the proposed Superior, Wisconsin Station location.

Impacts

Operations

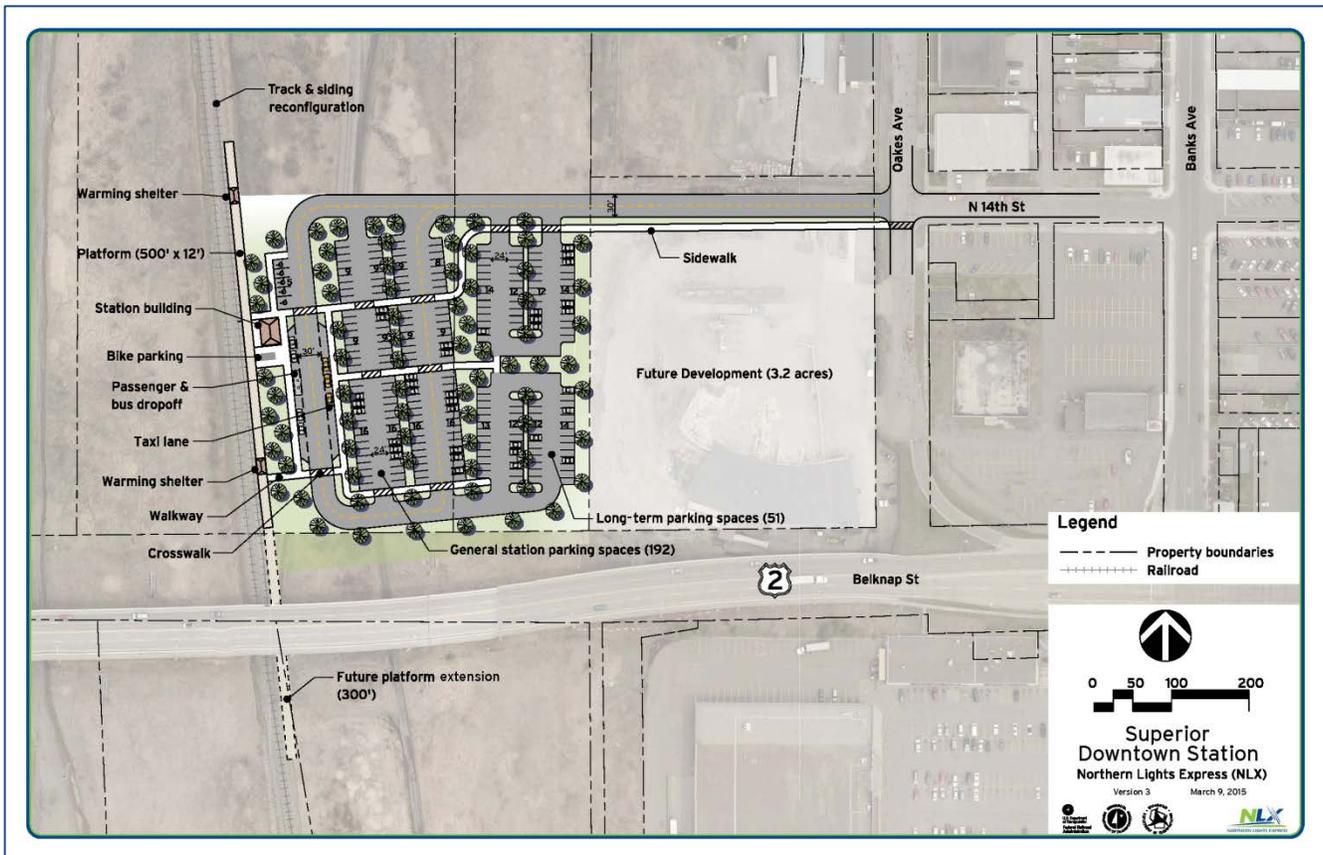
Due to the expected NLX travel time between Duluth and Superior, Wisconsin and the ease of parking at the proposed Superior, Wisconsin Station, it is anticipated that a large proportion of Duluth passengers may drive to the Superior, Wisconsin Station. From Duluth, Minnesota drivers would likely use either U.S. 2 (Richard Bong Memorial Bridge) or I-535 and U.S. 53 (Blatnik Bridge) connecting Minnesota with Wisconsin, as shown in **Figure 3-15**. Drivers arriving via U.S. 2 would turn onto Banks Avenue to North 14th Street. Drivers arriving from points north would likely use streets between Winter Street and North 14th Street to drive to the station via Oakes Avenue or Banks Avenue.

Figure 3-15: Duluth and Superior, Wisconsin Map



The entrance to the proposed Superior, Wisconsin Station parking lot would be at the North 14th Street and Oakes Avenue intersection where a new west connecting road to the station would be constructed, as shown in **Figure 3-16**. Because of existing turn restrictions on local streets in the area, some vehicles would travel an extra block or two on adjacent streets to access and egress the station.

Figure 3-16: Superior, Wisconsin Station Design Concept



The Superior, Wisconsin Station would have two departing southbound trains during the peak periods (one in the morning and one in the evening). The evening peak of approximately 310 trips for the 6:30 p.m. train represents the highest potential traffic impact at the station.

WisDOT is currently in final design for a project to reconstruct U.S. 2 (Belknap Street) from Banks Avenue to the east. Construction is scheduled to take place in 2017 and 2018. This project will improve Belknap Street, including its signalized intersections at Banks Avenue and Tower Avenue (WIS 35), to modern standards, with updated geometrics and signal timing to accommodate current and projected future volumes. Current volumes

at the U.S. 2 and Tower Avenue intersection range between 7,800 AADT for westbound traffic, to 18,600 AADT for southbound traffic. The year 2036 forecasted traffic volumes range at the intersection is between 9,200 AADT for westbound traffic, to 20,500 AADT for southbound traffic. Due to the station's location near the downtown Superior, Wisconsin street grid network, the reconstruction of U.S. 2 (Belknap Street), and the proximity to the interstate system access points, it is anticipated that the local road network would be able to accommodate the extra 310 vehicle trips generated by the proposed Superior, Wisconsin Station.

Daily operations and maintenance activities would occur at the track level, which is separate from the street network, and no operations impacts from the NLX Project are anticipated. Specifically, trains that are parked in the station for loading or unloading would not block any grade crossings because there are no grade crossings in the vicinity and therefore would not have an impact on traffic or the operation of emergency vehicles.

Maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Superior, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Construction at the North 14th Street and Oakes Avenue intersection may require short-term street closure in the vicinity of the intersection and may require short-term traffic detours to the surrounding street grid. Station construction would not impact local traffic operations. The rail lines in the general vicinity of the Superior, Wisconsin Station are separate from the local street network.

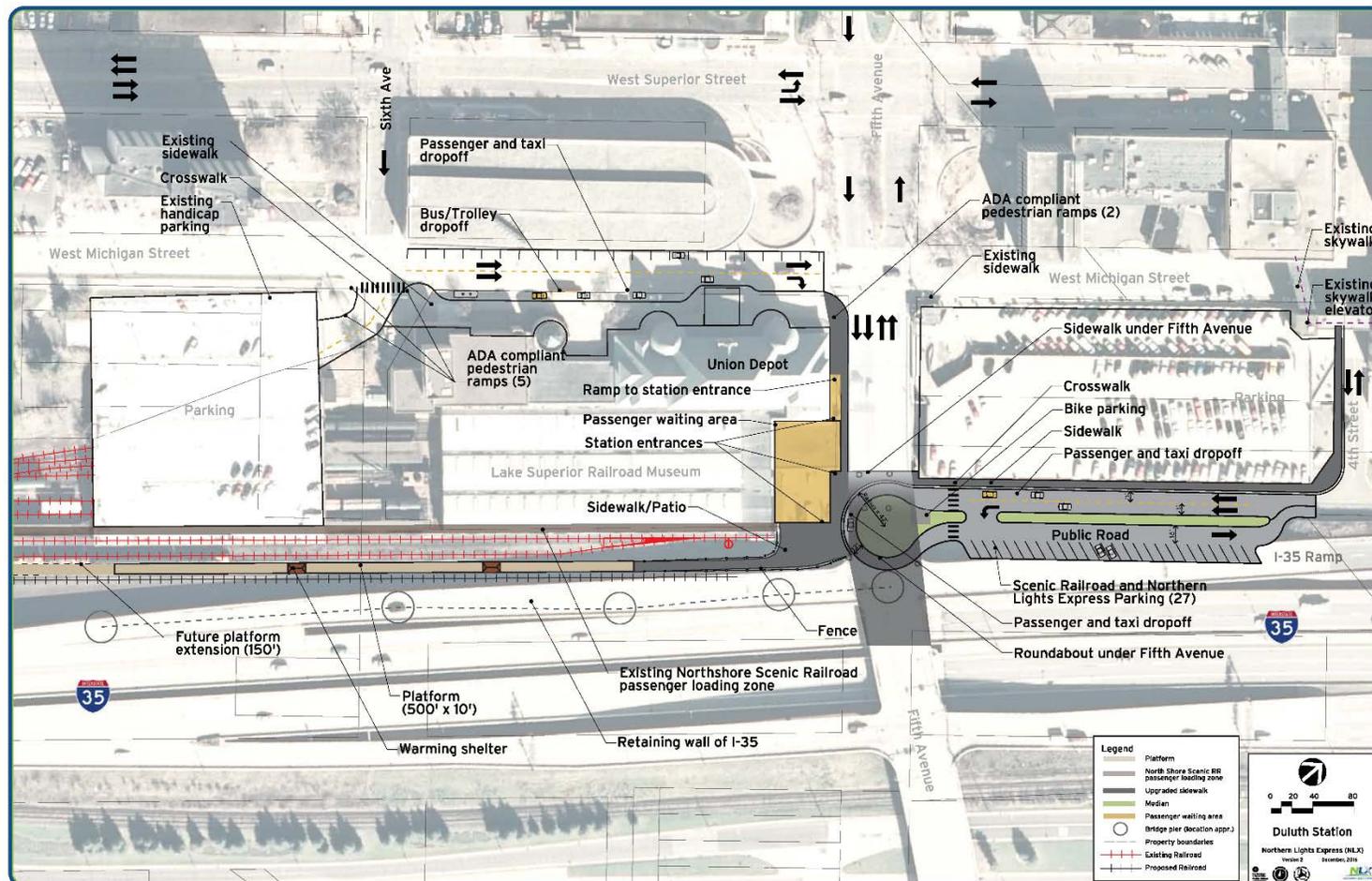
3.5.2.6 Duluth

Existing Conditions

I-35 travels north and south directly past the proposed Duluth Station along its southeast side, as shown in **Figure 3-17**, with entrance and exit ramps located adjacent to the station on 5th Avenue West. 5th Avenue West crosses over I-35, acting as the main connection between the Duluth Central Business District to the recreational area south and east of the interstate. The street features several closely spaced signalized intersections, with one at each of the interstate ramps and one at West Michigan Street and West Superior Street.

The signalized West Michigan Street and 5th Avenue West intersection also borders the north side of the proposed Duluth Station and the historic Union Depot building. At this location, West Michigan Street is a one-way street with traffic traveling only in the northeast direction, featuring on-street, metered parking across from the historic Union Depot building. There is also a pull-out area for drop-off and pick-up on West Michigan Street at the historic Union Depot building used primarily during events.

Figure 3-17: Duluth Station Design Concept



Impacts

Operations

Between 6th and 5th Avenues, the NLX Project would provide a taxi-lane, bus and trolley drop-off area on West Michigan Street. Travelers arriving from the south on I-35 can exit directly onto Michigan Street, drop-off and pick-up passengers in a dedicated space in front of the historic Union Depot, and make a right turn to return to I-35. Travelers from the north could use the existing street grid southbound to South 6th Avenue West then turn onto Michigan Street to drop-off and pick-up passengers in a similar manner.

The existing approach on the northeast side of the station (below grade under 5th Avenue) would be reconstructed as part of the NLX Project to provide additional access near the new station entrance. The lower level drop-off and pick-up point would be used primarily for taxis and cars as the turning radius would not be sufficient for buses due to the location of the 5th Avenue and I-35 bridge piers. This inbound roadway would be turned into a public two-lane road with a cul-de-sac at the end for easy passenger drop-off and pick-up, featuring bicycle parking and passenger waiting areas. The outbound approach would consist of one through lane with a perpendicular parking lane.

Two trains are scheduled to depart the Duluth Station during peak periods, one in the morning and one in the evening. Based on vehicular trips generated from ridership estimates, the evening peak hour would have the greatest potential to affect traffic. The southbound train at 6:16 p.m. would add up to approximately 290 vehicular trips. The volume increase surrounding the station is not expected to have negative impacts on local traffic circulation as the Duluth Station's location within the downtown grid and proximity to the regional arterials and interstate system would provide the capacity required to accommodate the additional vehicles.

Daily operations and maintenance activities would occur at the track level, which is separate from the street network, and no operations impacts from the NLX Project are anticipated. Specifically, trains that are parked in the station for loading or unloading would not block any grade crossings because there are no grade crossings in the vicinity and therefore would not have an impact on traffic or the operation of emergency vehicles.

Maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Duluth, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

No substantial construction is anticipated on the local street grid. Station construction would be removed from the existing street grid, avoiding impacts on traffic operations. Constructing the proposed public road and

drop-off and pick-up area at the proposed Duluth Station track level would not affect local street traffic operations because the existing area is primarily used for access to the existing historic Union Depot and a north parking ramp. Construction may require temporary access disruptions of the parking ramp and Union Depot. The rail lines in the general vicinity of the Duluth Station are separate from the local street network. No impacts on traffic circulation and access are anticipated during the construction period.

3.5.3 Crossings

A total of 165 public and private railroad crossings of the NLX study area occur between the proposed Target Field and Duluth Stations. MnDOT evaluated crossings for existing geometric conditions and to determine the level of improvements, including rail grade crossing warning devices, which would provide safe crossings of the NLX study area (see Chapter 2 Alternatives, Section 2.4.2.7). The NLX Project would not close any public or private crossings. The NLX Project operations would not result in substantial impacts on traffic operations at crossings throughout the NLX study area. Crossings would be closed for approximately 40 to 60 seconds to allow passenger trains to pass through the crossing. The brief closure would not cause substantial traffic delays. Emergency vehicle response time would not be substantially impacted. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and local jurisdictions, as needed, and no additional impacts from the NLX Project are anticipated.

Construction impacts for crossing reconstruction or installing new warning devices may require temporary closures and detours. Prior to construction, MnDOT would coordinate with individual communities to determine appropriate measures to minimize traffic disruption through construction schedules, phasing and, as needed, detours to route traffic around temporary closures (see **Appendix E** for construction proposed at each crossing).

3.5.4 Avoidance, Minimization and Mitigation Measures

The NLX Project would continue to avoid, minimize and mitigate impacts through final design. No mitigation measures would be required for Target Field Station in Minneapolis.

3.5.4.1 Coon Rapids

Prior to construction, MnDOT would coordinate with the City of Coon Rapids to determine construction schedules that minimize disruption to local traffic for intersection reconstruction at Foley Boulevard and the station access road and the Foley Boulevard grade crossing.

3.5.4.2 Cambridge

As part of final design and prior to construction, MnDOT would conduct a detailed analysis of the 1st Avenue East and Buchanan Street intersection. The queues occurring at the BNSF rail grade crossing occur regardless of the NLX Project, although NLX traffic could add to the queues. MnDOT would work with the City of Cambridge to determine additional appropriate actions to improve traffic operations at this location. A potential geometric improvement to the intersection to be further studied would be the addition of a dedicated westbound right-turn lane onto Buchanan Street, which would reduce the vehicle delays and queues for westbound vehicles and improve overall intersection operations.

Prior to construction, MnDOT would coordinate with the City of Cambridge to determine construction schedules that minimize disruption to local traffic for rail grade crossing reconstruction.

3.5.4.3 Hinckley

Prior to construction, MnDOT would coordinate with the City of Hinckley to determine appropriate construction phasing along Powers Avenue North to minimize traffic impacts. The surrounding street grid provides alternate access routes. MnDOT would also coordinate with Trinity Church and the City to determine parking needs along 1st Street Northeast, as well as maintaining access to structures along 2nd Avenue Northeast. Upon implementation of the NLX Project, MnDOT would coordinate with the City of Hinckley to monitor traffic in the vicinity of the NLX station and Hinckley-Finlayson High School and, if necessary, coordinate with the high school to minimize potential traffic impacts associated with train and school schedules.

Prior to construction, MnDOT would coordinate with the City of Hinckley to determine construction schedules that minimize disruption to local traffic for rail grade crossing reconstruction.

3.5.4.4 Superior, Wisconsin

Prior to construction, MnDOT would coordinate with the City of Superior, Wisconsin to determine construction schedules that minimize disruption to local traffic for intersection reconstruction at North 14th Street and Oakes Avenue.

3.5.4.5 Duluth

Prior to construction, MnDOT would coordinate with the City of Duluth to determine appropriate construction phasing along the existing access road to the parking ramp and Union Depot to maintain access.

3.5.4.6 Crossings

Prior to construction, MnDOT would coordinate with individual communities to determine appropriate measures to minimize traffic disruption through construction schedules, phasing and, as needed, detours to route traffic around temporary closures

3.6 Build Alternative – Bicycle and Pedestrian Facilities

The NLX Project has the potential to influence multiple modes of transportation within the station communities. This section focuses on the bicycle and pedestrian facilities located within the cities where an NLX station is proposed, as well as along the NLX study area where proposed improvements could impact the existing crossings of the rail line. An internet search was conducted for information on existing bicycle and pedestrian facilities. The focus of the research was on facilities and general accessibility within 0.5 mile of proposed station locations. Trail maps for the station cities are provided in **Appendix H**. NLX Project operations include regular daily operations and maintenance activities in the existing BNSF right of way described in Chapter 2. In general, impacts associated with operation and maintenance of NLX passenger service are expected to be similar to operating and maintaining the existing BNSF freight rail system. Construction impacts are temporary and related to anticipated typical construction activities described in Chapter 2 to install new and replace existing infrastructure, update signal systems and grade crossings, construct new stations and construct new maintenance and layover facilities.

3.6.1 Station Community Bicycle Routes and Pedestrian Analysis

Generally, there are a wide range of bicycle and pedestrian facilities in the vicinity of the Target Field Station and Duluth Station due to their urban context. Cambridge, Hinckley and Superior, Wisconsin Stations are located within or very close to their respective downtowns, also contributing to high walkability. The volume of street traffic within these communities allows for bicycling to and from the stations. The Coon Rapids Station is located along Foley Boulevard, which has sidewalks and striped bicycle lanes, though other amenities are located further from the station. All of the stations would include bicycle parking and warming shelters for passengers arriving via these modes of transportation. More detailed discussion of bicycle and pedestrian facilities surrounding each proposed NLX station follows.

The sections summarizing bicycle and pedestrian impacts under the Build Alternative in station communities considered all track, roadway, bridge, station and maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and

short-term construction impacts as described in Section 3.6. Avoidance, minimization and mitigation measures are described in Section 3.6.3.

3.6.1.1 Target Field Station, Minneapolis

Existing Conditions

The Minneapolis neighborhood surrounding Target Field Station features an extensive network for bicycle and pedestrian use. Free bicycle racks are provided at Target Field Station, as well as on the surrounding street network. Bicycle lockers available for rent at the YWCA located less than 1.0 mile from the station. The Northstar trains and all Metro Transit light rail lines and buses provide space for transporting bicycles. For travelers without a bicycle on hand, the Nice Ride bicycle sharing program currently operating from April to November, has 190 docking stations throughout the Twin Cities, and three are within 0.5 mile of Target Field Station.

Existing bicycle connections to Target Field Station include Twins Way, which connects directly to Cedar Lake Trail running parallel and adjacent to the NLX study area. Bicyclists would also access the NLX station or travel within walking distance to the station via on-street routes along 1st Avenue North, 3rd Avenue North, 5th Avenue North and 7th Street North.

Recommended walking routes to Target Field include 7th Street North, 6th Street North, 3rd Avenue North to 5th Street North, and Twins Way. These same routes would accommodate traffic destined to and from Target Field Station. The existing skyway network also connects to Target Field, providing an additional pedestrian connection within walking distance of the station. Details on all of these features, along with the suggested access route maps, can be seen in **Appendix H**.

Impacts

Operations

The proposed NLX platform at Target Field Station would not impact the existing bicycle and pedestrian facilities surrounding the station. Increases in bicycle and pedestrian activity as a result of the NLX Project would be accommodated by the existing bicycle facilities and sidewalk network. As a destination for major sporting events, the sidewalk system and bicycle facilities are designed to handle large volumes of pedestrian and bicycle activity including additional NLX pedestrians on a typical day. Daily operations and maintenance activities would occur at the track level, which is separate from the street network, and no operations impacts from the NLX Project are anticipated.

Construction

The proposed platform extension and associated track work would not impact existing bicycle or pedestrian trails as the railroad tracks are located below the existing facilities. The Cedar Lake Trail is located adjacent to the existing BNSF right of way, but would not be impacted by either NLX construction or operations.

3.6.1.2 Coon Rapids

Existing Conditions

The proposed Coon Rapids Station is northeast of MN 610 and Foley Boulevard. Foley Boulevard currently has sidewalks along both sides of the roadway; however, there is a gap at the existing dual track crossing just west of the Metro Transit Foley Boulevard park and ride. The sidewalk system extends along the north side of Foley Boulevard west to East River Road and east to Coon Rapids Boulevard. Walking distances to the nearest residential areas are typical of a suburban environment (approximately 0.4 mile). The roadway is suitable for biking with striped shoulders in some locations. A map is provided in **Appendix H**.

The existing Northstar Riverdale Station, located 5.0 miles northwest of the proposed Coon Rapids Station, provides bicycle accessibility information. Several bicycle routes extend past the proposed Coon Rapids Station. Bicycle lockers are available for rent at the Metro Transit Foley Boulevard park and ride.

Impacts

Operations

The proposed Coon Rapids Station includes a shared use path for bicycles and pedestrians. The proposed shared use path would begin at the signalized intersection of Foley Boulevard and Metro Transit Foley Boulevard park and ride entrance. Bicyclists would be able to access the station via a shared use path starting at this entrance and extending along the ring road. Bicycle parking and warming shelters provided at the station would accommodate bicyclists and pedestrians, in addition to providing multimodal access within the community.

An Anoka County project (independent of the NLX Project and not currently funded) would convert the existing Foley Boulevard at-grade railroad crossing to a grade-separated crossing. The project, if funded and constructed, would include a pedestrian sidewalk extending from the west end of Foley Boulevard park and ride, passing under Foley Boulevard, and leading directly into the proposed Coon Rapids Station. Eventually, both the proposed ring road (to be constructed by the City of Coon Rapids) and the shared use path would be extended further north as part of future local projects.

MnDOT would coordinate with Anoka County and Metro Transit on the status of the proposed grade-separated crossing of the BNSF rail line, as the proximity of the project would influence bicycle and pedestrian connections between the proposed Coon Rapids Station and the Foley Boulevard park and ride. If a future grade-separation is not constructed, a cross-walk would be provided at the Foley Boulevard intersection to connect the proposed station and ring road to the Foley Boulevard park and ride. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Coon Rapids, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Because the station would be located north of Foley Boulevard in an undeveloped area not currently accessible via bicycle or sidewalks, no construction period impacts are anticipated to the existing bicycle and pedestrian accommodations at the station site. Construction impacts would include temporary closure of a sidewalk along Foley Boulevard. The railroad grade crossing at Foley Boulevard would be reconstructed to accommodate track shifts and the additional third track. Warning devices would be relocated, and new sidewalks would be installed for pedestrian traffic using the existing park and ride lot.

3.6.1.3 Cambridge

The proposed Cambridge Station, located with the City Center Mall, is within 0.7 mile of an existing City of Cambridge bicycle and pedestrian trail. Bicyclists can access the station from the trail via local streets. A map is provided in **Appendix H**. Pedestrians can access the proposed station from the trail or surrounding neighborhoods and downtown by using the connecting sidewalk system located along 3rd Avenue Northeast, 2nd Avenue Northeast and Buchanan Street. From these entrances, pedestrians would cross the parking lot to the mall entrance and access to the station.

The City Center Mall currently houses the city police and fire stations, some governmental agencies and retail businesses including a food co-op and café.

Impacts

Operations

Impacts on the existing bicycle and pedestrian facilities are not anticipated as a result of NLX operations. Bicycle parking and warming shelters provided at the station would also accommodate bicyclists and pedestrians, in addition to providing multimodal access within the community. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Cambridge, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

The Cambridge Station would be built within existing multi-purpose City Center Mall building, minimizing any access constraints during construction. The businesses and government offices would remain in operation throughout construction, and bicyclists and pedestrians would be able to access the building as usual. Once constructed, pedestrians would access the station by entering the mall from either the front or the back of the building, with parking provided in both locations. Bicycle parking would be provided in the rear of the building, near the platform.

3.6.1.4 Hinckley

The proposed Hinckley Station is located between 1st Street Northeast and 2nd Street Northeast, and a block northeast of the Hinckley-Finlayson High School. The roadway network surrounding the Hinckley Station has low traffic volumes and is accessible to both bicycles and pedestrians. The existing sidewalk network is located along 1st Street Northeast, Lawler Avenue and Main Street serving the high school and downtown businesses. Currently, there are no sidewalks along 2nd Street Northeast though the sidewalk network extends north along Lawler Avenue to the 2nd Street Northeast intersection.

The Willard Munger State Trail is a network of multi-purpose trails that extend north from Hinckley to Duluth, roughly paralleling the I-35 corridor. A connecting trail into downtown Hinckley is located within 0.5 mile of the proposed Hinckley Station. A map is provided in **Appendix H**.

Impacts

Operations

Impacts on the existing bicycle and pedestrian facilities are not anticipated as a result of NLX operations. Bicycle parking and warming shelters provided at the station would also accommodate bicyclists and pedestrians, in addition to providing multimodal access within the community. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Hinckley, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Sidewalks would be provided to connect pedestrians from the existing sidewalk system to the proposed NLX station. Sidewalks would be constructed along Power Avenue North, 1st Street Northeast and 2nd Street Northeast to allow for pedestrian connectivity to the existing sidewalk system. Because the connections do not

already exist, there would be no construction impacts on the existing sidewalks in the vicinity of the proposed NLX station.

3.6.1.5 Superior, Wisconsin

Existing Conditions

The proposed Superior, Wisconsin Station is located north of U.S. 2, and accessible via the Oakes Avenue and 14th Street intersection. Like the transit network, the Superior, Wisconsin, bicycle paths are also connected to the Duluth area bicycle and pedestrian system. As seen on the map attached in **Appendix H**, the city of Superior, Wisconsin has ample on-street bicycle routes that would provide sufficient access for local travelers to the proposed Superior, Wisconsin Station from any direction. There is also a paved off-road multi-use path between Superior, Wisconsin and Duluth allowing travelers the opportunity to bicycle between the cities. The trail follows the U.S. 2 corridor between Susquehanna Avenue (Superior, Wisconsin) and South 43rd Avenue (Duluth) using the Richard Bong Memorial Bridge as the crossing of the St. Louis River.

The existing street grid includes sidewalk connections to Tower Avenue and residential areas within walking distance to the proposed station. Pedestrians walking from the neighborhoods south of U.S. 2 would likely cross U.S. 2 at either Banks Avenue or Tower Avenue then connect to the station via North 14th Street.

Impacts

Operations

As part of the proposed NLX station, North 14th Street would be extended west for the parking lot entrance. Bicycle and pedestrian access from North 14th and Oakes Avenue would be via a new sidewalk that connects to the platform itself. Bicycle parking and warming shelters provided at the station would also accommodate bicyclists and pedestrians, in addition to providing multimodal access within the community. Future development (not part of the NLX Project), which would be located between the proposed NLX station and Oakes Avenue, would not hinder the bicycle and pedestrian station access along the North 14th Street extension. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Superior, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Because the station would be located west of Oakes Avenue in an undeveloped area not currently accessible via bicycle or sidewalks, no construction related impacts are anticipated.

3.6.1.6 Duluth

Existing Conditions

The proposed Duluth Station would be located at track level, which is below grade from Michigan Avenue, and south of 5th Avenue West. The station would have an entrance accessible from Michigan Street and a second access at the track level. There are several bicycle routes located within downtown Duluth that allow bicyclists to approach the proposed station (see **Appendix H**). These include the paved multi-use path located southwest of the station that crosses the NLX study area at-grade and under I-35 and connecting to the Cross City and Superior, Wisconsin Hiking Trails. Additionally, one of the several designated on-street bicycle routes runs along Superior Street, just one block northwest of the station.

In the vicinity of the Duluth Station, sidewalks are located along both West Michigan Street and West Superior Street that allow pedestrians to connect to the Duluth Transit Center located a few blocks north between North 3rd Avenue West and North 2nd Avenue West. These same sidewalks also provide connectivity between the surrounding parking and the proposed station. The Duluth Skywalk system is an indoor pedestrian system that connects downtown buildings to the parking deck north of the proposed Duluth Station. This system allows pedestrians to get within a block of the station without walking outside in inclement weather. The sidewalk located on the north side of 5th Avenue West provides a pedestrian crossing over I-35 between the proposed NLX station and the Duluth Entertainment Convention Center.

Impacts

Operations

The proposed Duluth Station would expand the multimodal options connecting to the downtown area's robust existing transportation network typical of a city environment. The new public access road constructed at track level would provide pedestrian and bicycle access to the Duluth Station. A sidewalk ramp would provide safe, easy access for pedestrians on West Michigan Street to enter a proposed station entrance adjacent to the north side of the historic Union Depot. Crosswalks from parking decks to the north and south of the historic Union Depot provide pedestrian access at South 5th Avenue West and South 6th Avenue West, respectively. The existing pedestrian connection from West Michigan Street to the station entrance on the north side of

Union Depot would be reconstructed to meet ADA requirements. Bicycle parking and warming shelters provided at the station would also accommodate bicyclists and pedestrians. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and the City of Duluth, as needed, and no additional impacts from the NLX Project are anticipated.

Construction

Construction impacts would include temporary closure of a sidewalk between West Michigan Street and track level, and the public road at track level.

3.6.2 NLX Project Corridor Bicycle Routes and Pedestrian Analysis

3.6.2.1 Existing Conditions

There are several multi-purpose trail crossings of the NLX study area between Minneapolis and Duluth with varying degrees of suitability for bicycle and pedestrian use. Many of these crossings share right of way with or parallel local roads at the crossings of the proposed NLX study area. Section 4.13.2.3 describes trails throughout the NLX study area.

3.6.2.2 Impacts

The following sections summarize bicycle and pedestrian impacts in the NLX study area under the Build Alternative. Impacts analysis considered all track, roadway, bridge, station and maintenance and layover facilities as identified in the beginning of this chapter. Where impacts are specific to a type of proposed improvement, they are described below. The Build Alternative impacts discussion analyzes long-term operations and maintenance impacts and short-term construction impacts as described in Section 3.6. Avoidance, minimization and mitigation measures are described in Section 3.6.3.

Operations

The NLX Project operations would neither affect grade-separated crossings nor permanently close bicycle or pedestrian crossings. The addition of new crossing warning devices at the rail grade crossings would result in enhanced safety at the crossings for bicyclists and pedestrians in the long term. Daily operations and maintenance activities that may require temporary grade crossing closures are currently coordinated between BNSF and local jurisdictions, as needed, and no additional impacts from the NLX Project are anticipated.

Construction Impacts

Trail crossings would be affected by temporary closures during construction at crossings (see Section 4.13.3.3).

3.6.3 Avoidance, Minimization and Mitigation Measures

The NLX Project would continue to avoid, minimize and mitigate impacts through final design. No mitigation measures would be required for Minneapolis (Target Field Station), Cambridge, and Hinckley, Minnesota, and Superior, Wisconsin station communities.

3.6.3.1 Station Communities

Coon Rapids

MnDOT would coordinate with Anoka County and Metro Transit during final design to ensure continuous use of the Foley Boulevard park and ride. MnDOT would also communicate with Anoka County concerning future plans to grade separate Foley Boulevard as discussed in Section 3.6.1.2. Prior to construction, MnDOT would coordinate with the City of Coon Rapids to communicate construction schedules and minimize impacts on bicycle and pedestrian access from temporary closures.

Duluth

Prior to construction, MnDOT would coordinate with the City of Duluth to communicate construction schedules and minimize impacts on bicycle and pedestrian access from temporary grade crossing closures.

3.6.3.2 NLX Project Corridor

For potential temporary grade crossing closures during construction, MnDOT would coordinate with jurisdictional agencies (such as local municipalities, boards or counties) to communicate construction schedules. During temporary closures, advance trail closure signs would be placed and press releases coordinated with agencies to provide sufficient information to trail users. When feasible, bicyclists and pedestrians would be redirected to other nearby crossings.

3.7 Summary

The Tier 1 EA evaluated transportation impacts of NLX Project operations and proposed infrastructure improvements for eight daily round trips (16 trains per day) at speeds up to 110 mph. The Tier 2 EA addresses

changes to the NLX Project, as described in Chapter 2 Alternatives. That is, the Tier 2 EA evaluates transportation impacts of operations and proposed infrastructure for four daily round trips (8 trains per day) at speeds up to 90 mph.

The NLX Project would not have a significant impact on transportation services and operations in the NLX study area. The NLX Project operations would not substantially affect freight and passenger rail services that would share track with the NLX Project. Track infrastructure construction would require coordination with Northstar and BNSF to avoid service impacts. Section 3.3.5 discusses measures to mitigate construction impacts.

The proposed NLX Project would support multimodal connections to transit services and bicycle and pedestrian facilities. No significant impacts on traffic circulation and operations are anticipated at the stations and facilities. The analysis identified NLX traffic in Cambridge would extend the existing traffic queues on 1st Street East that cross the BNSF rail grade crossing. The added NLX station traffic would not substantially impact traffic operations compared to existing conditions. Section 3.5.4.2, discusses potential measures to improve traffic queues at the rail grade crossing for either the existing condition or with added NLX traffic.

Under the Build Alternative, no public and private rail grade crossings would be closed, and rail grade crossing safety would be improved with proposed rail grade crossing warning devices. Temporary rail grade crossing closures would occur during construction in communities throughout the NLX study area. Section 3.5.4.6 discusses measures to mitigate temporary closures.

The results of the Tier 2 EA are similar to the findings of the Tier 1 EA as noted in **Table 3-2**. The exception is that the Tier 1 EA identified up to 14 private rail grade crossings for closure. MnDOT has determined that the NLX Project would not close any public or private crossings.