

## MEETING PURPOSE

The Minnesota Department of Transportation is conducting today's open house meeting to present findings, and receive comments on the Tier 2 Project Level Environmental Assessment (EA) prepared for the NLX Project.

The Tier 2 EA was released for public comment on April 24, 2017 and comments will be accepted through **May 24, 2017**.

## MEETING AGENDA

The meeting is an informal open house, open to the public from 5:30 p.m. to 7:30 p.m. Please be sure to:

- ◆ Sign-in at the welcome table.
- ◆ Review meeting materials.
- ◆ Speak with project staff and have your questions answered.
- ◆ Submit your written or private verbal comments for the public meeting record.

## MEETING INFORMATION ON DISPLAY

- ◆ Tier 2 EA and executive summary
- ◆ Map series showing NLX Project features and environmental resources
- ◆ Displays showing NLX Project features
- ◆ Displays summarizing NLX Project impacts and benefits.

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Please visit the NLX Project website at [www.mndot.gov/nlx](http://www.mndot.gov/nlx) to review the Tier 2 EA and other project information. Today's meeting materials will be posted on the website for future review.



# THE NLX PROJECT

Northern Lights Express (NLX) is a proposed higher speed passenger rail service between Minneapolis and Duluth. Planning and implementation of NLX is being conducted by the Minnesota Department of Transportation, in coordination with the Federal Railroad Administration, and cooperation with the Wisconsin Department of Transportation.

## PROJECT FEATURES

<b>DISTANCE</b>	152 miles on existing BNSF Railway track
<b>FREQUENCY OF SERVICE</b>	4 trains per day in each direction
<b>SPEED</b>	60 mph average speed; 90 mph running speed
<b>TRAVEL TIME</b>	About 2½ hours travel time between Minneapolis and Duluth
<b>STATIONS</b>	Minneapolis, Coon Rapids, Cambridge, Hinckley, Superior, WI, and Duluth
<b>IMPLEMENTATION COST</b>	\$547 million (\$2014) for construction and equipment
<b>FACILITIES</b>	1 maintenance facility in either Duluth or Sandstone, 1 layover facility in Duluth
<b>TRAIN EQUIPMENT</b>	3 train consists, each includes 1 locomotive and 6 coaches
<b>RIDERSHIP</b>	700,000 and 750,000 annual rides in 2020, anticipated to increase to 900,000 and 1,000,000 rides by 2040
<b>FARES</b>	Approximately \$30 one way and \$60 round trip
<b>REVENUES FROM FARES</b>	In the range of \$12.8 million per year for the first 5 years of operation
<b>OPERATING COST</b>	\$17 million per year for operations and maintenance starting in 2020

## TYPICAL DAILY SCHEDULE

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

PM times in bold



**NLX STATIONS & FACILITIES**

NLX stations are proposed in six communities: Minneapolis, Coon Rapids, Cambridge, Hinckley, and Duluth in Minnesota and Superior in Wisconsin. In addition, the NLX Project would include one maintenance facility and one layover facility to provide for daily servicing of the trains. These facilities may be on separate sites in Sandstone and Duluth, or co-located on one site in Duluth.

- Station
- Maintenance facility
- Maintenance and/or layover facility
- NLX Project



# PURPOSE & NEED FOR THE NLX PROJECT

## PROJECT PURPOSE

The purpose of the NLX Project is to provide a means to meet transportation needs through *creating a passenger rail service* linking Minneapolis and Duluth, *connecting with other existing and planned transportation systems*.

The NLX Project seeks to introduce a new intercity passenger rail service that would:

- ◆ Be *reliable and cost-effective*
- ◆ Offer a *new transportation connection*
- ◆ Provide *greater intermodal connectivity*

## PROJECT NEED

The NLX Project would address the following needs:

- ◆ Limited statewide intermodal connectivity.
- ◆ Travel demand related to population trends.
- ◆ Decrease in reliable travel due to congestion.

*Rendering of a typical NLX station*



# NLX TIMELINE



If funding is received in a timely manner, service could start as early as 2020.



# INFRASTRUCTURE IMPROVEMENTS

## TRACK INFRASTRUCTURE

Track infrastructure improvements are needed to accommodate the higher speeds of the passenger trains, as well as to allow the new passenger trains and existing freight trains to operate within the same corridor including:

- ◆ New sidings and parallel track.
- ◆ Track curve modifications.
- ◆ Turnouts and crossovers.
- ◆ Improvements to existing track.

## ROADWAYS & GRADE CROSSINGS

The NLX Project would improve public grade crossings as follows:

- ◆ Installation of active warning devices (automatic gates and flashing lights).
- ◆ Reconstruction of approach roadways to improve sight-distance.
- ◆ Installation of medians where warranted.

## NO GRADE CROSSING CLOSURES

The NLX Project would not close any of the 126 existing public rail grade crossings along the corridor. 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.

## SIGNAL SYSTEMS

The NLX Project includes upgrades to train signal and communication systems including:

- ◆ Installation of CTC with a PTC overlay.
- ◆ Additional control points at powered turnouts and crossovers.

## BRIDGES AND CULVERTS

Bridge and culvert improvements include:

- ◆ New bridges would be constructed to accommodate additional track where necessary.
- ◆ Open deck bridges would be converted to ballast deck bridges.
- ◆ The operating and control systems would be rehabilitated on the Grassy Point swing bridge between Superior, Wisconsin, and Duluth.

## Proposed Track Improvements



# FACILITY SITE LOCATIONS

## DULUTH

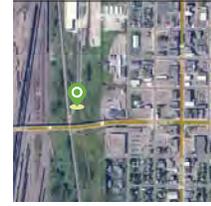


Union Depot



+   
 ◀ Area bounded by I-35, Railroad Street, Garfield Ave and Jenos Walk

## SUPERIOR



Downtown

## SANDSTONE



◀ South of Oak St

## HINCKLEY



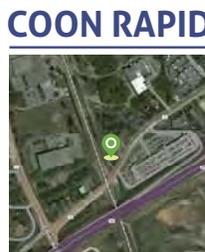
Downtown

## CAMBRIDGE



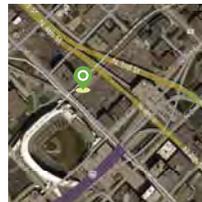
City Center

## MINNEAPOLIS



Foley Blvd

Target Field Station ▶



MINNESOTA  
 WISCONSIN

### KEY



Selected station site



Potential maintenance facility site



Potential layover facility site



# LAYOVER FACILITIES



The Northern Lights Express layover facilities provide a location away from the BNSF mainline tracks to store one or more complete train sets and perform limited servicing and inspection functions. A layover facility is proposed in Duluth as either a standalone facility, or in conjunction with a maintenance facility.

## Basic Program Elements



## YARD TRACKS

The layover facility site will contain one or more yard tracks that connect with the mainline tracks on each end of the facility. The site will also include a small support building for the train crew and the maintenance and cleaning forces. Vehicular access points and employee parking will be provided.



# MAINTENANCE FACILITY



The Northern Lights Express maintenance facility will handle inspection, servicing, maintenance and repair activities required to keep NLX trains in service and provide a place for trains to layover. NLX will require one maintenance facility in either Duluth or Sandstone.

## Basic Program Elements



### MAINTENANCE BAYS

Enclosed structure accommodates two trainsets with maintenance pits and tracks running the entire length of the building



### MAINTENANCE WORKSHOP

Enclosed maintenance pit allows employees to maintain and inspect trains



### TRAIN WASH

An enclosed and heated building with an automatic washer system designed to clean locomotives and coach cars

### SUPPORT FUNCTIONS

Employee offices, receiving/shipping area with loading dock, spare part storage, work room and other support functions



# STATION FACILITIES



The Northern Lights Express stations will be designed to meet the needs of a modern intercity passenger rail service that will include an enclosed station building, platform and multimodal access and circulation. All stations will be accessible and will comply with the Americans with Disabilities Act.

## Basic Program Elements



### STATION BUILDING

Climate controlled station building with seating, bathrooms and ticket machines



### BOARDING PLATFORM

500 foot long platform with warming shelters



### TICKETING

On-site ticket kiosk machines in passenger waiting area



### WAITING AREA

Enclosed space for passengers to wait for train



### PARKING

On-site short-term and long-term parking

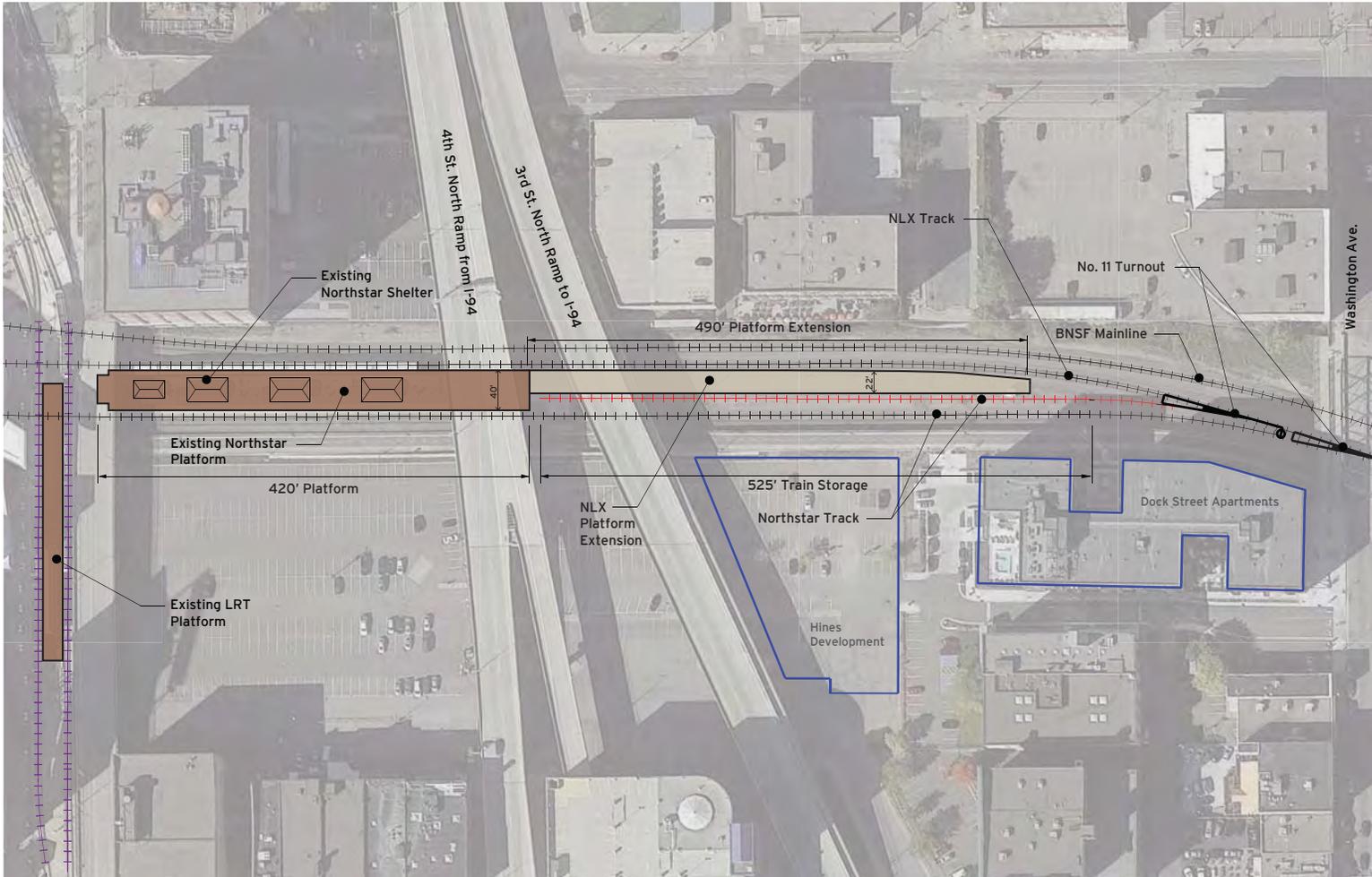


### MULTIMODAL ACCESS

Efficient passenger, taxi and bus drop off areas; pedestrian walkways and bicycle access

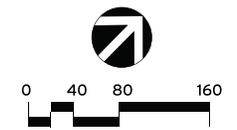


# TARGET FIELD STATION

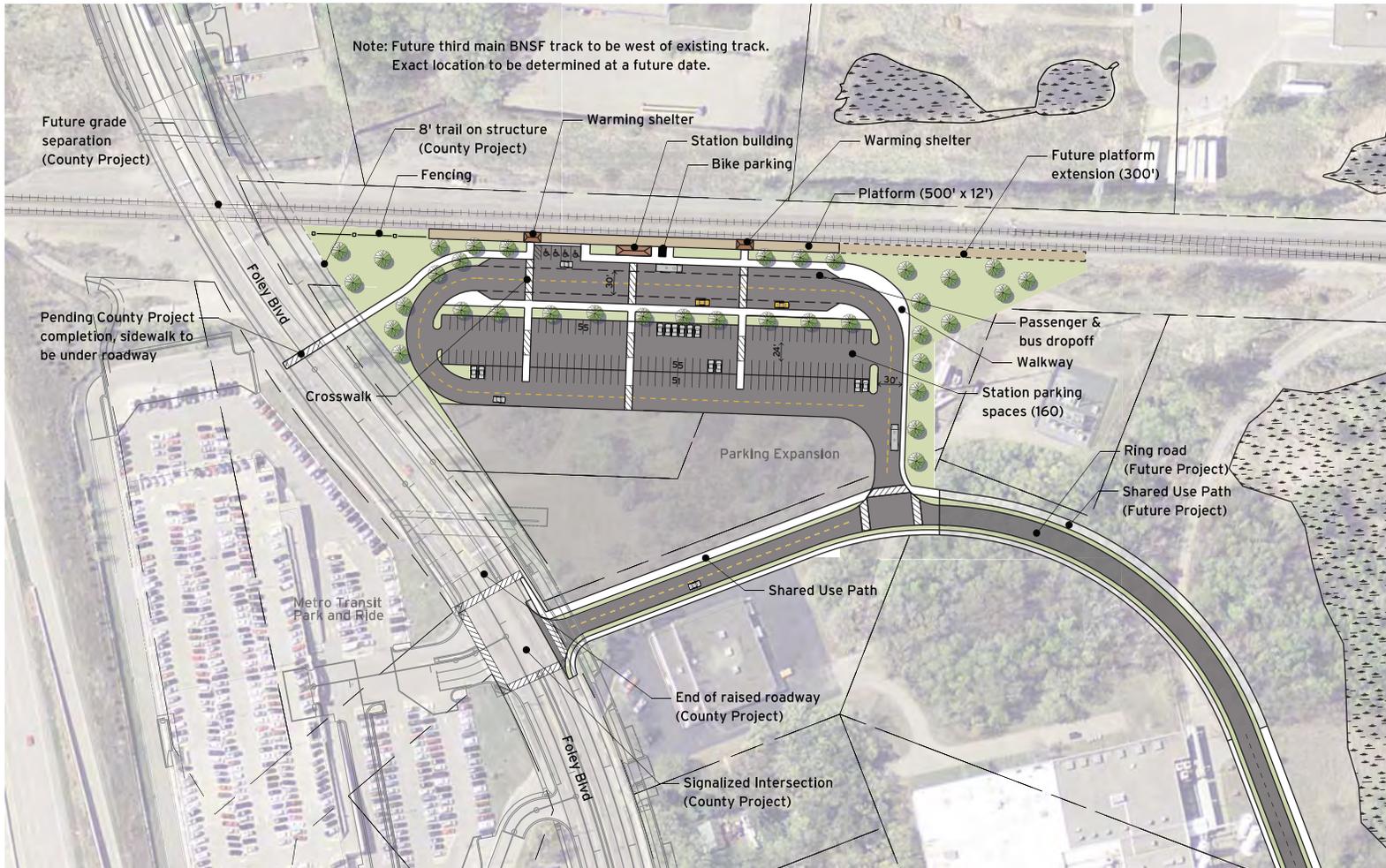


## LEGEND

- +++++ Proposed Railroad
- Existing Railroad
- Existing Light Rail Tracks

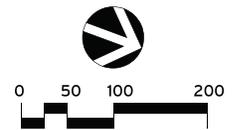


# COON RAPIDS FOLEY BOULEVARD STATION

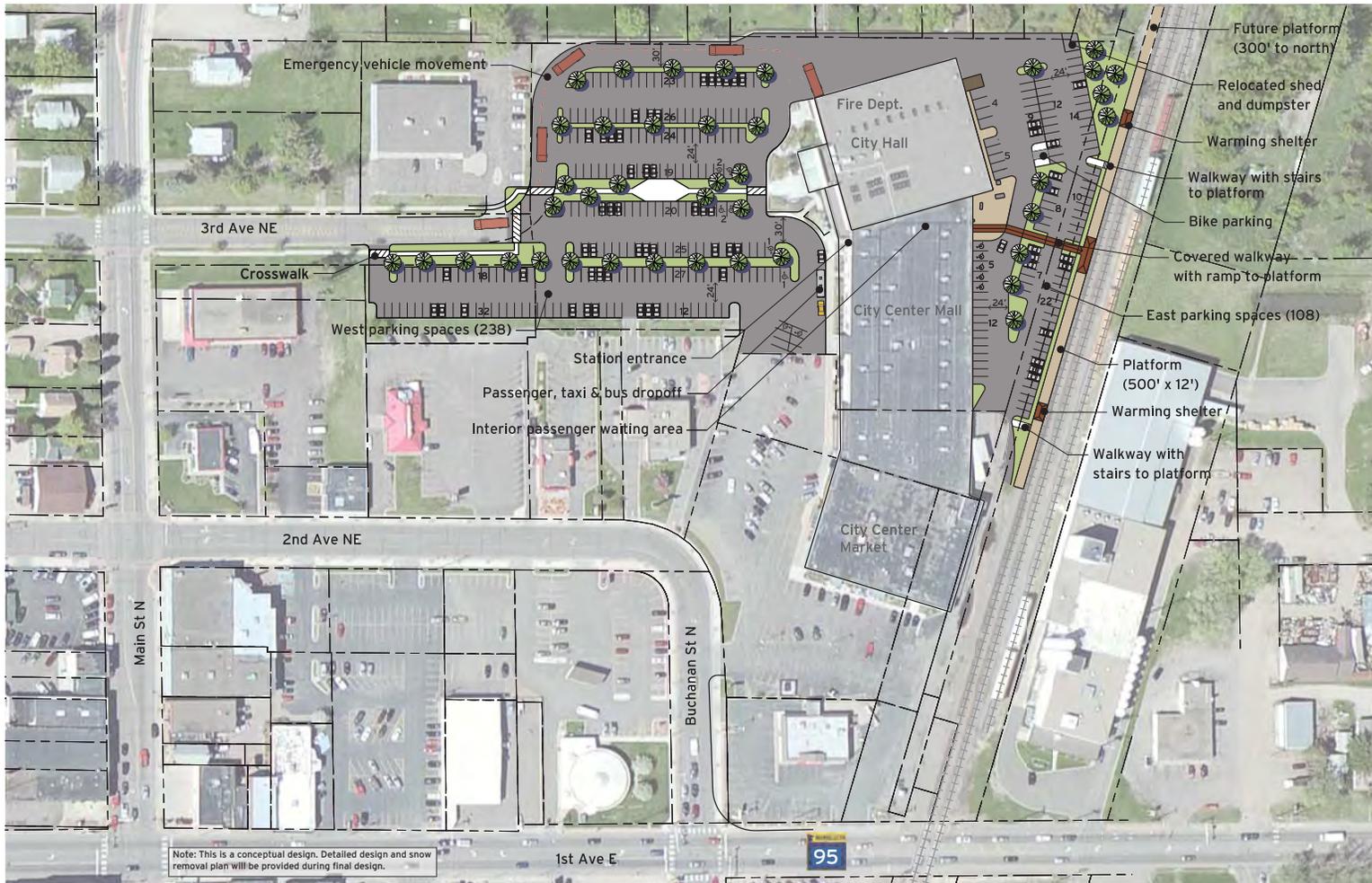


## LEGEND

- Property boundaries
- +++++ Railroad

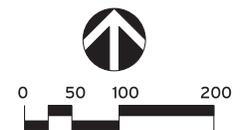


# CAMBRIDGE CITY CENTER STATION



## LEGEND

- Property boundaries
- ++++ Railroad

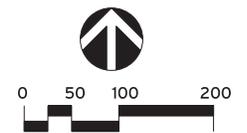


# HINCKLEY DOWNTOWN STATION



## LEGEND

- Property boundaries
- +++++ Railroad

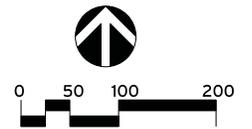


# SUPERIOR DOWNTOWN STATION

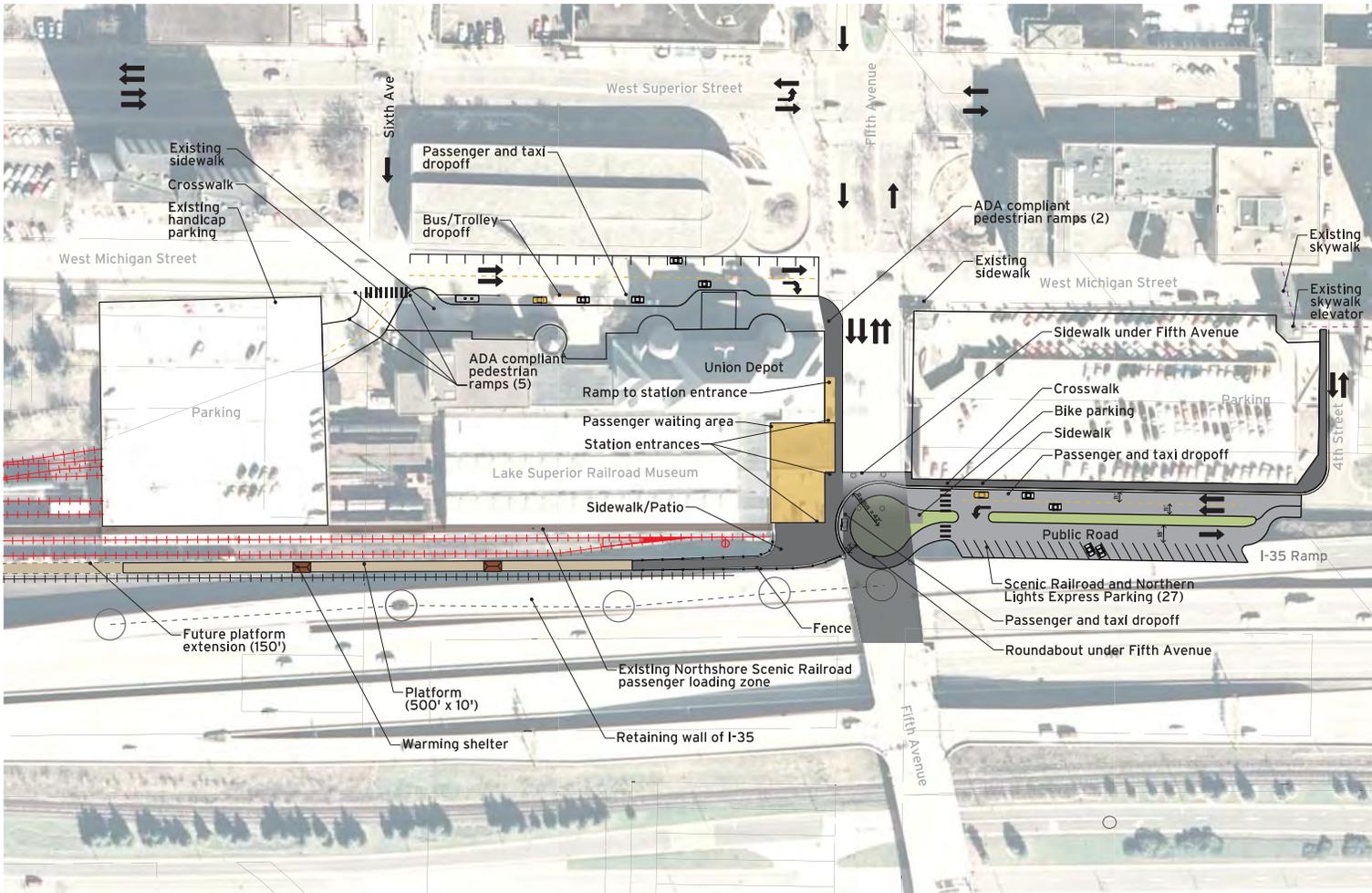


## LEGEND

- Property boundaries
- ++++ Railroad

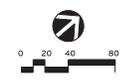


# DULUTH STATION

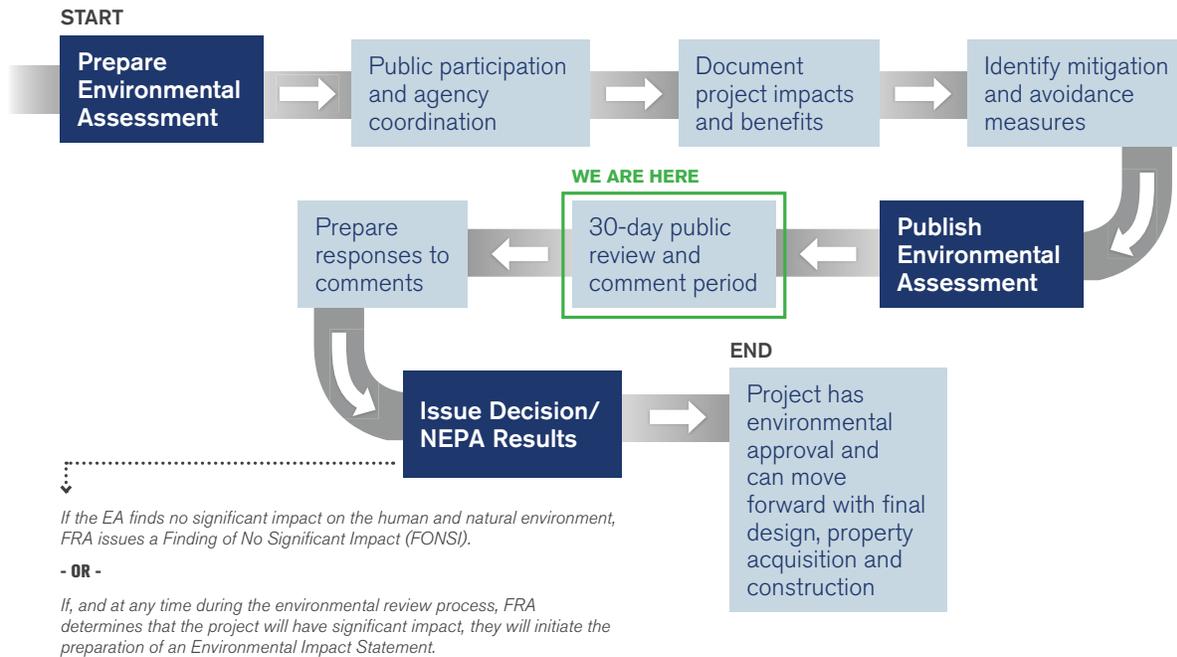


**Legend**

- Platform
- North Shore Scenic RR passenger loading zone
- Upgraded sidewalk
- Median
- Passenger waiting area
- Bridge pier (location appr.)
- Property boundaries
- Existing Railroad
- Proposed Railroad



## WHAT IS THE PROCESS FOR COMPLETING AN ENVIRONMENTAL ASSESSMENT?



## WHAT RESOURCES ARE EVALUATED FOR THE ENVIRONMENTAL ASSESSMENT?

- ◆ Transportation
- ◆ Land use and land cover
- ◆ Right of way
- ◆ Vegetation and wildlife
- ◆ Threatened and endangered species
- ◆ Wetlands
- ◆ Surface water
- ◆ Groundwater
- ◆ Air quality
- ◆ Noise and vibration
- ◆ Contaminated properties and regulated waste
- ◆ Cultural resources
- ◆ Farmland and soils
- ◆ Parks and recreation areas
- ◆ Visual
- ◆ Socioeconomics
- ◆ Environmental justice
- ◆ Economics
- ◆ Indirect and cumulative effects



# ENVIRONMENTAL REVIEW

## PREVIOUS PLANNING PHASE: TIER 1 SERVICE LEVEL ENVIRONMENTAL ASSESSMENT

The Tier 1 Service Level Environmental Assessment (EA), completed in 2013, evaluated impacts of the NLX Project as a whole, compared multiple corridor alternatives, and selected a preferred corridor for passenger rail service.

A Finding of No Significant Impact was issued by the Federal Railroad Administration on August 21, 2013, which determined that the NLX Project would not have significant environmental impacts and allowed the project to proceed to the next phase.

## CURRENT PLANNING PHASE: TIER 2 PROJECT LEVEL ENVIRONMENTAL ASSESSMENT

The Tier 2 Project Level Environmental Assessment updates the impacts evaluated in the Tier 1 EA. The Tier 2 EA evaluates the potential transportation, social, historic and natural resource impacts of the NLX Project, based on updated operations analysis and engineering. The Tier 2 EA includes avoidance, minimization and mitigation measures that would be implemented as final design advances and funding is secured for the NLX Project.

**Completing the Tier 2 EA will position the NLX Project to receive funding for final design and construction.**

The Tier 2 EA provides an environmental review of proposed:

- ◆ 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, Centralized Traffic Control (CTC) with a new Positive Train Control (PTC) system overlay).
- ◆ Roadway and grade crossing improvements (grade modifications, warning devices).
- ◆ Station, maintenance, and layover facilities.



# SOCIOECONOMIC & COMMUNITY RESOURCES

**The Tier 2 EA concluded the NLX Project would not have substantial impacts to socioeconomic and community resources.**

- ◆ The new passenger rail service utilizes an existing freight railroad corridor.
- ◆ No permanent access changes because no public or private crossings would be closed.
- ◆ Planned infrastructure improvements would help minimize freight delays in communities at crossings.
- ◆ Improved vehicle and pedestrian safety resulting from improved crossings and warning devices.

## NLX OPERATIONS

Impacts include:

- ◆ Relocation of City of Hinckley maintenance building for the station site.
- ◆ Acquisition of approximately 4 acres of private property for station and maintenance facility site development. No residential or business relocations.

## NLX CONSTRUCTION

Impacts include:

- ◆ Temporary impact on the City-owned portions of the parking lot in Cambridge at the City Center Mall due to the reconfiguration of parking spaces and construction staging.
- ◆ Temporary access disruptions to existing facilities located at Union Depot during the construction of the Duluth Station at track level.
- ◆ Communities may experience temporary inconveniences during construction.
- ◆ Communities may experience temporary access changes to reconstruct railroad crossings and install new warning devices.

## MITIGATION STRATEGIES

The NLX Project would continue efforts to avoid, minimize and mitigate impacts as the project advances through design and funding is secured for the NLX Project. Mitigation measures include:

- ◆ Coordination with affected community facilities during construction.
- ◆ Developing a traffic management plan.
- ◆ Compliance with the Uniform Act (49 CFR 24) for unavoidable land acquisitions of privately owned properties.

### STATION SITES SELECTED TO ENHANCE COMMUNITIES

In identifying locations for stations and facilities, MnDOT met with local community staff and elected officials, and conducted public open houses in station communities. Smaller one-on-one meetings with stakeholders throughout the study area followed. This resulted in proposed stations and facilities designed and located to improve access to existing community services, transportation modes and business districts within each community.



*Target Field Station in Minneapolis, MN*



*Depot in downtown Duluth, MN*



*City Hall in Cambridge, MN*



# THREATENED & ENDANGERED SPECIES

The Tier 2 EA evaluated potential impacts on threatened and endangered species in accordance with Section 7 of the Endangered Species Act (16 USC 1531-1544) and considered both state and federally listed species.

## KEY FINDINGS

- ◆ Known threatened and endangered species are present within the NLX study area.
- ◆ FRA and MnDOT have coordinated with U.S. Fish and Wildlife Service, MnDNR and WDNR and will continue to coordinate as the final design advances.
- ◆ **No adverse effects determinations are anticipated with avoidance, minimization and mitigation measures.**

## MITIGATION STRATEGIES

As the NLX Project advances through construction, interagency coordination efforts will continue in looking for means to avoid, minimize or mitigate impacts to protected species, including design features that facilitate animal movement. Potential measures could be:

- ◆ Installing wildlife friendly erosion mesh during construction.
- ◆ Incorporating a passage bench design feature at large, wet culverts or bridges that are being rehabilitated.
- ◆ Adding design modifications to allow turtles to escape from between the rails.
- ◆ Using best management practices that limit sedimentation or debris from entering streams.
- ◆ Developing a plan of action to protect habitat and individuals (if present).

MnDOT will coordinate with MnDNR, WDNR and USFWS to determine the need for additional field surveys. If sensitive plant or animal species are found in locations that would be affected by construction activities, MnDNR, WDNR and USFWS would be notified of species occurrence and consulted.

## THREATENED & ENDANGERED SPECIES POTENTIALLY OCCURRING IN THE NLX PROJECT STUDY AREA

### Federally Listed Species

- ◆ Kirtland's warbler (*Setophaga kirtlandii*)
- ◆ Piping plover (*Charadrius melodus*) and Critical Habitat
- ◆ Rufa red knot (*Calidris canutus rufa*)
- ◆ Higgins eye pearlymussel (*Lampsilis higginsii*)
- ◆ Snuffbox (*Epioblasma triquetra*)
- ◆ Spectaclecase (*Cumberlandia monodonta*)
- ◆ Fassett's locoweed (*Oxytropis campestris chartacea*)
- ◆ Canada lynx (*Lynx canadensis*)
- ◆ Gray wolf (*Canis lupus*)
- ◆ Canada lynx - Critical Habitat
- ◆ Gray wolf - Critical Habitat
- ◆ Rusty patched bumble bee (*Bombus affinis*)
- ◆ Northern long-eared bat (*Myotis septentrionalis*)

### State Listed Species

- ◆ Blanding's turtle (MN), wood turtle (MN and WI)
- ◆ Slender spike-rush (WI)



Northern Long-Eared Bat



Rusty Patched Bumble Bee



Gray Wolf



Canada Lynx



# TRANSPORTATION

The Tier 2 EA concluded no substantial impacts to the transportation system are expected from the operation and construction of the NLX Project. The NLX Project is located within an existing freight rail corridor and proposed infrastructure improvements would ensure safe and efficient travel for all transportation modes. The NLX Project presents an opportunity to provide a new convenient mode of transportation between the communities along the route and enhance statewide multimodal opportunities via improved connectivity to other regional and local modes of transportation.

	FREIGHT AND PASSENGER RAIL	REGIONAL BUS AND LOCAL TRANSIT	TRAFFIC OPERATIONS	PEDESTRIANS AND BICYCLES
EXISTING CONDITIONS	The NLX Project would operate within the existing BNSF right of way on tracks that are actively used for existing freight rail operations and passenger rail services including Amtrak, Northstar and the North Shore Scenic Railroad (NSSR).	Jefferson Lines and Greyhound provide regional bus services between Minneapolis and Duluth. Local transit services are available in Minneapolis, Coon Rapids, Superior, WI and Duluth. Rural on demand transit services are available in Cambridge and Hinckley.	All NLX stations are in areas with existing local and regional roadway networks. There are 165 public and private railroad crossings between Target Field and Duluth stations. The NLX Project would not close any crossings.	Throughout the corridor, there are several multi-purpose trail crossings that share right of way with or parallel local roads at railroad crossings. All stations are connected to local sidewalk networks.
OPERATIONS IMPACTS	<p>The proposed NLX infrastructure improvements would maintain existing rail service levels and provide sufficient capacity for rail operations resulting in:</p> <ul style="list-style-type: none"> <li>Improved freight rail operational efficiencies.</li> <li>Improved safety at public rail grade crossings.</li> <li>NSSR ticket office in Duluth replaced within new station building.</li> </ul>	<p>No substantial impacts to existing regional bus service and station community transit services. The NLX project would provide opportunities for:</p> <ul style="list-style-type: none"> <li>Multimodal connections with regional bus.</li> <li>Local transit connections in station communities and potential ridership increases.</li> <li>Potential local bus route modifications to serve NLX stations.</li> </ul>	<p>No substantial traffic impacts identified at railroad crossings and in station communities.</p> <ul style="list-style-type: none"> <li>Coon Rapids: Reconstruction of intersection along Foley Boulevard for new station entrance road.</li> <li>Cambridge: Station traffic could add to the existing traffic queues occurring along 1st Avenue East, past railroad crossing. MnDOT would identify potential options during final design.</li> <li>Hinckley: Added station trips are not expected to conflict with the heaviest school traffic times. MnDOT would continue to monitor train/school schedules.</li> </ul>	<p>No impacts are expected. Bike and pedestrian improvements include:</p> <ul style="list-style-type: none"> <li>New crossing warning devices at railroad crossings would improve safety at trails.</li> <li>Coon Rapids: Station provides new shared use path consistent with local plans.</li> <li>Hinckley: Station provides new sidewalks along Power Avenue and 1st and 2nd streets.</li> <li>Superior: New station entrance at North 14th and Oakes Avenue with sidewalk that connects to platform.</li> <li>Duluth: Station provides new ADA access from West Michigan Street to the station entrance.</li> </ul>
CONSTRUCTION IMPACTS	<p>MnDOT would coordinate with existing rail services to maintain operations and minimize impacts during construction. Potential rail impacts include:</p> <ul style="list-style-type: none"> <li>Temporary rail outages may be possible during construction of new or replaced infrastructure.</li> <li>Duluth: Potential outage of NSSR service at the station if construction must be done during NSSR's tourist season operations.</li> </ul>	<p>During construction, MnDOT would coordinate with transit providers to communicate temporary access changes and avoid service impacts. Potential transit impacts include:</p> <ul style="list-style-type: none"> <li>Buses may experience temporary disruptions or detours where rail grade crossing improvements are planned.</li> <li>Minneapolis: Platform and track construction near Northstar commuter rail operations at Target Field Station.</li> <li>Coon Rapids: Buses may experience temporary traffic disruptions along Foley Boulevard and to Foley Boulevard park and ride during new station entrance road construction.</li> </ul>	<p>During construction, MnDOT would coordinate with local communities to determine appropriate measures to minimize traffic disruption and route traffic around temporary closures at crossings and in station communities, as needed. Potential traffic impacts include:</p> <ul style="list-style-type: none"> <li>Temporary closures or detours to reconstruct or install new warning devices at railroad crossings.</li> <li>Coon Rapids: Temporary traffic disruptions to Foley Boulevard and to Foley Boulevard park and ride during new station entrance road construction.</li> <li>Hinckley: Temporary closure or lane reduction to resurface Power Avenue North.</li> <li>Superior: Short-term street closure or detour to construct new station entrance at North 14th Street and Oakes Avenue.</li> </ul>	<p>During construction, MnDOT would coordinate with local communities to communicate construction schedules and temporary access disruptions. Potential impacts include:</p> <ul style="list-style-type: none"> <li>Temporary disruptions or detours at trails where railroad crossings are closed for construction or installation of new crossing warning devices.</li> <li>Coon Rapids: Temporary sidewalk closure along Foley Boulevard to construct new entrance to station.</li> <li>Duluth: Temporary closure of sidewalk between West Michigan Street and track, and the public road at track level, for station construction.</li> </ul>



# NOISE & VIBRATION

The Tier 2 EA evaluated noise and vibration impacts for the NLX Project. The analysis measures existing and projected noise and vibration levels at noise-sensitive receivers (i.e. residence, hospital, school, park) along the corridor and utilizes criteria established by the Federal Railroad Administration to determine impacts.

## NOISE IMPACTS

- ◆ NLX station, maintenance and layover facility sites would not create an impact.
- ◆ The projected noise impacts along the corridor are primarily due to the sounding of train horns near rail grade crossings in areas without existing quiet zones, generally north of Andover and south of Duluth.
- ◆ The number and severity of horn-related noise impacts would increase between Sandstone and Duluth under the NLX Project's Sandstone maintenance facility alternative due to an additional nighttime round trip operation.
- ◆ The establishment of quiet zones by municipalities would eliminate all but four moderate noise impacts at one multifamily residential building in Minneapolis and one severe noise impact at Freedom Park in Braham.

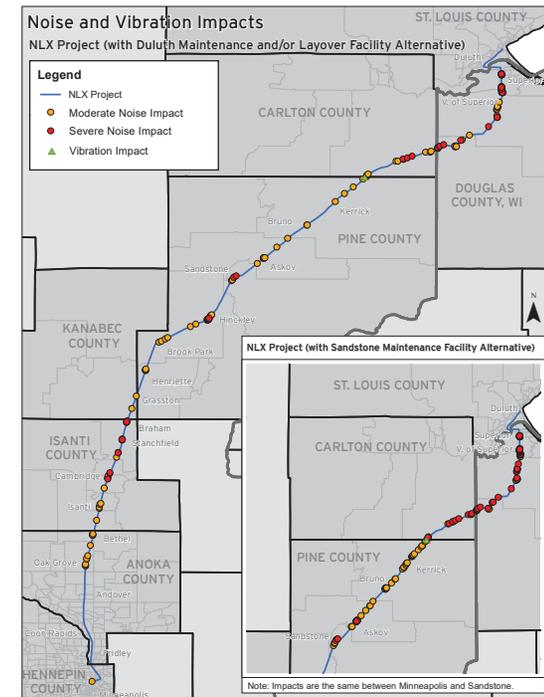
**Mitigation:** Since the projected noise impacts are primarily due to train horn noise, the most feasible way to mitigate the noise impacts would be for municipalities to establish quiet zones for rail grade crossings near noise-sensitive receivers. The establishment of quiet zones is a separate regulatory approval process with FRA's Office of Safety that must be initiated by municipalities. In quiet zones, because of safety improvements at the rail grade crossings, train operators would sound horns only in emergency situations.

## CONSTRUCTION IMPACTS

Temporary noise and vibration impacts could result from activities associated with the construction of new tracks and stations, utility relocation, grading, excavation, track work, demolition, and installation of systems components.

### **Mitigation:**

- Avoidance of nighttime construction in residential neighborhoods.
- Locating stationary construction equipment as far as possible from noise-sensitive sites.
- Construction of temporary noise barriers between noisy activities and noise-sensitive receivers.
- Routing construction-related truck traffic to roadways that will cause the least disturbance to residents.
- Use of alternative construction methods to minimize impact.



## VIBRATION IMPACTS

One single-family residence in Nickerson, MN would experience a vibration impact due to its proximity to the BNSF tracks.

**Mitigation:** Specific vibration mitigation measures would be recommended as the NLX Project advances through the design process. Additionally, site-specific ground-borne vibration propagation testing would be conducted through the design process to provide more refined results.



# IMPACTED SECTION 4(f) PARKS & RECREATION PROPERTIES

NAME OF SECTION 4(f) RESOURCE	LOCATION	ANTICIPATED IMPACT UNDER SECTION 4(f)	DESCRIPTION
Cedar Lake Trail	Minneapolis, MN	<i>De minimis</i>	Potential intermittent trail closures in sections adjacent to BNSF right of way near Target Field Station.
Grand Rounds Trail	Minneapolis, MN	<i>De minimis</i>	Potential intermittent trail closures for the section below the BNSF bridge over West River Parkway.
Edgewater Gardens Park	Fridley, MN	Temporary Occupancy	About 0.04 acres for construction of a new rail bridge over Mississippi Street Northeast to support construction of a third track.
Locke Lake Park	Fridley, MN	Temporary Occupancy	Approximately 0.07 acre to construct a new bridge over Rice Creek to support construction of a third track.
Plaza Park	Fridley, MN	Temporary Occupancy	Approximately 0.45 acre to construct a new bridge over Rice Creek to support construction of a third track.
Springbrook Nature Center	Fridley, MN	Temporary Occupancy	Approximately 0.33 acre to extend two culverts.
Rice Creek West Regional Trail Corridor	Fridley, MN	Temporary Occupancy	Approximately 0.35 acre to construct a third track.
Mississippi River Regional Trail	Fridley, MN	<i>De minimis</i>	Closure of approximately 120 feet of the trail under and near the BNSF bridge over Rice Creek during bridge construction. An additional 400 feet of the trail south of Locke Park within construction limited would need to be closed during construction.
Rice Creek West Regional Trail	Fridley, MN	<i>De minimis</i>	Closure of approximately 100 feet of trail under BNSF bridge over Rice Creek during bridge construction. An additional 1,600 feet of trail within construction limits would need to be closed during construction.
Osborne Road Trail	Fridley, MN	<i>De minimis</i>	Temporary closure of the trail at the Osborne Road grade crossing for crossing improvements.
85th Avenue Northwest Trail	Coon Rapids, MN	<i>De minimis</i>	Temporary closure of the trail at the 85th Avenue grade crossing for crossing improvements.
Coon Rapids Boulevard Extension Northwest Trail	Coon Rapids, MN	No Use	Initially identified as being within the construction limits, but later determined to be unaffected.
Egret Boulevard Northwest Trail	Coon Rapids, MN	<i>De minimis</i>	Temporary closure of the trail at the Egret Boulevard Northwest grade crossing for crossing improvements.
Tom Anderson Trail	Andover, MN	<i>De minimis</i>	Temporary closure of the trail where the BNSF crosses over the trail on a bridge to allow for bridge modifications.
Proposed North Anoka County Regional Trail	Oak Grove, MN	<i>De minimis</i>	Temporary closure of the trail at the 221st Avenue Northwest grade crossing for crossing improvements.
Rum River Snowmobile Trail	Isanti County, MN	Temporary Occupancy	Temporary closure of the trail at the 261st Avenue grade crossing (south of the City of Isanti) to allow for crossing improvements.
Isanti-Cambridge Trail	Isanti, MN	<i>De minimis</i>	Temporary closure of the trail adjacent to the grade crossing at 305th Avenue Northeast to allow for crossing improvements.
Cambridge-Weber-Starks-Isanti Snowmobile Trail	Cambridge, MN	Temporary Occupancy	Temporary closure of the trail at the 11th Avenue Southeast grade crossing to allow for crossing improvements.
Northern Lite Snowmobile Trail	Isanti and Kanabec Counties, MN	Temporary Occupancy	Temporary closure of the trail for crossing improvements at the following grade crossings: - 357th Avenue - 370th Avenue - Two crossings near 375th Avenue north of Grandy - Two private crossings north of Braham
Hinckley-Pine City Snowmobile Trail	Pine County, MN	Temporary Occupancy	Temporary closure of the trail at the grade crossings at Pokegama Avenue near Henriette, and at Old Highway 61 in Hinckley for crossing improvements.
Pine 1, 2, 3 Snowmobile Trails	Pine County, MN	Temporary Occupancy	Temporary closure of the trail for a temporary construction access easement northeast of Askov, and at crossings near Railroad Avenue northeast of Bruno, near MN 23, at Deerfield Road and at Klein Road in Kerriick; at Range Line Road, Ericks on Road and Berger Road near Duquette; and at Wolf Drive and DeLong Street near Nickerson. Some closures may be to allow track work to proceed, or for improvements where the trail uses a roadway grade crossing.
Moosehorn Snowmobile Trail	Carlton County, MN	Temporary Occupancy	Temporary closure of grade crossings at County Road 145 and at Granzow Road near Holyoke.
Saunders Grade Snowmobile/Winter ATV Trail	Douglas County, WI	Temporary Occupancy	Temporary closure of the trail near County Road C south of Superior, WI.
North Country National Scenic Trail	Foxboro, WI	<i>De minimis</i>	Temporary closure of the trail at the West County Road W grade crossing for crossing improvements.
Gandy Dancer Snowmobile Trail and Winter/Summer ATV	Superior, WI	<i>De minimis</i>	Temporary closure of the trail at the South Merrill Road grade crossing for crossing improvements.
Trail 28 (Snowmobile and Winter/Summer ATV)	Superior, WI	<i>De minimis</i>	Temporary closure of the trail at the North 58th Street crossing for crossing improvements.
Orange Trail (Snowmobile and Winter ATV)	Superior, WI	Temporary Occupancy	Temporary closure of the trail at the North 58th Street crossing for crossing improvements.
Proposed North 58th Street Trail	Superior, WI	<i>De minimis</i>	Temporary closure of the trail at the North 58th Street crossing for crossing improvements.
Cross City Trail	Duluth, MN	<i>De minimis</i>	Temporary closure of the trail crossing just south of downtown Duluth to allow for track improvements.

\*Properties are listed in order from south to north.



# PARKS & RECREATION AREAS

Public parks and recreation areas are protected by Section 4(f) of the U.S. DOT Act of 1966 (49 USC 303), which requires consideration of park and recreation, wildlife and waterfowl refuges, and historic sites. **The Tier 2 EA concluded the NLX Project would not permanently impact Section 4(f) park and recreation resources. Only temporary impacts could occur during construction.**

## NLX OPERATIONS

The NLX Project **would not permanently impact Section 4(f) parks and recreation areas** since the project would not convert land from these resources to transportation uses.

## NLX CONSTRUCTION

During NLX Project construction, some parks and recreation areas and trails could be **temporarily impacted by short term rail grade crossing closures or temporary construction easements**. The impacts to Section 4(f) properties are anticipated to be minor (de minimis or temporary occupancy) and include:

- ◆ 5 temporary easements at parks and recreation sites.
- ◆ 13 temporary closures at recreational trails.
- ◆ 11 temporary closures at snowmobile and ATV trails.

### SECTION 4(f) DEFINITIONS

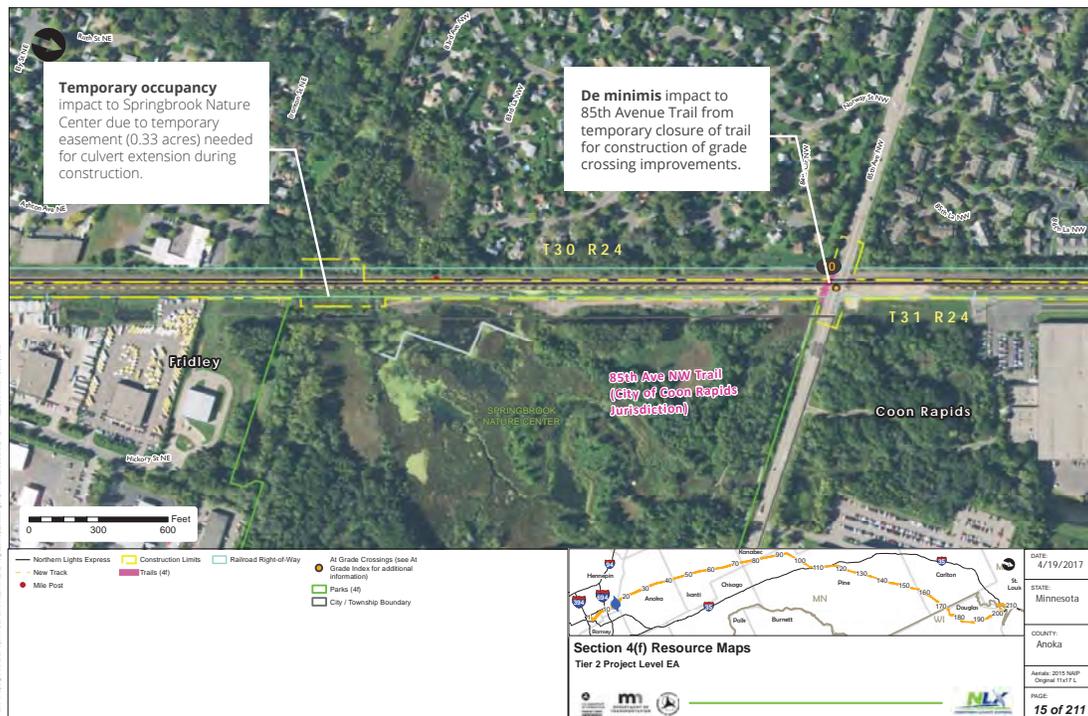
**Temporary Occupancy:** A temporary occupancy of land is so minimal that it does not constitute a use within the meaning of section 4(f) when the duration is temporary, the scope of work is minor, there are no anticipated permanent adverse physical impacts, and the property is restored to the condition in which it was originally found.

**De minimis:** A de minimis impact is one that, after taking into account avoidance, minimization, mitigation and enhancement measures, results in no adverse effect to the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).

## MITIGATION STRATEGIES

The NLX Project would continue to avoid, minimize and mitigate temporary Section 4(f) impacts as the final design advances and funding is secured for the NLX Project. Measures would be implemented to minimize temporary trail closure impacts including posting trail closure signs and working closely with park officials to provide timely public information regarding closures and potential detours.

### Example Section 4(f) Impacts for the NLX Project

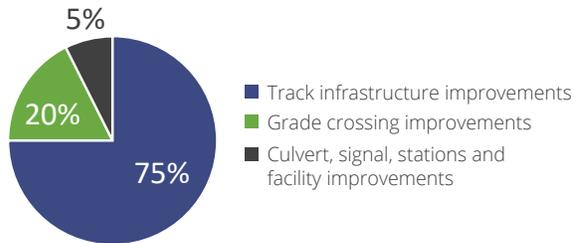


# WETLANDS

## KEY FINDINGS

- ◆ Approximately 92 acres of wetland could be impacted, accounting for less than 1% of all wetlands within the study area.
- ◆ Impacted wetlands consist of 321 separate wetlands, with an average impact of 0.3 acre/wetland.
- ◆ Some wetland impacts would be temporary and would be restored following construction.
- ◆ No wetlands would be bisected.

WETLAND IMPACT CAUSES



WETLAND IMPACTS

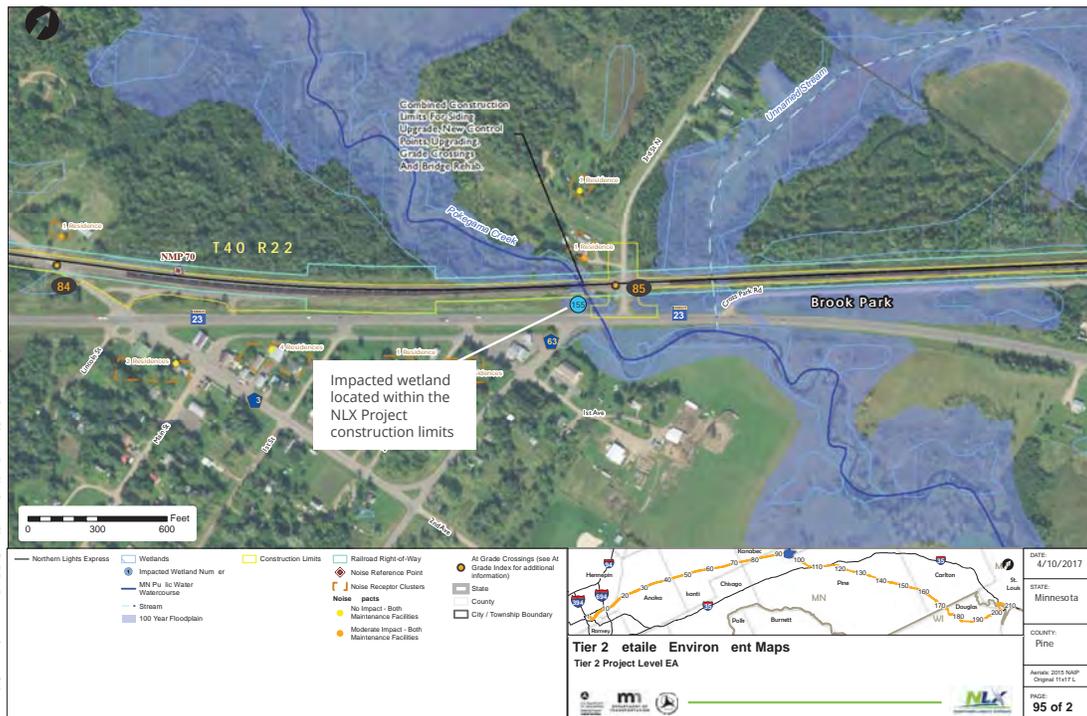
County	Acres
Hennepin	0.0
Anoka	8.7
Isanti	11.6
Kanabec	0.5
Pine	33.9
Carlton	1.0
St. Louis	0.4
Douglas, WI	35.7
<b>Total</b>	<b>91.9</b>

## WETLAND MITIGATION

MnDOT would continue to coordinate with MnDNR, WDNR, the Minnesota Board of Water and Soil Resources and the U.S. Army Corps of Engineers as the NLX Project advances through the design process. Additional avoidance, minimization and mitigation measures would be determined as MnDOT applies for federal, state and local wetland and water permits for construction activities. Specific mitigation measures include:

- ◆ Use of on-site and off-site mitigation including purchase of wetland bank credits.
- ◆ Use of construction Best Management Practices to minimize impacts.

### Example of a Wetland Impact for the NLX Project



# WATER RESOURCES

## SURFACE WATERS

The NLX Project would increase impervious areas, potentially resulting in higher runoff rates and volumes and a reduction in pre-treatment of stormwater runoff entering surface waters. **Surface water impacts would be managed by local, state and federal permitting requirements** including the National Pollutant Discharge Elimination System (NPDES).

## FLOODPLAINS

The NLX Project would comply with Executive Order 11988 and local permitting requirements for floodplain management and flood protections. Therefore, **the NLX Project would not result in substantial changes to floodplain values, flood flows or flood elevations and would not result in a significant floodplain encroachment** as defined in federal regulations. Within the NLX construction limits:

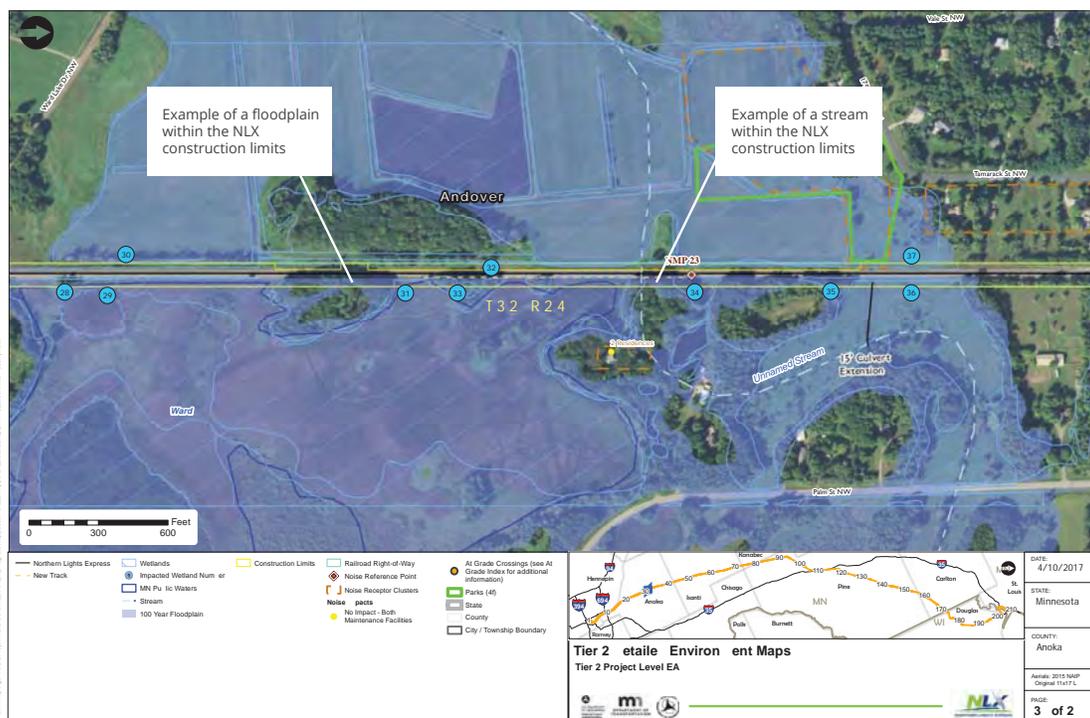
- ◆ 32 mapped floodplain crossings in areas of NLX construction.
- ◆ 26,130 linear feet of identified floodplain that may be temporarily or permanently filled.

## MITIGATION STRATEGIES

MnDOT would follow all local, state and federal regulations to avoid, minimize and mitigate impacts to surface waters and floodplains. Mitigation strategies include:

- ◆ Design standards to accommodate fish spawning and migration.
- ◆ Best Management Practices to reduce erosion, sedimentation and pollutant discharges from construction sites.
- ◆ Permanent treatment of stormwater runoff from new impervious areas in accordance with applicable regulations.
- ◆ Coordination with local floodplain administrators to determine permitting compliance measures.

### Example of Water Resource Impacts for the NLX Project



# HISTORIC PROPERTIES

## in the NLX Project Corridor

