



# Appendix H

## Section 106 Supporting Materials

### H.4 Other Supporting Documents

1. Federal Transit Administration, *METRO Blue Line Extension Light Rail Transit Project Section 106 Assessment of Effects and Final Determination of Effect for Historic Properties (DOE Report)*, January 20, 2016.
2. The 106 Group Ltd, *Theodore Wirth Regional Park Cultural Landscape Study for the Blue Line Extension LRT Project*, September 2015.
3. The 106 Group Ltd, *Phase I and II Architectural History Survey for the Bottineau Transitway Project, Crystal, Brooklyn Park, Golden Valley, Maple Grove, Minneapolis, New Hope, and Robbinsdale, Hennepin County, Minnesota (Volume 1 and 2)*, 2012. Available at <http://metro council.org/Transportation/Projects/Current-Projects/METRO-Blue-Line-Extension/Environmental/Technical-Reports.aspx>.
4. The 106 Group Ltd, *Phase IA Archaeological Assessment for the Bottineau Transitway Project, Hennepin County, Minnesota*, 2012. This report is available by request.
5. The 106 Group Ltd, *Bottineau Transitway Phase I and II Architectural Survey, Hennepin County, Minnesota: Supplemental Report 1*, 2013. Available at Available at <http://metro council.org/Transportation/Projects/Current-Projects/METRO-Blue-Line-Extension/Environmental/Technical-Reports.aspx>.
6. Federal Transit Administration and Minnesota State Historic Preservation Office, *Section 106 Programmatic Agreement Between the Federal Transit Administration and the Minnesota State Historic Preservation Office Regarding the Construction of the Interchange Project Minneapolis, Minnesota*, 2012.



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METRO Blue Line Extension Light Rail Transit Project

# Section 106 Assessment of Effects and Final Determination of Effect for Historic Properties

January 2016



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# Summary

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The METRO Blue Line Extension Light Rail Transit (LRT) Project (Project), previously known as the Bottineau Transitway, is an approximately 13-mile long LRT line with 12 stations (one [1] existing, 11 new), five (5) park-and-ride facilities, and one (1) operations and maintenance facility, located in Hennepin County, Minnesota. The line will begin at the existing Target Field Station in Minneapolis, where it will connect with the existing METRO Blue and Green LRT lines, and the Northstar Commuter Rail line. From the Target Field Station, the Project will extend along a northwesterly alignment, connecting the cities of Minneapolis, Golden Valley, Robbinsdale, Crystal, and Brooklyn Park.

The Metropolitan Council (Council) is intending to apply for Federal Transit Administration (FTA) funding for the Project and is intending to seek permits for construction from the United States Army Corps of Engineers; therefore, the Project is a federal undertaking and must comply with Section 306108 of the National Historic Preservation Act of 1966, as amended (54 United States Code [U.S.C.] § 306108) and its implementing regulations, 36 Code of Federal Regulations § 800 et. seq.; Section 101(b)(4) of the National Environmental Policy Act of 1969, as amended, (42 U.S.C. § 4331); and other applicable federal mandates. The Project is also using funding from the State of Minnesota and political subdivisions of the State and is seeking permits for construction from several state agencies, including Minnesota Department of Transportation, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, and Minnesota Department of Health. It must also, therefore, comply with Minnesota laws, including the Minnesota Environmental Policy Act of 1973, the Minnesota Field Archaeology Act (Minnesota Statute [MS] § 138.31-138.42), the Minnesota Historic Sites Act (MS § 138.661-138.669), and the Minnesota Private Cemeteries Act (MS § 307.08), as applicable. This assessment of effects study was prepared to comply with these legislative requirements.

This report describes the proposed Project; its Area of Potential Effect (APE); efforts to identify and evaluate historic properties within the Project's APE to determine their eligibility for listing on the National Register of Historic Places; and evaluates the Project's effects on those properties. Based on findings of the effects assessments, the Project will have an adverse effect on six (6) historic properties: the Wayman African Episcopal Methodist Church; Floyd B. Olson Memorial Statue; Grand Rounds Historic District; Homewood Residential Historic District; the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad / Great Northern Railway Historic District; and the West Broadway Avenue Residential Historic District. Due to the adverse effect the Project will have on these properties, FTA has determined that the undertaking will have an Adverse Effect on historic properties.

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# Section 1: Introduction

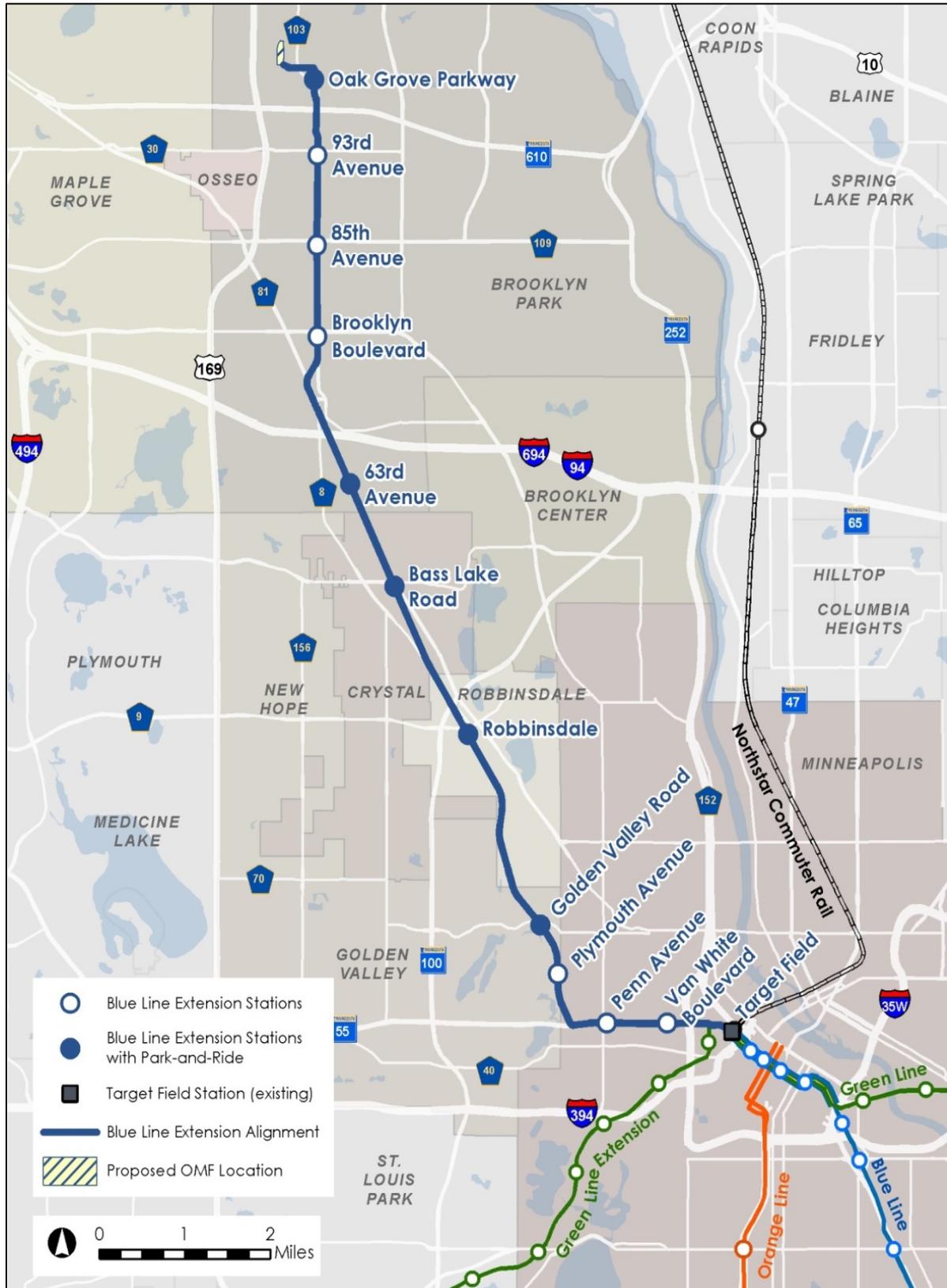
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The proposed METRO Blue Line Extension Light Rail Transit (LRT) Project (Project), previously known as the Bottineau Transitway, is an approximately 13-mile long, double track LRT located in Hennepin County, Minnesota. The line will begin at the existing Target Field Station (previously known as the Interchange Station) in Minneapolis, where it will connect with the existing METRO Blue and Green LRT lines, and the Northstar Commuter Rail line, and extend along a northwesterly alignment, to connect the cities of Minneapolis, Golden Valley, Robbinsdale, Crystal, and Brooklyn Park. The Project includes 11 new stations, five (5) park-and-ride facilities (four to be constructed as part of the Project and one that currently exists and will be used to serve the Project), and one (1) operations and maintenance facility (OMF) (Figure 1).

The Project was initiated by the Hennepin County Regional Railroad Authority (HCRRA), which completed an Alternatives Analysis for the Project in March 2010. In June 2012, the HCRRA identified a Locally Preferred Alternative (LPA) that included a preferred alignment, with LRT as the preferred mode of transit. The Metropolitan Council (Council) adopted the LPA as part of its *2030 Transportation Policy Plan* in March 2013. The HCRRA, in joint local partnership with the Council, and with the Federal Transit Administration (FTA) as the federal sponsor, subsequently completed and published a Draft Environmental Impact Statement (DEIS) for the Project in March 2014. Upon receipt of the FTA's approval to enter the New Starts Program, Governor Dayton identified the Council as the agency with responsibility to advance and, potentially, to construct and operate the Project. The Council will be the sole local Project sponsor preparing the Final Environmental Impact Statement (FEIS), with the FTA as the federal Project sponsor. The Council anticipates that completion of preliminary design and engineering in addition to publishing of the FEIS will occur in 2016.

The Council intends to apply for FTA funding for the Project and intends to seek permits for construction from the United States Army Corps of Engineers (USACE); therefore, the Project is a federal undertaking and must comply with Section 306108 of the National Historic Preservation Act of 1966 (NHPA), as amended (54 United States Code [U.S.C.] § 306108) (hereinafter referred to as Section 106) and its implementing regulations, 36 Code of Federal Regulations (CFR) § 800 et. seq.; Section 101(b)(4) of the National Environmental Policy Act of 1969 (NEPA), as amended, (42 U.S.C. § 4331); and other applicable federal mandates. The Project will also use funding from the State of Minnesota and political subdivisions of the State, and is seeking permits for construction from several state agencies. Therefore, it must also comply with Minnesota laws, including the Minnesota Environmental Policy Act of 1973, the Minnesota Field Archaeology Act (Minnesota Statute [MS] § 138.31-138.42), the Minnesota Historic Sites Act (MS § 138.661-138.669), and the Minnesota Private Cemeteries Act (MS 307.08), as applicable. This assessment of effects study was prepared to comply with the aforementioned legislative requirements.

Figure 1. Project Location



Pursuant to 36 CFR § 800.2(a)(2), the USACE has recognized FTA as the lead Federal agency responsible for fulfilling their collective Section 106 obligations for the Project.<sup>1</sup> FTA has delegated authority to the MnDOT Cultural Resources Unit (CRU) to aid FTA in many aspects of the Section 106 process for the Project per 36 CFR § 800.2(a)(3).<sup>2</sup> Authority delegated includes: initiating the Section 106 process; identifying an Area of Potential Effect (APE); conducting appropriate inventories to identify historic properties within the APE; making determinations of eligibility for the National Register of Historic Places (NRHP); making assessments of potential effect; and conducting consultation with the Minnesota State Historic Preservation Office (MnSHPO), interested parties, and the public. MnDOT CRU is also assisting FTA with identifying consulting parties, making determinations of effect and negotiating the terms and conditions of the Memorandum of Agreement (MOA) for the Project, although FTA retains final authority in these areas.

This report provides a summary description of the LPA, an overview of the legal and regulatory requirements for Section 106, a summary of the results of efforts completed to date to identify and evaluate historic properties for the NRHP that could be potentially affected by the Project, and describes consultation completed with interested parties and the public to consider Project effects on historic properties. It also assesses effects of the Project on NRHP listed and eligible properties located within the APE, provides findings of effect for each property, and describes FTA's final determination of effect on historic properties for this undertaking.

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<sup>1</sup> In a letter dated March 30, 2015, the USACE recognized FTA as the Lead Federal Agency pursuant to 36 CFR § 800.2(a)(2), to act on its behalf for meeting the requirements of Section 106.

<sup>2</sup> FTA delegated authority to MnDOT CRU in a letter dated February 16, 2011.

## Section 2: Project Description

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The proposed Project is an approximately 13-mile long, double track LRT line with 11 new stations; four (4) new park-and-ride facilities with approximately 1,670 spaces (an existing park-and-ride with 565 spaces will also be used to serve the Project); one (1) OMF; accommodations for passenger drop-off; pedestrian and bicycle access; roadway, streetscape, and landscape improvements; and restructured local bus route connections located in Hennepin County, Minnesota. The line will begin at the existing Target Field Station in Minneapolis, where it will connect with the existing METRO Blue and Green LRT lines, and the Northstar Commuter Rail line. From the Target Field Station, the line will extend along a northwesterly alignment to connect the cities of Minneapolis, Golden Valley, Robbinsdale, Crystal, and Brooklyn Park. The Project also includes alterations to a freight railroad line corridor that the LRT alignment will utilize for a portion of its length. A more detailed description of Project elements is included below.

### **Geographic Area and Light Rail Alignment**

The Project begins at Target Field Station in downtown Minneapolis and follows Olson Memorial Highway (Trunk Highway [TH] 55) west to the Burlington Northern Santa Fe (BNSF) Railway (Rwy.) corridor (historically known as the Osseo Branch Line of the St. Paul, Minneapolis & Manitoba Railroad [StPM&M RR] / Great Northern [GN] Rwy.) just west of Thomas Avenue where it enters the BNSF Rwy. right-of-way (ROW). Adjacent to the freight rail tracks, it continues in the railroad corridor through the cities of Golden Valley, Robbinsdale, Crystal, and into Brooklyn Park. It then crosses Bottineau Boulevard (CR 81) at 73rd Avenue to West Broadway Avenue and terminates just north of TH 610 near the Target North Campus (see Figure 1).

### **Track Structure**

The Project will operate on standard-gauge rail. The proposed system will be double-tracked throughout to provide separate tracks for northbound and southbound trains. Crossovers to allow trains to cross from the northbound to the southbound tracks will be provided at regular intervals for special operations or emergencies. Typically, the guideway in the BNSF Rwy. corridor will be ballasted track, separate from the freight rail track. Track at station areas will consist of direct fixation track. When running on alignments in streets the majority of the Project will be ballasted track, with embedded or direct fixation track provided depending on the location and the context of the street.

### **Overhead Power System**

Overhead Power Systems will transmit electrical power from a Traction Power Substation (TPSS) to the light rail vehicle via a pantograph system that will be constructed along the entire Project ROW.

The Overhead Power System consists of metal support poles with cross arms from which powered contact wires supported by messenger wires (catenary) are suspended above the light rail tracks to power the light rail vehicles (LRVs). The support poles are generally located between the two light rail tracks and support the wires for both alignments, although in some locations they may be positioned outside the light rail alignment. The poles may be painted or self-weathering steel.

## **Traction Power Substations, Signal Bungalows, and Signaling Systems**

The Project will include a total of seventeen (17) TPSS's.<sup>3</sup> TPSS sites will occupy about 4,000-square-feet and will accommodate a single-story prefabricated building with dimensions of roughly 40-by-20-feet. The sites will be completely enclosed with perimeter fencing. Access to the TPSS building by Metro Transit maintenance personnel must also be accommodated at the site. It is anticipated that most TPSS sites will be located within existing transportation ROW.

The Project will include a total of five (5) to six (6) signal bungalows located near special trackwork (such as crossovers). Additionally, there will be 11 to 12 combined station signal/communication bungalows located near each of the Project's stations. Signal bungalows are small prefabricated sheds, typically 10-by-30-feet in size, that house equipment to operate and monitor the signals that regulate train movement on the alignment. All bungalows will be installed at grade with access for maintenance.

## **Stations and Park-and-Ride Lots**

Beginning at the existing Target Field Station in Minneapolis, there will be 12 stations along the Project alignment (11 new and one [1] existing): three (3) in Minneapolis, two (2) in Golden Valley, one (1) in Robbinsdale, one (1) in Crystal, and five (5) in Brooklyn Park (Table 1). All 11 of the new stations will be center-platform stations, three of which will include vertical circulation for passengers to access LRT station platforms (these three are Plymouth Avenue Station, Golden Valley Road Station, and a skyway/elevator from the existing parking structure at the 63<sup>rd</sup> Avenue Station). Park-and-ride facilities will be located at five (5) stations (Oak Grove Parkway Station, 63<sup>rd</sup> Avenue Station, Bass Lake Road Station, Robbinsdale Station, and Golden Valley Road Station). The 63<sup>rd</sup> Avenue park-and-ride is an existing Metro Transit parking structure which will be used to serve the Project.

The station platforms will be approximately 270-by-22-feet in size and raised 14 inches above the guideway railhead. All stations will have Americans with Disabilities Act (ADA) accessible facilities and include ticketing, lighting, shelters, and signage. While the specific designs for the station shelters will not be determined until a later date, depending on the requirements for individual

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<sup>3</sup> At the time this was prepared, the exact location of some TPSSs was not finalized so 300-foot diameter areas were delimited to identify the area in which they could be located. These 300-foot diameter areas will be refined during the engineering phase of project development to identify a more precise siting for the TPSS within the area. This refinement process will seek to minimize impacts to all surrounding properties and resources, not just historic properties, and balance safety, reliability, cost, and operational efficiencies.

stations, a typical station platform will have four three-sided shelters. These shelters may be set under individual canopies, or under longer, continuous canopies spanning multiple shelters. A typical free-standing shelter would have a 12-to-16-foot tall canopy that is approximately 36-by-19-feet in size and located above the platform. Signage will range from 18-to-24-feet in height.

Table 1. LRT Stations and Park-and-Ride Facilities

Station	New or Existing	Park-and-Ride Spaces
<b>Minneapolis</b>		
Target Field Station	Existing	None
Van White Memorial Boulevard Station	New	None
Penn Avenue Station	New	None
<b>Golden Valley</b>		
Plymouth Avenue Station	New	None
Golden Valley Road Station	New	100 (new)
<b>Robbinsdale</b>		
Robbinsdale Station	New	550 (new)
<b>Crystal</b>		
Bass Lake Road Station	New	170 (new)
<b>Brooklyn Park</b>		
63 <sup>rd</sup> Avenue Station	New	565 (existing)
Brooklyn Boulevard Station	New	None
85 <sup>th</sup> Avenue Station	New	None
93 <sup>rd</sup> Avenue Station	New	None
Oak Grove Parkway Station	New	850

## Operations and Maintenance Facility

The OMF site will be located at the north end of the Project in Brooklyn Park. This location was selected based on its proximity to the end of the line, and adequate space for the facility (about 10.4 acres, or approximately 450,000-square-feet). The OMF site would be occupied by a LRT storage and maintenance building that is about 140,000-square-feet, surface parking for employees and visitors, trackwork, and open space. The facility will include areas to store, service, and maintain up to 30 light rail vehicles (LRVs), vehicle washing and cleaning equipment, and office space to accommodate staff who would report for work at this facility. The facility would be equipped to perform daily cleaning and repair activities on the LRVs as they enter and leave revenue service. Scheduled service and maintenance inspections also would be performed in this facility.

## Bridges

The Project includes the construction of seven (7) new LRT bridges: a 350-foot-long crossing of the Hennepin Energy Recovery Center (HERC) driveway, a 700-foot-long crossing of the ponds immediately north of Golden Valley Road, a 1,200-foot-long crossing of Grimes Pond in

Robbinsdale, a 375-foot-long bridge over TH 100, a 1,260-foot-long bridge (260-foot span with 500-foot approaches on either side) over the CP rail tracks, a 925-foot-long bridge over the 73rd Avenue/Bottineau Boulevard intersection, and a 250-foot-long bridge over TH 610.

In addition, five reconstructed roadway bridges are part of the LPA: a 375-foot-long TH 55 bridge over the BNSF Rwy. line, a 375-foot-long Plymouth Avenue bridge, a 120-foot-long Theodore Wirth Parkway bridge, a 215-foot-long Golden Valley Road bridge, and a 110-foot-long 36th Street bridge. The bridges carrying TH 55 over I-94 in Minneapolis and I-94/I-694 over the BNSF Rwy. line in Brooklyn Park will require modifications to accommodate LRT.

## **Freight Rail Modifications**

Freight rail service will continue to operate in its existing location within the BNSF Rwy. for the approximately 8.4 miles of shared ROW with the following general areas of freight rail modifications in Golden Valley, Robbinsdale, Crystal, and Brooklyn Park. Beginning at TH 55 and extending to north of 73<sup>rd</sup> Avenue North, the alignment of the existing freight rail track owned by the BNSF Rwy. will be shifted and reconstructed approximately 15-feet west of its existing alignment in order to allow the light rail alignment to be constructed in the eastern half of BNSF Rwy. ROW. The two exceptions are that the BNSF Rwy. freight rail track will run on its existing alignment within the Grimes Pond and Golden Valley ponds to eliminate the need to build a freight rail bridge structure across existing wetland areas. The BNSF Rwy. freight rail track will also run on its existing alignment over TH-100.

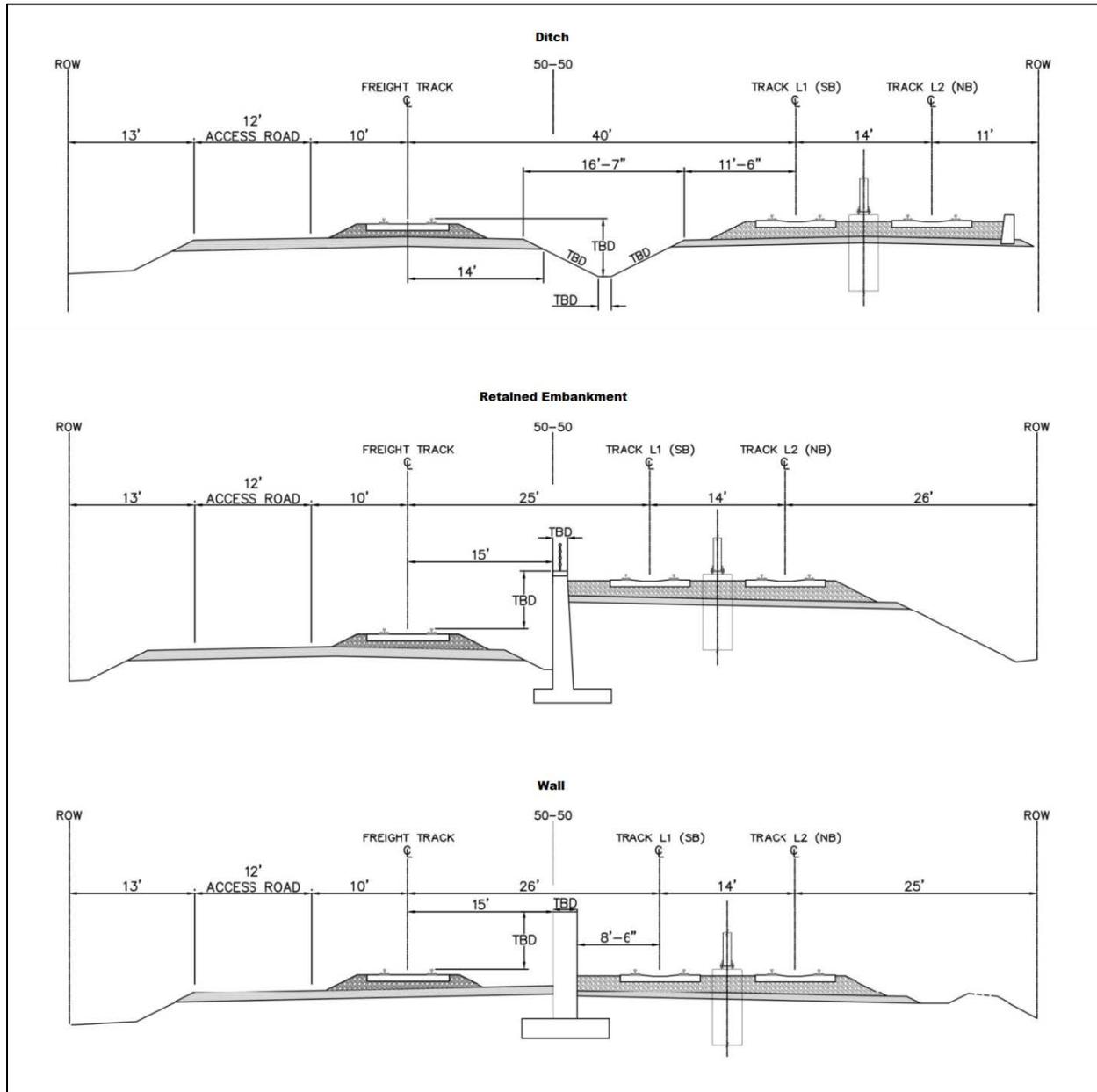
## **Corridor Protection Barrier**

Along the portion of the Project alignment located within the BNSF Rwy. ROW, a corridor protection barrier will be constructed to physically separate the LRT guideway from the BNSF Rwy. freight rail tracks. The barrier will include a combination of horizontal separation, vertical separation, and physical means to provide safe operations. Three specific corridor protection treatments are proposed (Figure 2):

- A ditch will be used where ROW width permits. The width of the ditch will range from 12-to-17 feet, with a track spacing range of 35-to-40-feet on-center between the LRT and freight rail tracks;
- A retained fill option where LRT would be at a higher grade than freight rail, with the raised LRT roadbed supported by a retaining wall(s); and
- A wall with an approximate height of 6-feet and an approximate width of up to 2-feet thick, the design and materials would be determined as Project design advances.

Figure 2 includes a typical section of each corridor protection treatment.

Figure 2. Corridor Protection Treatments



Source: Metropolitan Council

## Roadway Improvements

The Project will result in long-term physical modifications to existing roadways and intersections that will affect local circulation patterns. These changes to roadways will accommodate the introduction of the LRT alignment and related facilities and increase roadway capacity to respond to

anticipated demands on roadways (e.g., in response to demand at a new park-and-ride lot).<sup>4</sup> Roadway improvements range from turn lane additions and reconfiguration of lane widths to new roadways, modifications to existing roadway alignments, and reconstruction of bridges.

### **Trunk Highway 55 Reconstruction**

TH 55 will be reconstructed between the Target Field Station and the BNSF Rwy. corridor. This will include the full reconstruction of a six-lane roadway with the LRT guideway located in the center median, and includes the construction of new sidewalks on the north and south sides of the roadway. The existing bridge carrying TH 55 over I-94 will be modified to accommodate the LRT guideway in the middle of the bridge.

### **West Broadway Avenue**

Hennepin County is planning to do a full reconstruction of West Broadway Avenue as part of a separate project between Candlewood Avenue and 93<sup>rd</sup> Avenue. This reconstruction may occur before or concurrent with the Project; however, it is being designed to allow for the introduction of LRT into its center median should the Project be implemented. The Project includes full reconstruction of West Broadway Avenue between 75<sup>th</sup> Avenue, where the LRT guideway would enter the median of West Broadway Avenue, and Candlewood Avenue, and then north of 94<sup>th</sup> Avenue, where the LRT guideway would exit the median of West Broadway Avenue to cross TH 610. The Hennepin County project includes construction of a 10-foot trail and 8-foot boulevard on the west and east sides of the roadway.

## **Bicycle and Pedestrian Improvements**

The Project includes a variety of bicycle and pedestrian improvements to provide safe bicycle and pedestrian crossings of the proposed LRT alignment, to accommodate the proposed LRT and roadway improvements, and/or to provide bicycle and pedestrian connections to the proposed LRT stations. These improvements will affect several trails and sidewalks within the vicinity of the Project and include, but are not limited to, construction of ADA compliant curb ramps and detectable warnings, and relocations of regional and local trails.

## **Light Rail Vehicles**

The LRVs will be similar to those in use on the existing METRO Green Line and Blue Line (Figure 3). The LRVs will be designed to operate independently or as a multiple-unit train of up to three vehicles. A pantograph located on the roof of the LRV will collect power from the overhead power

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<sup>4</sup> The Project includes intersection modifications, new traffic signals, changes to existing traffic signals, and other traffic management techniques at intersections and at-grade light rail crossings of roadways within the roadways and traffic study area, so that the Project will not cause an unacceptable level of congestion, or worsen traffic operations at intersection that already experience an unacceptable level congestion compared to the 2040 No Build Alternative. Congestion is defined in terms of level of service (LOS). The Project will: 1) generally provide intersection operations of Level of Service D or better; or, 2) when the 2040 No Build Alternative LOS would be E or F, provides intersection operations that will be the same as or better than the No Build Alternative.

system. Each car will be equipped with level boarding for ADA accessibility and will be able to accommodate bicycles. LRV speeds will vary depending on operational conditions and will be set prior to the start of revenue operations based on a safety certification review. In Downtown Minneapolis they will operate at speeds of approximately 20 miles per hour, but along some segments of the alignment they may operate at top speeds ranging from 55 to 60 miles per hour.

Figure 3. Typical LRV



Source: Metropolitan Council

## Transit Operations

The Project entails a number of changes to transit operations in the Corridor including existing and planned bus systems of Metro Transit. The service plans will be revised prior to opening in 2021, and will be a result of a service planning process that complies with the Council's service planning policies, with federal requirements (e.g., Title VI), and a variety of external factors (e.g., transit demand, funding availability, public and agency comment).

### LRT Operations

The Project will have the effect of increasing both the average weekday light rail vehicle miles traveled (VMT) and revenue hours in the region, relative to the present (average weekday, 2040). Since the Project will have an interline connection with the existing METRO Blue Line (originally known as Hiawatha LRT), the Project's operating hours and frequency of service will be similar to the existing METRO Blue Line. As such the Project is expected to operate on 10-minute peak-period headways from approximately 6:30 a.m. to approximately 9:00 p.m., with less frequent service during early morning and late evening hours, and no service between approximately 2:00 a.m. and 4:30 a.m.<sup>5</sup>

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<sup>5</sup> Headways are the average time between transit vehicles operating in the same direction by a common point over a given period of time (e.g., four inbound light rail trains passing by a station within one hour would result in a 15-minute headway).

## Section 3: Section 106 Legal and Regulatory Context

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Prior to implementing an undertaking, Section 106 of the NHPA requires Federal agencies to consider the effects of the undertaking on historic properties that are included in, or are eligible for inclusion in, the NRHP. Undertakings include projects a federal agency carries out, approves or licenses, or funds. Federal agencies must also afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on the project prior to the agency making a decision.

As described in 36 CFR § 800 et. seq., which implements Section 106, the Section 106 process includes the following steps:

1. Initiation of the Section 106 process:
  - Establish the undertaking;
  - Notify the State Historic Preservation Officer (SHPO) and any Tribal Historic Preservation Officers (THPOs);
  - Plan to involve the public; and
  - Identify other consulting parties.
2. Identification of historic properties:
  - Determine the APE; and
  - Complete a survey of the APE to identify historic properties that are listed in or eligible for inclusion in the NRHP.
3. Assessment of adverse effects:
  - Apply criteria of adverse effect.
4. Resolution of adverse effects:
  - Continue consultation to consider measures to avoid, minimize, or mitigate adverse effects;
  - Reach agreement with the SHPO, any THPOs, and the ACHP if it chooses to participate in the consultation; and
  - Prepare a Section 106 agreement to document measures that will be implemented by the Federal agency to avoid, minimize, and/or mitigate adverse effects.

## Section 4: Identification of Historic Properties

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### Area of Potential Effect

An APE is “the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking” (36 CFR § 800.16[d]). An APE must account for both direct and indirect effects, including permanent and temporary effects.

MnDOT CRU, under delegation from FTA and in consultation with MnSHPO, determined an APE for the Project in 2011. Two APEs were established, one for architecture/history properties and one for archaeological resources. MnSHPO has concurred with both APEs.<sup>6</sup>

### Architecture/History APE

The APE for architecture/history properties (Figures 4 and 5) includes all areas within 500-feet on either side of the proposed alignment and within a 0.25 mile radius from the center point of proposed stations and the OMF. In addition, the architecture/history APE includes the following areas that are based on the type of Project improvement:

- New structures (new or replacement bridges, pedestrian bridges, etc.) – 0.25 mile radius from the structure (assumes the potential for pile driving);
- Existing structures – modification (widening/reconstruction of existing structures) – 0.25 mile radius from the structure (assumes the potential for pile driving); and
- Existing structures – pier modification only (moving piers to allow the LRT to go under) – 500-foot radius from the structure (assumes using drilling and no pile driving).

### Archaeological APE

The APE for archaeological resources (Figures 6 and 7) includes all areas of proposed construction activities or other potential ground disturbing activities associated with construction.<sup>7</sup> Based on the

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<sup>6</sup> Letter from MnSHPO to MnDOT CRU dated October 26, 2011. The APE that MnSHPO concurred with included the entirety of the LPA, as well as various alternative alignments that were under consideration at the time the APE was established. These alternative alignments were considered during the development of the DEIS, but were not selected as part of the LPA and have been dropped from further consideration. Therefore, they are not depicted in Figures 4-7.

<sup>7</sup> Figures 6-7 depict the location of the LPA and the corresponding archaeological APE. As the Project design has advanced since the archaeological APE was established, there have been several slight revisions to the Project design, but not to the Project scope. As a result, as is depicted in Figure 7, there are several small portions of the LPA that are now located outside the existing archaeological APE. However, the Phase IA archaeological investigation conducted for the Project (see later in this section) studied an area extending 0.25 miles beyond the archaeological APE, so the portions of the current LPA that are located outside the archaeological APE have been

current understanding of the proposed project, the Archaeological APE generally includes the existing railroad ROW for portions of the project within an existing railroad corridor, and the potential area of disturbance for other areas. The Archaeological APE for the stations includes all areas within 500-feet from the center point of the currently proposed station platforms to account for potential direct impacts from construction or development activities. Similarly, the Archaeological APE for the proposed park-and-rides and the OMF includes all areas within 500-feet from the potential area of disturbance.

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studied. No historic properties were identified and these areas were found to have low potential for archaeological resources to exist. The portion of the LPA outside the APE, from and including the 93<sup>rd</sup> Avenue station and its park-and-ride facility to the OMF site, also were previously surveyed at a Phase I level for another project and no historic properties were identified (see Woodward-Clyde, 1994). MnDOT CRU also examined the portions of the LPA outside the present APE again on January 12, 2016 through the use of its Minnesota Model (MnModel) and confirmed these areas have low archaeological site potential. Based on the previous archaeological assessments completed for the Project, the 1994 survey by Woodward-Clyde, and MnModel data, FTA has determined there is low potential for archaeological resources to exist, but will incorporate measures covering unanticipated discoveries during construction in its Section 106 MOA for the Project.

Figure 4. Architecture/History APE: South of Bass Lake Road

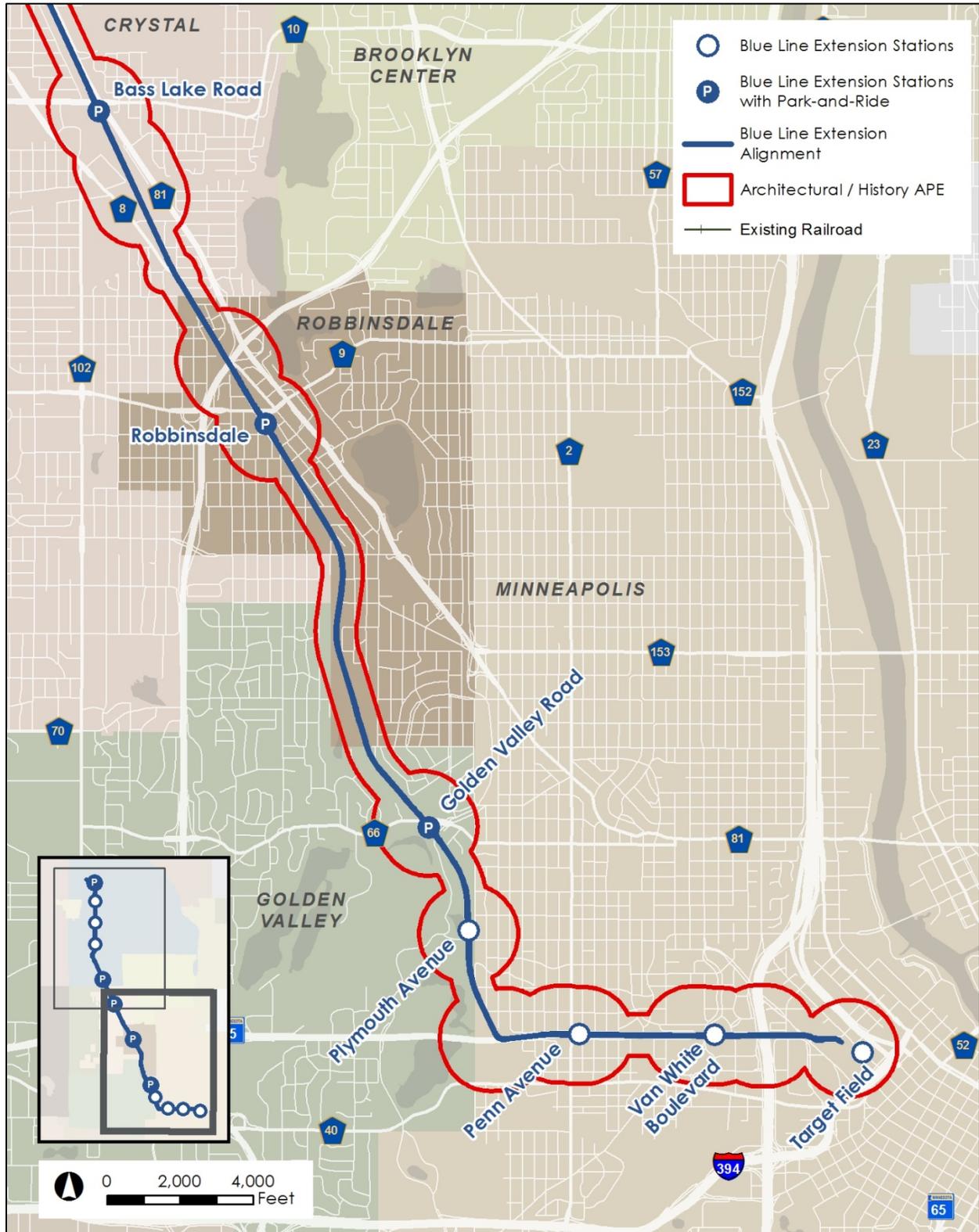


Figure 5. Architecture/History APE: North of Bass Lake Road



Figure 6. Archaeological APE: South of Bass Lake Road

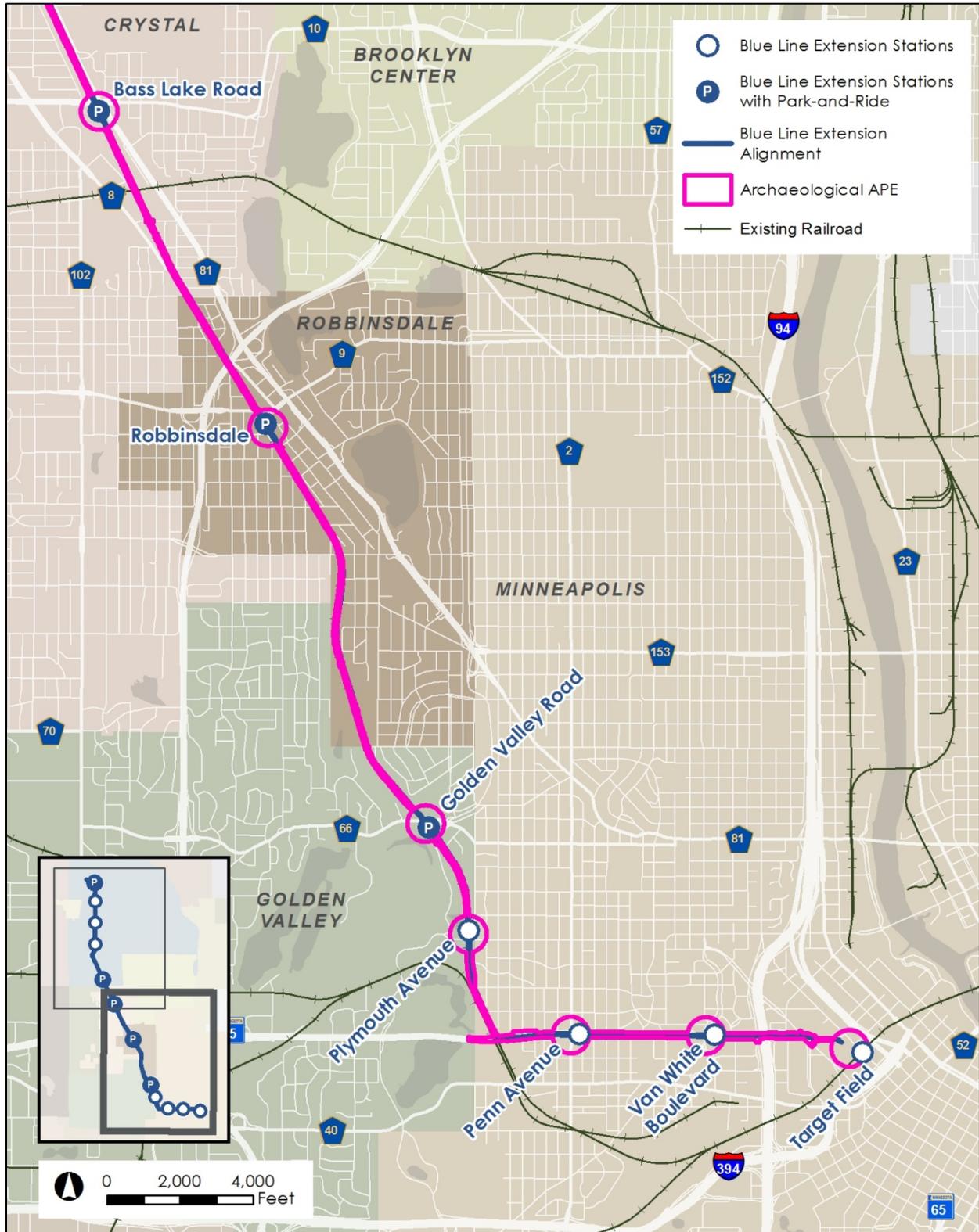


Figure 7. Archaeological APE: North of Bass Lake Road



## Identification and Evaluation of Historic Properties

Section 106 requires Federal agencies to consider the effects of their undertakings on historic properties that are listed in or are eligible for inclusion in the NRHP, which is the nation's official list of historic places worthy of preservation. Therefore, historic property surveys were undertaken to identify and evaluate historic properties listed in or eligible for inclusion in the NRHP located within the Project's architecture/history and archaeological APEs.

### National Register Criteria

In order to qualify for inclusion in the NRHP a property must possess significance under at least one of four criteria:

- A. Association with events that have made significant contributions to broad patterns of history.
- B. Association with the lives of persons significant in our past.
- C. Embodiment of distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.
- D. Has yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4; NPS 1997).

In general, a historic property must be at least 50 years of age or older to be considered for the NRHP, however, properties less than 50 years of age may be considered for listing if they possess exceptional significance. In addition to possessing significance, to be eligible for the NRHP a property must also retain sufficient historic integrity: "Integrity is the ability of a property to convey its significance" (NPS 1997:44). There are seven aspects or qualities that must be considered to determine whether a property retains integrity:

- Location: the place where the historic property was constructed or the place where the historic event occurred;
- Design: the combination of elements that create the form, plan, space, structure, and style of a property
- Setting: the physical environment of a historic property;
- Materials: the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
- Feeling: a property's expression of the aesthetic or historic sense of a particular period of time; and
- Association: the direct link between an important historic event or person and a historic property.

### Historic Properties Surveys

To identify historic properties within the Project's architecture/history and archaeological APEs, two architecture/history surveys, one archaeological survey, and one cultural landscape study have

been completed since 2011 (Table 2). This effort included documenting previously identified or evaluated properties, as well as conducting field surveys to document any previously unidentified properties more than 50 years of age within the Project's APEs. To encompass the environmental review period and construction process, all properties that were constructed in 1965 or earlier within the Project's APEs were surveyed and evaluated. The cultural landscape study was completed for one NRHP eligible property to inform the assessment of effects analysis for this historic property.

Table 2. Reports Documenting Results of Surveys to Identify Historic Properties in the Project's APEs

Title	Date
<b>Architecture/History Survey Reports</b>	
<i>Phase I &amp; II Architectural History Survey for the Bottineau Transitway Project, Crystal, Brooklyn Park, Golden Valley, Maple grove, Minneapolis, New Hope, and Robbinsdale, Hennepin County, Minnesota, Volume 1</i>	Nov 2012
<i>Phase I &amp; II Architectural History Survey for the Bottineau Transitway Project, Crystal, Brooklyn Park, Golden Valley, Maple grove, Minneapolis, New Hope, and Robbinsdale, Hennepin County, Minnesota, Volume 2</i>	Nov 2012
<i>Bottineau Transitway Phase I &amp; II Architectural History Survey, Hennepin County, Minnesota: Supplemental Report 1</i>	June 2013
<b>Archaeological Survey Reports</b>	
<i>Phase IA Archaeological Assessment for the Bottineau Transitway Project, Hennepin County, Minnesota.</i>	Nov 2012
<b>Cultural Landscape Study Reports</b>	
<i>Theodore Wirth Regional Park Cultural Landscape Study for the Blue Line Extension LRT Project, Golden Valley and Minneapolis, Hennepin County, Minnesota.</i>	Sept 2015

## Results of Investigations

Based on the results of the investigations identified above, MnDOT CRU, under delegation from FTA, made eligibility determinations and provided them to the MnSHPO for concurrence. MnSHPO has concurred with all of the eligibility determinations.<sup>8</sup> In total, 17 NRHP listed and eligible properties have been identified in the Project's architecture/history and archaeological APEs (Table 3; Figures 8 and 9). All properties identified are architecture/history properties resources. No archaeological resources listed, or eligible for listing, on the NRHP were identified.

Table 3. Number of NRHP Listed and Eligible Properties in the Project's APEs

Resource Type	NRHP Status	
	Listed	Eligible
Historic Districts	1	6
Individual Resources	3	7

<sup>8</sup> In a letter dated January 29, 2013, MnSHPO concurred with the eligibility determinations of all historic properties other than Sacred Heart Catholic Church; MnDOT CRU had recommended the Church as not eligible for the NRHP, but MnSHPO disagreed. In a letter dated July 8, 2013, MnDOT CRU revised its determination for the Church from ineligible to eligible for inclusion in the NRHP. MnSHPO concurred with this determination in a letter dated August 7, 2013.

Figure 8. Historic Properties: South of Bass Lake Road

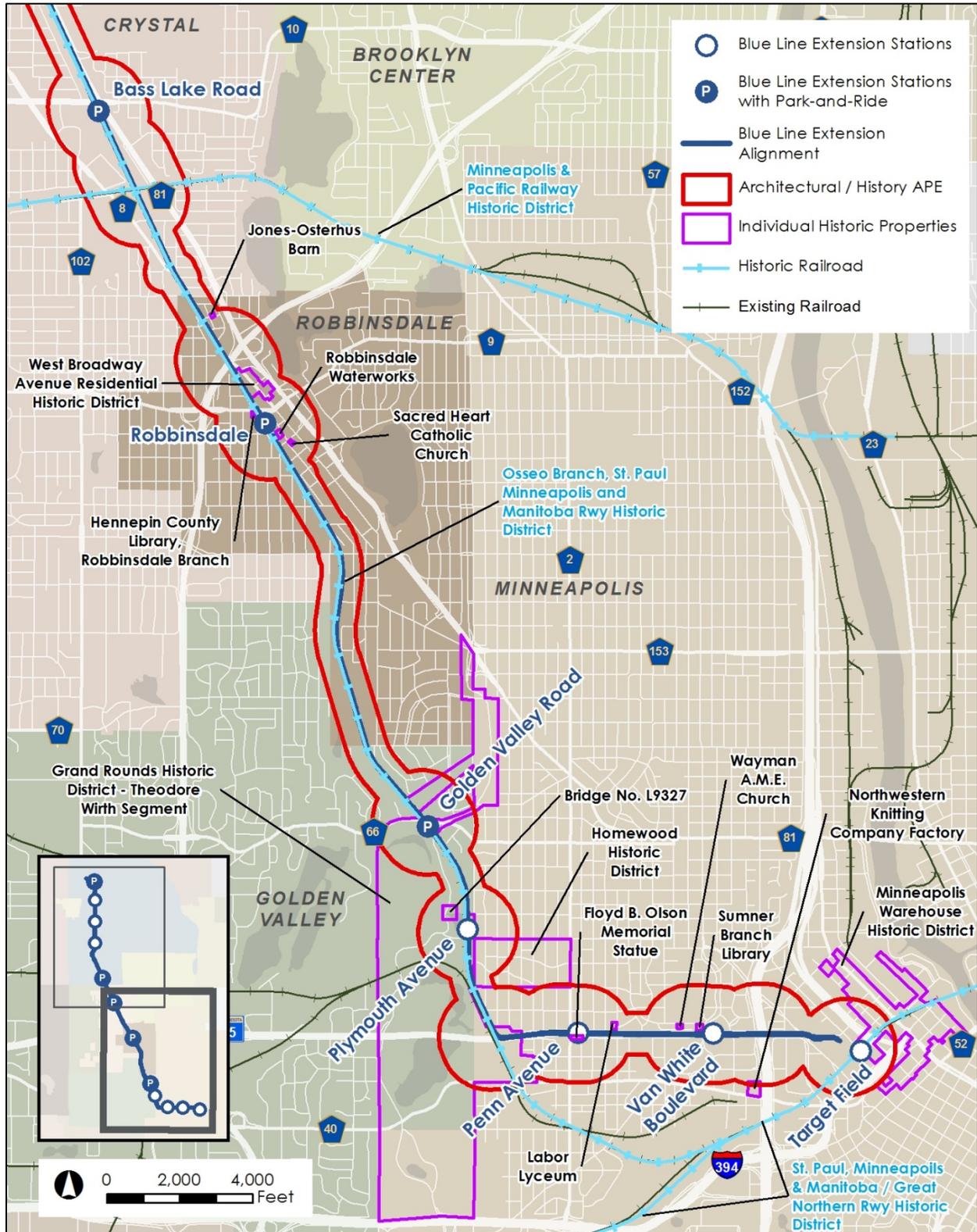


Figure 9. Historic Properties: North of Bass Lake Road



The remainder of this section describes the NRHP listed and eligible properties in the Project's APEs. Properties are described generally in order in which they are located from southeast to northwest along the Project corridor. The approximate distance from each historic property to the Project's limit of disturbance (LOD) is also included; this distance measurement accounts for both permanent and temporary easements.

***Minneapolis Warehouse Historic District (HE-MPC-0441)***

*Address:* Bounded by 1st Avenue North, 1st Street North, 10th Avenue, and 6th Street, Downtown Minneapolis

*Distance to LOD:* 430 feet

*NRHP Status:* Listed

*NRHP Criteria:* A, C

*Areas of Significance:* Architecture, Commerce

*Period of Significance:* 1865-1930

- The 30-block warehouse and wholesaling district that represents early commercial growth in downtown Minneapolis and the city's importance as the major distribution center for the upper Midwest
- Architecturally distinct for its intact concentration of commercial buildings designed by the city's leading architects
- Includes nineteenth and early twentieth century commercial buildings, and include examples of Italianate, Queen Anne, Richardsonian Romanesque, Classical Revival, and Commercial style architecture

***St. Paul, Minneapolis & Manitoba Railroad / Great Northern Railway Historic District (XX-RRD-010)***

*Address:* Minneapolis

*Distance to LOD:* 590 feet

*NRHP Status:* Eligible

*NRHP Criterion:* A

*Area of Significance:* Transportation

*Period of Significance:* 1880-1956

- Connected the Red River Valley wheat farms with the Minneapolis milling district, which was a significant factor in the development of the Minneapolis flour milling industry
- Helped solidify Minneapolis and St. Paul as the commercial, financial, and manufacturing center of the area from eastern Wisconsin to central Montana
- Was an important component in the GN's transcontinental route to Puget Sound

***Northwestern Knitting Company Factory (HE-MPC-8125)***

*Address:* 718 Glenwood Avenue, Minneapolis

*Distance to LOD:* 1,150 feet

*NRHP Status:* Listed

*NRHP Criterion:* A

*Areas of Significance:* Commerce, Engineering, Industry, Invention

*Period of Significance:* 1904-1915

- Company was the nation’s leading producer and distributor of underwear (“Munsingwear”) from its founding in 1887 by George Munsing, to 1981, when company went out of business
- Between 1904 and 1915, complex was expanded to include five buildings designed by Minneapolis architects Bertrand and Chamberlain

***Sumner Branch Library (HE-MPC-8081)***

*Address:* 611 Emerson Avenue North, Minneapolis  
*Distance to LOD:* 0 feet  
*NRHP Status:* Listed  
*NRHP Criteria:* A, B  
*Areas of Significance:* Education, Social History  
*Period of Significance:* 1915-1949

- One of four Carnegie-funded public libraries in Minneapolis
- Extensive outreach program that affected educational and cultural development of Minneapolis
- Property best associated with Gratia Alta Countryman, longtime head of the Minneapolis Public Library and leader in the movement to develop a public library system nationwide

***Wayman African Methodist Episcopal (A.M.E.) Church (HE-MPC-8290)***

*Address:* 1221 7th Avenue North, Minneapolis  
*Distance to LOD:* 40 feet  
*NRHP Status:* Eligible  
*NRHP Criterion:* C  
*Area of Significance:* Architecture  
*Period of Significance:* 1966

- Designed by architect Harry E. Gerrish
- Outstanding and distinctive example of Mid-Century Modern ecclesiastical architecture in Minneapolis
- Important and distinctive example of nationwide changes in ecclesiastical architectural design that rejected historicism and embraced new abstract, asymmetrical, and futuristic designs

***Labor Lyceum (HE-MPC-7553)***

*Address:* 1800 TH 55, Minneapolis  
*Distance to LOD:* 40 feet  
*NRHP Status:* Eligible  
*NRHP Criterion:* A  
*Areas of Significance:* Social History, Politics/Government  
*Period of Significance:* 1915-1948

- Center of immigrant Jewish labor movements in the early twentieth century. In Minneapolis, the building was home to the Workmen’s Circle, which was part of the anti-Zionist Communists and Socialists labor movement within Minneapolis’ Jewish community.
- Illustrates perpetuation of Jewish culture and traditions

***Floyd B. Olson Memorial Statue (HE-MPC-9013)***

*Address:* TH 55 at Penn Avenue North, Minneapolis

*Distance to LOD:* 0 feet

*NRHP Status:* Eligible

*NRHP Criterion:* C

*Area of Significance:* Art

*Period of Significance:* 1940

- Significant example of an expression of the work of master sculptor Carlo Brioschi during the last state of his career (1931-1940)
- Represents Brioschi's turn in focus from primarily architectural ornamentation to outdoor freestanding sculpture
- Erected in 1940 to commemorate Minnesota's popular 22nd Governor, Floyd B. Olson (1891-1936)

***Osseo Branch Line of the St. Paul, Minneapolis & Manitoba Railroad / Great Northern Railway Historic District (HE-RRD-002; segments: HE-MPC-16389; HE-RBC-0304; HE-CRC-0238; HE-BPC-0084)***

*Address:* Minneapolis, Golden Valley, Crystal, Robbinsdale, Brooklyn Park, Osseo

*Distance to LOD:* 0 feet (Project alignment is located within a portion of this property)

*NRHP Status:* Eligible

*NRHP Criterion:* A

*Area of Significance:* Transportation

*Period of Significance:* 1881-1931

- The 13-mile segment of this line from Minneapolis to Osseo supported the potato farming development of Osseo and surrounding areas. It established a connection that did not previously exist that resulted in a significant expansion of potato-growing region in northern Hennepin County for the construction of line to the decline of the potato industry.

***Grand Rounds Historic District, Theodore Wirth Segment (XX-PRK-0001)***

*Address:* Minneapolis, Golden Valley, Robbinsdale

*Distance to LOD:* 0 feet (Project alignment is located within a portion of this property)

*NRHP Status:* Eligible

*NRHP Criteria:* A, C

*Areas of Significance:* Community Planning and Development, Entertainment / Recreation, Landscape Architecture

*Period of Significance:* 1884-1942

- Represents conscious effort to link all areas of the city into a comprehensive and unified system; christened the "Grand Rounds" in the early 1890s
- Nationally significant example of urban park development in the nineteenth and twentieth centuries
- One of the most unique and iconic features of Minneapolis, which draws national attention for its role as a recreational resource that enhances the vitality of a major American city
- Most comprehensive design by, and crowning achievement of, nationally prominent landscape architect Horace William Shaler Cleveland

- Most important work by nationally prominent landscape architect and park professional Theodore Wirth

***Homewood Residential Historic District (HE-MPC-12101)***

*Address:* Bounded by Penn Avenue, Oak Park Avenue, Xerxes Avenue, and Plymouth Avenue, Minneapolis

*Distance to LOD:* 0 feet

*NRHP Status:* Eligible

*NRHP Criterion:* A

*Areas of Significance:* Community Planning and Development, Social History

*Period of Significance:* 1909-1962

- Early, planned, distinctive subdivision in North Minneapolis
- Focal point of the Jewish community in western North Minneapolis from 1911 until late 1960s

***Bridge No. L9327 (HE-GVC-0050)***

*Address:* Theodore Wirth Parkway over Bassett's Creek (in Theodore Wirth Park), Golden Valley

*Distance to LOD:* 480 feet

*NRHP Status:* Eligible (individually and as a contributing element to the Grand Round Historic District)

*NRHP Criteria:* C (individually), A and C (Grand Round Historic District)

*Areas of Significance:* Engineering (individually); Community Planning and Development, Entertainment/Recreation, Landscape Architecture (Grand Rounds Historic District)

*Periods of Significance:* 1940 (individually), 1940-1942 (Grand Rounds Historic District)

- The bridge is individually significant for its notable aesthetics
  - Single-span, reinforced-concrete arch bridge faced in St. Cloud granite with pentagonal voussoirs (stones around the arch), a stringcourse, and an open balustrade reflective of the patio railing on the Chateau
  - Excellent example of an ornamental park bridge
  - Designed in a notable restrained Classical Revival Style
- The bridge is also a contributing element of the Grand Rounds Historic District (the significance of this historic district is described above)

***Sacred Heart Catholic Church (HE-RBC-1462)***

*Address:* 4087 West Broadway Avenue, Robbinsdale

*Distance to LOD:* 130 feet

*NRHP Status:* Eligible

*NRHP Criterion:* C

*Area of Significance:* Architecture

*Period of Significance:* 1950

- Embodies efforts to apply Modernist design principles while working within the design constraints of the pre-Vatican II Catholic Church

- Signals transition of religious architecture from the Gothic Revival style, which was the prevalent architectural style for religious buildings prior to World War II, to Modernism after the war

***Robbinsdale Waterworks (HE-RBC-286)***

*Address:* 4127 Hubbard Avenue North, Robbinsdale

*Distance to LOD:* 0 feet

*NRHP Status:* Eligible

*NRHP Criterion:* A

*Areas of Significance:* Community Planning and Development, Politics / Government

*Period of Significance:* 1937-1963

- Association with Great Depression and subsequent development of federal relief projects, under which a portion of this property was constructed
- Original portion of the plant, including original pump house (Well No. 1) and water tower, are examples of WPA public utility project in Minnesota
- Embodies community's efforts to address water quality issues and fire protection needs of the community after a major fire in 1925

***Hennepin County Library, Robbinsdale Branch (HE-RBC-024)***

*Address:* 4915 42nd Avenue North, Robbinsdale

*Distance to LOD:* 0 feet

*NRHP Status:* Listed

*NRHP Criterion:* A

*Area of Significance:* Education

*Period of Significance:* 1925-1978

- Association with the Robbinsdale Library Club, which raised funds for the building and the library collection without aid of government funding
- Symbol of community's dedication to learning and its efforts to implement that dedication
- Focal point of community identity

***West Broadway Avenue Residential Historic District (HE-RBC-158)***

*Address:* West Broadway Avenue, between North 42nd Avenue and TH 100, Lakeland Avenue North to the BNSF Rwy. ROW, Robbinsdale

*Distance to LOD:* 0 feet

*NRHP Status:* Eligible

*NRHP Criterion:* C

*Area of Significance:* Architecture

*Period of Significance:* 1920-1940

- Best remaining example of pre-World War II suburban housing in the Robbinsdale area
- Architecturally diverse collection of Colonial Revival, Tudor Revival, Craftsman, and Prairie style houses
- Was home to many locally prominent residents

***Jones-Osterhus Barn (HE-RBC-264)***

*Address:* 4510 Scott Avenue North, Robbinsdale

*Distance to LOD:* 190 feet

*NRHP Status:* Eligible

*NRHP Criterion:* C

*Areas of Significance:* Agriculture, Architecture

*Period of Significance:* 1860-1888

- Rare example of a barn from first period of agricultural development in Minnesota
- Transition from grain production to diversified farming
- Shows settler's adaptability in using available building materials

***Minneapolis & Pacific Railway / Minneapolis, St. Paul & Sault Ste. Marie Railway Historic District (HE-CRC-199)***

*Address:* Crystal

*Distance to LOD:* 0 feet (the reconstructed BNSF Rwy. will continue to cross this property at grade, while the LRT alignment will cross directly over it on a new bridge)

*NRHP Status:* Eligible

*NRHP Criterion:* A

*Area of significance:* Transportation

*Period of Significance:* 1884-1930

- Minneapolis & Pacific (M&P) Rwy. was incorporated by Minneapolis mill owners in 1884 to construct a mainline from Minneapolis to the Red River Valley in order to secure a connection to wheat growers in western Minnesota and eastern North Dakota
- Was the first successful effort by Minneapolis mill owners to reach large, profitable markets in the East and Europe directly
- In 1888, M&P consolidated with three other lines to become the Minneapolis, St. Paul & Sault Ste. Marie Railway Company (Soo Line Rwy.), which is now part of the Canadian Pacific (CP) Rwy.

## Section 5: Section 106 Consultation

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FTA, with assistance from MnDOT CRU, initiated Section 106 consultation for the Project in February 2011 and, in accordance with 36 CFR § 800.3, has regularly consulted since that time with MnSHPO, Indian tribes, local governments, and other parties with a demonstrated interest to consider effects of the project on historic properties included on, or eligible for listing on, the NRHP. As described below, FTA consulted directly with Indian tribes, while MnDOT CRU, under delegation from FTA, completed most of the consultation with MnSHPO and other consulting parties.

### Agency Coordination and Public Involvement

FTA initiated consultation with MnSHPO in February 2011. Section 106 consulting parties include MnSHPO; USACE; Hennepin County; the Cities of Brooklyn Park, Crystal, Golden Valley, Minneapolis, and Robbinsdale; and the Minneapolis Park and Recreation Board.

In accordance with 36 CFR § 800.8, Section 106 consultation efforts were coordinated with the NEPA process and related outreach activities and events. In particular, opportunities for the public to review information and provide comments related to steps in the Section 106 process were incorporated, as appropriate, into public meetings related to the NEPA and design and engineering processes. The opportunities included open houses held on station design options near historic properties. At these meetings, information was shared summarizing the steps in the Section 106 process, historic properties identified, and effects to historic properties. A list of meetings related to agency coordination and public involvement efforts is included in Table 4.

*Table 4. Meetings Related to Section 106*

<b>Date</b>	<b>Meeting Type</b>	<b>Purpose</b>
June 6, 2015	Section 106 Consulting Parties Meeting	Section 106 process overview, BLRT project overview, Section 106 findings through DEIS
July 10, 2015	Section 106 Consulting Parties Meeting	Discuss potential effects on historic properties, present Theodore Wirth Cultural Landscape Study
July 16, 2015	Section 106 Consulting Parties Meeting	Discuss potential effects on historic properties, present Theodore Wirth Cultural Landscape Study
Oct 19, 2015	Public Open House in Crystal	Environmental review process. Included boards with information on historic properties in the APE in Crystal and potential Project effects on these properties.
Oct 20, 2015	Public Open House in Brooklyn Park	Environmental review process. Included boards with information on historic properties in the APE in Brooklyn Park and potential Project effects on these properties.
Oct 21, 2015	Public Open House in Robbinsdale	Environmental review process. Included boards with information on historic properties in the APE in Robbinsdale and potential Project effects on these properties.

Date	Meeting Type	Purpose
Oct 28, 2015	Public Open House in Golden Valley	Environmental review process. Included boards with information on historic properties in the APE in Golden Valley and potential Project effects on these properties.
Oct 29, 2015	Public Open House in Minneapolis	Environmental review process. Included boards with information on historic properties in the APE in Minneapolis and potential Project effects on these properties.

To comply with Section 106 requirements, MnDOT CRU submitted the architecture/history and archaeological APEs, the results of the surveys/investigations completed for the Project, including NRHP eligibility determinations, and preliminary assessments of effects to the MnSHPO for concurrence, copying other Section 106 consulting parties for their review and comment. Additional consultation with MnSHPO and Section 106 consulting parties has continued to consider effects on historic properties.

## Tribal Consultation

In January 2012, the FTA sent letters to potentially affected Indian tribes, requesting that they identify any concerns about potential Project effects and inviting them to participate in public scoping meetings and/or schedule a separate meeting to discuss any specific tribal issues and concerns. Letters were sent to the Lower Sioux Indian Community, Upper Sioux Indian Community, Bois Forte Band (Nett Lake) of Minnesota Chippewa, Fond du Lac Band of Minnesota Chippewa, Grand Portage Band of Minnesota Chippewa, Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, Red Lake Tribal Council, White Earth Band of Minnesota Chippewa, Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, Bad River Band of Lake Superior Chippewa, Lac Vieux Desert Band of Lake Superior Chippewa, Red Cliff Band of Lake Superior Chippewa, Lac Courte Oreilles Band of Lake Superior Chippewa, Lac du Flambeau Band of Lake Superior Chippewa, St. Croix Chippewa Indians of Wisconsin, Sokaogon (Mole Lake) Chippewa, Turtle Mountain Band of Chippewa, Sisseton-Wahpeton Oyate, Santee Sioux Nation, Flandreau Santee, Fort Peck Tribes, Spirit Lake Tribe, Three Affiliated Tribes, Keweenaw Bay Indian Community, Northern Cheyenne Tribe and the Standing Rock Sioux. No responses were received. The tribes also received copies of the DEIS and were invited to comment on the documents; no comments were received.

## Section 6: Assessment of Effects

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### Assessing Effects on Historic Properties

The criteria that must be used to assess effects of Federal undertakings on historic properties that are listed in or are eligible for listing in the NRHP is set forth 36 CFR § 800.5(a)(1):

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

An adverse effect can occur if any aspect of a historic property's integrity is diminished. Examples of adverse effects are identified in 36 CFR § 800.5(a)(2) and include, but are not limited to:

Physical destruction of or damage to all or part of the property;

Alteration of a property that is not consistent with the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties (36 CFR § 68) and applicable guidelines;

Removal of the property from its historic location;

Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;

Neglect of a property that causes its deterioration; and

Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

It is important to note that just because an undertaking may have an effect on a historic property it does not necessarily constitute an adverse effect. For example, project elements may be visible from a historic property without the effect rising to the level of an adverse effect. In this example, factors to consider when assessing whether the visual effect is adverse would include proximity of project components to the historic property, the nature of the element being introduced to the setting, the significance of the views to and from the historic property, and the overall importance of integrity of setting to the historic property's ability to convey its significance and maintain its eligibility for the NRHP. Direct effects, however, are often more likely to result in an adverse effect due to the actual physical changes they often cause to a historic property, although one notable exception is

rehabilitation projects completed in accordance with the SOI's Standards for the Treatment of Historic Properties (36 CFR § 68).

## Effects Assessment and Effects Findings

In accordance with 36 CFR § 800.5(a), the criteria of adverse effect was applied to the 17 NRHP listed and eligible historic properties located within the Project's architecture/history and archaeological APEs properties. Reference materials utilized in assessing effects on historic properties, but not included in the body of this report, are summarized in Table 5. The effects assessments and resultant finding of effect for each of these properties is presented in Table 6.

*Table 5. References Key – Assessment of Effects*

<b>Title</b>	<b>Description</b>	<b>Abbreviation Key<sup>9</sup></b>
<b>Project Plans</b>		
Blue Line LRT Extension: Volume 1	Plans and sections	Vol. I
Blue Line LRT Extension: Volume 2	Rendered views	Vol. II
Blue Line LRT Extension: Volume 3	Index sheets for sections along BNSF Rwy. corridor	Vol. III
Blue Line LRT Extension: Volume 4	Raw sections along BNSF Rwy. corridor	Vol. IV
Blue Line LRT Extension: Volume 5	Rendered sections along BNSF Rwy. corridor	Vol. V
Blue Line LRT Extension: Volume 6	Rendered elevations	Vol. VI
Blue Line LRT Extension: Volume 7	Typical station platform	Vol. VII
Blue Line LRT Extension: Volume 8	Existing Plymouth Avenue bridge plans	Vol. VIII
Blue Line LRT Extension: Volume 9	TPSS locations and technical information	Vol. IX
Blue Line LRT Extension: Volume 10	Supplemental renderings, plans, and sections	Vol. X
<b>Technical Studies</b>		
Noise and Vibration Effects on Historic and Cultural Resources	Technical memo on Project noise and vibration impacts on historic properties adjacent to the Project alignment	N&V Memo
BLRT Section 106 Historic Properties – Traffic/Access Impacts	Technical memo on Project traffic and access impacts on historic properties in the APEs for the Penn, Plymouth, Golden Valley Road, and Robbinsdale stations	T&A Memo
METRO Blue Line Extension (Bottineau LRT) Phase 1: Station Area Planning, Van White Boulevard and Penn Avenue Stations	Station area plans for the Van White Boulevard and Penn Avenue Stations, which are located along TH 55	SAPVWP
METRO Blue Line Extension (Bottineau LRT) Phase 1: Station Area Planning, Plymouth Avenue and Golden Valley Road Stations	Station area plans for the Plymouth Avenue and Golden Valley Road Stations, which are located along the BNSF Rwy. corridor, within / adjacent to Theodore Wirth Park	SAPPGV

<sup>9</sup> When listed, numbers following an abbreviation refer to the sheet numbers of the corresponding document. For example, "Vol. II, 4-8" refers to Volume 2, Sheets 4-8.

Title	Description	Abbreviation Key <sup>9</sup>
Robbinsdale Station Area Planning	PowerPoint Presentation on station area concepts for the Robbinsdale Station, presented at the public open house held in Robbinsdale on Oct 21, 2015	SAPR
Theodore Wirth Regional Park Cultural Landscape Study for the Blue Line Extension LRT Project	Cultural Landscape Study of the Theodore Wirth Park element of the Grand Rounds Historic District	TWCLS

## Project Determination of Effect

Based on the results of the assessment of effect analysis conducted by MnDOT CRU under delegation from FTA, and in consultation with the MnSHPO and other consulting parties, which are documented above, FTA has found that the Project will result in:

- No Adverse Effect on eleven (11) historic properties; and
- An Adverse Effect on six (6) historic properties:
  - Wayman A.M.E. Church;
  - Floyd B. Olson Memorial Statue;
  - Grand Rounds Historic District;
  - Homewood Residential Historic District;
  - Osseo Branch of the StPM&M RR / GN Rwy. Historic District; and
  - West Broadway Avenue Residential Historic District.

Therefore, FTA has determined that the undertaking will have an Adverse Effect on historic properties that are listed, or are eligible for inclusion, in the NRHP. Appropriate measures to avoid, minimize, mitigate and resolve these adverse effects will be included in the Section 106 MOA based on FTA's continuing consultation with consulting parties. If additional historic properties should be identified, the process for FTA to consult with the MnSHPO and consulting parties concerning effects and resolving any adverse effects will be included in the Section 106 MOA.

Table 6. Effects Assessments and Effects Findings

Effects	Finding
<b>Minneapolis Warehouse Historic District (HE-MPC-0441)</b>	
<p><b>Direct Effects:</b> All Project elements are completely outside the boundaries of the district, so it is anticipated that the Project will have no direct effects on the Warehouse Historic District and will therefore have no effect to the property’s location, design, material, or workmanship. All direct effects from the Target Field Station were considered and accounted for in the Section 106 review for the construction of that station (SHPO R&amp;C No. 2011-1404).</p> <p><b>Indirect Effects:</b> The Project guideway and associated infrastructure, such as the LRT bridge over the HERC driveway, will be visible from various points along the western/southwestern portions of the district. However, Project infrastructure will be at least a block away from the district. Therefore, any visual changes to the already densely developed setting will be minimal, and will have no effect on the property’s setting, feeling, or association.</p> <p>The Project will have an interline connection with the existing METRO Blue Line at the existing Target Field Station whereby the LRT trains already in operation on the Blue Line, instead of terminating at the Target Field Station, will continue on along the Project and vice versa, so introduction of Project operation will not substantially change the number of trains serving this station or noise levels. Any potential direct or indirect effects of development that would be potentially catalyzed by the Project around the Target Field station was accounted for by the Section 106 review for the construction of this already built station (SHPO R&amp;C No. 2011-1404).</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> The Project will not result in any direct effects to the historic district and any potential indirect effects to the district as a result of this undertaking related to its use of the Target Field Station were previously considered and resolved through the Section 106 process for the construction of that already built station (SHPO R&amp;C No. 2011-1404).</p>
<b>References: Vol. X: 1</b>	
<b>StPM&amp;M RR / GN Rwy. Historic District (XX-RRD-010)</b>	
<p><b>Direct Effects:</b> The Project will connect to an existing LRT bridge over the historic district at the western side of Target Field Station to access the station. As the connection is approximately 750-feet west of where the bridge crosses over the historic district and no changes are proposed to the bridge, the Project will not directly affect the historic district and will therefore have no effect to the property’s location, design, material, or workmanship.</p> <p><b>Indirect Effects:</b> The Project will cross over the historic district on an existing LRT bridge located between the bridge carrying 5<sup>th</sup> Street North over the district and Target Field, which screens views of the LRT from the grade separation in which the historic district is located. Therefore, the Project will not alter views to and from the district. Moreover, any other potential effects from the Project’s use of the Target Field Station were accounted for by the Section 106 review for the construction of that already built station (SHPO R&amp;C No. 2011-1404).</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> The Project will not result in any direct effects to the historic district and any potential indirect effects to the district as a result of this undertaking related to its use of the Target Field Station were previously considered and resolved through the Section 106 process for the construction of that already built station (SHPO R&amp;C No. 2011-1404).</p>
<b>References: n/a</b>	

Effects	Finding
<b>Northwestern Knitting Company Factory HE-MPC-8125)</b>	
<p><b>Direct Effects:</b> The Northwestern Knitting Company Factory is located roughly a quarter mile from the closest Project infrastructure, so it is anticipated that the Project will have no direct effects on this property. Therefore, the project will have no direct effect to the property’s location, design, material, or workmanship.</p> <p><b>Indirect Effects:</b> The Northwestern Knitting Company Factory property is located at the southern edge of the architecture/history APE, roughly a quarter mile south of the alignment, so Project elements may be visible at a distance in some views from the property. The Project could potentially catalyze redevelopment around the Van White Boulevard Station that would be visible from this property.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> The Northwestern Knitting Company Factory and the proposed Project elements in its vicinity are located in an already densely developed setting. Given the distance between the property and Project elements (well over 1,000 feet), and the scale of intervening development, any visual effect of Project infrastructure on this property will be negligible. Since the Project will only be minimally visible from the property, the characteristics qualifying the Northwestern Knitting Company Factory for inclusion in the NRHP will not be altered in a manner that would diminish its integrity of setting, feeling, or association.</p> <p>A number of parking lots and open parcels of land are located near the Northwestern Knitting Company Factory. Based on station area planning studies, introduction of the Project could potentially catalyze the redevelopment of these properties, which would cause changes to the setting of the Northwestern Knitting Company Factory. However, transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances. If these areas are redeveloped, the factory historically had other buildings—as opposed to parking lots—surrounding it, so the redevelopment would not change views from the historic property in a manner that would diminish its setting in a way that would affect its ability to convey its historic significance.</p>
<p><b>References:</b> <i>Figure 8</i>; <b>SAPVWP:</b> Section 2</p>	

Effects	Finding
<b>Sumner Branch Library (HE-MPC-8081)</b>	
<p><b>Direct Effects:</b> The Project's LOD extends along the southern boundary of the library, so the Project will not infringe on this property. Therefore, the project will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> The Project alignment will be located in the center median of TH 55 in front of the library and the Van White Boulevard Station will be located in the center median, across Van White Memorial Boulevard from the library, so Project infrastructure and trains will be highly visible from the library. Operation of the Project will also introduce noise from LRVs and station operations, as well as potential changes in access to the library. The Project may also catalyze potential redevelopment of nearby properties or the library itself.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> While Project infrastructure, including the Van White Boulevard Station, will be added to the immediate setting of the library, the nature and scale of this infrastructure, combined with its distance from the library (the station will be located approximately 320 feet away), will allow views of the library to remain intact. To ensure that the visual prominence of the library will not be diminished by the Project, and that it will maintain its stature as a visual anchor of the intersection of TH 55 and Van White Memorial Boulevard, the Project will design its infrastructure in the vicinity of the library in accordance with the SOP's Standards, and will therefore have no adverse effect to the property's setting, feeling or association. In addition, the Project will prepare and implement a construction protection plan to document measures to be taken to avoid any direct effects to Sumner Library during Project construction.</p> <p>Given the proximity of the library to the Van White Boulevard Station, station area planning studies have indicated a strong potential for redevelopment to be catalyzed by this station in the vicinity of the historic property. While new development could cause changes to the setting of the library, it would not alter characteristics of the library that qualify it for the NRHP. The library itself is also included in the group of properties identified in a station area planning study completed in coordination with the Project as part of a planned neighborhood commercial node around the Van White Station. Properties included in this node are proposed to be up zoned to allow for increased density (five or more stories), mixed-use development. However, the Sumner Branch Library is unlikely to be subjected to any redevelopment pressure as it is in public ownership and use. Moreover, it is also designated by the City of Minneapolis as a local landmark, which affords it additional protection both by requiring all alterations to the exterior of the building, the site, and some portions of the interior to be reviewed by the Minneapolis Heritage Preservation Commission for compatibility with the historic character of the property. This designation further sets a high threshold for demolition. Per the City of Minneapolis' Heritage Preservation ordinance, the City can only approve the demolition of a historic property if "the demolition is necessary to correct an unsafe or dangerous condition on the property, or that there are no reasonable alternatives to the demolition. In determining whether reasonable alternatives exist, the commission shall consider, but not be limited to, the significance of the property, the integrity of the property and the economic value or usefulness of the existing structure, including its current use, costs of renovation and feasible alternative uses" (Minneapolis Code of Ordinances 23, §599.480[b]).</p> <p>The existing traffic signals (semaphores) and crosswalks that currently exist at the intersection of TH 55 and Van White Memorial Boulevard will be reconstructed as part of the Project, thereby maintaining access to the library. Per FTA criteria, the library is a Category 3 noise receptor. A noise analysis completed for the Project has determined that LRT operation will not result in a noise impact to the library.</p> <p>With the implementation of the measures identified above to minimize potential effects on the library, and avoid an adverse effect, all of which will be documented in the Section 106 MOA for the Project, a finding of No Adverse Effect has been made for the Sumner Branch Library.</p> <p><b>Avoidance and Minimization Measures to be included in the Project MOA:</b></p> <ul style="list-style-type: none"> <li>• Design Project infrastructure in the vicinity of the library in accordance with the SOP's Standards</li> <li>• Prepare and implement a construction protection plan for the library</li> </ul>
<b>References:</b> Vol. I: 1-2; Vol. VI: 2; Vol. X: 2-3; N&V Memo; SAPVWP: Section 2	

Effects	Finding
<b>Wayman A.M.E. Church (HE-MPC-8290)</b>	
<p><b>Direct Effects:</b> In the vicinity of the church, the Project's LOD is limited to the TH 55 ROW limits, so it will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> There is an intervening two-story addition to the church between the NRHP-eligible church building and the Project alignment that will block views of the Project from the church. Operation of the Project will introduce noise from LRVs and station operations. There is the potential that the Project will catalyze the redevelopment of nearby properties or the church itself.</p>	<p><b>Finding:</b> Adverse Effect</p> <p><b>Rationale:</b> Per FTA criteria, the church is a Category 3 noise receptor. A noise analysis completed for the Project has determined that LRT operation will not result in a noise impact to the church. This combined with the fact that the church is not within the viewshed of the Project means that Project noise will not affect the setting, feeling or association of the property.</p> <p>Station area planning studies completed in coordination with the Project have indicated a strong potential for redevelopment to be catalyzed by the Project in the vicinity of this historic property. In general, transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances. However, a planning study completed in coordination with the Project identifies the church as part of a group of properties proposed to be up zoned to allow for increased density (five or more stories), mixed-use development in order to create a planned neighborhood commercial node around the Van White Station. As a result, development pressure created in part by the construction and operation of the Project may lead to changes to the setting of the church and potential alteration or demolition of this property. While new development in the setting would not alter characteristics that qualify the church for the NRHP, alteration would likely diminish the property's historic integrity and demolition would destroy the historic property. As redevelopment of this historic property is a reasonably foreseeable cumulative effect of the Project, a finding has been made that the Project will have an Adverse Effect on the Wayman A.M.E. Church. The adverse effect of the Project on this historic property will require resolution through consultation with MnSHPO and other consulting parties.</p>
<p><b>References:</b> Vol. I: 3-4; Vol. VI: 2; Vol. X: 2-3; N&amp;V Memo; SAPVWP: Section 2</p>	

Effects	Finding
<b>Labor Lyceum (HE-MPC-7553)</b>	
<p><b>Direct Effects:</b> In the vicinity of the Labor Lyceum, the Project's LOD is limited to the TH 55 ROW limits, so it will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> The Project alignment will be located in the center median of TH 55 in front of the Labor Lyceum, so Project infrastructure and trains will be highly visible from the library. Operation of the Project will also introduce noise from LRVs and station operations, and potential changes in access. The Project may also catalyze potential redevelopment of nearby properties.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> While Project infrastructure will be added to the immediate setting of the Labor Lyceum, the nature and scale of this infrastructure, combined with its distance from the historic property, will allow views of the Labor Lyceum to remain intact. To ensure that the visual prominence of the Labor Lyceum is maintained and its integrity of setting, feeling, and association is not diminished by the Project, the Project will design its infrastructure in the vicinity of this historic property in accordance with the SOI's Standards.</p> <p>Station area planning studies have indicated a strong potential for redevelopment to be catalyzed by the Project around the Penn Avenue Station (which is located 930 feet away) and in the vicinity of this historic property; however, the Labor Lyceum itself is not among the properties identified in the station area plan for redevelopment. Transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances, so it may or may not occur. If redevelopment does occur around the Penn Station, it may lead to changes in the setting of the Labor Lyceum, but not in a manner that would alter characteristics of the historic property that qualify it for the NRHP.</p> <p>Per FTA criteria, the Labor Lyceum is a Category 3 noise receptor. A noise analysis completed for the Project has determined that LRT operation will not result in a noise impact to this historic property. There will be no change in vehicular access to this property as a result of Project construction. However, there will be a minor change in pedestrian access. An existing crosswalk on TH55 at Logan Avenue will be removed. This will require pedestrians to utilize a crosswalk one block to the west at Morgan Avenue to access the Labor Lyceum from south of TH 55. However, access will be maintained and this change will not alter characteristics of the property that qualify it for the NRHP.</p> <p>With implementation of the measure identified above to minimize potential effects on Labor Lyceum, and avoid an adverse effect, all of which will be documented in the Section 106 MOA for the Project, a finding of No Adverse Effect has been made for the Labor Lyceum.</p> <p><b>Avoidance and Minimization Measures to be included in the Project MOA:</b></p> <ul style="list-style-type: none"> <li>• Design Project infrastructure in the vicinity of the Labor Lyceum in accordance with the SOI's Standards</li> </ul>
<p><b>References:</b> Vol. I: 5-6; Vol. VI: 3-4; Vol. X: 2-3; T&amp;A Memo; SAPVWP</p>	

Effects	Finding
<b>Floyd B. Olson Memorial Statue (HE-MPC-9013)</b>	
<p><b>Direct Effects:</b> A portion of the NRHP-eligible property along its northern boundary will be acquired to construct the Project. The portion of the plaza that will be acquired, which is largely green space, will be destroyed and incorporated into a widened TH 55 and sidewalk for the Project. The statue itself will not be directly affected, only the northern edge of its plaza.</p> <p><b>Indirect Effects:</b> The BLRT and associated infrastructure, including a new station, will be highly visible from the Memorial and may catalyze the redevelopment of nearby properties. There is not expected to be any difference in vehicular traffic along TH 55 as a result of the BLRT.</p> <p>The Project alignment and Penn Avenue Station will be located in the center median of TH 55 in front of the statue. Consequently, Project infrastructure and trains will be highly visible from the statue and views of the statue from TH 55 will be obscured. The Project may also catalyze potential redevelopment of nearby properties and within the NRHP-eligible boundaries for this historic property.</p>	<p><b>Finding:</b> Adverse Effect</p> <p><b>Rationale:</b> The incorporation of a portion of the property’s formal plaza into a street and sidewalk will result in the destruction of portions of the designed landscape in which the statue is situated, and of which the statue is the focal point. Portions of the formal yard in front of the statue, which is an important landscape divider within the site and statue’s setting, as well as the formal walk leading to the statue, which is the primary circulation network within the historic property, will be destroyed as a result of the Project’s infringement onto the historic property. Both of these features are important characteristics of the historic property’s designed landscape and the statue’s setting. These direct physical changes to the designed landscape will also alter important spatial relationships and result in changes to the way the statue is experienced and perceived within both its immediate and larger settings. As a result of these changes, the Project will directly diminish the Floyd B. Olson Memorial Statue property’s integrity of design, setting, and feeling. The introduction of the Penn Station directly in front of the historic property will also disrupt views and the visual connection between the statue and TH 55, which is an important historic characteristic of the historic property. This will further diminish the historic property’s integrity of setting, feeling, and association.</p> <p>Station area planning studies completed in coordination with the Project indicated a strong potential for redevelopment to be catalyzed by the Project on, and in the vicinity of, this historic property due to its proximity to the Penn Avenue Station. In general, transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances. However, the planning study completed in coordination with the Project identifies the historic property as a property to be redeveloped in order to increase density around the Penn Station and it proposes to incorporate the Floyd B. Olson Memorial Statue itself into a small plaza within the future redevelopment on the property. The plan also identifies the redevelopment of adjacent properties. This redevelopment of the historic property would destroy the immediate setting of the historic property and severely alter, or sever its critical visual connection with TH 55, which is an important aspect of its integrity of association. The redevelopment of adjacent property would further diminish the visual connection and, as a result, its association with TH 55.</p> <p>In summary, per 36 CFR § 800.5(a), the Project will cause both direct and indirect adverse effects on the Floyd B. Olson Memorial Statue, including the destruction of a portion of the eligible site, thereby altering characteristics qualifying a property for inclusion in the NRHP in a manner that diminishes its integrity. Therefore, a finding of Adverse Effect has been made for the Floyd B. Olson Memorial Statue. The adverse effects of the Project on this historic property will require resolution through consultation with MnSHPO and other consulting parties.</p>
<p><b>References:</b> Vol. I: 7-8; Vol. VI: 4; Vol. X: 2-3; T&amp;A Memo; SAPVWP: Section 3</p>	

Effects	Finding
<b>Osseo Branch of the StPM&amp;M RR / GN Rwy. Historic District (HE-RRD-002; segments: HE-BPC-0084, HE-CRC-0238, HE-RBC-0304, HE-MPC-16389)</b>	
<p><b>Direct Effects:</b> The historic property is an approximately 13-mile long linear corridor that is generally 100-feet in width, with a track on a slightly raised roadbed running down the center of the 100-foot wide ROW. The Project will be constructed within the BNSF Rwy.-owned ROW along an approximately eight (8) mile long segment of the district, from TH 55 northwest to 73rd Avenue North in Brooklyn Park, where the LRT alignment diverts from the railroad ROW. Along this segment, the Project will acquire the eastern half of the ROW for the project alignment. The existing BNSF Rwy. track will be removed and reconstructed along an alignment approximately 25-feet to the west of its present alignment, roughly in the center of the western half of the BNSF Rwy. ROW. One exception is where it will remain on its existing alignment for a short stretch in Golden Valley, just north of the Golden Valley Road Station. The Project will construct its infrastructure, including two (2) light rail tracks, overhead power system, five (5) stations, three (3) vertical circulation towers, multiple TPSS and signal bungalows, various safety treatments, bridges, lighting, etc. in the eastern half of the ROW. New stations will be present within the corridor while reconstructed bridges will cross directly over it. The bluffs that define the edges of portions of the corridor will be partially altered to accommodate new retaining walls and sufficient space for the BLRT. Some vegetation within the corridor will be removed. In addition, along the entire length of the historic district that it will co-share with BNSF Rwy. freight track, the Project will construct a corridor protection barrier between the freight rail track and light rail track. Three types of corridor protection barriers will be utilized along various portions of the co-shared segment of the historic district. Types of corridor barriers include a wall that would be six-feet tall and two-feet thick, a wide ditch (35-to-40-feet between the centerlines of the freight rail and southbound light rail track), or a retained embankment whereby the freight rail and light rail tracks would be grade separated with LRT on an elevated roadbed held by a retaining wall that is at least six-feet tall. The existing high-voltage transmission line (HVTL) located along the eastern side of the existing tracks will be removed from the eastern edge of the corridor and replaced on the western side of the ROW. The steel-truss towers supporting the wires will be replaced by monopoles.</p> <p><b>Indirect Effects:</b> The Project may catalyze the redevelopment of properties near light rail stations along the historic district, which could result in potential changes to the setting of the district.</p>	<p><b>Finding:</b> Adverse Effect</p> <p><b>Rationale:</b> The exiting jointed rail track with wood ties, which is in its historic alignment and includes contributing track structure (rail), is being removed. The freight rail alignment will be relocated and two new LRT tracks comprised of heavily ballasted welded ribbon rail and concrete tie construction will be placed in the historic district, along with a substantial amount of new infrastructure, such as the overhead power system, stations and fencing, that is not in keeping with the branch-line character of the district. Corridor protection barriers will further alter the district. Collectively, relocation of the freight tracks, loss of historic fabric, and the introduction of Project infrastructure into the district will alter the perception of the corridor as an historic, isolated freight line into that of a dense, multi-purpose combined freight and transit rail corridor and will introduce passenger rail stations to a stretch of rail corridor that has never before had passenger rail facilities. The undertaking will alter characteristics of the Osseo Branch qualifying it for inclusion in the NRHP in a manner that will diminish the property's integrity of design, materials, setting, workmanship, feeling, and association.</p> <p>Based on station area planning studies, introduction of the Project could potentially catalyze the redevelopment of properties near light rail stations around the historic district, which would cause changes to the setting of the district. While transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances. Moreover, even if development does occur, it would not diminish the district setting in a way that would affect its ability to convey its significance.</p> <p>In summary, per 36 CFR § 800.5(a), the Project will cause direct adverse effects on the Osseo Branch of the StPM&amp;M Rwy. / GN Rwy. Historic District, including the substantial alteration and destruction of a significant portion of the eligible historic district (over 60 percent of the length of this linear historic district), thereby altering characteristics qualifying the property for inclusion in the NRHP in a manner that diminishes its integrity. Therefore a finding of Adverse Effect has been made for the Osseo Branch of the StPM&amp;M Rwy. / GN Rwy. Historic District. The adverse effects of the Project on this historic district will require resolution through consultation with MnSHPO and other consulting parties.</p>
<b>References: Vol. I: 9-39; Vol. II; Vol. III; Vol. IV; Vol. V; Vol. VI: 5-16; Vol. VII; Vol. IX; Vol. X: 4-10</b>	

Effects	Finding
<b>Grand Rounds Historic District (XX-PRK-0001), Theodore Wirth Segment</b>	
<p><b>Direct Effects:</b> The Project will acquire a portion of Theodore Wirth Regional Park, including up to one-half (0.5) acre at both the Plymouth Avenue and Golden Valley Road stations for the stations, approximately one-and-a-half (1.5) acres for a park-and-ride facility at the Golden Valley Road Station, as well as some smaller areas along the alignment. In addition, the Project will make a wide number of physical alterations to this large contributing element to the Theodore Wirth Segment of the Grand Rounds Historic District, as well as other more minor indirect effects to other contributing elements of the Theodore Wirth Segment of the historic district. The Grand Rounds Historic District is approximately 4,662 acres; the Theodore Wirth Segment of the district is approximately 755.4 acres; and the portion of Theodore Wirth Regional Park that is within the Grand Rounds Historic District, is approximately 677.1 acres. The portion of the Theodore Wirth Segment that is affected by this Project is approximately 246.2 acres, of which 233.5 acres are within the portion of Theodore Wirth Regional Park that is included in the historic district; totaling approximately 5.3% of the larger Grand Rounds Historic District that will be affected by the Project.<sup>10</sup> Many, but not all of these alterations will be within the BNSF Rwy. ROW through the park. Alterations include the removal of vegetation from the BNSF Rwy. ROW and adjacent areas in the park, alteration of the topography, as well as the construction of the LRT guideway and the realigned freight track, corridor protection barriers between the freight rail and light rail lines (combination of walls, grade separations, and wide ditches). Two stations (Plymouth Avenue and Golden Valley Road), both with vertical circulation towers, will be constructed within the boundaries of Theodore Wirth Park. A 100 space park-and-ride lot will be constructed adjacent to the Golden Valley Road Station, within the park at its northern entrance from Wirth Parkway. Two bridges extending into and running through the park will be demolished and reconstructed. The existing HVTL in the BNSF Rwy. ROW through the park will be removed from the eastern edge of the corridor and replaced on the western side. A segment of Bassett Creek in the park, near Plymouth Avenue, will also be altered, relocating it from its existing channel to a new channel in order to accommodate the relocation of an existing park trail from the BNSF Rwy. ROW into the park land. Along the reconstructed segment of the channel, the channel will be slightly narrowed and the natural, earthen bank of the extant channel will be replaced on one side by a retaining wall.</p> <p><b>Indirect Effects:</b> Project infrastructure, as well as other associated improvements and alterations to the landscape within, adjacent to, and in the vicinity of the Grand Rounds Historic District will alter the visual character of the district, and viewsheds and views within the district, including designed viewsheds. The vertical circulation structure at the Plymouth Avenue Station will be particularly noticeable and will be present within the Theodore Wirth Regional Park's most important viewshed, especially so when the structure is lit at dusk. There is also potential for development to be catalyzed outside of the district around the Plymouth Avenue and Golden Valley Road stations. Operation of the Project will also introduce noise from LRVs and station operations. There will be a slight increase in vehicular traffic along the various roads that access the property.</p>	<p><b>Finding:</b> Adverse Effect</p> <p><b>Rationale:</b> Direct effects will physically alter the entire eastern edge of Theodore Wirth Regional Park, as well as its northern edge where Wirth Parkway, another contributing element, enters the park. In addition, two historic entry points to the Theodore Wirth Segment are also being demolished and reconstructed, or substantially altered from natural to developed spaces. All of this work will not only alter the cultural landscape of the Theodore Wirth Segment of the Grand Rounds Historic District, it will also introduce new, contemporary elements to these portions of the historic district. New visual elements will be in the form of formal, engineered structures such as retaining walls, the LRT guideway and overhead power system, stations, vertical circulation towers, a parking lot, and other elements to the otherwise naturalistic setting of the park's landscape. Illumination of the stations and vertical circulation towers will also change the visual character of the otherwise dark nature of natural areas within the district at night. In addition, the introduction of Project elements will alter key viewsheds and views within Theodore Wirth Regional Park, including the most prominent viewshed within it, which is that from one of the character defining features, the Theodore Wirth Chalet. Collectively the direct physical effects to the Theodore Wirth Segment of the Grand Rounds Historic District, and related resultant indirect visual effects, will alter historic characteristics that qualify this segment of the district for the NRHP by diminishing its integrity design, setting, materials, workmanship, feeling, and association.</p> <p>Station area planning studies have shown low potential for the Golden Valley Road Station to catalyze development that could change the setting of the district. A traffic analysis has also shown a slight increase in vehicular traffic along the various roads that access the historic district, none of which would diminish any aspect of integrity of the district property. In addition, while noise from LRVs and stations will be perceptible in portions of the district, per FTA criteria, the noise will not be of sufficient levels to alter characteristics that qualify the historic district, or its contributing elements, for the NRHP.</p> <p>In summary, per 36 CFR § 800.5(a), the Project will cause both direct and indirect adverse effects on the Theodore Wirth Segment of the Grand Rounds Historic District, thereby altering characteristics qualifying this segment of the historic district for inclusion in the NRHP in a manner that diminishes its integrity. Therefore a finding of Adverse Effect has been made for the Grand Rounds Historic District. The adverse effects of the Project on this historic district will require resolution through consultation with MnSHPO and other consulting parties.</p>

<sup>10</sup> The Theodore Wirth Segment of the Grand Rounds Historic District encompasses 755.4 acres, of which 246.2 acres (approximately one-third of this segment, or approximately 5.3 percent of the land area in the historic district) will be affected, directly and/or indirectly, by the Project. The majority of this area is located with Theodore Wirth Regional Park. Approximately 677.1 acres of the approximately 760-acre Theodore Wirth Regional Park are included in the Grand Rounds Historic District. Of the portion of the park that is included in the Grand Rounds Historic District, 233.5 acres (approximately 34.5 percent of the eligible portion of the park) will be effected by the Project (228.6 acres are within the architecture/history APE and an additional 4.9 acres are part of defined historic viewsheds that are included in the APE, but continue beyond the APE limits).

Effects	Finding
<b>References: Vol. I: 9-19; Vol. II: 1-2; Vol. III: 1-4; Vol. IV: 1-12; Vol. V: 1-21; Vol. VI: 5-8; Vol. VIII; Vol. X: 5-6; T&amp;A Memo; N&amp;V Memo; TWCLS</b>	
<b>Homewood Residential Historic District (HE-MPC-12101)</b>	
<p><b>Direct Effects:</b> The Project's LOD is mostly located just west of the western boundary of the historic district, within the BNSF Rwy. ROW that is inside the boundaries of Theodore Wirth Park, which is adjacent to the Homewood Residential Historic District. However, the LOD does include a very small portion of a street within the Homewood Residential Historic District at its extreme southwest corner. In this area a retaining wall will be constructed downslope from the street, and a small portion of the street (with an area less than 500-square-feet) will be reconstructed.</p> <p><b>Indirect Effects:</b> Project elements, such as the reconstructed Plymouth Avenue Bridge and the Plymouth Avenue Station will be visible from the district as the Project guideway and other associated infrastructure will run within the BNSF Rwy. corridor directly west of the district. Operation of the Project will also introduce noise from LRVs and station operations. The Project may catalyze the redevelopment of properties adjacent to or within the district with potentially three blocks of medium-density residential recommended from station area planning efforts.</p>	<p><b>Finding:</b> Adverse Effect</p> <p><b>Rationale:</b> Per FTA criteria, the district is a Category 2 noise receptor. A noise analysis completed for the Project indicates that without mitigation, LRT operations would cause a moderate noise impact on three residences at the southwestern corner of the historic district. As a residential district with properties experiencing moderate noise effects, the Project will diminish the district's integrity of setting and feeling. The noise analysis indicates that the three residences meet the threshold for mitigation, so appropriate measures to mitigate this adverse effect will need to be considered for implementation.</p> <p>While Project infrastructure will be added to the immediate setting of the historic district, as well as to a very small portion of its southwest corner, much of this infrastructure is located in a trench below the bluff on which the western edge of the historic district is situated. Given that much of this infrastructure will be below direct views and also somewhat screened by existing vegetation, these Project elements will not diminish the setting of the district. The small portion of roadway within the historic district that is being removed and reconstructed will be rebuilt in kind, so that Project elements will similarly avoid diminishing the setting of the district.</p> <p>Station area planning studies indicate low potential for the Plymouth Avenue Station to catalyze development that could change the setting of the district or cause potential changes to properties within the district. The only potential development site identified was a site that had been previously identified for redevelopment by the City of Minneapolis in its comprehensive plan (prior to station planning efforts), thus it is unrelated to LRT.</p> <p>In summary, operation of the Project will result in adverse auditory effects on the Homewood Residential Historic District. Therefore a finding of Adverse Effect has been made for the Homewood Residential Historic District. The adverse effect of the Project on this historic district will require resolution through consultation with MnSHPO and other consulting parties.</p>
<b>References: Vol. I: 9-12; Vol. II: 2, 10-15; Vol. III: 1; Vol. IV: 3-5; Vol. V: 5-6; Vol. VI: 5, 7; Vol. VIII; N&amp;V Memo</b>	
<b>Bridge No. L9327 (HE-GVC-0050)</b>	
<p><b>Direct Effects:</b> Bridge No. L9327 is located approximately 570-feet from the Project alignment, so it is anticipated that the Project will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> The Project will cause visual effects on the Bridge from the removal of vegetation and the introduction of new visual elements in the form of formal, engineered structures such as retaining walls, the LRT guideway and overhead power system, and potential illumination at night from the Plymouth Avenue Station to the otherwise naturalistic, park setting of the bridge. Operations will also introduce noise from LRVs and station operation.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> Bridge No. L9327 is individually eligible for the NRHP under Criterion C in the area of Engineering for its aesthetics. While Project infrastructure will be visible from the bridge, the introduction of Project elements to its setting will not alter characteristics of the bridge that qualify it individually for the NRHP. Moreover, given their distance from the bridge, Project elements will not diminish the setting, feeling and association of the bridge in a way that would preclude it from being able to convey its individual significance under NRHP Criterion C. In addition, per FTA criteria, the bridge is not a noise sensitive resource, so noise from Project operation will not have an effect on the bridge.</p> <p>The bridge is also located within, and is a contributing element to, the Grand Rounds Historic District, which will be adversely affected by the undertaking (see section on the Grand Rounds Historic District). However, the effects of the Project on the bridge as a contributing element to the historic district are limited to those described under its individual significance.</p> <p>In summary, the Project will cause minor indirect visual effects on Bridge No. L9327, however, they will not alter any of the characteristics of the bridge that qualify it for the NRHP in a manner that would diminish its historic integrity. Therefore, a finding of No Adverse Effect has been made for Bridge No. L9327 as an individual historic property.</p>
<b>References: n/a</b>	

Effects	Finding
<b>Sacred Heart Catholic Church (HE-RBC-1462)</b>	
<p><b>Direct Effects:</b> The church is located approximately 300-feet from the Project alignment's centerline and approximately 130-feet from its LOD, so the Project will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> The Project alignment will be located in the BNSF Rwy. ROW, approximately 300-feet west of the historic property. The Project guideway and associated infrastructure, including a large, multi-level park-and-ride structure located a block away along the Hubbard Avenue viewshed, will be visible from the property. Operation of the Project will also introduce noise from LRVs and station operations. There is the potential that the Robbinsdale Station could catalyze the redevelopment of nearby properties.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> The introduction of Project infrastructure to the church's setting will not visually or physically separate the property from its downtown Robbinsdale setting. Given the distance of Project elements from the historic property, when also considered with their nature and scale, the Project will cause a negligible change to the property's setting and will not diminish its integrity of feeling or associations.</p> <p>Per FTA criteria, the church is a Category 3 noise receptor. A noise analysis completed for the Project indicates that without mitigation, the Project would cause a severe auditory impact in this historic property from LRT horns at nearby grade crossings. The noise analysis indicates that the implementation of quiet zones will eliminate all auditory impacts on the church. Therefore, the Project will implement quiet zones for the 41<sup>st</sup> Avenue North and 42<sup>nd</sup> Avenue North grade crossings to avoid an adverse auditory effect on the church. With implementation of this measure to minimize potential effects on the church, and avoid an adverse effect, which will be documented in the Section 106 MOA for the Project, a finding of No Adverse Effect has been made for Sacred Heart Church.</p> <p><b>Avoidance and Minimization Measures to be included in the Project MOA:</b></p> <ul style="list-style-type: none"> <li>• Implement quiet zones for the Project's 41<sup>st</sup> Avenue North and 42<sup>nd</sup> Avenue North grade crossings</li> </ul>
<p><b>References:</b> Vol. I: 23; Vol. II: 3, 28-31; Vol. III: 6; Vol. IV: 13; Vol. V: 26; Vol. X: 7; T&amp;A Memo; N&amp;V Memo</p>	

Effects	Finding
<b>Robbinsdale Waterworks (HE-RBC-286)</b>	
<p><b>Direct Effects:</b> The Project's LOD extends along the northwest and southwest boundaries of the waterworks, but will not infringe on the historic property, so the Project will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> Project infrastructure will be located adjacent, and in close proximity, to the waterworks. The Project alignment will be located in the BNSF Rwy. ROW, approximately 100-feet away across a surface parking lot from the waterworks. The Robbinsdale Station and a large, multi-level park-and-ride structure that includes street level transit oriented development and a parking ramp on the upper levels will be constructed approximately 200-feet northwest of the waterworks property. The existing parking lot adjacent to the southwest boundary of the historic property will also be reconstructed. Operation of the Project will introduce noise from LRVs and station operations. There is the potential that the Robbinsdale Station could catalyze the redevelopment of nearby properties.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> Vibration analysis indicates that construction and operation of the Project will not affect the property; however, the Project will prepare and implement a construction protection plan to document measures to be taken to avoid any direct effects to the waterworks during Project construction. Per FTA criteria, the waterworks is not a noise sensitive resource, so noise from Project operation will not affect characteristics that qualify the waterworks for the NRHP.</p> <p>While the Project will introduce a variety of new elements adjacent to the historic property and also within its setting, the Project elements will not diminish the ability of the water tower to serve as the visual focal point of downtown Robbinsdale. To ensure that the Project elements do not diminish the setting, association or feeling of the waterworks, that the visual prominence of the water tower is not diminished, and that the property will maintain its stature as the visual anchor of downtown Robbinsdale, the Project will design its infrastructure in the vicinity of the waterworks in accordance with the SOI's Standards.</p> <p>Given the proximity of the waterworks to the Robbinsdale Station, planning studies have indicated a strong potential for redevelopment to be catalyzed by this station in the vicinity of the historic property. However, transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances. If new development does occur, it could cause changes to the setting of the waterworks; however, it would not alter characteristics of the waterworks that qualify it for the NRHP. It should be noted that the waterworks itself would not be subjected to any redevelopment pressure as it is in public ownership and use, and as it serves an infrastructure use, it would be cost prohibitive to relocate its function elsewhere.</p> <p>With the implementation of the measures identified above to minimize potential effects on the waterworks, and to avoid an adverse effect, all of which will be documented in the Section 106 MOA for the Project, a finding of No Adverse Effect has been made for the Robbinsdale Waterworks.</p> <p><b>Avoidance and Minimization Measures to be included in the Project MOA:</b></p> <ul style="list-style-type: none"> <li>• Design Project infrastructure in the vicinity of the waterworks in accordance with the SOI's Standards</li> <li>• Prepare and implement a construction protection plan for the library</li> </ul>
<p><b>References:</b> Vol. I: 23-24; Vol. II: 3, 28-31; Vol. III: 6; Vol. IV: 13-14; Vol. V: 27; Vol. VI: 9-12; Vol. X: 7; N&amp;V Memo</p>	

Effects	Finding
<b>Hennepin County Library, Robbinsdale Branch (HE-RBC-024)</b>	
<p><b>Direct Effects:</b> The Project's LOD extends along the north and northeast boundaries of the library, so the Project will not infringe on the historic property. The Project will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> Project infrastructure, including the guideway, Robbinsdale Station, and a large, multi-story park-and-ride structure, will be highly visible from the property as they will be located immediately across Railroad Avenue from the library, within and extending beyond the BNSF Rwy. ROW to the east. In addition, 42<sup>nd</sup> Avenue North, including sidewalks and the boulevard, will also be reconstructed in front of the library. Operation of the Project will also introduce noise from LRVs and station operations, and changes in access to the library.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> Vibration analysis indicates that construction and operation of the Project will not affect the property; however, the Project will prepare and implement a construction protection plan to document measures to be taken to avoid any direct effects to the library during Project construction.</p> <p>The amount of Project elements, when their size, scale, and massing is considered, will alter the property's setting. This infrastructure will also significantly change the property's viewshed towards downtown Robbinsdale as the park-and-ride structure will introduce a large visual barrier that is of a different scale (much larger) than existing development within the library's setting. As a result, this will diminish the setting of the library and its feeling and association. To minimize the visual effects of Project elements on the library, and avoid an adverse visual effect, the Project will design its infrastructure in the vicinity of the library in accordance with the SOI's Standards. Given the proximity of the library to the Robbinsdale Station, station area planning studies have indicated a strong potential for redevelopment to be catalyzed by this station in the vicinity of the historic property. However, transit development is an indirect catalyst for redevelopment, redevelopment opportunities are primarily based on global market conditions and local economic stability as well as established land use policies and zoning ordinances. If new development does occur, it could cause changes to the setting of the library; however, most views of any potential development would be screened by the Project's park-and-ride structure.</p> <p>The Project will also cause minor changes in access to the library from the downtown. While the existing BNSF Rwy. freight rail line already separates the property from downtown Robbinsdale, introduction of the Project will result in two new, additional rail tracks with much more frequent operations. The Project will also cause a minor change in vehicular access to the library. In order to reconstruct the 42<sup>nd</sup> Avenue North grade crossing to accommodate LRT, the intersection of 42<sup>nd</sup> Avenue North and Railroad Avenue must be reconstructed with a center median in 42<sup>nd</sup> Avenue through the intersection. This will prevent westbound vehicles from turning on Railroad Avenue to access the library, but access will be maintained by driving around the block and via the alley adjacent to the library. Access from the west and south will not change.</p> <p>Per FTA criteria, the library is a Category 3 noise receptor. A noise analysis completed for the Project indicates that without mitigation, the Project would cause a severe auditory impact in this historic property from LRT horns at nearby grade crossings. The noise analysis indicates that the implementation of a quiet zone will eliminate all auditory impacts on the library. Therefore, the Project will implement quiet zones for the 41<sup>st</sup> Avenue North and 42<sup>nd</sup> Avenue North grade crossings to avoid an adverse auditory effect on the library.</p> <p>With implementation of the measures identified above to minimize potential effects on the library, and avoid an adverse effect, all of which will be documented in the Section 106 MOA for the Project, a finding of No Adverse Effect has been made for the Hennepin County Library, Robbinsdale Branch.</p> <p><b>Avoidance and Minimization Measures to be included in the Project MOA:</b></p> <ul style="list-style-type: none"> <li>• Design Project infrastructure in the vicinity of the waterworks in accordance with the SOI's Standards</li> <li>• Prepare and implement a construction protection plan for the library</li> <li>• Implement quiet zones for the Project's 41<sup>st</sup> Avenue North and 42<sup>nd</sup> Avenue North grade crossings</li> </ul>
<p><b>References:</b> Vol. I: 24-25; Vol. II: 3, 32-33; Vol. III: 6; Vol. IV: 15; Vol. V: 29; Vol. VI: 9-13; Vol. X: 7; T&amp;A Memo; N&amp;V Memo</p>	

Effects	Finding
<b>West Broadway Avenue Residential Historic District (HE-RBC-158)</b>	
<p><b>Direct Effects:</b> The Project's LOD extends along the western boundary of the historic district, so the Project will have no direct effects on this historic district.</p> <p><b>Indirect Effects:</b> The Project alignment will run directly adjacent to the western boundary of the district on an elevated roadbed and approach structure for the Project's bridge over TH 100. The trains and associated infrastructure will be highly visible from the rear of properties within the district that face the existing BNSF Rwy. ROW and a retaining wall will front the alley forming the district's western edge. The viewshed from the district across the existing BNSF Rwy. freight track will be blocked as a result of the higher elevation of the Project guideway. Operation of the Project will also introduce noise from LRVs and station operations, and potential changes in traffic patterns in the district.</p>	<p><b>Finding:</b> Adverse Effect</p> <p><b>Rationale:</b> The introduction of Project infrastructure and all its associated elements immediately adjacent to the entire western boundary of the West Broadway Avenue Residential Historic District will sever the district's visual connection across the existing BNSF Rwy. freight rail track to areas to the west. Additionally, Project infrastructure, including tall retaining walls to support the elevated guideway and the overhead power system, will introduce new, incompatible, and out-of-scale elements to the setting of the district. Due to the geometric requirements related to the Project's crossing over TH 100, the blocking of historic views from the district and the introduction of out-of-scale elements to the immediate setting of the historic district cannot be avoided. Collectively, these changes will diminish the historic district's integrity of setting and feeling.</p> <p>Per FTA criteria, the district is a Category 2 noise receptor. A noise analysis completed for the Project indicates that without mitigation, the Project would cause a severe auditory impact on some residences in the historic district, specifically from LRV horns at nearby grade crossings. As a residential district with properties experiencing moderate and severe noise effects, the Project will diminish the district's integrity of setting, feeling and association. The noise analysis indicates that implementation of quiet zones would eliminate severe auditory impacts on the district, but two residences would still have moderate impacts even with the implementation of quiet zones. Therefore, since the implementation of a quiet zone will not resolve the auditory impacts on all properties, Project noise will adversely affect the historic district. In summary, per 36 CRF § 800.5(a), the Project will cause adverse visual and auditory effects on the West Broadway Avenue Residential Historic District. Therefore, a finding of Adverse Effect has been made for the West Broadway Avenue Residential Historic District. The adverse effects of the Project on this historic district will require resolution through consultation with MnSHPO and other consulting parties.</p>
<b>References: Vol. I: 26-29; Vol. II: 4, 34-35; Vol. III: 7; Vol. IV: 16-17; Vol. V: 30-34; Vol. VI: 13-14; T&amp;A Memo; N&amp;V Memo</b>	
<b>Jones-Osterhus Barn (HE-RBC-264)</b>	
<p><b>Direct Effects:</b> The closest Project infrastructure to the barn is located a half block (approximately 190-feet) to the west, so it is anticipated that the Project will have no direct effects on this property.</p> <p><b>Indirect Effects:</b> Project elements such as support poles and catenary wires may be minimally visible from the property. There will be a minor increase in vehicular traffic in nearby streets.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> Project infrastructure will only be minimally, if at all, visible from the property and would result in a negligible change in one view from the barn. The barn is located more than a half mile from the nearest Project station. There will be no change in pedestrian/bicycle access to the property. Given the street network, there is no potential for cut-through traffic to access stations past the barn. Per 2040 projections, there will only be an additional 50 cars will that would utilize the nearby portion of West Broadway Avenue if the Project is built compared to if it were not constructed. As a result of this, and the absence of direct effects, the undertaking will not alter any of the characteristics qualifying the Jones-Osterhus Barn for inclusion in the NRHP in a manner that would diminish its historic integrity, including its setting, feeling and association. Therefore, a finding of No Adverse Effect has been made for the Jones-Osterhus Barn.</p>
<b>References: Vol. I: 30-31; T&amp;A Memo</b>	

Effects	Finding
<b>M&amp;P Rwy. / Soo Line Rwy. Historic District (HE-CRC-199)</b>	
<p><b>Direct Effects:</b> The existing diamond crossing where the BNSF Rwy. freight rail track crosses the historic Soo Line Rwy. track at-grade will be shifted and reconstructed in-kind approximately 25-feet west of its present location.</p> <p><b>Indirect Effects:</b> The Project guideway will cross over this linear historic district on a new, 1,260-foot long bridge (260-foot span with 500-foot approaches on either side) that will clear span the 100-foot wide historic railroad ROW. The bridge and other associated LRT infrastructure will be visible along a short stretch of the historic district on either side of the crossing point.</p>	<p><b>Finding:</b> No Adverse Effect</p> <p><b>Rationale:</b> The realigned BNSF Rwy. freight rail track will continue to cross the former Soo Line Rwy. mainline track within the historic district, now owned by CP Rwy., at grade, thereby maintaining the historic at-grade crossing. While this will result in minor direct effects to the historic district, since the crossing will be reconstructed in-kind and within the historic ROW limits of both railroad lines, and will affect a relatively minute portion of the line (roughly a 100-to-150-foot long segment of an approximately 386.5-mile long linear historic district) these effects will not diminish the ability of the historic district to convey its significance. The LRT guideway will pass over the historic district on a bridge with a sufficiently large span to avoid directly affecting the historic district. The bridge will result in a visual effect on a segment of the historic district extending along either side of the new structure. However, at the Project crossing the historic district is located in a fully developed urban area that includes other grade separation structures. The visual effect will be limited to a short segment of an approximately 387-mile long linear historic district, so it will not diminish the district's integrity of setting, feeling, or association.</p> <p>In summary, the Project will cause minor direct and indirect effects on the M&amp;P Rwy. / Soo Line Rwy. Historic District; However, they will not alter, directly or indirectly, any of the characteristics of the historic district that qualify it for the NRHP in a manner that would diminish its historic integrity. Therefore, a finding of No Adverse Effect has been made for the M&amp;P Rwy. / Soo Line Rwy. Historic District.</p>
<p><b>References: Vol. I: 32-33; Vol. VI: 15-16</b></p>	

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