4.0 Community and Social Analysis

This chapter addresses the social characteristics and conditions within the Bottineau Transitway study area that would potentially be affected by the alternatives under consideration. Potential operating phase (long-term) impacts and construction phase (short-term) impacts were evaluated. The study area is defined for each topic discussed and varies based on the type of resource under evaluation.

The National Environmental Policy Act (NEPA, 41 USC 4321) and Minnesota Environmental Policy Act (MEPA) (Minn. Stat. Chpt. 116D) form the general basis of consideration for discussing impacts to the social environment. However, specific laws, regulations, and executive orders apply to the evaluation of some community and social impacts, such as residential and business displacements, cultural resources, parklands, safety and security, and environmental justice. Any additional statutory or regulatory laws are provided within the regulatory context, as appropriate. The following were analyzed for potential community and social impacts:

- Land Use Plan Compatibility
- Community Facilities/Community Character and Cohesion
- Displacement of Residents and Businesses
- Cultural Resources
- Visual/Aesthetics
- Business Impacts
- Safety and Security

The study area considered for each area of analysis in this chapter is summarized in Table 4.0-1. Greater detail is provided in each section of this chapter.

Table 4.0-1. Summary of Defined Study Areas – Social Analysis

Resource Evaluated	Study Area Definition	Basis for Study Area
Land Use and Plan Compatibility	Jurisdictions in which the transitway would be located	Project compatibility with overall city plans
Community Facilities/Community Character and Cohesion	½ mile radius around stations ¼ mile on either side of alignments	A half-mile radius is commonly used by transit planners to represent the distance transit users are willing to walk to access an LRT station. For alignments, a quarter-mile captures both direct (within 350 feet) and indirect impacts.
Displacement of Residents and Businesses	Within potential area of disturbance[1]	Area reflecting direct impacts on properties

Resource Evaluated	Study Area Definition	Basis for Study Area
Cultural Resources	Within potential area of disturbance and 500 feet on either side of alignments; 0.25 mile radius around stations, new structures, and the modification of existing structures; 500 ft to either side of the modification of piers; and one block on either side of the LRT alignment and stations in downtown Minneapolis	Area of Potential Effect (APE) as agreed upon by MnDOT Cultural Resources Unit and the State Historic Preservation Office
Visual/Aesthetics	The immediate area of properties adjacent to and in visual proximity to the various project components, including track alignments, stations, park-and-rides, TPSS, new bridges, and any other infrastructure elements	Properties and features visible from the project components
Business Impacts	½ mile on either side of alignments	Area reflecting direct impacts on properties
Safety and Security	Within and adjacent to potential area of disturbance	Reflects direct impacts and proximity of proposed alignments to places that attract persons of special concern relative to safety and security.

[1] Potential area of disturbance is defined as the estimated area where construction would occur for the proposed project at this stage of design.

For reference, conceptual engineering plans are located in Appendix E.

4.1 Land Use Plan Compatibility

Information included in this section is based on the information provided in the Land Use Plan Compatibility Technical Report (SRF Consulting Group, 2012).

4.1.1 Regulatory Context and Methodology

No specific laws or executive orders regulate the consideration of land use impacts as part of preparing federal environmental review documents. As stated on page 4-1, NEPA, 41 USC 4321, and MEPA 2007 c 116D form the general basis of consideration for discussing land use issues. Local municipalities have land use controls available to them in the form of comprehensive plans guiding land use and city zoning codes guiding development.

Note that potential impacts, including noise, community cohesion, economic development, and visual quality, have a relationship to the land uses within the study area considered in other sections of this document. Although these impacts may require mitigation at the site level, this section focuses on the compatibility of the Bottineau Transitway with local and regional land use planning documents on a broader scale.

4.1.2 Study Area

The study area is defined as the jurisdictions in which the transitway would be located. Specific land use data were obtained from existing and planned land use maps for the cities of Maple Grove, Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis. These land use maps are drawn from each city's comprehensive plan, which is a locally approved planning document that guides planning policy and land use through the year 2030. Under the Metropolitan Land Planning Act, each local land use plan must also be consistent with the Metropolitan Council's regional growth and development plan, the *2030 Regional Development Framework and Policy Plans*. These data were supplemented by recent aerial photography and field inspections of the study area. Assessment of compatibility with existing and planned land uses was based on the land use inventories and plans in cities' adopted comprehensive plans. See Land Use Plan Compatibility Technical Report (SRF Consulting Group, 2012) for greater detail.

4.1.3 Affected Environment

For the analysis, the specific land use plans of each city were reviewed and summarized below. Land use maps depicting existing and future land uses for each city are provided in Appendix I. These land use maps are referenced as Exhibits 4-1 through 4-14.

Existing and Future Land Use

The following section outlines the existing and planned land use conditions along the Bottineau Transitway. Existing land use is described for each alignment.

Alignment A

Alignment A begins in southeastern Maple Grove and passes through the southwestern portion of Brooklyn Park. This alignment has four proposed stations: Hemlock Lane, Revere Lane, Boone Avenue/Hennepin Tech, and 71st Avenue.

As illustrated in Exhibit 4-1 and Exhibit 4-2, the existing land use adjacent to Alignment A between Hemlock Lane and US 169 is designated as "Gravel Mining Area" on the City of Maple Grove's existing and future land use plan maps. This designation denotes the City's intent to provide for extraction of gravel followed by reclamation of the 2,000 acre area for suburban development. Extraction has been completed west of Hemlock Lane, and this area has been redeveloped for commercial and residential use. Extraction activities have moved eastward and are expected to continue for several decades. As the extraction is completed, the land will be graded and made available for development. The *City of Maple Grove 2008 Comprehensive Plan* calls for "regional mixed use" in the area, recommending that development occur in a compact, vertically integrated manner with predominantly office and/or corporate uses. The proposed Hemlock Lane station is located north of a suburban shopping area. The proposed Revere Lane station is located in a current extraction area adjacent to a planned future roadway.

Exhibit 4-3 depicts the existing land uses east of US 169 as primarily industrial uses to the south of Brooklyn Boulevard, with Hennepin Technical College and residential uses to the north. As shown in Exhibit 4-4, the City of Brooklyn Park plans to transition industrial uses to business park use while the other uses are planned to remain. The Boone Avenue/Hennepin Tech station would be located in this area.

As the alignment shifts onto the railroad corridor paralleling CSAH 81, adjacent land uses are primarily commercial/industrial. The *Brooklyn Park 2030 Comprehensive Plan* confirms that these land uses are planned to remain with some areas transitioning to mixed use. As indicated in Exhibit 4-4, the *Brooklyn Park 2030 Comprehensive Plan* introduces the new future land use designation of Neighborhood Commercial (NC) for the area near the proposed 71st Avenue station. A zoning designation of NC by Brooklyn Park is intended for compact, pedestrian-oriented, mixed use areas of limited size as opposed to the auto-oriented commercial uses in the area today.

Alignment B (part of the Preferred Alternative)

Alignment B begins in Brooklyn Park just north of TH 610 and ends where Alignment C begins near 71st Avenue. Proposed stations would be located at Oak Grove Parkway, 93rd Avenue, 85th Avenue, and Brooklyn Boulevard, all along West Broadway Avenue.

Land uses at the north end of Alignment B are transitioning from agricultural use/open space to commercial use. The Brooklyn Park 2030 Land Use Plan figure in the *Brooklyn Park 2030 Comprehensive Plan* designates a portion of this area near the Oak Grove Parkway station for Signature Mixed Use (including the Target North Campus) with most of the area southwest of the 93rd Avenue station planned for expansion of business parks. The Signature Mixed Use designation indicates commercial development, which shapes a strong image for the City, including "high quality and landmark buildings or coordinated group of buildings with significant height and scale."

Between the proposed 93rd and 85th Avenue stations, land uses are primarily residential with plans to continue such use in the future.

At 85th Avenue, land uses include North Hennepin Community College and some limited commercial uses along 85th Avenue, with the predominant land use being residential. Residential uses extend south toward Brooklyn Boulevard. These uses are planned to remain. Hennepin County is planning a new library for the northeast quadrant of 85th and West Broadway Avenues.

The proposed Brooklyn Boulevard station is located within a large suburban commercial node characterized by "big box" (e.g., Target) and other auto-oriented retail uses. As illustrated in Exhibit 4.4, this commercial center is expected to remain in the future.

Alignment C (part of the Preferred Alternative)

Alignment C begins in Brooklyn Park and largely follows CSAH 81 through Crystal and Robbinsdale. Stations would be located at 63rd Avenue, Bass Lake Road, and downtown Robbinsdale.

As depicted in Exhibit 4-3, existing land uses east and west of Alignment C in Brooklyn Park consist of primarily industrial and commercial uses with some residential uses. Exhibit 4-4 indicates that the majority of these land uses are planned to remain, with some uses transitioning to business park use.

Near the proposed 63rd Avenue station area, existing uses are a mix of commercial, industrial, and high-density residential land uses with an existing Metro Transit park-and-ride structure on the west side of CSAH 81. Uses are planned to transition to high-density residential, institutional, and mixed use.

South of 63rd Avenue, Alignment C passes into the city of Crystal. As shown in Exhibit 4-5, land uses between 62nd Avenue and Bass Lake Road are predominantly low-density residential to the west and commercial and airport uses to the east. Currently, high-density residential, commercial, and some park uses are adjacent to the proposed Bass Lake Road station area. Exhibit 4-6 indicates these uses are planned to remain. South of Bass Lake Road, the existing uses are primarily commercial and industrial with some park uses. Again, these land use patterns are generally planned to remain in the future.

From Crystal, Alignment C enters the northwest corner of Robbinsdale at 47th Avenue approximately four blocks north of TH 100. As illustrated in Exhibit 4-7 and Exhibit 4-8, existing and planned future land uses east and west of Alignment C are primarily low-density residential, with some commercial, high-density residential, and park uses.

East of the proposed Robbinsdale (42nd Avenue) station lies "downtown" Robbinsdale, a large retail/office area centered on both West Broadway Avenue and CSAH 81. West of the Burlington Northern Santa Fe (BNSF) railroad corridor, residential uses predominate. As illustrated in Exhibit 4-8, the *Robbinsdale 2030 Comprehensive Plan* indicates increasing density in the downtown area including transition of some parcels to mixed use.

Alignment D1 (part of the Preferred Alternative)

Alignment D1 begins near 34th Avenue in Robbinsdale and continues south into the city of Golden Valley crossing the municipal boundary at 26th Avenue.

As shown in Exhibit 4-7 and Exhibit 4-9, existing land uses east and west of Alignment D1 in Robbinsdale and Golden Valley are primarily low-density residential and park uses, with limited areas of institutional use. As depicted in Exhibit 4-10, the *City of Golden Valley Comprehensive Plan 2008-2018* indicates these land uses are planned to remain. The existing and planned future land uses near the Golden Valley Road and Plymouth Avenue/Theodore Wirth Regional Park station options are also low-density residential and park uses.

Alignment D1 continues along the BNSF railroad corridor southeast through eastern areas of Golden Valley, with Theodore Wirth Regional Park to the west and low-density residential land uses to the east. Alignment D1 enters Minneapolis north of TH 55 then travels east to CSAH 2 (Penn Avenue) where it joins the Alignment D Common Section. As shown in Exhibit 4-11, the primary land uses are park and low-density residential uses with no plans for changes in the future. Along TH 55, existing and future planned land uses are primarily low-density residential uses.

Alignment D2

The D2 alignment transitions from the BNSF railroad corridor to street-running segments through Robbinsdale and the north side of Minneapolis before rejoining the D1 alignment along TH 55 at Penn Avenue.

As illustrated in Exhibit 4-11, throughout the entire D2 alignment, the predominant land uses are residential, including low-, medium-, and high-density residential uses, community-oriented commercial uses, and institutional uses. North Memorial Medical Center is located in Robbinsdale at the north end of this alignment (see Exhibit 4-8). The North Memorial station would serve this regional medical facility as well as existing and future commercial uses to the north.

As depicted in Exhibit 4-12, the City of Minneapolis's future land use plan indicates the West Broadway Avenue corridor as an "urban neighborhood" which includes mixed residential and commercial uses. *The Minneapolis Plan for Sustainable Growth* and the *West Broadway Alive Plan* designate West Broadway Avenue as a Commercial Corridor and Penn Avenue as a Community Corridor with the surrounding area as Urban Neighborhood. The plans further designate the intersection of Penn Avenue and West Broadway Avenue as a Neighborhood Commercial Node extending from 26th Avenue to Oliver Avenue that is appropriate for mixed use commercial/residential. Residential uses at the node can be medium to high density. The proposed Broadway/Penn station would serve this existing and future commercial corridor. Adjacent to the proposed Penn/Plymouth station are institutional and community commercial uses within an otherwise residential neighborhood. The Penn Avenue/Plymouth Avenue intersection is a Neighborhood Commercial Node that is appropriate for mixed use commercial/residential uses. Residential uses at the node can be medium to high density. As shown in Exhibit 4-12, *The Minneapolis Plan* designates this area as urban neighborhood.

Alignment D Common Section (part of the Preferred Alternative)

The Alignment D Common Section is located entirely in Minneapolis, beginning at Penn Avenue and following TH 55 to 6th Avenue North into downtown Minneapolis. Proposed stations would be located at Van White Boulevard and Target Field.

Land use north and south of the Alignment D Common Section is primarily low- and medium-density residential between Penn Avenue and I-94. Future land uses in this area are designated as urban neighborhood use, which includes religious, institutional, and open space uses. Existing institutional and religious uses (academic facilities, a community center, a library, and a church) are adjacent to the Alignment D Common Section near TH 55 between Irving Avenue and Bryant Avenue. The western

portions of the new Heritage Park neighborhood contain a mix of residential land uses including medium-, and high-density housing. This land use pattern continues to Lyndale Avenue/I-94, where the corridor enters downtown Minneapolis.

As illustrated in Exhibit 4-12, *The Minneapolis Plan for Sustainable Growth* indicates that residential land uses will remain near the proposed Penn Avenue station. The Plan also indicates no planned changes to the existing land uses near the proposed Van White Boulevard station.

East of I-94, the Alignment D Common Section enters the downtown area of Minneapolis, which is characterized by commercial and industrial uses, as shown in Exhibit 4-13. The alignment transitions to the Blue Line (Hiawatha) LRT at the Target Field Station, which is currently transitioning from industrial uses to mixed use development adjacent to the Minnesota Twins ballpark as indicated in The Future Land Use Plan map for the Downtown Sector from *The Minneapolis Plan* (Exhibit 4-14). The terminal station would be located at the Target Field Station, an intermodal transit station under construction and planned to open in 2014. The *North Loop Small Area Plan* (2010) guides redevelopment for the North Loop area and calls for mixed use developments organized to support transit.

4.1.4 Planning Context

This section provides a summary of land use and other planning documents, which are the basis for evaluating land use compatibility of the Bottineau Transitway project.

Local and Regional Plans and Policies

Local and regional policies were reviewed to determine their compatibility with the Bottineau Transitway Project. A description of local and regional plans, as related to transit, is provided below.

An objective of the *City of Maple Grove 2008 Comprehensive Plan* (2008) is that multi-modal transportation be planned for and invested in to slow the growth of congestion. Strategies supporting this objective include promoting the evaluation of light rail and other modes of transit, planning land use patterns to support transit development, continuing to support the integration of land uses enabling shared parking and transit-oriented developments, and planning for the concentration of jobs and housing around transit hubs and daily conveniences. In addition, Maple Grove's comprehensive plan acknowledges that all areas designated as mixed use that have not been developed have the potential for transit-oriented higher-density clustered or mixed use development, including the Gravel Mining Area.

The *Brooklyn Park 2030 Comprehensive Plan* (2008) acknowledges that CSAH 81 is currently being studied by Hennepin County and Metro Transit for use as a transit corridor. The plan states that the City encourages a thorough analysis of the corridor to provide the most cost-effective and efficient mode of transit and to construct it in a timely manner. In addition, Brooklyn Park's comprehensive plan recognizes that changes would be necessary to implement the policies and objectives of the plan, including the consideration of transit overlay districts in areas where the City plans to have transit connections in the future, including Bottineau Boulevard. Additionally, the plan calls for promoting transit-oriented development where possible and encouraging commercial higher density residential uses along transit routes. The proposed station locations would provide access to employment centers and other major destinations in Brooklyn Park, which would be compatible with these goals.

It is a policy of the *City of Crystal, Minnesota Comprehensive Plan Update Through the Year 2030* (2011) to plan and invest in multi-modal transportation choices, based on the full range of costs and benefits, to slow the growth of congestion and serve the region's economic needs. A strategy supporting this policy is to expand the transit system. The Public Transit chapter of Crystal's comprehensive plan supports the development of the Bottineau Transitway Project with LRT as the preferred transit technology.

An objective of the *Robbinsdale 2030 Comprehensive Plan* is to provide an effective choice of transportation modes for the city's residents. The plan states that transit corridors provide the potential for concentrations of residential uses that may accommodate the regional projections for increased

population. The plan also states that the City should coordinate all future downtown redevelopment with a transit hub, exclusive busway, and light rail transit plans. In addition, the transitway is included on Robbinsdale's Transit Routes map (Figure 4G of the comprehensive plan). The transportation chapter of Robbinsdale's comprehensive plan acknowledges the Bottineau Transitway planning efforts, expressing a preference for LRT.

The *City of Golden Valley Comprehensive Plan 2008-2018* includes the goal of enhancing transit usage. A supporting objective is to support local and regional transit provider plans and programs that benefit residents and visitors in the community.

The transportation chapter of *The Minneapolis Plan for Sustainable Growth* (2009) indicates that enhanced transit services are the means to efficiently meeting the needs of the traveling public. The plan also calls for ongoing investment and development of corridors served by light rail, commuter rail, streetcars, and buses. Additionally, The Minneapolis Plan for Sustainable Growth's future Transitway System map acknowledges potential Bottineau Transitway routes, noting that transitway alignments and station locations are still under review and subject to change.

Hennepin County's *2030 Transportation Systems Plan* (*TSP*) (2011) is one of the four planning elements of the *Hennepin County Comprehensive Plan* (2011), which includes regional plans for wastewater and sewage systems, regional park systems, and surface water management.

The *TSP* states five central transportation goals, and the development of transitways is addressed as a strategy to achieve three of these goals. Goal 3 identifies the need to "provide mobility and choice to meet the diversity of transportation needs, as well as to support health objectives throughout the county." Continuing the progress of environmental documentation for the Bottineau Transitway is explicitly listed as a transit strategy to meet this goal, which also includes targets for improving regional accessibility and the number of jobs accessible via transit service. Goal 4 and Goal 5 address increasing spatial efficiency of land use and reducing the region's environmental footprint through increased development along key transit corridors. The *TSP* also lists the dedicated transitway as one of multiple strategies to achieve a 50 percent increase in transit ridership by 2030.

The Hennepin County *Sustainable Development Strategy* (2011) outlines the County's Housing, Community Works, and Transit Department's approach to aligning resources and targeting development to "integrate multi-modal transportation, economic development, housing, and community choices." Specifically, the *Strategy* addresses the agency partnerships, funding sources, and innovative problem solving used to fund and implement transitways, encourage sustainable, mixed use development, and apply the sustainable development strategy to transit corridors in planning, engineering, and design phases of the project.

Hennepin County, in partnership with the Bottineau Boulevard Partnership, also prepared the *Bottineau Land Use Planning Framework* (2012). While the *Framework* is unlike the aforementioned local comprehensive planning documents because the County does not have land use planning administration authority, it clearly dictates the County and Partnership's priority for increased development along the Bottineau Transitway.

The *Framework* creates a land use planning "To Do" list for the corridor, outlines local and best practices regarding land use planning around transit, and specifically emphasizes the Federal Transit Administration's (FTA) non-financial rating methodology, of which 40 percent is comprised by land use and economic development measures. Ultimately, the *Framework* states that "a strong land use planning process and subsequent adoption of new policies can increase this score and make a transit project more likely to receive federal funding."

Metropolitan Council's *Regional 2030 Transportation Policy Plan* (2010) acknowledges ongoing study of the Bottineau Transitway as a future transit route. Policy 15 of the *Transportation Policy Plan* addresses transitway development and implementation. The policy states that the "Metropolitan Council will strongly

pursue, in coordination with the Counties Transit Improvement Board (CTIB), county regional railroad authorities and transit providers, the cost-effective implementation of a regional network of transitways to provide a travel-time advantage for transit vehicles, improve transit service reliability, and increase the convenience and attractiveness of transit service."

Strategies supporting Policy 15 refer to land use. Strategy 15c states that Metropolitan Council will consider readiness, priority, and timing along with local commitment to transitway implementation and land use when making transitway investments. Strategy 15g states that local units of government are expected to develop local comprehensive plans, zoning, and community development strategies that ensure more intensified development along transitways and that this development should be effectively linked to the transitway through compact, walkable environments.

4.1.5 Operating Phase (Long Term) Impacts

No-Build Alternative

The No-Build alternative would not fulfill a key goal of city and regional plans described above. These plans indicate support for the enhancement, development, and implementation of transit improvements. In addition, these plans address the importance of diversity of transportation modes and the efficiency of land use offered by transit.

Enhanced Bus/TSM Alternative

The Enhanced Bus/Transportation System Management (TSM) alternative would provide some transit improvements and would therefore partially fulfill the intent of regional and local comprehensive plans to support and develop transit in the corridor. However, the Enhanced Bus/TSM Alternative would not be as effective as LRT in meeting plan goals for planning land use development to support transit development, including the concentration of housing and employment around transit hubs. Additionally, the *Robbinsdale 2030 Comprehensive Plan* specifically expresses a preference for LRT.

Build Alternatives

Overall, the Bottineau Transitway Build alternatives would be compatible with the local land use planning policies of Maple Grove, Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis. Although Golden Valley's comprehensive plan does not specifically mention the Bottineau Transitway Project, LRT would be compatible with the transit goal and objective of the city's comprehensive plan. The Build alternatives would also be compatible with regional land use planning policies.

4.1.6 Construction Phase Impacts

Construction phase impacts are defined as the temporary impacts that occur during project construction only.

No-Build Alternative

No construction phase impacts would occur under the No-Build alternative. Therefore, there would be no construction-related land use compatibility issues for this alternative.

Enhanced Bus/TSM Alternative

Construction phase impacts would be limited to the area of the proposed transit center and park-and-ride facility at Oak Grove Parkway and West Broadway Avenue. There would be no construction-related land use compatibility issues for this alternative.

Build Alternatives

Construction phase impacts generally include:

- Traffic detours resulting in traffic increases through residential neighborhoods

- Noise, dust, and visual impacts due to construction
- Temporary effects to land use due to staging areas

These impacts do not pose compatibility issues with planning policy documents. Negative impacts such as those listed above are addressed under other topic areas (community cohesion, noise, etc.).

4.1.7 Avoidance, Minimization, and/or Mitigation Measures

As all Build alternatives would be compatible with land use planning policy documents, no avoidance, minimization, or mitigation measures would be needed.

4.2 Community Facilities/Community Character and Cohesion

Information included in this section is based on the information provided in the Noise and Vibration Technical Report (HMMH, 2012), Transportation Technical Report (Kimley-Horn and Associates & SRF Consulting Group, 2012), and Visual Quality Technical Report (SRF, 2012). For information on coordination regarding community facilities, see Chapter 8 Section 4(f) Evaluation.

4.2.1 Regulatory Context and Methodology

No specific laws or executive orders regulate how impacts to community character, cohesion, and community facilities resulting from transit projects are evaluated. NEPA (41 USC 4321) and MEPA (Minn Stat. Chpt. 116D) form the general basis of consideration of these potential social impacts.

Operating phase (long-term) impacts are the permanent effects associated with operating the transitway. Construction phase impacts are defined as direct impacts, generally temporary in nature, associated with constructing the project. Community data were obtained from comprehensive plans for the cities of Maple Grove, Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis. These data were supplemented by recent aerial photography and input from public involvement activities. Information from the Noise and Vibration Technical Report (HMMH, 2012), Transportation Technical Report (Kimley-Horn and Associates & SRF Consulting Group, 2012), and Visual Quality Technical Report (SRF, 2012) was reviewed and evaluated to assess direct and indirect effects to community character and facilities.

Community facilities near the Bottineau Transitway include schools, colleges, libraries, community centers, parks, medical facilities, places of worship, funeral chapels, police and fire departments, as well as a food bank and a radio station. Community facilities and park resources more than 350 feet from the proposed alignments were assumed to experience no direct impacts. This distance is used because 350 feet is the unobstructed screening distance for FTA noise impact assessments and would allow identification of potential noise impacts to community facilities and park resources.

Parks are also subject to evaluation in the context of Section 4(f) of the Department of Transportation Act of 1966, which governs the use of publicly-owned/open to the public park and recreation lands, government-owned wildlife lands, and historic resources. Section 4(f) is specifically addressed in Chapter 8, Draft Section 4(f) Evaluation. In addition to the protection provided by Section 4(f), Section 6(f) of the Land and Water Conservation Fund Act of 1965 (LAWCON) stipulates that any land or facility planned, developed, or improved with LAWCON funds cannot be converted to uses other than parks, recreation, or open space unless land of at least equal fair market value and reasonably equivalent usefulness is provided. Anytime a transportation project would cause such a conversion, regardless of funding sources, such replacement land must be provided. No permanent right-of-way would be acquired from Section 6(f) resources within the study area. Therefore, no properties planned, developed, or improved with LAWCON funds would be converted to non-outdoor recreation use, and this issue is not discussed further in the Draft EIS.

4.2.2 Study Area

For operating phase (long-term) impacts, the study area is defined as the area within ½ mile of the proposed transit stations. A half-mile radius is commonly used by transit planners to represent the distance transit users are willing to walk to access an LRT station. For areas along corridor alignments that are not within a half-mile radius of a transit station, community character and facilities within ¼ mile of the transitway alignments were evaluated. As indicated above, no direct impacts were assumed to occur within 350 feet of any of the alignments. This means that the study area beyond 350 feet but within ¼ mile of the non-station area alignments was assessed for indirect impacts only.

4.2.3 Affected Environment

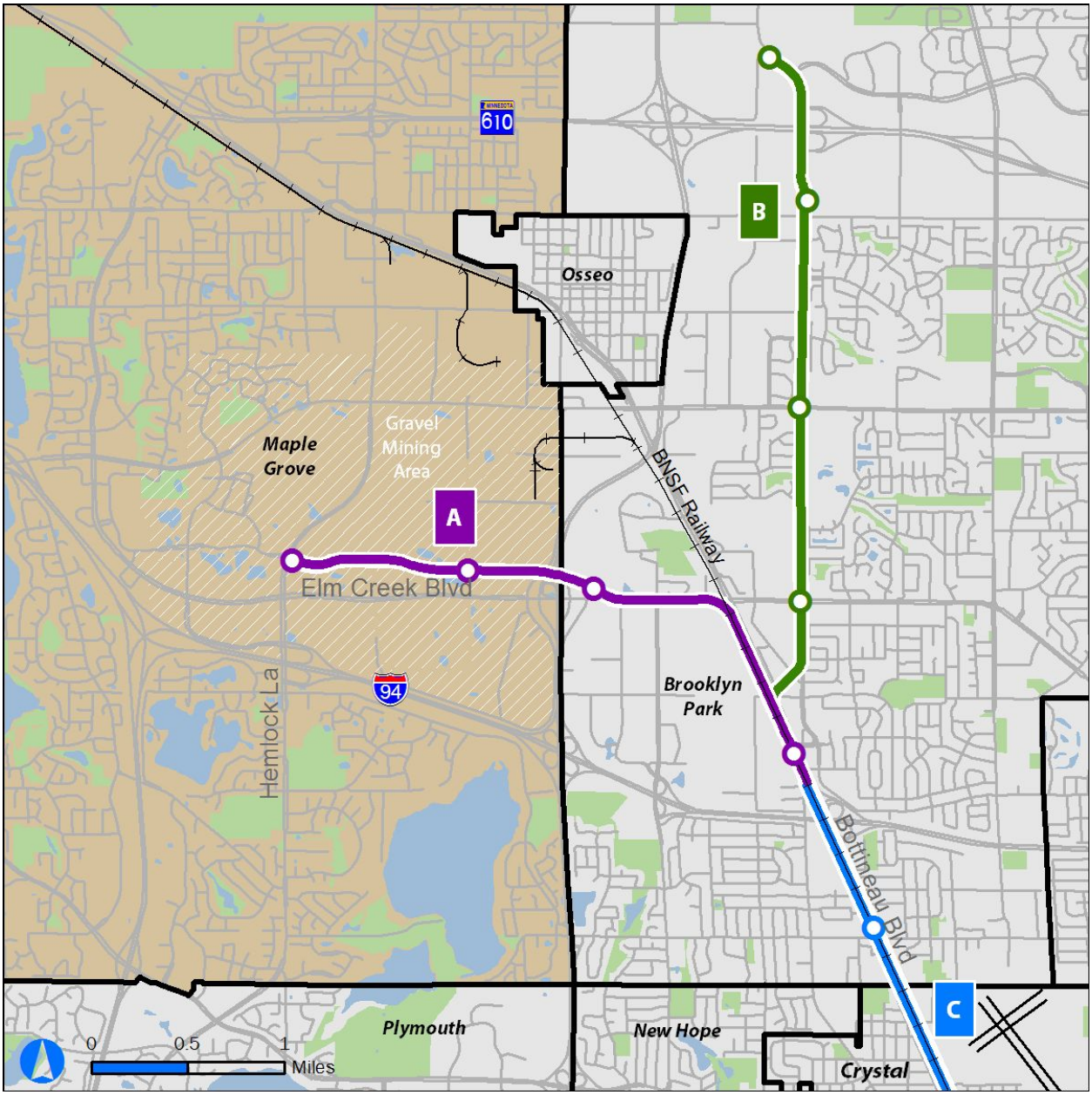
This section describes each of the communities along the proposed Bottineau Transitway (Maple Grove, Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis). Where applicable, descriptions of formally recognized neighborhoods within these communities are also provided. The term neighborhood can refer to a geographically defined area or it can denote a social community. For the purpose of this discussion, neighborhoods are defined as geographic areas within the communities along the Bottineau Transitway.

These community descriptions provide context for subsequent discussion about displacements and relocations, community facilities, cohesion within communities, and safety and security concerns associated with the Bottineau Transitway. Existing physical features (e.g., roadways, railroads, or other features) that may represent barriers between communities and neighborhoods are identified. Roadways that provide connectivity within communities are also noted.

Maple Grove

Maple Grove does not have any officially recognized neighborhoods within its boundaries. The area north and south of Alignment A in Maple Grove is currently in use as a gravel mining area and therefore no "community" or "neighborhood" is currently present. The *City of Maple Grove Gravel Mining Area Special Area Plan* envisions mixed uses for the area adjacent to Alignment A. The future roadway north of Elm Creek Boulevard would separate retail uses from office and other uses. Refer to Figure 4.2-1 for primary physical features near Alignment A in Maple Grove.

Figure 4.2-1. Primary Physical and Community Features in Maple Grove



Brooklyn Park

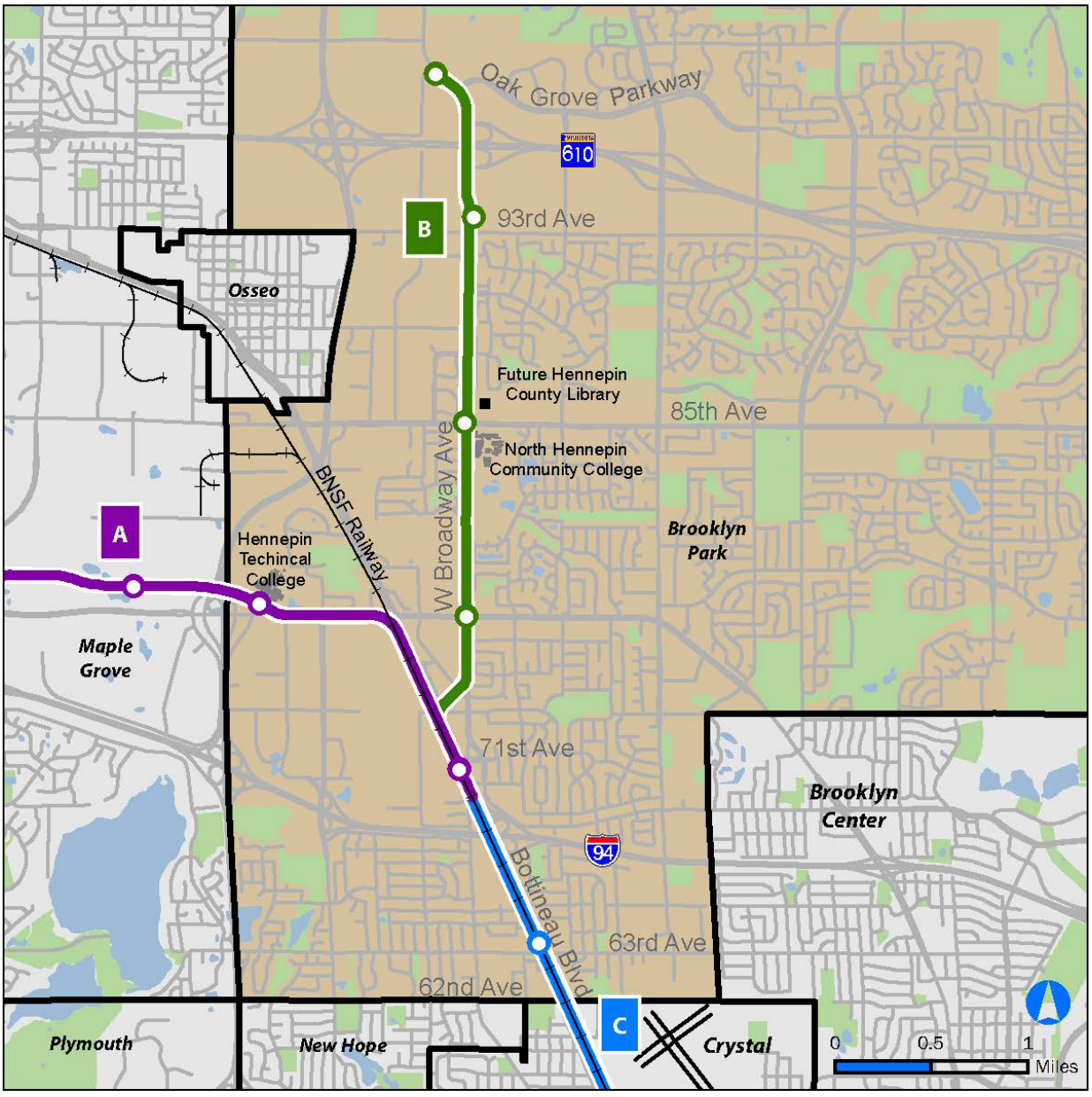
Brooklyn Park does not have any officially designated neighborhoods within its boundaries. In the northern portion of the city, the existing area near Alignment B north of TH 610 is currently undeveloped. Future development, including commercial uses, is planned for the area north of TH 610 along Alignment B near the Oak Grove Parkway station. TH 610 separates the future development area from the neighborhoods to the south. Refer to Figure 4.2-2 for primary physical features in Brooklyn Park.

Existing residential neighborhoods are located on either side of Alignment B (West Broadway Avenue) from 93rd Avenue to approximately 71st Avenue. Higher density town homes are present in the area of 85th Avenue. North Hennepin Community College and a future Hennepin County library are near the

location of the 85th Avenue station. The existing neighborhoods have winding internal circulation streets and do not generally face Alignment B (West Broadway Avenue). Residential areas are also located along both sides of Alignment C (CSAH 81) from around 70th Avenue to the city boundary at 62nd Avenue.

Within Brooklyn Park, 93rd Avenue, 85th Avenue, and 63rd Avenue serve as important cross community connectors that link neighborhoods. Proposed station locations at 93rd Avenue and 85th Avenue are anticipated to support connectivity among neighborhoods. In contrast, I-94 presents a barrier to north-south travel within the city. Brooklyn Park has a low- to medium-density suburban character with higher density town homes in the area of 85th Avenue. Neighborhoods east and west of Alignment B (West Broadway Avenue) and Alignment C (CSAH 81) are separate and cohesive in relation to themselves but not across these major roadways.

Figure 4.2-2. Primary Physical and Community Features in Brooklyn Park



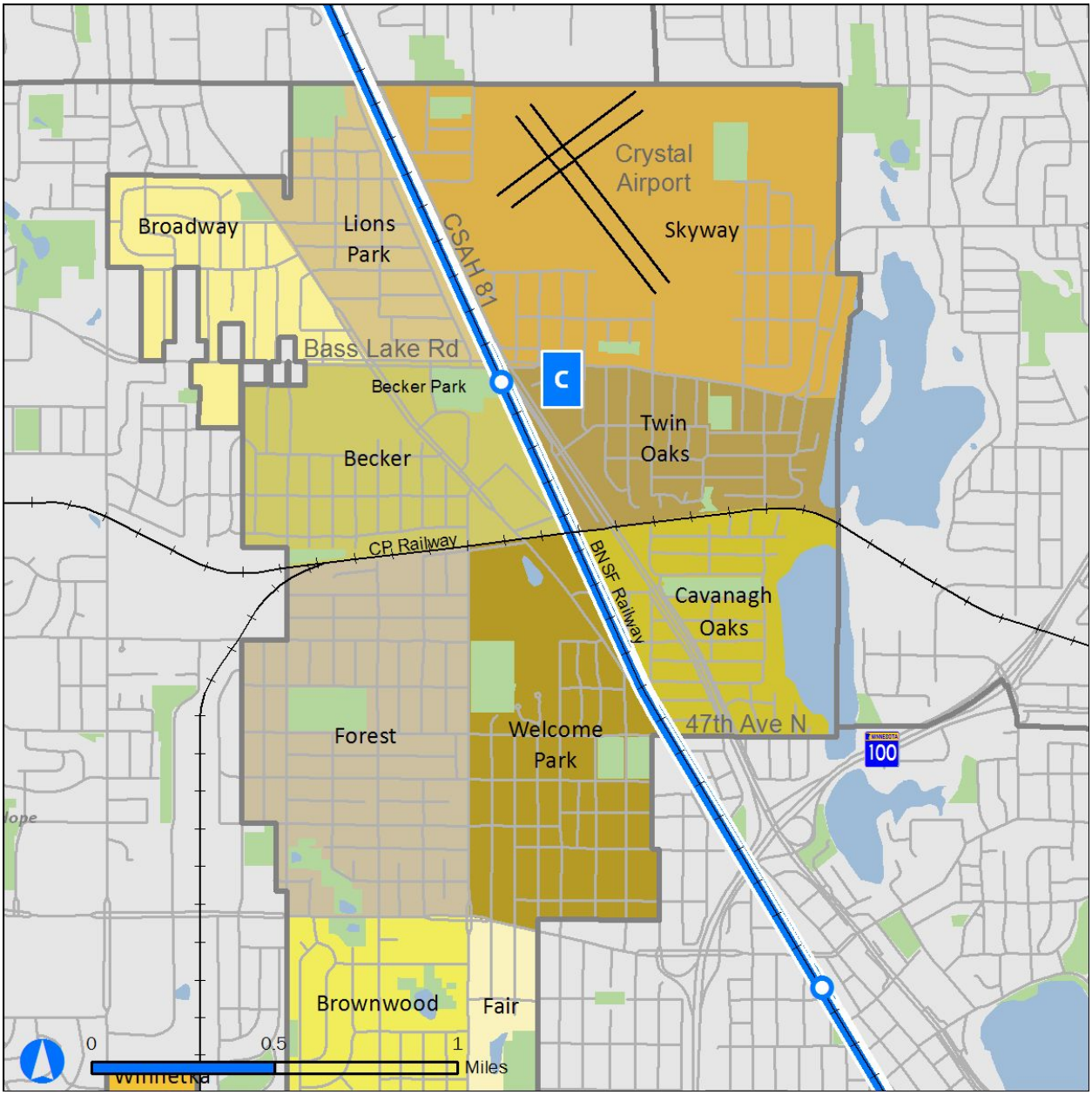
Crystal

The city of Crystal is comprised of 14 officially recognized neighborhoods. The six neighborhoods adjacent to Alignment C are Lions Park, Skyway, Becker, Twin Oaks, Welcome Park, and Cavanagh Oaks. The location of each neighborhood is illustrated in Figure 4.2-3. These neighborhoods are generally residential.

Within Crystal, Alignment C parallels Bottineau Boulevard then diverges to parallel the existing BNSF railroad south of Bass Lake Road. Along Alignment C (CSAH 81) the neighborhoods are separated by CSAH 81 and the BNSF railroad corridor. The neighborhoods are generally cohesive within themselves but not across the boulevard and the railroad. The Crystal Airport is a major feature embedded within a primarily residential neighborhood east of Alignment C and north of Bass Lake Road.

South of Bass Lake Road, Alignment C deviates from Bottineau Boulevard and shifts to the BNSF railroad corridor then continues along the freight line to the city boundary at 47th Avenue. Between Bass Lake Road and 47th Avenue, Alignment C passes through commercial and residential areas. In this area of Crystal, the Canadian Pacific (CP) railroad (east-west orientation) and BNSF railroad corridors (north-south orientation) present a barrier for movement between neighborhoods. Residential neighborhoods in Crystal have a suburban residential character with a grid street pattern.

Figure 4.2-3. Officially Recognized Neighborhoods and Primary Community Features along the Bottineau Transitway in Crystal



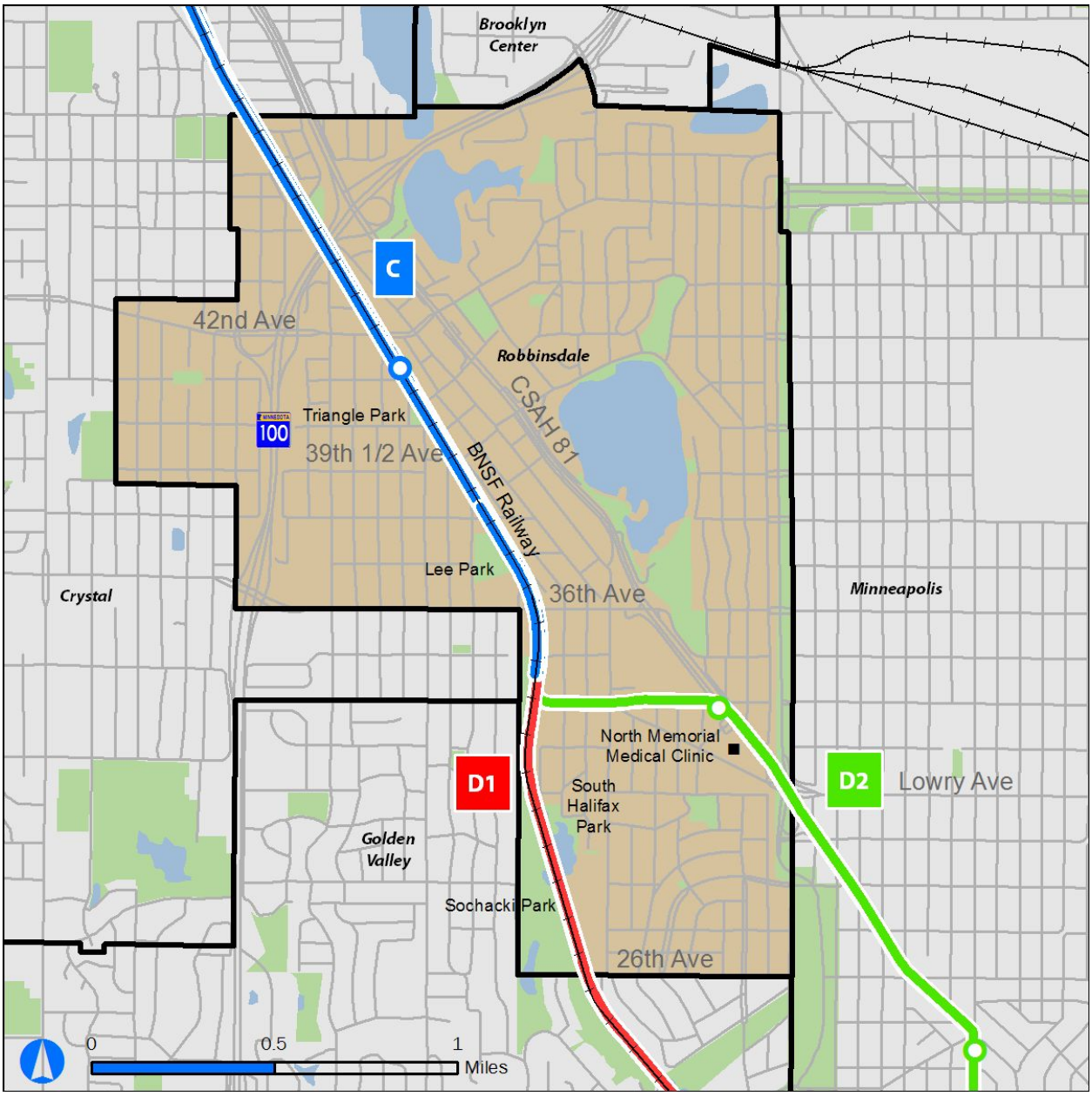
Robbinsdale

Robbinsdale does not have any officially recognized neighborhoods within its boundaries. Within the city, Alignment C parallels the BNSF railroad corridor. Downtown Robbinsdale is located east of Alignment C. Cross-community connections are provided by 42nd Avenue, 39½ Avenue, and 36th Avenue. Neighborhoods within the city are generally separated by TH 100, Bottineau Boulevard, and the BNSF railroad corridor. Residential neighborhoods are cohesive within themselves but are separated by major roadways and the railroad. Refer to Figure 4.2-4 for primary physical features in Robbinsdale.

Alignment D1 parallels the BNSF railroad from approximately 34th Avenue to 26th Avenue. Parkland and residential neighborhoods are located on both sides of Alignment D.

Residential neighborhoods in Robbinsdale have a suburban residential character with a grid street pattern. The grid street pattern is somewhat interrupted by several lakes within the city boundaries. The lakes also present natural barriers that influence access and connectivity within the city.

Figure 4.2-4. Primary Physical and Community Features in Robbinsdale

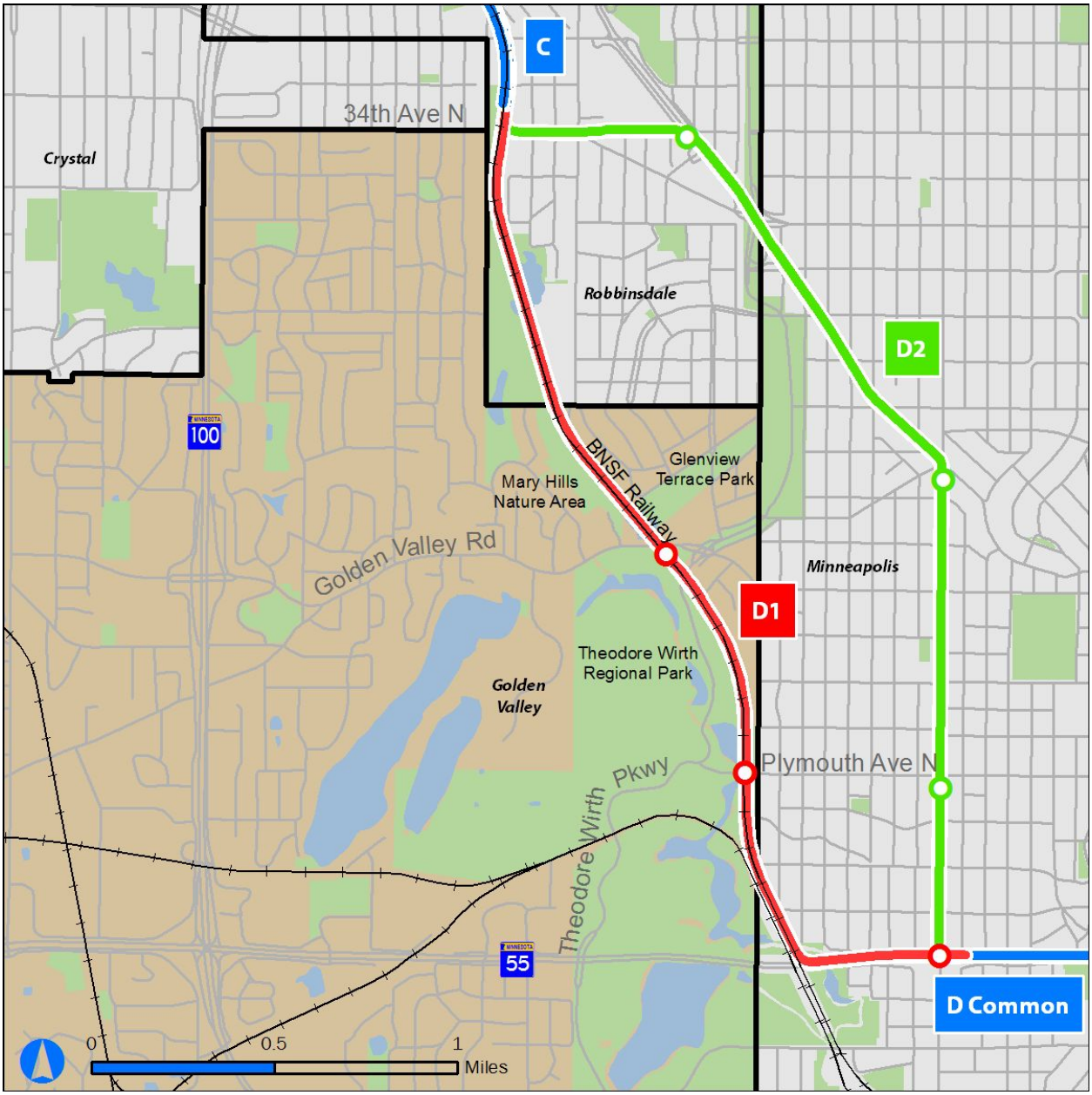


Golden Valley

Golden Valley does not have any officially designated neighborhoods within its boundaries. Alignment D1 travels through the city parallel to the BNSF railroad corridor from 34th Avenue to TH 55. The area

adjacent to Alignment D1 consists of parkland to the west and residential neighborhoods to the east. The BNSF railroad corridor (Alignment D1) and parkland separate the residential neighborhoods from one another. Some residential areas to the east have limited vehicle access to the parks. Theodore Wirth Parkway, part of the Grand Rounds Scenic Byway, provides an important connection to Golden Valley Road and connects parkland to nearby neighborhoods. Refer to Figure 4.2-5 for primary physical features in Golden Valley.

Figure 4.2-5. Primary Physical and Community Features in Golden Valley



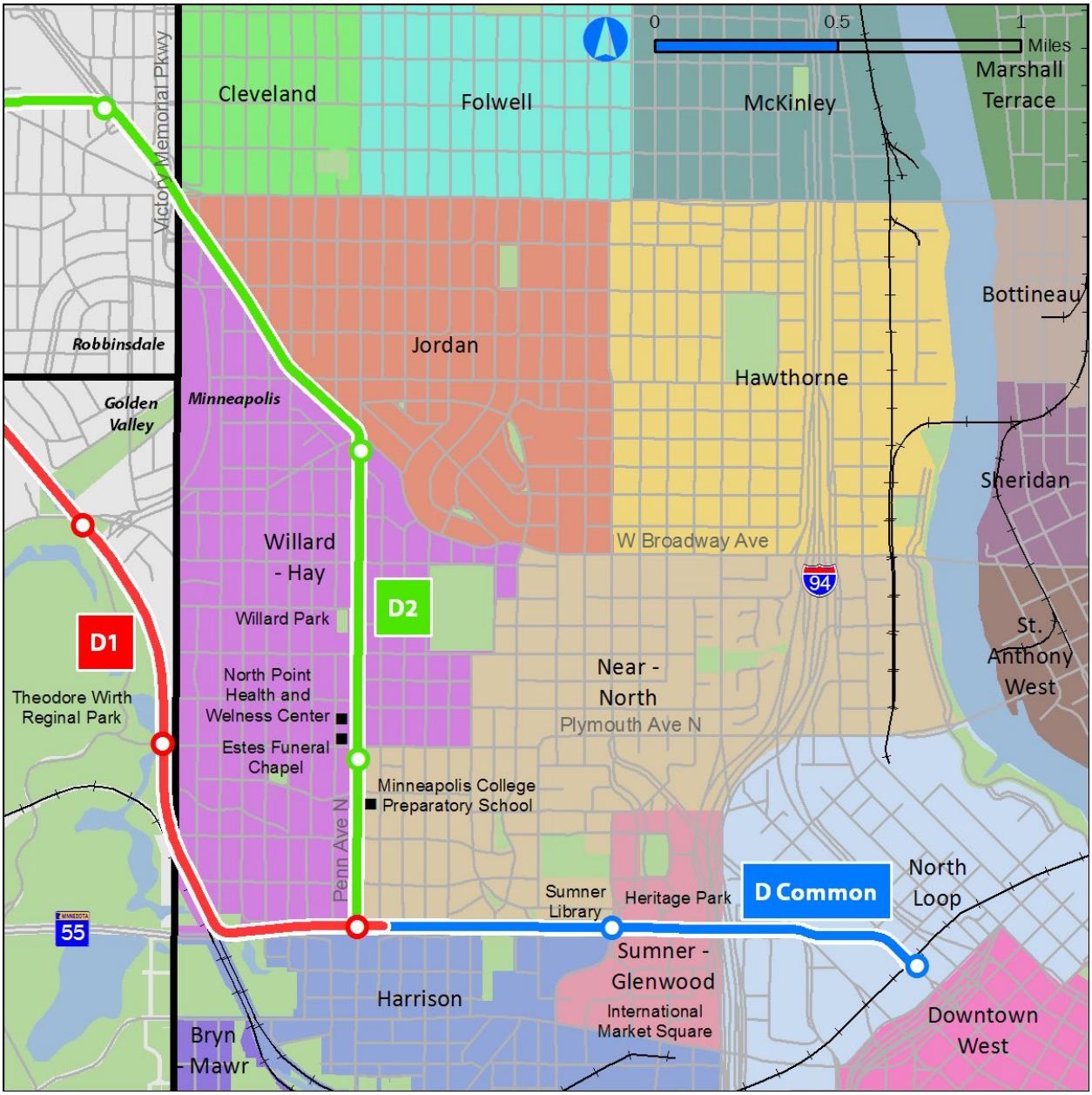
Cross streets within the city are limited to Golden Valley Road, Theodore Wirth Parkway, Plymouth Avenue, and TH 55 which pass over the existing BNSF railroad on bridge structures. Grade-separated roadway crossings provide pedestrians and bicyclists with the only formal crossings of the railroad. Residential

neighborhoods within Golden Valley have a suburban character with curvilinear streets. Neighborhoods are cohesive among themselves but not across the BNSF railroad and parkland.

Minneapolis

Within Minneapolis, Alignment D1, Alignment D2, and the Alignment D Common Section pass through five officially designated neighborhoods: Jordan, Willard-Hay, Harrison, Near-North, and Sumner-Glenwood. These residential neighborhoods, illustrated in Figure 4.2-6, generally have an urban character with a grid street pattern and residential housing in a variety of densities along the alignments.

Figure 4.2-6. Officially Recognized Neighborhoods and Primary Community Features along the Bottineau Transitway in Minneapolis



The neighborhoods bordering the portion of Alignment D2 where it parallels West Broadway Avenue are Jordan and Willard-Hay. These neighborhoods are primarily residential with commercial uses along West Broadway Avenue. Victory Memorial Parkway runs north-south along the western Minneapolis border, crossing under the proposed Alignment D2 on the western border of Minneapolis.

Alignment D2 continues south along Penn Avenue and is bordered by the Willard-Hay and Near-North neighborhoods. Commercial activity and community facilities are located where Penn Avenue intersects West Broadway Avenue and Plymouth Avenue.

Alignment D1 enters Minneapolis also in the Willard-Hay neighborhood. Theodore Wirth Regional Park is a major community feature west of the alignment. In some instances (near Plymouth Avenue), the park is also east of Alignment D1.

The neighborhoods adjacent to Alignment D1 along TH 55 and the Alignment D Common Section are Harrison to the south, Near-North to the north, and Sumner-Glenwood just west of I-94.

The Harrison neighborhood, located south of TH 55, is primarily residential. TH 55 is a wide arterial street with neighborhood connections provided by north-south street crossings with traffic signals at TH 55 intersections. The wide median with trees and green space within the right-of-way serve as a buffer between the highway and the adjacent neighborhoods.

Near-North is primarily residential. Major landmarks include the historic Sumner Library and the recently redeveloped Heritage Park, a mixed use residential development that includes public housing. International Market Square, a redeveloped factory containing commercial businesses, is also a major landmark in the neighborhood. Near-North is bordered on the east by I-94, which physically separates the neighborhood from downtown Minneapolis.

The Alignment D Common Section continues into downtown in the North Loop neighborhood, which has a mixed use urban character.

4.2.4 Environmental Consequences

This section identifies community facilities and evaluates potential impacts to community character due to access changes, loss of parking, noise impacts, visual changes, and property conversions. Impacts to community cohesiveness are also identified, specific to actions or results from implementation of the proposed project that would divide (physically or visually) the community or negatively alter the connections between parts of the community. Refer to the following individual reports for further detail regarding access changes and parking, noise, and visual changes*:* Transportation Technical Report (Kimley-Horn and Associates & SRF Consulting Group, 2012), Noise and Vibration Technical Report (HMMH, 2012), and the Visual Quality Technical Report (SRF Consulting Group, 2012).

4.2.4.1 Operating Phase (Long-Term) Impacts

No-Build Alternative

No changes to community character, facilities, or cohesiveness within communities are anticipated under the No-Build alternative.

Enhanced Bus/TSM Alternative

Impacts to community character and facilities would be limited to the area of the transit center and park-and-ride facility at Oak Grove Parkway and West Broadway Avenue, where undeveloped land would be converted to transportation use. No direct or indirect adverse impacts to community character, facilities, or cohesiveness within communities are anticipated.

Build Alternatives

The following discussion evaluates the effect of the Bottineau Transitway Project on facilities present, the character of the communities, and potential changes in community cohesiveness along each alignment. Table 4.2-1 summarizes potential community impacts associated with facilities, character, and cohesion for each Build Alternative.

Table 4.2-1. Potential Impacts to Community Facilities/Community Character and Cohesion

Alternative	Access to Community Facilities Maintained	Community Character Maintained	Community Cohesion Maintained
A-C-D1	Yes	Yes	Yes
A-C-D2	Yes	No	No
B-C-D1 (Preferred Alternative)	Yes	Yes	Yes
B-C-D2	Yes	No	No

While Table 4.2-1 provides an overview of potential community impacts, specific impacts are presented and discussed in further detail in other sections of this Draft EIS. Refer to the following sections for additional information regarding property acquisition, displacement, and relocation (Section 4.3), noise (Section 5.6), vibration (Section 5.7), visual/aesthetics (Section 4.5), parks (Chapter 8 Draft Section 4(f) Evaluation), effects to minority and low-income and populations (Chapter 7), and business impacts (Section 4.6).

Community facilities, including park resources, were identified for each community along each of the proposed alignments. Tables listing community facilities and park resources are provided for each alignment and community, as applicable.

Alignment A

- Maple Grove

No community facilities were identified along Alignment A in Maple Grove. Much of the area adjacent to this alignment option is within the gravel mining area.

Effect on community character and cohesiveness:

No adverse effects to community facilities are anticipated along Alignment A in Maple Grove as the majority of the area is undeveloped. Although gravel mining operations in this area may continue for decades, Maple Grove is planning for future development that includes a street alignment that would accommodate the proposed Bottineau Transitway. Future cross street facilities are expected to provide connections between future neighborhoods as well as to transit stations, thereby supporting cohesiveness within and among neighborhoods.

- Brooklyn Park

Community facilities along Alignment A in Brooklyn Park are listed in Table 4.2-2.

An evaluation of noise, access, right-of-way requirements, and changes in visual character determined that the transitway would not disrupt the functions of Hennepin Technical College or Living Word Christian Center. The Bottineau Transitway Project is expected to provide the positive benefit of enhancing access to Hennepin Technical College.

Table 4.2-2. Community Facilities along Alignment A in Brooklyn Park

Community Facility	Distance [1]	Location
Hennepin Technical College	< 350 feet	9000 Brooklyn Boulevard
Living Word Christian Center	> 350 feet	9201 75th Avenue North

[1] Indicates distance from Alignment A

One park resource, Greenhaven Park, was identified along Alignment A in Brooklyn Park and is listed in Table 4.2-3. Greenhaven Park is located far enough away from Alignment A that no impacts are anticipated.

Table 4.2-3. Park Resources along Alignment A in Brooklyn Park

Park	Acres	Distance [1]	Facilities
Greenhaven Park	29	> 350 feet	Playground, basketball and game courts, picnic area

[1] Indicates distance from Alignment A

Direct/indirect effects can be summarized as follows:

- Direct effects would result from the acquisition of eight residential properties south of Brooklyn Boulevard and east of Boone Avenue.

Effect on community character:

From Brooklyn Boulevard to 71st Avenue, Alignment A would be constructed within the BNSF right-of-way. Addition of a transitway within this existing rail corridor is not anticipated to substantially change the community character from what exists today.

Effect on community cohesiveness:

Implementation of the Bottineau Transitway is not anticipated to adversely affect connections within the community and no changes in community cohesion are expected.

Alignment B (part of the Preferred Alternative)

- Brooklyn Park

Community facilities along Alignment B in Brooklyn Park are listed in Table 4.2-4.

The effect of transitway noise is expected to occur near Prince of Peace Lutheran Church. As worship activities are assumed to be indoors, no adverse impacts are anticipated.

Consideration of noise, access, and visual impacts determined that no other community facilities listed in Table 4.2-4 are expected to be directly or indirectly affected by the transitway. Although changes in access are anticipated, they would not adversely affect the resources described below.

- The access closure at 78th Avenue, which would be required to maintain pedestrian safety, is not expected to affect pedestrian access to Brooklyn Park Evangelical Free Church as pedestrians would be diverted ⅛-mile (5 minute walk) to cross at Candlewood Drive.
- North Hennepin Community College, Step by Step Montessori School, and the future Hennepin County Library are near the proposed 85th Avenue station. The access closure at 84th Avenue, which would be necessary to maintain pedestrian safety, would divert pedestrians ⅛-mile to cross at College Park Avenue and is not expected to impact community facilities near the 85th Avenue station. The college, businesses, residents, and future library patrons are expected to benefit from improved transit access provided by the 85th Avenue station. The Brooklyn Boulevard station would provide improved access to retail activity in the area near the proposed station.

Table 4.2-4. Community Facilities along Alignment B in Brooklyn Park

Community Facility	Distance[1]	Location
Berean Baptist Church	< 350 feet	8825 West Broadway Avenue
Step by Step Montessori School	> 350 feet	8401 West Broadway Avenue
Future Hennepin County Library	= 350 feet	85th Avenue and West Broadway Avenue
North Hennepin Community College	< 350 feet	7411 85th Avenue North
Brooklyn Park Evangelical Free Church	< 350 feet	7849 West Broadway Avenue
Prince of Peace Lutheran Church	> 350 feet	7217 West Broadway Avenue
Brooklyn-Crystal Cemetery	> 350 feet	Across from 7217 West Broadway Avenue
Parenting with Purpose	> 350 feet	7111 West Broadway Avenue
Grace Lutheran Church	> 350 feet	6810 Winnetka Avenue North

[1] Indicates distance from Alignment B

Park resources along Alignment B in Brooklyn Park are listed in Table 4.2-5.

Reconstruction of West Broadway Avenue between CSAH 30 (93rd Avenue) and Candlewood Drive would be completed by Hennepin County prior to construction of the Bottineau Transitway Project, a committed project (construction activities to begin late 2015) included under the No-Build alternative. Because the Bottineau Transitway would be built within the median of the reconstructed West Broadway Avenue, no changes in park or trail access are anticipated.

The direct effect of property acquisition (5.2 acres) from Three Rivers Park District is anticipated if an OMF is constructed at the 101st Avenue location. Construction of the OMF may affect the turf portion of Rush Creek Regional Trail. The location of the trail and a detailed discussion of trail impacts are provided in Chapter 8 Draft Section 4(f) Evaluation.

The Bottineau Transitway is not expected to affect any of the other parks identified in Table 4.2-5 due to their location in relation to Alignment B. Tessman Park consists primarily of green space, and the recreation facilities in College Park are set back from the proposed alignment. The character of the North Hennepin Community College ball fields and the adjacent trail would not change as a result of the Bottineau Transitway. An evaluation of noise, access, changes in visual character, and location relative to Alignment B determined that the transitway would not disrupt the function of Brooklyn Acres, Tessman Acres Park, or Park Lawn Park.

Table 4.2-5. Park Resources along Alignment B in Brooklyn Park

Park	Acres	Distance [1]	Facilities
Rush Creek Regional Trail	5.2[2]	Adjacent	Paved and turf trail
Brooklyn Acres	5.6	> 350 feet	Playground, picnic area, path and trail
Tessman Acres Park	6.2	> 350 feet	Playground, picnic area, path and trail
College Park	6	Adjacent	Playground, skate rink, picnic pavilion, park activity building
North Hennepin Community College Ball Fields	5.8	Adjacent	Ball fields
North Hennepin Community College Trail	--	Adjacent	Trail
Tessman Park	10.9	Adjacent	Trail
Park Lawn Park	5	> 350 feet	Playground, basketball, path and trail

[1] Indicates distance from Alignment B
[2] Partial acquisition of property owned by Three Rivers Park District

Direct/indirect effects can be summarized as follows:

- An OMF may be constructed at 101st Avenue or 93rd Avenue and property acquisitions would be needed for either of the OMF options. Construction of an OMF would add a large built structure to the landscape, changing the existing visual character. The area around the OMF option at 101st Avenue is currently undeveloped, but future mixed use is planned at this location. The OMF at 101st Avenue would also require approximately five acres owned by Three Rivers Park District. Should the OMF option at 101st Avenue move forward as the preferred location, formal review would be required by Metropolitan Council and the Park District Board of Commissioners to address restrictive covenants associated with this property. The OMF option at 93rd Avenue may be used as a park-and-ride or a combined OMF and park-and-ride. The area around the OMF option at 93rd Avenue is planned for future business park use.
- Potential noise impacts to residents along Alignment B.
- Property acquisitions are anticipated along Alignment B between the Oak Grove Parkway station and the 93rd Avenue station.
- Acquisition of a narrow strip of right-of-way would occur adjacent to Alignment B to allow for roadway widening to accommodate the transitway south of Candlewood Drive to 75th Avenue.
- Full property acquisitions are anticipated for eight residential properties east of West Broadway Avenue and south of 76th Avenue.
- One commercial property acquisition is expected near 75th Avenue.
- Four crossings of West Broadway Avenue in Brooklyn Park would be closed (92nd Avenue, 84th Avenue, 78th Avenue, and commercial access to Starlite Center/76th Avenue).

Effect on community character:

Although minor variations in visual character directly adjacent to the proposed changes may occur due to the construction of an OMF, acquisition and removal of residential and commercial properties, and access closures, these changes are not expected to change the overall community character of the areas near Alignment B in Brooklyn Park. The effects are confined to limited areas and are not anticipated to affect the overall community character.

Effect on community cohesiveness:

The effects are confined to limited areas and would not present a substantial physical or social barrier affecting community cohesion.

Alignment C (part of the Preferred Alternative)

- Brooklyn Park

Four community facilities, all of which are parks, were identified along Alignment C in Brooklyn Park. An evaluation of noise, access, changes in visual character, and location relative to Alignment C determined that the transitway would not disrupt the function of any of the park resources identified in Table 4.2-6.

Table 4.2-6. Park Resources along Alignment C in Brooklyn Park

Park	Acres	Distance [1]	Facilities
Lakeland Park	10.2	> 350 feet	Ball fields, playground, skating and hockey, picnic pavilion, park activity building, tennis, basketball, game courts
Streifel Park	1.3	> 350 feet	Ball field, playground
Edgewood Park	3.6	> 350 feet	Playground
Southbrook Park	9	> 350 feet	Picnic area, path and trail, nature area

[1] Indicates distance from Alignment C

Direct/indirect effects can be summarized as follows:

- Potential for noise impacts to residences north of I-94.
- Change of access to one commercial property (a drive-in restaurant) along West Broadway Avenue
- Expansion of the park-and-ride west of the 63rd Avenue station is anticipated. Adjacent residential neighborhoods may experience the effect of increased traffic.

Effect on community character:

Potential for increased noise at several residences, acquisition of one commercial property, and increased traffic near the park-and-ride are not anticipated to change the overall community character of the area near Alignment C in Brooklyn Park. The effects would be confined to limited areas and are not expected to affect the overall community character.

Effect on community cohesiveness:

The effects would be confined to limited areas and would not present a substantial physical or social barrier affecting community cohesion.

- Crystal

Community facilities along Alignment C in Crystal are listed in Table 4.2-7.

Increased noise is anticipated to occur at Doug Stanton Ministries. As activities of the ministry are assumed to be indoors, no adverse impacts are anticipated. No other direct or indirect impacts are expected for the community facilities identified in Table 4.2-7. An evaluation of noise, access, right-or-way requirements, and changes in visual character determined that the transitway would not affect the function of these community facilities.

Table 4.2-7. Community Facilities along Alignment C in Crystal

Community Facility	Distance[1]	Location

Crystal Medical Center	< 350 feet	5706 Lakeland Avenue
Conquerors Christian Center	< 350 feet	5250 Hanson Court
Doug Stanton Ministries	< 350 feet	4947 West Broadway Avenue
Washburn-McReavy Funeral Chapel	> 350 feet	5125 West Broadway Avenue

[1] Indicates distance from Alignment C

No direct or indirect impacts are anticipated for park resources along Alignment C in Crystal, which are identified in Table 4.2-8.

The Bass Lake Road station would be located directly east of Becker Park. The location of Becker Park is depicted in Figure 4.2-3. Fencing along the eastern boundary of the park provides a barrier to the existing railroad and the proposed transit station. Becker Park, nearby commercial uses, and a senior housing complex located just south of the park may benefit from improved transit access provided by the proposed station.

An evaluation of noise, access, changes in visual character, and location relative to Alignment C determined that Broadway Park, Skyway Park, North Bass Lake Park, Lions Soo Line Park, Cavanagh Park, North Lions Park, and Welcome Park would not be adversely affected by the transitway.

Table 4.2-8. Park Resources along Alignment C in Crystal

Park	Acres	Distance [1]	Facilities
North Lions Park	12	< 350 feet	Basketball court, tennis courts, warming house, playground, trail, BBQ grills, volleyball courts, softball and baseball fields
Broadway Park	3.3	> 350 feet	Half-court basketball, softball field, playground, hockey rink, skating rink, warming house
Skyway Park	3.5	> 350 feet	Half-court basketball, playground, softball field, picnic shelter
Becker Park	12.4	< 350 feet	Basketball court, playground, tennis courts, softball fields, playground, trails, picnic tables, horseshoe courts, activity center
North Bass Lake Park	1.5	> 350 feet	Basketball court, playground, picnic shelter
Lions Soo Line Park	0.5	> 350 feet	Playground
Cavanagh Park	4.8	> 350 feet	Playground, picnic shelter, softball fields
Welcome Park	9.5	< 350 feet	Basketball court, skating rink, hockey rink, warming house, tennis courts, baseball fields, playground, soccer field

[1] Indicates distance from Alignment C

Direct/indirect effects can be summarized as follows:

- Potential for existing residences at several locations adjacent to Alignment C to experience the effect of increased noise

Effect on community character:

Increased noise is not anticipated to affect the community character of the area surrounding Alignment C in Crystal.

Effect on community cohesiveness:

Potential noise impacts would not affect community cohesion as it is localized and does not present a physical or social barrier.

- Robbinsdale

No direct or indirect impacts are anticipated for the community facilities along Alignment C in Robbinsdale, which are identified in Table 4.2-9. An evaluation of noise, access, right-of-way requirements, and changes in visual character determined that the transitway would not disrupt the function of these community facilities.

Table 4.2-9. Community Facilities along Alignment C in Robbinsdale

Community Facility	Distance[1]	Location
Redeemer Lutheran Church	> 350 feet	4201 Regent Avenue North
Robbinsdale Police Department	< 350 feet	4101 Hubbard Avenue
Elim Lutheran Church	> 350 feet	3978 West Broadway Avenue
Sacred Heart Catholic Church and School	> 350 feet	4087 West Broadway Avenue
Bethel World Outreach	< 350 feet	3900 Hubbard Avenue North

[1] Indicates distance from Alignment C

Park resources along Alignment C in Robbinsdale are listed in Table 4.2-10.

Triangle Park is located adjacent to Alignment C, and park users are expected to experience the effects of increased noise. The perimeter of Triangle Park is bounded by chain-link fencing. Lee Park is bordered by the railroad corridor on the east, with fencing providing a barrier between the railroad corridor and the park. The fencing is expected to remain, thereby providing a barrier between park activities and transitway operations. The location of Triangle Park and Lee Park are shown in Figure 4.2-4.

An evaluation of noise, access, and changes in visual character determined that Spanjers Park, Mielke Park, Thomas Hollingsworth Park, Lakeview Terrace Park, and Lee Park would not be adversely affected by the transitway.

Table 4.2-10. Park Resources along Alignment C in Robbinsdale

Park	Acres	Distance [1]	Facilities
Spanjers Park	2.5	> 350 feet	Ball field, picnic area, paths/trails
Mielke Park	0.7	> 350 feet	Picnic area
Triangle Park	1	Adjacent	Ball field, playground equipment, picnic area, wading pool
Thomas Hollingsworth Park	4.4	> 350 feet	Picnic Area, path/trail, fishing dock
Lakeview Terrace Park	30	> 350 feet	Ball fields, playground equipment, tot equipment, picnic area, paths/trails, tennis courts, concession stand, boat access
Lee Park	6.7	Adjacent	Ball field, playground equipment, tot equipment, picnic area, picnic pavilion, paths/trails,

[1] Indicates distance from Alignment C

Direct/indirect effects can be summarized as follows:

- Residences adjacent to Alignment C, particularly along the east side, are expected to experience the effect of increased noise generated by transitway operations.

- Five commercial parcels (three properties with buildings and two parking lots) would be acquired to accommodate parking near the Robbinsdale station. Hubbard Marketplace, one of the three commercial properties, would likely be replaced by another structure that would serve as a transit facility.

Effect on community character:

Increased noise and the acquisition of five commercial properties are not anticipated to change the overall community character of the area surrounding Alignment C in Robbinsdale. Although minor changes in visual character may occur due to the removal of commercial properties, the positive effect of improved access provided by the Robbinsdale station is anticipated to support retail and commercial activity in the area. The effects would be confined to limited areas and are not expected to affect the overall community character.

Effect on community cohesiveness:

The effects would be confined to limited areas and would not present a substantial physical or social barrier affecting community cohesion.

Alignment D1 (part of the Preferred Alternative)

Alignment D1 passes through the cities of Robbinsdale, Golden Valley, and Minneapolis. The majority of Alignment D1 is within a trench where the existing railroad corridor is approximately 20 to 30 feet below grade. The railroad right-of-way is 100 feet wide within the trench. Freight rail would continue to operate on the western 50 feet and LRT would operate on the eastern 50 feet.

- Robbinsdale

Three community facilities, all of which are parks, were identified along Alignment D1 in Robbinsdale. These parks are listed in Table 4.2-11.

Sochacki Park is bordered by June Avenue and residential backyards on the west and the BNSF railroad corridor on the east. There is a trail within Sochacki Park that parallels the railroad north of Grimes Pond. The trail is less than 50 feet from the railroad in some locations. The natural setting of Sochacki Park may be somewhat diminished due to the proximity of the trail to Alignment D1. The location of Sochacki Park is depicted in Figure 4.2-4.

South Halifax Park is east of Alignment D1 and south of Lowry Avenue. East of Alignment D1, the existing BNSF railroad corridor is buffered by an Xcel Energy substation facility, South Halifax Park, and large densely vegetated backyards. Deciduous vegetation provides some screening of the existing railroad corridor for residents along Indiana Avenue. Given its proximity to Alignment D1, moderate visual impacts are possible. The location of South Halifax Park is shown in Figure 4.2-4.

No direct or indirect impacts are anticipated for Parkview Park, as it is located far enough away from Alignment D1 that no impacts are expected.

Table 4.2-11. Park Resources along Alignment D1 in Robbinsdale

Park	Acres	Distance [1]	Facilities
Sochacki Park	37.4	Adjacent	Picnic area, picnic pavilion, paths/trails
South Halifax Park	4	Adjacent	Playground equipment, tot equipment, half-court basketball, paths/trails
Parkview Park	0.3	> 350 feet	Playground equipment, picnic area

[1] Indicates distance from Alignment D1

Direct/indirect effects can be summarized as follows:

- Noise impacts are anticipated for residents north of South Halifax Park along Indiana Avenue between 33rd Avenue and Lowry Avenue.

Effect on community character:

Increased noise for residents north of South Halifax Park is not anticipated to change the community character of the area surrounding Alignment D1 in Robbinsdale. The effects would be confined to limited areas and are not expected to affect the overall community character.

Effect on community cohesiveness:

The effects would be confined to limited areas and would not present a substantial physical or social barrier affecting community cohesion.

- Golden Valley

No direct or indirect impacts are anticipated for the community facilities along Alignment D1 in Golden Valley, which are identified in Table 4.2-12. An evaluation of noise, access, and changes in visual character determined that the transitway would not disrupt the function of these community facilities.

Table 4.2-12. Community Facilities along Alignment D1 in Golden Valley

Community Facility	Distance[1]	Location
Unity Christ Church	> 350 feet	4000 Golden Valley Road
St. Margaret Mary Catholic Church and Loveworks Academy	> 350 feet	2225 Zenith Avenue

[1] Indicates distance from Alignment D1

Park resources along Alignment D1 in Golden Valley are listed in Table 4.2-13. Figure 4.2-5 shows the location of Mary Hills Nature Area, Glenview Terrace Park, and Theodore Wirth Regional Park.

Mary Hills Nature Area is located west of the BNSF railroad. A meandering trail system connects Mary Hills Nature Area with Sochacki Park to the north. The trail generally parallels the existing railroad corridor, with deciduous vegetation providing some visual screening. The recreational experiences of this park resource may be lessened due to the effects of increased transitway operations and change in setting.

Although Glenview Terrace Park is adjacent to Alignment D1, the active uses of the park are well buffered by a ravine and wooded area.

Theodore Wirth Regional Park is located generally between a line extending along France Avenue on the west (France Avenue is discontinuous and exists north and south of the park only), Xerxes Avenue on the east, I-394 to the south, and Golden Valley Road on the north. Some of the walking trails and cross-country ski trails are near Alignment D1. Although deciduous trees provide some visual screening of the existing railroad corridor, their buffering effect would be reduced as a result of leaf loss during the winter months. Recreational experiences within the park may be somewhat diminished due to the effects of transitway operations and change in setting.

An evaluation of noise, access, changes in visual character, and location relative to Alignment D1 determined that Stockman Park, Rice Lake Nature Area, Valley View Park, and Sweeney Lake Park would not be adversely affected by the transitway.

Table 4.2-13. Park Resources along Alignment D1 in Golden Valley

Park	Acres	Distance [1]	Facilities
Stockman Park	1.5	> 350 feet	Game squares, play equipment, basketball court, softball field
Mary Hills Nature Area	15.7	Adjacent	Trails, picnic areas, benches
Rice Lake Nature Area	9	> 350 feet	Trail, wooden boardwalk, overlook across scenic pond
Glenview Terrace Park	5	Adjacent	Play equipment, walkways/trails, tennis court
Valley View Park	5.5	> 350 feet	Picnic areas, open fields, walking and cycling paths
Sweeney Lake Park	0.9	> 350 feet	Dock, canoe launch, sun shelter
Theodore Wirth Regional Park	759	Adjacent	Fishing pier, boat launch, volleyball courts, playground, picnic area/pavilion, snowboard park, trails, golf courses and clubhouse, Eloise Butler Wildflower Garden, Quaking Bog, cross-country skiing

[1] Indicates distance from Alignment D1

Direct/indirect effects can be summarized as follows:

- There are two potential station sites for Alignment D1: the Plymouth Avenue/Theodore Wirth Regional Park station option and the Golden Valley Road station option. No additional right-of-way is needed if the Plymouth Avenue/Theodore Wirth Regional Park station option is selected.
    - To construct the transitway, permanent property acquisition is anticipated from Theodore Wirth Regional Park near where Alignment D1 crosses Plymouth Avenue. A small amount of right-of way (0.4 acre) is anticipated due to the slope at this location. The property is owned by the Minneapolis Park & Recreation Board (MPRB).
    - To construct the Golden Valley Road station option, permanent acquisition of less than one half acre is expected from Theodore Wirth Regional Park. The property would be acquired from the MPRB.

Effect on community character:

Potential changes in the setting of Sochacki Park and Mary Hills Nature area and minor property acquisitions from Theodore Wirth Regional Park are not anticipated to change the community character of the area surrounding Alignment D1 in Golden Valley. Property acquisitions would occur near the park's eastern boundary and are not anticipated to impact park facilities or recreational use. Coordination with the MPRB regarding potential park impacts is ongoing. Construction of either proposed station is anticipated to improve access to Theodore Wirth Regional Park.

Effect on community cohesiveness:

The effects described would be confined to limited areas and are not anticipated to present a substantial physical or social barrier affecting community cohesion.

- Minneapolis

Two community facilities, both of which are parks, were identified along Alignment D1 in Minneapolis and are listed in Table 4.2-14.

No direct or indirect impacts to Farwell Park are anticipated due to its distance from Alignment D1. A temporary easement from Theodore Wirth Regional Park would be required to construct the LRT guideway north of TH 55 where it transitions from the BNSF railroad corridor to TH 55. The property would be

acquired from the MPRB. The location of Theodore Wirth Regional Park is depicted in Figure 4.2-6 and further discussion of park impacts is provided in Chapter 8 Draft Section 4(f) Evaluation.

Table 4.2-14. Park Resources along Alignment D1 in Minneapolis

Park	Acres	Distance [1]	Facilities
Farwell Park	1.1	> 350 feet	Picnic area, playground
Theodore Wirth Regional Park	759	Adjacent	Fishing pier, boat launch, volleyball courts, playground, picnic area/pavilion, snowboard park, trails, golf courses and clubhouse, Eloise Butler Wildflower Garden, Quaking Bog, cross-country skiing

[1] Indicates distance from Alignment D1

Direct/indirect effects can be summarized as follows:

- East of the BNSF railroad/TH 55 transition, three non-signalized pedestrian crossings of TH 55 would be closed (Sheridan Avenue, Russell Avenue, and Queen Avenue).
- Nearby low- and medium-density residential areas would experience the effects of general activity surrounding the Penn Avenue station.

Effect on community character:

The closure of three pedestrian crossings and the increased activity near the Penn Avenue station is not anticipated to change the community character of the area surrounding Alignment D1 in Minneapolis. Residences and community facilities near the station would benefit from improved transit access. The effects would be confined to limited areas and are not expected to affect the overall community character.

Effect on community cohesiveness:

The effects would be confined to limited areas and would not present a substantial physical or social barrier affecting community cohesion.

Alignment D2

- Robbinsdale

Community facilities along Alignment D2 in Robbinsdale are listed in Table 4.2-15.

North Memorial Medical Center is a Level I Trauma Center equipped to provide emergency services while nearby North Memorial Outpatient Center provides outpatient services. Access to both the main campus and outpatient facilities would be maintained and no effects related to noise or changes to visual character are anticipated. Access and time delays are concerns for medical facilities because a prompt emergency response can influence a patient's outcome. Refer to Figure 4.2-4 for the location of North Memorial Medical Center.

Table 4.2-15. Community Facilities along Alignment D2 in Robbinsdale

Community Facility	Distance[1]	Location
North Memorial Medical Center Main Campus	> 350 feet	3300 Oakdale Avenue North
North Memorial Outpatient Center	> 350 feet	3435 West Broadway Avenue

[1] Indicates distance from Alignment D2

Park resources along Alignment D2 in Robbinsdale are listed in Table 4.2-16. No direct or indirect impacts to Manor Park are anticipated, as it is located far enough away from Alignment D2 to not be adversely affected by the transitway.

Table 4.2-16. Park Resources along Alignment D2 in Robbinsdale

Park	Acres	Distance [1]	Facilities
Manor Park	3.8	> 350 feet	Ball field, playground equipment, tot equipment, picnic area, paths/trails, tennis court, splash pad

[1] Indicates distance from Alignment D2

Direct/indirect effects can be summarized as follows:

- Potential noise impacts are anticipated along 34th Avenue in Robbinsdale.
- Alignment D2 would be constructed on a new alignment where it enters Robbinsdale, introducing direct physical changes to the residential neighborhood. Five residential parcels south of 34th Avenue and one parcel north of 34th Avenue would be acquired.
- Access along 34th Avenue would be reconfigured between the railroad corridor and Oakdale Avenue with a north-south connection maintained at Halifax Avenue. To maintain traffic safety, access would change to right-in, right-out only along 34th Avenue, except at Halifax Avenue.
- Pedestrian and bicycle access across 34th Avenue at Grimes Avenue would be eliminated to accommodate for the guideway as it transitions from the BNSF railroad trench to the elevation of the new station platform. Users would need to divert one block ($^1/_{16}$ mile) east or west to cross 34th Avenue.
- The North Memorial station would be located just south of, but elevated from, the Terrace Mall retail/medical office complex. Acquisition of five residential properties, one four-unit condominium, and additional right-of-way would be necessary to construct the station and the elevated transitway near North Memorial Medical Center, resulting in direct impacts.
- The elevated transitway near North Memorial Medical Center may alter the visual character of the neighborhood.

Effect on community character:

The effects of increased noise, permanent residential acquisitions, changes in access, and change in visual character are expected to alter the community character of areas adjacent to Alignment D2 but would not affect other Robbinsdale neighborhoods. Although roadway circulation patterns would be modified at 34th Avenue, the change would affect a small number of residents. The effects would be limited to the area near 34th Avenue and North Memorial Medical Center and may be perceived to affect community character in these areas.

Effect on community cohesiveness:

The minor access changes near 34th Avenue North do not present a substantial physical or social barrier affecting community cohesion.

- Minneapolis

Community facilities along Alignment D2 in Minneapolis are listed in Table 4.2-17. Figure 4.2-6 shows the location of NorthPoint Health and Wellness Center, Estes Funeral Chapel, and Minneapolis College Preparatory School.

NorthPoint Health and Wellness Center is a multi-specialty medical, dental, and mental health center and human service agency serving north Minneapolis residents and employees. The Bottineau Transitway

would require partial acquisition of NorthPoint, resulting in a direct right-of-way impact. Although the transitway would require removal of part of the facility, it is anticipated that modifications to the building would allow its continued use. Access closures at 14th Avenue (east and west) would divert pedestrians ⅛ mile to cross at Plymouth Avenue. However, these closures are not expected to impair access to NorthPoint Health and Wellness Center.

Estes Funeral Chapel provides services for the local community. The Penn/Plymouth station would require the removal of the chapel, which is located south of NorthPoint. The full acquisition would result in direct property impacts.

Minneapolis College Preparatory School, a public charter school that leases the Lincoln Community School Building, is adjacent to Penn Avenue. An access closure at 12th Avenue would divert pedestrians ⅛ mile to cross at Plymouth Avenue. However, this closure is not expected to impair access to the school.

None of the other community facilities listed in Table 4.2-17 are expected to sustain direct or indirect impacts. An evaluation of right-of-way requirements, noise, access, and changes in visual character determined that the transitway would not disrupt the function of these community facilities.

Table 4.2-17. Community Facilities along Alignment D2 in Minneapolis

Community Facility	Distance[1]	Location
Parkway United Church of Christ	< 350 feet	3120 Washburn Avenue North
True Vine Missionary Baptist Church	< 350 feet	2639 Thomas Avenue North
Church of St. Anne	> 350 feet	2627 Queen Avenue North
New Creation Church	> 350 feet	1922 25th Avenue North
KMOJ Radio Station	< 350 feet	2323 West Broadway Avenue
Morning Star Assembly of God	< 350 feet	2229 West Broadway Avenue
All Nations Seventh Day Adventist Church	< 350 feet	2315 24th Avenue North
Plymouth Christian Youth Center	= 350 feet	2210 Oliver Avenue North
North Community Missionary	< 350 feet	1832 Penn Avenue North
Twin Cities Community Gospel	> 350 feet	1530 Russell Avenue North
NorthPoint Health and Wellness Center	< 350 feet	1313 Penn Avenue North
Estes Funeral Chapel	< 350 feet	2210 Plymouth Avenue North
Police Station	> 350 feet	1925 Plymouth Avenue North
University of Minnesota Urban Research and Outreach-Engagement Center (UROC)	> 350 feet	2001 Plymouth Avenue North
Minneapolis Urban League	< 350 feet	2100 Plymouth Avenue North
Minneapolis College Preparatory School	< 350 feet	2131 12th Avenue North
Holsey Memorial Christian Church	> 350 feet	1229 Logan Avenue North
Hospitality House	> 350 feet	1220 Logan Avenue North
Pastor Paul's Mission	< 350 feet	1000 Oliver Avenue North
Minneapolis Believers – Christ	< 350 feet	1001 Penn Avenue North

[1] Indicates distance from Alignment D2

Park resources along Alignment D2 in Minneapolis are listed in Table 4.2-18. Refer to Chapter 8 Draft Section 4(f) Evaluation for the location of the Lincoln Community School playground and the Minneapolis Public Schools athletic field.

Willard Park is located west of Penn Avenue and south of 17th Avenue. Acquisition and removal of residential housing along the west side of Penn Avenue would expose the park to transitway operations. Without visual screening such as vegetation or future development of the remnant strip west of Penn

Avenue, the transitway is expected to be visible from Willard Park. Access closures at 17th Avenue (east and west) would divert pedestrians ⅛ mile to cross at 16th Avenue or Golden Valley Road, respectively. However, access closures at 17th Avenue are not expected to affect access to the park. Willard Park is used for active recreation and no disruption to its function as a community facility is anticipated due to transitway operations. Figure 4.2-6 shows the location of Willard Park.

The Lincoln Community School playground is owned by the Minneapolis Board of Education. The school closed in 2007 and is currently being leased by the Minneapolis College Preparatory School. The chain-link fencing bordering the playground on the southern portion of the property provides a barrier to Penn Avenue and the proposed transitway. An access closure at 12th Avenue would divert pedestrians ⅛ mile to cross at Plymouth Avenue or Oak Park Avenue. However, this closure is not expected to affect access to the playground. The playground is used for active recreation and no disruption to its function as a community facility is anticipated due to transitway operations.

A Minneapolis Public Schools athletic field, located across the street from the Lincoln Community School building, functions as a soccer and football field for Minneapolis Public Schools and is occasionally used by the community. Lincoln Peace Garden is situated in the northeast corner of the property. A strip of land on the east side of the athletic field would need to be acquired to construct the transitway, resulting in a direct right-of-way impact. The total area of use is estimated at about a half an acre, representing approximately 18 percent of the field's total area. Although the resource could still function as a football field, it would no longer be wide enough to accommodate a full-size soccer field. Removal of the existing row of coniferous trees along the eastern boundary of the park would eliminate the buffer to Penn Avenue. The area of the Lincoln Peace Garden, located in the northeast corner of the athletic field, would be reduced. The loss of full use of the athletic field, and the green space it provides, may affect community character. An access closure at 12th Avenue would divert pedestrians ⅛ mile to cross at Plymouth Avenue or Oak Park Avenue. This closure is not expected to affect access to the athletic field. The area of impact is illustrated and discussed in Chapter 8 Draft Section 4(f) Evaluation.

An evaluation of noise, access, changes in visual character, and location relative to Alignment D2 determined that the transitway would not disrupt the function of any of the other park resources identified in Table 4.2-18.

Table 4.2-18. Park Resources along Alignment D2 in Minneapolis

Park	Acres	Distance [1]	Facilities
Victory Memorial Pkwy	75.2	Adjacent	2.8 mile parkway, WW I monument
Cleveland Park	1.4	< 350 feet	Baseball field, basketball court, picnic area, playground, softball field, wading pool
Russell Triangle Park	0.03	> 350 feet	Green space
Newton Triangle Park	0.14	> 350 feet	Green space
Cottage Park	0.5	> 350 feet	Picnic area, playground
Oliver Triangle	0.04	< 350 feet	Green space
Glen Gale Park	1.4	> 350 feet	Playground
Irving Triangle Park	0.09	> 350 feet	Green space
North Commons Park	25.5	> 350 feet	Baseball field, basketball court, picnic area, playground, soccer field, softball field, swimming pool, tennis court, wading pool
Willard Park	1.2	< 350 feet	Basketball court, picnic area, playground, wading pool
Lincoln Community School Playground	1.4	< 350 feet	Playground

Park	Acres	Distance [1]	Facilities
Minneapolis Public Schools Athletic Field	3.7	Adjacent	Soccer field, football field

[1] Indicates distance from Alignment D2

Direct/indirect effects can be summarized as follows:

- Near 29th Avenue, one residential property would be removed and several partial acquisitions would be required to accommodate bus pullouts. West Broadway Avenue would be reduced to one lane in each direction and left turn movements would be prohibited. Street parking would be removed.
- Minor right-of-way acquisitions would be necessary at the West Broadway Avenue/26th Avenue intersection. Two partial property acquisitions would result in direct right-of-way impacts.
- The Bottineau Transitway would require one property owned by Metropolitan Council (Metro Transit) and three partial acquisitions at the West Broadway Avenue/Penn Avenue intersection, near the proposed Broadway/Penn station. Residential uses within the station area may experience nuisance effects of transitway operations. A station in this location could be a catalyst for redevelopment near the West Broadway Avenue/Penn Avenue intersection. Refer to the Economic Impacts Technical Report (SRF Consulting Group & Biko Associates, 2012) for further information regarding redevelopment of this intersection.
- Between McNair Avenue and TH 55, approximately 90 residential properties on the west side of Penn Avenue would be acquired and removed to construct the transitway. The backyards of the existing houses that face Queen Avenue would be exposed to transitway operations.
- The unmarked pedestrian crossings at the following two locations would be closed: 27th Avenue/Thomas Avenue and Sheridan Avenue.
- Eight pedestrian/vehicle access crossings at the following intersections of Penn Avenue would be closed: 21st Avenue, 17th Avenue–west, 17th Avenue–east, 15th Avenue, 14th Avenue– east, 14th Avenue–west, 12th Avenue, and 8th Avenue.

Effect on community character:

Changes in community character are expected for neighborhoods surrounding Alignment D2 within Minneapolis. The Willard-Hay neighborhood would experience a change in community character due to the removal of approximately 90 residential properties, a funeral chapel, and a church as well as visual changes resulting from modifications to NorthPoint Health and Wellness Center and an athletic field.

The loss of approximately 270 on-street parking spaces along 34th Avenue, West Broadway Avenue, and Penn Avenue to accommodate the proposed guideway is anticipated to alter community character along Alignment D2. Residents and their visitors may have difficulty finding places to park near their homes. Public comments provided during the Scoping process expressed concerns that loss of nearby parking would be particularly detrimental to the elderly and people with disabilities.

Effect on community cohesiveness:

The above-mentioned loss of approximately 270 on-street parking spaces along 34th Avenue, West Broadway Avenue, and Penn Avenue is also anticipated to alter community cohesion along Alignment D2. Changes in access across Penn Avenue, which would be necessary to maintain pedestrian safety, are also expected to affect community cohesion. The closure of eight pedestrian/vehicle crossings along Penn Avenue, as well as the interruption to the street grid system in north Minneapolis, would collectively contribute to decreased walkability and accessibility to and within the neighborhoods surrounding this area of Alignment D2.

Alignment D Common Section (part of the Preferred Alternative)

- Minneapolis

Community facilities along the Alignment D Common Section in Minneapolis are listed in Table 4.2-19.

Access closures at Oliver Avenue, Newton Avenue, Logan Avenue, and James Avenue are not expected to affect pedestrian traffic associated with community facilities as access closures would require a diversion of less than 0.1 mile. An evaluation of right-of-way requirements, noise, access, and changes in visual character determined that the transitway would not disrupt the function of community facilities along the Alignment D Common Section in Minneapolis.

Table 4.2-19. Community Facilities along the Alignment D Common Section in Minneapolis

Community Facility	Distance[1]	Location
United Christian Ministries	> 350 feet	1919 8th Avenue North
Joint Heirs with Christ Faith	> 350 feet	500 Newton Avenue North
Minneapolis Central Church	> 350 feet	1922 4th Avenue North
Redeemer Lutheran Church	> 350 feet	1800 Glenwood Avenue
Bryn Mawr Health Care Center	> 350 feet	275 Penn Avenue North
Sumner Library	< 350 feet	611 Van White Memorial Boulevard
Glenwood Lyndale Community Center	< 350 feet	555 Girard Terrace
Jehovah's Witnesses	> 350 feet	701 Humboldt Avenue North
Zion Baptist Church	< 350 feet	621 Elwood Avenue North
Lao Assistance Center	> 350 feet	503 North Irving Avenue
Harrison Education Center	> 350 feet	501 Irving Avenue North
Bethune Community School	> 350 feet	919 Emerson Avenue North
Phyllis Wheatley Community Center	> 350 feet	1301 10th Avenue North
Heritage Park Senior Services Center	> 350 feet	1015 North 4th Avenue
La Creche Early Childhood Center	< 350 feet	1800 Olson Memorial Highway
Wayman AME Church	< 350 feet	1221 7th Avenue North
Harvest Preparatory School	< 350 feet	1300 Olson Memorial Highway
Sharing and Caring Hands	< 350 feet	525 North 7th Street
Mary's Place	> 350 feet	401 North 7th Street
3 Degrees Ministry Center	> 350 feet	119 North 4th Street
Greater Lake Country Food Bank	> 350 feet	554 8th Avenue North
Fire Station 4	> 350 feet	1101 North 6th Street
Fire Station 16	> 350 feet	1600 Glenwood Avenue

[1] Indicates distance from Alignment D Common Section

No direct or indirect impacts to park resources are expected along the Alignment D Common Section in Minneapolis, which are listed in Table 4.2-20. Harrison Park, Lovell Square, Mary McLeod Bethune Park, and Sumner Field are more than 350 feet from the Alignment D Common Section while Barnes Place and Humboldt Triangle Park are comprised primarily of green space.

Table 4.2-20. Park Resources along the Alignment D Common Section in Minneapolis

Park	Acres	Distance [1]	Facilities
Harrison Park	6.9	> 350 feet	Baseball field, basketball court, picnic area, playground, soccer field, softball field, tennis court, wading pool
Barnes Place	0.6	< 350 feet	Green space
Lovell Square	1.3	> 350 feet	Walking path, picnic area, totlot playground
Mary McLeod Bethune Park	12.2	> 350 feet	Basketball court, picnic area, play field, playground, wading pool
Humboldt Triangle Park	0.3	< 350 feet	Picnic tables
Sumner Field	4.8	> 350 feet	Walking trail

[1] Indicates distance from Alignment D Common Section

The Alignment D Common Section would run in the median of TH 55, which currently has high traffic volumes. Due to the buffer area between homes and TH 55, and the fact that TH 55 is an existing busy road, the transitway is not expected to substantially increase noise or traffic on TH 55. Refer to the Traffic Technical Report (Kimley-Horn and Associates, 2012) for details regarding TH 55 traffic volumes.

Direct/indirect effects can be summarized as follows:

- Four existing unmarked pedestrian crossings of the TH 55 median would be closed (Oliver Avenue, Newton Avenue, Logan Avenue, and James Avenue).
- One existing marked pedestrian crossing of TH 55 would be closed at West Lyndale Avenue.
- Medium-density residential areas near the Van White Boulevard station are expected to experience the effects of transitway operations and general activity.

Effect on community character:

Access closures along TH 55, transitway operations, and general activity associated with the proposed transit stations are not anticipated to change the overall community character of the Harrison, Sumner-Glenwood, and Near-North neighborhoods. Residences and nearby community facilities would benefit from improved transit access, and the changes would be relatively minor. Evaluation of pedestrian access closures along TH 55 would continue during project design and development. The Van White Boulevard station would improve transit access to future planned mixed use areas along Glenwood Avenue to the south, less than a half mile away from the transit station. The effects would be confined to limited areas and are not expected to affect the overall community character.

Effect on community cohesiveness:

Overall effects would be confined to limited areas and would not present a substantial physical or social barrier affecting community cohesion.

Traction Power Substations

The TPSS buildings are generally small enough to not be visually intrusive and are not anticipated to affect community character. Siting of TPSS facilities would take into account potential visual impacts and ability to screen with appropriate landscaping, especially in residential areas.

4.2.4.2 Construction Phase Impacts

Construction phase impacts are defined as the temporary impacts occurring during project construction.

No-Build Alternative

No construction impacts would occur under the No-Build alternative.

Enhanced Bus/TSM Alternative

Construction phase impacts would be limited to the area of the proposed transit center and park-and-ride facility at Oak Grove Parkway and West Broadway Avenue, and the undeveloped land at this location would be converted to transportation use. No adverse impacts to community character or facilities are anticipated.

Build Alternatives

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

4.2.5 Avoidance, Minimization, and/or Mitigation Measures

Adverse effects to community character and cohesion have been identified for Alignment D2. Mitigation may include measures to facilitate better connectivity within the community, redevelopment of unused property acquired by the project, or other methods to enhance community character and cohesion.

Although impacts to Alignments A, B, C, D1, and the D Common Section were not severe enough to affect overall community character and cohesion, mitigation would be implemented for specific locations where long-term operational impacts and short-term construction impacts are anticipated. Specific mitigation for identified long-term operational impacts such as property acquisitions, displacements, and visual impacts are discussed under the appropriate sections. Mitigation of predicted noise impacts along Alignments B, C, D1, and D2 is addressed in Section 5.6. As discussed in Section 5.6, noise mitigation strategies that will be further evaluated in preliminary engineering will consider the need, feasibility, reasonableness, effectiveness, and acceptability to the community.

Short-term construction impacts may be mitigated by the use of deliberate construction staging or phasing, signage, and signal control requirements during construction for roads, trails, and sidewalks to maintain access to neighborhoods and community facilities throughout the construction period. Although specific mitigation plans have not yet been developed, Best Management Practices (BMPs) would include working with residents and community facility managers to provide alternative access, giving residents and community facilities adequate notice about construction plans and phasing, keeping access to bus stops open, and alerting the public to detours.

4.2.5.1 Summary of Potential Community Impacts

Table 4.2-21 summarizes potential community impacts associated with facilities, character, and cohesion. For alternatives A-C-D2 and B-C-D2, it is anticipated that community facilities, character, and cohesion would not be fully maintained. Along Penn Avenue, modifications to NorthPoint Health and Wellness Center and the Minneapolis Public Schools athletic field would occur and a funeral chapel and church would be demolished. As previously stated, changes in community character and cohesion are expected due to loss of residential properties and on-street parking. The closure of eight pedestrian/vehicle crossings along Penn Avenue is expected to affect community cohesion, as these changes would contribute to decreased walkability and accessibility to and within the neighborhoods surrounding this area.

Table 4.2-21. Potential Impacts to Community Facilities/Community Character and Cohesion

Alternative	Community Facilities Maintained	Community Character Maintained	Community Cohesion Maintained
A-C-D1	Yes	Yes	Yes
A-C-D2	No	No	No
B-C-D1 (Preferred Alternative)	Yes	Yes	Yes
B-C-D2	No	No	No

4.3 Displacement of Residents and Business

The Bottineau Transitway Project would require the acquisition of land (partial and full) for the construction and operation of the transitway. Each alignment would require additional land beyond that already dedicated to transportation purposes. This section summarizes land acquisition and residential, commercial, and farmland displacements associated with the proposed alignments and alternatives.

4.3.1 Regulatory Context and Methodology

Specific regulations govern the displacement and relocation of residents and businesses resulting from publicly funded transportation projects. Public agencies are required by law to compensate land owners for property acquired for public uses. Any acquisition of property required for the Bottineau Transitway Project would be in accordance with the Uniform Relocation and Real Property Acquisitions Polices Act of 1970 as amended (Uniform Act or URA) (PL 91–646) and 49 CFR part 24, the implementing regulation. The objective of the Uniform Act is to provide fair and equitable treatment of people whose real property is acquired or who are displaced in connection with federally funded projects, to ensure relocation assistance is provided, and to ensure that decent, safe, and sanitary housing is available within the displaced person's financial means.

Right-of-way acquisitions can be divided into two categories: partial acquisitions and full acquisitions. A partial acquisition occurs when a public agency acquires part of a property, but the original use of the property remains intact. For example, a partial acquisition may occur when a strip of land is acquired from the front of a residential lot for a transitway project, but the residence remains intact and undisturbed. In contrast, a full acquisition occurs when the entire property is acquired for public use.

In addition to permanent partial and full acquisitions, permanent and temporary easements would be required. A permanent easement is a right granted by the property owner that entitles the holder of the easement a specific use of the property (e.g., utility access). A temporary easement is a right granted for a specific period of time, and, once it expires, the rights granted return to the property owner (e.g., temporary use of property for construction staging). Permanent and temporary easement requirements would be refined in subsequent engineering phases.

This analysis identifies the location, size and number of parcels, and type of property that may be acquired to accommodate the Bottineau Transitway. The proposed acquisitions (partial and full) were identified and estimated using the potential area of disturbance and approximate right-of-way requirements for the proposed project.

4.3.2 Study Area

The study area is defined as the area within the potential area of disturbance, which provides a conservative estimate of right-of-way requirements. Further refinements of right-of-way requirements will be provided in the Final EIS.

4.3.3 Affected Environment

Development along the proposed Bottineau Transitway includes residential, commercial, industrial, institutional, agricultural, park, and transportation uses. A gravel mining area is located along Alignment A in Maple Grove. Existing land uses along the proposed alignment options are identified and described in Section 4.1 of this Draft EIS.

Parklands, and the specific regulations associated with parkland acquisition, are described in Chapter 8 Draft Section 4(f) Evaluation. Utilities and potential utility relocations are discussed in Section 5.1.

4.3.4 Environmental Consequences

4.3.4.1 Operating Phase (Long-Term) Impacts

The operating phase of the Bottineau Transitway Project would require the permanent acquisition of right-of-way from residential, commercial, industrial, park, and farm properties.

No-Build Alternative

The No-Build alternative would not require acquisition of any properties within the Bottineau Transitway.

Enhanced Bus/TSM Alternative

Right-of-way impacts would be limited to the property required to construct a transit center and park-and-ride facility near Oak Grove Parkway and West Broadway Avenue, north of TH 610 in Brooklyn Park. The facility would be constructed in an undeveloped area and no relocations would be necessary.

Build Alternatives

The operating phase of the Bottineau Transitway Project would require the permanent acquisition of right-of-way from residential, commercial, industrial, park, and farm properties. Estimated full and partial acquisitions, based on project alignments, are provided in Table 4.3-1.

Table 4.3-1. Impact Details by Alignment

Alignment	Partial Acquisition		Full Acquisition	
	Parcels	Acres	Parcels	Acres
A	17	12.9	9	4.5
B (part of the Preferred Alternative)	44	7.5	10	5.8
C (part of the Preferred Alternative)	7	0.5	7	2.4
D1[1] (part of the Preferred Alternative)	3 - 5	0.4 - 0.8	0	0
D2	25	2.3	125	19.7
D Common Section (part of the Preferred Alternative)	1	< 0.1	1	< 0.1

[1] Range shown for Plymouth Avenue/Theodore Wirth Regional Park and Golden Valley Road station options

Estimated permanent right-of-way acquisitions, based on project alternatives, are provided in Table 4.3-2.

Table 4.3-2. Impact Details by Alternative

Alternative	Partial Acquisition		Full Acquisition	
	Parcels	Acres	Parcels	Acres
A-C-D1[1]	28 - 30	13.9 - 14.3	17	7.0
A-C-D2	50	15.8	142	26.7
B-C-D1[1] (Preferred Alternative)	55 - 57	8.5 - 8.9	18	8.3
B-C-D2	77	10.4	143	28.0

[1] Range shown for Plymouth Avenue/Theodore Wirth Regional Park and Golden Valley Road station options

There are two potential station sites for Alignment D1: the Plymouth Avenue/Theodore Wirth Regional Park station option or the Golden Valley Road station option. No additional right-of-way is needed if the Plymouth Avenue/Theodore Wirth Regional Park station option is selected (a small amount of right-of-way is anticipated near Plymouth Avenue due to the slope at this location). If the Golden Valley Road station option is selected, two additional partial acquisitions totaling approximately 0.4 acre are expected.

The types of properties that are expected to require full and partial property acquisitions, based on project alignments, are presented in Table 4.3-3. The types of properties that are expected to require full and partial property acquisitions, based on project alternatives, are provided in Table 4.3-4. Residential properties are expected to incur the greatest impacts in terms of number and area. It is important to note that some of the parcels are vacant. In Table 4.3-3 and Table 4.3-4, the total number of properties is followed in parentheses by the number of vacant parcels. In general, vacant parcels are undeveloped and do not have any structures.

Table 4.3-3. Number and Types of Parcels Impacted by Alignment

Alignment	Number of Residential Parcels[1]		Number of Commercial Parcels[1]		Number of Park Parcels		Number of Other Parcels[1,2]	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full
A	5 (2)	9	3	1 (1)	0	0	9 (2)	0
B (part of the Preferred Alternative)	30 (2)	8	12 (2)	2 (1)	0	0	2 (1)	0
C (part of the Preferred Alternative)	5	1 (1)	2 (1)	6 (4)	0	0	0	0
D1[3] (part of the Preferred Alternative)	0	0	1	0	1 - 3	0	1	0
D2	13	115 (10)	10 (2)	10 (7)	0	0	2	0
D Common Section (part of the Preferred Alternative)	1	0	0	1 (1)	0	0	0	0

[1] The total number of properties is followed in parentheses by the number of vacant parcels.
[2] Other category includes industrial, railroad, or utility
[3] Range shown for Plymouth Avenue/Theodore Wirth Regional Park and Golden Valley Road station options

Table 4.3-4. Number and Types of Parcels Impacted by Alternative

Alternative	Number of Residential[1] Parcels		Number of Commercial[1] Parcels		Number of Park Parcels		Number of Other Parcels[1,2]	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full
A-C-D1[3]	11 (2)	10 (1)	6 (1)	8 (6)	1 - 3	0	10 (2)	0
A-C-D2	24 (2)	125 (11)	15 (3)	18 (13)	0	0	11 (2)	0
B-C-D1[3] (Preferred Alternative)	36 (2)	9 (1)	15 (3)	9 (6)	1 - 3	0	3 (1)	0
B-C-D2	49 (2)	124 (11)	24 (5)	19 (13)	0	0	4 (1)	0

[1] The total number of properties is followed in parentheses by the number of vacant parcels.
[2] Other category includes industrial, railroad, or utility
[3] Range shown for Plymouth Avenue/Theodore Wirth Regional Park and Golden Valley Road station options

Operations and Maintenance Facilities

In addition to the right-of-way needed to construct the proposed alternatives, the Bottineau Transitway Project would require the construction of an OMF. Three potential OMF locations have been identified, one of which would be selected for the proposed project. For the alternatives including Alignment A, an OMF facility would be located at the northern end of the alternative in Maple Grove on a parcel currently within the gravel mining area east of Hemlock Lane. For the alternatives including Alignment B, an OMF facility would be located at the northern end of the alternative in Brooklyn Park on one of two potential sites: the 93rd Avenue and West Broadway Avenue park-and-ride site or the northwest quadrant of the Winnetka Avenue and 101st Avenue intersection. The OMF site north 93rd is currently undeveloped farmland. The OMF site north of 101st Avenue consists of an undeveloped parcel owned by the City of Brooklyn Park and a parcel that contains a portion of the Rush Creek Regional Trail, which is under the jurisdiction of Three Rivers Park District. Table 4.3-5 provides an estimate of the number of parcels and acres required for each OMF alternative. The number of parcels and acres needed for the OMF would be in addition to the right-of-way requirements identified in Table 4.3-1 and Table 4.3-2.

Table 4.3-5. Acquisition Details for OMF Locations

OMF Location[1]	Partial Acquisition		Full Acquisition	
	Parcels	Acres	Parcels	Acres
Alignment A – Hemlock Lane[2]	1	6.2	0	0
Alignment B – 93rd Avenue option[3]	3	10.9	2	21.3
Alignment B – 101st Avenue option	2	18.4	0	0

[1] Alignment B is part of the Preferred Alternative B-C-D1. Two OMF locations are currently under evaluation as part of the Preferred Alternative.
[2] The Hemlock Lane site would also include adjacent land owned by the Minnesota Department of Transportation (not included in Table 4.3-5).
[3] The 93rd Avenue site includes additional area for a park-and-ride facility.

Traction Power Substations

Proposed TPSS would be located along the LRT line and spaced approximately ¾ mile to one mile apart, with most located near LRT stations. TPSS would be located on limited access sites that would be approximately 4,000 square feet (less than 0.1 acre) in size and able to accommodate a single-story building that is about 40 feet by 20 feet. Although most TPSS are expected to fit within the transportation right-of-way, there may be cases where these buildings may be sited outside of existing right-of-way.

Displacements and Relocations

The Bottineau Transitway Project is expected to require the relocation of residents (both renters and property owners) as well as several commercial properties.[1] Table 4.3-6 depicts the number of residential and business displacements by alignment, while Table 4.3-7 shows the number of displacements by project alternative. The financial and other compensation that displaced residents and businesses would be entitled to is described under Section 4.3.5 Avoidance, Minimization, and/or Mitigation Measures.

[1] The acquisition of parcels designated as “double bungalow” assumed that two relocations would be necessary for each property.

Table 4.3-6. Displaced Properties by Alignment

Alignment	Residential Properties	Commercial Properties
A	8	0
B (part of the Preferred Alternative)	8	1
C (part of the Preferred Alternative)	0	2
D1 (part of the Preferred Alternative)	0	0
D2	105	3
D Common Section (part of the Preferred Alternative)	0	0

Table 4.3-7. Displaced Properties by Alternative

Alternative	Residential Properties	Commercial Properties
A-C-D1	8	2
A-C-D2	113	5
B-C-D1 (Preferred Alternative)	8	3
B-C-D2	113	6

The majority of residential relocations are anticipated along Alignment D2. Correspondingly, Alternatives A-C-D2 and B-C-D2 would have the greatest number of residential relocations. The Bottineau Transitway Project is expected to require one business relocation along Alignment B, two business relocations along Alignment C, and three business relocations along Alignment D2. Thus, Alternatives A-C-D2 and B-C-D2 and would have the greatest number of business relocations. No business relocations would be necessary along Alignment D1 or the Alignment D Common Section.

In addition to the residential and business displacements provided in Table 4.3-6 and Table 4.3-7, the acquisition of two agricultural properties are anticipated for the OMF option at 93rd Avenue (Alignment B). As shown in Table 4.3-8, the total area of the two farm properties is 21.3 acres.

Table 4.3-8. Displaced Properties, by OMF Location

OMF Location[1]	Agricultural Properties	
	Parcels	Acres
Alignment A – Hemlock Lane	0	0
Alignment B – 93rd Avenue option	2	21.3
Alignment B – 101st Avenue option	0	0

[1] Alignment B is part of the Preferred Alternative B-C-D1. Two OMF locations are currently under evaluation as part of the Preferred Alternative.

Relocation Potential and Services under URA

The relocation potential for displaced residents and businesses was evaluated based on the availability of similar residential or commercial properties within the same or nearby community. A search of the Multiple Listing Service (MLS) was conducted to assess the future potential for identifying suitable replacement properties for residents and businesses whose properties may be acquired for the Bottineau Transitway. The number of displaced properties was compared with the number of comparable properties available, assuming similar properties may be available at the time of construction. MLS search results were also used to assess the availability of suitable residential or commercial properties in or near the community where displacements are anticipated to occur. Although this methodology cannot predict the future availability of suitable properties, it does provide a sense of the degree of difficulty associated with

relocating a small number of properties (low) as compared to relocating a large number of properties (high).

This MLS exercise was performed only to assess the ability to relocate displaced residents and businesses in current real estate market conditions. Should the Bottineau Transitway proceed to construction, displaced residents and businesses would receive relocation assistance in accordance with their needs and current market availability. Relocation assistance would also be provided for agricultural properties.

Replacement residential properties were identified based on comparable housing costs. Replacement commercial properties were based on type of use. In general, where displacements of residents and businesses are minimal, adequate replacement properties are anticipated to be available based on current projections. Displacements and relocation potential are summarized below by alignment.

Alignment A

Relocation of eight residential parcels south of Brooklyn Boulevard in Brooklyn Park would be necessary to construct LRT tracks and guideway where Alignment A transitions onto the railroad corridor paralleling CSAH 81. Currently, two of the eight residential properties are occupied by tenants; the remainder are owner-occupied. A search of available housing in the area indicates that similar housing stock currently exists as a potential source of relocation.

Alignment B (part of the Preferred Alternative)

Eight owner-occupied residential parcels east of West Broadway Avenue and south of Brooklyn Boulevard in Brooklyn Park would be acquired to construct the LRT tracks and guideway. A search of available housing in the area indicates that similar housing stock currently exists as a potential source of relocation.

Relocation of one business is anticipated north of 73rd Avenue where Alignment B transitions from West Broadway Avenue to CSAH 81. Commercial property of similar use is currently available in the area.

Alignment C (part of the Preferred Alternative)

Two business relocations are anticipated along Alignment C to construct the Bottineau Transitway. Two businesses (electronics store and Asian market) are situated east of the proposed Robbinsdale station. Commercial property of similar use is currently available in the area.

A drive-in restaurant is located west of CSAH 81 and north of I-94 in Brooklyn Park. The parking lot of the restaurant is currently located on railroad right-of-way. Access to this property would be impacted by the project. Refinements would be considered during final design to minimize and/or mitigate these impacts.

Alignment D1 (part of the Preferred Alternative)

No residential or business relocations would be necessary along Alignment D1.

Alignment D2

Approximately 105 residential displacements are expected at various locations along Alignment D2. Relocations are anticipated where Alignment D2 transitions from the railroad corridor to 34th Avenue in Robbinsdale, near the North Memorial station where the transitway transitions from 34th Avenue to Bottineau Boulevard, and west of the West Broadway Avenue/29th Avenue intersection in Minneapolis. The majority of residential displacements are expected to occur along Penn Avenue between McNair Avenue and TH 55 in Minneapolis. It is estimated that about 75 percent of these residents are home-owners and about 25 percent are tenants. Although replacement properties are currently available in Minneapolis and Robbinsdale, due to the large number of residential displacements available properties may be outside of the displaced residents' immediate neighborhoods.

Three business relocations (animal hospital, funeral chapel, and church) are anticipated west of Penn Avenue in Minneapolis. Commercial property of similar use is currently available in the area.

Alignment D Common Section (part of the Preferred Alternative)

No residential or business relocations would be necessary along the Alignment D Common Section.

Availability of Replacement Housing for Low-Income Populations

Low-income populations have been identified along much of the Bottineau Transitway. Comparable replacement properties are expected to be available in locations where the number of displaced residents is minimal (Alignments A, B, C, and D1). Displacement of approximately 90 homeowners and tenants would occur along the west side of Penn Avenue in Minneapolis under Alignment D2. Based on MLS information, comparable replacement housing is currently available for homeowners and tenants along Penn Avenue; however, not all currently available properties are near the current location of the displaced properties. Securing affordable housing for displaced low-income residents may be challenging, and it is possible that residents would need to relocate outside their immediate neighborhoods (Jordan, Willard-Hay, and Near-North) to secure comparable housing options.

Should the Bottineau Transitway proceed to construction, displaced residents and businesses would receive individual relocation assistance in accordance with their needs and current market availability. Transit accessibility would be considered for displaced residents who do not own automobiles.

4.3.4.2 Construction Phase Impacts

Construction activities would result in short-term impacts due primarily to activities requiring temporary construction easements. In addition, project construction would likely require temporary modification or closure of some existing property access. Refer to Section 3.3, Section 3.4, Section 3.5, and Section 4.6 of this Draft EIS for further discussion of construction impacts related to access closures and impacts to on-street parking.

4.3.5 Avoidance, Minimization, and/or Mitigation Measures

Loss of private residential property would be mitigated by payment of fair market compensation and provision of relocation assistance in accordance with URA. For residential displacements, the following would be provided:

- Relocation advisory services to displaced tenants and owner occupants
- Minimum 90 days written notice to vacate prior to requiring possession
- Reimbursement for moving expenses
- Payments for the added cost of renting or purchasing comparable replacement housing

For non-residential displacements, the following would be provided:

- Relocation advisory services
- Minimum 90 days written notice to vacate prior to requiring possession
- Reimbursement for moving and reestablishment expenses

Although the law requires a minimum of 90 days written notice to vacate for residential and non-residential displacements, the displaced owners would have been previously contacted by a right-of-way agent and an appraiser. Relocation advisory services would ensure that relocation activities are coordinated with the owners.

There are a number of other reimbursable/incidental expenses related to relocation that may also be provided to residents and businesses if determined to be actual, reasonable, and necessary.

4.4 Cultural Resources

This section describes cultural resources and discusses potential impacts that would result from proposed project implementation. Cultural resources are defined as the buildings, structures, districts, objects, and sites that are listed in or eligible for listing in the National Register of Historic Places (NRHP) as required under the National Historic Preservation Act. Historic properties designated or eligible for designation by the City of Minneapolis or other local governments are not subject to review under the National Historic Preservation Act, unless those properties are also listed in or eligible for the NRHP.

Information included within this section is based on the information provided in the 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 (The 106 Group Ltd., 2012) and the Phase IA Archaeological Assessment for the Bottineau Transitway Project, Hennepin County, Minnesota (The 106 Group Ltd., 2012). The analysis completed for this section was conducted in coordination with the Minnesota State Historic Preservation Office (SHPO), Minnesota Department of Transportation Cultural Resources Unit (MnDOT CRU), and Native American tribes (see discussion throughout this section and in Chapter 9 Consultation and Coordination).

4.4.1 Legal and Regulatory Context

The Bottineau Transitway Project is applying for FTA funding and therefore must comply with Section 106 of the National Historic Preservation Act (Section 106) of 1966 and with other applicable federal mandates. The Minnesota Field Archaeology Act, the Minnesota Historic Sites Act, and the Minnesota Private Cemeteries Act must also be addressed, as applicable.

Section 106 requires federal agencies to consider the effects of their actions on historic properties before undertaking a project. For the purposes of this document, historic properties and cultural resources are synonymous. FTA's Section 106 compliance is achieved through consultation with SHPO, Native American tribes, local governments, and other interested parties. In accordance with the Section 106 process, the responsible federal agency shall:

- Identify the project's Area of Potential Effect (APE) and the properties within the APE that are listed, or eligible for listing, in the NRHP
- Assess the effects of the project on those properties
- Resolve adverse effects by exploring alternatives that avoid, minimize, or mitigate for the adverse effects through project design, consultation with Section 106 consulting parties, and development of a Section 106 Agreement

The FTA has designated MnDOT CRU to carry out many aspects of the Section 106 review for this project.

4.4.2 Consultation

FTA initiated Section 106 consultation for the Bottineau Transitway Project with SHPO and Native American tribes. In January 2012, FTA sent coordination letters to Native American tribes that may have an interest in the Bottineau Transitway Project. The letters requested that tribes identify any historic, cultural, archaeological, or other concerns regarding the project, and invited them to participate in public Scoping meetings and/or schedule a separate meeting to discuss any specific tribal issues and concerns. Although none of the tribes elected to participate, they will have the opportunity to comment on the Draft EIS.

Letters were sent to the following tribes:

- Fond du Lac Reservation Tribal Council
- Keweenaw Bay Indian Community

- Grand Portage Reservation Council and Tribal Historic Preservation Office (THPO)
- Mille Lacs Band of Ojibwe
- Upper Sioux Indian Community
- Standing Rock Sioux Tribe
- White Earth Tribal Council
- Bois Forte Reservation Tribal Council
- Prairie Island Indian Community Council
- Lower Sioux Indian Community Council
- Red Lake Tribal Council
- Shakopee Dakota Community Council
- Three Affiliated Tribes
- Bad River Band of Lake Superior Chippewa
- Flandreau Santee Community
- Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin
- Lac du Flambeau Band of Lake Superior Chippewa Indians of Wisconsin
- Lac Vieux Desert Band Ketegitigaaning Ojibwe Nation
- Red Cliff Band of Lake Superior Chippewa Indians
- Sokaogon Chippewa (Mole Lake)
- Spirit Lake Tribal Council
- St. Croix Chippewa Indians of Wisconsin
- Turtle Mountain Band of Chippewa
- Northern Cheyenne Tribe
- Fort Peck Tribes
- Leech Lake Band of Ojibwe
- Santee Sioux Nation
- Sisseton-Wahpeton Oyate of the Lake Travers Reservation

The following governments, agencies, and organizations have elected to participate in the Section 106 review as consulting parties under the provisions of 36 CFR § 800.2: City of Brooklyn Park, City of Maple Grove, City of Crystal, City of Robbinsdale, City of Golden Valley, City of Minneapolis, and the Minneapolis Park & Recreation Board. Consultation and outreach will continue throughout the Section 106 process.

Consultation with SHPO is described below.

4.4.3 Area of Potential Effect / Methodology

Two Areas of Potential Effect (APEs) have been defined for this project. The first addresses the potential for effects on NRHP listed/eligible buildings, structures, districts, and landscapes, identified as the "Architectural APE." The second addresses the potential for effects on NRHP listed/eligible archaeological sites and is termed the "Archaeological APE."

4.4.3.1 Architectural APE and Methodology

An appropriate APE for architectural history resources must account for any physical, auditory, atmospheric, visual, or change-in-use impacts to historic properties. The Bottineau Transitway Project has the potential for both direct and indirect effects.

The following APE for architecture/history has been delineated:

- Proposed routes/corridors – 500 feet on either side of the proposed alignment
- Stations – 0.25 mile radius from the center point of the station area
- 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)
- Existing structures – pier modification only (moving piers to allow the LRT to go under) – 500 feet radius from the structure (assumes using drilling and no pile driving)

Detailed rationale for these distances can be found in the Phase I/II report[2] of the architectural history survey. The Architectural APE is illustrated on Figures 4.4-1 through 4.4-5 showing the five project alignments. The original APE was supplemented to reflect the addition of the Plymouth Avenue/Theodore Wirth Regional Park station option to Alignment D1.

To identify NRHP-eligible architectural resources in the Architectural APE, a Phase I/II survey was completed of all five alignments. Architectural history surveys focus on above-ground resources, including buildings, structures, districts, and landscapes. Information was compiled on properties already listed on the NRHP or previously evaluated for eligibility. Surveyors conducted field investigations to identify previously unevaluated above-ground resources that may merit listing on the NRHP.

4.4.3.2 Archaeological APE and Methodology

The APE for archaeology includes all areas of proposed construction activities or other potential ground disturbing activities associated with construction. Based on the current understanding of the proposed project, the Archaeological APE generally includes the existing railroad right-of-way for portions of the project in 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 currently proposed park-and-rides and OMF locations includes all area within 500 feet from the potential area of disturbance. The Phase IA archaeology assessment report,[3] completed in November 2012, provides detailed rationale for these distances.

The Phase IA archaeology assessment included a cultural resources literature review to identify all previously identified cultural resources and previously surveyed portions within the study area as well as a review of topographic maps, existing historical contexts, historical aerial photographs, and historical plat maps to assess archaeological potential within the APE. In addition, county histories, city directories, and

[2] Kellerhals, Kelli Andre, Greg Mathis, Saleh Miller, Kathryn Ohland, and Katherine Scott. 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. Prepared by the 106 Group Ltd., St. Paul, Minnesota, 2012.
Kellerhals, Kelli Andre, Greg Mathis, Saleh Miller, Kathryn Ohland, and Katherine Scott. Bottineau Transitway Phase I and II Architectural History Survey, Hennepin County, Minnesota, Supplemental Report 1. Prepared by the 106 Group Ltd., St. Paul, Minnesota, 2013.
[3] Halvorsen, Peer, and Anne Ketz. Phase IA Archaeological Assessment for the Bottineau Transitway Project, Hennepin County, Minnesota. Prepared by the 106 Group Ltd., St. Paul, Minnesota, 2012.

historical census data were reviewed to further aid in assessing the potential for post-contact archaeological resources within the APE.

Visual inspection was conducted for most of the APE. Since access was not granted to private property, the visual inspection was conducted from within the public right-of-way.

4.4.3.3 Determination of Eligibility

In accordance with the Section 106 process, the findings of the Phase IA archaeology assessment and of the Phase I/II architectural history survey, together with MnDOT CRU's eligibility determinations, were submitted to SHPO and the other Section 106 consulting parties. Comments were received from SHPO and from the City of Minneapolis. All of the eligibility determinations included in Section 4.4.4 have the concurrence of the SHPO. Letters from the SHPO (October 26. 2011; October 19, 2012; January 29, 2013; August 7, 2013; and October 9, 2013) and from the City of Minneapolis (January 24, 2013, February 25, 2013, and August 9, 2013) can be found in Appendix D.

4.4.3.4 Assessment and Resolution of Effects

This assessment of effects is presented for the purposes of comparing alternatives and informing selection of the Preferred Alternative. However, at this time, the engineering plans for the project are only in the conceptual stage. It is anticipated that consultation on design efforts during subsequent project stages would seek to avoid or minimize any potential impacts on historic properties. Mitigation for any adverse effects which are not avoided in the design process will be considered. FTA intends to make an effect finding for the project and each of the historic properties listed or eligible for the NRHP as part of the Final EIS/Record of Decision (ROD), after its consideration of public and consulting party comments on this Draft EIS. Based on review of potential effects on historic properties and archeological resources FTA is preparing to make a No Adverse Effect finding in the Final EIS/ROD for all properties and will seek concurrence from the SHPO prior to publication of that document. FTA is seeking input from consulting parties and the public on the effects to historic properties prior to making its final finding of effect.

Following the provisions of the Section 106 review process, ways to avoid, minimize, and mitigate adverse effects to historic properties will continue to be explored through consultation with the SHPO, Section 106 consulting parties, other interested parties and the public. The Advisory Council on Historic Preservation (ACHP) may also join in this consultation. Measures for avoidance, minimization, and mitigation will be stipulated in a Section 106 Agreement signed by the FTA, the SHPO, the ACHP (if participating), and other consulting parties. FTA will execute a Section 106 agreement prior to the Final EIS/ROD. The project will be implemented in accordance with the stipulations in the Section 106 agreement.

Figure 4.4-1. Architectural APE for Alignment A

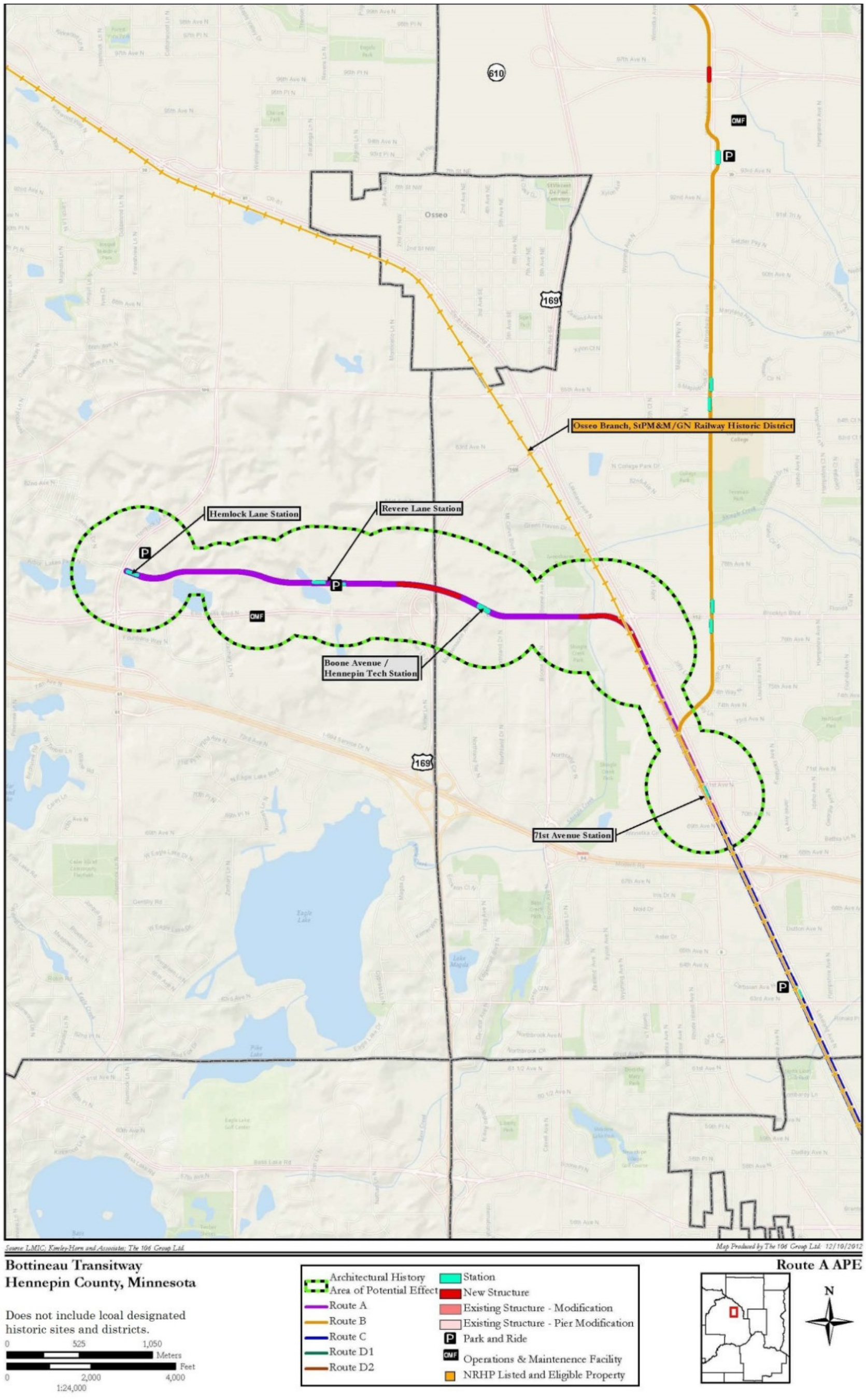


Figure 4.4-2. Architectural APE for Alignment B

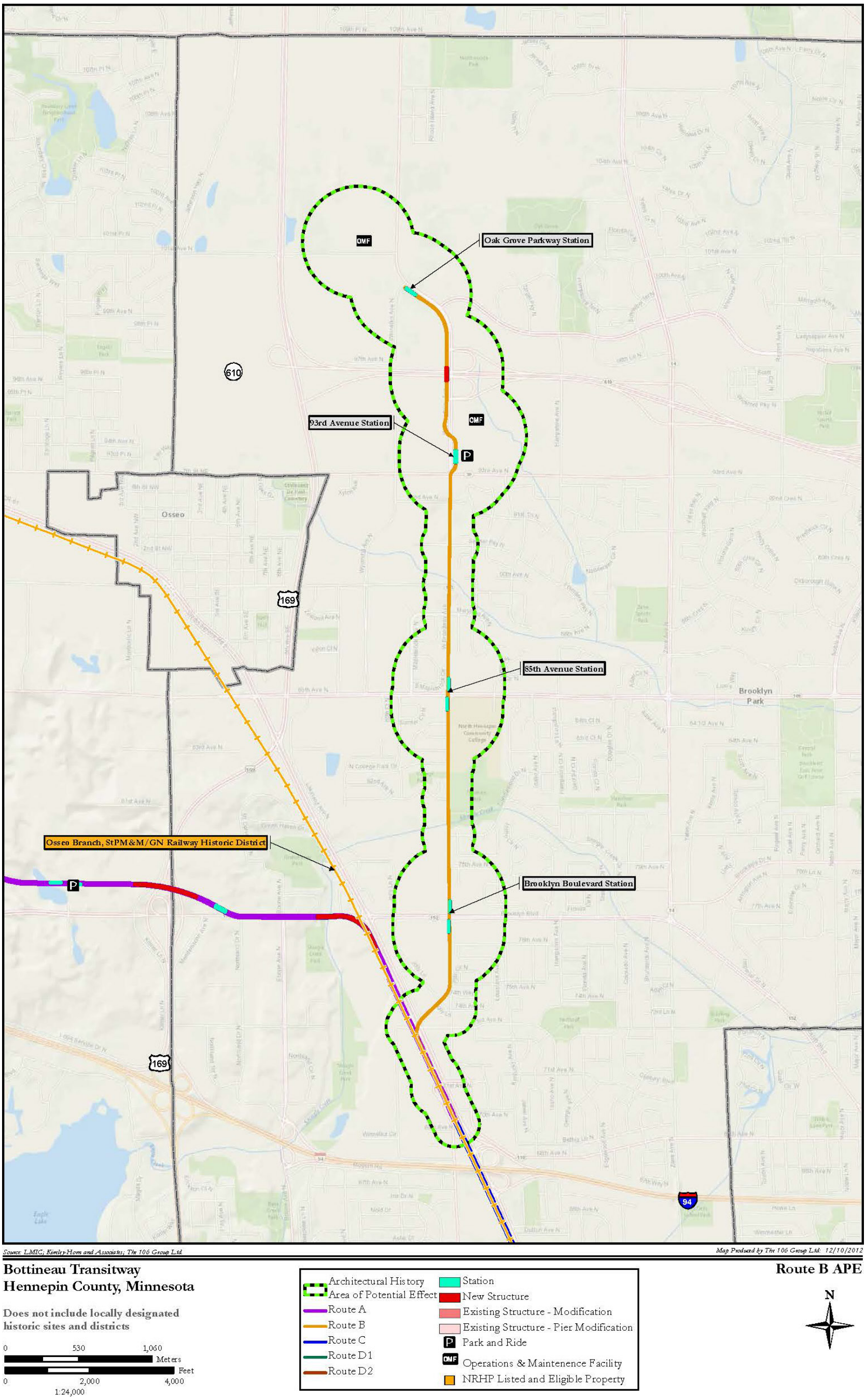


Figure 4.4-3. Architectural APE for Alignment C

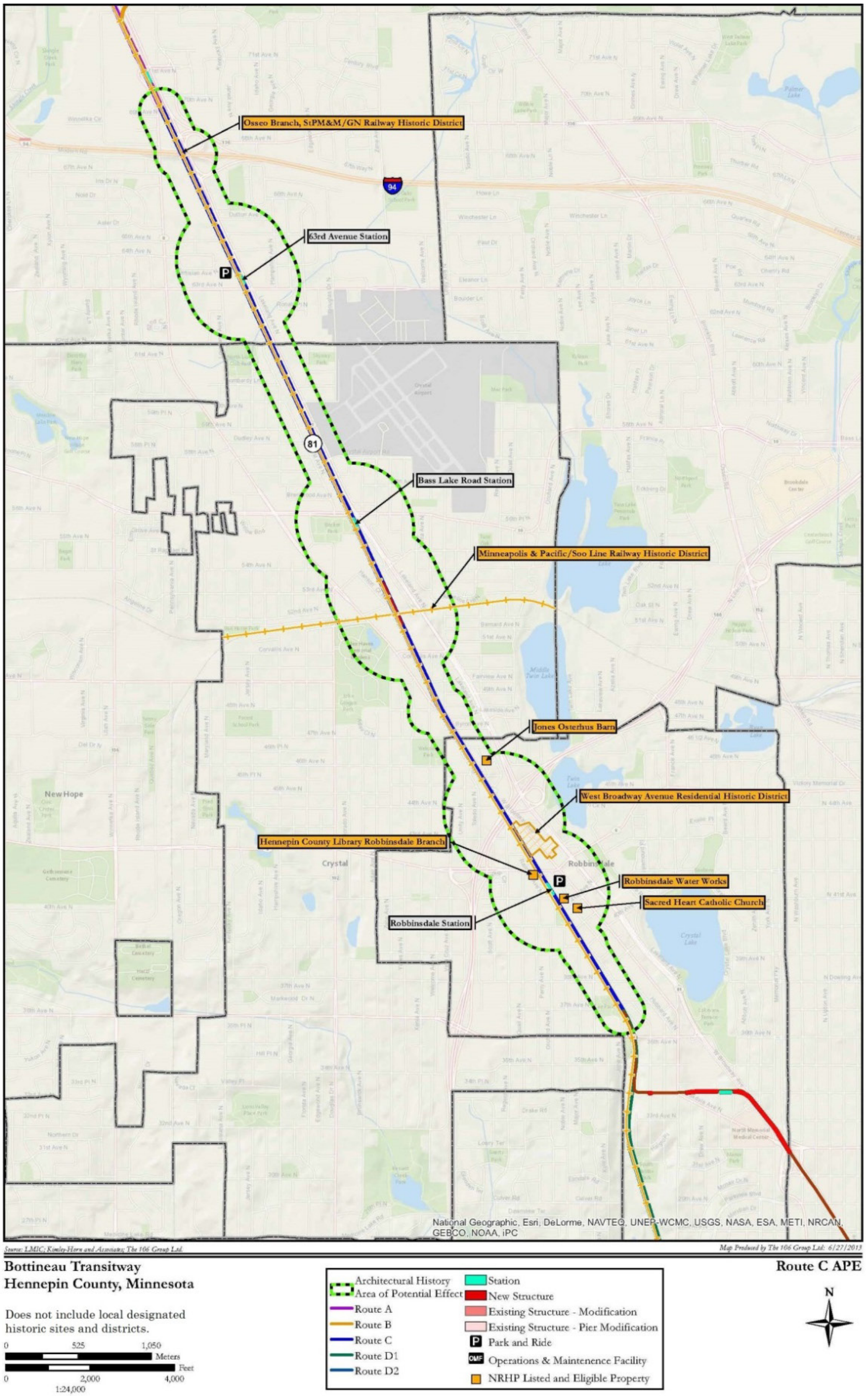


Figure 4.4-4. Architectural APE for Alignment D1

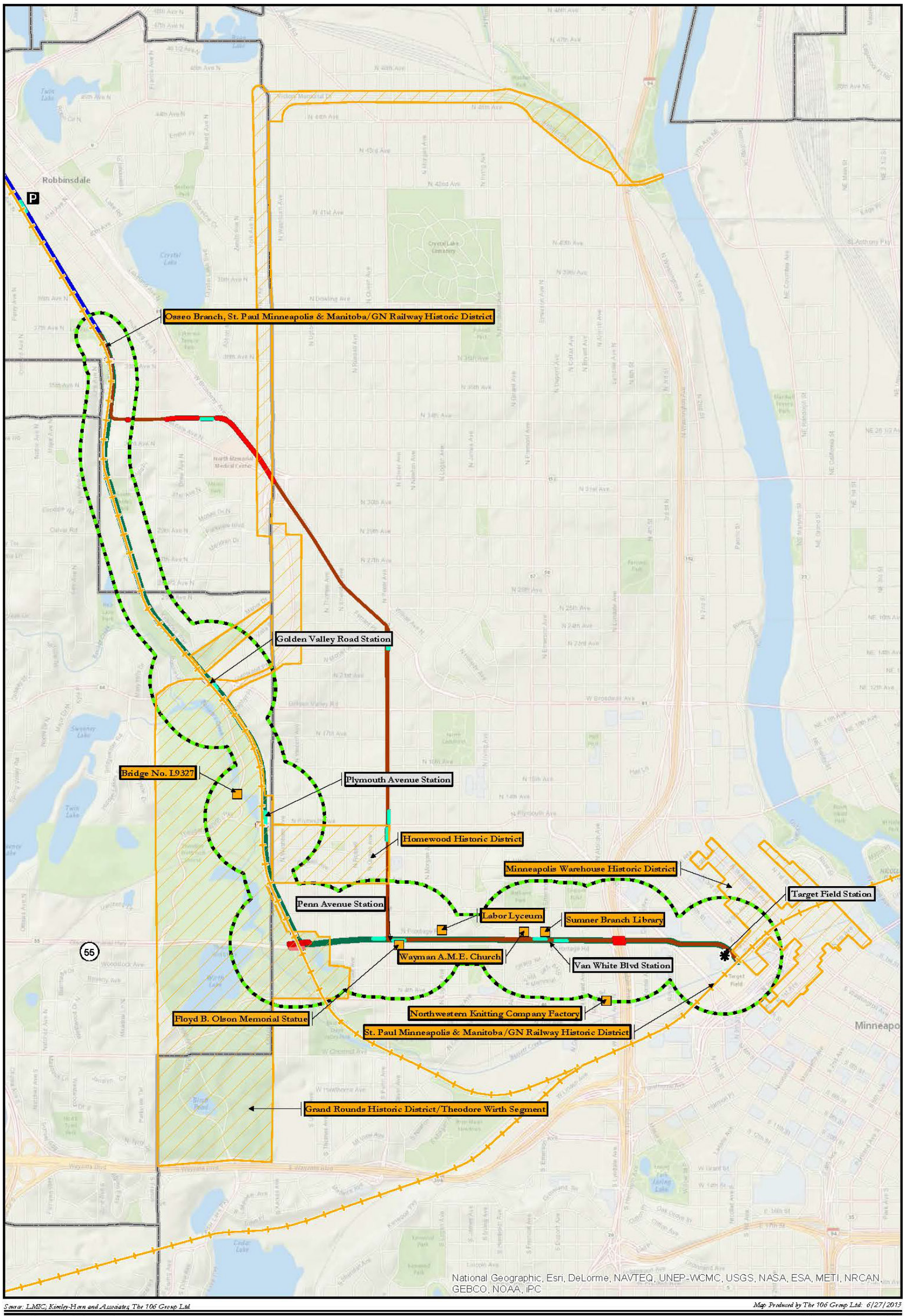
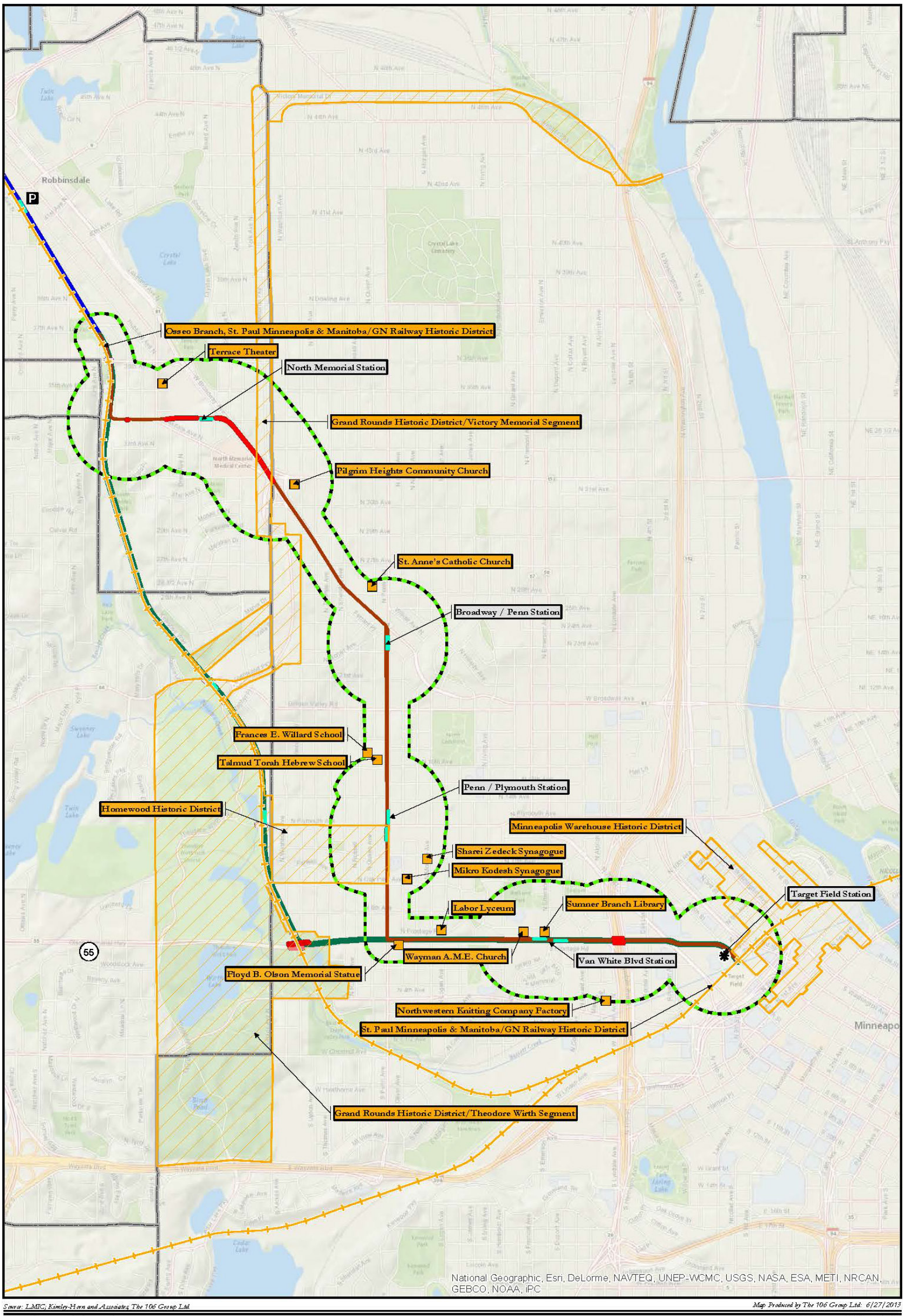


Figure 4.4-5. Architectural APE for Alignment D2



4.4.4 Affected Environment/ Identified Resources

4.4.4.1 Architectural Resources

Architectural resources listed on, or determined eligible for, the NRHP within the architectural APE are depicted in Figure 4.4-6 and described below.

- **Jones Osterhus Barn (HE-RBC-264), 4510 Scott Avenue North, Robbinsdale**

The Jones-Osterhus Barn is one of the last remaining remnants of the first generation of settlement in the Robbinsdale area. The barn was built circa 1860 by one of the early settlers in the Robbinsdale area, David W. Jones, and was later owned by the Osterhus family. The barn embodies the rural, agrarian character of the lands northwest of Minneapolis in the last half of the nineteenth century and the first half of the twentieth century, prior to the development of the area as a suburb after World War II. The Jones-Osterhus Barn has been determined eligible for listing in the NRHP under Criterion C as it embodies the transition from grain production to more diversified farming operations, exhibits the adaptations made by settlers of available building materials for the purpose of constructing necessary buildings, and is a rare example of barn design from the first period of agricultural development in Minnesota.

- **Hennepin County Library, Robbinsdale Branch (HE-RBC-024), 4915 42nd Avenue North, Robbinsdale**

The Robbinsdale Library was established by the Robbinsdale Library Club, which was organized in 1907. The Club raised money for both the first library materials and the library building, which was completed in 1925 by architect H.H. Livingston. The Club owned and maintained the library until 1976, when it was donated to the City of Robbinsdale. The Robbinsdale Library is listed in the NRHP under Criterion A for its representation of the efforts of the Robbinsdale Library Club to provide the residents of the Robbinsdale area with the opportunity to improve their lives and gain enjoyment through reading. Additionally, the Club represents the self-help culture prevalent in America at the beginning of the twentieth century by funding the library without the aid of the government or an outside foundation.

- **Robbinsdale Waterworks (HE-RBC-286), 4127 Hubbard Avenue North, Robbinsdale**

Built between 1938 and 1963, the Robbinsdale Waterworks consists of two pump houses, a water tower, an above ground water cistern, and a filtration plant. The Robbinsdale Waterworks was initially constructed in response to a 1925 fire that destroyed half a block of downtown Robbinsdale. The initial construction of the system was completed in 1938 and was partially funded by the WPA. Later components of the system were built as Robbinsdale's population grew during and after World War II. The Robbinsdale Waterworks is eligible for listing in the NRHP under Criterion A as an example of a WPA public utilities project in Minnesota. The Robbinsdale Waterworks is also eligible for its embodiment of successful political initiatives that were implemented to overcome longstanding resistance to develop public infrastructure to meet the needs and demands of its residents.

- **Sacred Heart Catholic Church (HE-RBC-1462), 4087 West Broadway, Robbinsdale**

Constructed in 1958, Sacred Heart Church was designed by prolific Twin Cites architecture firm Hills, Gilbertson, and Hayes. The church is part of a complex that is also comprised of a school, convent, rectory, and gymnasium. Sacred Heart Church has been determined eligible for listing in the NRHP under Criterion C as a distinctive example of the integration of Modernist principles with the traditional design standards of the Catholic Church that began to occur in the years preceding the Second Vatican Council. Sacred Heart Catholic Church embodies the architectural shift from Gothic Revival to Mid-Century Modern as it exhibits features of both styles. In the Twin Cities the shift from Gothic Revival to Mid-Century Modern was spurred by Eliel Saarinen's design for Christ Church Lutheran in Minneapolis, which was completed in 1949. Saarinen's design used simplistic and tranquil yet dramatic design and light as a spiritual element. Hills, Gilbertson, and Hayes teamed with Saarinen on the design of Christ Church Lutheran, and elements of the firm's design for Sacred Heart Catholic Church, including smooth wall

planes and the lack of a projected, semi-circular chapel to the rear of the altar, are drawn from Christ Church Lutheran.

- Terrace Theater (HE-RBC-200), West Broadway and 36th Avenue North, Robbinsdale

The Terrace Theater was originally owned by Sidney and William Volk, who commissioned the architectural firm of Liebenberg and Kaplan to design the theater. Liebenberg and Kaplan was one of the most prominent architecture firms in Minneapolis during the mid-twentieth century. The Terrace Theater has been determined eligible for listing in the NRHP under Criterion C as an outstanding example of Mid-Century Modern theater design, and as a distinct design of renowned Minneapolis theater architects Liebenberg and Kaplan. Architecturally, the Terrace Theater embodies the futuristic, space-age ideals that became popular in architecture in the 1950s and 1960s, specifically through its brick and glass tower crowned by a pair of signed illuminated signs. The Terrace Theater originally featured a 1,300-seat auditorium, a smoking lounge, and a television room that were innovative in theater design.

- Pilgrim Heights Community Church (HEMPC-8277), 3120 Washburn Avenue North, Minneapolis

Built between 1952 and 1953, the Pilgrim Heights Community Church is an example of a Mid-Century Modern ecclesiastical building. The church complex is comprised of a one-story church and a two-story educational wing. The church was designed by the architecture firm of McEnary and Krafft. After World War II, McEnary and Krafft began concentrating on church design and designed several community churches in Minnesota throughout the 1950s and 1960s, of which Pilgrim Heights Community Church was the first. The Pilgrim Heights Community Church has been determined eligible for listing in the NRHP under Criterion C as an example of an early modernist community church designed by the Minneapolis firm of McEnary and Krafft. The church exhibits many typical characteristics of the Mid-Century Modernist movement. The church also represents the development of the design aesthetic McEnary and Krafft used for future ecclesiastical commissions, which embraced Mid-Century Modernism.

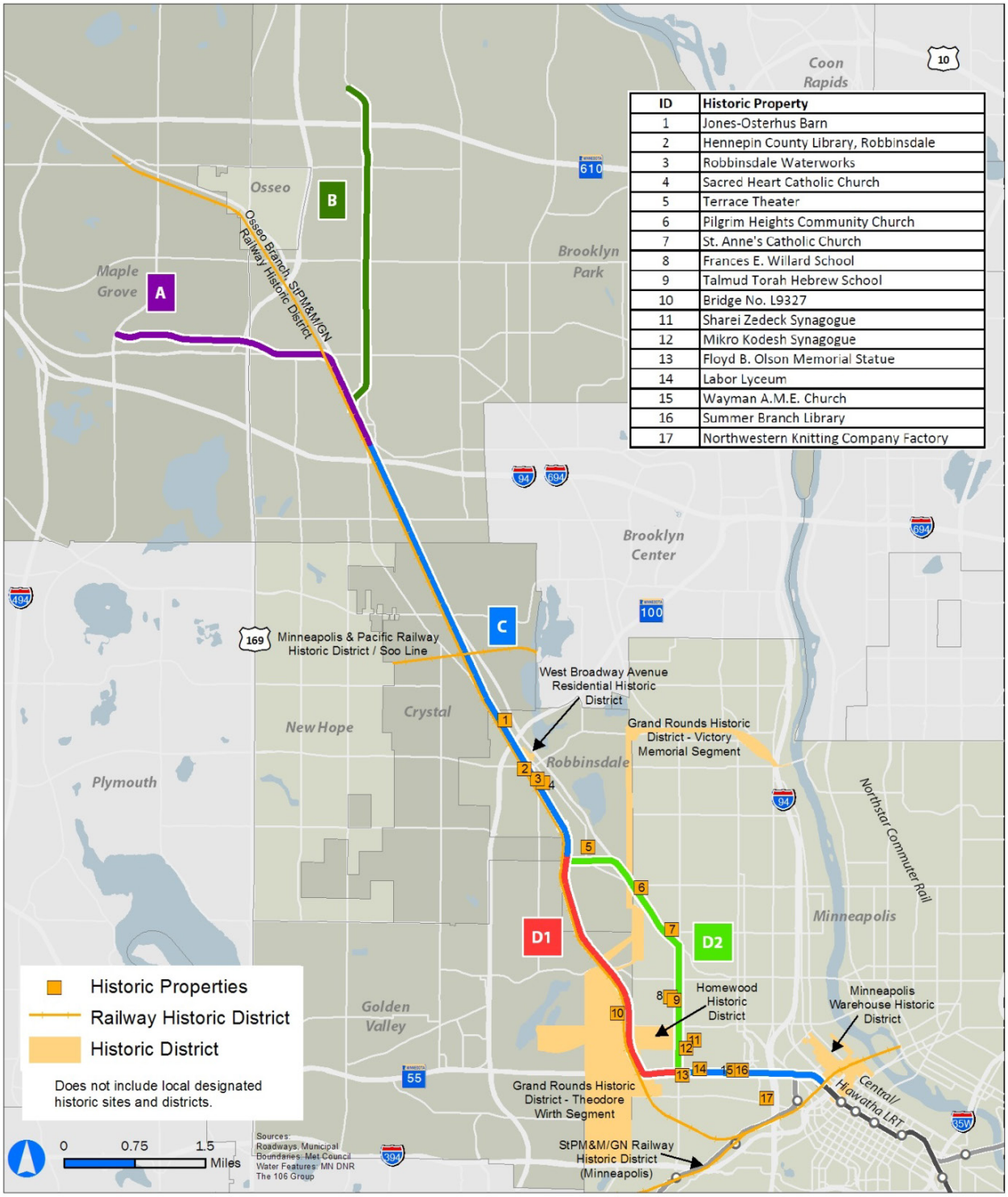
- St. Anne's Catholic Church (HE-MPC-8251), 2306 26th Avenue North, Minneapolis

Constructed in 1949, St. Anne's Church is an example of the Italian Renaissance style. The church is part of a complex that is also comprised of a rectory, school, and convent. Founded in 1884 as St. Clotilde's to serve French Canadians, St. Anne's parish is among the five oldest Catholic parishes in Minneapolis. The congregation started building on this site in the 1920s. Designed by well-known St. Paul architect Frederick Slifer, the current church was built as a result of the growth and prosperity of the congregation. St. Anne's Church has been determined eligible for listing in the NRHP under Criterion C as the embodiment of the distinctive characteristics of the Italian Renaissance style. Built at a time when ecclesiastical architecture was taking a dramatic turn away from traditional church forms, St. Anne's Church was one of the last and grandest Italian Renaissance style churches built in Minnesota and was one of the last buildings designed by architect Frederick Slifer, a well-known architect who designed several prominent churches in the Twin Cities Metropolitan Area.

- Frances E. Willard School (HE-MPC-8249), 1615 Queen Avenue North, Minneapolis

The Frances E. Willard School is a two-and-a-half-story building that features elements of the Classical Revival style. The school was constructed in two stages, the first rectangular section of the school was built in 1910, and a rectangular wing was built in 1919 by contractor J. E. Pilgram. The school is named after Frances E. Willard, an American reformer, founder of the Women's Christian Temperance Union, and promoter of the women's suffrage movement. The Minneapolis public school closed in 2005. The Frances E. Willard School has been determined eligible for listing in the NRHP under Criterion A for its association with education in North Minneapolis.

Figure 4.4-6. Location of Historic Properties Identified within the Architectural APE



ID	Historic Property
1	Jones-Osterhus Barn
2	Hennepin County Library, Robbinsdale
3	Robbinsdale Waterworks
4	Sacred Heart Catholic Church
5	Terrace Theater
6	Pilgrim Heights Community Church
7	St. Anne's Catholic Church
8	Frances E. Willard School
9	Talmud Torah Hebrew School
10	Bridge No. L9327
11	Sharei Zedeck Synagogue
12	Mikro Kodesh Synagogue
13	Floyd B. Olson Memorial Statue
14	Labor Lyceum
15	Wayman A.M.E. Church
16	Summer Branch Library
17	Northwestern Knitting Company Factory

- **Talmud Torah Hebrew School (HE-MPC-7612), 1616 Queen Avenue North, Minneapolis**

The Talmud Torah, founded in 1894, was the first Jewish school established in Minneapolis and provided Hebrew schooling and services to the Jewish community living in North Minneapolis. The Talmud Torah was originally housed in rooms at Kenesseth Israel Synagogue and then at a building on Fremont Avenue until this two-story T-shaped brick building was constructed in 1951. The Talmud Torah Hebrew School has been determined eligible for listing in the NRHP under Criterion A for the opportunity it provided to all Jewish children, including those without the means to afford a private school, to receive a quality education founded on Jewish values and heritage. Unlike other Jewish schools that were private and associated with a particular congregation, at the Talmud Torah Hebrew School all Jewish children could attend without having to pay tuition and regardless of congregational affiliation. Additionally, the school played a critical role in the efforts of the Jewish community in North Minneapolis to maintain and perpetuate its culture, values, traditions, heritage, and identity.

- **Bridge No. L9327 (HE-GVC-0050), Theodore Wirth Parkway over Bassett's Creek, Golden Valley**

This bridge is located in Theodore Wirth Park and carries the Theodore Wirth Parkway over Bassett Creek. The bridge is a half mile south of Golden Valley Road. The single-span, filled spandrel, concrete arch bridge is 50 feet in length and was constructed in 1939. The bridge carries two lanes of vehicular traffic through Theodore Wirth Park, which is the largest regional park in the Minneapolis Park System. Bridge No. L9327 is eligible for listing in the NRHP under Criterion C, within the area of architecture.

- **Sharei Zedeck Synagogue (HE-MPC-8211), 1119 Morgan Avenue North, Minneapolis**

The Sharei Zedeck Synagogue was the last of four major synagogues that were built in the Near North Side of Minneapolis during the early part of the twentieth century. The synagogue played an important social role in the community during the height of Jewish settlement in North Minneapolis, which occurred between the early 1900s and 1960s. Although the Jewish population started to move westward to St. Louis Park in the decades after World War II, the synagogue continued to play an important role in the North Minneapolis Jewish community. Reflecting the increased shift of Jewish institutions out of North Minneapolis in the late 1960s, the Sharei Zedeck congregation followed, leaving Minneapolis by 1969. The Sharei Zedeck Synagogue is eligible for listing in the NRHP at the local level under Criterion A, in the areas of social history and ethnic heritage within the historical context Jewish Settlement in North Minneapolis, 1890-1969.

- **Mikro Kodesh Synagogue (HE-MPC-8227), 1000 Oliver Avenue North, Minneapolis**

The Mikro Kodesh Synagogue was built in 1926 by architect S. J. Bowler who incorporated several styles into his design including Byzantine, Romanesque, and Classical Revivals. The Mikro Kodesh Synagogue has been determined eligible for listing in the NRHP under Criterion A for its association with the historic Jewish population in North Minneapolis. The Mikro Kodesh Synagogue, along with the Beth El Synagogue, fostered the migration of the Jewish population to the Penn and Plymouth area of Minneapolis. The Synagogue also became the largest Orthodox congregation in the Upper Midwest in 1948.

- **Floyd B. Olson Memorial Statue (HE-MPC-9013), TH 55 at Penn Avenue North, Minneapolis**

The Floyd B. Olson Memorial Statue was erected in 1940 to commemorate Minnesota's popular 22nd Governor, Floyd B. Olson (1891-1936). The statue was designed and executed by renowned St. Paul artists Carlo Brioschi, A. (Amerigo) J. Brioschi, and L. R. Kirchner, with Carlo Brioschi as the lead designer. Carlo Brioschi came to St. Paul in 1909 and helped establish the Brioschi-Minuti Company. The Brioschi-Minuti Company specialized in sculptures, stone carving, terra cotta, and other architectural ornamentation for both building interiors and exteriors. Among the company's most prominent local commissions include ornamentation for the St. Paul Cathedral, the Foshay Tower, and the St. Paul Auditorium. The Floyd B. Olson Memorial Statue is eligible for listing in the NRHP under Criterion C as an expression of the work of master sculptor Carlo Brioschi during the last stage of his career (1931-1940),

when he turned the focus of his work from primarily architectural ornamentation to outdoor freestanding sculpture. The Floyd B. Olson Memorial Statue was the last major commission by Carlo Brioschi.

- Labor Lyceum (HE-MPC-7553), 1800 Olson Memorial Highway, Minneapolis

The Labor Lyceum is a one-story, frame meeting hall that is located in the Near North Side of Minneapolis, which was historically home to a large concentration of Jewish residents. Social ostracism resulted in the Minneapolis Jewish population establishing their own network of social services and institutions to meet the needs of their growing community. The building was constructed in 1915 by the Workmen's Circle as a social center. The Workmen's Circle was part of the anti-Zionist Communist and Socialist labor movements within Minneapolis' Jewish community. Additionally, the Labor Lyceum was a place to maintain Jewish culture without religion. The Workmen's Circle provided medical and insurance benefits to members, organized a Yiddish language school and library, and staged Yiddish plays. The Labor Lyceum has been determined eligible for listing in the NRHP under Criterion A for its role in Jewish settlement in Minneapolis; for its association with the Workmen's Circle, Jewish radicalism, and labor movements; as well as the programs it offered to perpetuate Jewish culture and traditions, including the continuation of Yiddish as a spoken language.

- Wayman A.M.E. Church (HE-MPC-8290), 1221 7th Avenue North, Minneapolis

The Wayman A.M.E. Church is a one-story, 16-sided, brick ecclesiastical building that is surmounted by an iconic, 75 foot tall, hexadecagon roof with an exaggerated bell-shape. Constructed in 1966 by an African American congregation, the building was designed in the Mid-Century Modern style by architect Harry E. Gerrish. By the 1960s, Modern ecclesiastical architectural designs had gained a foothold and exceptional examples of the style began to be built nationwide. The Wayman A.M.E. Church has been determined eligible for listing in the NRHP under Criterion C as an outstanding and distinctive example of Mid-Century Modern ecclesiastical architecture in Minneapolis. The church is an important and distinctive example of nationwide changes in ecclesiastical architectural design that rejected historicism and embraced new forms that were often abstract, asymmetrical, and futuristic in design.

- Sumner Branch Library (HE-MPC-8081), 611 Emerson Avenue North, Minneapolis

Designed by architect Cecil Bayless Chapin in the Tudor Revival style, the Sumner Branch Library was built in 1915. Listed in the NRHP under Criteria A and B, the library was one of 14 public libraries that were built and acquired in Minneapolis between 1894 and 1936. The building is a well-preserved example of a small public library and was one of four public libraries that were built with Carnegie funds in Minneapolis. The library is also associated with the extensive outreach program of the Minneapolis Public Library that affected the educational and cultural development of Minneapolis. Additionally, the building is associated with Gratia Alta Countryman, the longtime head of the Minneapolis Public Library and leader in the movement to develop a public library system nationwide.

- Northwestern Knitting Company Factory (HE-MPC-8125), 718 Glenwood Avenue, Minneapolis

In 1888, the Northwestern Knitting Company's founder, George Munsing, invented a method of plating woolen fibers with silk and cotton to take the "itch" out of woolen underwear. The less bulky, single-piece undergarments made Munsingwear the nation's leading producer and distributor of underwear. The success of the company necessitated the need for factory expansion. Between 1904 and 1915, the site on Glenwood Avenue in Minneapolis expanded to include five large buildings designed by architects Bertrand and Chamberlain. The Northwestern Knitting Company continued to thrive until 1981 when a deteriorating national economy forced the factory to close. Renovated in the 1980s into offices and showrooms, the complex is known as the International Market Square today. The factory is listed in the NRHP under Criterion A.

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

The Minneapolis Warehouse Historic District covers a thirty-block area in downtown Minneapolis and includes nineteenth and early twentieth century commercial buildings, many of which were architect designed. The district is listed in the NRHP under Criteria A and C. The buildings within the district range from three to seven stories in height and include examples of Italianate, Queen Anne, Richardsonian Romanesque, Classical Revival, and early twentieth century commercial styles. The Minneapolis Warehouse Historic District was an area of early commercial growth in Minneapolis and the city's warehouse and wholesaling district that expanded when Minneapolis became a major distribution center for the upper Midwest. The district is also architecturally distinct for its intact concentration of commercial buildings designed by the city's leading architects.

- Osseo Branch, St. Paul Minneapolis & Manitoba Railway Historic District (HE-RRD-002 *[including HE-BPC-0084, HE-CRC-0238, HE-RBC-0304, and HE-MPC-16389]*), Brooklyn Park, Crystal, Robbinsdale, Golden Valley, Minneapolis)

The Osseo Branch Line (Osseo Branch Line, St. Paul Minneapolis & Manitoba Railroad (StPM&M)/Great Northern Railway (GN) (aka Minneapolis & Northwestern Railroad Company (M&NW)/Burlington Northern Santa Fe (BNSF)) of the StPM&M is a c. 13 mile long segment of the railroad line originally constructed by the M&NW between Minneapolis and St. Cloud in 1881-1882. The Osseo Branch Line became an essential component in the development of the City of Osseo as a major potato growing, marketing, and distribution center. With the coming of the railroad, Osseo potato distributors could transport their product quickly and efficiently to markets in Minneapolis and beyond. As a result, area farmers could grow potatoes as a cash crop on a relatively large scale because they were now able to ship their crops before they spoiled. The Osseo Branch, St. Paul Minneapolis & Manitoba Railway Historic District has been determined eligible for listing in the NRHP under Criterion A as an important transportation corridor that linked Osseo with the Twin Cities, and its agricultural markets. Additionally, the railroad line established a connection that did not previously exist and resulted in the significant expansion of the potato-growing region in northern Hennepin County.

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

As a segment of the Great Northern Railway's transcontinental route, the St. Paul, Minneapolis & Manitoba Railway Historic District corridor helped to solidify Minneapolis and St. Paul as the commercial, financial, and manufacturing center of an area extending from eastern Wisconsin to central Montana. Although its importance began to wane by the 1920s due to competition from automobiles and trucks, the Great Northern Railway's transcontinental route remained a vital component of Minnesota's and the region's transportation network into the 1950s. As such, the St. Paul, Minneapolis & Manitoba Railway Historic District is eligible for listing in the NRHP under Criterion A, because it meets registration requirement numbers 2 and 3 from the *Railroads in Minnesota, 1862-1956 Multiple Property Documentation Form*. The historic district meets registration requirement 2 because it established a railroad connection that did not previously exist and/or served as the dominant transportation corridor. Additionally, the railway facilitated the expansion of the industrial, commercial, and agricultural practice along the corridor. The historic district also meets registration requirement 3 as it was an influential component of the state's railroad network and made important connections within the network and with other modes of transportation.

- Minneapolis & Pacific Railway Historic District (Soo Line) (HE-CRC-199), Crystal

The Minneapolis & Pacific Railway Company (M&P) was incorporated in 1884 to construct a single-track mainline from Minneapolis to the Red River Valley. The Minneapolis & Pacific Railway Historic District has been determined eligible for listing in the NRHP under Criterion A for its association with the Minneapolis mill owners who built the line to secure their own connection to wheat growers in western Minnesota and North Dakota. The M&P line was critical in bringing wheat directly from its source in the Red River Valley

to the flour mills of Minneapolis. Additionally, the M&P line was the first successful effort of the Minneapolis mill owners to reach the large, profitable markets in the East and Europe directly. In 1888, the M&P was consolidated, along with three other railroads, into the Minneapolis, St. Paul & Sault Ste. Marie Railway Company (Soo Line). The Canadian Pacific Railway took control of the Soo Line in 1990.

- West Broadway Residential Historic District (HE-RBC-158), Robbinsdale

The West Broadway Avenue Residential Historic District encompasses approximately three city blocks in the City of Robbinsdale. The West Broadway Avenue Residential Historic District has been determined eligible for listing in the NRHP under Criterion A for its association with the development of the City of Robbinsdale as an early twentieth century suburb of Minneapolis. Built between 1919 and 1940, the houses in the district are examples of styles that were popular among suburban homebuilders before World War II. The residential styles in the district include Colonial Revival, Tudor Revival, Prairie, and Craftsman. The district represents the expansion of Robbinsdale between World War I and World War II. Additionally, the district was home to many locally prominent members of the community, who lived there during the Interwar period.

- Grand Rounds Historic District (Theodore Wirth Parkway Segment and Victory Memorial Drive Segment) (XX-PRK-0001), Robbinsdale, Golden Valley, Minneapolis

In 1883, Horace Cleveland, a landscape architect, brought his idea for a continuous green necklace of parkway and open space around Minneapolis to the newly formed Board of Park Commissioners (renamed the Minneapolis Park and Recreation Board in 1969). The Grand Rounds was subsequently acquired and built over many years by the Board of Park Commissioners primarily during the late nineteenth and early twentieth century. Theodore Wirth, Superintendent of Parks from 1906 until 1935, had a prominent role in the acquisition of lands and development of the Grand Rounds. Comprised of seven districts, the Grand Rounds passes through almost every part of Minneapolis. Each of the seven segments was acquired and developed at a different time and contributes its own history and significance to the Grand Rounds as a whole. The seven districts include a dozen lakes and ponds, four golf courses, two waterfalls, natural and planned gardens, creek and river views, and 50.1 miles of trails. There are also more than 50 identified interpretive sites. The Grand Rounds has been determined eligible for listing in the NRHP as a superb example of an urban byway and park system.

- Homewood Historic District (HE-MPC-12101), (bounded by Penn, Oak Park, Xerxes, and Plymouth Avenues, Minneapolis

The Homewood Historic District encompasses a large, rectangular-shaped, 80-acre, hilly area that is eight blocks by two blocks in size. The district includes 254 parcels, which were primarily developed from 1910 to 1946, and 12 extant stone entrance markers around the perimeter of the district. The residences within the district were constructed in a variety of popular architectural styles from the early twentieth century, including Tudor Revival, Colonial Revival, French Eclectic, and Spanish Colonial Revival. A number of houses in the area were designed by noted Minneapolis architecture firm Liebenberg & Kaplan. The Homewood Historic District attracted a large number of prominent upper-middle class Jewish residents beginning in the mid-1910s. Many synagogues were built in the area around the district as a result. The Homewood Historic District has been determined eligible for listing in the NRHP under Criterion A for the significant role it played in the development of the western portion of North Minneapolis as the second location of a Jewish community in North Minneapolis, which was occupied by primarily Jewish residents from 1911 until the late 1960s.

4.4.4.2 Archaeological Resources

The Phase IA archaeology assessment did not identify any NRHP-listed archaeological sites nor did it recommend any further archaeological investigations for potentially eligible sites. It did acknowledge a previous study, which identified an area along 5th Avenue North, between 4th Street North and 5th Street

North, with potential for historic archaeological resources.[4] Therefore, if any project related ground disturbing activities were to occur in this area, further archaeological investigation may be warranted. At this time, no project work is anticipated in the area. SHPO has reviewed and concurred with the Phase IA archaeological assessment findings.

4.4.5 Environmental Consequences

4.4.5.1 Operating Phase (Long-Term) Impacts

No-Build Alternative

There would be no anticipated effects to the identified cultural resources under the No-Build alternative.

Enhanced Bus/TSM Alternative

There are no anticipated effects to the identified cultural resources under the Enhanced Bus/TSM alternative.

Build Alternatives

This assessment of adverse effects to historic properties is based on current conceptual engineering plans. While some effects can be fully understood at this level of project design (e.g., effects resulting from the alignment of the transitway corridor), others are less definite as they are dependent on subsequent stages of project design. These effects may be avoided through consultation during the development of more detailed project engineering and design. If it is not feasible to avoid adverse effects, minimization and mitigation will be considered.

Potential adverse effects to historic properties fall into three main categories: project design, station area planning and development, and noise. In accordance with 36 CFR 800.5, FTA, in consultation with the SHPO, will review the project elements after considering avoidance, minimization, and mitigation to determine if there is an adverse effect to these properties. FTA will also consider input on the effects to historic properties provided by consulting parties and the public.

- **Project Design:** The project design of the LRT infrastructure (LRT tracks, poles, catenary, stations, retaining walls, aerial structures, traction power substations, signal bungalows, and other project elements) may alter the characteristics of a historic property that would diminish the integrity of the historic property. Examples include physical destruction or damage to part or all of the property; alteration of a property; change of the character of the property's use or physical features that contribute to the property's setting; or introduction of visual elements that diminish the integrity of the property's significant historic features.
- **Station Area Planning and Development:** Activities related to station area planning and development may alter the characteristics of a historic property that would diminish the integrity of the historic property. Examples include physical destruction or damage to part or all of the property; alteration of a property; change of the character of the property's use or physical features that contribute to the property's setting; or introduction of visual elements that diminish the integrity of the property's significant historic features. This category does not include the station and LRT system as described above, but it does include related infrastructure and development activities including transit-related parking and traffic.
- **Noise:** Construction and/or operations noise may introduce audible elements that diminish the integrity of the property's significant historic features.

[4]Harrison, Christina and Penny Peterson. *2011 Phase IA Archaeological Review for the Proposed Interchange Project, Hennepin County, Minnesota*. Prepared by Archaeological Research Services, Minneapolis, MN, 2011.

Potential effects are detailed in the Section 106 Potential Effects Table, which was developed in consultation with SHPO and consulting parties as part of the Section 106 process. This table is provided in Appendix D of this Draft EIS.

Adverse Effects on NRHP Eligible Properties

Based on current conceptual plans, an adverse effect was assessed for the Homewood Residential Historic District due to the right of way necessary to construct Alignment D2. The project design of the guideway as well as the Penn/Plymouth Station along Alignment D2 would remove historic properties on the west side of Penn Avenue as well as shift the original curb/sidewalk and significantly affect the entire east edge of the historic district.

Table 4.4-1 identifies the alternatives for which adverse effects have been determined.

Table 4.4-1 Historic Properties for which *Adverse Effects* have been determined, by Alternative

Property Name (Historic)	Adverse Effects			
	A-C-D1	A-C-D2	B-C-D-1 (Preferred Alternative)	B-C-D2
Homewood Residential Historic District		●		●

Potential Effects on NRHP Listed and NRHP Eligible Properties

Based on current conceptual plans, potential effects have been identified for 16 historic properties and five historic districts. Properties for which potential effects have been identified are listed, by alternative, in Table 4.4-2. Table 4.4-3 identifies the type of potential effects by alignment. These tables indicate the potential for effects; these effects may be avoided or minimized through consultation during project design. Any adverse effects that are not avoided may be considered for mitigation. Property locations are shown in Figure 4.4-6.

Table 4.4-2. Historic Properties with *Potential Effects*, by Alternative

Figure ID[1]	Property Name (Historic)	Potential Effects[2]			
		A-C-D1	A-C-D2	B-C-D-1 (Preferred Alternative)	B-C-D2
--	Osseo Branch, St. Paul Minneapolis & Manitoba RR/Great Northern Historic District	●	●	●	●
--	Minneapolis & Pacific RR/Soo Line Historic District	●	●	●	●
--	West Broadway Avenue Residential Historic District	●	●	●	●
--	Grand Rounds Historic District – Victory Memorial Drive and Theodore Wirth Parkway Segments		●		●
--	Grand Rounds Historic District – Theodore Wirth Segment	●		●	
--	Homewood Residential Historic District[2]	●		●	
1	Jones Osterhus Barn	●	●	●	●
2	Hennepin County Library, Robbinsdale Branch	●	●	●	●
3	Robbinsdale Water Works	●	●	●	●
4	Sacred Heart Catholic Church	●	●	●	●
5	Terrace Theater		●		●
6	Pilgrim Heights Community Church		●		●
7	St. Anne's Catholic Church		●		●
8	Frances E. Willard School		●		●
9	Talmud Torah Hebrew School		●		●

Figure ID[1]	Property Name (Historic)	Potential Effects[2]			
		A-C-D1	A-C-D2	B-C-D-1 (Preferred Alternative)	B-C-D2
10	Bridge L9327	●		●	
11	Sharei Zedeck Synagogue		●		●
12	Mikro Kodesh Synagogue		●		●
13	Floyd B. Olson Memorial Statue	●	●	●	●
14	Labor Lyceum	●	●	●	●
15	Wayman A.M.E. Church	●	●	●	●
16	Sumner Branch Library	●	●	●	●

[1] Historic districts are not numbered in Figure 4.4-6.
[2]For the Homewood District, an adverse effect resulting from demolition of contributing properties has been determined for Alignment D2 only. However, Alignment D1, while it does not result in demolition of properties, could result in other types of effects potentially avoided or mitigated by project design.

Table 4.4-3. Historic Properties with Potential Effects, by Alignment

Alignment	Figure ID[1]	Property Name (Historic)	Potential Effects		
			Project Design	Station Area Development	Noise
A		Osseo Branch, St. Paul Minneapolis & Manitoba RR/Great Northern Historic District	●	●	
B (part of the Preferred Alternative)		Osseo Branch, St. Paul Minneapolis & Manitoba RR/Great Northern Historic District	●		
C (part of the Preferred Alternative)		Osseo Branch, St. Paul Minneapolis & Manitoba RR/Great Northern Historic District	●	●	
	--	Minneapolis & Pacific RR/Soo Line Historic District	●		
	1	Jones Osterhus Barn	●		
	--	West Broadway Avenue Residential Historic District	●	●	●
	2	Hennepin County Library, Robbinsdale Branch	●	●	●
	3	Robbinsdale Water Works	●	●	
	4	Sacred Heart Catholic Church	●	●	●
D1 (part of the Preferred Alternative)		Osseo Branch, St. Paul Minneapolis & Manitoba RR/Great Northern Historic District	●	●	
	--	Grand Rounds Historic District – Theodore Wirth Segment	●	●	●
	10	Bridge L9327		●	
	--	Homewood Residential Historic District[2]	●	●	●
	13	Floyd B. Olson Memorial Statue	●	●	

Alignment	Figure ID[1]	Property Name (Historic)	Potential Effects		
			Project Design	Station Area Development	Noise
D2		Osseo Branch, St. Paul Minneapolis & Manitoba RR/Great Northern Historic District	●		
	5	Terrace Theater		●	
	--	Grand Rounds Historic District – Victory Memorial Drive and Theodore Wirth Parkway Segments	●	●	
	6	Pilgrim Heights Community Church	●		
	7	St. Anne's Catholic Church	●	●	
	8	Frances E. Willard School	●		
	9	Talmud Torah Hebrew School	●		
	11	Sharei Zedeck Synagogue		●	
	12	Mikro Kodesh Synagogue	●	●	
	13	Floyd B. Olson Memorial Statue	●		
D Common Section (part of the Preferred Alternative)	14	Labor Lyceum	●		
	15	Wayman A.M.E. Church	●	●	
	16	Sumner Branch Library	●	●	

[1] Historic districts are not numbered in Figure 4.4-6.
[2]For the Homewood District, an adverse effect resulting from demolition of contributing properties has been determined for Alignment D2 only. However, Alignment D1, while it does not result in demolition of properties, could result in other types of effects potentially avoided or mitigated by project design.

Comparison of Alternatives

Table 4.4-4 summarizes the preliminary number of properties adversely affected or potentially affected by the proposed alternatives. Measures to avoid, minimize, and mitigate adverse effects will be specified in the Section 106 Agreement as previously discussed in Section 4.4.3.4.

Table 4.4-4. Number of Historic Properties with Adverse Effects or Potential Effects, by Alternative

Type of Effect	Number of Potential Effects			
	A-C-D1	A-C-D2	B-C-D-1 (Preferred Alternative)	B-C-D2
Total Adverse Effect	0	1[1]	0	1[1]
Total Potential Effect	14	19	14	19

4.4.5.2 Construction Phase Impacts

No-Build Alternative

There would be no construction effects to the identified cultural resources under the No-Build alternative.

Enhanced Bus/TSM Alternative

There would be no construction effects to the identified cultural resources under the Enhanced Bus/TSM alternative.

Build Alternatives

Noise, vibration, visual, and traffic impacts would be experienced during construction throughout all segments. These impacts would be short-term and temporary. Noise and vibration impacts and mitigation measures are discussed in Section 5.6 and Section 5.7 and will be addressed as part of Section 106 consultation. Short-term visual impacts and mitigation are discussed in Section 4.5. Short-term access impacts and mitigation are discussed in Chapter 3.

4.4.6 Avoidance, Minimization, and/or Mitigation Measures

Methods for avoidance, minimization, or mitigation of impacts to historic and archaeological property would be developed and coordinated under the Section 106 consultation process and stipulated in the Section 106 Agreement.

Potential avoidance/minimization/mitigation measures may include:

- Development of a construction protection plan in consultation with SHPO and interested parties to mitigate potential construction related impacts to nearby historic properties
- Educational efforts and incentives aimed at the rehabilitation of historic properties in areas that may experience project-related redevelopment, including station areas
- Coordination with local municipalities to develop incentive to promote the rehabilitation of historic properties near the project corridor, particularly in station areas
- Development of a plan to monitor and address potential noise effects on historic properties during construction

  Develop an interpretive plan to provide public education and interpretation about historic properties in the project area

4.5 Visual/Aesthetics

Information included in this section is based on the information provided in the Visual Quality Technical Report (SRF Consulting Group, 2012).

4.5.1 Introduction

This section assesses the existing physical character of the Bottineau Transitway study area including physical development, vegetation and other natural features, and visually sensitive landmarks and views. Potential impacts on the visual character of the areas adjacent to the alternatives are also evaluated. The Visual Quality Technical Report (SRF Consulting Group, 2012), which provides the basis for this assessment of visual quality, is incorporated into this Draft EIS by reference.

The Bottineau Transitway Project has a number of constructed elements that would have a visual presence within the transitway right-of-way. The Visual Quality Technical Report (SRF Consulting Group, 2012) includes a detailed description of the LRT track alignment and catenary wires/supports, LRT vehicles, stations, park-and-ride facilities, OMF, and TPSS. It is noteworthy that although lighting would be provided at station areas, there would be no lighting along the guideway between stations.

4.5.2 Definition of Terms

Visual Features

The term “visual features” refers to the components of the natural, built, or project environments that are capable of being seen.

- Natural visual features include the land, water, vegetation, and animals that compose the natural environment. Although natural features may have been altered or imported by people, features that

are primarily geological or biological in origin are considered natural.

- Built visual features include the buildings, structures, and artifacts that compose the surrounding built environment. These are features that were constructed by people.
- Project visual features include the geometrics, structures, and fixtures that compose the project environment. These are the constructed features that would be placed in the environment as part of the proposed project. For this project, the features include both the transitway and other infrastructure modified by the project.

Visual Quality

The term "visual quality" refers to what viewers like and dislike about the visual features that compose a particular scene. Visual quality is inherently subjective, as different viewers may evaluate visual features differently. Based on the developed urban and suburban context of the study area, specific features were identified as "higher quality visual features" when they exemplify one of the following characteristics:

- A remnant natural feature exemplary of pre-settlement conditions
- A visually distinct natural or built feature that stands out from the surroundings and contributes physically and symbolically in a positive way to the overall community's visual quality
- A natural or built feature that is an integral component of the broader physical pattern of the community and is generally regarded positively

General Visual Context

The term "general visual context" is the appearance of the nearby surroundings from the vantage point of a person from ground level, i.e., as one would perceive it from a car, train, bus, bicycle, or on foot. The Bottineau Transitway passes through developed urban and suburban areas with a wide range of development patterns. A brief description of the general visual context of each area is provided in Section 4.5.5 as a basis for understanding the identified effects on specific visual features.

4.5.3 Regulatory Context and Methodology

The methodology used for this analysis is composed of two primary aspects: inventory of existing visual features (natural and built) and assessment of project effects on those features. The project area was studied and inventoried using mapping and direct observation from field visits. The conceptual project design and potential identified right-of-way impacts were considered in evaluating the potential visual change to the project area.

A three-tier scale (high, moderate, or minimal) was used to qualitatively assess the degree of visual quality effect that the project elements would have on higher quality visual features. The following definitions summarize each classification:

- **High:** Introduction of new elements that would substantially affect the quality of the visual/aesthetic features
- **Moderate:** Introduction of new elements that may have an effect on the quality of the visual/aesthetic features
- **Minimal:** Introduction of new elements that are not likely to have an effect on visual/aesthetic features

The basis for the level of effects for higher quality visual resources is provided below.

4.5.4 Study Area

The study area is defined as the right-of-way for the alternative alignments currently under consideration and the immediately adjacent properties with a visual connection to the proposed transitway. In select instances, the extent of analysis was expanded to account for specific features that were visible by field observation along the proposed transitway as a result of topography, physical scale, architectural distinction, or other considerations. A collection of photographs is available in the Visual Quality Technical Report (SRF Consulting Group, 2012) to assist the reader in understanding the existing visual context and visual features of the study area.

4.5.5 Affected Environment

The study area includes developed urban and suburban communities extending from Minneapolis into the northwest Twin Cities Metropolitan Area. It includes a diverse array of development patterns, railroads, highways, and local roadways. For each alignment under consideration, a summary of the general visual context is provided along with a list of identified higher quality visual features. Unique project visual features are also noted for each alignment. The Visual Quality Technical Report (SRF Consulting, 2012) includes descriptions of the higher quality visual features identified along each alignment.

Alignment A

Gravel mining operations are the primary current use of land around Alignment A between Hemlock Lane and US 169 in Maple Grove, but future development of the area is planned. Industrial, business park, and institutional land uses can be found in Brooklyn Park around Alignment A. The mining area is characterized by large piles of soil, sand, and gravel and large pits. Large equipment is used to dig, pile and sort materials, creating a continuously changing landscape. Vegetation in the active gravel mining area is sparse. There is a large interchange where Elm Creek Boulevard and Brooklyn Boulevard cross over US 169. Future redevelopment with higher intensity land uses is envisioned for the area, which would bring a more suburban development pattern with new streets, buildings, parking, and landscaping.

East of US 169, the Bottineau Transitway would pass the Hennepin Technical College campus and follow Brooklyn Boulevard, which is flanked by light-industrial sites and residential neighborhoods. Approximately one block west of CSAH 81, Shingle Creek passes under Brooklyn Boulevard through a culvert, affording a brief view of the riparian corridor. The Bottineau Transitway would turn south along the BNSF railroad corridor adjacent to CSAH 81, which is flanked by larger-scale commercial and industrial properties. One higher quality visual feature, Shingle Creek, was identified along Alignment A.

Alignment B (part of the Preferred Alternative)

North of TH 610 up to 101st Avenue near Alignment B, open field agricultural land is the predominant land use with some remnant woodland and grassland areas. The recently constructed Target North Campus, with its multi-story buildings, is located along Oak Grove Parkway east of West Broadway Avenue and has landscaped grounds characterized by mowed lawn and trees. Future redevelopment with higher-intensity land use is envisioned for the area, which would likely bring a more suburban development pattern with new streets, buildings, parking, and landscaping.

South of TH 610, the adjacent land use transitions from agricultural to a mix of single-story commercial and light-industrial buildings, as well as single-family residential neighborhoods. The commercial areas have front yards characterized by mowed lawns, trees, and stormwater treatment ponds. The homes face away from West Broadway Avenue, and fences and landscaping visually separate backyards from the roadway. North Hennepin Community College, located in the southeast corner of the West Broadway Avenue and 85th Avenue intersection, is comprised of one- and two-story buildings organized around a central green space. The perimeter of the campus is dominated by surface parking lots. Tessman Park is

located south of the college and contains two ball fields and mowed lawn. A uniform large-scale planned commercial development is located west of Alignment B and south of Brooklyn Boulevard.

These higher-quality visual features were identified along Alignment B:

- Shingle Creek
- West Broadway Avenue Bridge over TH 610

Alignment C (part of the Preferred Alternative)

In general, on Alignment C, the Bottineau Transitway would follow the BNSF railroad corridor along the southern half of the alignment. In some locations, the route would parallel a primary roadway. In other locations, it would be more secluded, running behind commercial and residential areas. At the north end of Alignment C, the route would pass under I-94, and the development pattern in that vicinity is comprised of single-story commercial buildings oriented towards CSAH 81, primarily clustered at I-94, 63rd Avenue, and Bass Lake Road. The transitway would parallel CSAH 81, a multi-lane divided-median county highway. Along the edges of the railroad right-of-way, rows of tree cover provide some visual buffer for adjacent residential properties. The railroad right-of-way is also a primary utility corridor and includes overhead utility lines and poles. Alignment C passes over the Canadian Pacific (CP) railroad approximately ½ mile south of Bass Lake Road.

Moving south, the transitway would run adjacent to West Broadway Avenue, a lower speed two-lane county roadway. Between 47th Avenue and TH 100, a handful of mature trees are in a grass median between the railroad and West Broadway Avenue. Crossing over TH 100, the transitway would pass along the west edge of downtown Robbinsdale's commercial area between 42nd Avenue and Noble Avenue. Downtown Robbinsdale is an area primarily comprised of single-story storefront buildings and an enhanced streetscape with brick pavers, decorative lighting, and other features. Two neighborhood-scale parks with ball fields are located adjacent to the transitway: Triangle Park and Lee Park. These parks are characterized by mowed lawn with some tree cover at the edges. Along the edges of the railroad right-of-way, rows of tree cover provide some visual buffer for adjacent residential properties, and continuous chain link fencing restricts access.

In the segment between Noble Avenue and 36th Avenue, the transitway would be aligned at a skew from the neighborhood street grid, so vantage points would vary. At the edges of the railroad right-of-way, continuous chain link fencing restricts access. Near 36th Avenue, the railroad corridor is depressed with steep side slopes to allow clearance under the 36th Avenue Bridge. South of 36th Avenue, the transitway would pass by Sochacki Park, a narrow wooded park situated outside the west embankment of the BNSF railroad corridor.

Higher quality visual features identified along Alignment C include:

- I-94 Bridge over the BNSF railroad corridor and CSAH 81
- City of Crystal gateway area (near Bass Lake Road)
- CSAH 81 Bridge over CP railroad corridor
- Green boulevard on west side of West Broadway Avenue between 47th Avenue and TH 100
- West Broadway Avenue and BNSF railroad bridges over TH 100
- Historic Robbinsdale Public Library
- Sacred Heart Catholic Church

Alignment D1 (part of the Preferred Alternative)

Along the edge of the Robbinsdale and Minneapolis city limits, Alignment D1 would run in the eastern 50 feet of the total 100-foot wide BNSF railroad corridor alongside the BNSF railroad tracks. This alignment is independent of other roads. From 36th Avenue southward, the transitway would be depressed in relation to the surroundings with wooded embankments on both sides. Adjacent land uses primarily include residential neighborhoods and public parkland.

While some of the residential areas are secluded from the rail corridor by wider vegetative buffers, others are in proximity or have less vegetative buffer such as along the eastern edge on Indiana Avenue, Kewanee Way, parts of Xerxes Avenue, and the area near the transition to TH 55. Along the western edge of the rail corridor, a linear natural area is comprised of a series of parks that are a natural retreat from the surrounding urban and suburban development including Sochacki Park, South Halifax Park, Rice Lake Park, Mary Hills Nature Area, Glenview Terrace/Valley View Park, and Theodore Wirth Regional Park and Golf Course. The Visual Quality Technical Report (SRF Consulting Group, 2012) includes a description of each park. Within Theodore Wirth Regional Park, Bassett Creek meanders through a patchwork of forested areas at the edge of the golf course as it heads south toward Bassett Lake and TH 55.

The BNSF railroad corridor is also a primary utility corridor. A power substation is located adjacent to the BNSF corridor near 34th Avenue. A high-voltage power line with metal lattice towers runs along the east side of the railroad corridor. The presence of the railroad and utilities through this generally natural area indicates the natural area has been previously disturbed. At TH 55, the transitway would turn east under the westbound TH 55 bridge over the BNSF railroad corridor to the center median of TH 55.

Higher quality visual features identified along Alignment D1 include:

- Theodore Wirth Regional Park and Golf Course
- Bassett Creek and Bassett Lake
- Theodore Wirth Parkway
- Sochacki Park, South Halifax Park, Rice Lake Park, and Mary Hills Nature Center
- Glenview Terrace/Valley View Park
- Plymouth Avenue Bridge over Bassett Creek and BNSF railroad corridor

Alignment D2

In Robbinsdale, Alignment D2 would pass through a residential neighborhood along 34th Avenue where most homes are single-family dwellings. There are mature boulevard street trees and yards with trees and lawn. Approaching CSAH 81, the transitway would pass the Terrace Mall commercial site and then North Memorial Medical Center, which is comprised of a number of variously scaled buildings in a campus layout. It would follow CSAH 81 and West Broadway Avenue, which were both reconstructed within the past ten years to include streetscape enhancements such as decorative lighting and boulevard trees.

Entering Minneapolis, the buildings along West Broadway Avenue and Penn Avenue are a mix of commercial, residential, and civic structures. Commercial buildings are generally single-story structures. Some are freestanding and some are “storefront” buildings. Two three-story, multi-family residential structures were newly constructed within the last several years, one of which is a senior housing facility. Many single-family homes directly face these two streets with Penn Avenue being predominantly single-family residential. Much of the housing stock was constructed in the early to mid-1900s. Some of the building stock and tree cover in the neighborhood was affected by the 2011 tornado, and some repairs appear to be pending.

Higher quality visual features identified along Alignment D2 include:

- Victory Memorial Parkway and Theodore Wirth Parkway
- City of Robbinsdale gateway area
- City of Minneapolis gateway area
- Church of St. Anne
- 5 Points Building plaza
- Minneapolis Urban League building
- NorthPoint Health and Wellness Center
- Lincoln Community School
- International Foursquare Gospel Church

Alignment D Common Section (part of the Preferred Alternative)

The Alignment D Common Section runs along TH 55 towards downtown Minneapolis. As part of the *Minneapolis Near Northside Master Plan* (2000), TH 55 was envisioned as a "gateway" corridor. This plan acknowledges that LRT would need to be accommodated in the right-of-way in the future. Since the plan's adoption, a number of improvements have been implemented, including new boulevard and median tree plantings to complement the mature trees along the south frontage road.

Along TH 55, homes in the adjacent residential neighborhoods face inward to the local streets and do not face the highway directly. Some multi-family residential buildings ranging from two to six stories do have some units facing the highway. On the south side of TH 55, Harrison Park includes ball fields and a community center building. Additionally, several civic buildings and spaces have prominent locations.

East of I-94, industrial and civic buildings line the route, and there is little greenery. The intersection of TH 55, 6th Avenue, and 7th Street is a skewed configuration and a challenging area to navigate visually. 7th Street branches off as a multi-lane road to access downtown Minneapolis. Approaching the Target Field Station, 6th Avenue realigns to the street grid of downtown becoming 5th Street. The roadway narrows where it runs parallel to the existing Blue Line and Green Line (Central) LRTs. The taller buildings of downtown Minneapolis are visible in the near distance.

Higher quality visual features identified along the Alignment D Common Section include:

- Boulevard and median trees along TH 55 west of I-94
- Harrison Neighborhood gateway sculptures
- Floyd B. Olson memorial
- Zion Baptist Church
- Seed Academy and Wayman Church
- Sumner Library
- Metro Transit headquarters
- HERC site landscaping

4.5.6 Environmental Consequences

4.5.6.1 Operating Phase (Long-Term) Impacts

No-Build Alternative

No effects to visually sensitive resources are anticipated as a result of the No-Build alternative.

Enhanced Bus/TSM Alternative

A proposed transit center and park-and-ride facility would be constructed at Oak Grove Parkway and West Broadway Avenue, north of TH 610, and would alter the current landscape characterized by agricultural, grassland, and remnant woodland at the edge of suburban development.

Build Alternatives

The following summarizes the degree of effect to existing visual features along each of the proposed alignments. The Visual Quality Technical Report (SRF Consulting Group, 2012) includes detailed descriptions of these effects.

Alignment A

Alignment A would use land in Maple Grove that is either currently being used for gravel mining or is existing road or freight rail right-of-way. Potential effects to visual quality would be generally minimal throughout Alignment A. Minimal effects are anticipated to Shingle Creek, a higher quality visual feature identified along this alignment. The new transitway bridge that would curve from the south side of Brooklyn Boulevard onto the BNSF railroad corridor would also span Shingle Creek; it would therefore not impede views from eye level. The retaining walls at the end of the bridge in BNSF railroad corridor would end before the wetland features adjacent to the creek; it would therefore not impede views from CSAH 81.

Alignment B (part of the Preferred Alternative)

Alignment B utilizes the existing right-of-way of West Broadway Avenue. For much of Alignment B the transitway would be located in the center of the roadway and would have minimal to moderate effects to visual quality. Effects on higher quality visual features are listed below:

- Shingle Creek – Minimal

Views of Shingle Creek would be minimally affected. The only transitway features in the vicinity would be the tracks and catenary in the center median of the roadway, and they would not visually interrupt clear views to the creek.

- West Broadway Avenue Bridge over TH 610 – Minimal

The bridge would be minimally affected. The new transitway bridge that would parallel the West Broadway Avenue Bridge over TH 610 would block views of the West Broadway Avenue Bridge, but the transitway bridge could be designed to be consistent with the TH 610 aesthetic guidelines.

Alignment C (part of the Preferred Alternative)

Alignment C utilizes the existing BNSF railroad corridor. Effects to visual quality would generally be minimal because the transitway would run closely parallel to the existing railroad. Some moderate effects are identified. Effects on higher quality visual features are listed below:

- I-94 Bridge over the BNSF railroad and CSAH 81 – Minimal

Since no modifications to the I-94 Bridge would be required, visual effects to this resource would be minimal.

- City of Crystal gateway area – Minimal

Visual effects to the gateway area would be minimal. The gateway sign and landscaping are near the CSAH 81/Bass Lake Road intersection and would not be in conflict with the station location.

- CSAH 81 Bridge over Canadian Pacific railroad – Minimal

Visual effects to the bridge would be minimal. It would not be physically impacted, and since the new bridge for the transitway over the railroad is separated visually by commercial development, there would be minimal visual influence between them.

- Green boulevard west of West Broadway Avenue between 47th Avenue and TH 100 – High

Visual effects to the boulevard would be high. The construction of the transitway would require the removal of some mature trees and reduce the width of the green space separating the roadway and railroad.

- West Broadway Avenue and BNSF Railroad Bridges over TH 100 – Minimal

Visual effects to the bridges would be minimal. The existing BNSF Railroad Bridge would be widened to accommodate the transitway, and a new BNSF Railroad Bridge would be constructed south of the existing bridge. It could be designed to be consistent with the TH 100 aesthetic guidelines.

- Historic Robbinsdale Public Library – Minimal

Visual effects to the library would be minimal since the transitway infrastructure would run within the existing BNSF right-of-way and would not alter views of the building.

- Sacred Heart Catholic Church – Minimal

Visual effects to the church would be minimal since the transitway infrastructure would run within the existing BNSF right-of-way and would not alter views of the building.

Alignment D1 (part of the Preferred Alternative)

Alignment D1 utilizes the existing BNSF railroad corridor between 34th Avenue and TH 55. The transitway would run closely parallel to the existing BNSF freight rail tracks and, as such, would be a modification to an existing dedicated rail corridor rather than the introduction of a new rail corridor. Still, the implementation of LRT would bring an increased frequency of vehicles passing through.

Effects to visual quality would be minimal to moderate. In some locations, the tracks would be in a depressed cut section and shielded by the topography and vegetation. In other instances though, residential and park areas on both the east and west sides have more of a visual connection based on close proximity and varying degrees of openness of existing vegetation. Both temporary and permanent effects to the vegetation along the BNSF railroad corridor from construction may alter the views and amount of screening of adjacent neighborhoods to the east and parks to the west. Effects to higher quality visual features include:

- Sochacki Park, South Halifax Park, Rice Lake Park, and Mary Hills Nature Area – Moderate

These parks would be moderately affected. The additional utilitarian features, as listed in the description of effects to Theodore Wirth Regional Park, would add additional visual intrusions to the perceived "natural" character of the parks beyond the existing railroad and overhead utilities.

- Glenview Terrace/Valley View Park – Minimal

Glenview Terrace/Valley View Park would be minimally affected. The presence of wetlands in the BNSF railroad corridor adjacent the park would prevent cutting into side slopes and minimal removal of trees. The active uses of the park are well buffered by a wooded area.

- **Theodore Wirth Regional Park and Golf Course – Moderate**

Theodore Wirth Regional Park and Golf Course would be moderately affected, since views to the BNSF railroad corridor may be opened up by grading and vegetation thinning for the transitway. The additional utilitarian features, including catenary wires, support poles, tracks, TPSS, and the light rail vehicles, would add visual intrusions to the perceived "natural" character of the park, beyond the existing railroad and overhead utilities.

- **Theodore Wirth Parkway – Minimal**

Theodore Wirth Parkway would be minimally affected since it passes over the transitway on a bridge only briefly. Some views to the BNSF railroad corridor may be opened up in the approaches by grading and vegetation thinning for the transitway but would be peripheral to the immediate scenery adjacent the Parkway.

- **Plymouth Avenue Bridge over Bassett Creek and BNSF railroad – Minimal**

Some modifications to the bridge would be necessary to make space for the transitway whether or not the Plymouth Avenue/Theodore Wirth Regional Park station option is constructed at this location. In either case, the overall visual quality of the bridge would be minimally affected since the primary aesthetic features including the pier arches, railing, and lighting on the deck would remain unchanged. In order to accommodate the new LRT tracks an area below the bridge would be altered from a paved slope to a clear opening with infill walls added to two of the existing arched piers for crash protection and to retain grade. This modification would only be visible from the pedestrian trail west of the BNSF track and would be unnoticeable from Plymouth Avenue above.

A transit station at this location would have a visual presence. Design modifications, such as an enclosed elevator, would be needed to provide transit patrons with access to the station.

- **Bassett Creek and Bassett Lake – Moderate**

Bassett Creek and Bassett Lake would be moderately affected similarly to Theodore Wirth Regional Park since they are part of the park's natural scenery.

Alignment D2

At the northern end of Alignment D2, the transitway transitions from running in the BNSF railroad corridor to running within road right-of-way. As it would enter suburban and urban neighborhoods with denser development patterns than other alignments, the transitway would be in closer visual proximity to a greater number of people. Along Penn Avenue, the transitway cross section design requires the full acquisition of a number of properties resulting in a high degree of visual impacts. Minimal to moderate effects are also identified. Effects to higher quality visual features include:

- **Victory Memorial Parkway and Theodore Wirth Parkway – Minimal**

The parkways would be minimally affected since the new transitway bridge would cross over them in conjunction with the existing CSAH 81 bridges.

- **City of Robbinsdale/Minneapolis gateway area – High**

A welcome sign for Robbinsdale is oriented towards those traveling northbound (over Oakdale Avenue/Lowry Avenue) on CSAH 81. A welcome sign for Minneapolis is oriented towards those traveling southbound (over Oakdale Avenue/Lowry Avenue) on CSAH 81. A number of streetscape features in the center median of CSAH 81 including a monument sign, landscaping, and lighting would be highly affected by the proposed transitway bridge, which curves from 34th Avenue onto CSAH 81, requiring their removal.

- Church of St. Anne – Minimal

The church would be minimally affected since it is a full block away from the transitway and buffered by other buildings.

- 5 Points Building plaza – Minimal

The plaza would be minimally affected since it is already located at a high-traffic intersection. There may potentially be curb or sidewalk alterations based on the conceptual plan, but the sculptural transit shelter, furnishings, and landscaping in the plaza would not be affected.

- Minneapolis Urban League building – Moderate

The Urban League building would be moderately affected. Even though the transitway would be constructed within the median of Penn Avenue and would not affect the building itself, building users would be subject to potential increased distraction as a result of the addition of LRT vehicle frequency. The exterior gathering areas around the building have some buffering from Penn Avenue by a retaining wall and railing since they are set below the sidewalk grade, but would still feel quite close visually.

- NorthPoint Health and Wellness Center – Moderate

The NorthPoint Health and Wellness Center would be moderately affected because Penn Avenue would be widened to the west to accommodate the transitway, thereby requiring partial acquisition of the property frontage. Some building modifications would be necessary to create adequate space for the transitway.

- Lincoln Community School – Moderate

The Lincoln Community School would be moderately affected. Even though the transitway would be constructed within the median of Penn Avenue and would not affect the building itself, building users would be subject to potential increased distraction as a result of the addition of LRT vehicle frequency.

- International Foursquare Gospel Church – High

The church would be highly affected visually since Penn Avenue would be widened to accommodate the transitway and full acquisition of the property and removal of the building to create adequate space for the transitway would be required.

Alignment D Common Section (part of the Preferred Alternative)

In the Alignment D Common Section, the transitway would run along TH 55, a highway that currently accommodates a relatively high amount of traffic. Although it is envisioned as a "gateway" corridor to downtown Minneapolis, the *Minneapolis Near Northside Master Plan* (2000) envisioned that LRT could be accommodated without sacrificing the overall desired character in the context of a redesigned TH 55 right-of-way with a widened center median. This project would not reconstruct the entire highway cross section, and the construction of the transitway within the existing median would alter its existing green character. Considering the existing industrial character of the visual context east of I-94 approaching downtown, it is anticipated that minimal visual effects would occur in that area. Effects to higher quality visual features include:

- Boulevard and median trees along TH 55 west of I-94 – High

The TH 55 center median would be highly affected. Newly planted trees would need to be removed for the transitway alignment. After the transitway is constructed in the center median, there would not be adequate space for new trees alongside it. Trees at the highway edges would remain and continue to support the "gateway" appearance of the corridor.

- Harrison Neighborhood gateway sculptures – Minimal

The sculptures would be minimally affected since the transitway turns onto TH 55 and does not conflict with their siting.

- Floyd B. Olson memorial – Minimal

The memorial would be minimally affected since the transitway turns onto TH 55 and does not conflict with its siting.

- Zion Baptist Church – Minimal

The church would be minimally affected since it is visually buffered by the north frontage road along TH 55. Use of church sanctuaries is typically an indoor activity, and the church is already located along a busy highway.

- Seed Academy and Wayman Church – Minimal

The school and church would be minimally affected since the use of church sanctuaries is typically an indoor activity, and it is already located along a busy highway.

- Sumner Library – Minimal

The library would be minimally affected visually since it is already located along a busy highway.

- Metro Transit headquarters – Minimal

The Metro Transit building would be minimally affected visually since it is already located along a busy highway and serves as a transit vehicle service and storage site.

- HERC site landscaping – Moderate

The HERC site landscaping would be moderately affected by the Bottineau Transitway. The transitway would run parallel to 6th Avenue in a widened right-of-way, which would require partial removal of planter wall, trees, and the lawn area at the corner of 6th Avenue and 7th Street.

- Ford Building – Minimal

The Ford Building would be minimally affected because the Blue Line already passes the building along 5th Street.

Summary of Operational Impacts by Alternative

Based on the degree of effect identified for each alignment, a list of effects by alternative is provided below.

- No-Build Alternative: None
- Enhanced Bus/TSM Alternative: Minimal
- Alternative A-C-D1: Moderate
- Alternative A-C-D2: High
- Alternative B-C-D1 (Preferred Alternative): Moderate
- Alternative B-C-D2: High

4.5.6.2 Construction Phase Impacts

Anticipated visual effects during construction would be similar to the appearance of typical roadway projects including the temporary presence of heavy equipment, traffic control measures, and construction

activities. Where the transitway passes along residential neighborhoods, the construction activity would likely be perceived as visually disruptive to typically more peaceful residential settings.

Alignment A

Future redevelopment of the area is planned but would not be implemented prior to the transitway. Therefore, without any active land use except gravel mining, no construction phase effects are anticipated for Alignment A.

Alignment B (part of the Preferred Alternative)

The construction of the new bridge for the transitway over TH 610 would be highly visible to travelers along eastbound TH 610.

Alignment C (part of the Preferred Alternative)

The reconstruction of the BNSF bridge over TH 100 to create adequate width for the transitway would be highly visible to travelers along northbound TH 100. Where the transitway passes along residential neighborhoods, the construction activity would likely be perceived as more visually disruptive to these typically peaceful residential settings.

Alignment D1 (part of the Preferred Alternative)

Users of Theodore Wirth Regional Park, Sochacki Park, South Halifax Park, Rice Lake Park, and Mary Hills Nature Area would likely perceive construction activity as undesirable and not consistent with their anticipated recreational experience. The reconstruction of the westbound TH 55 bridge over the BNSF railroad corridor and depressed transitway with retaining walls curving onto TH 55 would be highly visible to travelers along TH 55. Based on final construction limits, there may be temporary grading for the construction of retaining walls or other features that would affect slopes and vegetation.

Alignment D2

Construction of the fly-over bridge from 34th Avenue to CSAH 81 and the North Memorial station would be highly visible to travelers along CSAH 81, West Broadway Avenue, Lowry Avenue, Victory Memorial Parkway, and Theodore Wirth Parkway. With the relatively narrow street width, homes with frontages along West Broadway Avenue on the east side of Penn Avenue would be subject to the construction activity nearby.

Alignment D Common Section (part of the Preferred Alternative)

The reconstruction of the TH 55 Bridge over I-94 to create adequate width for the transitway would be highly visible to travelers along I-94 and TH 55.

Summary of Construction Impacts by Alternative

Construction impacts would range from minimal to high depending on the acquisition of properties for additional transitway right-of-way, removal of vegetation, and visual proximity.

- **No-Build Alternative:** None
- **Enhanced Bus/TSM Alternative:** Minimal
- **Alternative A-C-D1:** Moderate
- **Alternative A-C-D2:** High
- **Alternative B-C-D1 (Preferred Alternative):** Moderate
- **Alternative B-C-D2:** High

4.5.7 Avoidance, Minimization, and/or Mitigation Measures

The various Build alternatives would not result in a substantial change to the visual character of the corridor as a whole. The most dramatic (high) visual effects would occur as part of alternatives A-C-D2 and B-C-D2, particularly along Alignment D2 where a significant number of homes would be removed and the Alignment D Common Section where the existing center green median of TH 55 would be affected. Under these alternatives, the community would be involved in the station design process, and the process of selecting landscaping and streetscape elements that would complement and benefit the visual nature of this neighborhood. Along TH 55, coordination would occur with MnDOT and the MPRB to identify potential opportunities for tree replacement.

Moderate visual effects are anticipated as a result of alternatives A-C-D1 and B-C-D1, particularly along Alignment D1 near Theodore Wirth Regional Park and the string of several other community parks. In this location, transitway elements added to the rail corridor may be visually screened or softened using landscaping where adequate space permits, and the loss of existing vegetation on side slopes for grading or access purposes would be replaced to the extent feasible. The MPRB and the Cities of Minneapolis, Golden Valley, and Robbinsdale would be involved in selecting landscape treatments that would be compatible with the character of the parks and the surrounding neighborhoods.

For all alternatives, minimal impacts are anticipated as a result of station construction. Stations can be designed to be aesthetically attractive and to complement their surroundings. Station design and aesthetics would be addressed during subsequent engineering phases.

As with station construction, TPSS facilities can be designed to be visually appealing and to fit with their surroundings. To minimize visual quality impacts, TPSS siting would consider the context of each facility in relation to adjacent properties and resources. TPSS design and siting would be determined as the Bottineau Transitway moves into Project Development.

As components of the various Build alternatives, minimal effects to visual quality are generally anticipated to result under Alignments A, B, and C. In Alignment B, the potential construction of the OMF at 93rd Avenue would have a moderate effect on the neighborhood across the street. City code requirements for a front landscape yard would provide some screening. In general, where feasible, removed vegetation would be replaced with vegetation of a similar type. No other specific mitigation is proposed.

4.6 Business Impacts

This section focuses specifically on commercial uses in the Bottineau Transitway, and potential impacts to businesses as a result of the project. A full evaluation of both residential and commercial right-of-way impacts is available in Section 4.3 of this Draft EIS. A complete parking analysis is available in Section 3.5.

4.6.1 Regulatory Context and Methodology

No specific laws or executive orders regulate the topic of economic impacts. NEPA and MEPA form the general basis of consideration for economic issues.

Operating phase (long-term) impacts include direct impacts of the project as well the permanent impacts of operating the transitway, including acquisition of right-of-way, loss of on-street parking, and changes in traffic patterns. Construction phase impacts are defined as impacts generally temporary in nature associated with constructing the project.

4.6.2 Study Area

The study area for operating phase (long-term) direct impacts (right-of-way acquisition, loss of on-street parking) is defined as the potential area of disturbance for the project.

4.6.3 Affected Environment

Existing Economic Activity

The following section outlines the existing economic activities within the Bottineau Transitway. Existing uses are described for each alignment.

Alignment A

The predominant economic activity in the westernmost segment of Alignment A is gravel mining. Extraction has been completed west of Hemlock Lane, and the area has been redeveloped for commercial and residential use. Extraction activities have moved eastward and are expected to continue for several decades. As the extraction is completed in an eastward fashion, the remaining land would be graded and made available for development.

Continuing east from US 169, Alignment A runs along the south side of Brooklyn Boulevard adjacent to a large area of industrial/business park uses. The proposed Boone Avenue station would be located in this area.

As the alignment shifts onto the BNSF railroad corridor paralleling CSAH 81, commercial/industrial uses surround the corridor. The *Brooklyn Park 2030 Comprehensive Plan* confirms that these activities are planned to remain with some areas transitioning to mixed use.

Alignment B (part of the Preferred Alternative)

Agricultural activities at the north end of Alignment B are currently transitioning from agricultural to commercial use, most notably with the development of the Target North Campus and developing business parks in the area of the proposed 93rd Avenue station.

The proposed Brooklyn Boulevard station lies within a large suburban commercial node characterized by "big box" (e.g., Target) and other auto-oriented retail.

Alignment C (part of the Preferred Alternative)

Numerous commercial and industrial uses surround Alignment C in the cities of Brooklyn Park, Crystal, and Robbinsdale. At the proposed 63rd Avenue station area, a small cluster of businesses is located on the west side of CSAH 81. The *Brooklyn Park Comprehensive Plan* guides future redevelopment of this area to mixed use.

South of 63rd Avenue, few businesses are located adjacent to the Bottineau Transitway with the exception of the Crystal Airport located on the east side of CSAH 81. Commercial activity increases south of the Bass Lake Road station area.

East of the Robbinsdale station lies "downtown" Robbinsdale, a large retail/office area centered on both West Broadway Avenue and CSAH 81. The *City of Robbinsdale Comprehensive Plan* envisions intensification of commercial use in the downtown area.

Alignment D1 (part of the Preferred Alternative)

Few businesses surround Alignment D1, which lies within a predominantly residential area. Commercial activities are not proposed for this area.

Alignment D2

The North Memorial Medical Center anchors a small retail and medical clinic commercial area at the north end of Alignment D2.

Additional retail activity is scattered along the corridor as it proceeds southward, culminating in a small commercial node at the proposed Broadway/Penn station. As the alignment turns southward into a primarily residential area, a limited number of small businesses are scattered among the residential uses.

The *Minneapolis Plan for Sustainable Growth* reinforces this existing pattern, encouraging business activity to concentrate along West Broadway Avenue.

Alignment D Common Section (part of the Preferred Alternative)

No businesses are located in the western portion of the Alignment D Common Section.

East of I-94, the Alignment D Common Section enters the downtown area of Minneapolis, characterized by commercial and industrial uses. The alignment transitions to the existing Blue Line LRT at the Target Field Station, which is currently transitioning from industrial uses to a signature mixed use development adjacent to the Minnesota Twins ballpark as indicated in The Future Land Use Plan map for the Downtown Sector from *The Minneapolis Plan*. The last station to be constructed as part of the Bottineau Transitway would be at Van White Boulevard. The terminal station at the transition to the Blue Line would be located at the Target Field Station, an intermodal transit station under construction and planned to open in 2014. The *North Loop Small Area Plan* (2010) guides redevelopment for the North Loop area and calls for mixed use developments organized to support transit.

4.6.4 Environmental Consequences

4.6.4.1 Operating Phase (Long-Term) Impacts

The Bottineau Transitway would result in several types of direct impacts to existing businesses in the study area. This section evaluates these direct economic impacts including the following:

- Displacement of commercial uses due to right-of-way acquisition
- Loss of on-street parking and changes to property access due to location of LRT within the street right-of-way
- Other property acquisition (both commercial and non-commercial) due to right-of-way acquisition resulting in reduced property tax collection

No-Build Alternative

The No-Build alternative would not have any direct economic impacts. Adverse impacts due to introduction of the transitway, such as displacement of businesses, loss of parking, and change in access, would not occur.

Enhanced Bus/TSM Alternative

Direct impacts would be limited to the area of the proposed transit center and park-and-ride facility at Oak Grove Parkway and West Broadway Avenue, where undeveloped land would be converted to transportation use. As the area is currently undeveloped and not in economic use, no direct economic impacts would occur.

Build Alternatives

Alignment A

Construction of the transitway would largely occur within existing or future roadway right-of-way through this alignment.

Table 4.6-1 summarizes the direct impacts to commercial uses along Alignment A.

Table 4.6-1. Summary of Direct Impacts to Commercial Uses along Alignment A

Type of Impact	Magnitude of Impact
Number of businesses displaced	0
Number of commercially-zoned properties fully acquired	1
Number of on-street parking spaces lost	0
Loss of property access[1]	0
Estimated market value of properties no longer taxable[2]	$1.56 million

[1] "Property access" as defined by the ability for a vehicle to park in front of the property
[2] Total of 2012 Market Values as determined in the Hennepin County tax records for all full property acquisitions on the alignment

Alignment B (part of the Preferred Alternative)

Similar to Alignment A, construction of the transitway would largely occur within existing or future roadway right-of-way through this alignment. One business would be displaced by the proposed Bottineau Transitway Project.

Table 4.6-2 summarizes the direct impacts to commercial uses along Alignment B.

Table 4.6-2. Summary of Direct Impacts to Commercial Uses along Alignment B

Type of Impact	Magnitude of Impact
Number of businesses displaced	1
Number of commercially-zoned properties fully acquired	1
Number of on-street parking spaces lost	0
Loss of property access[1]	0
Estimated market value of properties no longer taxable[2]	$4.61 million

[1] "Property access" as defined by the ability for a vehicle to park in front of the property
[2] Total of 2012 Market Values as determined in the Hennepin County tax records for all full property acquisitions on the alignment

Alignment C (part of the Preferred Alternative)

The transitway would be constructed in BNSF railroad right-of-way for the majority of this alignment with limited impacts to existing commercial activities. No businesses abutting the rail corridor currently use the adjacent rail corridor for commercial activity, nor do any commercial sidings exist along the corridor that could be disrupted by the Bottineau Transitway.

Table 4.6-3 summarizes direct impacts to commercial uses along Alignment C.

Table 4.6-3. Summary of Direct Impacts to Commercial Uses along Alignment C

Type of Impact	Magnitude of Impact
Number of businesses displaced	2
Number of commercially-zoned properties fully acquired	1
Number of on-street parking spaces lost[1]	0
Loss of property access[2]	1
Estimated market value of properties no longer taxable[3]	$1.13 million

[1] A commercial business site north of 42nd Avenue developed 17 parking spaces on freight rail property without obtaining an easement.
[2] "Property access" as defined by the ability for a vehicle to park in front of the property
[3] Total of 2012 Market Values as determined in the Hennepin County tax records for all full property acquisitions on the alignment

Alignment D1 (part of the Preferred Alternative)

Alignment D1 passes through the cities of Robbinsdale, Golden Valley, and Minneapolis. The majority of Alignment D1 is an existing BNSF railroad corridor located approximately 20 to 30 feet below the

surrounding grade. Land uses outside the depressed rail corridor are primarily park and residential. Due to these characteristics, there would be no direct impacts to commercial activity.

Alignment D2

Alignment D2 is located on existing city streets. Due to the number and proximity of commercial uses along this alignment, a number of businesses would experience direct impacts from construction of the transitway. Retail businesses are more dependent on on-street parking and direct access to the roadways on which the transitway would be located in this alignment, resulting in further impacts.

Table 4.6-4 summarizes direct impacts to commercial uses along Alignment D2.

Table 4.6-4. Summary of Direct Impacts to Commercial Uses along Alignment D2

Type of Impact	Magnitude of Impact
Number of businesses displaced	3
Number of commercially-zoned properties fully acquired	7
Number of on-street parking spaces lost	300 (primarily in residential areas)
Loss of property access[1]	77
Estimated market value of properties no longer taxable[2]	$15.23 million

[1] "Property access" as defined by the ability for a vehicle to park in front of the property
[2] Total of 2012 Market Values as determined in the Hennepin County tax records for all full property acquisitions on the alignment

4.6.4.2 Construction Phase Impacts

Construction phase impacts include impacts to existing businesses during transitway construction through temporary vehicular and pedestrian access changes, temporary loss of parking, and nuisance impacts related to construction activities, such as noise and dust.

No-Build Alternative

No construction impacts would occur under the No-Build alternative.

Enhanced Bus/TSM Alternative

Construction phase impacts would be limited to the area of the proposed transit center and park-and-ride facility at Oak Grove Parkway and West Broadway Avenue. Businesses in this vicinity could expect to be temporarily affected by limited changes in customer access, on-street parking availability, service access, traffic flow, and congestion during construction activities.

No further construction phase economic impacts are anticipated.

Build Alternatives

Under all of the Build alternatives, businesses could expect activities to be temporarily affected by changes in customer access, on-street parking availability, service access, traffic flow, and congestion during construction activities. Depending on the intensity and duration of construction activities, businesses dependent on ease of customer access may experience a loss of revenue during this time.

Businesses with outdoor activities such as outdoor dining or outdoor storage of products or materials could also experience negative impacts due to noise, dust, or other nuisance conditions during nearby construction activities.

Businesses that rely on providing customers with a quiet atmosphere (e.g., dining, spa services) may also be affected during nearby construction activities.

Businesses may experience short-term disruptions of utility services during construction activities if utilities need to be moved or replaced.

4.6.4.3 Summary of Economic Effects by Alternative

The following Table 4.6-5 shows a summary of adverse economic and business impacts for each alternative.

Table 4.6-5. Summary of Economic Effects by Alternative

Alternative	Total Adverse Impacts
No-Build	No economic effects
Advanced Bus/TSM	Limited direct impacts as construction is limited to park-and-ride facility
A-C-D1	Limited direct impacts Construction impacts associated with access changes, temporary loss of parking, and nuisance impacts (e.g., noise and dust)
A-C-D2	Greater direct impacts due to greater right-of-way acquisition and on-street parking loss Greater construction impacts given land use and dependence of businesses on access and on-street parking
B-C-D1 (Preferred Alternative)	Limited direct impacts Construction impacts associated with access changes, temporary loss of parking, and nuisance impacts (e.g., noise and dust)
B-C-D2	Greater direct impacts due to greater right-of-way acquisition and on-street parking loss Greater construction impacts given land use and the dependence of businesses on access and on-street parking

4.6.5 Avoidance, Minimization, and/or Mitigation Measures

The alternatives development process sought to minimize impacts to the greatest degree possible while preserving project benefits.

Loss of commercial property would be mitigated by payment of fair market compensation and provision of relocation assistance in accordance with applicable laws and statutes, as noted in Section 4.3 Displacement of Residents and Businesses.

While not a specific mitigation measure, Hennepin County and the Metropolitan Council would support local communities' station area planning efforts to enhance the potential economic benefits of the Bottineau Transitway through community development.

Measures to avoid and/or minimize adverse impacts to businesses during project construction including maintenance of traffic, maintenance of access, business signage, and advance communication of construction activities would be provided.

4.7 Safety and Security

4.7.1 Regulatory Context and Methodology

The Metropolitan Council, as the owner and operator of the Bottineau Transitway, follows safety and security policies that establish minimum requirements for facilities based on local, state, and federal codes or standards. These codes and standards include, but are not limited to, the applicable parts of:

- The National Fire Protection Association (NFPA) 130, *Standard for Fixed Guideway Transit or Passenger Rail Systems*

- The Uniform Building Code, 2007 Edition as amended by the cities of Minneapolis, Golden Valley, Robbinsdale, Crystal, Brooklyn Park, and Maple Grove
- Uniform Fire Code, 1997 Edition as amended
- The 2007 Minnesota State Building Code
- The Life Safety Code as well as ISO standards
- American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM) Standards

In addition, the FTA provides safety and security oversight for major capital projects (*Safety and Security Guidance for Recipients with Major Capital Projects*, covered under 49 CFR part 633, "Project Management Oversight"). The design of the Bottineau Transitway should meet the following minimum objectives:

- Design for minimum hazard through the identification and elimination of hazards through the use of appropriate safety design concepts and/or alternative designs
- Use of fixed, automatic, or other protective safety devices to control hazards which cannot be eliminated
- Use of warning signals and devices if neither designs or safety devices can effectively eliminate or control an identified hazard
- Provide special procedures to control hazards which cannot be minimized by the aforementioned devices

Safety and security aspects of the Bottineau Transitway would be developed in accordance with the Metropolitan Council's policies and procedures. Metropolitan Council's *Regional Transitway Guidelines* and *Station and Support Facility Design Guidelines User Guide Supplement* (February 2012) provide technical guidance for the design of transitway facilities. According to this guidance, Crime Prevention Through Environmental Design (CPTED) principles should be used for all passenger facilities. This approach is consistent with the Minneapolis zoning ordinance, which requires adherence to CPTED principles.

At this time, safety and security policies and procedures have not been developed specifically for the Bottineau Transitway; policies, procedures, and any mitigation measures required for safety and security would be specified at an appropriate level of detail in the Final EIS. For the Green Line (Central Corridor) LRT project, which began construction in summer 2010 and is on schedule to be operational in 2014, the Metropolitan Council developed a Safety and Security Management Plan (SSMP) as part of entering into Preliminary Engineering, and the SSMP was refined during following project phases. As was done for Green Line (Central Corridor) LRT, safety and security plans would be developed for the Bottineau Transitway as the project moves into Project Development.

Metro Transit employees and consultants are expected to fully comply with the provisions of all safety and security plans developed and fully cooperate during planning, engineering, and construction to provide a safe Bottineau Transitway.

4.7.2 Study Area

The study area includes facilities within and adjacent to the potential area of disturbance of the transitway system and considers the proximity of proposed alignments to schools, playgrounds, and other places that attract school-age children and other persons of special concern relative to safety and security.

4.7.3 Affected Environment

Public safety and security along the corridor is currently provided by the police, fire departments, and emergency response units of the communities adjacent to the proposed Bottineau Transitway. The Bottineau Transitway alignments pass through the cities of Maple Grove, Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis. Each city has a system for responding to emergencies such as weather, fire, rescue incidents, hazardous materials issues, and homeland security. Minneapolis Police Precincts One and Four provide crime prevention services for the North Loop, Harrison, Sumner-Glenwood, Near-North, Willard-Hay, and Jordan neighborhoods.

Concerns related to the safety of neighborhood children, trail users, pedestrians, and transitway commuters were identified during the Scoping process. There are multiple areas along the Bottineau Transitway for which safety may be a concern. Specific community facilities and parklands with potential safety issues are listed in Table 4.7-1 along with their locations. Community facilities are also identified in Section 4.2 and discussed in the context of social impacts. Parks and trails are identified and discussed in Chapter 8 Draft Section 4(f) Evaluation regarding potential project impacts to these recreational resources.

Table 4.7-1 Community Facilities and Parklands with Potential Safety Concerns

Alignment A		
Hennepin Technical College	9000 Brooklyn Boulevard	Brooklyn Park
Alignment B (part of the Preferred Alternative)		
North Hennepin Community College	7411 85th Avenue	Brooklyn Park
Step by Step Montessori School	8401 West Broadway Avenue	Brooklyn Park
Future Hennepin County Library facility	85th Avenue and West Broadway Avenue	Brooklyn Park
Alignment C (part of the Preferred Alternative)		
Sacred Heart Catholic Church and School	4087 West Broadway Avenue	Robbinsdale
Triangle Park	North of 40th Avenue	Robbinsdale
Lee Park	Between 36th Avenue and 38th Avenue	Crystal
Alignment D1 (part of the Preferred Alternative)		
Sochacki Park	Between 26th Avenue and 34th Avenue	Robbinsdale
Mary Hills Nature Area	2190 Bonnie Lane	Golden Valley
St. Margaret Mary Catholic Church and Loveworks Academy	2225 Zenith Avenue	Golden Valley
Alignment D2		
Lincoln Community School playground	2131 12th Avenue	Minneapolis
Minneapolis Public Schools athletic field	West of Lincoln Community School	Minneapolis
Urban League Academy Elementary	2100 Plymouth Ave.	Minneapolis
Alignment D Common Section (part of the Preferred Alternative)		
Sumner Library	611 Van White Memorial Boulevard	Minneapolis
La Creche Early Childhood Center	1800 Olson Memorial Highway	Minneapolis
Harvest Preparatory School (K-6)	1300 Olson Memorial Highway	Minneapolis

4.7.4 Environmental Consequences

4.7.4.1 Operating Phase (Long Term) Impacts

No-Build Alternative

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

Enhanced Bus/TSM Alternative

No positive or adverse impacts to safety and security are anticipated to result from the Enhanced Bus/TSM alternative.

Build Alternatives

This section describes proposed design elements and other measures to increase personal safety and security at the proposed stations and along the Bottineau Transitway. Potential impacts associated with public safety at specific locations along each of the alignments are also discussed. Given adherence to transitway design guidelines and the oversight of security personnel, no adverse impacts related to safety and security are anticipated along the Bottineau Transitway. Safety measures for co-locating freight and transit within the right-of-way are addressed in Chapter 3.

Design Elements

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

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

Station platforms would be fenced on the side not used to access the transitway at median stations and where significant grade changes exist at side platforms. Fencing would also be installed at locations where informal (illegal) crossing of the existing freight rail track have been identified.

Safety and security within the Bottineau Transitway is the joint responsibility of the operator and local law enforcement authorities. Metro Transit has its own licensed police force to address public safety on and near the transit system. Transit police routinely patrol the bus routes and bus stop areas, as well as the Blue Line LRT. Transit police officers on the Blue Line system, which is similar to the Bottineau Transitway system, provide security at the LRT stations and in the rail cars.

Alignment A

Hennepin Technical College is located north of the proposed Boone Avenue/Hennepin Tech station. It is anticipated that students would use the Bottineau Transitway to commute to and from the college, during day and evening hours. Adherence to design guidelines and other measures would maintain a safe and secure transit environment.

Alignment B (part of the Preferred Alternative)

North Hennepin Community College, Step by Step Montessori School, and the future Hennepin County Library are near the proposed 85th Avenue station. Appropriate lighting, fencing, and other measures would maintain the safety of commuters, college students, children, and future library patrons. No adverse impacts are expected near the 85th Avenue station.

Alignment C (part of the Preferred Alternative)

Sacred Heart Catholic Church and School, which provides K-8 curriculum and daycare facilities, is located one block east of the Bottineau Transitway. Adherence to design guidelines and other measures would maintain a safe and secure transit environment for schoolchildren near the Bottineau Transitway.

Triangle Park is located immediately west of the BNSF railroad corridor near the proposed Robbinsdale station. The park provides playground equipment and a wading pool for children. The perimeter of the park is bounded by chain-link fencing acting as obstacle barrier between the BNSF railroad corridor and the park. The fencing is expected to remain, thereby continuing to serve as a barrier between park activities and Bottineau Transitway operations.

Lee Park is also located immediately west of the BNSF railroad corridor and has a playground, ball fields, and skating rink. Existing fencing provides a barrier between the park and the railroad corridor. The fencing is expected to remain, serving as a barrier between park activities and Bottineau Transitway operations. No adverse impacts are anticipated.

Alignment D1 (part of the Preferred Alternative)

Community concerns related to the safety of park and trail users were expressed during the Scoping process. There are several informal (illegal) crossings of the BNSF railroad corridor within parkland between 36th Avenue and Golden Valley Road. Pedestrians who cross at these unmarked locations are illegally trespassing on (private) BNSF property. During the Scoping process, it was learned that residents of the area east of the park cross the BNSF railroad corridor at these illegal crossing to access the trail and Sochacki Park. Fencing along informal crossings in Sochacki Park and Mary Hills Nature Area would increase safety of trail users.

St. Margaret Mary Catholic Church and Loveworks Academy are situated north of the Golden Valley Road station option. Loveworks Academy is a public charter school serving students in kindergarten through the eighth grade. Adherence to design guidelines and other measures would maintain a safe and secure transit environment for schoolchildren near the proposed Golden Valley Road station option.

Alignment D2

The Minneapolis Urban League and Elementary School is located near the proposed Penn/Plymouth station within the northeast quadrant of this intersection. The school serves children in kindergarten through the eighth grade. Adherence to design guidelines and other measures would maintain a safe and secure transit environment for schoolchildren near the proposed Penn/Plymouth station.

The Lincoln Community playground is located east of Penn Avenue and south of 12th Avenue. The playground is open to the public. The playground is fenced, providing a physical barrier along Penn Avenue and the proposed alignment.

A Minneapolis Public Schools athletic field is located across from the Lincoln Community School building. The athletic field is used by the school system for football and soccer games. Currently, a chain-link fence encompasses the athletic field. The Bottineau Transitway would require the acquisition of a strip of land on the east side of the field. The fence would be replaced, maintaining the barrier between the athletic field and the proposed transitway along Penn Avenue.

Alignment D Common Section (part of the Preferred Alternative)

La Creche Early Childhood Center and Harvest Preparatory School (K-6) are located west of the proposed Van White Boulevard station within 60 feet north of TH 55. Sumner Library is situated at the northwest corner of TH 55 and Van White Boulevard. The Bottineau Transitway would be constructed within the median of TH 55 with existing east-west traffic flow maintained on both sides. Adherence to design guidelines, including the inclusion of pedestrian signals and well-marked crosswalks at crossing locations, would enhance safety along TH 55.

Traction Power Substations

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

4.7.4.2 Construction Phase Impacts

Construction activity may pose a safety risk to both workers and the public. Potential construction impacts for workers include temporary hazards to personal safety such as the possibility for worker-vehicle conflict in restricted workspaces under traffic conditions, work in deep and confined spaces during utility relocations and construction, and the potential for exposure to potential contaminants during soil excavation and drilling work. Both federal Occupational Safety and Health Administration (OSHA) and Minnesota OSHA (MNOSHA) standards for safety of construction site personnel would be maintained. Access to construction sites would be limited by fencing and security gates to prevent inadvertent access by those without access clearance.

Public safety, particularly the encroachment of pedestrians, bicyclists, and other spectators near open excavations and other construction activity, is an issue to be resolved by the creation, proper timing, and placement of protective safety programs, public information efforts, and selected protective measures. The use of construction equipment, delivery of materials, and other construction site activity may have temporary negative safety impacts on adjacent roadways and pedestrian areas.

Applicable safety and security precautions would be specified in the SSMP and SEPP and would be overseen by the Metro Transit Police in cooperation with local law enforcement and emergency response personnel.

4.7.5 Avoidance, Minimization, and/or Mitigation Measures

System safety and security oversight for the project would be achieved through implementation of safety and security plans by the Metropolitan Council. The primary purpose of these plans is to consider safety and security when designing and constructing the project. These plans would cover requirements for safety and security design criteria, hazard analyses, threat and vulnerability analyses, construction safety and security, operational staff training, and emergency response measures. These plans and programs would also specify actions and requirements of the Metropolitan Council and Metro Transit Police to maintain continuation of safety and security during Bottineau Transitway operations. Safety and security plan development for the project would be closely coordinated with city and county law enforcement agencies. Safety and security notification and outreach to the affected communities could include mass media public service announcements, signage of roadway or trail closures, and during community meetings or public events. The Metropolitan Council would be the responsible agency for communicating safety and security measures during construction and operations of the Bottineau Transitway.

Based on previous transit project practice, it is anticipated that safety and security for the Bottineau Transitway project would be facilitated by a Metro Transit Fire Life Safety Committee (FLSC). Should the

Metropolitan Council follow past practices, the FLSC for the Bottineau Transitway would be tasked with facilitating exchange of information on safety and security to minimize fire and life safety hazards to rail patrons and to project employees and the public. The FLSC would be responsible for reviewing design specifications, drawings, and other related documents for Metro Transit facilities and systems for compliance with established federal, state, and local regulations, codes, and standards relating to fire/life safety.