

Technical Report Economic Impacts

1.0 Introduction

1.1 Purpose of Report

This *Economic Impacts Technical Report* has been prepared in support of the Bottineau Transitway Project Draft Environmental Impact Statement (Draft EIS). The objective of this report is to evaluate the Project's potential direct, indirect, and construction-related economic impacts within the study area. Broad economic impacts, both direct and indirect, are also examined.

Direct economic impacts include:

- Displacement of commercial uses due to right-of-way acquisition
- Other property acquisition (non-commercial) due to right-of-way acquisition
- Loss of on-street parking due to location of LRT within the street right of way

Construction-related impacts include:

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

Potential indirect economic impacts include:

- Changes in local economic activity due to improved transportation access near stations (potential for redevelopment measured through soft site analysis, land use framework, walkability, and real estate market strength)

Broad economic impacts include:

- Spending (direct) and multiplier impacts (indirect) from transit construction
- Spending (direct) and multiplier impacts (indirect) from transit operations

1.2 Economic Framework

Transitway construction typically generates two overarching categories of economic impacts:

- **One-time construction-related impacts:** The economic stimulus created by the construction of the Project itself will produce new construction-related jobs on site, in factories, and in offices. These "one-time" job benefits are expected to improve local economies during the construction period.
- **Long-term impacts from enhanced accessibility:** Transit service can improve the local economy by providing new and improved connections to jobs, housing, and leisure destinations. These economic benefits will begin when the line is operational, but will not reach their full potential for many years and decades to come.

Transitway Development Value Cycle



In the long term, enhanced accessibility generates real estate value premiums that support density, which results in the creation of industry clusters and associated economic benefits in high-skill fields including technology, professional services, and creative/artistic industries. This attracts skilled workers and net new economic activity to the region.

1.3 Demographic and Economic Context

Hennepin County is well poised to capture the potential benefits of public investment in transit. The Twin Cities Metropolitan Area population has grown significantly over the past decade, supported by a stable economy. Between 2000 and 2010, the metro area population grew by 12 percent to 3.3 million.¹ Between 2002 and 2010, the regional economy gained over 10,000 net new jobs, fueled in part by 30 percent employment growth in the health care and social assistance industry.² While the economy slowed in the latter part of the decade, the Met Council forecasts anticipate long-term health and vitality of the region, with long-term growth in both employment and population. This regional growth provides a market for future transit-oriented real estate development and job creation in industries that benefit from the enhanced connectivity that the Bottineau Transitway can provide.

1.4 Research Addressing Indirect Economic Impacts of Transitways in the Twin Cities

The Center for Transportation Studies at the University of Minnesota has sponsored a series of studies following the opening of the first LRT transitway in the Twin Cities- the Hiawatha Line – to examine the effects of transitways on the surrounding communities. Two studies of this series directly address the potential economic impacts of transitways on residential properties, commercial

¹ ESRI, 2010

² Longitudinal Employer-Household Dynamics, 2002 and 2010

and industrial properties experienced in the Hiawatha Corridor and inform potential economic impacts that could result from the Bottineau Transitway. Summaries of these two studies are provided below:

“The Hiawatha Line: Impacts on Land Use and Residential Housing Value”, Edward Goetz, Kate Ko, Aaron Hagar, Hoang Ton, Jeff Matson, Center for Transportation Studies, University of Minnesota, 2010.

This data showed a significant positive effect in both single-family and multi-family housing property values within a ½-mile radius of the station areas, particularly for properties west of the line which are closer and have easier access to the stations. Properties to the east of Line, where a 4-lane roadway and parallel strip of industrial land use separate residential uses from the Hiawatha Line, did not experience the proximity effect. A small nuisance effect for residential properties immediately adjacent to the Line was also noted, but outweighed by the proximity effect.

The study also noted a significant amount of new housing constructed in proximity to the Hiawatha Line since 1997 when funding for the Hiawatha Line was announced; 183% more than would be expected given rates of new construction in the southeast Minneapolis sub-market.

The analysis of land use changes was determined to be inconclusive as insufficient data were available post year of opening to reliably determine any effects.

The study found little difference in the number or value of building permits issued as compared with the southeast Minneapolis sub market.

“Impacts of the Hiawatha Light Rail Line on Commercial and Industrial Property Values in Minneapolis,” Kate Ko and Xinyu (Jason) Cao, Center for Transportation Studies, University of Minnesota, 2010.

The researchers examined the Hiawatha Light Rail Transit Line as a case study to answer the question “How does the proximity to light rail stations impact the values of properties along the corridor?” Using 2000-2007 estimated market value data and 2000-2008 property sales data, the researchers looked for trends in estimated market value as compared to estimated market values in the region, and developed two linear hedonic³ pricing models to determine the effect of proximity to LRT on sales prices of properties within 1-mile of station areas and a broader sub-region⁴ through which the Hiawatha Line travels.

The researchers concluded that the Hiawatha LRT Line has generated positive impacts to commercial and industrial properties in station areas. However, they urge caution with interpretation of these results as the study could not clarify if the businesses activities have been shifted from one area to another within the region. Further, they note that any

³ Hedonic pricing models are frequently used in research examining real estate values to account for the numerous property characteristic that can affect real estate values such as number of stories, type of structure, etc.

⁴ For the purposes of the study, the subregion was defined by the boundary intersections of one mile west of I-35W (Lyndale Avenue), one mile north the last downtown Minneapolis station, the Mississippi River, and one mile south of the Mall of America. The subregion was use to discount overall price fluctuations in the real estate market in the region.

prediction of potential economic impacts resulting from transportation impacts should consider the following four factors:

1. General strength of the economy: If the investment happens in a fast growing area, a more substantial impact on economic development can occur.
2. Land availability: If land is available for development, more significant impacts can be generated.
3. Policy support: Political support and land use policy play an important role in determining the degree of impact.
4. Accessibility: the degree to which accessibility is improved corresponds to the economic impact generated.

2.0 Technical Analysis

2.1 Regulatory Context/Methodology

No specific laws or executive orders regulate the topic of economic impacts. The National Environmental Policy Act (NEPA, 41 USC 4321) and Minnesota Environmental Policy Act (MEPA 2007 c 116D) form the general basis of consideration for economic issues.

Operating phase 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. Potential indirect effects resulting from redevelopment are assessed by the availability of land for redevelopment and land use policies supporting redevelopment.

2.2 Study Area

For operating phase impacts, the study area for impacts related to the physical direct impacts of the project (right-of-way acquisition, loss of on-street parking) is defined as land within ½-mile of the proposed transit stations as well as properties immediately adjacent to the transitway outside of this ½-mile radius. "Soft site" analysis to assess redevelopment potential similarly employed a ½-mile radius. A ½-mile radius is commonly used by transit planners to represent the distance transit users are willing to walk to access an LRT station.

Monetary and employment benefits are not limited in this analysis to any specific geographic area and are expected to be experienced by the broader region.

2.3 Affected Environment

Existing Economic Activity

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

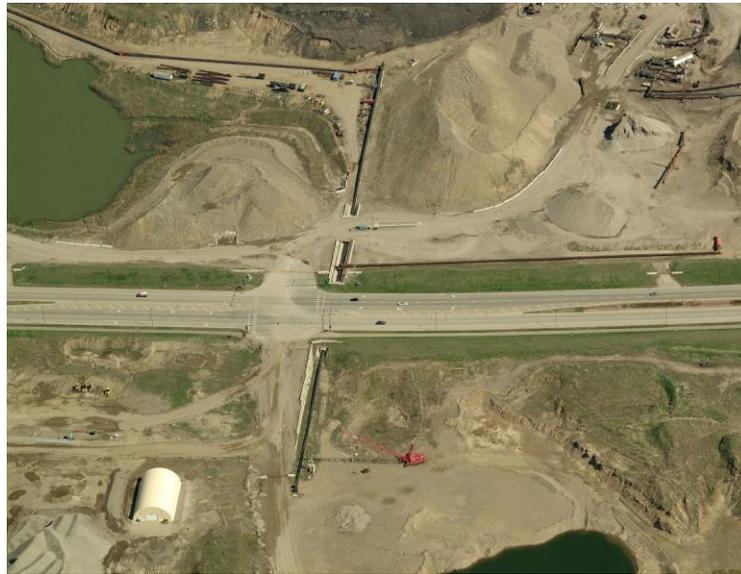
Alignment A

The predominant economic activity in the westernmost segment of Alignment A is gravel mining. Extraction has been completed west of Hemlock Lane and 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 will be graded and made available for development



Station area near Hemlock Lane



Existing aggregate mining activity surrounding the Revere Lane Station site.

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



Hennepin Technical College lies to the north of Brooklyn Boulevard with business park/industrial uses to the south.

As the alignment shifts onto the railroad corridor paralleling CSAH 81, the 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



The 71st Avenue Station area from the west.

Alignment B

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 93rd Avenue Station.



The view of the 93rd Avenue Station site from the west shows the business parks that lie to the west of West Broadway Avenue.

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



Suburban commercial uses surround the 85th Avenue Station site.

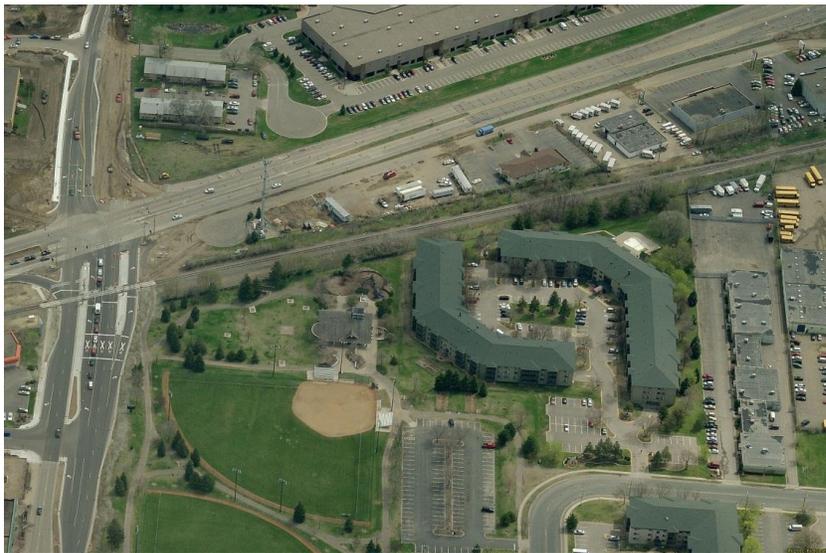
Alignment C

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



This view of the 63rd Avenue Station site from the west shows the Metro Transit Park and Ride facility on the west side of CSAH 81 and scattered commercial uses on the east side.

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



The Bass Lake Road Station area (viewed from the west) includes both large scale commercial and high density residential uses.

East of the Robbinsdale (42nd Avenue) 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.



The BNSF corridor creates a clear boundary between the commercial uses of Downtown Robbinsdale to the east and the residential area at the west near the proposed 42nd Avenue Station.

Alignment D1

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



The Golden Valley Station option would be located below grade in the BNSF corridor at the boundary between park uses to the east and institutional and residential uses to the west.



The Plymouth Avenue Station is also grade separated, but closer to recreational facilities within Wirth Park.

Alignment D2

The North Memorial medical center Anchors a small retail and medical clinic commercial area at the north end of Alignment D2.



North Memorial medical center lies within a residential area along CSAH 81.

Additional retail activity is scattered along the corridor as it proceeds southward, culminating at 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 Broadway Avenue.



The Broadway/Penn commercial node is surrounded by residential uses.



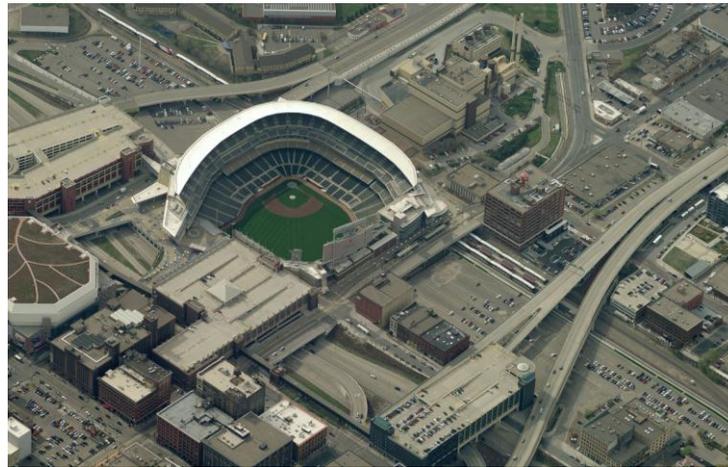
View of Penn/Plymouth intersection from the west. Community institutional uses are a focus of this neighborhood intersection.

Alignment D Common Section

No businesses uses are located in the western portion of the Alignment D common section.

East of I-94, Alignment D enters the downtown area of Minneapolis, characterized by commercial and industrial uses. The alignment terminates at 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 terminal station would be located at The Interchange, 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.



Alignment D terminates at Target Field Station, a multi-modal facility in downtown Minneapolis.

2.4 Environmental Consequences

2.4.1 Operating Phase (Direct) Impacts

The Bottineau Transitway will 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
- Other property acquisition (non-commercial) due to right-of-way acquisition
- Loss of on-street parking due to location of LRT within the street right of way

No-Build Alternative

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

Transportation System Management Alternative

Direct impacts would be limited to the area of the transit center and park-and-ride facility at 97th Avenue 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; land uses where full parcel acquisition is needed for right-of-way are residential.

Summary of direct impacts to commercial uses along Alignment A:

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 ⁵ :	0
Loss of Tax Base ⁶	\$3.92 million

Alignment B

Similar to Alignment A, construction of the transitway would largely occur within existing or future roadway right-of-way through this alignment; land uses where full parcel acquisition is needed for right-of-way are residential. However, one business would be displaced by transitway construction.

Summary of direct impacts to commercial uses along Alignment B:

Number of businesses displaced:	1
Number of commercially-zoned properties fully acquired	2
Number of on-street parking spaces lost:	0
Loss of property access:	0
Loss of Tax Base ⁷	\$5.87 million

Alignment C

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

Summary of direct impacts to commercial uses along Alignment C:

Number of businesses displaced:	3
Number of commercially-zoned properties fully acquired	7
Number of on-street parking spaces lost ⁸ :	0
Loss of property access:	0
Loss of Tax Base ⁹	\$0.56 million

⁵ "Property access" as defined by the ability for a vehicle to park in front of the property.

⁶ Total of 2012 Market Value as determined in Hennepin County tax records for all full property takings on the alignment.

⁷ Total of 2012 Market Value as determined in Hennepin County tax records for all full property takings on the alignment.

⁸ A commercial business site north of 42nd Avenue has been allowed to develop 17 parking spaces on freight rail property.

⁹ Total of 2012 Market Value as determined in Hennepin County tax records for all full property takings on the alignment.

Alignment D1

Alignment D1 passes through the cities of Robbinsdale, Golden Valley, and Minneapolis. The majority of Alignment D1 is an existing freight rail 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 are no direct impacts to commercial activity.

Summary of direct impacts to commercial uses along Alignment D1:

Number of businesses displaced:	0
Number of commercially-zoned properties fully acquired	0
Number of on-street parking spaces lost:	0
Loss of property access:	0
Loss of Tax Base ¹⁰	\$0.00 million

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 will 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.

Summary of direct impacts to commercial uses along Alignment D2:

Number of businesses displaced:	11
Number of commercially-zoned properties fully acquired	20
Number of on-street parking spaces lost:	300 (primarily in residential areas)
Loss of property access:	90
Loss of Tax Base ¹¹	\$12.03 million

2.4.2 Construction Phase Impacts

Construction-related 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.

Transportation System Management Alternative

Construction phase impacts would be limited to the area of the transit center and park-and-ride facility at 97th Avenue and West Broadway. 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-related economic impacts are anticipated.

¹⁰ Total of 2012 Market Value as determined in Hennepin County tax records for all full property takings on the alignment.

¹¹ Total of 2012 Market Value as determined in Hennepin County tax records for all full property takings on the alignment.

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.

2.4.3 Indirect/Secondary Effects: Potential economic benefits

The Bottineau Transitway, through increased transportation accessibility, will provide economic benefits from increased economic activity in the corridor. This section evaluates these indirect and secondary economic impacts, focusing on the redevelopment potential at each station area site.

Research conducted by the University of Minnesota indicates economic benefits resulting from operation of Metro Transit's first LRT line, the Hiawatha Corridor, as discussed in Section 1.4 above. These studies found an increase in property values in all property types – single family residential, multi-family residential, commercial and industrial – reflecting increased economic value in activities in proximity to the Hiawatha Line.

While the results of these studies are not conclusive enough to predict specific property value increases along the Bottineau Transitway, they do indicate the potential for increased economic activity in the corridor. The researchers noted that redevelopment potential is influenced the amount of land available for redevelopment, the presence of land use policies supporting transit-oriented development, real estate market strength, and walkability of station areas supporting transit-oriented development.

Real estate market strength has been weak in recent years and is difficult to predict. Information about the remaining factors provides insight as to the ability of the potential alignments to support economic growth in the future. For each alignment, information is provided about three factors: land available for redevelopment, currently adopted land use policies regarding future redevelopment, and walkability as measured by Walkscore.com.¹² Future station area planning efforts will address and local comprehensive plan, land use plan, or zoning modifications needed to plan for the details of the station area development; see *Land Use Plan Compatibility Technical Report* for discussion of compatibility with local and regional plans.

¹²The walk score, as calculated by walkscore.com, is a nationally-recognized metric that integrates the proximity and accessibility of a variety of services and institutions to a location, where 100 is most walkable and zero is least walkable. For further information, see www.walkscore.com/professional/methodology.

No-Build Alternative

The No-Build Alternative would not result in any indirect economic effects as no changes would occur influencing future redevelopment. Indirect land use changes such as redevelopment and compact development around transit stations would not occur due to the Bottineau Transitway and resulting economic benefits of this redevelopment would not be realized.

Transportation System Management Alternative

Influence on existing and future land use would be limited to the area of the transit center and park-and-ride facility at 97th Avenue and West Broadway Avenue, where undeveloped land would be converted to transportation use.. Further, improvements to existing transportation systems would not generate private business investment dedicated transitway would, as the geographic location of transportation benefits are less concentrated.

Build Alternatives

Alignment A

Alignment A offers significant opportunities for development, with large “soft sites” (i.e. vacant or potentially underutilized parcels)¹³ within a 10-minute walking distance (1/2 mile) of planned stations. However, much of this type of land along Alignment A may not be ready for development in the short term, since it is in active gravel mining use. **Table 1** below identifies over 400 acres available in sites at least 10 acres in size, providing opportunities for significantly sized developments. These large sites are located in proximity to the Hemlock Lane and Revere Lane stations with smaller sized sites identified near the 71st Avenue station. Few soft sites have been identified near the Boone Avenue/Hennepin Technical College station.

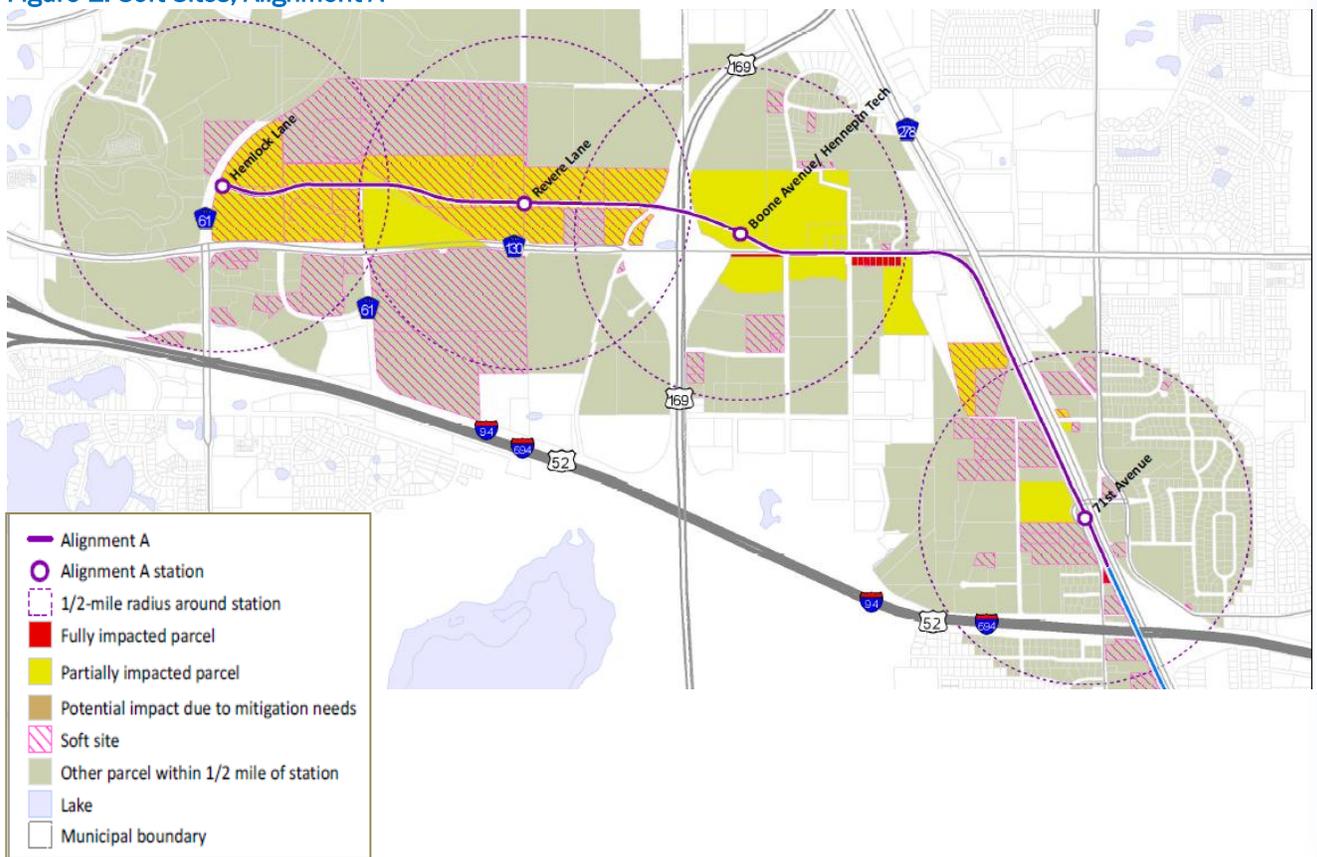
Table 1. Alignment A Soft Site Acreage by Parcel Size within ½-Mile of Station

Parcel Size	Total Acres
0-1 Acres	8.9
1-3 Acres	37.0
3-5 Acres	30.5
5-10 Acres	60.1
10+ Acres	447.6
Total	584.1

Source: SRF Consulting, Biko Associates, HR&A Advisors

¹³ For the purposes of this analysis, soft sites are defined as parcels for which assessed land value exceeds assessed building value, or land that is vacant or significantly underutilized and is zoned for potential development.

Figure 1. Soft Sites, Alignment A



Source: SRF Consulting

Both Maple Grove and Brooklyn Park future land use plans are supportive of redevelopment of areas where the “soft sites” are located. [Table 2](#) captures the acres and types of planned uses within ½-mile of the station areas along Alignment A.

The *City of Maple Grove 2008 Comprehensive Plan* calls for a regional mixed use area to develop in a compact, vertically integrated manner with predominantly office and/or corporate uses. This planned development pattern captures many of the accessibility benefits associated with proximity to the Bottineau Transitway. Further, an objective of Maple Grove’s comprehensive plan is to support transit-oriented development, and planning for the concentration of jobs and housing around transit hubs and daily conveniences.

The *Brooklyn Park 2030 Comprehensive Plan (2008)* supports expansion of the business park south of the Boone Avenue Station. In addition, the plan introduces new future land use designations in this area, including Neighborhood Commercial (NC) in the 71st Avenue Station area. According to the comprehensive plan, NC is intended to provide for compact, pedestrian-oriented mixed-use areas of limited sized designed for use in existing or potential pedestrian and transit nodes. Further, Brooklyn Park’s comprehensive plan also recognizes that changes are 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.

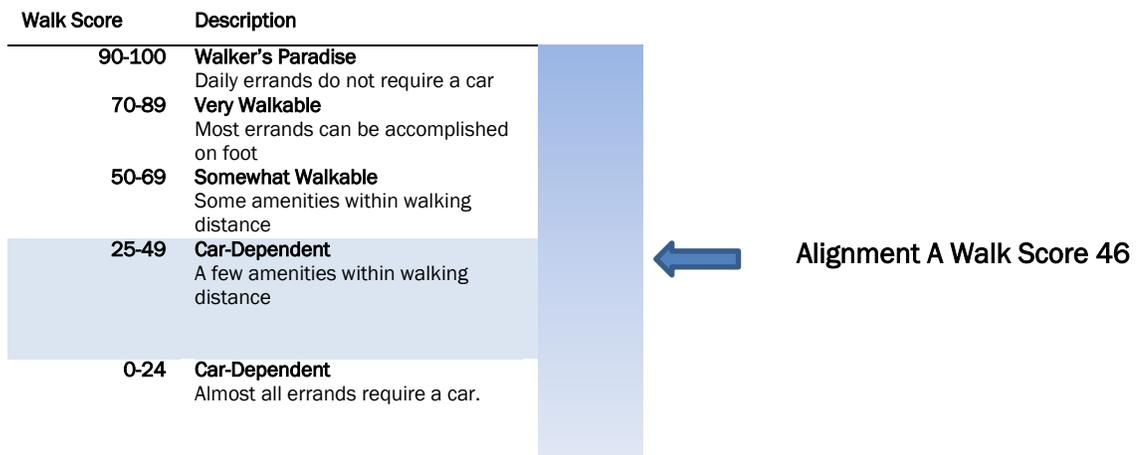
Table 2. Acres of Planned Commercial, Mixed Use, Residential and Industrial¹ Land Use Within ½-Mile of Alignment A Station Areas

Land Use Category	Acres
Commercial	419
Mixed Use	507
Residential	425
Industrial	136
Total	1487

¹ Data source category includes agricultural in the industrial category; however no agricultural land use is planned for the corridor.

Source: Biko Associates, HR&A Advisors

A Walk Score of “46” was calculated for Alignment A indicating a more car dependent environment. Existing business environments therefore are not as conducive to attracting transit users; however, future land use goals seek to improve that condition.



Alignment B

Alignment B offers numerous opportunities for development, with large soft sites within walking distance of the stations (Table 3 and Figure 2). Alignment B also has a number of large soft sites at the far end of the alignment in proximity to the 97th Street and 93rd Street Stations. The 85th Avenue Station has fewer soft sites within the ½-mile walk shed. The Brooklyn Boulevard Station has a limited number of soft sites in proximity to the station location.

Table 3. Alignment B Soft Site Acreage By Parcel Size Within ½ Mile Of Station.

Size	Total Acres
0-1 Acres	5.5
1-3 Acres	39.0
3-5 Acres	17.5
5-10 Acres	104.5
10+ Acres	387.1
Total	553.6

Source: SRF Consulting, Biko Associates, HR&A Advisors

The Brooklyn Center Comprehensive Plan identifies the north end of Alignment B including the 97th Avenue Station area for mixed use and signature mixed use, which provides an opportunity for transit-oriented development.

Much of the existing land use surrounding the 93rd Avenue Station is planned to transition to future business park use allowing for greater capture of economic benefits in the area. Land uses surrounding the 85th Avenue Station are not planned to change. Given the few soft sites proximate to this station, substantial redevelopment activity is not anticipated.

Table 4 captures the acres and types of planned uses within ½-mile of the station areas along Alignment A.

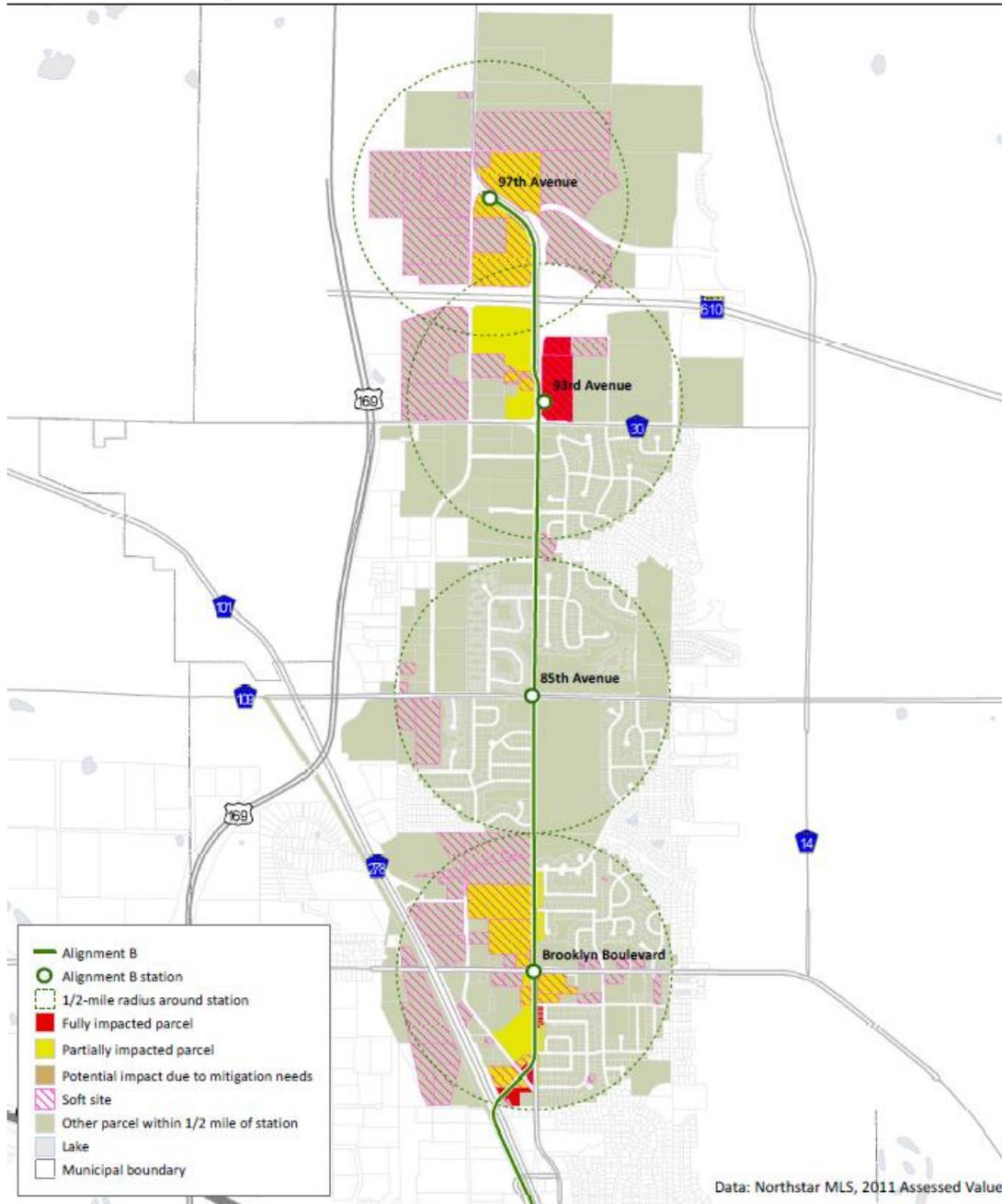
Table 4. Acres Of Planned Commercial, Mixed Use, Residential And Industrial¹ Land Use Within ½ Mile Of Alignment B Station Areas

Land Use Category	Acres
Commercial	721
Mixed Use	390
Residential	670
Industrial	6
Total	1787

¹Data source category includes agricultural in the industrial category; however no agricultural land use is planned for the corridor.

Source: Biko Associates, HR&A Advisors

Figure 2. Soft Sites, Alignment B



Source: SRF Consulting

A Walk Score of “46” was calculated for Alignment B indicating a more car dependent environment. Existing business environments therefore are not as conducive to attracting transit users; however, future land use goals seek to improve that condition.

Walk Score	Description
90-100	Walker's Paradise Daily errands do not require a car
70-89	Very Walkable Most errands can be accomplished on foot
50-69	Somewhat Walkable Some amenities within walking distance
25-49	Car-Dependent A few amenities within walking distance
0-24	Car-Dependent Almost all errands require a car.

Alignment B Walk Score 41

Alignment C

Alignment C passes primarily through residential areas and parkland resulting in relatively few soft sites for potential redevelopment (Figure 3). The majority of soft site acreage identified is on parcels less than 3 acres in size (Table 5). Larger sites can be found north of the 63rd Avenue Station and southwest of the Bass Lake Road Station.

Table 5. Alignment C Soft Site Acreage By Parcel Size Within ½ Mile Of Station

Parcel Size	Total Acres
0-1 Acres	55.13
1-3 Acres	34.12
3-5 Acres	4.2
5-10 Acres	6.9
10+ Acres	41.8
Total	142.15

Source: SRF Consulting, Biko Associates, HR&A Advisors

The Brooklyn Park Comprehensive Plan identifies high-density residential, mixed use in proximity to the 63rd Avenue Station increasing the potential for transit-oriented development surrounding this station. The *Crystal Comprehensive Plan* (2011) supports continued commercial and high-density residential use in the Bass Lake Road Station area. The *Robbinsdale 2030 Comprehensive Plan* states that the City should concentrate higher-density residential redevelopment along transportation corridors, including the Robbinsdale Station area to promote the efficiencies of “bringing people to transit.”

Table 6 below summarizes acres of planned land use types in proximity to Alignment C stations indicating substantial acres of commercial and mixed use development available to capture economic potential.

Figure 3. Soft Sites, Alignment C

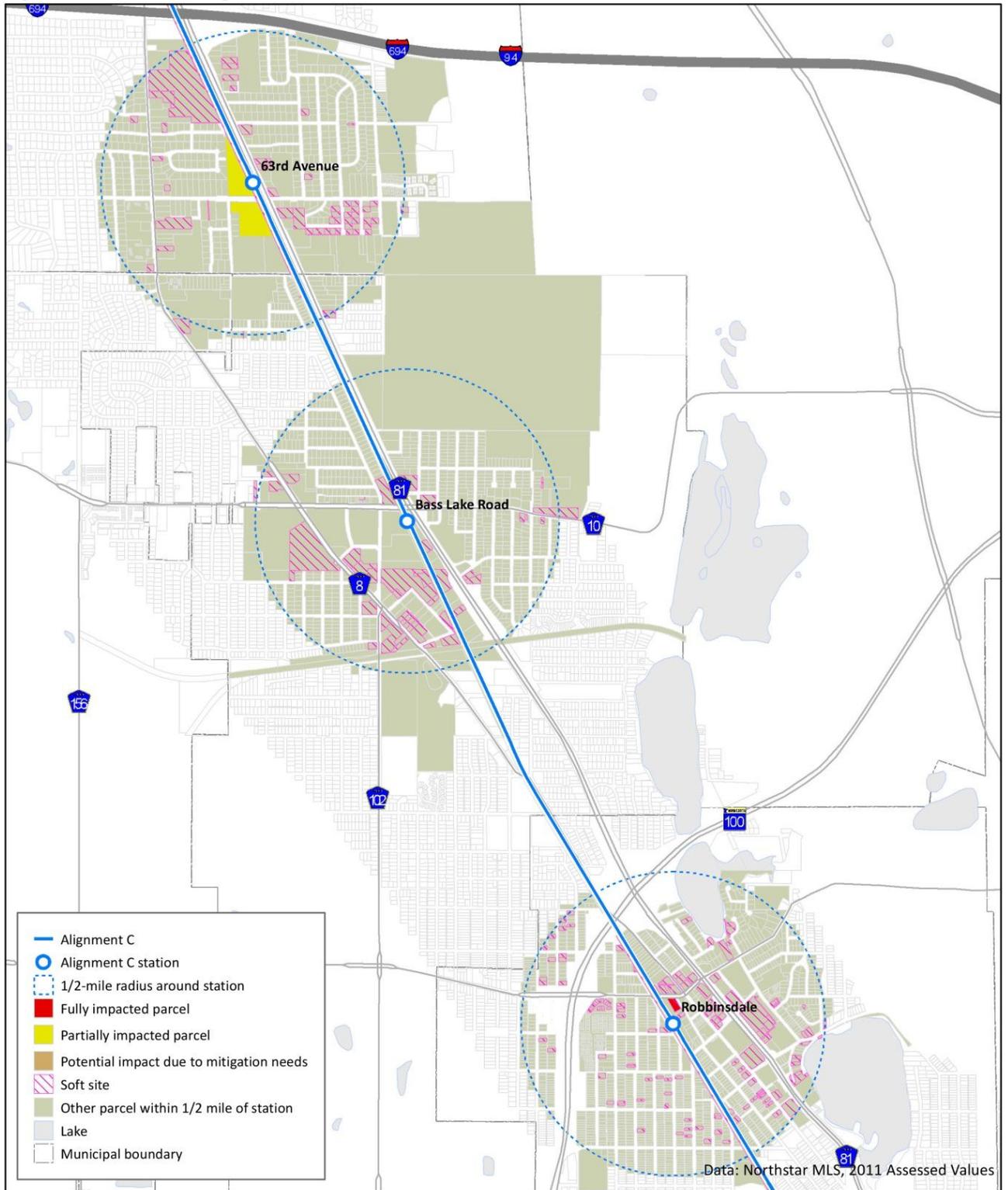


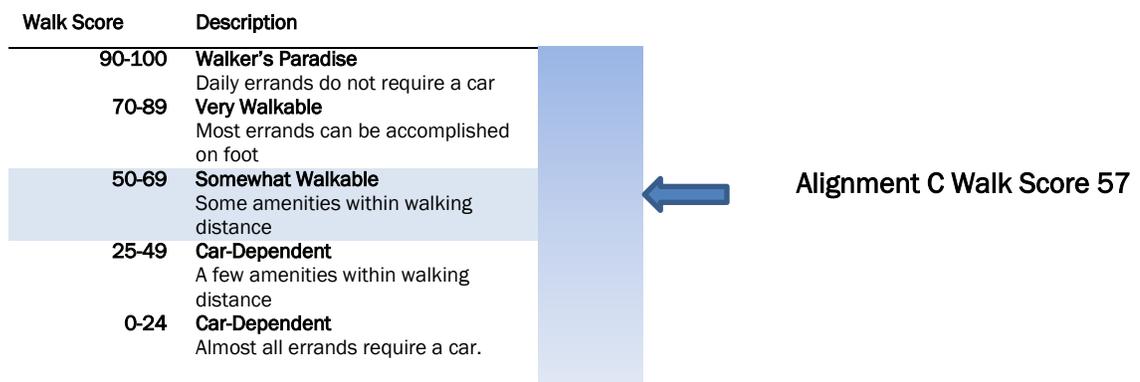
Table 6. Acres Of Planned Commercial, Mixed Use, Residential And Industrial¹ Land Use Within ½ Mile Of Alignment C Station Areas

Land Use Category	Acres
Commercial	199
Mixed Use	52
Residential	862
Industrial	60
Total	1173

¹ Data source category includes agricultural in the industrial category; however no agricultural land use is planned for the corridor.

Source: Biko Associates, HR&A Advisors

A Walk Score of “57” was calculated for Alignment C indicating a “some-walkable” environment reflecting a greater mix of uses at a walkable scale. Existing business environments therefore are somewhat conducive to attracting transit users; however, future land use goals seek to improve that condition.

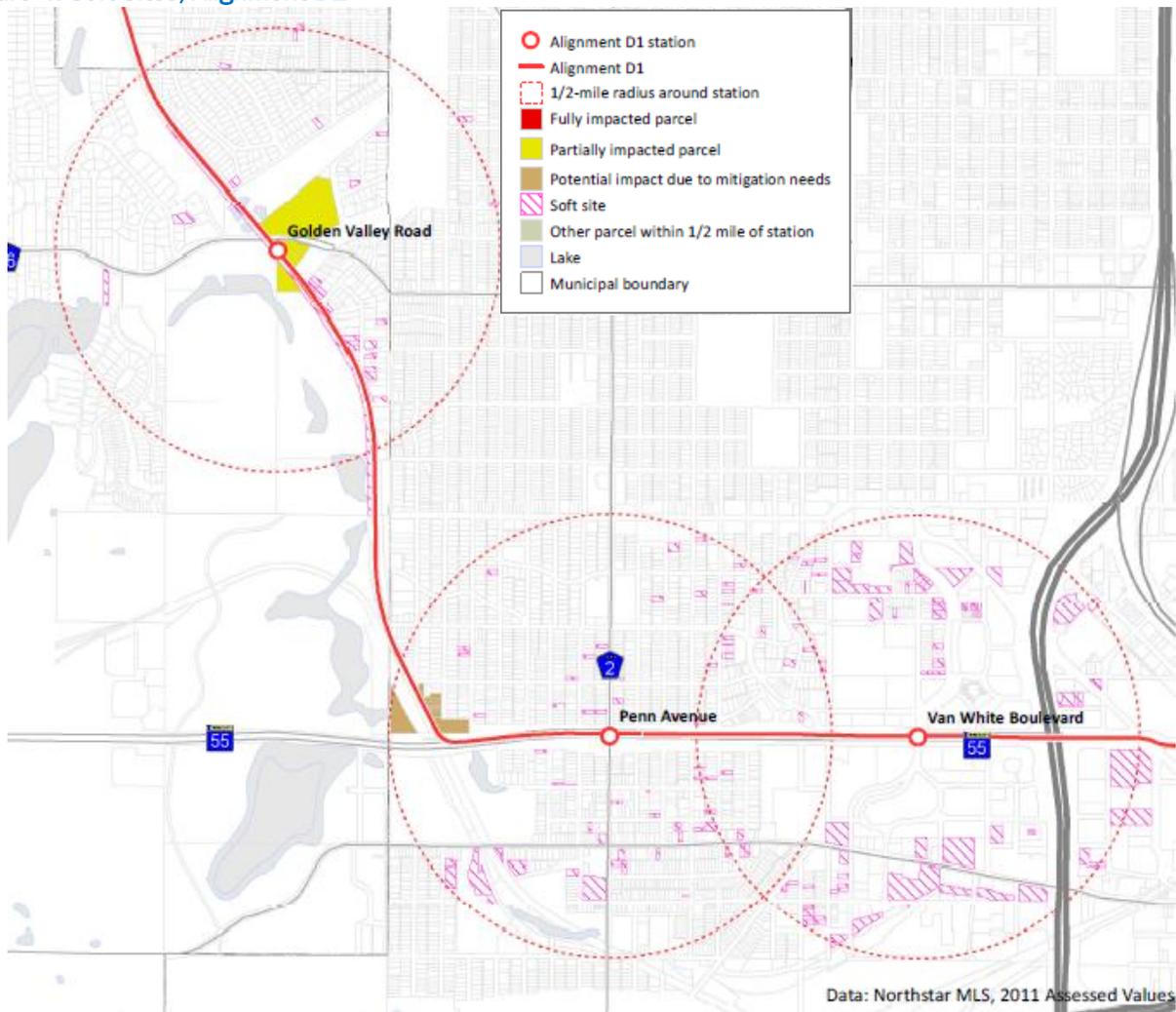


Alignment D1

Excluding the Target Field station, there are 59 acres of “soft sites” in Alignment D1. As illustrated in [Figure 4](#) and [Table 7](#), these sites tends to be small and scattered.

[Table 8](#) captures the acres and types of planned uses within ½-mile of the station areas along Alignment A. According to the Robbinsdale, Golden Valley and Minneapolis comprehensive plans, future land use near the D1 corridor are expected to remain in low-density residential and park use, limiting potential for redevelopment.

Figure 4. Soft Sites, Alignment D1



Source: SRF Consulting

Table 7. Alignment D1 Soft Site Acreage By Parcel Size Within 1/2 Mile Of Station

Size	Total Acres
0-1 Acres	33.7
1-3 Acres	16.4
3-5 Acres	8.7
5-10 Acres	0
10+ Acres	0
Total	58.8

Source: SRF Consulting, Biko Associates, HR&A Advisors

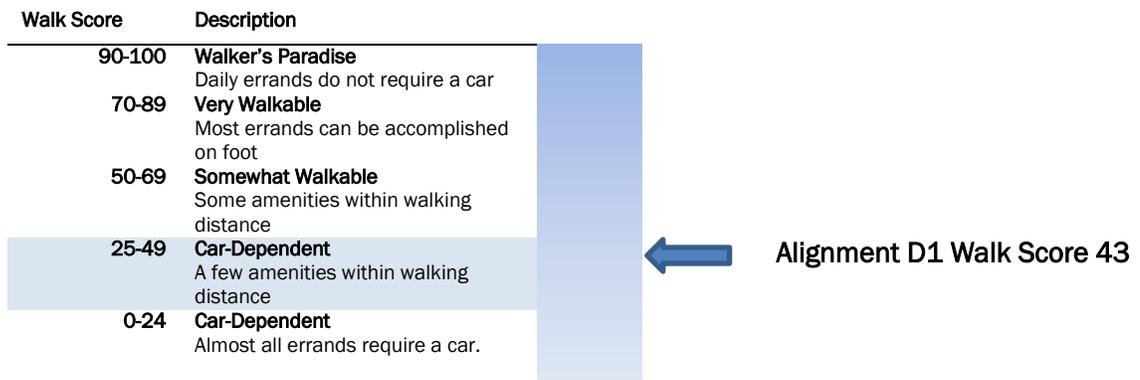
Table 8. Acres Of Planned Commercial, Mixed Use, Residential And Industrial¹ Land Use Within ½ Mile Of Alignment D1 Station Areas

Land Use Categories	Acres
Commercial	221
Mixed Use	260
Residential	829
Industrial	154
Total	1464

¹ Data source category includes agricultural in the industrial category; however no agricultural land use is planned for the corridor.

Source: Biko Associates, HR&A Advisors

A Walk Score of “43” was calculated for Alignment D1 indicating a “car-dependent” environment. Existing business environments therefore are not as conducive to attracting transit users. Current land use policies do not anticipate a change in that condition.



Alignment D2

Excluding the Target Field station, there are 90 acres of “soft sites” in Alignment D2 (Figure 5 and Table 9).

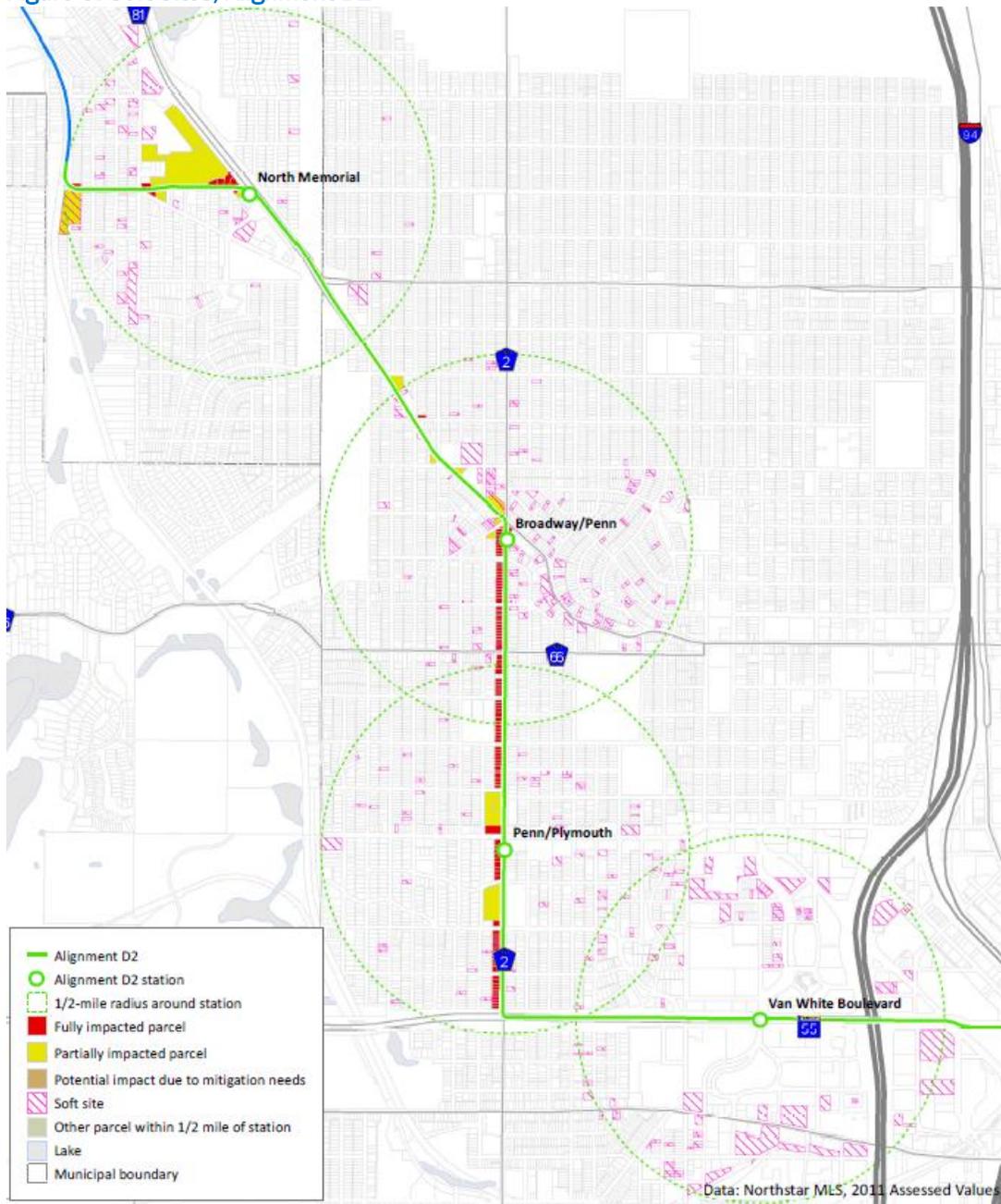
Table 9. Alignment D2 Soft Site Acreage By Parcel Size Within ½ Mile Of Station

Size	Total Acres
0-1 Acres	55.2
1-3 Acres	22.6
3-5 Acres	12.1
5-10 Acres	0
10+ Acres	0
Total	89.9

*Does not include the Interchange station area

Source: SRF Consulting, Biko Associates, HR&A Advisors

Figure 5. Soft Sites, Alignment D2



Source: SRF Consulting

The Robbinsdale comprehensive plan recommends continuing the existing level of development near the North Memorial Station; however, intensification of commercial use at the Terrace Mall site to the north of the station is promoted. According to *The Minneapolis Plan for Sustainable Growth*, commercial uses along West Broadway Avenue (between the Robbinsdale city limits and Penn Avenue) would be consolidated within a mixed-use commercial node that extends from 26th Avenue to Penn Avenue and to Oliver Avenue. *The Minneapolis Plan for Sustainable Growth* also calls for

mixed uses (commercial/residential) in proximity to the Penn/Plymouth station and residential and institutional uses near the Van White station.

Table 10 captures the acres and types of planned uses within 1/2-mile of the station areas along Alignment D2. In addition to the sites illustrated above, remnant right of way would be available on the west side of Penn Avenue between the Broadway/Penn station and Highway 55 for residential or limited commercial redevelopment as allowed under the Urban Neighborhood land use designation.

Table 10. Acres Of Planned Commercial, Mixed Use, Residential And Industrial ¹ Land Use Within 1/2 Mile Of Alignment D2 Station Areas

Land Use Category	Acres
Commercial	242
Mixed Use	305
Residential	1419
Industrial	157
Total	2123

¹ Data source category includes agricultural in the industrial category; however no agricultural land use is planned for the corridor.

Source: Biko Associates, HR&A Advisors

A Walk Score of “53” was calculated for Alignment D2 indicating a “some-walkable” environment reflecting a greater mix of uses at a walkable scale. Existing business environments therefore are somewhat conducive to attracting transit users; however, future land use goals seek to improve that condition.

Walk Score	Description
90-100	Walker's Paradise Daily errands do not require a car
70-89	Very Walkable Most errands can be accomplished on foot
50-69	Somewhat Walkable Some amenities within walking distance
25-49	Car-Dependent A few amenities within walking distance
0-24	Car-Dependent Almost all errands require a car.

← **Alignment D2 Walk Score 53**

2.4.4 Broad Economic Impacts

Output, Earnings, and Employment Effects from Capital Expenditures

This section describes the anticipated economic impacts to the local economy resulting from capital expenditures for construction of the various alternatives. The local economy is defined here as the Minneapolis-St. Paul-Bloomington MN-WI Metropolitan Statistical Area.¹⁴ This geographic area includes the counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne,

¹⁴ Metropolitan and Micropolitan Statistical Areas and Components, U.S. Census Bureau, December, 2009.

Washington and Wright in Minnesota, and Pierce and St. Croix in Wisconsin.

Construction of any of the alternatives would represent substantial capital investment in the local economy that would in turn increase employment, earnings, and output in for the duration of the construction process. To determine the additional benefits to the local economy as described above, broadly accepted multipliers developed by the Bureau of Economic Analysis are applied to the cost of each alternative limited by “new” construction dollars brought to the local economy by the project. “New” dollars refer to either state or federal dollars that would otherwise not be present in the local economy except for the transitway project. These Regional Input-Output Modeling System (RIMS II) multipliers have been developed by the U.S. Department of Commerce-Bureau of Economic Analysis to measure the effects of fiscal stimulus in specific industries on the regional economy.

Capital Expenditures

The estimated capital expenditures for construction of the Bottineau Transitway are shown in [Table 11](#). These costs represent gross capital expenditures for the alternatives and are divided into four categories: general construction, vehicles, right-of-way, and professional services.

Table 11. Summary of Alternative Capital Costs (in Year of Expenditure (YOE) dollars)¹⁵

Alternative	General Construction Costs ¹	Vehicles	Right-of-Way ²	Professional Services ³	Total ⁴
A-C-D1	\$638,061,000	\$106,695,000	\$70,738,000	\$141,820,000	\$957,314,000
A-C-D2	\$683,039,000	\$129,889,000	\$113,756,000	\$159,930,000	\$1,086,614,000
B-C-D1	\$647,389,000	\$120,611,000	\$125,622,000	\$154,747,000	\$1,048,369,000
B-C-D2	\$674,817,000	\$120,611,000	\$58,871,000	\$147,268,000	\$1,001,567,000

Source: Metropolitan Council, June 2012

- ¹ Includes contingency costs, YOE dollars.
- ² ROW estimate is based on Hennepin County market values.
- ³ Professional Services include real estate services, engineering, legal fees, and other agency costs.
- ⁴ Total cost is a representation of all cost being rounded to the nearest thousand

Only two of these four categories, General Construction Costs and Professional Services, will result in effects to the local economy as it is assumed that construction goods and services will be purchased in the local economy. Although not all building materials required for the project are produced locally, the RIMS II multipliers reflect the supplier linkages for the industry and thus account for this leakage¹⁶ from the local economy. Professional services costs purchased locally will also have an impact in the local economy.

¹⁵ Total capital expenditures are divided into four major categories. These include general construction, vehicles, right-of-way and professional services.

- General Construction: guideway elements, support facilities, site work, systems, and contingencies.
- Vehicles: vehicle manufacturing and assembly.
- Right-of-Way: all rights-of-way, land, and existing improvements.

¹⁶ Leakage represents purchases made by local suppliers from sources outside the Twin Cities region.

It is assumed that the purchase of transit vehicles will not occur locally. Transit vehicles are not manufactured within the Minneapolis-St. Paul-Bloomington MSA, which limits the potential impact of this purchase. Thus, as no local labor is assumed to produce the vehicles, no local impact generated by their purchase is realized. There is likely to be some assembly required upon delivery of the vehicles, and it is possible that a component of the vehicle might be made by a local supplier; however, these possibilities represent a negligible share of the vehicles' cost and are thus excluded from this analysis.

Right-of-way expenditures shown are for real property only; the transaction costs, legal services, and required household and business relocation assistance associated with these expenditures are included in the professional services cost category (i.e., engineering, design, and other agency costs). Labor is not associated with the right-of-way expenditures; therefore, there is no economic impact to the pure land costs.

Funding Sources

To isolate the potential economic effects of the project on the local economy, it is necessary to distinguish those resources that are new to the economy from local resources that would still be spent in the region. **Table 12** describes the funding sources and expenditure percentages that are planned for the Bottineau Corridor and indicates whether or not these funds represent new resources that are being invested in the region because of the project.

Table 12. Summary of Funding Sources

Source	Funding Share	New or Existing Funding Source
Local Funding	50%	Existing/New
County Transit Improvement Board (CTIB)	30%	Existing
State of Minnesota	10%	New to MSP area
Hennepin County Regional Railroad Authority (HCRRA)	10%	Existing
Federal Transit Administration (FTA)	50%	New to MN/MSP
Total Funding	100%	

Source: Metropolitan Council, June 2012

Determining the amount of additional benefit to the local economy requires limiting the analysis of construction and professional services costs to only those that are purchased with funding that is “new” to the region, as funding that is not “new” would be assumed to be purchasing similar items for other local projects.

This analysis assumes that the new funds are spent on general construction expenditures as the amount of “new funding” is less than estimated construction expenditures. Therefore, every single dollar of new resources is expected to yield an impact as it is assumed to be spent on construction activity. This assumption does not bias the analysis, as the multipliers for “construction” and for “professional, scientific, and technical services” (the multiplier that would be applied to the professional services cost category) are similar.

Table 13 combines the information shown in the previous two tables showing the level of funding for the capital expenditure elements that will generate economic effects within the state and local

Minneapolis and St. Paul economy. The expenditures with substantial local labor elements (i.e., construction cost of \$638 to \$675 million) that will yield impacts on the local economy are derived from the data in Table 14 and represent the sum of expenditures on construction and professional services costs for each alternative. The amount of funding that represents new resources (i.e., 60 percent or \$575 to \$652 million) for the region is derived from Table 12 and represents the sum of those sources designated as “new.”

Table 13. Capital Costs Representing New Resources (in YOE dollars)

Alternative	General Construction Costs ¹	New Resources – Federal/State Funding ²
A-C-D1	\$638,061,000	\$574,388,400
A-C-D2	\$683,039,000	\$651,968,400
B-C-D1	\$647,389,000	\$629,021,400
B-C-D2	\$674,817,000	\$600,940,200

Source: Metropolitan Council, June 2012

¹ Capital cost that would impact the local economy.

² Represents Federal (50%) and State (10%) share of total project costs.

Calculating Economic Impact of Bottineau Transitway Alternatives

RIMS II provides five types multipliers to calculate various types of economic impacts. Final demand multipliers for output, earnings, and employment, and direct-effect multipliers for earnings and employment. These multipliers (described below) represent the increase in dollars or earnings experienced in the local economy that result from a one-time investment of new funding in the industries listed below.

The final demand output multiplier in [Table 14](#) represents the increase in dollars that occurs in all industries for each additional dollar delivered by the construction industry. The final demand earnings multiplier represents the increased earnings (in dollars) of households employed by all industries for each additional dollar delivered by the construction industry. The final demand employment multiplier represents the increased number of jobs that occurs in all industries for each one million dollars of output delivered to final demand by the construction industry. The direct effect earnings multiplier represents the increased earnings of households employed by all industries for each additional dollar of earnings paid directly to households employed by the construction industry.

The direct effect employment multiplier represents the total change in number of jobs in all industries for each additional job in the construction industry.

Table 14. RIMS II Multipliers by Industry

Region	Industry	Multiplier				
		Final Demand			Direct Effects	
		Output (\$)	Earnings (\$)	Employment (Jobs)	Earnings (\$)	Employment (Jobs) ^a
Minneapolis-St. Paul-Bloomington MSA	Construction	1.5368	0.4959	11.8120	1.4162	1.4276
	Professional, Scientific and Technical Services	1.3932	0.5901	12.2238	1.2520	1.3767
	Transit and Ground Passenger Transportation	1.4492	0.6309	26.8622	1.1907	1.0859

Source: U.S. Department of Commerce BEA, RIMS II 2008

^a New person-year jobs that will be created in the metropolitan area as a result of new one-time funding for the capital expenditure. This does not include jobs derived from O&M costs.

Applying the final demand multipliers for the construction industry to the amount of new funding/resources that would be used for capital expenditures provides estimates of the net output, earnings, and employment impacts generated by each alternative in the short-term (construction phase). The results are summarized in **Table 15**. These are one-time impacts that would last for the duration of construction. One job is defined as a job for one person for one year. For example, a job for one person that lasts three years would equate to three person-year jobs.

Table 15. Net Effects of Construction (Short-Term) Activity

Alternative	New Capital Expenditure	Output	Earnings	Employment	Output (Thousands)	Earnings (Thousands)	Employment (Jobs)
A-C-D1	\$574,388,400	1.5368	0.4959	11.8120	\$882,720	\$284,839	6,785
A-C-D2	\$651,968,400				\$1,001,945	\$323,311	7,701
B-C-D1	\$629,021,400				\$966,680	\$311,932	7,430
B-C-D2	\$600,940,200				\$923,525	\$298,006	7,098

Source: U.S. Department of Commerce BEA, RIMS II 2008 and Metropolitan Council

Short-Term Effects

For the Minneapolis-St. Paul-Bloomington MSA, the effect of construction spending for the alternatives would range from \$883 million to \$1 billion in output (YOE dollars), a difference of \$119 million or 12 percent. It is estimated that construction of the alternatives would generate from \$285 to \$323 million in additional employment earnings for households and payroll expansion and generate from 6,785 to 7,701 person-year jobs for all industries in the Minneapolis-St. Paul-Bloomington MSA. Thus, due to its higher anticipated capital expenditures, Alternative A-C-D2 would

demonstrate the greatest economic impacts to the local economy during construction activities of all four alternatives, with Alternative A-C-D1 resulting in the least economic benefit.

Long-Term Effects

There are no long-term effects associated with the economic impacts generated by capital expenditures as construction-related impacts only last for the duration of the project's construction cycle.

Output, Earnings, and Employment Effects from Operations and Maintenance Expenditures

Each of the Bottineau Corridor alternatives is anticipated to create jobs and additional earnings as a result of Operations and Maintenance (O&M) expenditures. Although these O&M expenses would originate from local sources, they represent spending that would not take place except for the implementation of this service. The expansion of transit service associated with the alternatives creates an expansion of economic activity in the counties of the Minneapolis-St. Paul-Bloomington MSA, thus generating recurring net economic impacts (long-term). Other potential sources of federal funding for maintenance exist as grants and could be applied to preventative maintenance in later years. If future Federal funds are received and applied to maintenance activities, they could generate additional net economic effects to the local and state economies through increased employment and earnings.

The estimated net change in local earnings generated by the various Alternatives is shown in [Table 16](#). The table describes anticipated payroll expansion (Net Earnings Impacts) resulting from the Build Alternatives. This analysis uses only the Direct Effect Multipliers to generate estimates of earnings impacts attributable to O&M activities because output measures (i.e. Final Demand Multipliers) are less reliable in determining indirect impacts where market prices are not available as provision of transit service is a public rather than private-sector activity. The multipliers applied in this section of the analysis are for the industry labeled "Transit and Ground Passenger Transportation." The increased earnings would result in positive economic impacts to the local economy, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand. The transit earnings are derived by multiplying the incremental O&M cost over the No-Build Alternative by the transit on-site labor percentage (71%). The O&M labor component was derived from American Public Transportation Association (APTA) analysis of allocation of operating expenditures by object class from 1985-1995. The final transit earnings do not include benefits and only the wage element impacts transit earnings.

Table 16. Net Earnings Impacts from O&M Activities (in 2011 dollars)

Alternative	Corridor Operations and Maintenance Cost over No-Build (thousands) ¹	Minneapolis and St. Paul MSA Earnings Multiplier ²	Net Change in Local Earnings (thousands)
A-C-D1	\$21,438	1.1907	\$25,526
A-C-D2	\$21,566	1.1907	\$25,679
B-C-D1	\$20,501	1.1907	\$24,411
B-C-D2	\$21,216	1.1907	\$25,261

Source: Metropolitan Council, June 2012

¹ Transit Earnings are the incremental O&M costs multiplied by an estimated on-site labor component. The O&M labor component was derived from APTA analysis of allocation of operating expenditures by object class 1985-1995.

² RIMS II Multiplier (Transit and ground passenger transportation) Direct Effect Earnings Multiplier.

Long-Term Effects

For the Minneapolis-St. Paul-Bloomington MSA, the effect of local O&M spending for the alternatives will result in an estimated range of \$24.4 million to \$25.7 million in local annual wages and salaries (2011 dollars). Implementation of any of the four alternatives, and their associated increased earnings is anticipated to result in positive economic impacts to the local economy, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand.

Short-Term Effects

O&M expenditures are not expected to create short-term economic effects. The earnings impacts generated by O&M expenditures are long-term recurring benefits.

2.4.5 Summary of Economic Effects by Alternative

Table 17. Impacts By Alternative

Alternative	Total Impact (Both adverse and beneficial)
No-Build Alternative	No economic effects.
TSM Alternative	Limited direct and indirect impacts (both adverse and beneficial) as construction is limited to park-and-ride facility.
Alternative 1: A-C-D1	Limited direct impacts; all alternatives will experience similar construction impacts. This alternative has a moderate amount of soft sites available for new development supported by land use policies aimed at capturing economic benefits yielded by additional transit access, particularly at the north end. Few opportunities are present at the south end of the corridor due to land use policies that support existing land use patterns. Economic benefits from operations and maintenance expenditures are similar across all alternatives.

Alternative	Total Impact (Both adverse and beneficial)
Alternative 2: A-C-D2	Greater direct impacts due to greater right-of-way acquisition and on-street parking loss. All alternatives will experience similar construction impacts. This alternatives has a substantial amount of soft sites available for new development supported by land use policies aimed at capturing economic benefits yielded by additional transit access. Economic benefits from operations and maintenance expenditures are similar across all alternatives.
Alternative 3: B-C-D1	Limited direct impacts. All alternatives will experience similar construction impacts. This alternatives has the least amount of soft sites available for new development. Economic benefits from operations and maintenance expenditures are similar across all alternatives.
Alternative 4: B-C-D2	Greater direct impacts due to greater right-of-way acquisition and on-street parking loss. All alternatives will experience similar construction impacts. This alternative has a moderate amount of soft sites available for new development supported by land use policies aimed at capturing economic benefits yielded by additional transit access. Economic benefits from operations and maintenance expenditures are similar across all alternatives.

2.5 Avoidance, Minimization, and/or Mitigation Measures

As no significant adverse economic impacts are anticipated during the operational phase, no avoidance, minimization and/or mitigation measure were considered.

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 will be provided.

While not a mitigation measure, Hennepin County and the Metropolitan Council will enhance the potential to capture the potential economic benefits of the Bottineau Transitway through station area planning efforts conducted in cooperation with local communities follow identification of the preferred alternative.

3.0 Summary

The Bottineau Transitway will result in direct impacts to local economies by taking of commercial property, relocation of businesses, loss of on-street parking to support business activities and removal of properties from the local tax base. With the exception of Alignment D2, the degree of impact is fairly limited in a 10-mile corridor. Bottineau Transitway construction will also result in short-term disruption of business activities due to changes in access, parking and traffic flow to accommodate construction activities. However, these adverse impacts will be offset by broad economic benefits resulting from construction jobs and new money infused into the local economy from non-local sources. In addition, the Bottineau Transitway may result in increased economic activity attracted by the increased transportation accessibility in proximity to Bottineau Transitway stations. These economic benefits will be most substantial in areas where land availability, supportive land use policies and accessibility benefits are the greatest. With the exception of Alignment D1 where land use policies do not encourage commercial use, this economic potential exists throughout the Bottineau Transitway corridor. This economic potential will be enhanced by station area planning activities conducted by Hennepin County and the Metropolitan Council in cooperation with local municipalities.