To: Andrew G. Gillett, Community Works Project Coordinator  
Community Works | Hennepin County Public Works

From: Joni Giese, Principal  
Stewart Crosby, Senior Associate  
Emily Gross, Associate

Date: December 13, 2018

Subject: Bottineau Community Works Infrastructure Advanced Planning Study

Introduction

Since 2014, the Hennepin County Bottineau LRT Community Works Program has been collaborating with METRO Blue Line Extension stakeholders to maximize the quality of life benefits that can result from the implementation of this significant infrastructure investment. Extensive research and analysis has been performed, resulting in the development of valuable community-based visions and plans for future physical enhancements that will improve health outcomes, improve access to employment and resources, and support economic development and equity for residents along the METRO Blue Line Extension corridor. This study focused on bicycle/pedestrian infrastructure enhancements to improve biking/walking connections to/from the proposed Blue Line Extension Light Rail Transit (BLRT) stations. The study area extends from Golden Valley to Brooklyn Park, and includes eight proposed stations across four communities.

Project Purpose and Intent

With the recent award of the FTA grant, Hennepin County Community Works and corridor partners are now able to move the visions and plans developed to date one step closer to implementation. The intent of this project was to advance the planning and design of desired bicycle and pedestrian infrastructure enhancements that will facilitate safe, comfortable, and convenient access to and from the planned stations. This project reviewed and compiled a comprehensive inventory of proposed bicycle and pedestrian enhancements that have been brought forward in previous studies. This compiled list was reviewed with community stakeholders to ensure it is as comprehensive as possible. From there, 20 projects were selected to explore in more depth, resulting in the development of conceptual design options for each of the 20 projects. These options were evaluated, and 10 projects were selected for further refinement into 60 percent construction plans and associated opinions of probable construction costs.
Public Engagement

Public engagement was performed as part of a separate contract with Hennepin County and findings from those efforts will be documented in a separate report. The resulting public engagement findings informed the development of evaluation criteria used to select projects for conceptual and 60 percent design.

Bottineau Technical Infrastructure Committee

The Bottineau Technical Infrastructure Committee (BTIC) was assembled to provide guidance to the consultant team and to review draft work products. BTIC Members include:

Andrew Gillett – Hennepin County          Emily Goellner – City of Golden Valley
Joan Vanhala – Hennepin County            Adam Arvidson – Minneapolis Parks
Kerri Pearce Ruch – Hennepin County       Ann Rexine – Three Rivers Park District
Jordan Kocak – Hennepin County            Alicia Vap – Metro Transit
Nathaniel Hood – Hennepin County          Michael Mechtenberg – Metro Transit
Brent Rusco – Hennepin County             Michael Larson, Metropolitan Council
Kimberly Berggren – City of Brooklyn Park Eric Wojchik, Metropolitan Council
Jennifer Jordan – City of Brooklyn Park

Dan Olson – City of Crystal
John Sutter – City of Crystal
Rick Pearson – City of Robbinsdale
Marcia Glick – City of Robbinsdale
Jason Zimmerman – City of Golden Valley

Consultant Team:

SRF Consulting Group
Nelson\Nygaard
Community Design Group
Rani Engineering

Schedule

The consultant team met with the BTIC eight times between January and December 2018. The schedule below highlights the study process, along with deliverables and desired outcomes for each BTIC meeting.
<table>
<thead>
<tr>
<th>Project Tasks</th>
<th>Year 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task 1: Project Management</strong></td>
<td></td>
</tr>
<tr>
<td>Work Plan Coordinated with Community Engagement Plan</td>
<td></td>
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<tr>
<td>Community Engagement Support</td>
<td></td>
</tr>
<tr>
<td>Project Team/Project Manager Coordination &amp; Monthly Progress Updates</td>
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<tr>
<td><strong>Task 2: Review Completed Work</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Task 3: Station Area Circulation &amp; Connectivity Assessment</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Task 4: Bicycle/Pedestrian Connections Implementation Plan</strong></td>
<td></td>
</tr>
<tr>
<td>Develop Project Selection Approach &amp; Confirm 20 projects for Conceptual Design</td>
<td></td>
</tr>
<tr>
<td>Prepare Conceptual Designs &amp; Estimated Costs for 20 Projects</td>
<td></td>
</tr>
<tr>
<td>Refine Project Prioritization Framework &amp; Update Prioritization</td>
<td></td>
</tr>
<tr>
<td>Bicycle &amp; Pedestrian Design Plans (up to 10 projects)</td>
<td></td>
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<tr>
<td><strong>Task 5: Shared Mobility Feasibility</strong></td>
<td></td>
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<tr>
<td>Proposed mobility strategies, ownership/operations, &amp; costs</td>
<td></td>
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<tr>
<td>Technical Memorandum</td>
<td></td>
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<tr>
<td><strong>Stakeholder Engagement Integration</strong></td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #1 (February)</td>
<td>BTIC 1</td>
</tr>
<tr>
<td>- Present map of compiled ped/bike projects (existing, funded, and planned)</td>
<td></td>
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<tr>
<td>get feedback from BTIC members</td>
<td></td>
</tr>
<tr>
<td>- Present draft evaluation criteria/metrics to get feedback from BTIC members</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #2 (March)</td>
<td>BTIC 2</td>
</tr>
<tr>
<td>- Present shared mobility research findings (national best practices)</td>
<td></td>
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<tr>
<td>to be provided to BTIC in advance of meeting.</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #3 (April)</td>
<td>BTIC 3</td>
</tr>
<tr>
<td>- Confirm/finalize the prioritization process (evaluation criteria/metrics)</td>
<td></td>
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<tr>
<td>to be used to select the 20 projects for conceptual design.</td>
<td></td>
</tr>
<tr>
<td>- Review the shared mobility draft/potential strategies for the BLRT stations.</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #4 (May)</td>
<td>BTIC 4</td>
</tr>
<tr>
<td>- Confirm the 20 projects selected via the prioritization process.</td>
<td></td>
</tr>
<tr>
<td>- Discuss approach for developing &amp; prioritizing conceptual designs</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #5 (July)</td>
<td>BTIC 5</td>
</tr>
<tr>
<td>- Present the conceptual designs for the 20 projects (up to 60 concepts)</td>
<td></td>
</tr>
<tr>
<td>- Finalize the prioritization process (20 to 10) projects</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #6 (August)</td>
<td>BTIC 6</td>
</tr>
<tr>
<td>- Confirm the 10 projects from conceptual design options selected for the</td>
<td></td>
</tr>
<tr>
<td>design phase</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #7 (October)</td>
<td>BTIC 7</td>
</tr>
<tr>
<td>- Review 30% design plans with BTIC for 10 projects</td>
<td></td>
</tr>
<tr>
<td>- Review shared mobility memo</td>
<td></td>
</tr>
<tr>
<td>BTIC Meeting #8 (December)</td>
<td>BTIC 8</td>
</tr>
<tr>
<td>- Review 60% design plans with BTIC for 10 projects</td>
<td></td>
</tr>
</tbody>
</table>
Compilation of Potential Projects

This study focused on the proposed BLRT stations in Brooklyn Park, Crystal, Robbinsdale, and Golden Valley (see list of stations below). The stations included within the City of Minneapolis boundaries were not included as part of this study.

- Oak Grove Station – City of Brooklyn Park
- 93rd Avenue Station – City of Brooklyn Park
- 85th Avenue Station – City of Brooklyn Park
- 63rd Avenue Station – City of Brooklyn Park
- Bass Lake Road Station - City of Crystal
- Robbinsdale Station - City of Robbinsdale
- Golden Valley Road Station – City of Golden Valley

Prior to compiling a list of previously identified bike/pedestrian projects, the bikeshed and walkshed was identified for each station. The bikeshed was developed for the Bottineau LRT/METRO Blue Line Extension Bicycle Study and was based on energy expenditure, which takes into account topography. In general, the bikeshed was identified to be approximately 4.4 miles on flat ground from the station. Note that this represents the travel distance to/from the station based on the roadway or planned bikeway network.

The walkshed was developed for this project and was identified to be approximately one mile. Similar to the bikeshed, the walkshed is distance-based. The walkshed includes trail and streets regardless of whether a sidewalk or trail is currently present. Unless the roadway was classified as an interstate or highway, which pedestrians were not assumed as a route option to access the station.

Previous Planning Efforts

A review of previous planning work was completed to identify existing and planned bike/pedestrian projects within the study area as well as key findings from the studies that may influence this project. The following plans were reviewed:

1. METRO Blue Line LRT Extension 90% Submittal Layouts
2. Bottineau LRT/METRO Blue Line Extension Bicycle Study
3. Hennepin County 2040 Bicycle Transportation Plan
4. City of Robbinsdale Pedestrian and Bicycle Plan
5. Bottineau Health Impact Assessment
6. Bottineau LRT Station Area Plans (Golden Valley, Robbinsdale, Crystal, and Brooklyn Park)
7. Bottineau Transitway Station Area Pre-Planning Study
8. Bottineau Land Use Planning Framework
Potential Projects

Based on the bikeshed and walkshed, an initial list of bike/pedestrian projects were identified and presented to the BTIC members. The BTIC reviewed the list to remove any projects that had been recently constructed as well as to add projects that were not included in the planning studies. The resulting list of projects includes 269 bike projects and 198 pedestrian projects. Shared-use trail projects were included as both a bike and a pedestrian project. These projects are mapped in Figure 1 and Figure 2, respectively.
Figure 1. Bicycle Network

Planned Transit
- Bottineau Blue Line Light Rail Line/Station
- Station Not Included in Study Area
- Station Access Bikeshed ~ 4 miles

Existing and Proposed Bicycle Network

- Funded/90% Design
- Planned/Proposed
- Existing

Share-Use Trail
Buffered Bike Lane
Bike Lane
Bike Boulevard

*Planned/Proposed projects to be evaluated and prioritized as part of this plan.
Figure 2. Pedestrian Network

*Planned/Proposed projects to be evaluated and prioritized as part of this plan.
Top 20 Projects

Prior to scoring the 269 bike and 198 pedestrian projects, an initial review of the projects was performed. Projects located within the bikeshed/walkshed but not within the city boundaries of Brooklyn Park, Crystal, Robbinsdale, or Golden Valley were removed, projects that overlapped were removed, and projects that could be combined into a single project were consolidated.

Screening to 20 Projects

The remaining bicycle and pedestrian projects were evaluated based on the Phase 1 screening criteria summarized in Table 1 and Table 2. The criteria was developed using the framework from the Bottineau LRT/METRO Blue Line Extension Bicycle Study and input from the BTIC members. The weight applied to each criterion was based on feedback from the Engagement Study and discussion with BTIC members.

<table>
<thead>
<tr>
<th>Table 1. Bicycle Project Evaluation Criteria Phase 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritization Criteria</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
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<td>4</td>
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<td>5</td>
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<td>6</td>
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<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

100%
Table 2. Pedestrian Project Evaluation Criteria Phase 1

<table>
<thead>
<tr>
<th>Prioritization Criteria</th>
<th>Notes</th>
<th>Value</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Existing Pedestrian Level of Traffic Stress</td>
<td>Simplified LTS to identify highest stress segments</td>
<td>Ranked by LTS from 1-4 (4 being the most stressful)</td>
<td>15%</td>
</tr>
<tr>
<td>2 Connects to regional trail network</td>
<td>Direct connection to regional trail</td>
<td>4 points</td>
<td>12.5%</td>
</tr>
<tr>
<td>3 Concentration of employees and residents served</td>
<td>Jobs (LEHD data points) and population (adjacent blocks)</td>
<td>Ranked in comparison by quartiles</td>
<td>15%</td>
</tr>
<tr>
<td>4 Project readiness (in a CIP)</td>
<td>Is this project on a CIP list?</td>
<td>Yes or No</td>
<td>10%</td>
</tr>
<tr>
<td>5 Creates direct connection to an LRT station</td>
<td>Connection to an LRT station or project in design</td>
<td>Yes or No</td>
<td>12.5%</td>
</tr>
<tr>
<td>6 Serves people in need</td>
<td>Populations of people of color, people with limited English proficiency, and people living in poverty</td>
<td>Ranked in comparison by quartiles</td>
<td>10%</td>
</tr>
<tr>
<td>7 Concentrations of people likely to walk to transit</td>
<td>Young people, older adults, zero-car</td>
<td>Ranked in comparison by quartiles</td>
<td>10%</td>
</tr>
<tr>
<td>8 Within walk shed (proximity to station)</td>
<td>Percentage of the project within the walk shed</td>
<td>Ranked in comparison by quartiles</td>
<td>5%</td>
</tr>
<tr>
<td>9 Concurrent planning efforts</td>
<td>Listed as priority in another Plan</td>
<td>Yes or No</td>
<td>5%</td>
</tr>
<tr>
<td>10 Directly serves schools, libraries, business nodes and other destinations</td>
<td>Schools, libraries, businesses and destinations per mile</td>
<td>Ranked in comparison by quartiles</td>
<td>5%</td>
</tr>
</tbody>
</table>

While the bicycle and pedestrian projects were evaluated separately based on the criteria in Table 1 and Table 2, for projects included on both the bicycle and pedestrian project list, the higher score was used. Using the screening criteria, the top 20 projects were identified, which are mapped in Figure 3 and summarized in Table 3. The scores for all bicycle/pedestrian projects evaluated are included in Appendix A.
Figure 3. Top 20 Projects

Selected projects, by type

List updated 06/07/18

- Bike Boulevard
- Bike Lane
- Bike Lane OR Trail
- Buffered Bike Lane
- Buffered Bike Lane OR Trail
- Intersection improvement
- Sidewalk
- Trail

Project ranking / ID is provided as numeric label. Please refer to accompanying spreadsheet for narrative description.
Table 3.  Top 20 Project Description

<table>
<thead>
<tr>
<th>Rank</th>
<th>Project</th>
<th>Project Limits</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brooklyn Boulevard</td>
<td>Highway 169 to Hampshire Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>2</td>
<td>Bass Lake Road</td>
<td>Bottineau Blvd to the vicinity of Xenia &amp; Yates Avenues (and Sherburne Avenue to the vicinity of West Broadway)</td>
<td>Crystal</td>
</tr>
<tr>
<td>3</td>
<td>42nd Avenue</td>
<td>Adair Avenue to Lake Road</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>4</td>
<td>West Broadway Avenue</td>
<td>County Road 81 (Bottineau Boulevard) to 60th Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>5</td>
<td>93rd Avenue</td>
<td>From the BLRT station going west to tie in to Osseo at Jefferson Highway/Central Avenue.</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>6</td>
<td>Hubbard Avenue</td>
<td>42nd Avenue to 36th Avenue</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>7</td>
<td>West Broadway to 42nd Avenue</td>
<td>47th Avenue to 42nd Avenue</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>8</td>
<td>63rd Avenue</td>
<td>Boone Avenue to Zane Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>9</td>
<td>Lake Drive and County Road 81</td>
<td>Intersection Improvement</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>10</td>
<td>85th Avenue</td>
<td>CR 81 to Regent Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>11</td>
<td>West Broadway Avenue</td>
<td>60th Avenue to 47th Avenue</td>
<td>Crystal</td>
</tr>
<tr>
<td>12</td>
<td>Hampshire Avenue North</td>
<td>66th Avenue to 63rd Avenue on Hampshire Avenue and 66th Avenue from Hampshire Road to Lakeland Park</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>13</td>
<td>Bassett Creek Trail</td>
<td>Golden Valley Road from Regent Avenue to Xerxes Avenue and on Regent Avenue from just south of Westbound to Golden Valley Road/Duluth Street</td>
<td>Golden Valley</td>
</tr>
<tr>
<td>14</td>
<td>Brookdale Drive</td>
<td>Zane Avenue to TH 252</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>15</td>
<td>Starlite Center connections to Brooklyn Boulevard Stations</td>
<td>Improved pedestrian connections through parking lot to businesses west of West Broadway</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>16</td>
<td>Zane Avenue</td>
<td>85th Avenue to 63rd Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>17</td>
<td>36th Avenue</td>
<td>Douglas Drive to County Road 81</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>18</td>
<td>Sherburne Avenue to Douglas Drive</td>
<td>Douglas Drive from 55th Avenue to the Crystal Community Center near 48th Avenue</td>
<td>Crystal</td>
</tr>
<tr>
<td>19</td>
<td>Streets in station area without sidewalks</td>
<td>[Prior to concept development, the City of Robbinsdale removed this project from consideration]</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>20</td>
<td>Louisiana Avenue North</td>
<td>63rd Avenue to 62nd Avenue</td>
<td>Brooklyn Park</td>
</tr>
</tbody>
</table>
Concept Development for 20 Projects

Concept worksheets were developed for the top 20 projects. Each worksheet included the following:

- Project name/extents, municipality
- Map of the project extents
- Proposed bicycle/pedestrian enhancement (i.e. shared-use trail, buffered bike lane, bike lane, bike boulevard, sidewalk, intersection improvement)
- General description of the project (route, relation to other proposed projects)
- Project segments (projects were split into character segments based on corridor conditions, such as available right-of-way and roadway configuration)
- Project description (typical roadway section, number of through lanes, average daily traffic volume (ADT), speed limit, roadway width, available right-of-way, roadway jurisdiction, noted if the roadway was a state aid facility, presence of curb & gutter, presence of a median, presence of on-street parking, presence of a shoulder, presence of center left-turn lane (and width), presence of an existing sidewalk/sidewalk, width of the boulevard or buffer from roadway, approximate length of segment, transit routes along/across the project, noted if the project interacts with the Blue Line Extension LRT 90% Submittal Layouts, and noted if the concept is consistent with the recommendations from the 90% Submittal Layouts)
- General design guidelines and standards used to develop concepts (assumptions provided by Hennepin County staff)

Concepts were developed for each of the segments in the top 20 projects. The segment concepts were illustrated via existing/proposed cross-sections. A description was provided for each segment cross-section that summarized the concept and noted potential impacts to right-of-way, on-street parking, stormwater infrastructure/gutter, transit, and signalized intersections; in addition, if a turn lane or thru lane was modified the worksheet noted if additional traffic analysis would be required. The segment concepts were grouped together to form project concepts. Up to three (3) project concepts were identified for each of the top 20 projects. The worksheets developed for each of the top 20 projects are included in Appendix B.

Top 10 Projects

Screening to 10 Projects

The top 20 project concepts were evaluated based on the Phase 2 screening criteria summarized in Table 4. These criteria were established based on discussions with the BTIC members. Each project had up to three (3) project concepts that were evaluated, resulting in 50 project concepts that were scored. Using the screening criteria, the top 10 projects were identified, which are mapped in Figure 4. The scores for project concepts evaluated are included in Appendix C.
<table>
<thead>
<tr>
<th>Prioritization Criteria</th>
<th>Notes</th>
<th>Recommended Value</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Proposed Level of Traffic Stress with project</td>
<td>Does the project get to LTS 1 on at least one side?</td>
<td>Yes=1, No=0</td>
<td>10%</td>
</tr>
<tr>
<td>2 Proposed Level of Traffic Stress degrees of improvement</td>
<td>Level of improvement from existing LTS to Proposed LTS</td>
<td>Difference between Existing and Proposed LTS, values from 0 to 3</td>
<td>10%</td>
</tr>
<tr>
<td>3 Ease of implementation</td>
<td>Cost estimate and available right-of-way</td>
<td>Rank by cost/scale of construction</td>
<td>15%</td>
</tr>
<tr>
<td>4 Project Leveraging (was Project Readiness)</td>
<td>Is the project primed for design or construction due to other funding opportunities or advanced planning work?</td>
<td>Grant applications in process = 1; Some funding secured = 1; An adjacent project is in design = 1 (cumulative score up to 3)</td>
<td>15%</td>
</tr>
<tr>
<td>5 Serves transit reliant populations</td>
<td>Populations of people of color, people with limited English proficiency, and people living in poverty</td>
<td>Ranked in comparison 1 to 4</td>
<td>10%</td>
</tr>
<tr>
<td>6 Fills a bike network gap</td>
<td>Connections to low stress facilities</td>
<td>Makes a connection to 1 low stress facility = 1; Makes a connection to 2 low stress facilities = 2; Makes a connection to 3 or more low stress facilities = 3; no connection = 0</td>
<td>10%</td>
</tr>
<tr>
<td>7 Projects proportional to number of stations</td>
<td>Each city will be allocated the highest scoring projects in proportion to the number of sites in the city.</td>
<td>n/a</td>
<td>N/A</td>
</tr>
<tr>
<td>8 Concept Readiness</td>
<td>Is there a reason that this concept could not be ready for design such as timing, the need for a traffic study, complexity, or extensive interagency coordination?</td>
<td>No traffic study needed = 1, Intersection studies needed= 0.5, Corridor study needed (road diet and ADT&gt; 13,000) = 0; Simple or established agency coordination expected and no parking impacts = 1; Parking impacts on one side = 0.5; Complex agency coordination and/or parking impacts both sides = 0; No additional ROW needed = 1; ROW impacts of 1’ or less per side = 0.5; ROW impacts greater than 1’ per side = 0 (cumulative score up to 3)</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>
Figure 4. Top 10 Projects
The selection process was two-tiered; after projects were scored Criteria #7 was applied to ensure that each city was allocated projects in proportion to the number of stations in the city. It should also be noted that based on discussions with City staff, additional adjustments were applied based on project feasibility. As a result, the StarLite Shopping Center project in Brooklyn Park and the West Broadway project in Robbinsdale were removed from consideration for detailed design and the next highest scoring project in each city was selected.

Table 5. Top 10 Project Description

<table>
<thead>
<tr>
<th>Rank</th>
<th>Project</th>
<th>Project Limits</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brooklyn Boulevard</td>
<td>Hampshire Avenue to ½ block east of West Broadway Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>2</td>
<td>Bass Lake Road/Douglass Drive</td>
<td>Bass Lake Road from Yates Avenue to Bottineau Blvd and Douglas Drive from West Broadway to 55th Avenue</td>
<td>Crystal</td>
</tr>
<tr>
<td>5</td>
<td>93rd Avenue</td>
<td>North Oak Drive to Jefferson Highway</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>6</td>
<td>Hubbard Avenue</td>
<td>36th Avenue to 41st Avenue and west along 41st Avenue for ½ block</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>8</td>
<td>63rd Avenue</td>
<td>Zane Avenue to Forest Avenue and West Broadway to Boone Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>12</td>
<td>Hampshire Avenue North</td>
<td>Hampshire Avenue from 63rd Avenue to 66th Avenue and 66th Avenue from Hampshire Avenue to Lakeland Park</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>13</td>
<td>Bassett Creek Trail</td>
<td>Golden Valley Road from Xerxes Avenue to Duluth Street and Duluth Street from Golden Valley Road to Douglas Drive</td>
<td>Golden Valley</td>
</tr>
<tr>
<td>16</td>
<td>Zane Avenue</td>
<td>73rd Avenue to 85th Avenue</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>17</td>
<td>36th Avenue</td>
<td>France Avenue to Halifax Avenue</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>20</td>
<td>Louisiana Avenue North</td>
<td>62nd Avenue to 63rd Avenue</td>
<td>Brooklyn Park</td>
</tr>
</tbody>
</table>

Design Plans (30 Percent and 60 Percent) for 10 Projects

The intent for developing the 60 percent plans was to assist corridor communities in advancing these projects towards implementation. The level of design provided helped identify potential implementation challenges that needed to be resolved in order to construct these facilities. A preliminary opinion of estimated construction cost was prepared for each project to inform corridor communities of expected funding needed to implement the projects as currently designed. The corridor communities could use this information in a variety of ways, such as soliciting potential funding sources, performing community engagement to solicit input and feedback on the concepts, or to initiate discussions with key project stakeholders.

Initial layouts at a 30 percent engineering level were created for the final 10 projects based on aerial photography overlaid with Hennepin County right-of-way data. The layouts were used to convey project extents, along with conceptual pedestrian and bicycle facility alignments and sizing. These were shared with the BTIC for review and comment.
Concurrent with the development of the 30 percent layouts, topographic surveys were being performed on the 10 project sites. Survey data was collected for all utility covers and rim elevations. Data on back of curb locations, road centerlines, sidewalks, fences, etc. were collected on approximately 50-foot cross-section intervals.

Based on the topographic survey, LIDAR data, and files received from the corridor communities, design plans at the 60 percent engineering level were developed. The plans included:

- Title sheet
- General layout
- Special signage – wayfinding and furnishing locations and details
- Typical sections
- Existing topography, in-place utilities and removals
- Construction plan and profiles
- Cross sections

The 60 percent plans are considered preliminary and have been developed as a recommendation that will be considered with other information and options at the time of final design.

**Project Issues Identified**

Design issues identified over the course of developing the 60 percent plans are noted on the plan sheets as a convenient way of linking outstanding or substantive issues with current design efforts. Table 6 summarizes some of the primary issues identified to date and shared at the final BTIC meeting.

<table>
<thead>
<tr>
<th>Project</th>
<th>Outstanding Issue</th>
<th>City</th>
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<td>Trail location options: a) stay within right-of-way with no planting buffer or b) provide planting buffer, but extend outside of current right-of-way</td>
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<tr>
<td>93rd Avenue</td>
<td>Requires installation of a culvert and associated wetland impacts</td>
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<td>Hubbard Avenue</td>
<td>Trail connection to 36th Avenue will impact existing gateway plaza and vegetation. City will need to decide how to reconfigure plaza space and how best to incorporate trail into new design</td>
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<tr>
<td>63rd Avenue</td>
<td>Numerous utility impacts along corridor</td>
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<tr>
<td>Bassett Creek Trail</td>
<td>Impacts to existing retaining walls. Extension of creek culvert needed.</td>
<td>Golden Valley</td>
</tr>
<tr>
<td>Zane Avenue</td>
<td>Impacts to parking lots north of Brooklyn Boulevard. Analyze traffic to determine feasibility of eliminating free right turn lanes at Brooklyn Boulevard and 85th Avenue</td>
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<tr>
<td>36th Avenue</td>
<td>Impacts to townhouse steps</td>
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<tr>
<td>Louisiana Avenue</td>
<td>Sidewalk location options for southern portion of project: a) stay within right-of-way with no planting buffer or b) provide planting buffer, but extend outside of current right-of-way</td>
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Appendix A
Phase 1 Scoring
### Phase 1 Scoring (Top 20 Selection Process)

<table>
<thead>
<tr>
<th>ID</th>
<th>Location</th>
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## Phase 1 Scoring (Top 20 Selection Process)

<table>
<thead>
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<th>ID</th>
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## Phase 1 Scoring (Top 20 Selection Process)

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<td>Golden Valley</td>
<td>Bike Lane</td>
<td>197</td>
<td>1.05</td>
</tr>
<tr>
<td>B120</td>
<td>Winnetka Ave</td>
<td>Brooklyn Park</td>
<td>Bike Lane</td>
<td>198</td>
<td>1.05</td>
</tr>
<tr>
<td>P198</td>
<td>Lakeland Avenue North</td>
<td>Brooklyn Park</td>
<td>Sidewalk</td>
<td>198</td>
<td>1.05</td>
</tr>
<tr>
<td>P9</td>
<td>Parkview Blvd from Manor Dr to 26th Ave N</td>
<td>Golden Valley</td>
<td>Sidewalk</td>
<td>200</td>
<td>1.00</td>
</tr>
<tr>
<td>B137</td>
<td>Culver Rd</td>
<td>Golden Valley</td>
<td>Bike Boulevard</td>
<td>201</td>
<td>0.95</td>
</tr>
<tr>
<td>B139</td>
<td>Culver Rd</td>
<td>Golden Valley</td>
<td>Bike Boulevard</td>
<td>201</td>
<td>0.95</td>
</tr>
<tr>
<td>P14</td>
<td>Southeast from end of Kewanne Way across Glenview Terrace Park</td>
<td>Golden Valley</td>
<td>Sidewalk</td>
<td>203</td>
<td>0.90</td>
</tr>
<tr>
<td>P8</td>
<td>Legend Dr from Golden Valley Rd to northern terminus</td>
<td>Golden Valley</td>
<td>Sidewalk</td>
<td>203</td>
<td>0.90</td>
</tr>
<tr>
<td>B282</td>
<td>Jersey Dr</td>
<td>Brooklyn Park</td>
<td>Bike Boulevard</td>
<td>205</td>
<td>0.85</td>
</tr>
<tr>
<td>P7</td>
<td>Bassett Creek Dr from Golden Valley Rd to northern terminus</td>
<td>Golden Valley</td>
<td>Sidewalk</td>
<td>205</td>
<td>0.85</td>
</tr>
<tr>
<td>P16</td>
<td>Noble Ave N from Golden Valley Rd to Culver Rd</td>
<td>Golden Valley</td>
<td>Sidewalk</td>
<td>207</td>
<td>0.75</td>
</tr>
</tbody>
</table>
Appendix B
Top 20 Concept Sheets
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

ID: 01

08/16/18

Revision:

08/16/18

GENERAL DESCRIPTION

Route for proposed improvement

- Route starts: Highway 169
- Route covers: Brooklyn Boulevard, except Xylon Avenue North to West Broadway (currently planned by others)
- Route ends: Hampshire Avenue

Relation to other proposed projects

- Blue Line station at intersection with West Broadway
- Planned improvements at CR81 and east of Hampshire (10ft trail on south side)

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route

- Segment 1: Four lane, two way section west of Xylon Avenue North to Highway 169
- Segment 2: Four lane, two way with medians and center left and right turn lanes east of West Broadway Avenue to Hampshire Avenue

Traffic levels (current AADT, MnDOT).

General project location.
Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 2 (EB)
Project Description

Other Currently Planned Improvements

View of currently planned improvements at CR81
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way</td>
<td>Four lane, two way with center left turn lanes</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>16,000 to 16,900</td>
<td>18,800 to 19,500</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>72 - 80</td>
<td>100</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 152</td>
<td>Yes - CSAH 152</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>Yes - 7 ft</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>12</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>10 ft sidepath on south side between Northland and Boone - 5 ft sidewalk along north (east of Boone)</td>
<td>5 ft sidewalk on north and south (east of Zealand)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>7.5 ft on north</td>
<td>5.5 ft - 9 ft on north and south</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>4,050 ft</td>
<td>2,610 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>721</td>
<td>705, 724</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>782,764</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>Yes: one block east and west from W Broadway Ave</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>No</td>
<td>Trail on north and south side of Brooklyn Blvd between block east and west of station. Two lane, two way traffic on road, with a landscape median, as well as left and right turn lanes at intersections.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>Trail on one side (south) or both sides</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal
TYPE: Shared-Use Path

Existing (EB)

Proposed (EB)

GENERAL DESCRIPTION

• Single Two-way Shared-use Path / Trail
• Implement one two-way shared-use path / trail along the south side of roadway
  - One segment currently existing between Northland and Boone
  - Brooklyn Park project for Hampshire to Zane will provide trail on south side
  - Existing trail on south side west of Jefferson Highway
• Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter only
• Requires up to 5 ft acquisition or easement beyond existing ROW for select parcels

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

• Impacts to existing on-street parking
  - None
• Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
• Impacts to existing transit
  - None at this time
• Any turn lane removal will require traffic analysis
• Impacts at signalized intersections
  - Potential impact to newly installed APS at Boone
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Double Two-way Shared Use Paths / Trails

- Implement two Two-way Shared Use Paths / Trails
- No change to existing roadway cross-section width or roadway components
- Requires up to 12 ft acquisition or easement beyond existing ROW for select parcels

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 10' of impervious surface per SUP
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None at this time
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential impact to newly installed APS at Boone
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

- Implement one two-way shared-use path / trail along the south side of roadway
  - One segment currently existing between Northland and Boone
  - Brooklyn Park project for Hampshire to Zane will provide trail on south side
  - Existing trail on south side west of Jefferson Hwy
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South of median

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Double Two-way Shared Use Paths / Trails
- Implement two Two-way Shared Use Paths / Trails
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter only

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater with addition of 10' of impermeable surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Implementing an 8' trail on north side reduces ROW impacts
- Implementing an 8' trail on south side eliminates curb and gutter impacts
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
EXISTING CONDITIONS AND CONTEXT

PROJECT LOCATION

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: West Broadway Ave
- Route covers: Bass Lake Rd, except Becker Park
- Route ends: Yates Ave N

Relation to other proposed projects
- Connects to Project ID 11
- Upcoming trail improvements at Becker Park
- Blue Line station just south of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route
- Segment 1: Four lane, two way section with center left turn lane and median west of Sherburne Avenue
- Segment 2: Four lane, two way with center left turn lane, and median between Bottineau Blvd and Zane Ave
- Segment 3: Four lane, two way east of Zane Avenue
Project Description
Segments to be Considered

Segments considered and general project location.

View of Segment 1 (EB)

View at Becker Park (in planning by others)
Project Description
Segments to be Considered - CONTINUED

Intersection with Bottineau Blvd (EB)

View of Segment 2 (EB)

View of Segment 3 (EB)
Segments to be Considered - CONTINUED

Existing at Becker Park (EB)

Becker Park - Currently in development by City of Crystal and Hennepin County

Diagram of Currently Existing at Becker Park (by others, EB)

Proposed at Becker Park by others (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way road with a center left turn lane and median</td>
<td>At Bottineau: Four lanes, two way, with additional right turn and center-left turn lanes, and median</td>
<td>Four lanes, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>&lt;&lt; pending &gt;&gt;</td>
<td>11,600 (21,200 just west of Bottineau)</td>
<td>18,800 to 19,500</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>70</td>
<td>90</td>
<td>48</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>100</td>
<td>115</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 10</td>
<td>Yes - CSAH 10</td>
<td>Yes - CSAH 10</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes - 6 ft</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>13</td>
<td>11.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>12</td>
<td>14, 11.5</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>9 ft sidewalk both sides</td>
<td>8 ft sidewalk both sides</td>
<td>5 ft sidewalk on north, 8 ft sidewalk on south</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
<td>Varied</td>
<td>3 ft on north, none south</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>800 ft</td>
<td>670 ft</td>
<td>340 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>721</td>
<td>721</td>
<td>721</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
<td>Segment 3</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - single side (south)

GENERAL DESCRIPTION
Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

Existing (EB) (Available ROW - 100' TYP.)

Proposed (EB) (Available ROW - 100' TYP.)
GENERAL DESCRIPTION

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Reconstruct sidewalk on north side of Bass Lake Rd to provide greater setback / separation from roadway and improve experience for pedestrians
  - Matches location as proposed across Becker Park
- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - South curb and gutter

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Reconstruct sidewalk on north side of Bass Lake Rd to provide greater setback / separation from roadway and improve experience for pedestrians
  - Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - North curb and gutter
- Reduction in buffer between sidewalk and roadway could eliminate curb and gutter impacts

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Review considerations for safe pedestrian and bicycle travel across the Bottineau Blvd intersection
  - Explore protected intersection or similar treatments
- Impacts on driving lanes
  - None
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Reconstruct sidewalk on north side of Bass Lake Rd to provide greater setback / separation from roadway and improve experience for pedestrians
  - Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- No change to existing roadway cross section width or roadway components

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 8’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
  - Matches location of trail proposed for Becker Park
- No change to existing roadway cross-section width or roadway components
  - Maintains existing curb line
  - Given current traffic volumes, limited opportunity to implement a three lane conversion
- Requires 8’ acquisition or easement beyond existing ROW
  - 8’ trail width could reduce ROW impacts

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding 8’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Transition of SUP to the existing on-street bike lanes east of project limits will require limited restriping of Bass Lake Road to include bike lanes and three lane section immediately west of Yates
**EXISTING CONDITIONS AND CONTEXT**

General project location.

Traffic levels (current AADT, MnDOT).

**GENERAL DESCRIPTION**

Route for proposed improvement
- Route starts: 42nd Avenue N at Adair Ave N (for concept discussion, extend to Douglas Drive N in Crystal)
- Route covers: 42nd Avenue N
- Route ends: 42nd Avenue N at West Broadway

Relation to other proposed projects
- Connects to Project IDs 06, 07 and 09
- Blue Line station just south of intersection with Hubbard Ave N

**UNIFORMITY / VARIABILITY ALONG ROUTE**

Conditions and configuration vary along the route
- Segment 1: Four lane section west of Welcome Ave N
- Segment 2: Freeway ramps, medians, four lane section, and freeway ingress and egress between Welcome Ave N and Regent Ave N
- Segment 3: Four lane section between Regent Ave N and West Broadway Avenue
Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 2 (EB)
View of Segment 3 (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way</td>
<td>Four lane, two way with freeway access, multiple turn lanes</td>
<td>Four lane, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>no data for segment - closest are 20,500 to west, 13,000 to east</td>
<td>no data for segment - closest are 20,500 to west, 13,000 to east</td>
<td>13,000</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>48</td>
<td>48 to 100</td>
<td>48</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>108 (bridge width)</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 9</td>
<td>Yes - CSAH 9</td>
<td>Yes - CSAH 9</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>Yes - 8 ft</td>
<td>No, except narrow medians between railroad and Broadway (to be extended with the BLRT Project)</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>Yes - north only</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>10</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on north (5ft) and south (5ft)</td>
<td>Sidewalk on north (7ft) and south (7ft)</td>
<td>Sidewalk on north (7ft) and south (7ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>4 ft</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,270 ft</td>
<td>1,840 ft</td>
<td>1,240 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>716, 717, 764</td>
<td>716, 717, 764</td>
<td>716, 717</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
<td>Segment 3</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>Four lane, two way with sidewalk. Does not include bike lane.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;&lt; pending &gt;&gt;</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - single side (south)

Existing (EB)

Proposed (EB)

GENERAL DESCRIPTION
Three Lane Conversion and Shared-Use Path
- Implement a three lane conversion (“Road Diet”) for Segments 1 and 3
  - ADT at Segment 3 is within range for conversion; ADT at Segment 1 is currently not available but may also be within range for conversion
  - Conversion frees up space for off-road bicycle facilities
- Implement Single Two-way Shared-Use Path
- Requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - None at this time
- Overhead power lines and poles along the south side may require relocation
Concept Proposal
TYPE: Separated / Protected Bicycle Lanes - both sides

GENERAL DESCRIPTION
Three Lane Conversion and Separated Bicycle Lanes
- Implement a three lane conversion ("Road Diet") for Segments 1 and 3
  - ADT at Segment 3 is within range for conversion; ADT at Segment 1 is currently not available but may also be within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement separated bicycle lanes along both sides of roadway
  - Requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential railroad crossing impacts
**GENERAL DESCRIPTION**

Three Lane Conversion and Two-way Separated Bike Lanes

- Implement a three lane conversion (“Road Diet”) for Segments 1 and 3
  - ADT at Segment 3 is within range for conversion; ADT at Segment 1 is currently not available but may also be within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement one two-way separated/protected bike lanes along the south side of 42nd Ave N
  - Facilitates connection to / from Blue Line station south of 42nd and Hubbard
  - Requires change to existing roadway curb line
- Requires 2’ acquisition or easement beyond existing ROW

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter (bike friendly)
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Account for adjustments to accommodate two-way bike lane on one side of the roadway.
  - ADA compliant pedestrian ramps
  - APS at intersections
- Overhead power lines and poles along the south side may require relocation.
- Reduction in buffer width between sidewalks and curbs could eliminate ROW impacts
GENERAL DESCRIPTION

Three Lane Conversion and Two-way Separated / Protected Bike Lanes

- Implement a three lane conversion (“Road Diet”) for Segment 2
  - ADT at adjoining Segment 3 is within range for conversion; ADT at Segment 2 is currently not available but may also be within range for conversion
  - Partial conversion at this location (removal of one EB lane) frees up space for on-road separated bicycle facilities
- Implement one two-way protected bike lanes along the south side of 42nd Ave N
  - Facilitates connection to / from Blue Line station south of 42nd and Hubbard
  - Does not requires change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Account for adjustments to accommodate two-way bike lane on one side of the roadway
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
GENERAL DESCRIPTION

Three Lane Conversion and Two-way Separated / Protected Bike Lanes

- Implement a three lane conversion ("Road Diet") for Segment 2
  - ADT at adjoining Segment 3 is within range for conversion; ADT at Segment 2 is currently not available but may also be within range for conversion
  - Partial conversion at this location (removal of one EB lane) frees up space for EB separated bike lane
  - Existing shoulder space along north side repurposed to WB separated bike lane
- Implement separated protected bicycle lanes along both sides of roadway
  - Does not require change to existing roadway curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Account for adjustments to accommodate one-way bike lanes
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
**EXISTING CONDITIONS AND CONTEXT**

**GENERAL DESCRIPTION**

- Route for proposed improvement
  - Route starts: 60th Avenue
  - Route covers: West Broadway Avenue
  - Route ends: 71st Avenue/CR 81

- Relation to other proposed projects
  - Connects to Project IDs 08 and 11

**UNIFORMITY / VARIABILITY ALONG ROUTE**

- Conditions and configuration vary along the route
  - Segment 1: Two lane, two way roadway between 60th and 69th Ave N
  - Segment 2: Four lane, two way with center turn lane and median north of 69th Ave N

---

Project: West Broadway Avenue - 60th Avenue North to CR81
City: Brooklyn Park
Mode(s): Bicycle
Segments to be Considered

Segments considered and general project location.

View of Segment 1 (NB)

View of Segment 1 (NB)
Project Description
Segments to be Considered - CONTINUED

View of Segment 1 (NB)

View of Segment 1 (NB)

View of Segment 2 (NB)
2017 reconstruction at Segment 2
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way</td>
<td>Four lanes, two way with a center turn lane</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>6,300</td>
<td>8,700 to 12,100</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>38 to 40</td>
<td>86</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>74 to 82</td>
<td>105</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin Co</td>
<td>Hennepin Co</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 8</td>
<td>Yes - CSAH 8</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>No, except east side south of 62nd Ave</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>8</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11</td>
<td>12.5</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>11.5</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on east south of 62nd Ave</td>
<td>Sidewalk on west and east, north of 69th Ave N</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>8 ft</td>
<td>9 ft</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>6,970 ft</td>
<td>1,520 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>705, 716, 767, 764</td>
<td>705, 764</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>782</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>Intersection was reconstructed in 2017. Sidewalk on west side of road, no sidewalk on east side of road. Trail provided on west side of CR81</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>Separated bike lanes (both sides) and single bidirectional trail (on west).</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
**GENERAL DESCRIPTION**

Buffered Bicycle Lane
- Buffered bicycle lanes provided in the existing shoulder
- No change to existing roadway cross-section width

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - Access to mailboxes for mailtrucks
- Impacts to existing stormwater infrastructure / gutter
  - Verify impacts of roadway spread changes, if any
- Impacts to existing transit
  - Eliminates bus pull-over area
- Impacts to signalized intersections
  - Potential use of separate bike signal
GENERAL DESCRIPTION
- Provide separated / protected bicycle lane (both sides) in space adjacent to the sidewalk and separated from the roadway by boulevard
- No change to existing roadway cross-section width or roadway components
- Fills in sidewalk gap on east side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Evaluate turning templates if changing intersection turning radii
**GENERAL DESCRIPTION**

Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail along the west side of roadway
  - Ties to facility across recently reconstructed CR81
  - Transition Segment 1 facility to single side before reaching Segment 2
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Median and west side only
  - Reduction in buffer between path and road could eliminate roadway and median impacts
- Fills in sidewalk gap on east side

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Evaluate turning templates if changing intersection turning radii
- Need to determine location and method for transition between segment one (on-road treatment) and segment two (off-road treatment)
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

Project: 93rd Avenue North - Jefferson Highway to Blue Line Station
City: Brooklyn Park
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
• Route starts: Jefferson Highway North / Central Avenue
• Route covers: 93rd Avenue North / 7th Street North
• Route ends: West Broadway Avenue

Relation to other proposed projects
• Blue Line station just south of West Broadway

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route
• Segment 1: Two lane section west of 6th Ave N, with occasional center left and right turn lanes
• Segment 2: Four lane section between 6th Ave N and Wyoming Ave, including center left and right turn lanes.
• Segment 3: Two lane, two way, center left turn east of Wyoming Avenue
Project Description
Segments to be Considered

Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 2 (EB)
View of trail along Segment 2 (EB)

View of Segment 3 (EB)

View of Segment 3 at West Broadway (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way (occasional center left and right turn lanes)</td>
<td>Four lane, two way (with center left and right turn lanes)</td>
<td>Two lane, two way (with center left turn lane)</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>no data available</td>
<td>7,600 to 8,600</td>
<td>7,600 to 5,800</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>22-50 (48 typ)</td>
<td>60-82</td>
<td>32</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66 ft</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 30</td>
<td>Yes - CSAH 30</td>
<td>Yes - CSAH 30</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>Yes (8 - 12 ft)</td>
<td>Yes (painted, 8 ft)</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
<td>No</td>
<td>Yes (unpaved)</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>2 - 5</td>
<td>N/A</td>
<td>2 - 7</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>10.5</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>None</td>
<td>8 ft sidepath on north and south (west of 169) - 12 ft sidewalk north and south on bridge over 169 - 8 ft sidepath on south (east of 169)</td>
<td>None</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>N/A</td>
<td>5.5 ft on north, 7 ft on south (west of 169) - none (east of 169)</td>
<td>N/A</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,930 ft</td>
<td>3,380 ft</td>
<td>1,310 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
<td>None</td>
<td>724</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
<td>Segment 3</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>782</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>Yes: Wyoming Ave N to W Broadway Ave</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>Trail on north and south side of 93rd of W Broadway Ave. Two lane, two way traffic on road, w/ a landscape median, and left and right turn lanes at intersections.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>Shared-use path on one or both sides of road</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
<td>N/A</td>
<td>No</td>
</tr>
</tbody>
</table>

Project 05 Segment 3 is being designed as a four-lane divided roadway with trails on both sides as part of LRT station plans.
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
**Concept Proposal**

**TYPE:** Two-way Separated / Protected Bicycle Lane - single side (south)

**GENERAL DESCRIPTION**

Two-way separated/protected bicycle lane

- Implement one two-way separated/protected bicycle lane
  - Place on south side to facilitate connection with Blue Line station
- Requires reconstruction and modification to roadway cross-sections and curb and gutters

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

One-way Buffered Bicycle Lanes
- Implement a pair of one-way buffered bicycle lanes on roadway shoulder
  - Shoulder remains accessible by motor-vehicles
- Maintains existing roadway cross-section width
  - Maintains existing roadway edge line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - May require ditch regrading
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail
  - Place on south side to facilitate connection with Blue Line station
- Maintains existing roadway cross-section width
  - Requires construction of curb and gutter and modification of existing curb line on one side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
- 1’ acquisition or easement beyond existing ROW
  - Reducing path to 9’ would eliminate ROW impacts
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - both sides

GENERAL DESCRIPTION
Two-way Shared-use Paths / Trails
- Implement two-way shared-use path / trails along both sides of the roadway
  - Trails and accommodation are already provided on both sides of approaches and bridge over Hwy 169, and in one or both sides of segment 2
  - If necessary, prioritize connection and development of trails on south side to facilitate connection with Blue Line station

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter between 6th Ave and N. Oak (south side)
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential wetland impacts between 6th Ave and N. Oak on south side
### GENERAL DESCRIPTION

**Route for proposed improvement**
- Route starts: 42nd Avenue N and Hubbard Avenue N
- Route covers: Hubbard Avenue N
- Route ends: 36th Avenue N and Hubbard Avenue N

**Relation to other proposed projects**
- Connects to Project IDs 03 and 17
- Blue Line station nearby, south of 42nd Ave N

### UNIFORMITY / VARIABILITY ALONG ROUTE

**Conditions and configuration are generally constant along the route**
- Minor variation in cross-section elements between north and south of 41st Avenue North

**General project location and traffic levels (current AADT, MnDOT).**
Segments considered and general project location.

View of Segment 1 (NB)

View of Segment 2 (NB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way</td>
<td>Two lane, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>1,200</td>
<td>740 to 780</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Robbinsdale</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes, one side</td>
<td>Yes, both sides</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>8</td>
<td>6 (not marked)</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11</td>
<td>10 (not marked)</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on east and west</td>
<td>Sidewalk on east and west (north of 38th Ave N) - Sidewalk on east (south of 38th Ave N)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
<td>6 ft</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>960 ft</td>
<td>4,000 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>14, 32, 716, 717, 758</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>N/A</td>
<td>14, 32</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Categories

<table>
<thead>
<tr>
<th>Recommendation from 90% plans</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalk improvements, redesigned curb of Hubbard at 42nd Ave N</td>
<td>Neighborhood Slow Street</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Recommendations from concepts in this project interacting with 90% plans (several concepts available)

<table>
<thead>
<tr>
<th>Do the recommendations conflict or preclude each other?</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
**Segment 1**

**GENERAL DESCRIPTION**

Neighborhood Slow Street

- Implement Neighborhood Slow Street (traffic-calmed street)
  - Suitable solution given low volumes of traffic (significantly below 3,000 ADT threshold)
- Introduce traffic calming elements to calm traffic speeds to 25 mph or less:
  - Reorient stop signs to stop cross street / perpendicular traffic
  - Add traffic-calming elements, including traffic circles, bump-outs (curb extensions), medians, diverters or speed tables
  - Add wayfinding markers and route signs
  - Add pavement markings, including oversize sharrow or bike boulevard markings
- Investigate and develop solutions for movement across intersections and connection for:
  - Crossing 41st Ave North (route includes zig-zag along 41st)

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Work with Metro Transit to maintain appropriate access from 41st Ave N to Lake Dr / 42nd Ave N
- Impacts at signalized intersections
  - N/A
GENERAL DESCRIPTION

Neighborhood Slow Street

• Implement Neighborhood Slow Street (traffic-calmed street)
  - Suitable solution given low volumes of traffic (significantly below 3,000 ADT threshold)
• Introduce traffic calming elements to calm traffic speeds to 25 mph or less:
  - Reorient stop signs to stop cross street / perpendicular traffic
  - Add traffic-calming elements, including traffic circles, bump-outs (curb extensions), medians, diverters or speed tables
  - Add wayfinding markers and route signs
  - Add pavement markings, including oversize sharrow or bike boulevard markings
• Develop sidewalk segments where not currently existing (west side south of 38th Ave N)
• Investigate and develop solutions for southern terminus at 36th

Avenue North, and connection to other bicycle facilities

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

• Impacts to existing on-street parking
  - None
• Impacts to existing stormwater infrastructure / gutter
  - None
• Impacts to existing transit
  - N/A
• Impacts at signalized intersections
  - N/A
Concept Proposal
TYPE: Neighborhood Slow Street

Sample implementation

Sample implementation

Sample implementation
EXISTING CONDITIONS AND CONTEXT

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: 42nd Avenue N and W Broadway Ave
- Route covers: W Broadway Avenue
- Route ends: 47th Avenue N and W Broadway Ave

Relation to other proposed projects
- Connects to Project IDs 03, 06 and 11
- Southern terminus in proximity to Blue Line station

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route
- Segment 1: Two lane section with parking, curb and gutter south of Lakeland Avenue
- Segment 2: Two lane section, rural shoulder, north of Lakeland Ave
**Project Description**

Segments to be Considered

---

**Segments considered and general project location.**

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**View of Segment 1 (NB)**

---

**View of Segment 1 (NB)**
## Project Description

### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of typical roadway section</strong></td>
<td>Two lane, two way with parking lane</td>
<td>Two lane, two way with shoulder</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>5,200</td>
<td>3,700</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>44</td>
<td>40</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 8</td>
<td>Yes - CSAH 8</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes - except at bridge over Highway 100</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No - except at bridge over Highway 100</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Yes, 5 ft sidewalk both sides</td>
<td>No</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>6 ft</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,420</td>
<td>2,490</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>717</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Project Description

**Description of Segments - CONTINUED**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation from 90% plans</td>
<td>Improved sidewalks at 42nd Ave N intersection, center left turn and painted median between 42nd Ave n and 42nd ½ Ave N. No indication for bike facilities or boulevard.</td>
<td>Redesign 45 1/2 Ave N with new right turn lane, new sidewalk on west side of road (see below)</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>Two way separated bicycle facility on the west side of the road, boulevard between sidewalk and road.</td>
<td>Proposal 7-A is two-way separated bicycle lane on the west side of the roadway. Proposal 7-B calls is one-way separated bicycle lane on both sides of street.</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>Geometry does not preclude our recommended concept from working.</td>
<td>Potentially yes - proposed 90% designs do not seem to include space for separated bike lane on west side as needed for either 7-A or 7-B, but could be addressed to resolve.</td>
</tr>
</tbody>
</table>

**Existing at Segment 2**

**90% Plans at Segment 2**
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal
TYPE: Two-way Separated / Protected Bicycle Lane - single side (west)

Existing (NB)

Proposed (NB)

GENERAL DESCRIPTION
Two-way Separated / Protected Bicycle Lane
- Implement a two-way separated bicycle lane
  - Place on west side to reduce number of intersections
- No change to existing roadway cross-section
  - Maintains existing curb line
- Removes one lane of existing parking
  - Maintain parking lane along west side to accommodate multi-family and commercial uses along Segment 1

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - Elimination of east side parking lane
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

One-way Buffered Bicycle Lanes
- Implement a pair of one-way buffered bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Elimination of parking on both sides
- Impacts to existing stormwater infrastructure / gutter
  - Bike friendly drainage grates
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION
Two-way Separated / Protected Bicycle Lane
• Implement a two-way separated bicycle lane
  – Place on west side to reduce number of intersections
• Reconstruction and modification of roadway cross-section

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  – None
• Impacts to existing stormwater infrastructure / gutter
  – Stormwater spread will need to be evaluated to ensure it meets requirements
  – Potential impacts to stormwater by adding impervious surface
  – Re-grading of drainage ditches
• Impacts to existing transit
  – N/A
• Impacts at signalized intersections
  – N/A
GENERAL DESCRIPTION
One-way Separated / Protected Bicycle Lanes
• Implement a pair of one-way separated protected bicycle lanes

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  - None
• Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts to stormwater by adding impervious surface
  - Re-grade drainage ditches
• Impacts to existing transit
  - N/A
• Impacts at signalized intersections
  - N/A
GENERAL DESCRIPTION
Single Two-way Shared-use Path / Trail
• Implement a two-way shared-use path / trail
  – Place on west side to reduce number of intersections
  – Requires construction of curb and gutter
• Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  – None
• Impacts to existing stormwater infrastructure / gutter
  – Potential impacts due to addition of 10’ of impervious surface
  – Stormwater spread will need to be evaluated to ensure it meets requirements
• Impacts to existing transit
  – N/A
• Impacts at signalized intersections
  – N/A
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

ID: 08
Revision: 08/15/18

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: Boone Avenue
- Route covers: 63rd Avenue
- Route ends: Zane Avenue

Relation to other proposed projects
- Connects to Project IDs 04, 20, 12, and 16
- Blue Line station just north of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 1: Two lane, two way road west from Louisiana Avenue North
- Segment 2: Four lane, two way road with center left turn lane east from Louisiana Avenue North
Project Description
Segments to be Considered

View of Segment 1 (EB)

Segments considered and general project location.

View of Segment 1 (EB)
Segments to be Considered - CONTINUED

View of Segment 2 at Bottineau Blvd (EB)

Street view out of date - now features one-way bike lanes on both sides of roadway

View of Segment 2 (EB)

Street view out of date - now features one-way bike lanes on both sides of roadway

View of Segment 2 (EB)
### Project Description

#### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way</td>
<td>Two lane, two way with center left turn lane</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>6,900</td>
<td>7,200 to 12,100</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>70</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes (painted)</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Some</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>12</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>5 ft widewalk on north and south</td>
<td>8 ft sidewalk both sides (west of Bottineau), 10 ft shared use path both sides (east of Bottineau), 5 ft sidewalk on north only (east of Forest Ave N)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>10 ft on north, 12 ft on south (east of Yukon Ave)</td>
<td>6 ft (east of Forest Ave N)</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>5,250 ft</td>
<td>4,090 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>716, 767</td>
<td>716, 767</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>705, 721, 764, 767</td>
<td>724, 760</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes: at corner of Louisiana Ave N and 63rd Ave N</td>
<td>Yes: at Louisiana Ave N to Lakeland Ave N</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>Redesign sidewalk corners at intersection to provide direct crossing from north to south side of 63rd Ave N, as well as east to west on Louisiana Ave N</td>
<td>East of Bottineau Blvd: Sidewalk on north and south side of 63rd Ave N. One lane, two way traffic on road, w/ a median, as well as two left turn lanes and one right turn lane via east from Louisiana Ave N to Bottineau/63rd intersection. A right and left turn lane via west from Bottineau/63rd intersection to Louisiana Ave N. West of Bottineau Blvd: Remains the same.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>Shared-use path on one side (north) or on both sides both sides of 63rd Ave N</td>
<td>Shared-use path on both sides of 63rd Ave N Separated / protected bicycle lane on one side (north) or on both sides</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11' wide
• Parking lane minimum of 8'
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic
  and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps
  and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min.
  5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in
  Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - single side (north)

GENERAL DESCRIPTION
Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail along the north side of 63rd Avenue
  - Place on north side to facilitate connection with Blue Line station
- No change to existing roadway cross-section width or roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Space constraints at West Broadway to accommodate turn lanes

Available ROW - 66’ TYP.

Existing (EB)

Proposed (EB)
Concept Proposal
TYPE: Sidewalk - single side (south)

GENERAL DESCRIPTION
Sidewalk
• Implement sidewalk along south side of roadway.

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  - None
• Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
• Impacts to existing transit
  - None
• Impacts at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

Project: Intersection improvement - Lake Drive and County Road 81
City: Robbinsdale
Mode(s): Pedestrian

GENERAL DESCRIPTION

Intersection improvement
• Improvement for pedestrian travel along 42nd Avenue across Bottineau Boulevard / County Road 81
• Note: Intersection currently not under consideration for bike facilities due to expected impacts to property and/or traffic diversion.

Relation to other proposed projects
• Blue Line Station is located south of 42nd Ave / Hubbard Ave N Intersection
UNIFORMITY/VARIABILITY ALONG ROUTE

On 42nd Avenue / Lake Drive
- ADT
  - 12,400 west of Bottineau
  - 9,900 east of Bottineau
- Lanes and configuration
  - EB: 1LTOL, 2TH, 1RTOL
  - EB receiving: 2 lanes
  - WB: 1RT+TH, 1TH, 1LTOL
  - WB receiving: 2 lanes

On Bottineau Blvd / County Road 81
- ADT
  - 20,900 north of 42nd Ave N
  - 21,400 south of 41st Ave
- Lanes and configuration
  - NB: 1RTOL, 2TH, 2LTOL
  - NB receiving: 2 lanes
  - SB: 1LTOL, 2TH, 1RTOL
  - SB receiving: 2 lanes
View of 42nd Ave N/Lake Drive at County Road 81 (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Intersection Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way with major intersection, multiple turn lanes</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>12,400 to 9,900</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>48 to 72 (Bottineau)</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>85 at Bottineau</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 9</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11-13</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>12</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on north (10 ft) and sidewalk on south (7 ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None (west of Lakeland Ave N) - 6 ft on north, 11.25 ft on south (east of Lakeland Ave N)</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,130 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>717</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
</tr>
<tr>
<td>Categories</td>
<td>Intersection Area</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
</tr>
</tbody>
</table>

**GENERAL GUIDELINES AND STANDARDS**

- Driving lanes must be at least 11’ wide to accommodate trucks and buses
- Parking lane minimum of 8’ due to accommodate winter plowing concerns
- 2’ gutters required (in addition to min. 11’ lanes)
- Do not include gutter as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- State aid requires 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ to allow for snow storage
- Removal of any turn or travel lanes require traffic analysis
- Changing radii at intersections require turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
GENERAL DESCRIPTION

Enhanced Pedestrian Crossing
- Reduce curb radii on southeast quadrant of intersection
  - Reduces pedestrian exposure to vehicles
- Extend southern median on County Road 81 further north to buffer crosswalk
  - Depress median to accommodate pedestrian crossing
  - Provides pedestrian refuge if pedestrian doesn’t make full crossing during pedestrian signal phase

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to on-street parking
  - None
- Impacts to stormwater infrastructure / gutter
  - May impact storm drains
- Impacts to existing transit
  - Not yet determined
Concepts Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: County Road 81
- Route covers: 85th Avenue North
- Route ends: Regent Avenue North

Relation to other proposed projects
- Connects to Project ID 16
- Blue Line station at W Broadway Ave

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route (please see next page for illustrations)
- Segment 1: Four lane, two way with additional right turn lane, Highway 169 ingress/egress, two center left turn lanes, and median west of Xylon Ave N
- Segment 2: Four lane, two way with additional center turn lane, right turn lane, and median east of Xylon Ave N

General project location.

Traffic levels (current AADT, MnDOT).
Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 1 (EB)
## Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way, with additional right turn lane, Highway 169 ingress/egress, and two center left turn lanes</td>
<td>Four lanes, two way with additional center turn lane, right turn lane</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>18,500</td>
<td>18,900 to 15,100</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>110 - 134</td>
<td>82</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>126 - 140</td>
<td>122</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 109</td>
<td>Yes - CSAH 109</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes - 10 ft</td>
<td>Yes - 6ft</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>12</td>
<td>11.5</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on north side, (5 ft)</td>
<td>Both sides (5 ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>11.5 ft</td>
<td>Varied</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,200 ft</td>
<td>11,190 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
<td>723, 724, 760</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>782</td>
<td>722</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>Yes: Maplebrook Pkwy N to College Pkwy</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>Trail on north and south side of 85th Ave N. Two lane, two way traffic on road, w/ a landscape median, as well as left and right turn lanes at intersections.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>Trail on north and south side of 85th Ave N</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal (Segments 1 AND 2)

TYPE: Two-way Shared-Use Path and Trails

GENERAL DESCRIPTION

Double Two-way Shared-Use Paths / Trails

- Implement two-way shared-use paths / trails along each side of Segments 1 and 2
  - Given current traffic volumes, reduction in number of lanes or conversion to three lane is unlikely
  - Given current traffic speeds, traffic volumes and number of lanes, pedestrian or bicycle crossing of 85th Avenue to reach a facility would be difficult and less likely to be attempted
  - On-street facilities not recommended
  - Important to reduce speeds for vehicles turning across the trails at intersections (many locations include high-speed right turns)
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Adds up to 10’ of impervious surface each side; spread of stormwater to be evaluated to ensure requirements are met
- Impacts to existing transit
  - None
- Impacts at signalized intersections
  - Not yet determined
- Requires 2’ acquisition or easement beyond existing right-of-way
  - Reducing trail to 8’ would eliminate right-of-way impacts
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

Project: West Broadway Avenue - 47th Ave N to 60th Ave N
City: Crystal
Mode(s): Bicycle

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
• Route starts: 47th Ave N
• Route covers: West Broadway Avenue
• Route ends: 60th Ave

Relation to other proposed projects
• Connects to Project ID 07 at 47th and Project ID 04 at 60th;
  intersects Project ID 18 and ID 02
• Blue Line station at W Broadway Ave

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
• Segment 1: Two lane, two way and shoulder south of Fairview Ave N
• Segment 2: Four lane, two way between Fairview Ave N and
  Douglas Dr N
• Segment 3: Four lane, two way with center left turn lane between
  Douglas Dr N and Cloverdale Ave
• Segment 4: Two lane, two way and shoulder north of Cloverdale Ave
Project Description

Segments to be Considered

Segments considered and general project location.

View of Segment 1 (NB)

View of Segment 2 (NB)
### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way with shoulder</td>
<td>Four lane, two way</td>
<td>Four lane, two way with center left turn lane</td>
<td>Two lane, two way with shoulder</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>no data currently available</td>
<td>7,100</td>
<td>8,000 to 12,800</td>
<td>8,000</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>40</td>
<td>52</td>
<td>70</td>
<td>40</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>80</td>
<td>90</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin</td>
<td>Hennepin</td>
<td>Hennepin</td>
<td>Hennepin</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 8</td>
<td>Yes - CSAH 8</td>
<td>Yes - CSAH 8</td>
<td>Yes - CSAH 8</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
<td>Yes - 6 ft</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
<td>9.5</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12.5</td>
<td>12.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
<td>12</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>No</td>
<td>Yes - 5 wide sidewalk, both sides</td>
<td>Yes - 5 wide sidewalk, both sides</td>
<td>No</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>N/A</td>
<td>7</td>
<td>3</td>
<td>N/A</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,780</td>
<td>2,180</td>
<td>3,320</td>
<td>2,130</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>716, 767</td>
<td>716, 767</td>
<td>716, 767</td>
<td>716, 767</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>721</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Project Description

**Description of Segments - Continued**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation from 90% plans</td>
<td>Half block before Welcome Ave provide sidewalk on east and west side W Broadway Ave. West of Welcome Ave N provide trail. One lane, two way traffic on road, w/ a median, as well as left turn and right turn lanes at the Fairview/ Broadway intersection. One lane, two way road a block north, west, and south of W Broadway Ave. Roundabout at Vera Cruz/Broadway</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>Separated / protected bicycle lanes on west side or both sides, and a trail on west side</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No - can adapt selected concept to work with 90% plan</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers

- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Concept Proposal
TYPE: One-way / Buffered Bicycle Lanes - both sides

GENERAL DESCRIPTION
One-way Buffered Bicycle Lanes
- Implement a pair of one-way buffered bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing roadway edge line
  - May require ditch re-grading

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential ditch grading
- Impacts to existing transit
  - Bike lane conflicts with bus boarding and alighting
**Concept Proposal**  
**TYPE:** Two-way Protected Bicycle Lane - single side (west)  

### GENERAL DESCRIPTION

**Single Two-way Protected Bike Lane**
- Implement one two-way Protected Bike Lane  
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

### OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Eliminates pull-over shoulder
  - Bike lanes conflict with bus boarding and alighting

---

**EXISTING (NB)**

**(Available ROW - 66' TYP.)**

**PROPOSED (NB)**

**(Available ROW - 66' TYP.)**
GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail
- Implement a two-way shared-use path / trail
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Eliminates pull-over shoulder
GENERAL DESCRIPTION

Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail
- Requires reconstruction and modification to existing roadway cross-section width and curb lines

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter on west side of road
- Impacts to existing transit
  - Not yet determined
GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes along both sides of roadway
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
Concept Proposal

**TYPE:** Two-way Separated / Protected Bicycle Lane - single side

**GENERAL DESCRIPTION**

**Three Lane Conversion and Separated / Protected Bicycle Lane**
- Implement a three lane conversion (“Road Diet”) for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement a two-way separated / protected bicycle lane along one side of roadway
- Maintains existing roadway cross-section width
  - Maintains existing curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 3
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes along both sides of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb lines

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction and modifications to existing roadway cross-section width and curb line
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Reductions in buffer widths between roadway and sidewalk could eliminate curb and gutter impacts
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes
- Implement a three lane conversion ("Road Diet") for roadway along Segment 3
  - ADT is within range for conversion
  - Requires a traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lanes along west side of roadway
- Reconstruct curb and gutter on east side
  - Provides generous planted buffer and wider sidewalk on east side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage/curb and gutter on east side
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Double Two-way Shared-use Path / Trail
- Implement two-way shared-use path / trail along west side of roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line
- Requires 6' acquisition or easement beyond existing ROW on west side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction and modifications to existing roadway cross-section width and curb line
- Impacts to existing transit
  - Not yet determined
GENERAL DESCRIPTION

**One-way Buffered Bicycle Lanes**
- Implement a pair of one-way buffered bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing roadway edge line
  - May require ditch re-grading
- Reduce speed limit to 30 mph
- Maintains bike facility continuity with ID 04-A

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential ditch grading
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Potential overhead utility impacts on north side
GENERAL DESCRIPTION

Single Two-way Protected Bicycle Lane

- Implement one two-way protected bike lane
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Potential overhead utility impacts on north side
**Concept Proposal**

**TYPE:** Two-way Shared-Use Path / Trail - single side (west)

**GENERAL DESCRIPTION**

**Single Two-way Shared-use Path / Trail**
- Implement a two-way shared-use path / trail
  - Place on west side to reduce number of intersections
  - Requires construction of curb and gutter
- Implement sidewalk on east side to accommodate pedestrian uses from adjoining residential areas south of Lakeside Ave N

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
**EXISTING CONDITIONS AND CONTEXT**

General project location, traffic levels (current AADT, MnDOT).

**GENERAL DESCRIPTION**

Route for proposed improvement
- Route starts: 63rd Avenue North
- Route covers: Hampshire Ave N, 66th Ave N
- Route ends: Lakeland Park

Relation to other proposed projects
- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

**UNIFORMITY / VARIABILITY ALONG ROUTE**

Conditions and configuration are generally constant along the route
- Segment 1: Two way residential street
Sections to be considered:

- View of Segment 1 (NB)
- View of Segment 1 (WB)

Segments considered and general project location.
### Segment 1

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two way, two lanes</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>No data available</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>30 on Hampshire, 28 at 66th</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66 on Hampshire, 60 on 66th Ave N</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>No</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>14 ft</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>None</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>N/A</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>2,910 ft</td>
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<tr>
<td>Transit service along project</td>
<td>716</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>767</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
GENERAL DESCRIPTION
Sidewalks and Neighborhood Slow Street
- Develop sidewalks along both sides of street
- Implement Neighborhood Slow Street (traffic-calmed street, also known as Bicycle Boulevard)
  - Include traffic calming elements, typically in and near intersections, including traffic circles, bump-outs or medians, wayfinding markers, route signs, and bicycle boulevard markings
- Maintains existing roadway cross-section width and roadway components
  - Maintain existing curb line and on-street parking

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at intersections
  - ADA compliant pedestrian ramps
**GENERAL DESCRIPTION**

Bidirectional Shared-use Path / Trail

- Implement a two-way shared-use path / trail along the west side of Hampshire Avenue, and north side of 66th Avenue
  - Place on west side to facilitate connection with trail on 63rd Ave N and Blue Line station
- Provide sidewalk on other side of street
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Not yet determined
- Impacts at intersections
  - ADA compliant pedestrian ramps
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: Douglas Drive
- Route covers: Duluth Street and Golden Valley Road
- Route ends: Xerxes Avenue

Relation to other proposed projects
- Blue Line station near Theodore Wirth Parkway

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 1: Four lane, two way road west of Lilac Drive
- Segment 2: Four lane, two way road and interchange with Hwy 100 between Lilac Dr and Toledo Ave
- Segment 3: Four lane, two way road between Toledo Ave and Regent Ave
- Segment 4: Four lane, two way road between Regent Ave and Noble Ave
- Segment 5: Two lane, two way road east of Noble Ave
Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 2 (at Highway 100) (EB)
## Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
<th>Segment 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way</td>
<td>Four lane, two way</td>
<td>Four lane, two way</td>
<td>Four lane, two way</td>
<td>Two lane, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>15,000</td>
<td>17,200</td>
<td>17,200</td>
<td>No data available</td>
<td>9,800</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>65</td>
<td>78 -104</td>
<td>48</td>
<td>48</td>
<td>34</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66-120</td>
<td>85+</td>
<td>66</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Select locations, physical</td>
<td>Yes, physical</td>
<td>None</td>
<td>Select locations, painted</td>
<td>Select locations, painted</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>6 ft bike lane on shoulder</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>6 ft</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>11.5</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>7 ft sidewalk on north and south</td>
<td>10 ft sidepath on north - 7 ft sidepath on south, 10 ft sidepath on south (under bridge only)</td>
<td>7 ft sidewalk on south, 10 ft sidepath on south (non-conforming condition near pedestrian bridge at Regent Ave N)</td>
<td>6 ft sidewalk on south</td>
<td>5 ft sidewalk north and south (west of Wirth Pkwy) - 8 ft sidewalk south only (east of Wirth Pkwy)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>5 ft grass buffer on both sides (at and west of Brunswick Ave N) - none (east of Brunswick Ave N)</td>
<td>None</td>
<td>None, except near pedestrian bridge at Regent Ave N (varied dimensions)</td>
<td>None</td>
<td>5 ft pavement buffer both sides (west of Wirth Pkwy) - none (east of Wirth)</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
<td>Segment 3</td>
<td>Segment 4</td>
<td>Segment 5</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>2,000 ft</td>
<td>1,600 ft</td>
<td>776 ft</td>
<td>1,490 ft</td>
<td>5,520 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>14,758</td>
<td>14,758</td>
<td>14,758</td>
<td>14 and 758</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>705</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>30</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes: Bonnie Lane to Zephyr Place</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Trail on south side of GV road between Bonnie Lane and Station. Two lane, two way traffic on road, w/ center left turn lane at intersections.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Separated / protected bike lane on both sides of street and trail on single side</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
**Concept Proposal**

**TYPE:** Shared-Use Path / Trail - one side

---

**GENERAL DESCRIPTION**

**Two-way Shared-use Path / Trail**
- Implement a two-way shared-use path/trail along north side of the roadway
  - Provide sidewalk along south side of roadway
- Maintains existing roadway cross-section width, components, and curb line.
- Requires up to 9 ft acquisition or easement beyond existing ROW for select parcels

---

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface.
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires extension of Bassett Creek culvert

---

*Available ROW - Varies: 66'-120' TYP.*

*Available ROW - Varies - 66' shown*
**Concept Proposal**

**TYPE:** Two-way Shared-Use Path / Trail - single side

---

**GENERAL DESCRIPTION**

**Two-way Shared-use Path / Trail**

- Implement a two-way shared-use path/trail along one side of the roadway
  - Trail north of street west of Toledo Ave and south of street east of Toledo
  - West of Toledo, trail located at back of curb. No additional ROW required
- Provide sidewalk along the other side of roadway
- Maintains existing roadway cross-section width, components, and curb line

---

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires 1 ft acquisition or easement beyond existing ROW (east of Toledo Ave)
  - Reducing buffer between street and trail could eliminate ROW impacts
- Pedestrian flasher needed at Toledo Ave for trail crossing
Concept Proposal
TYPE: Three Lane Conversion and Separated / Protected Bike Lanes - both sides

Segment 4

Existing (EB)

(Available ROW - 66' TYP.)

Proposed (EB)

(Available ROW - 66' TYP.)

GENERAL DESCRIPTION
Three Lane Conversion and Separated / Protected Bike Lanes
- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - No data for Segment 4, but ADT in nearby segments is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes
- Maintains existing roadway cross-section width
  - Maintains existing curb line on one side of roadway

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Requires bike friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way will require traffic analysis
GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bike Lanes
- Implement a three lane conversion (“Road Diet”) for roadway along Segment 4
  - No data for Segment 4, but ADT in nearby segments is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lane
- Maintains existing roadway cross-section width
  - Maintains existing curb line on both sides of roadway

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike-friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way will require traffic analysis
Concept Proposal

TYPE: Three Lane Conversion and Two-way Shared-Use Path / Trail - one side

General Description

Three Lane Conversion and Two-way Shared-Use Path / Trail
- Implement a three lane conversion (“Road Diet”) for roadway along Segment 4
  - No data for Segment 4, but ADT in nearby segments is within range for conversion
  - Conversion frees up space for off-road bicycle facilities
- Implement a two-way shared-use path / trail along one side of the roadway
  - Provide sidewalk along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

Other Considerations and Potential Impacts

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Potential bike / walk signal at intersection
- Impacts on travel lanes
  - Reduction of one traffic lane each way, will require traffic analysis
**Types of Project: Two-way Shared-Use Path / Trail**

- **ID:** 13-I
- **Revision:** 08/16/18
- **Segment 5**

### GENERAL DESCRIPTION

**Two-way Shared-use Path / Trail**

- Implement a two-way shared-use path / trail on one side of Segment 5
  - Provide facility behind boulevard to provide separation from the roadway
  - Provide sidewalk for pedestrian travel along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

### OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: Zane Avenue North
- Route covers: Brookdale Drive North
- Route ends: TH 252

Relation to other proposed projects
- Connects to Project ID 16

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 1: Four lane, two way road from Zane Avenue North to Welcome Avenue North
- Segment 2: Two lane, two way road from Welcome Avenue North to York Lane North
- Segment 3: Two lane, two way road with additional right turn lane and center left turn lane from York Lane North to Vincent Avenue North
- Segment 4: Two lane, two way road, Vincent Avenue North to Colfax Avenue North
- Segment 5: Four lane, two way road and center left turn lanes and right turn lanes from Colfax to TH 252
Project Description
Segments to be Considered

Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 2 (EB)
Segments to be Considered - Continued

View of Segment 3 (EB)

View of Segment 4 (EB)

View of Segment 5 (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
<th>Segment 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way</td>
<td>Two lane, two way</td>
<td>Two lane, two way</td>
<td>Two lane, two way</td>
<td>Four lane, two way</td>
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<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>5,800</td>
<td>6,500</td>
<td>6,000</td>
<td>7,400</td>
<td>6,300</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>42</td>
<td>42</td>
<td>68</td>
<td>42</td>
<td>42-95</td>
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<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>66</td>
<td>94</td>
<td>80 to 66</td>
<td>80+</td>
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<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
<td>Yes (5ft - 15ft)</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>8</td>
<td>N/A</td>
<td>8</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>10</td>
<td>12</td>
<td>11, 16</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
<td>11</td>
<td>N/A</td>
<td>12-13</td>
</tr>
<tr>
<td>Sidewalk or sidestep present?</td>
<td>Sidewalk on north and south (5ft)</td>
<td>Sidewalk on north and south (5ft)</td>
<td>Sidewalk on north and south (5ft)</td>
<td>Sidewalk on north (5ft) and south (6ft) (east of Humboldt Ave N) - sideway on south (6ft) (between Humboldt Ave N and Newton Ave N) - sidewalk on north (6ft) (west of Newton Ave N)</td>
<td>Sidewalk on north and south (5ft)</td>
</tr>
</tbody>
</table>
**Categories** | **Segment 1** | **Segment 2** | **Segment 3** | **Segment 4** | **Segment 5**
---|---|---|---|---|---
Boulevard or buffer from roadway (typ) | 5.5 ft | 5 ft | 5 ft - 8.5 ft | 7 ft | 7-10 ft
Approximate length of segment (ft) | 775 ft | 8,262 ft | 1,104 ft | 5,522 ft | 960 ft
Location of cross section for segment | Near Yates Ave N | Near Regent Ave N | Near Xerxes Ave N | Near Penn Ave N | East of Aldrich Ave N
Transit service along project | 722, 723, 760, 761 | 722, 723, 761 | 722, 763 | 722, 763 | 722, 763
Transit service across project | None | None | None | None | None
Segment interacts with the 90% plans? | No | No | No | No | No
Recommendation from 90% plans | N/A | N/A | N/A | N/A | N/A
Recommendations from concepts in this project interacting with 90% plans (several concepts available) | N/A | N/A | N/A | N/A | N/A
Do the recommendations conflict or preclude each other? | No | No | No | No | No

**GENERAL GUIDELINES AND STANDARDS**

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Bidirectional Shared-use Path / Trail

- Implement a two-way shared-use path / trail along north side of the roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

GENERAL DESCRIPTION

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts to signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Reduction of buffer between roadway and trail could reduce ROW impacts.
- Requires 5’ acquisition or easement beyond existing ROW on north side
**GENERAL DESCRIPTION**

Three Lane Conversion and Separated / Protected Bicycle Lanes
- Implement a three lane conversion (“Road Diet”) for roadway along Segment 1
  - ADT is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement one-way separated / protected bicycle lanes
- Requires reconstruction and modification to existing roadway cross-section width and curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Reduction of buffer between roadway and sidewalk could eliminate ROW impacts
- Reduction in travel lane widths could reduce curb and gutter impacts to one side of street
- Requires 5’ acquisition of easement beyond existing ROW on north side.
- Overhead utility impacts on south side
GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 1
  - ADT is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lane
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Reduction of travel lane widths could reduce curb and gutter impacts to one side of the street
- Utility impacts on south side
- Requires 4’ acquisition or easement of ROW beyond existing ROW
GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail
- Implement a two-way shared-use path / trail along north side of Segments 2 and 4
- Requires reconstruction and modifications to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Reduction of buffer width between trail and parking lane could reduce impacts to one side of street
- Potential overhead utility impacts on north side (Perry Ave to York Ave, Vincent Ave to Colfax Ave)
Concept Proposal
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

GENERAL DESCRIPTION
One-way Separated / Protected Bicycle Lanes
- Implement a one-way separated / protected bicycle lane along both sides of the roadway
  - Requires removal of one lane of on-street parking - one of the bicycle lanes is separated by the remaining parking lane
- Requires reconstruction and modifications to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - Requires removal of one lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage/curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Impacts at signalized intersections
    - ADA compliant pedestrian ramps
    - APS at intersections
- Reduction in buffer width between sidewalk and road on one side of street could reduce curb and gutter impacts to one side of street
- Reduction in buffer width between sidewalk and road on one side of street could eliminate ROW impacts
- Potential overhead utility impacts on north side (Perry Ave to York Ave, Vincent Ave to Colfax)
- Potential overhead utility impacts on south side (Bethany Baptist Church to Newton Ave)
- Requires 2’ acquisition or easement beyond existing ROW
GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lanes
- Implement a two-way separated / protected bicycle lane along one side of the roadway
  - Requires removal of one lane of on-street parking - the two-way bicycle lanes are separated by the remaining parking lane
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - Requires removal of one lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage/curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Impacts at signalized intersections
    - ADA compliant pedestrian ramps
    - APS at intersections
  - Requires 1’ acquisition or easement beyond existing ROW.
  - Reduction in buffer width between sidewalk and road on one side of street could reduce curb and gutter impacts to one side of street
  - Reduction in buffer width between sidewalk and road on one side of street could eliminate ROW impacts
  - Potential overhead utility impacts on north side (Perry Ave to York Ave, Vincent Ave to Colfax)
  - Potential overhead utility impacts on south side (Bethany Baptist Church to Newton Ave)
**GENERAL DESCRIPTION**

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use paths / trails on north side of Segment 3
- Requires reconstruction and modification to existing roadway cross-section width and curb line on north side of street

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage/curb and gutter on north side
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION
One-way Separated / Protected Bicycle Lanes
• Implement buffered one-way bike lanes on both sides of Segment 3
• Maintains existing roadway cross-section width and roadway components
  – Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  – None
• Impacts to existing stormwater infrastructure / gutter
  – None
• Impacts to existing transit
  – Bike lanes conflict with bus boarding and alighting
• Impacts at signalized intersections
  – ADA compliant pedestrian ramps
  – APS at intersections
**GENERAL DESCRIPTION**

**Two-way Separated / Protected Bicycle Lanes**
- Implement two-way protected bike lanes on one side of Segment 3
- Maintains existing roadway cross-section width
  - Maintains existing curb line
  - Removal of turn lane will require traffic analysis

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Two-way Shared-Use Path on North Side
- Implement two-way shared-use path/trail on north side
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential overhead utility impacts on north side
**GENERAL DESCRIPTION**

Two-way Shared-Use Path on South Side

- Implement two-way shared-use path/trail on south side
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
Concepts Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

Project: Brooklyn Blvd - StarLite Shopping Center Connections to Brooklyn Blvd Stations
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

GENERAL DESCRIPTION

Route for proposed improvement
• Route covers: Parking lot connections between the StarLite Shopping Center and Jolly Lane N to the Brooklyn Blvd station

Relation to other proposed projects
• Adjacent to Project ID 01
• Blue Line station at Brooklyn Boulevard and W Broadway

UNIFORMITY / VARIABILITY ALONG ROUTE

Segments and potential links for consideration include:
• Segment 1: Proposed path through parking area
• Segment 2: Existing three lane (one lane in, two out) access into shopping center parking area
• Segment 3: Proposed path through parking area
• Segment 4: Existing two lane, two way road connecting Jolly Ln and W Broadway Ave, and Segment 2
Pedestrian Demonstration Concept
Starlite Shopping Center, Brooklyn Park | Hennepin County Public Works

Location and elements of ongoing demonstration project. Concept shown is located at Segment 3.

Images of the installation.
Project Description
Segments to be Considered

View of Segment 1 (WB)

View of Segment 2 (EB)

View of Segment 3 (WB)
View of Segment 4 (EB)
### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Planned two way road, one lane westbound, two lanes eastbound, including right turn lane and left/straight lane connecting to two lanes, two way</td>
<td>Two way road, one lane westbound, two lanes eastbound, including right turn lane and left/straight lane</td>
<td>Parking area featuring straight-in parking</td>
<td>Two lanes, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>3 &amp; 2 (planned)</td>
<td>3</td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>No data currently available</td>
<td>No data currently available</td>
<td>No data currently available</td>
<td>No data currently available</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>40</td>
<td>40</td>
<td>24 (Parking stall to parking stall)</td>
<td>28</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>Unknown</td>
<td>N/A (Privately owned roadways)</td>
<td>N/A (Privately owned roadways)</td>
<td>N/A (Privately owned roadways)</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park or Metro Transit</td>
<td>Private owner: Starlite MN LLC</td>
<td>Private owner: Starlite MN LLC</td>
<td>Private owner: Starlite MN LLC</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes for 75th Ave</td>
<td>Yes</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>N/A</td>
<td>No</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No - 75th Ave</td>
<td>No</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11-13</td>
<td>11-13</td>
<td>N/A</td>
<td>14</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>13</td>
<td>13</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on north (75th Ave)</td>
<td>Sidewalk on north</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>300</td>
<td>210</td>
<td>430 ft</td>
<td>1,570 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>705, 723, 724</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>705, 764</td>
<td>705, 764</td>
<td>None</td>
<td>705, 764</td>
</tr>
</tbody>
</table>
### Categories

<table>
<thead>
<tr>
<th>Segment interacts with the 90% plans?</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommendation from 90% plans</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension of 75th Ave to Jolly Lane and partial property acquisition</td>
<td>Sidewalk on north side of road, partial property acquisition.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace sidewalk with shared-use path</td>
<td>Replace sidewalk with shared-use path</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do the recommendations conflict or preclude each other?</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Concept Proposal

TYPE: Two-way Shared-Use Path / Trail

GENERAL DESCRIPTION

Two-way Shared-use Path / Trail
- Implement a two-way shared-use path / trail adjacent to planned 75th Ave and parking lot drive aisle
- Requires reconstruction and modification to pavement islands, traffic circulation and curb line in parking lot

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing parking
  - Removes approximately 8-10 parking spaces
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Requires acquisition of approximately 4’ beyond planned acquisition.
GENERAL DESCRIPTION

Two-way Shared-use Path / Trail
- Implement a two-way shared-use path / trail on north side to facilitate access to Blue Line station
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail along Segment 3 through parking area
  - Requires reconstruction and modification to pavement islands, traffic circulation and mountable curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Removes approximately 37 parking spaces
- Impacts to existing stormwater infrastructure / gutter
  - Requires construction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - single side and Sidewalk

GENERAL DESCRIPTION
Two-way Shared-Use Path / Trail
- Implement a two-way shared-use path / trail along one side of the roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - Not yet determined
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 10’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined

Segment 4
VIEW OF SEGMENT 4 (EB)

EXISTING AT SEGMENT 4 (EB)

PROPOSED 15-I (AT SEGMENT 4 ONLY) (EB)
Project: Zane Avenue - 63rd Avenue to 85th Avenue
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: 63rd Avenue N, in Brooklyn Park
- Route covers: Zane Avenue North
- Route ends: 85th Avenue North

Relation to other proposed projects
- Connects to Project IDs 08, 10, and 14

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route
- Segment 1: Two way, two lanes with center turn lane section south of 69th Avenue North
- Segment 2: Two way, two lanes with additional center turn lane between 69th Avenue and 73rd Avenue North
- Segment 3: Four lanes, two way between 73rd Avenue North to Brooklyn Boulevard
- Segment 4: Four lane, two way between Brooklyn Boulevard and ending at 85th Avenue North / Hennepin CSAH 14

General project location.

Traffic levels (current AADT, MnDOT).
Segments considered and general project location.

View of Segment 1 (NB)

Street view out of date - now features shared-use path on east side of roadway

View of Segment 2 (NB)
View of Segment 3 (NB)
### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way with center left turn lane</td>
<td>Two lane, two way with center turn lane</td>
<td>Four lane, two way road with median and center turn lane at intersections</td>
<td>Four lane, two way road</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>9,300 - 11,200</td>
<td>8,100</td>
<td>16,300</td>
<td>13,400</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>42</td>
<td>42</td>
<td>66</td>
<td>48</td>
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<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>66</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
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<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
<td>Yes (9ft)</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>NA</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11</td>
<td>12</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>12</td>
<td>14</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Yes, sidewalk on east (5 ft) and west (6 ft)</td>
<td>Yes, shared-use path on east (10 ft) and west (6.5 ft) side of street</td>
<td>Yes, sidewalk on west and east (6 ft)</td>
<td>Yes, sidewalk on both sides of street (14 ft on west side, 9.5 ft on east side)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>9 ft (south of 65th Ave N)</td>
<td>Yes, west side 3 ft buffer</td>
<td>8 on west side, 9 on east side of street</td>
<td>None</td>
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<tr>
<td>Approximate length of segment (ft)</td>
<td>3,970 ft</td>
<td>2,612</td>
<td>2,583</td>
<td>3,900</td>
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<td>Transit service along project</td>
<td>716, 724, 760</td>
<td>716, 724, 760</td>
<td>716, 722, 723, 724, 760, 761</td>
<td>722, 723, 760, 761</td>
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<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
<td>Segment 3</td>
<td>Segment 4</td>
</tr>
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<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>767</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
**Concepts Development - Blue Line LRT Station Walk Bike Connectivity Project**

**Type:** One-way Separated / Protected Bicycle Lanes - both sides

**ID:** 16-A

**Revision:** 08/16/18

**Segment 1**

---

**General Description**

Separated / Protected Bicycle Lanes

- Implement one pair of one-way separated / protected bicycle lanes
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reducing buffer between sidewalk and roadway could reduce roadway impacts to south curb line and eliminate right-of-way impacts
  - 3’ acquisition or easement beyond existing right-of-way

**Other Considerations and Potential Impacts**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Requires bike friendly drainage grates
  - Adding 12’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

---

**Existing (NB)**

(Available ROW - 66’ TYP.)

- 5’ Sidewalk
- 8’ Planting strip
- 11’ Drive lane
- 14’ Center turn lane
- 11’ Drive lane
- 8’ Planting strip
- 5’ Sidewalk

(Available ROW - 66’ TYP.)

**Proposed (NB)**

(+3’ ROW)

- 1’ Sidewalk
- 5’ 2’ 3’ 2’ 11’ Drive lane
- 11’ Center turn lane
- 11’ Drive lane
- 2’ 3’ 2’ 5’ Sidewalk

---

Concepts Development - Blue Line LRT Station Walk Bike Connectivity Project
GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lanes
- Implement two-way separated / protected bicycle lane on one side of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reducing buffer width between sidewalk & roadway could reduce roadway impacts to south curb line and eliminate right-of-way impacts
  - 3’ acquisition or easement needed beyond existing right-of-way

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Utility conflicts must be resolved
  - Addition of impervious surface with expanded trail
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented
  - New pedestrian signals
**Concept Proposal**

**TYPE:** Two-way Shared-Use Path / Trail - one or both sides

---

### GENERAL DESCRIPTION

Two-way Shared-Use Path / Trail - one or both sides  
- Implement two-way shared-use path / trail  
- Requires reconstruction and modification to existing roadway cross-section width and curb line

### OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking  
  - None  
- Impacts to existing stormwater infrastructure / gutter  
  - Stormwater spread will need to be evaluated to ensure it meets requirements  
  - Utility conflicts must be resolved  
  - Addition of impervious surface with expanded trail  
- Impacts to existing transit  
  - Not yet determined  
- Impacts at signalized intersections  
  - Potential change to turning radii  
  - ADA compliant pedestrian ramps  
  - APS implemented
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - both sides

GENERAL DESCRIPTION
Two-way Shared-use Path / Trail
- Implement two-way shared-use paths / trails on east side of Segment 3
- Maintains existing roadway cross-section width and roadway components
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - Reduction in buffer between trail and roadway or reducing trail width to 8’ would eliminate roadway impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Addition of impervious surface with expanded trail
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented
General Description

One-way Separated / Protected Bicycle Lanes

- Implement a one-way separated / protected bicycle lane on both sides of Segment 3
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

Other Considerations and Potential Impacts

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Addition of impervious surface with expanded trail
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential change to turning radii
  - ADA compliant pedestrian ramps
  - APS implemented
**GENERAL DESCRIPTION**

Three Lane Conversion and One-way Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 4
  - ADT is within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement one-way separated / protected bicycle lanes along both sides of roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike friendly drainage grates
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way, will require traffic analysis
Concept Proposal
TYPE: Three Lane Conversion and Two-way Separated / Protected Bicycle Lane

Segment 4

GENERAL DESCRIPTION
Three Lane Conversion and Two-way Separated / Protected Bicycle Lanes
- Implement a three lane conversion (“Road Diet”) for roadway along Segment 4
  - ADT is within range for conversion
  - Conversion frees up space for on-road separated bicycle facilities
- Implement two-way separated / protected bicycle lanes along one side of roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
- Impacts on travel lanes
  - Elimination of driving lane each way, will require traffic analysis

Proposed (NB)

Existing (NB)
**General Description**

Bidirectional Shared-use Path / Trail
- Implement two-way shared-use path / trail along one side of Segment 4
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - Reducing buffer width between trail and roadway could eliminate roadway impacts

**Other Considerations and Potential Impacts**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
Project: 36th Avenue N - Douglas Dr to CR 81
City: Robbinsdale
Mode(s): Bicycle Trail

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: 36th Avenue N at Douglas Drive, in Crystal
- Route covers: 36th Avenue N
- Route ends: 36th Avenue N and Bottineau Blvd

Relation to other proposed projects
- Connects to Project ID 06

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 1: Four lane section west of Welcome Ave N
- Segment 2: Freeway ramps, medians, four lane section, and freeway ingress and egress between Welcome Ave N and Quail Ave N
- Segment 3: Three lane section east of Quail Ave N, Grimes to CR81 includes 3-4 travel lanes and turn lanes

Traffic levels (current AADT, MnDOT).

General project location.
Segments considered and general project location.

View of Segment 1 (EB)

View of Segment 1 (EB)
Project Description

View of Segment 2 (EB)

View of Segment 3 (EB)

View of Segment 3 (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
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</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way</td>
<td>Four lane, two way with</td>
<td>Three lane (two way with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>freeway access</td>
<td>center left turn lane)</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
<td>3</td>
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<tr>
<td>AADT (typ.)</td>
<td>15,700</td>
<td>18,300 - 17,500</td>
<td>12,800 - 8,300</td>
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<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
<td>30</td>
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<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>48</td>
<td>90 - 120</td>
<td>48</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>100 - 120 (112 width at bridge)</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Crystal</td>
<td>Robbinsdale/Crystal</td>
<td>Robbinsdale/Crystal</td>
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<tr>
<td>State Aid Facility?</td>
<td>Yes, MSAS</td>
<td>Yes, MSAS (except between Hwy 100 and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regent Ave N)</td>
<td></td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>Yes (5.5 ft)</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
<td>14</td>
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<tr>
<td>Sidewalk or sidpath present?</td>
<td>Sidewalk on north(6ft) and</td>
<td>Sidewalk on north (5.5 ft) and south</td>
<td>Sidewalk on north (6ft) and south</td>
</tr>
<tr>
<td></td>
<td>south (6ft)</td>
<td>(5.5 ft) and south (6ft)</td>
<td>(6ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>2,400 ft</td>
<td>2,150 ft</td>
<td>4,240 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>None</td>
<td>32</td>
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### Categories

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>Two lane, two way street with center left turn lane between June Ave N and Halifax Ave N on 36th Ave N. No bike lane indicated. Sidewalk on both sides.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>Concepts include trail and separated / protected bike lane options</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
<td>Need to coordinate bike facility concepts into 90% plans.</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
**GENERAL DESCRIPTION**

Three Lane Conversion and Bidirectional Shared-use Path / Trail

- Implement a three lane conversion (“Road Diet”) for Segments 1
  - ADT at Segment 1 is within range for conversion.
  - Conversion frees up space for on-road separated bicycle facilities
- Implement a two-way shared-use path / trail along one side of the roadway
  - Maintain existing sidewalk along the other side of roadway
  - Requires reconstruction and modification to existing roadway cross-section width and curb line (on one side only)

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Reconstruct drainage / curb and gutter on south side
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Any removal of turn or travel lanes or travel lanes will require a traffic analysis
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Three Lane Conversion and Separated / Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 1
  - ADT is within range for conversion
  - Conversion frees up space for on-road bicycle facilities
- Implement two-way separated / protected bicycle lane
  - Maintain existing separated / protected bicycle lane
- Maintain existing sidewalks along the side of roadway
- Maintains existing roadway cross-section width
  - Maintains existing curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bike friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
  - Any removal of turn or travel lanes or travel lanes will require a traffic analysis
- Impacts at signalized intersections
  - Account for adjustments to accommodate two-way bike lane on one side of the roadway
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

- Implement a two-way shared-use path / trail along south side of the roadway
  - Maintain existing sidewalk along north side of roadway
  - Maintains existing roadway cross-section width and curb line
- Requires 8’ acquisition or easement beyond existing right-of-way

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to increased impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail

GENERAL DESCRIPTION
Two-way Shared-Use Path / Trail
- Implement a two-way shared-use path / trail along the south side of Segment 2, including on bridge over Hwy 100
- Requires reconstruction and modification to the width of existing lanes, and curb line south of median

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter (south side)
- Impacts to existing transit
  - None
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
**Concept Proposal**

**TYPE:** Two-way Separated / Protected Bicycle Lane - single side

**GENERAL DESCRIPTION**

Bidirectional Separated / Protected Bicycle Lane

- Implement a two-way separated / protected bicycle lane along one side of the roadway
- Maintains existing roadway cross-section width and roadway components
  - Maintains existing curb line both sides of roadway
  - Requires traffic analysis between Grimes Avenue and CR 81

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires bicycle friendly drainage grates
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
- Impacts at signalized intersections
  - Potential bicycle / pedestrian signal
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential utility impact between Regent Avenue and Quail Avenue on south side
**GENERAL DESCRIPTION**

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use paths / trails on one side of Segment 3
  - Maintain sidewalk along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
- Requires traffic analysis between Grimes Avenue and CR 81

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to addition of 3’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Eliminates bus pull-over area
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Potential utility impact south side between Orchard and Noble
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
• Route starts: 48th Avenue (Crystal Community Center)
• Route covers: Douglas Drive
• Route ends: 55th Avenue / Sherburne Avenue

Relation to other proposed projects
• Connects to Project ID 11
• Upcoming trail improvements at Becker Park

UNIFORMITY / VARIABILITY ALONG ROUTE
Segments and potential links for consideration include:
• Segment 1: Two lane, two-way road with center left turn lane south of Corvallis Ave to 48th Ave
• Segment 2: A four lane, two-way road south of West Broadway to Corvallis Avenue
• Segment 3: Two lane, two-way road on Douglas Drive north of West Broadway

General project location and traffic levels (current AADT, MnDOT).
Segments to be considered: Segment 1, Segment 2, Segment 3

Segment considered and general project location.
## Project Description

### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way with center left turn lane</td>
<td>Four lane, two way</td>
<td>Two lane, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>no data available</td>
<td>7,900</td>
<td>1,750</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>48-55</td>
<td>50</td>
<td>48 - 70</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>66 south of railroad, 80</td>
<td>62 - 80</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Y - CSAH 102</td>
<td>Y - CSAH 102</td>
<td>Y - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>3-7</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>13</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk both sides (6 ft)</td>
<td>Sidewalk both sides (6 ft)</td>
<td>Sidewalk both sides (6 ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>3 ft, both sides</td>
<td>7.5 ft, both sides</td>
<td>3 ft, both sides</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,310</td>
<td>1,620</td>
<td>850</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>716, 758</td>
<td>716, 758</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

*Note: West Broadway (ID:11) connects segments 2 and 3*
### GENERAL GUIDELINES AND STANDARDS

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road must be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
GENERAL DESCRIPTION

**One-way Separated / Protected Bicycle Lanes**
- Implement a one-way separated / protected bicycle lane along both sides of the roadway
- Requires reconstruction and modification to existing roadway cross section and width
- Eliminates sidewalk on west side of street
- Reduce posted speed limit to 30 mph

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Eliminates bus pull-over area
- May impact overhead utilities on east side of street
- Reduction of buffer width between street and sidewalk on one side could reduce curb and gutter impacts to one side of street
- Impacts at signalized intersections
  - None
GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lane

- Implement a two-way separated / protected bicycle lane along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb lines

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Eliminates bus pull-over area
  - Bike lanes conflict with bus boarding and alighting
- Overhead utility impacts on east side
- Requires 6’ acquisition or easement beyond existing ROW
  - Reduction in buffer width between sidewalk and roadway on west side could reduce curb and gutter impacts on that side of street and reduce ROW impacts
- Impacts at signalized intersections
  - N/A
GENERAL DESCRIPTION

**Sidewalk on west and Two-way Shared-use Path / Trail**

- Improve sidewalk on west side of roadway
  - Expand width and provide boulevard / planted median
- Implement a two-way shared-use path / trail along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction in buffer width between sidewalk and roadway on west side could reduce curb and gutter impacts on west side of street

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Eliminates bus pull-over area
- Potential overhead utility impacts on east side
- Impacts at signalized intersections
  - N/A
GENERAL DESCRIPTION

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail along east side of Segment 2
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - Not yet determined
- Requires 10’ acquisition or easement beyond existing ROW (south of Corralis). No ROW needed north of Corralis
  - Reduction in buffer widths on west side could reduce curb and gutter impacts on that side of street and reduce ROW impacts
- Potential railroad crossing impacts
- Impacts to signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

**Three Lane Conversion and Separated / Protected Bicycle Lanes**
- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for on-road bicycle facilities
- Implement a two-way separated / protected bicycle lane along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
  - Bus boarding and alighting will stop traffic flow
- Requires 6’ acquisition or easement beyond existing ROW (south of Corralis). No ROW needed north of Corralis
  - Reduction in buffer widths on west side could reduce curb and gutter impacts on west side of street and reduce ROW impacts
- Impacts to signalized intersections
  - New pedestrian / bicycle signal
  - ADA compliant pedestrian ramps
  - APS at intersections
**Concept Proposal**

**TYPE:** Sidewalk (west) and Two-way Shared-use Path / Trail - single side (east)

**ID:** 18-I

**Revision:** 08/16/18

**Segment 3**

---

**GENERAL DESCRIPTION**

**Two-way Shared-use Path / Trail**
- Implement a two-way shared-use path / trail along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Improve sidewalk on west side of roadway
  - Provide boulevard / planted median
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction in buffer and sidewalk width on west side could reduce curb and gutter and potentially utility impacts

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**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - Eliminates one lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - N/A
- Overhead utility impacts on west side of street
- Impacts to signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
GENERAL DESCRIPTION

Two-way Separated / Protected Bicycle Lane
- Implement a two-way separated / protected bicycle lane along east side of the roadway
  - Place on east side to reduce number of intersections and to facilitate access and connection to Community Center and to Becker Park trail and improvements
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction in buffer widths on west side of street would reduce curb and gutter impacts and potentially utility impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - Eliminates two lane of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Overhead utility impacts on west side of street
- Impacts to signalized intersections
  - N/A
Concept Proposal

**GENERAL DESCRIPTION**

Three Lane Conversion and Protected Bicycle Lanes

- Implement a three lane conversion ("Road Diet") for roadway along Segment 2
  - ADT is within range for conversion
  - Requires traffic analysis
  - Conversion frees up space for off-road bicycle facilities
- Implement one-way protected bike lane along both sides of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
- Reduce posted speed limit to 30 mph

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Bike lanes conflict with bus boarding and alighting
    - Bus boarding and alighting will stop traffic flow
- Requires 7' acquisition or easement beyond existing ROW (south of Corralis). Adequate ROW exists north of Corralis
- Impacts to signalized intersections
  - Potential pedestrian / bicycle signals
  - ADA compliant pedestrian ramps
  - APS at intersections
**Concept Proposal**

**TYPE:** One-way Protected Bike Lanes

**ID:** 18-L

**Revision:** 08/16/18

**Segment 3**

### GENERAL DESCRIPTION

**One-way Protected Bike Lanes**

- Implement a one-way protected bike lane along both sides of the roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
  - Reduction of buffers on west side of street could reduce curb and gutter impacts on west side and potentially utility impacts

### OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - Eliminates both lanes of on-street parking
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - N/A
- Overhead utility impacts on west side of street
- Impacts to signalized intersections
  - N/A
EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: 62nd Avenue North
- Route covers: Louisiana Ave N
- Route ends: 63rd Avenue North

Relation to other proposed projects
- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route
- Segment 1: Two way residential street
Segments considered and general project location.

View of Segment 1 (NB)

View of Segment 1 (NB)
### Project Description

**Description of Segments**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two way, two lanes</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>No data available</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>30</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>60</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>No</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>Not marked</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>14</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,260</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>716, 767</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>(several concepts available)</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
</tr>
</tbody>
</table>
• Driving lanes must be at least 11’ wide
• Parking lane minimum of 8’
• 2’ gutters required (in addition to min. 11’ lanes)
• Gutter not included as part of travel lane or bike lane
• Trails (10 ft width preferred) require min 2’ clear zone to traffic
  and from edge of ROW
• 6’ shoulder on rural sections
• Improvements need to include ADA compliant pedestrian ramps
  and APS at signalized intersections.
• Boulevard, median or other buffers alongside a road must be min.
  5’ for snow storage
• Removal of any turn or travel lanes requires traffic analysis
• Changing radii at intersections requires turning templates in
  Autoturn
• When adding impervious surface check impacts to stormwater
• Update storm drains to bike-friendly designs
• Reduce travel lane widths to widen sidewalks, paths, or buffers
• Maintain consistent lane widths
• Maintain curbs and median locations when possible
Concept Proposal
TYPE: Sidewalks on both sides of street

GENERAL DESCRIPTION
Develop sidewalks along both sides of street
• Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  – None
• Impacts to existing stormwater infrastructure / gutter
  – Stormwater spread will need to be evaluated to ensure it meets requirements
  – Addition of 12’ impervious surface
• Impacts to existing transit
  – N/A
• Impacts at signalized intersections
  – N/A
• Impacts to driveways
  – Two apartment driveways
  – Four single family driveways
• Impacts to signalized intersections
  – N/A
GENERAL DESCRIPTION
Provide sidewalk on west side of street
• Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  - None
• Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to increased impervious surface
• Impacts to existing transit
  - N/A
• Impacts to driveways
  - 2 apartment driveways
  - 4 single-family driveways
• Impacts to signalized intersections
  - N/A
Concept Proposal

**TYPE:** Sidewalk on east side of street

**GENERAL DESCRIPTION**

Provide sidewalk on east side of street

- Maintains existing roadway cross-section width and roadway components

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - N/A
- Impacts to driveways
  - 4 single-family driveways
- Impacts to signalized intersections
  - N/A
Appendix C
Phase 2 Scoring
<table>
<thead>
<tr>
<th>Analysis ID</th>
<th>Project</th>
<th>Concept Group/Description</th>
<th>TOTAL SCORE</th>
<th>RANK</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1B</td>
<td>Brooklyn Blvd - Broadway to Hampshire, BROOKLYN PARK</td>
<td>Group 1 - 2C SUP south side</td>
<td>2.7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>63rd Avenue - from Boone Avenue to Zane Avenue, BROOKLYN PARK</td>
<td>Group 1 - 1A 2E SUP+ Sidewalk</td>
<td>2.65</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1.2B</td>
<td>Brooklyn Blvd - Broadway to Hampshire, BROOKLYN PARK</td>
<td>Group 2 - 2D SUP both sides</td>
<td>2.55</td>
<td></td>
<td>Same location as #1</td>
</tr>
<tr>
<td>16.3B</td>
<td>Zane Avenue - 73rd Ave to 85th Ave, BROOKLYN PARK</td>
<td>Group 3 - 3G 4K SUP east side</td>
<td>2.55</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>93rd Avenue North - Jefferson Hwy to Winnetka Ave, BROOKLYN PARK</td>
<td>Group 1 - 1A 2D One-way PBLs + SUP</td>
<td>2.5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Bass Lake Rd - Broadway to Sherburne and Bottineau to Yates, CRYSTAL</td>
<td>Group 2 - 1B 2F 3D SUP south side, sidewalk north</td>
<td>2.4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>16.3</td>
<td>Zane Avenue - 63rd Ave to 85th Ave, BROOKLYN PARK</td>
<td>Group 3 - 1C 2C 3G 4K SUP</td>
<td>2.4</td>
<td></td>
<td>Same location as #3</td>
</tr>
<tr>
<td>16.2B</td>
<td>Zane Avenue - 73rd Ave to 85th Ave, BROOKLYN PARK</td>
<td>Group 2 - 3G 4J Two-way PBL</td>
<td>2.4</td>
<td></td>
<td>Same location as #3</td>
</tr>
<tr>
<td>5.3</td>
<td>93rd Avenue North - Jefferson Hwy to Winnetka Ave, BROOKLYN PARK</td>
<td>Group 3 - 1C 2D 3E SUP</td>
<td>2.35</td>
<td>4</td>
<td>Same location as #4</td>
</tr>
<tr>
<td>13.3</td>
<td>Bassett Creek Trail - Duluth/Golden Valley Rd to Xerxes Ave N, GOLDEN VALLEY</td>
<td>Group 4 1K 2Ex 3I 4G 5I SUP</td>
<td>2.35</td>
<td>6/7</td>
<td>Tied - Concept G preferred by City/TRPD</td>
</tr>
<tr>
<td>13.1</td>
<td>Bassett Creek Trail - Duluth/Golden Valley Rd to Xerxes Ave N, GOLDEN VALLEY</td>
<td>Group 4 1K 2Ex 3I 4I 5I SUP and One-way PBLs</td>
<td>2.35</td>
<td></td>
<td>Same location as #6</td>
</tr>
<tr>
<td>13.2</td>
<td>Bassett Creek Trail - Duluth/Golden Valley Rd to Xerxes Ave N, GOLDEN VALLEY</td>
<td>Group 4 1K 2Ex 3I 4F 5I SUP and Two-way PBL</td>
<td>2.35</td>
<td></td>
<td>Same location as #6</td>
</tr>
<tr>
<td>15.2</td>
<td>StarLite Shopping Center Connections to Brooklyn Blvd Stations, BROOKLYN PARK</td>
<td>Group 2 - 2C 3G SUP on 76th Ave and across parking area</td>
<td>2.35</td>
<td></td>
<td>Removed after discussion with City</td>
</tr>
<tr>
<td>20.3</td>
<td>Louisiana Ave N - 62nd Ave to 63rd Ave, BROOKLYN PARK</td>
<td>Group 3 - 1C Sidewalk on east side of street</td>
<td>2.35</td>
<td>6/7</td>
<td></td>
</tr>
<tr>
<td>12.2</td>
<td>Hampshire Avenue North, BROOKLYN PARK</td>
<td>Group 2 - 1B SUP</td>
<td>2.25</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>15.3</td>
<td>StarLite Shopping Center Connections to Brooklyn Blvd Stations, BROOKLYN PARK</td>
<td>Group 3 - 3G 4I SUP</td>
<td>2.2</td>
<td></td>
<td>Same location as #7</td>
</tr>
<tr>
<td>20.2</td>
<td>Louisiana Ave N - 62nd Ave to 63rd Ave, BROOKLYN PARK</td>
<td>Group 2 - 1B Sidewalk on west side of street</td>
<td>2.2</td>
<td></td>
<td>Same Location as #8</td>
</tr>
<tr>
<td>7.1</td>
<td>West Broadway from 42nd Avenue N to 47th Avenue N, ROBBINSDALE</td>
<td>Group 1 - 1B 2D Two-way PBL</td>
<td>2.15</td>
<td></td>
<td>Removed after discussion with City</td>
</tr>
<tr>
<td>5.2</td>
<td>93rd Avenue North - Jefferson Hwy to Winnetka Ave, BROOKLYN PARK</td>
<td>Group 2 - 2B 3D Buffered bike lanes + SUP</td>
<td>2.15</td>
<td></td>
<td>Same location as #4</td>
</tr>
<tr>
<td>10.1</td>
<td>85th Avenue - CR81 to Regent Ave N, BROOKLYN PARK</td>
<td>Group 1 SUP</td>
<td>2.15</td>
<td></td>
<td>Brooklyn Park is allotted 6 projects - Alternative Project</td>
</tr>
<tr>
<td>1.1</td>
<td>Brooklyn Blvd - TH169 to Zeeland and Broadway to Hampshire, BROOKLYN PARK</td>
<td>Group 1 - 1A 2C SUP south side</td>
<td>2.1</td>
<td></td>
<td>Same location as #1</td>
</tr>
<tr>
<td>2.1</td>
<td>Bass Lake Rd - Broadway to Sherburne and Bottineau to Yates, CRYSTAL</td>
<td>Group 1 - 1A 2C 3D SUP path south side</td>
<td>2.1</td>
<td></td>
<td>Same location as #5</td>
</tr>
<tr>
<td>16.1B</td>
<td>Zane Avenue - 73rd Ave to 85th Ave, BROOKLYN PARK</td>
<td>Group 1 - 3H 4I One-way PBL</td>
<td>2.1</td>
<td></td>
<td>Same location as #3</td>
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<tr>
<td>20.1</td>
<td>Louisiana Ave N - 62nd Ave to 63rd Ave, BROOKLYN PARK</td>
<td>Group 1 - 1A Sidewalks on both sides of street</td>
<td>2.05</td>
<td></td>
<td>Same location as #8</td>
</tr>
<tr>
<td>7.2</td>
<td>West Broadway from 42nd Avenue N to 47th Avenue N, ROBBINSDALE</td>
<td>Group 2 - 1B 2F Two-way PBL + SUP</td>
<td>2</td>
<td></td>
<td>Same location as #9</td>
</tr>
<tr>
<td>12.1</td>
<td>Hampshire Avenue North, BROOKLYN PARK</td>
<td>Group 1 - 1ANeighborhood slow street</td>
<td>2</td>
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<td>Same location as potential #8</td>
</tr>
<tr>
<td>1.2</td>
<td>Brooklyn Blvd - TH169 to Zealand and Broadway to Hampshire, BROOKLYN PARK</td>
<td>Group 2 - 1B 2D SUP both sides</td>
<td>1.95</td>
<td></td>
<td>Same location as #1</td>
</tr>
<tr>
<td>6.1</td>
<td>Hubbard Avenue, ROBBINSDALE</td>
<td>Neighborhood slow street</td>
<td>1.95</td>
<td>9</td>
<td></td>
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<tr>
<td>17.3</td>
<td>36th Avenue N - Douglas Dr to CR81, ROBBINSDALE</td>
<td>Group 3 - 1C 2D 3F Two-way PBL + SUP</td>
<td>1.95</td>
<td>10</td>
<td></td>
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<tr>
<td>4.1</td>
<td>West Broadway Avenue - 60th Ave N to CR81, BROOKLYN PARK</td>
<td>Group 1 - 1A 2C One-way PBLs</td>
<td>1.95</td>
<td></td>
<td></td>
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<td>4.2</td>
<td>West Broadway Avenue - 60th Ave N to CR81, BROOKLYN PARK</td>
<td>Group 2 - 1A 2B One-way PBLs + SUP</td>
<td>1.95</td>
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<td>15.1</td>
<td>StarLite Shopping Center Connections to Brooklyn Blvd Stations, BROOKLYN PARK</td>
<td>Group 1 - 1J SUP on planned 75th Ave</td>
<td>1.9</td>
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<td>Project</td>
<td>Concept Group/Description</td>
<td>TOTAL SCORE</td>
<td>RANK</td>
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<td>-------------</td>
<td>------</td>
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<td>9.1</td>
<td>Intersection of Lake Drive and County Road 81, ROBBINSDALE</td>
<td>Intersection improvement</td>
<td>1.85</td>
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<td>16.1</td>
<td>Zane Avenue - 63rd Ave to 85th Ave, BROOKLYN PARK</td>
<td>Group 1 - 1A 2A 3H 4I One-way PBL</td>
<td>1.8</td>
<td></td>
<td></td>
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<tr>
<td>16.2</td>
<td>Zane Avenue - 63rd Ave to 85th Ave, BROOKLYN PARK</td>
<td>Group 2 - 1B 2B 3G 4J Two-way PBL</td>
<td>1.8</td>
<td></td>
<td></td>
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<tr>
<td>17.1</td>
<td>36th Avenue N - Douglas Dr to CR81, ROBBINSDALE</td>
<td>Group 1 - 1A 2D 3G SUP with road diet</td>
<td>1.8</td>
<td></td>
<td></td>
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<tr>
<td>17.2</td>
<td>36th Avenue N - Douglas Dr to CR81, ROBBINSDALE</td>
<td>Group 2 - 1I 2D 3G SUP without road diet</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.3</td>
<td>West Broadway from 42nd Avenue N to 47th Avenue N, ROBBINSDALE</td>
<td>Group 3 -1C 2E Buffed bike lanes + PBL</td>
<td>1.75</td>
<td></td>
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<td>3.1</td>
<td>42nd Avenue N, ROBBINSDALE</td>
<td>Group 1 - 1A 2D 3A SUP</td>
<td>1.7</td>
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<td>3.3</td>
<td>42nd Avenue N, ROBBINSDALE</td>
<td>Group 3 - 1C 2D 3C Two-way PBL</td>
<td>1.55</td>
<td></td>
<td></td>
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<tr>
<td>18.3</td>
<td>Douglas Dr - 55th Avenue to Crystal Comm. Center, CRYSTAL</td>
<td>Group 3 - 1D 2E 3Prj 1I, 4I SUP</td>
<td>1.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.1</td>
<td>Brookdale Drive, BROOKLYN PARK</td>
<td>Group 1 - 1B 2E 3H 4E 5K One-way PBL</td>
<td>1.5</td>
<td></td>
<td></td>
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<td>14.2</td>
<td>Brookdale Drive, BROOKLYN PARK</td>
<td>Group 2 - 1C 2F 3I 4F 5K Two-way PBL</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.3</td>
<td>Brookdale Drive, BROOKLYN PARK</td>
<td>Group 3 - 1A 2D 3G 4D 5J SUP</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.2</td>
<td>West Broadway Avenue - 47th Ave N to 60th Ave N, CRYSTAL</td>
<td>Group 2 - 1B 2G 3I 4M Two-way PBL</td>
<td>1.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.2</td>
<td>Douglas Dr - 55th Avenue to Crystal Comm. Center, CRYSTAL</td>
<td>Group 2 - 1B 2F 3Prj 1J, 4I Two-way PBL</td>
<td>1.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.1</td>
<td>Douglas Dr - 55th Avenue to Crystal Comm. Center, CRYSTAL</td>
<td>Group 1 - 1A 2K 3Prj 1H, 4L One-way PBL</td>
<td>1.25</td>
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<td>3.2</td>
<td>42nd Avenue N, ROBBINSDALE</td>
<td>Group 2 - 1B 2E 3B One-way PBLs</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.1</td>
<td>West Broadway Avenue - 47th Ave N to 60th Ave N, CRYSTAL</td>
<td>Group 1 - 1A 2F 3H 4L Buffered bike lanes + One-way PBL</td>
<td>1.15</td>
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<td></td>
</tr>
<tr>
<td>11.3</td>
<td>West Broadway Avenue - 47th Ave N to 60th Ave N, CRYSTAL</td>
<td>Group 3 - 1C 2D 3J 4N SUP</td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D
Top 10 Concept Sheets
EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: 1/2 block east of West Broadway
- Route ends: Hampshire Avenue

Relation to other proposed projects
- Blue Line station at intersection with West Broadway
- Planned improvements at CR81 and east of Hampshire (10ft trail on south side)

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route
- Segment 2: Four lane, two way with medians and center left and right turn lanes east of West Broadway Avenue to Hampshire Avenue
Note: Segment 1 removed from 60% design. Final project consists of segment 2 only
## Project Description

### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way with center left turn lanes</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>18,800 to 19,500</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>45</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>70</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>100</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 152</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes - 7 ft</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>12</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>5 ft sidewalk on north and south</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>5.5 ft - 9 ft on north and south</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>2,030 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>724</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>705,764</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes: east from W Broadway Ave</td>
</tr>
</tbody>
</table>
### Categories

<table>
<thead>
<tr>
<th>Recommendation from 90% plans</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trail on north and south side of Brooklyn Blvd between block east and west of station. Two lane, two way traffic on road, with a landscape median, as well as left and right turn lanes at intersections.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</th>
<th>Trail on one side (south) or both sides</th>
</tr>
</thead>
</table>

| Do the recommendations conflict or preclude each other? | No |

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Concept Proposal
TYPE: Shared-Use Path

Segment 2

GENERAL DESCRIPTION
• Implement one two-way shared-use path / trail along the south side of roadway
  – Brooklyn Park project for Hampshire to Zane will provide trail on south side

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  – None
• Impacts to existing stormwater infrastructure / gutter
  – Potential impacts due to addition of 5’ of impervious surface
  – Stormwater spread will need to be evaluated to ensure it meets requirements
• Impacts to existing transit
  – Not yet determined
• Impacts at signalized intersections
  – ADA compliant pedestrian ramps
  – APS at intersections
**GENERAL DESCRIPTION**

Route for proposed improvement
- Route starts: West Broadway
- Route covers: Douglas Drive
- Route ends: 55th Avenue / Sherburne Avenue

Relation to other proposed projects
- Connects to Project ID 11
- Upcoming trail improvements at Becker Park

**UNIFORMITY / VARIABILITY ALONG ROUTE**

Segments and potential links for consideration include:
- Segment 1: Two lane, two-way road on Douglas Drive north of West Broadway

**EXISTING CONDITIONS AND CONTEXT**

General project location and traffic levels (current AADT, MnDOT).
Concept Development for Walk/Bike Connectivity

Segments to be Considered

General project location.

View of Segment 1 (NB)
## Project Description
### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
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</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way</td>
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<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>1,750</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>48</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Y - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>14</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk both sides (5 ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>2.5 ft, both sides</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
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<td>Transit service across project</td>
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<td>Categories</td>
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<td>Segment interacts with the 90% plans?</td>
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<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
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<tr>
<td>Recommendations from concepts in this project interacting with 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>(several concepts available)</td>
<td></td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
</tr>
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</table>

**GENERAL GUIDELINES AND STANDARDS**

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Concept Proposal
TYPE: One-way Separated / Protected Bicycle Lanes - both sides

Existing (NB)

Proposed (NB)

(Available ROW - 66’ TYP.)
Project: Bass Lake Rd - Bottineau to Yates and Douglas Drive - 55th Ave to West Broadway  
City: Crystal  
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: Bottineau Blvd
- Route covers: Bass Lake Rd
- Route ends: Yates Ave N

Relation to other proposed projects
- Upcoming trail improvements at Becker Park
- Blue Line station just south of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along Bass Lake Rd
- Segment 1: See previous section
- Segment 2: Four lane, two way with center left turn lane, and median between Bottineau Blvd and Zane Ave
- Segment 3: Four lane, two way east of Zane Avenue
Project Description
Segments to be Considered

General project location.

View at Becker Park (in planning by others)
Intersection with Bottineau Blvd (EB)

View of Segment 2 (EB)

View of Segment 3 (EB)
### Project Description

#### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>At Bottineau: Four lanes, two way, with additional right turn and center-left turn lanes, and median</td>
<td>Four lanes, two way</td>
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<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>11,600</td>
<td>18,800 to 19,500</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>90</td>
<td>48</td>
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<td>Available right-of-way typ. (ft)</td>
<td>115</td>
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<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
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<td>State Aid Facility?</td>
<td>Yes - CSAH 10</td>
<td>Yes - CSAH 10</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11.5</td>
<td>11.5</td>
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<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>14, 11.5</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>8 ft sidewalk both sides</td>
<td>5 ft sidewalk on north, 8 ft sidewalk on south</td>
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<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>Varied</td>
<td>3 ft on north, none south</td>
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<td>Approximate length of segment (ft)</td>
<td>670</td>
<td>340 ft</td>
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<td>721</td>
<td>721</td>
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<td>Transit service across project</td>
<td>None</td>
<td>None</td>
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### Categories

<table>
<thead>
<tr>
<th>Segment 2</th>
<th>Segment 3</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
**GENERAL DESCRIPTION**

Improve Sidewalk and Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
- No change to existing roadway cross section width or roadway components

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

Single Two-way Shared-use Path / Trail
- Implement one two-way shared-use path / trail along the south side of Bass Lake Rd
- No change to existing roadway cross-section width or roadway components
  - Maintains existing curb line
  - Given current traffic volumes, limited opportunity to implement a three lane conversion
- Requires 8’ acquisition or easement beyond existing ROW
  - 8’ trail width could reduce ROW impacts

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts to stormwater by adding impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Any turn lane removal will require traffic analysis
- Transition of SUP to the existing on-street bike lanes east of project limits will require limited restriping of Bass Lake Road to include a three lane section between Zane and Yates, and restriping to include bike lanes full length between Yates and Xenia.
CONCEPT DEVELOPMENT FOR WALK/BIKE CONNECTIVITY
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

PROJECT: 93rd Avenue North - Jefferson Highway to West Broadway
City: Brooklyn Park
Mode(s): Bicycle

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: Jefferson Highway North / Central Avenue
- Route covers: 93rd Avenue North / 7th Street North
- Route ends: West Broadway Avenue

Relation to other proposed projects
- Blue Line station just south of West Broadway

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 1: Two lane section west of 6th Ave N, with occasional center left and right turn lanes
- Segment 2: Four lane section between Hwy 169 ramp and Winnetka Avenue, including center left and right turn lanes.
- Segment 3: Two lane, two way, center left turn east of Winnetka Avenue
**Project Description**

Segments to be Considered

General project location.

**View of Segment 1 (EB)**

**View of Segment 2 (EB)**
Projects continued...

- View of trail over Hwy 169 (EB)

- View of Segment 3 (EB)

- View of Segment 3 at West Broadway (EB)
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way (occasional center left and right turn lanes)</td>
<td>Four lane, two way (with center left and right turn lanes)</td>
<td>Two lane, two way (with center left turn lane)</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>no data available</td>
<td>7,600 to 8,600</td>
<td>7,600 to 5,800</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>22.50 (48 typ)</td>
<td>60-82</td>
<td>32</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66 ft</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 30</td>
<td>Yes - CSAH 30</td>
<td>Yes - CSAH 30</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>Yes (8 - 12 ft)</td>
<td>Yes (painted, 8ft)</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
<td>No</td>
<td>Yes (unpaved)</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>2 - 5</td>
<td>N/A</td>
<td>2 - 7</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>10.5</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Shared use path on north side east of DeCature Drive</td>
<td>8 ft sidepath on north and south (west of 169) - 12 ft sidewalk north and south on bridge over 169 - 8 ft sidepath on south (east of 169)</td>
<td>None</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>N/A</td>
<td>5.5 ft on north, 7 ft on south (west of 169) - none (east of 169)</td>
<td>N/A</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,930 ft</td>
<td>2,880 ft</td>
<td>1,310 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
<td>None</td>
<td>724</td>
</tr>
</tbody>
</table>
### Categories

<table>
<thead>
<tr>
<th>Description</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit service across project</td>
<td>782</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>Yes: Wyoming Ave N to W Broadway Ave</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>Trail on north and south side of 93rd of W Broadway Ave. Two lane, two way traffic on road, w/ a landscape median, and left and right turn lanes at intersections.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>Shared-use path on one or both sides of road</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
<td>N/A</td>
<td>No</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
**Concept Proposal**

TYPE: Two-way Separated / Protected Bicycle Lane - single side (south)

**Segment 1**

**Existing (EB)**

(Activity ROW - 66' TYP.)

14' Blvd
6' Shld.
13' Drive Lane
13' Drive Lane
6' Shld.
14' Blvd

**Proposed (EB)**

(Activity ROW - 66' TYP.)

12' Blvd
2'
11' Drive Lane
11' Drive Lane
11' Drive Lane
2'
5'
10' Shared Path
2'

**Existing (at bridge over Hwy 169) (EB)**

(Activity ROW - 76' TYP.)

10' Shared Use Path
2'
12' Drive lane
12' Drive lane
12' Drive lane
4'
12' Drive lane
12' Drive lane
12' Drive lane
2'
10' Shared Use Path
GENERAL DESCRIPTION

Two-way Shared-use Paths / Trails
- Implement two-way shared-use path / trails along north side of the roadway
  - Trails and accommodation are already provided on both sides of west approaches and bridge over Hwy 169

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter between 1st Ave and N. Oak (south side)
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - Potential change to turning radii at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Potential wetland impacts between 6th Ave and N. Oak on south side
EXISTING CONDITIONS AND CONTEXT

36th Ave N  42nd Ave N  41st Ave N

General project location and traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
- Route starts: 41st Avenue N, 1/2 block W of Hubbard Avenue N
- Route covers: Hubbard Avenue N
- Route ends: 36th Avenue N and France Avenue N

Relation to other proposed projects
- Connects to Project ID 17
- Blue Line station nearby, south of 42nd Ave N

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route
- Two lane, two way street on 41st Ave
- Two lane, two way residential street on Hubbard
- Plaza/open space between Hubbard Ave and 36th Ave/France Ave Intersection
**Project Description**

**Segments to be Considered**

General project location.

**View of Segment 1 (EB)**

**View of Segment 2 (NB)**
### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way</td>
<td>Two lane, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>2,200</td>
<td>740 to 780</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>44</td>
<td>32</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>60</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Robbinsdale</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Unknown</td>
<td>Yes - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes, both sides</td>
<td>Yes, both sides</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>10</td>
<td>6 (not marked)</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>10 (not marked)</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk located North and South at back of curb</td>
<td>Sidewalk on east and west (north of 38th Ave N) - Sidewalk on east (south of 38th Ave N)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>150 ft</td>
<td>4,000 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>Unknown</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>N/A</td>
<td>14, 32</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>Shared use path on north side of 41st from LRT corridor to parking lot driveway</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans</td>
<td>Shared use path connection from Hubbard to planned shared use path</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11' wide
- Parking lane minimum of 8'
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Reconstruct sidewalk into Shared-use path (impacts existing curb & gutter and slightly narrows 41st Ave width)
Concept Proposal
TYPE: Neighborhood Slow Street

GENERAL DESCRIPTION
Neighborhood Slow Street
- Implement Neighborhood Slow Street (traffic-calmed street)
  - Suitable solution given low volumes of traffic (significantly below 3,000 ADT threshold)
- Introduce traffic calming elements to calm traffic speeds to 25 mph or less:
  - Reorient stop signs to stop cross street / perpendicular traffic
  - Add traffic-calming elements, including traffic circles, bump-outs (curb extensions), medians, diverters or speed tables
  - Add wayfinding markers and route signs
  - Add pavement markings, including oversize sharrow or bike boulevard markings
- Develop sidewalk segments where not currently existing (west side south of 38th Ave N)
- Shared us path between Hubbard Avenue and intersectin of 36th Ave N and France Ave N

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - Possibly 41st Ave
- Impacts to existing stormwater infrastructure / gutter
  - Possible on 41st Ave new trail
- Impacts to existing transit
  - N/A
- Impacts at signalized intersections
  - Possibly at intersection of 36th Ave and France Ave
Project: 63rd Avenue - from West Broadway, Forest Ave to Zane Ave
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
- Segment 1 starts: Boone Avenue
- Segment 1 ends: W. Broadway
- Segment 2 starts: Forest Ave
- Segment 2 ends: Zane Ave

Relation to other proposed projects
- Connects to Project IDs 04, 20, 12, and 16
- Blue Line station just north of intersection with Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration vary along the route
- Segment 1: Two lane, two way road
- Segment 2: Two lane, two way road with center left turn lane
General project location.

View of Segment 1 (EB)

View of Segment 1 (EB)
## Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Two lane, two way</td>
<td>Two lane, two way with center left turn lane</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>6,900</td>
<td>7,200 to 12,100</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
<td>70</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes (painted)</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Some</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>12</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>5 ft widewalk on north and south</td>
<td>5 ft sidewalk on north only (east of Forest Ave N)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>10 ft on north, 12 ft on south (east of Yukon Ave)</td>
<td>6 ft (east of Forest Ave N)</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>3,940 ft</td>
<td>2,420 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>716, 767</td>
<td>716, 767</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>705, 721, 764, 767</td>
<td>724, 760</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes: at corner of Louisiana Ave N and 63rd Ave N</td>
<td>Yes: at Louisiana Ave N to Lakeland Ave N</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>Redesign sidewalk corners at intersection to provide direct crossing from north to south side of 63rd Ave N, as well as east to west on Louisiana Ave N</td>
<td>East of Bottineau Blvd: Sidewalk on north and south side of 63rd Ave N. One lane, two way traffic on road, w/ a median, as well as two left turn lanes and one right turn lane via east from Louisiana Ave N to Bottineau/63rd intersection. A right and left turn lane via west from Bottineau/63rd intersection to Louisiana Ave N. West of Bottineau Blvd: Remains the same.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>Shared-use path on on one side (north) or on both sides both sides of 63rd Ave N</td>
<td>Shared-use path on both sides of 63rd Ave N</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
**Concept Proposal**

**TYPE:** Two-way Shared-Use Path / Trail - single side (north)

---

**GENERAL DESCRIPTION**

Single Two-way Shared-use Path / Trail

- Implement one two-way shared-use path / trail along the north side of 63rd Avenue
  - Place on north side to facilitate connection with Blue Line station
- No change to existing roadway cross-section width or roadway components

---

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5' of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Space constrictions at West Broadway to accommodate turn lanes
Concept Proposal
TYPE: Sidewalk - single side (south)

GENERAL DESCRIPTION
Sidewalk
- Implement sidewalk along south side of roadway.

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Potential impacts due to addition of 5’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - None
- Impacts at intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
EXISTING CONDITIONS AND CONTEXT

General project location, traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION

Route for proposed improvement
  • Route starts: 63rd Avenue North
  • Route covers: Hampshire Ave N, 66th Ave N
  • Route ends: Lakeland Park

Relation to other proposed projects
  • Connects to Project ID 08
  • Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE

Conditions and configuration are generally constant along the route
  • Segment 1: Two way residential street
Segment 1

General project location.

View of Segment 1 (NB)

View of Segment 1 (WB)
### Categories of Segments

<table>
<thead>
<tr>
<th>Description of Segment 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
</tr>
<tr>
<td>AADT (typ.)</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
</tr>
<tr>
<td>State Aid Facility?</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
</tr>
<tr>
<td>Median present?</td>
</tr>
<tr>
<td>On-street parking present?</td>
</tr>
<tr>
<td>Shoulder present?</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
</tr>
<tr>
<td>Center left turn lane?</td>
</tr>
<tr>
<td>Width of center turn lane</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
</tr>
<tr>
<td>Transit service along project</td>
</tr>
<tr>
<td>Transit service across project</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
</tr>
</tbody>
</table>

- **Two way, two lanes**
- **2**
- **No data available**
- **30**
- **30 on Hampshire, 28 at 66th**
- **66 on Hampshire, 60 on 66th Ave N**
- **Brooklyn Park**
- **No**
- **Yes**
- **No**
- **Yes**
- **No**
- **N/A**
- **14 ft**
- **No**
- **N/A**
- **None**
- **N/A**
- **2,910 ft**
- **716**
- **767**
- **No**
### Project Description

**Description of Segments - CONTINUED**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
**GENERAL DESCRIPTION**

Sidewalks and Neighborhood Slow Street

- Develop sidewalks along both sides of street
- Implement Neighborhood Slow Street (traffic-calmed street, also known as Bicycle Boulevard)
  - Include traffic calming elements, typically in and near intersections, including traffic circles, bump-outs or medians, wayfinding markers, route signs, and bicycle boulevard markings
- Maintains existing roadway cross-section width and roadway components
  - Maintain existing curb line and on-street parking

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Not yet determined
- Impacts at intersections
  - ADA compliant pedestrian ramps
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

Project: Bassett Creek Trail - Duluth Street and Golden Valley Road to Xerxes Avenue North
City: Golden Valley
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: Douglas Drive
- Route covers: Duluth Street and Golden Valley Road
- Route ends: Xerxes Avenue

Relation to other proposed projects
- Blue Line station near Theodore Wirth Parkway

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 1: Four lane, two way road west of Lilac Drive
- Segment 2: Four lane, two way road and interchange with Hwy 100 between Lilac Dr and Toledo Ave
- Segment 3: Four lane, two way road between Toledo Ave and Regent Ave
- Segment 4: Four lane, two way road between Regent Ave and Noble Ave
- Segment 5: Two lane, two way road between Noble Ave and Theodore Wirth Parkway
- Segment 6: Two lane, two way road

Traffic levels (current AADT, MnDOT).
**Project Description**
Segments to be Considered

---

Segments considered and general project location.

---

**View of Segment 1 (EB)**

---

**View of Segment 2 (at Highway 100) (EB)**
Concepts Development - Blue Line LRT Station Walk Bike Connectivity Project

Segments to be Considered

View of Segment 3 (EB)

View of Segment 4 (EB)

View of Segment 5 (EB)
Segments to be Considered

View of Segment 5 (EB)

View of Segment 6 (EB)
### Project Description

#### Description of Segments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>Segment 3</th>
<th>Segment 4</th>
<th>Segment 5</th>
<th>Segment 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way</td>
<td>Four lane, two way</td>
<td>Four lane, two way</td>
<td>Four lane, two way</td>
<td>Two lane, two way</td>
<td>Two lane, two way</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
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<tr>
<td>AADT (typ.)</td>
<td>15,000</td>
<td>17,200</td>
<td>17,200</td>
<td>No data available</td>
<td>9,800</td>
<td>No Data</td>
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<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>Unknown</td>
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<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>65</td>
<td>78 -104</td>
<td>48</td>
<td>48</td>
<td>34</td>
<td>40</td>
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<td>Available right-of-way typ. (ft)</td>
<td>66-120</td>
<td>85+</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>66</td>
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<td>Roadway jurisdiction</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
<td>Yes - CSAH 66</td>
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<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Partial</td>
</tr>
<tr>
<td>Median present?</td>
<td>Select locations, physical</td>
<td>Yes, physical</td>
<td>None</td>
<td>Select locations, painted</td>
<td>Select locations, painted</td>
<td>None</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>6 ft bike lane on shoulder</td>
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<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>6 ft</td>
<td>8’</td>
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<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>11.5</td>
<td>12</td>
<td>12’</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>7 ft sidewalk on north and south</td>
<td>10 ft sideway on north - 7 ft sideway on south, 10 ft sideway on south (under bridge only)</td>
<td>7 ft sidewalk on south, 10ft sideway on north (non-conforming condition near pedestrian bridge at Regent Ave N)</td>
<td>6 ft sidewalk on south</td>
<td>5 ft sidewalk north and south (west of Wirth Pkwy)</td>
<td>8 ft sidewalk south only</td>
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<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>5 ft grass buffer on both sides (at and west of Brunswick Ave N) - none (east of Brunswick Ave N)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>5 ft pavement buffer both sides (west of Wirth Pkwy)</td>
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<tr>
<td>Categories</td>
<td>Segment 1</td>
<td>Segment 2</td>
<td>Segment 3</td>
<td>Segment 4</td>
<td>Segment 5</td>
<td>Segment 6</td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
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<tr>
<td>Approximate length of segment (ft)</td>
<td>2,000 ft</td>
<td>1,600 ft</td>
<td>776 ft</td>
<td>1,490 ft</td>
<td>4,590 ft</td>
<td>930 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>14,758</td>
<td>14,758</td>
<td>14,758</td>
<td>14 and 758</td>
<td>14</td>
<td>14</td>
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<tr>
<td>Transit service across project</td>
<td>705</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>30</td>
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<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes: Bonnie Lane to Zephyr Place</td>
<td>Yes: Bonnie Lane to Zephyr Place</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Trail on south side of GV road between Bonnie Lane and Station. Two lane, two way traffic on road, w/ center left turn lane at intersections.</td>
<td>On street bike lanes east of Theodore Wirth Pkwy</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Separated / protected bike lane on both sides of street and trail on single side</td>
<td>On street bike lanes</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Segment 1

**GENERAL DESCRIPTION**

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path/trail along north side of the roadway
  - Provide sidewalk along south side of roadway
- Maintains existing roadway cross-section width, components, and curb line.
- Requires up to 9 ft acquisition or easement beyond existing ROW for select parcels

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface.
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
- Requires extension of Bassett Creek culvert
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - single side

Existing (EB)

Proposed East of Toledo (EB)

GENERAL DESCRIPTION
Two-way Shared-use Path / Trail
- Implement a two-way shared-use path/trail along north side of the roadway
  - West of Toledo, trail located at back of curb. No additional ROW required
  - Maintains existing roadway cross-section width, components, and curb line

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
**GENERAL DESCRIPTION**

Three Lane Conversion and Two-way Shared-Use Path / Trail
- Implement a three lane conversion (“Road Diet”) for roadway along Segment 4
  - Follow Bassett Creek Regional Trail Feasibility Study alignment
- Implement a two-way shared-use path / trail along south side of the roadway
- Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Bus boarding and alighting will stop traffic flow
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
  - Potential bike / walk signal at intersection
- Impacts on travel lanes
  - Reduction of one traffic lane each way, will require traffic analysis
Concepts Development - Blue Line LRT Station Walk Bike Connectivity Project

**Concept Proposal**

**TYPE:** Two-way Shared-Use Path / Trail - single side

**ID:** 13-I  
**Revision:** 11/19/18

**Segment 5**

**GENERAL DESCRIPTION**

Two-way Shared-use Path / Trail

- Implement a two-way shared-use path / trail on south side of Segment 5
  - Follow Bassett Creek Regional Trail Feasibility Study alignment (Noble Avenue to Blue Line Extension Project)
  - Requires reconstruction and modification to existing roadway cross-section width, roadway components, and curb line

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

---

**Existing (EB)**

![Existing (EB) Diagram](image1)

**Proposed (EB)**

![Proposed (EB) Diagram](image2)
**Concept Proposal**

**TYPE:** Two-way Shared-Use Path / Trail - single side

**GENERAL DESCRIPTION**

**On street bike lanes**
- Implement on street bike lanes
- Match bike lanes in blue line ext plans

**OTHER CONSIDERATIONS AND POTENTIAL IMPACTS**
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - None
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections

(Available ROW - 66' TYP.)

Existing and Proposed (EB)

<table>
<thead>
<tr>
<th>Existing and Proposed (EB)</th>
<th>GENERAL DESCRIPTION</th>
<th>OTHER CONSIDERATIONS AND POTENTIAL IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On street bike lanes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Implement on street bike lanes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Match bike lanes in blue line ext plans</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

Project: Zane Avenue – 73rd Avenue to 85th Avenue
City: Brooklyn Park
Mode(s): Pedestrian, Bicycle

EXISTING CONDITIONS AND CONTEXT

GENERAL DESCRIPTION
Route for proposed improvement
• Route starts: 73rd Avenue N, in Brooklyn Park
• Route covers: Zane Avenue North
• Route ends: 85th Avenue North

Relation to other proposed projects
• Connects to Project IDs 10, and 14

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
• Segment 3: Four lanes, two way between 73rd Avenue North to Brooklyn Boulevard
• Segment 4: Four lane, two way between Brooklyn Boulevard and ending at 85th Avenue North / Hennepin CSAH 14
Note: Segments 1 & 2 were removed from 60% design. Final project consists of segments 3 & 4 only.
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Four lane, two way road with median and center turn lane at intersections</td>
<td>Four lane, two way road</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>16,300</td>
<td>13,400</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>66</td>
<td>48</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>100</td>
<td>80</td>
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<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
<td>Hennepin County</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes - MSAS</td>
<td>Yes - MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>Yes (9ft)</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Yes, sidewalk on west and east (6ft)</td>
<td>Yes, sidewalk on both sides of street (14 ft on west side, 9.5 ft on east side)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>8 on west side, 9 on east side of street</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>2,583</td>
<td>3,900</td>
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<tr>
<td>Transit service along project</td>
<td>716, 722, 723, 724, 760, 761</td>
<td>722, 723, 760, 761</td>
</tr>
</tbody>
</table>
### Project Description

**Description of Segments - CONTINUED**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 3</th>
<th>Segment 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit service across project</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road should be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
Concept Proposal
TYPE: Two-way Shared-Use Path / Trail - both sides

GENERAL DESCRIPTION
Two-way Shared-use Path / Trail
• Implement two-way shared-use paths / trails on east side of Segment 3
• Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
• Impacts to existing on-street parking
  - None
• Impacts to existing stormwater infrastructure / gutter
  - Addition of impervious surface with expanded trail
  - Stormwater spread will need to be evaluated to ensure it meets requirements
• Impacts to existing transit
  - Not yet determined
• Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS implemented
GENERAL DESCRIPTION
Bidirectional Shared-use Path / Trail
- Implement two-way shared-use path / trail along one side of Segment 4
- Requires reconstruction and modifications to existing roadway cross-section width and curb line
  - Reducing buffer width between trail and roadway could eliminate roadway impacts

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS
- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to additional impervious surface
- Impacts to existing transit
  - Not yet determined
- Impacts at signalized intersections
  - Potential bike / walk signal at intersection
  - ADA compliant pedestrian ramps
  - APS at intersections
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: 36th Avenue N at Halifax Ave
- Route ends: 36th Avenue N at France Ave

Relation to other proposed projects
- Connects to Project ID 06

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration vary along the route
- Segment 3: Three lane section Halifax to Grimes, 3-4 travel lanes and turn lanes Grimes to France
Note: Segments 1 & 2 not carried forward to 60% design. Final project consists of segment 3 only.
<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of typical roadway section</td>
<td>Three lane (two way with center left turn lane)</td>
</tr>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>3</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>12,800 - 8,300</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>48</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>66</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Robbinsdale</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>Yes, MSAS</td>
</tr>
<tr>
<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>No</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>12</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>Yes</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>14</td>
</tr>
<tr>
<td>Sidewalk or sidepath present?</td>
<td>Sidewalk on north (6ft) and south (5.5 ft)</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>660 ft</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>14</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>32</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Project Description
**Description of Segments - CONTINUED**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation from 90% plans</td>
<td>Two lane, two way street with center left turn lane between June Ave N and Halifax Ave N on 36th Ave N. Sidewalk on north side. Shared use path on south side.</td>
</tr>
<tr>
<td>Recommendations from concepts in this project interacting with 90% plans (several concepts available)</td>
<td>Concepts include shared use path on south side.</td>
</tr>
<tr>
<td>Do the recommendations conflict or preclude each other?</td>
<td>No</td>
</tr>
</tbody>
</table>

- Driving lanes must be at least 11’ wide
- Parking lane minimum of 8’
- 2’ gutters required (in addition to min. 11’ lanes)
- Gutter not included as part of travel lane or bike lane
- Trails (10 ft width preferred) require min 2’ clear zone to traffic and from edge of ROW
- 6’ shoulder on rural sections
- Improvements need to include ADA compliant pedestrian ramps and APS at signalized intersections.
- Boulevard, median or other buffers alongside a road desired to be min. 5’ for snow storage
- Removal of any turn or travel lanes requires traffic analysis
- Changing radii at intersections requires turning templates in Autoturn
- When adding impervious surface check impacts to stormwater
- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
GENERAL DESCRIPTION

Bidirectional Shared-use Path / Trail

- Implement two-way shared-use paths / trails on one side of Segment 3
  - Maintain sidewalk along the other side of roadway
- Requires reconstruction and modification to existing roadway cross-section width and curb line
- May require traffic analysis between Grimes and France Ave

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Requires reconstruction of drainage / curb and gutter
  - Potential impacts due to addition of 3’ of impervious surface
  - Stormwater spread will need to be evaluated to ensure it meets requirements
- Impacts to existing transit
  - Eliminates bus pull-over area
- Impacts at signalized intersections
  - ADA compliant pedestrian ramps
  - APS at intersections
Concept Development for Walk/Bike Connectivity
Hennepin County Blue Line LRT Station Walk Bike Connectivity Project

EXISTING CONDITIONS AND CONTEXT

General project location.

Traffic levels (current AADT, MnDOT).

GENERAL DESCRIPTION
Route for proposed improvement
- Route starts: 62nd Avenue North
- Route covers: Louisiana Ave N
- Route ends: 63rd Avenue North

Relation to other proposed projects
- Connects to Project ID 08
- Blue Line station at Bottineau Blvd

UNIFORMITY / VARIABILITY ALONG ROUTE
Conditions and configuration are generally constant along the route
- Segment 1: Two way residential street

Project: Louisiana Ave N - 62nd Ave to 63rd Ave
City: Brooklyn Park
Mode(s): Pedestrian, Bikes
General project location.

View of Segment 1 (NB)
### Categories

<table>
<thead>
<tr>
<th>Description of typical roadway section</th>
<th>Two way, two lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of through lanes (typ. config.)</td>
<td>2</td>
</tr>
<tr>
<td>AADT (typ.)</td>
<td>No data available</td>
</tr>
<tr>
<td>Speed limit (mph)</td>
<td>30</td>
</tr>
<tr>
<td>Roadway (curb-to-curb) width typ. (ft)</td>
<td>30</td>
</tr>
<tr>
<td>Available right-of-way typ. (ft)</td>
<td>60</td>
</tr>
<tr>
<td>Roadway jurisdiction</td>
<td>Brooklyn Park</td>
</tr>
<tr>
<td>State Aid Facility?</td>
<td>No</td>
</tr>
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<td>Curb &amp; gutter (urban) section?</td>
<td>Yes</td>
</tr>
<tr>
<td>Median present?</td>
<td>No</td>
</tr>
<tr>
<td>On-street parking present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Shoulder present?</td>
<td>No</td>
</tr>
<tr>
<td>Width of shoulder or parking lane</td>
<td>Not marked</td>
</tr>
<tr>
<td>Width of driving lane(s)</td>
<td>14</td>
</tr>
<tr>
<td>Center left turn lane?</td>
<td>No</td>
</tr>
<tr>
<td>Width of center turn lane</td>
<td>N/A</td>
</tr>
<tr>
<td>Boulevard or buffer from roadway (typ)</td>
<td>None</td>
</tr>
<tr>
<td>Approximate length of segment (ft)</td>
<td>1,260</td>
</tr>
<tr>
<td>Transit service along project</td>
<td>None</td>
</tr>
<tr>
<td>Transit service across project</td>
<td>716, 767</td>
</tr>
<tr>
<td>Segment interacts with the 90% plans?</td>
<td>No</td>
</tr>
<tr>
<td>Categories</td>
<td>Segment 1</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Recommendation from 90% plans</td>
<td>N/A</td>
</tr>
<tr>
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- Update storm drains to bike-friendly designs
- Reduce travel lane widths to widen sidewalks, paths, or buffers
- Maintain consistent lane widths
- Maintain curbs and median locations when possible
GENERAL DESCRIPTION

Provide sidewalk on east side of street
- Maintains existing roadway cross-section width and roadway components

OTHER CONSIDERATIONS AND POTENTIAL IMPACTS

- Impacts to existing on-street parking
  - None
- Impacts to existing stormwater infrastructure / gutter
  - Stormwater spread will need to be evaluated to ensure it meets requirements
  - Potential impacts due to increased impervious surface
- Impacts to existing transit
  - N/A
- Impacts to driveways
  - 4 single-family driveways
- Impacts to signalized intersections
  - N/A