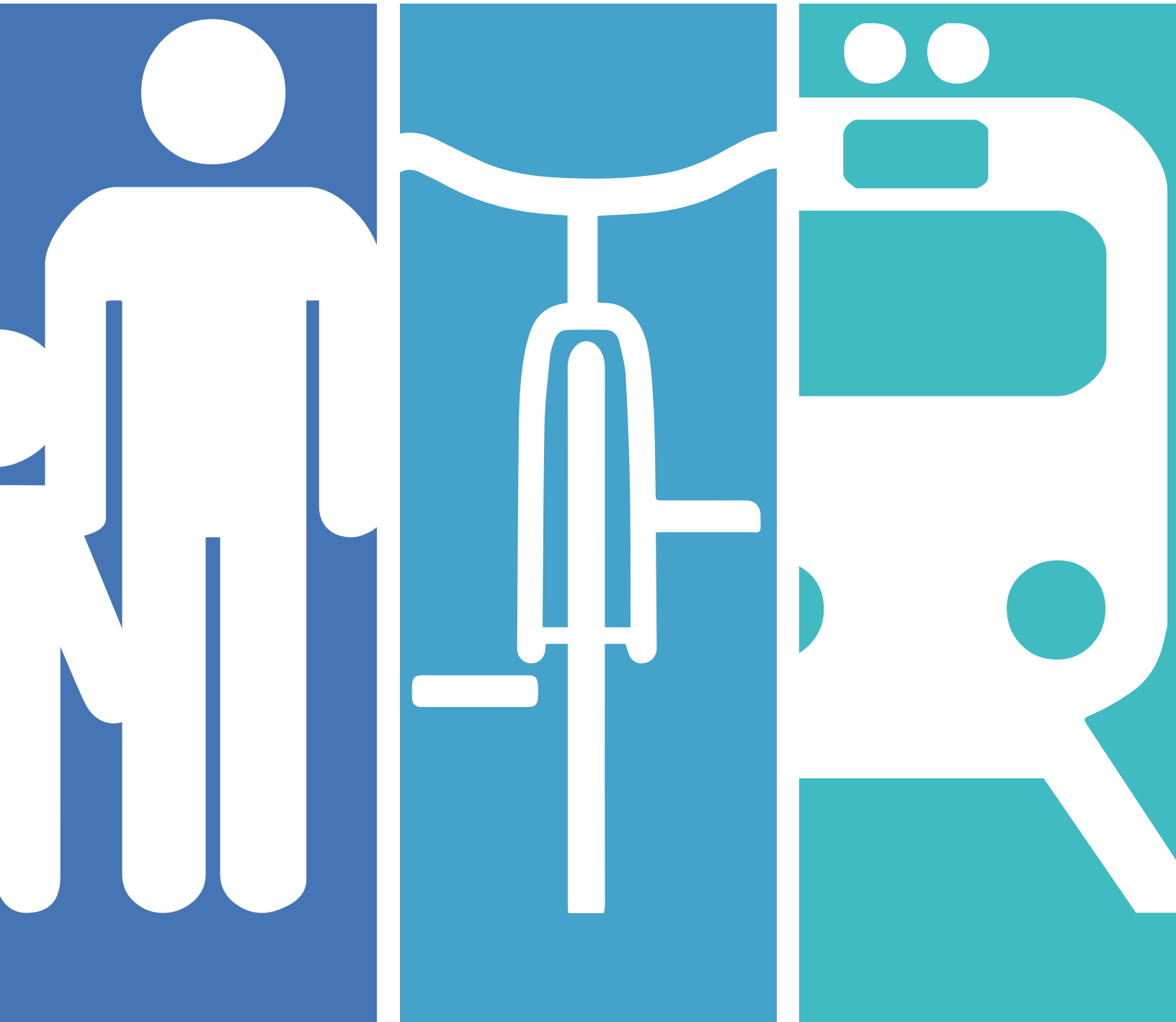


WEST LAKE MULTIMODAL TRANSPORTATION STUDY

FINAL RECOMMENDATIONS REPORT



FEBRUARY 2016

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WEST LAKE MULTIMODAL TRANSPORTATION STUDY

FINAL RECOMMENDATIONS REPORT

SECTIONS

1. EXECUTIVE SUMMARY
2. GREEN LINE DESIGN RECOMMENDATIONS
3. NEAR TERM RECOMMENDATIONS
4. LONG TERM RECOMMENDATIONS
5. PLANNING HORIZON RECOMMENDATIONS

APPENDIX A - RECOMMENDATION 33 – 2040 TRAFFIC OPERATIONS ANALYSIS

LIST OF FIGURES

SECTION 1

- 1-1 West Lake Multimodal Transportation Study Recommendations Map
- 1-2 Recommendation 33b - Proposed Trail Expansion Along Lake Street Channel Bridge
- 1-3 Study Area

SECTION 2

- 2-1 Green Line Design Recommendation Locations
- 2-2 RECOMMENDATION 1 – Trail Crossing Improvements
- 2-3 RECOMMENDATION 8 – Enhanced Trail Crossing
- 2-3 RECOMMENDATION 9 – Bicycle Roundabout

SECTION 3

- 3-1 Near Term Design Recommendation Locations
- 3-2 RECOMMENDATION 10a – Chowen Avenue
- 3-3 RECOMMENDATION 10a – 32nd Street West of Excelsior Boulevard
- 3-4 RECOMMENDATION 10b – 32nd Street East of Excelsior Boulevard
- 3-5 RECOMMENDATION 10c – Intersection of 32nd Street & Excelsior Boulevard
- 3-6 RECOMMENDATION 10d – Intersection of 32nd Street & West Calhoun Parkway
- 3-7 Bicycle Connectivity Analysis Map - West Lake Station to Lake Calhoun
- 3-8 Comparison of Existing & Proposed Phasing for Dean Parkway/West Calhoun Parkway
- 3-9 Lake Street & Dean Parkway Trail Crossing Improvements
- 3-10 East Calhoun Parkway Crossing & Trail Enhancements
- 3-11 Bicycle Connectivity Analysis Map - East Calhoun Parkway Trail
- 3-12 Interim Eastbound Lake Street at Thomas Avenue
- 3-13 Interim Lake Street at Channel Bridge

SECTION 4

- 4-1 Long Term Recommendation Locations
- 4-2 Additional Station Area Wayfinding
- 4-3 Potential Study Area Wayfinding Portals
- 4-4 Reallocation of Street Width for Pedestrian Amenities
- 4-5 RECOMMENDATION 25 – Pedestrian Crossing of Freight and Green Line LRT Tracks
- 4-6 RECOMMENDATION 25a – At-Grade Crossing Near Lake Street
- 4-7 Bicycle Connectivity Analysis Map - NW Neighborhood To West Lake Station
- 4-8 RECOMMENDATION 26a-d – Market Plaza Connection to Lake Calhoun
- 4-9 RECOMMENDATION 26e – West Calhoun Boulevard – Excelsior Blvd to West 32nd Street
- 4-10 Connectivity Analysis Map – Connection Between Midtown Greenway at Calhoun Village & Lake Calhoun
- 4-11 RECOMMENDATION 29a – Intersection of Excelsior Blvd and Lake Street
- 4-12 RECOMMENDATION 29b – Excelsior Blvd between Market Plaza and Lake Street
- 4-13 RECOMMENDATION 33a – Partial Reconstruction of Lake Street, 6 lanes
- 4-14 RECOMMENDATION 33b – Full Reconstruction of Lake Street: Dean Parkway to Thomas Avenue
- 4-15 RECOMMENDATION 33b – Full Reconstruction of Lake Street, 5 lanes
- 4-16 RECOMMENDATION 33b – Existing and Proposed Trail Expansion Along Lake Street Channel Bridge
- 4-17 2040 Traffic Analysis Lake Street No Build and Full Reconstruction Comparison
- 4-18 RECOMMENDATION 34 – Isles to Calhoun Trail Connection
- 4-19 RECOMMENDATIONS 36 through 44 – East Calhoun Area Improvements
- 4-20 RECOMMENDATIONS 37 - Trail Realignment
- 4-21 RECOMMENDATION 41 - New Pedestrian Only Trail

SECTION 5

- 5-1 Long Term Recommendation Locations
- 5-2 RECOMMENDATION F – Gateway Locations
- 5-3 RECOMMENDATION 45 – Calhoun Commons Crosswalk
- 5-4 Comparison of Existing Access & Potential Right-in/Right-out at Calhoun Commons/Market Plaza
- 5-5 RECOMMENDATIONS 35, 47 and E – Cedar Lake Area

LIST OF TABLES

SECTION 2

- 2-1 Green Line Recommendations

SECTION 3

- 3-1 Near Term Recommendations

SECTION 4

- 4-1 Long Term Recommendations
- 4-2 Comparison Matrix of Freight & Green Line Crossing Alternatives

SECTION 5

- 5-1 Planning Horizon Recommendations

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1. EXECUTIVE SUMMARY



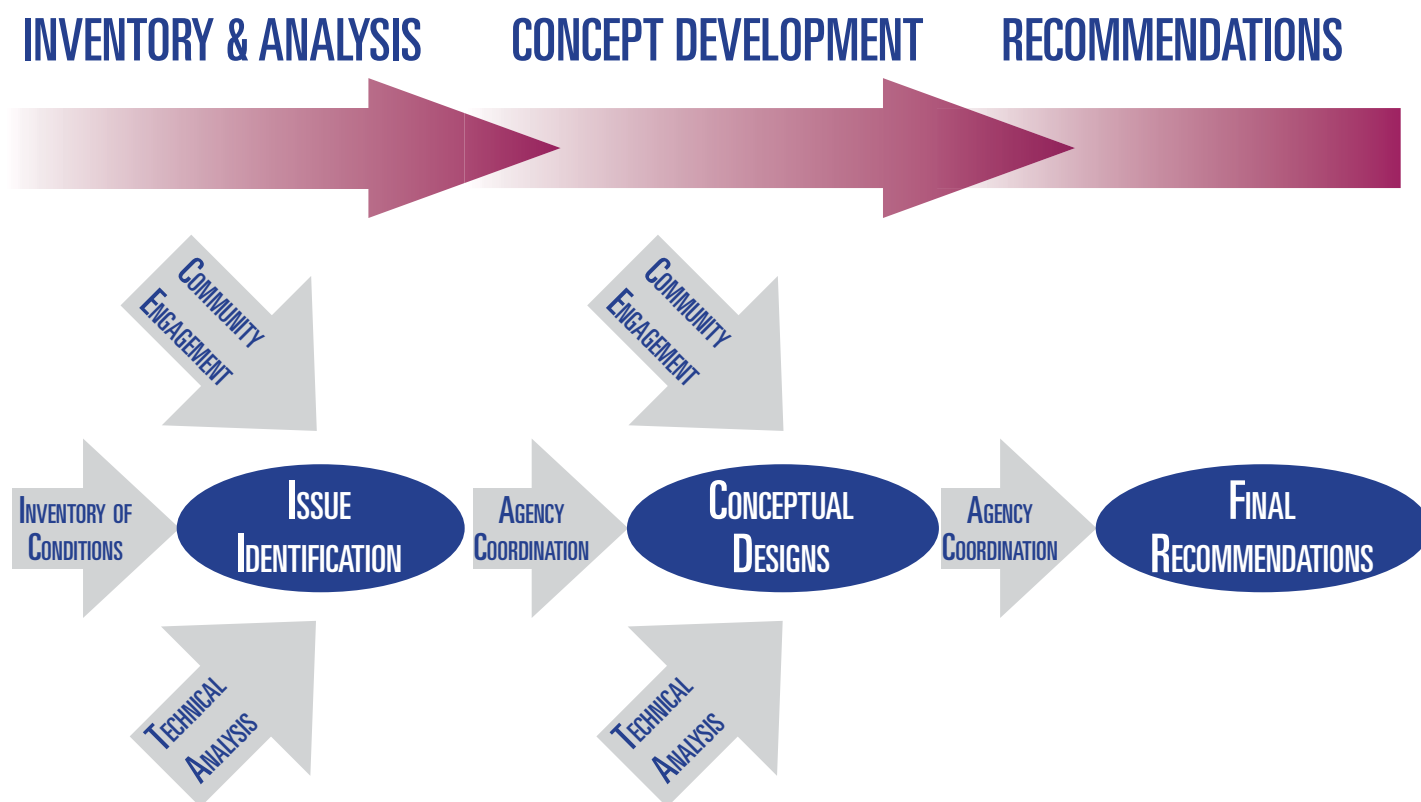
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EXECUTIVE SUMMARY

This Recommendations Report is the final document produced for the West Lake Multimodal Transportation Study. It is the culmination of a nearly year-long process of issue identification, technical analysis, agency coordination, and stakeholder outreach aimed at identifying opportunities to improve multimodal mobility, access, connectivity, and safety near the proposed West Lake LRT station. Reports prepared as part of this study and available for review are as follows:

- 1) Inventory & Analysis Report
 - Introduction & Project Background
 - Previous Planning Studies
 - Existing Multimodal Traffic
 - 2040 Forecast Traffic Volumes
 - Multimodal Crash History
 - Parking Inventory
 - Multimodal Operations Analysis
 - Circulation, Gaps, and Connectivity
 - Issue Identification
- 2) Community Engagement Summary Report
- 3) Recommendations Report

The Recommendations Report describes each of the recommendations, illustrates concepts and provides discussion, analysis and implementation considerations. Each of the Final Recommendations was influenced by ongoing community engagement and agency coordination during the Concept Development phase, and is ultimately a response to the issues that were identified and analysis conducted during the Inventory & Analysis Phase of the study.



Over 60 issues were identified during the Inventory & Analysis phase and conceptual designs were developed based on analysis and input from community stakeholders and partnering agencies to address each issue. The concepts were refined throughout the Concept Development and Final Recommendations phases based on additional analysis and agency and community feedback. The result includes over 60 recommendations for improvements to the multimodal transportation system in the West Lake Study Area.

As each of the recommendations were refined, they were assigned to one of four implementation timeframes:

Green Line Design Recommendations

Refinements to Metro Transit's Green Line Extension design that will be constructed as part of the project.

Near Term Recommendations

Improvements are recommended near opening day of Green Line Extension service, but do not have funding sources identified at this time.

Long Term Recommendations

Improvements implemented beyond opening day of the Green Line Extension (scheduled for 2020).

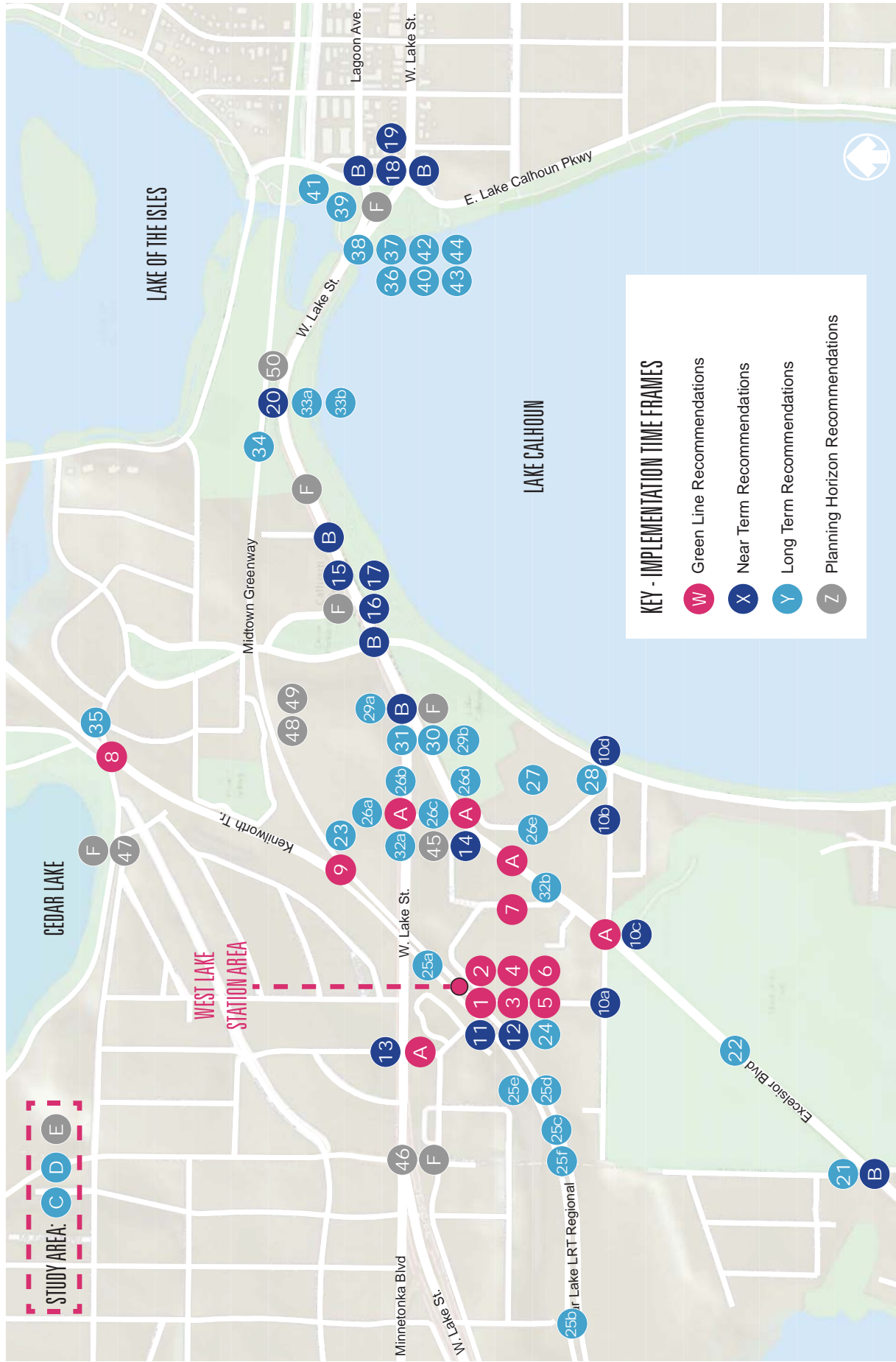
Planning Horizon Recommendations

Potential to be considered in the future, but no timetable for implementation. Requires additional analysis outside the scope of the current study.

All recommendations are located on Figure 1-1.



FIGURE 1-1
WEST LAKE MULTIMODAL TRANSPORTATION STUDY RECOMMENDATIONS MAP



The final recommendations include a wide range of improvements, from small striping, signing and wayfinding projects to significant reconstruction projects and innovative new facilities. Figure 1-2 illustrates the “after” condition of the photo at right as part of Recommendation 33b. This includes the full reconstruction of Lake Street between Thomas Avenue and East Calhoun Parkway. The recommendation results in a “road diet” on Lake Street and the expansion of the trail over the Channel Bridge.

The recommendation also includes addition of a gateway median and widening of the sidewalk and boulevard along the north side of Lake Street.



FIGURE 1-2
RECOMMENDATION 33B - PROPOSED TRAIL EXPANSION ALONG LAKE STREET CHANNEL BRIDGE



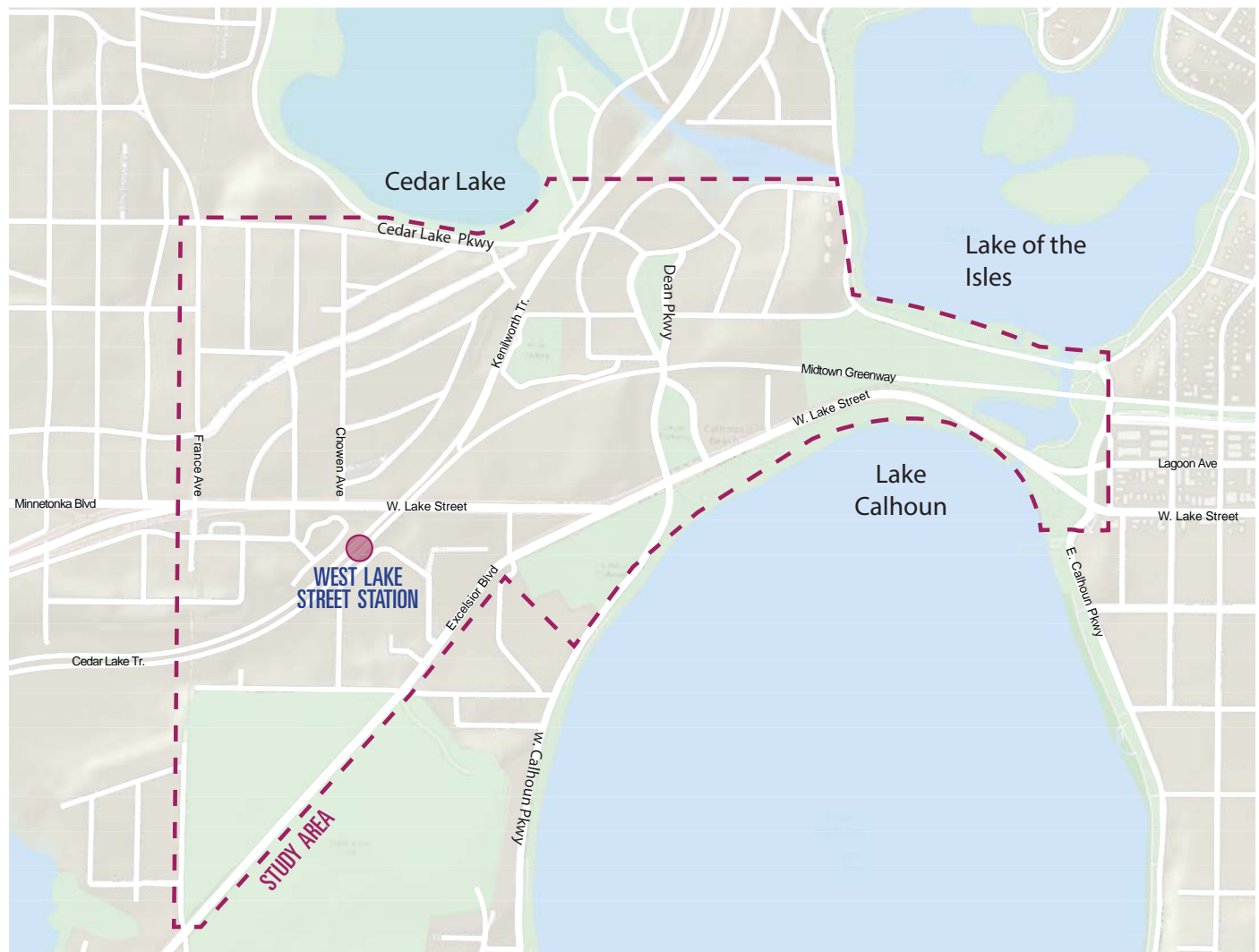
STUDY BACKGROUND

The West Lake Multimodal Transportation Study was initiated to identify opportunities to improve safety, access, connectivity, and mobility for all modes of travel in the area surrounding the proposed West Lake Station for the Southwest Light Rail Transit line (Green Line Extension). This study was included in the Memorandum of Understanding between the Metropolitan Council and the City of Minneapolis as a requirement to the City granting initial municipal consent for the Green Line Extension.

The goal of the study was to identify recommendations to address non-motorized and motorized travel within the West Lake Station area with projects that can be implemented as a part of the construction of the Green Line Extension or as part of other capital initiatives.

The study area is comprised of an area north of Lake Calhoun and south of Cedar Lake and Lake of the Isles in southwest Minneapolis. The borders of the study area are France Avenue on the west, Cedar Lake Parkway on the north, East Calhoun Parkway on the east, and West Calhoun Parkway/Excelsior Boulevard on the south.

FIGURE 1-3
STUDY AREA



COMMUNITY ENGAGEMENT

The robust community engagement process was designed to garner feedback and input from participants at key touchpoints throughout the project. These touchpoints coincided with the three study phases: Inventory and Analysis, Concept Development, and Final Recommendations.

Outreach activities and events were developed to provide multiple forums for stakeholders to discuss issues, challenges, and opportunities in the West Lake study area; respond to preliminary concepts and inform the final recommendations.



COMMUNITY WIDE OPPORTUNITIES

- (2) Interactive Community Workshops
- (1) Community Walking Tour

ONLINE ENGAGEMENT

- Project Website
- (2) Community Engagement Surveys
- (1) Interactive Online Mapping Tool

COMMUNITY STAKEHOLDER MEETINGS

- Calhoun Commons (1 meeting and phone discussions)
- Calhoun Village (2 meetings)
- Cedar-Isles Dean Neighborhood Association (4 meetings)
- Calhoun Executive Center (2 telephone discussions)
- Hennepin County Bicycle Advisory Committee (3 meetings)
- Midtown Greenway Coalition (1 meeting)
- Minneapolis Bicycle Advisory Committee (3 meetings)
- Minneapolis Pedestrian Advisory Committee (3 meetings)
- West Calhoun Neighborhood Council (4 meetings)

AGENCY COORDINATION & IMPLEMENTATION

Monthly meetings and frequent communication and coordination occurred throughout the project with the Technical Advisory Committee (TAC) comprised of the City of Minneapolis, Metropolitan Council, Hennepin County, Minneapolis Park & Recreation Board, the City of St. Louis Park, Toole Design Group, and SEH. The TAC provided data, CAD files, and project partner updates on agency initiatives that related to the study. TAC members reviewed analysis, stakeholder feedback and improvement concepts, ultimately assisting with development of the final recommendations.

The majority of recommendations will require both participation and coordination between multiple jurisdictional agencies. For example, improvements to trail crossings at local streets will require both the park agency and the roadway agency to coordinate improvements in order to assure both agency's goals and requirements are met. The coordinating agencies include:

CITY OF MINNEAPOLIS

MINNEAPOLIS PARK AND RECREATION BOARD

METRO TRANSIT

HENNEPIN COUNTY

THREE RIVERS PARK DISTRICT

CITY OF ST. LOUIS PARK

While responsibilities for project funding, construction and future maintenance have not been identified at this time, the anticipated coordinating agencies have been identified for each recommendation and are included in the summary tables in Sections 2 through 5.

RECOMMENDATION COST ESTIMATES

The costs to construct or implement the recommendations were developed using various resources, including:

- Green Line LRT Project Office Design Team Costs
- City of Minneapolis Average Unit Prices
- 2014 MnDOT Average Bid Prices
- Current Vendor Pricing
- Per Mile Reconstruction Estimates for Similar Facility

Costs were developed for construction only, and do not include engineering or right-of-way acquisition costs. Also, due to the conceptual nature of the recommendations and the amount of project development still required, the current 2015 costs include a 30% increase, or contingency, to cover the unknown or unidentified costs that will be determined during further project development.

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2. GREEN LINE DESIGN RECOMMENDATIONS



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2.0 GREEN LINE DESIGN RECOMMENDATIONS

The 30% design plans for the Green Line Extension were provided to the study team for review. Refinements to the existing plans and additional improvements were recommended for the West Lake Multimodal Transportation Study area. These refinements and improvements were included as part of the approval of preliminary design plans for the Green Line Extension. Recommendations A and 1 through 9 will be constructed as part of the Green Line Extension.

FIGURE 2-1
GREEN LINE DESIGN RECOMMENDATION LOCATIONS

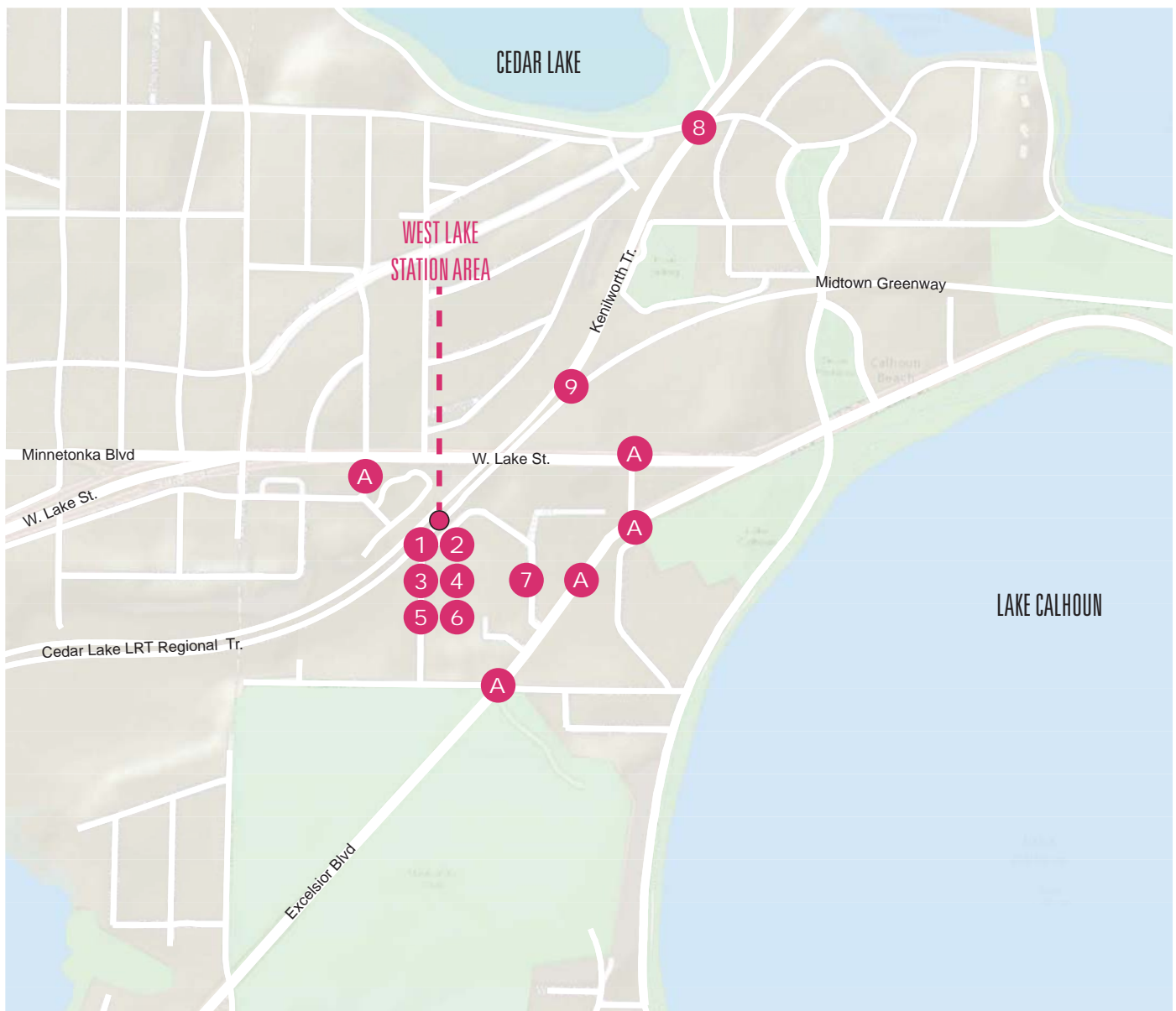


TABLE 2-1
GREEN LINE RECOMMENDATIONS

ID	Location	Refinement/ Improvement
A	5 Signalized Intersections: Lake/Drew Lake/Market Excelsior/32nd Excelsior/Commons Driveway Excelsior/Market	Enhanced crosswalk markings including continental design and poly-preform material, countdown timers where not present, consider signal timing that allows pedestrians to begin crossing the street before cars are allowed to cross, ADA/audible push buttons, directional ped ramps and minor curb modifications
1	West Lake Station	Treatments for the LRT patron/trail intersections including signage and pavement markings
2	West Lake Station	Identify space for bike parking near station and implement
3	West Lake Station	Wayside/rest area for trail users with furnishings at station or tunnel portal
4	West Lake Station	Landscaping barrier between station sidewalk and trail
5	West Lake Station	Increased pedestrian space on corner near station
6	West Lake Station	Station Area Wayfinding - signage directing people between the station and key destinations
7	31st/Abbott Intersection	Provide pedestrian connection between street sidewalk and Calhoun Commons.
8	Cedar Lake Pkwy/Kenilworth Trail	Install actuated trail crossing signal
9	Midtown/Kenilworth Trail Intersection	Roundabout design at trail intersection to fit within project boundary

RECOMMENDATION A — EMPHASIZE PRESENCE OF PEDESTRIANS AT 5 STATION AREA INTERSECTIONS

1. LAKE STREET & DREW AVENUE
2. LAKE STREET & MARKET PLAZA
3. EXCELSIOR BOULEVARD & MARKET PLAZA
4. EXCELSIOR BOULEVARD & CALHOUN COMMONS DRIVEWAY
5. EXCELSIOR BOULEVARD & WEST 32ND STREET

Increase awareness of pedestrians by installing enhanced crosswalk markings, including continental design and poly-preform material, and add pedestrian countdown timers where not present, and consider signal timing that allows pedestrians to begin crossing the street before cars are allowed to cross (leading pedestrian interval). Additional improvements include providing ADA/audible push buttons, realigned directional pedestrian ramps, and other minor curb modifications.

DISCUSSION & ANALYSIS

- Existing conditions include worn pavement markings due to material and high traffic volumes, thus poly-preform marking material is recommended
- Use of the continental design for crosswalk markings also improves visibility for motorists and crosswalk detection for people with low vision and cognitive impairments
- Where geometry allows it is desirable to align pedestrian crossings with the direction of travel across an intersection, and preferably the shortest most direct path
- Leading pedestrian intervals enhance the visibility of pedestrians in the intersection and reinforce their right-of-way over turning vehicles, especially in locations with a history of conflict ⁽¹⁾

IMPLEMENTATION CONSIDERATIONS

- Signal timing modifications such as the leading pedestrian interval will be completed by City staff as appropriate



(1) Footnote, National Association of City Transportation Officials, Urban Street Design Guide

RECOMMENDATION 1 – TRAIL CROSSING IMPROVEMENTS

CEDAR LAKE LRT REGIONAL TRAIL CROSSING AT WEST LAKE STATION

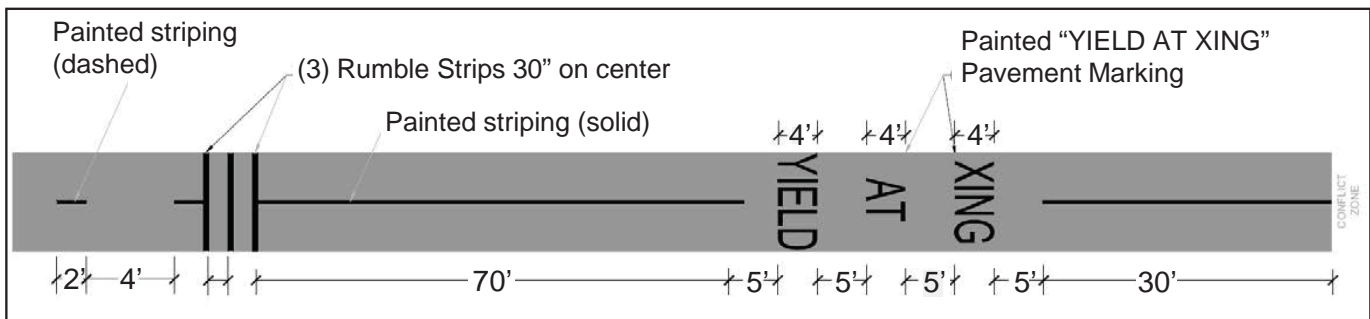
Provide advance pavement marking messages, warning signage and textured rumble strips to alert trail users of the two crossings for station patrons to access the station. At the crossings include continental design crosswalks with bicycle-sized yield markings.

FIGURE 2-2

RECOMMENDATION 1 - TRAIL CROSSING IMPROVEMENTS



Crosswalks with longitudinal striping and bike-sized yield markings



DISCUSSION & ANALYSIS

- The placement of pavement markings, rumble strips and warning signs provides advance warning and time for trail users to stop for crossings
- The textured rumble strips increase wheeled users' (bicyclist's and rollerblader's) awareness of the crossing
- Continental crosswalks and yield markings provide increased visibility over standard crosswalks highlighting the crossing locations for the West Lake Station
- Use of the continental design for crosswalk markings also improves crosswalk detection for people with low vision and cognitive impairments

IMPLEMENTATION CONSIDERATIONS

- The rumble strips are made of textured ground-in poly-preformed tape for longer durability during snow removal

RECOMMENDATION 2 — BICYCLE PARKING

WEST LAKE STATION

Provide spaces for bicycle parking near the West Lake Station on opening day. (Note: additional bicycle parking facilities are also proposed in Recommendation 12.

DISCUSSION & ANALYSIS

- Providing bicycle infrastructure at transit stations promotes the combination of transit (for moderate to long-distance trips) and bicycling modes (for shorter-distance trips) to extend the range of non-motorized travel

IMPLEMENTATION CONSIDERATIONS

- The Green Line Extension project will include installation of short term bicycle parking (14 spaces)

RECOMMENDATION 3 — TRAIL REST AREA

WEST LAKE STATION AND GREEN LINE LRT TUNNEL PORTAL

Provide rest area facilities and furnishings for bicycles and pedestrians near the Cedar Lake LRT Regional Trail, specifically at the West Lake Station and tunnel portal.



DISCUSSION & ANALYSIS

- Wayside rest areas provide stopping point for wayfinding
- Improve comfort for more casual users on heavily used trail and busy trail intersections
- Potential for placemaking or gateway treatment

IMPLEMENTATION CONSIDERATIONS

- None

RECOMMENDATION 4 – BUFFER BETWEEN LRT PATRONS & TRAIL USERS

WEST LAKE STATION

Provide a planted or landscaped barrier between the sidewalks that serve the station and the Cedar Lake LRT Regional Trail.

DISCUSSION & ANALYSIS

- Clearly delineating the station from the regional trail will assist in wayfinding and discourage potentially hazardous trail and station user interactions, except at designated intersections

IMPLEMENTATION CONSIDERATIONS

- None

RECOMMENDATION 5 – PEDESTRIAN AMENITIES

WEST LAKE STATION AND CEDAR LAKE LRT REGIONAL TRAILHEAD

Provide additional space for pedestrians at the corner of Chowen Avenue and West 31st Street where the station and trail connect to the street and sidewalk. Provide pedestrian furnishings, including benches and waste receptacles.

DISCUSSION & ANALYSIS

- Provide stopping point for wayfinding at major trailhead connection
- Improve comfort for more pedestrians at congested location
- Potential for placemaking or gateway treatment

IMPLEMENTATION CONSIDERATIONS

- None

RECOMMENDATION 6 - WAYFINDING

WEST LAKE STATION

Provide wayfinding throughout the station area that directs bicycles and pedestrians to nearby destinations.

DISCUSSION & ANALYSIS

- Wayfinding will encourage travelers to navigate to destinations using the most direct connection or the most appropriate facility for their mode using bicycle facilities, sidewalks or trails

IMPLEMENTATION CONSIDERATIONS

- This recommendation is limited to the immediate station area
(Note: recommendation D calls for a wayfinding plan for the entire study area)



RECOMMENDATION 7 – PEDESTRIAN CONNECTION

WEST LAKE STATION

Re-establish the existing connection between Calhoun Commons and the new 31st Street sidewalk which provides access to the West Lake Station and Cedar Lake LRT Regional Trail.

DISCUSSION & ANALYSIS

- Calhoun Commons is a desired destination from the Cedar Lake LRT Regional Trail and adjacent neighborhoods. This commercial center will also be a destination for West Lake Station patrons
- Providing a clear, accessible pedestrian connection will minimize the use of private property or less desirable roadway crossings

IMPLEMENTATION CONSIDERATIONS

- The connection requires coordination with private property

RECOMMENDATION 8 – ENHANCED TRAIL CROSSING

KENILWORTH TRAIL CROSSING AT CEDAR LAKE PARKWAY

Install an actuated traffic signal for bicycles and pedestrians at the Kenilworth Trail crossing of Cedar Lake Parkway, including passive and active detection of trail users and red signal. Sidewalks, freight track, and trail crossings will also be aligned as shown in Figure 2-3.

DISCUSSION & ANALYSIS

- The passive detection will detect bicyclists and pedestrians on the trail and automatically change the signal for the trail to be given the right of way
- There will also be push-button (active) detection for users who wish to use it or in the event of a missed detection

IMPLEMENTATION CONSIDERATIONS

- None

FIGURE 2-3

RECOMMENDATION 8 - ENHANCED TRAIL CROSSING



Source: Southwest LRT Design

RECOMMENDATION 9 – BICYCLE ROUNDABOUT

MIDTOWN GREENWAY & KENILWORTH TRAIL INTERSECTION

Install a bicycle roundabout at the existing intersection of the Midtown Greenway and Kenilworth Trail.

DISCUSSION & ANALYSIS

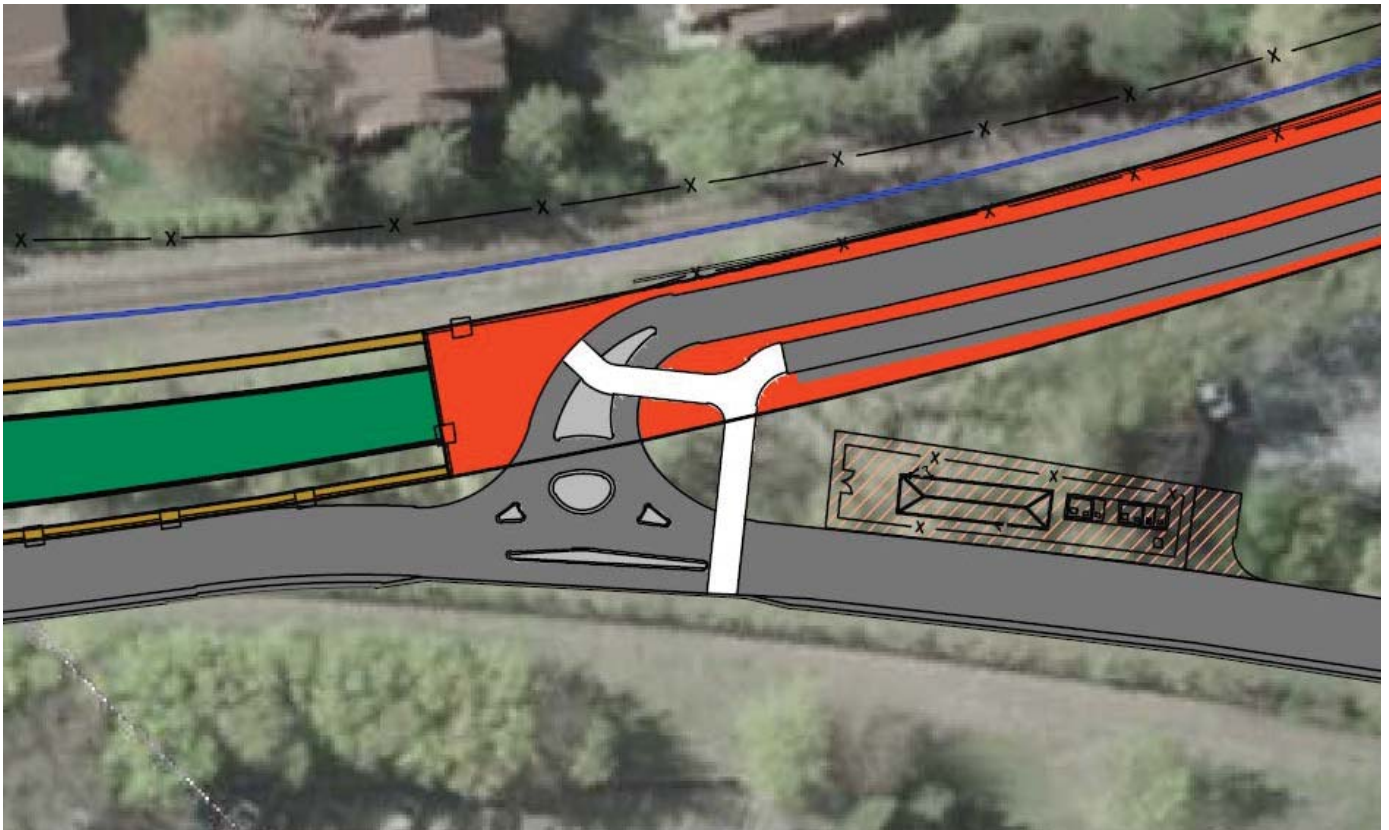
- Roundabout design improves sight lines for users compared to the existing skewed trail intersection
- Reduces conflicts between bicyclists crossing paths at the congested intersection of the two regional trails
- Provides clear delineation for pedestrians to cross the bicycle route along the trail, reducing the amount of potential conflicts between pedestrians and bicyclists

IMPLEMENTATION CONSIDERATIONS

- Roundabout design to be coordinated with ongoing landscape design project for the area near the trail intersection and LRT tunnel portal
- It is recommended that the potential trail crossing of the proposed Midtown Corridor Transitway, near the bicycle boulevard, be physically separated.
- Separation of the trail intersection from the transitway crossing will reduce queuing on the trail during transit crossings and improve safety for trail users

FIGURE 2-4

RECOMMENDATION 9 - BICYCLE ROUNDABOUT



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3. NEAR TERM RECOMMENDATIONS



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3.0 NEAR TERM RECOMMENDATIONS

Several improvements that will enhance access to the Green Line Extension and overall bicyclist and pedestrian mobility across the study area were identified. The improvements in the Near Term category are recommended for implementation near opening day of Green Line Extension service, but do not have funding sources identified at this time. Recommendations B and 10 through 20 represent the Near Term recommendations.

FIGURE 3-1
NEAR TERM DESIGN RECOMMENDATION LOCATIONS



TABLE 3-1
NEAR TERM RECOMMENDATIONS

ID	Location	Improvement	Agency*	Estimated Cost**
B	6 Signalized Intersections in Study Area: Lake/Dean Pkwy (see details in 16 and 17), Lagoon/E Calhoun Pkwy, Lake/E Calhoun Pkwy, Excelsior/France (see 21), Lake/Excelsior (see 29a), Lake/Thomas (see 33a-c)	Enhanced crosswalk markings including continental design and poly-preform material, countdown timers where not present, consider signal timing that allows pedestrians to begin crossing the street before cars are allowed to cross, ADA/audible push buttons, directional pedestrian ramps and curb modifications as necessary	MPLS/HC	\$399,000 (all intersection improvements)
10a	31st/Chowen/32nd Loop	Design Chowen Avenue and 32nd Street with expanded path to include bike facility to provide access from station to Lake Calhoun. Two-way shared use path along inside of the Chowen/32nd loop.	MPLS	\$129,000
10b	32nd Street east of Excelsior	Design street to include bike facility to provide access from 32nd Street to Lake Calhoun. EB Counterflow Bicycle Lane and WB Bike Boulevard	MPLS	\$12,000
10c	32nd/Excelsior Intersection	Bicycle and pedestrian crossing treatments - colored pavement markings and two-stage queue boxes to facilitate the route between the LRT station and Lake Calhoun, curb extensions	HC/ MPLS	\$40,000
10d	32nd/W Calhoun Pkwy Intersection	Bicycle and pedestrian route crossing treatments of Pkwy (colored pavement markings, raised intersection, signing, design elements) to serve as the main bicycle entrance to Lake Calhoun from the west. Wayfinding signing.	MPLS/ MPRB	\$35,000
11	West Lake Station	Trail pull-off (additional pavement) at wayside/rest area near station	HC/TR	\$2,000
12	West Lake Station	Bike parking near station - secured \$120k, unsecured (U-racks) \$10k. *ROW NEEDED not included in cost and location not identified	MT/HC	\$130,000
13	Drew/Lake	Extend median nose through crosswalk for improved buffer for pedestrian crossing	HC/ MPLS	\$2,000
14	Market Plaza/Excelsior Intersection	Extend eastbound left turn lane striping to serve demand volume in the lane	HC/ MPLS	\$2,000
15	Lake - Between Thomas and Market Intersection	Implement directional signage for Lake/Excelsior split (mast arm)	HC/MPLS	\$30,000
16	Lake/Dean Pkwy Intersection	Traffic signal timing improvements including a left turn phase and consideration of no turns on red for northbound and southbound	MPLS	\$60,000

*Listed agencies are assumed partners for identified improvement.

**Estimated costs include 30% contingency in 2015 dollars without engineering fees.

MPLS = Minneapolis MT = Metro Transit HC = Hennepin County TR = Three Rivers Park Dist. MPPB = Minneapolis Park and Recreation Board

NEAR TERM RECOMMENDATIONS, CONTINUED

ID	Location	Improvement	Agency*	Estimated Cost**
17	Lake/Dean Pkwy Intersection	Enhanced trail crossing markings on east leg for trail connection, west median extension. Reduce curb radius on southwest corner to slow turning motorists and shorten crossing distance	HC/ MPLS	\$39,000
18	East Calhoun Pkwy between Lake and Lagoon	Provide a trail connection along west side and reconstruct corners for staging	MBRB/ MPLS	\$29,000
19	East Calhoun Pkwy at Lake and Lagoon Intersections	Add parkway lighting across intersection and along new trail	MPRB/ MPLS	\$37,000
20	Lake Street - East Calhoun Parkway to Thomas Ave	Remove eastbound travel lane, provide barrier between travel lane and trail expansion at Channel Bridge	HC/ MPLS/ MPRB	\$258,000

*Listed agencies are assumed partners for identified improvement.

**Estimated costs include 30% contingency in 2015 dollars without engineering fees.

MPLS = Minneapolis MT = Metro Transit HC = Hennepin County TR = Three Rivers Park Dist. MPPB = Minneapolis Park and Recreation Board

RECOMMENDATION B — EMPHASIZE PRESENCE OF PEDESTRIANS AT 6 KEY INTERSECTIONS

1. LAKE STREET & DEAN PARKWAY,
2. LAGOON AVENUE & EAST CALHOUN PARKWAY,
3. LAKE STREET & EAST CALHOUN PARKWAY,
4. EXCELSIOR BOULEVARD & FRANCE AVENUE,
5. LAKE STREET & EXCELSIOR BOULEVARD,
6. LAKE STREET & THOMAS AVENUE

Increase awareness of pedestrians by installing enhanced crosswalk markings, including continental design and poly-preform material, add pedestrian countdown timers where not present, and consider signal timing that allows pedestrians to begin crossing the street before cars are allowed to cross (leading pedestrian interval). Additional improvements include providing ADA/audible push buttons, realigned directional pedestrian ramps, and other minor curb modifications.

DISCUSSION & ANALYSIS

- Existing conditions include worn pavement markings due to material and high traffic volumes, thus poly-preform marking materials are recommended
- Use of the continental design for crosswalk markings also improves visibility for motorists and crosswalk detection for people with low vision and cognitive impairments
- Where geometry allows it is desirable to align pedestrian crossings with the direction of travel across an intersection, and preferably the shortest most direct path
- Leading pedestrian intervals enhance the visibility of pedestrians in the intersection and reinforce their right-of-way over turning vehicles, especially in locations with a history of conflict ⁽¹⁾

IMPLEMENTATION CONSIDERATIONS

- Signal timing modifications such as the leading pedestrian interval will be completed by City staff as appropriate and coordinated with Hennepin County



RECOMMENDATION 10 A, B, C, D – CONNECT STATION TO LAKE CALHOUN

WEST LAKE STATION TO LAKE CALHOUN VIA CHOWEN/ABBOTT/32ND ST

Create a connection for bicyclists and pedestrians between the proposed West Lake Station and Lake Calhoun on West 32nd Street.

10a – The bicycle facility would consist of a shared use path in place of the sidewalk on the inside of the Chowen/32nd/Abbott loop.

FIGURE 3-2
RECOMMENDATION 10A - CHOWEN AVENUE

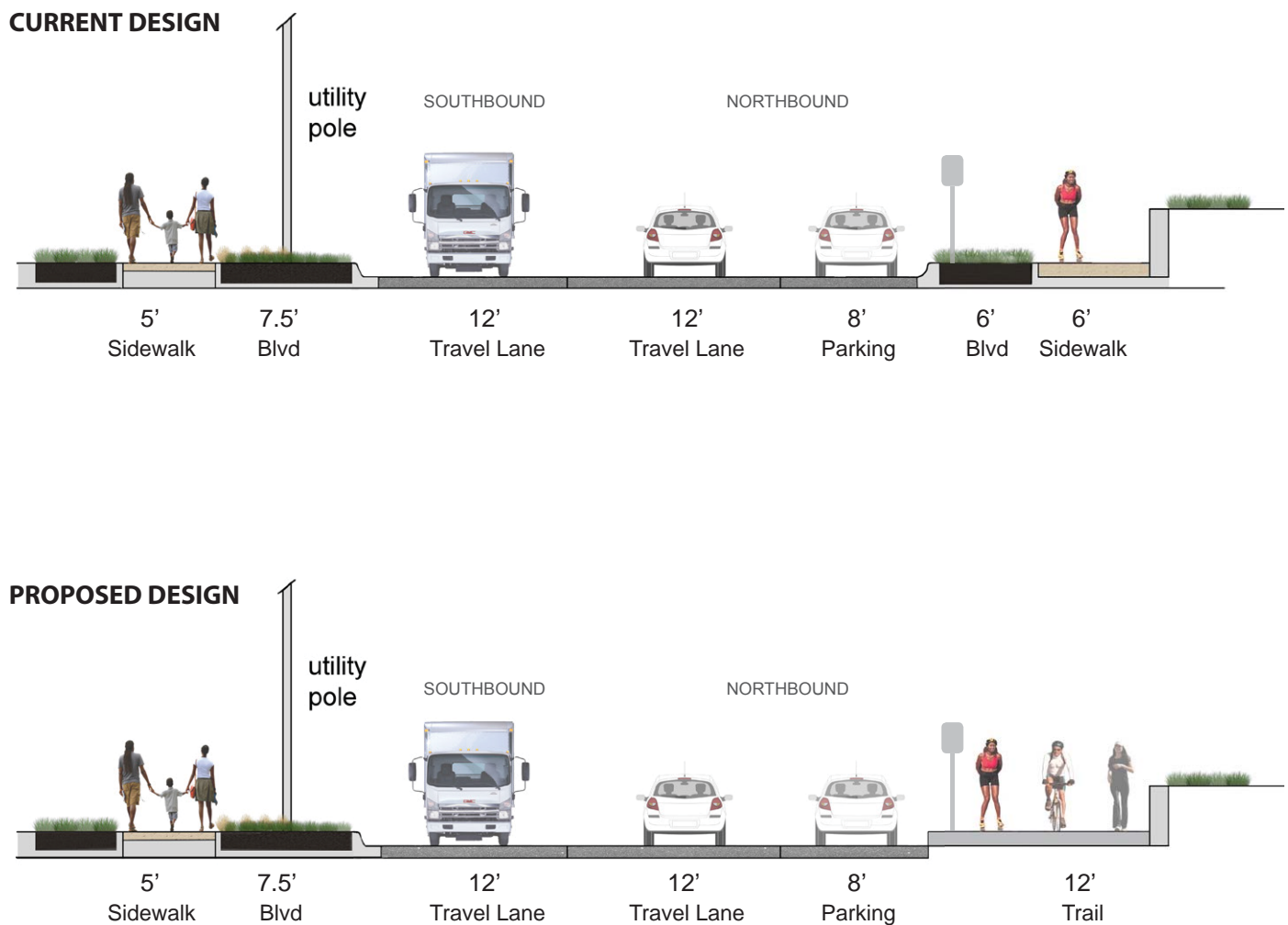
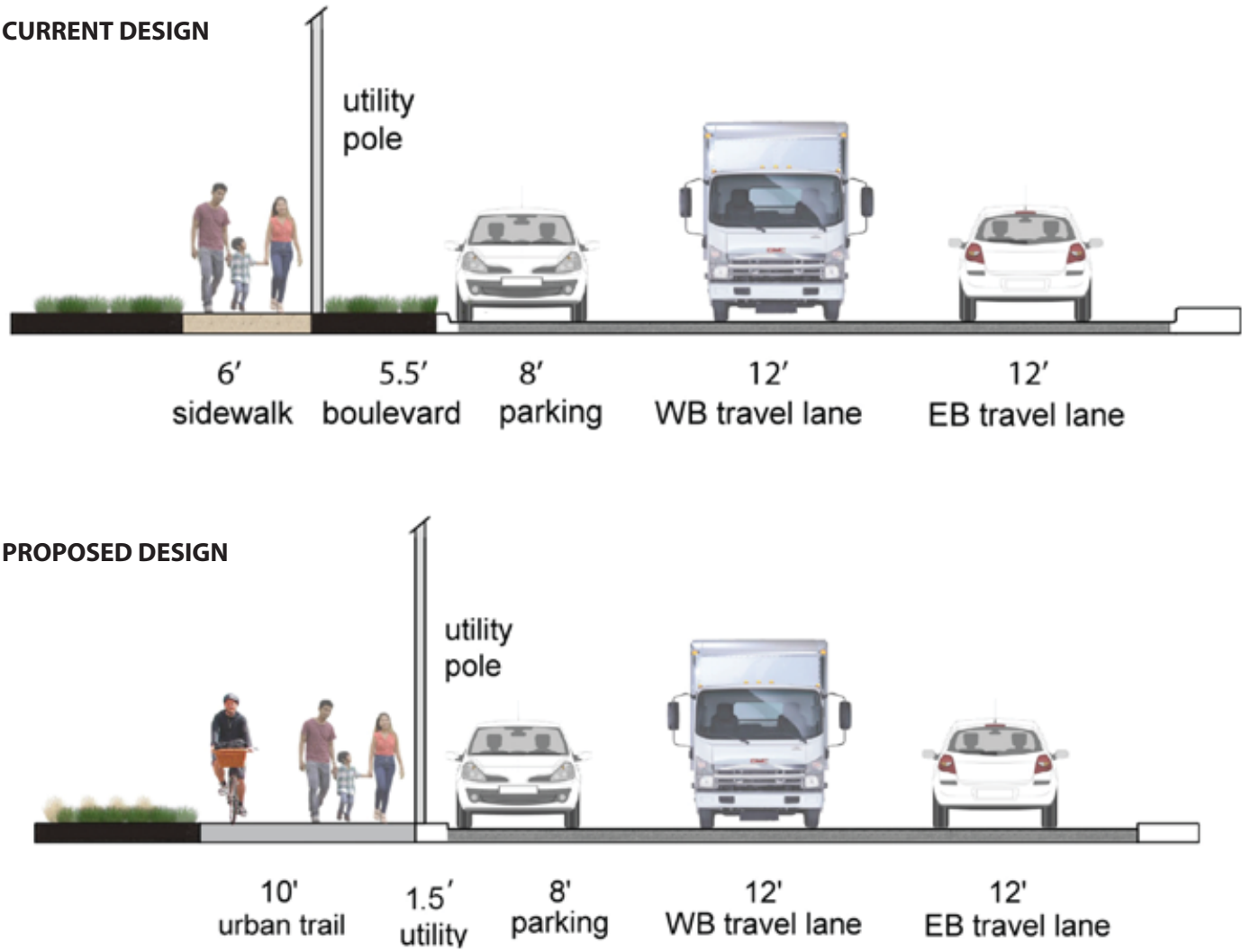
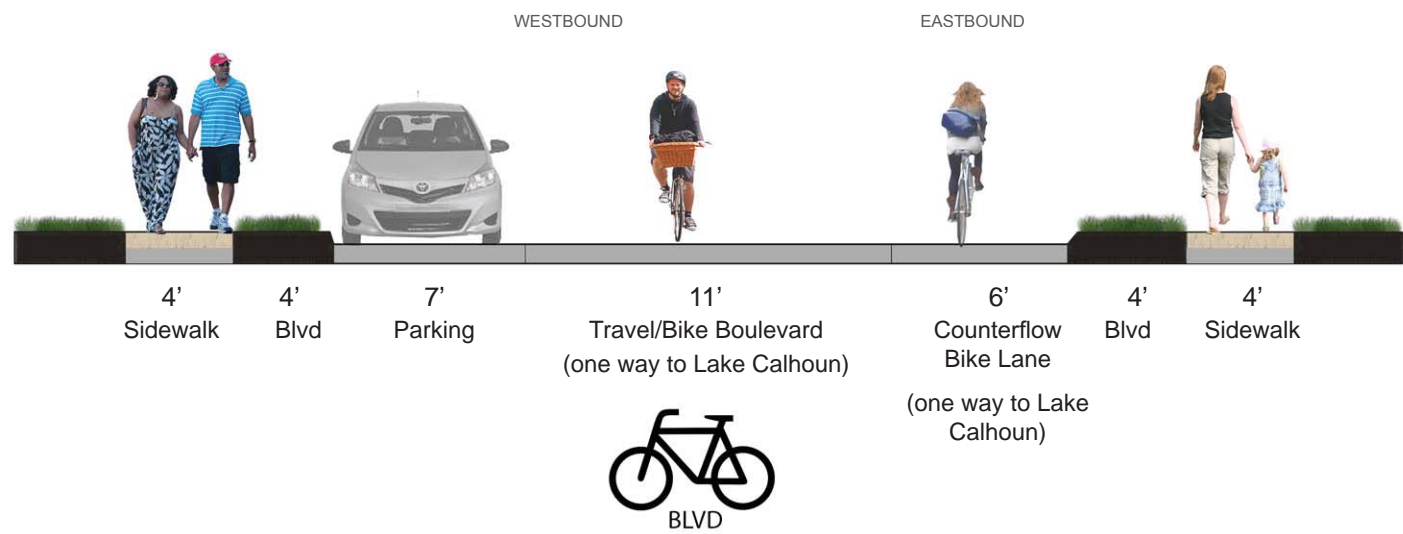


FIGURE 3-3
RECOMMENDATION 10A - 32ND STREET WEST OF EXCELSIOR BOULEVARD



10b – On West 32nd Street between Excelsior Boulevard and Lake Calhoun Parkway, the recommendation consists of an eastbound counter-flow bicycle lane and a westbound bicycle boulevard.

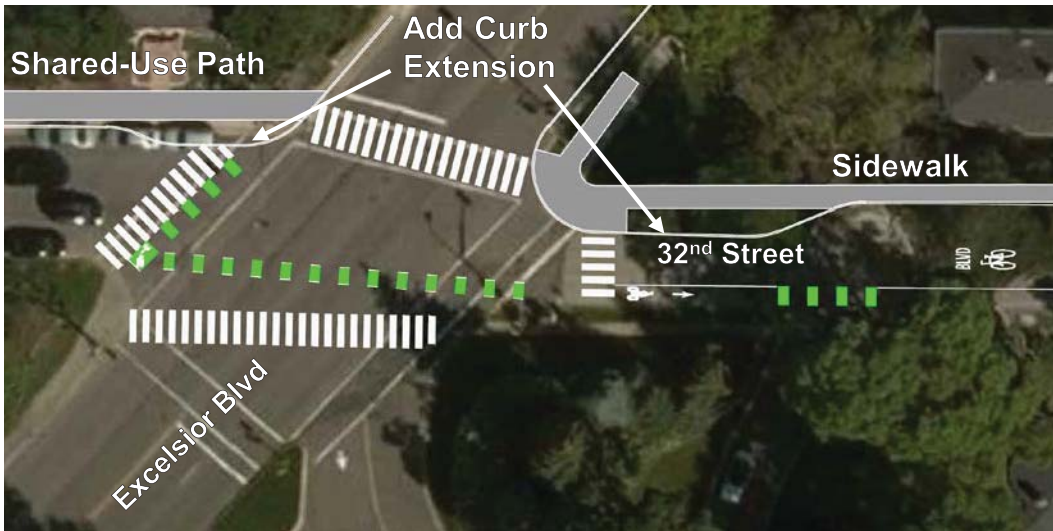
FIGURE 3-4
RECOMMENDATION 10B - 32ND STREET EAST OF EXCELSIOR BOULEVARD



10c – This recommendation also includes bicycle-specific markings at the intersection of 32nd and Excelsior as well as curb extensions on the NW and NE corners and a two-stage queue box for bicyclists crossing between the north side trail and on-street bicycle boulevard/counter-flow bicycle lane.

FIGURE 3-5

RECOMMENDATION 10C - INTERSECTION OF 32ND STREET & EXCELSIOR BOULEVARD



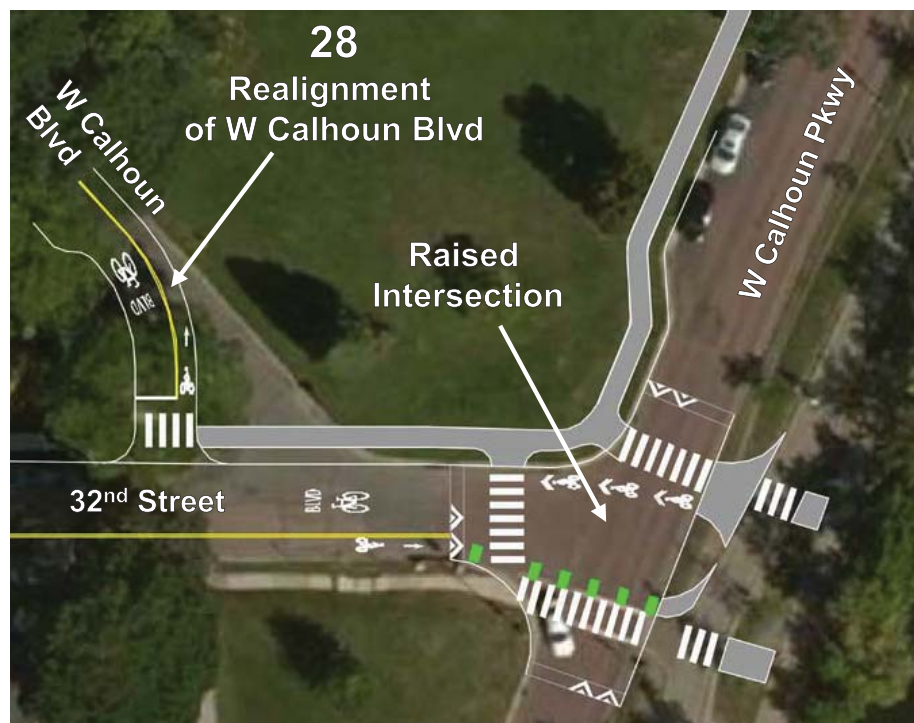
Specific Recommendations:
1) Pull back west-side crosswalk. Add two-stage queue box with green bicycle crossing markings to facilitate movement from NW corner to SE bike lane. Add green intersection crossing markings from two-stage queue box to SE bike lane.
2) Add curb extensions on south sides of NE and NW corners. May need to pull back parking from intersection.
3) Add bicycle wayfinding and warning signage through intersection.



10d – At the intersection of 32nd Street and Lake Calhoun Parkway, the recommendation includes a raised intersection and bicycle-specific crossing to provide access to the trail around the lake. Pedestrian improvements are also included at the intersection of 32nd Street and Lake Calhoun Parkway, including a crosswalk across the bike trail to the pedestrian trail. Recommendation 28 is also shown on Figure 3-6.

FIGURE 3-6

RECOMMENDATION 10D - INTERSECTION OF 32ND STREET & WEST CALHOUN PARKWAY



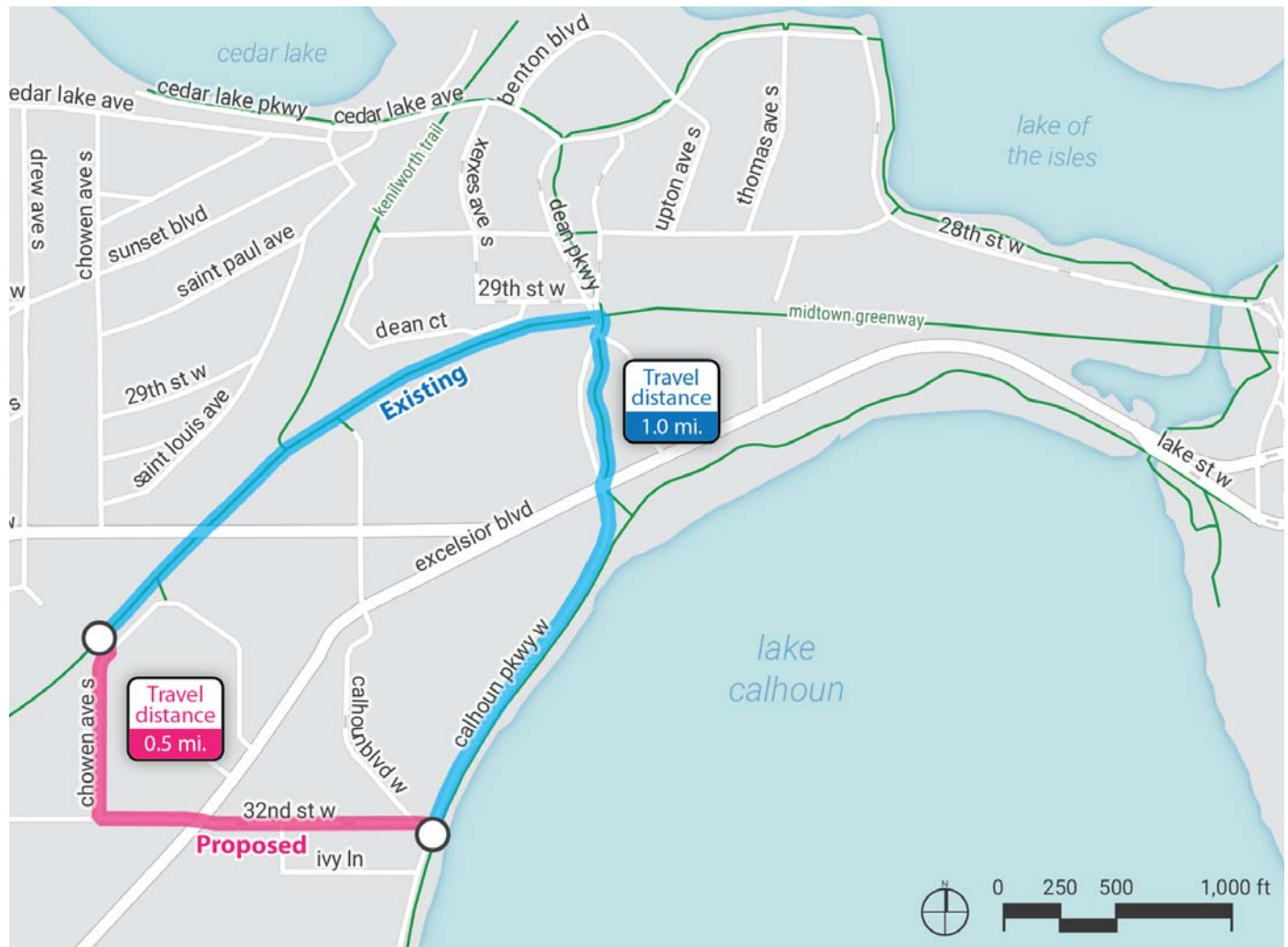
Specific Recommendations:

- 1) Raised Intersection at W Calhoun Pkwy and W 32nd St
- 2) Green bicycle crossing markings, widen trail entrance, add pedestrian crossing on bike trail and pedestrian connection to pedestrian trail.
- 3) Add new north side trail entrance and bicycle crossing markings to north side of W 32nd St.
- 4) Add high-visibility crosswalk markings at south side crosswalk.
- 5) Add bicycle and pedestrian crossing warning signage. May consider rectangular rapid-flashing beacon depending on speeds and volumes on W Calhoun Pkwy.
- 6) Realign W Calhoun Blvd to be perpendicular to W 32nd St.
- 7) Incorporate trail from Market Plaza

DISCUSSION & ANALYSIS

- Combined with wayfinding, the recommendation clearly delineates a bicycle connection between West Lake Station and Lake Calhoun
- Counter-flow bicycle lane east of Excelsior Boulevard provides a circulation improvement for bicycle travel
- Off-street shared use trail west of Excelsior Boulevard provides a low-stress facility for visitors and people with children
- Crossing treatments at intersections address location where conflicts between bicyclists and automobiles would be most likely to occur, creating a higher quality facility
- Raised intersection increases visibility of pedestrians and bicyclists and improves sense of right of way
- Clearly delineated pedestrian connection across bicycle path reduces non-motorized conflicts

FIGURE 3-7
BICYCLE CONNECTIVITY ANALYSIS MAP - WEST LAKE STATION TO LAKE CALHOUN



Analysis

As shown in Figure 3-7, the addition of the counter-flow bicycle lane on West 32nd Street improves bicycle connectivity between the West Lake LRT Station and Lake Calhoun. The figure illustrates the shortest, low-stress path between the two destinations. Without the recommendation, a bicyclist seeking a low-stress route would be required to travel a mile, whereas they would only travel ½ mile with the contra-flow bike lane in place.

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County, the Minneapolis Park and Recreation Board and City of Minneapolis is necessary
- This recommendation should be done in conjunction with wayfinding signing

RECOMMENDATION 11 — CEDAR LAKE LRT REGIONAL TRAIL PULL-OFF AREA

WEST LAKE STATION

Create a wayside/rest area on the east side of the Cedar Lake LRT Regional Trail in the vicinity of the proposed West Lake Station. This pull-off area would be approximately 10-feet by 15-feet and would include wayfinding and seating amenities.

DISCUSSION & ANALYSIS

- Provides stopping point for wayfinding
- Provides location for slowing and turning near trailhead
- Improves comfort for more casual cyclists on congested trail
- Potential for placemaking or gateway treatment

IMPLEMENTATION CONSIDERATIONS

- This recommendation will require coordination with Hennepin County and Three Rivers Park District

RECOMMENDATION 12 — ADDITIONAL BICYCLE PARKING

WEST LAKE STATION

Provide 250 additional bicycle parking spaces at the West Lake Station. Provide a mix of secured and unsecured parking.

DISCUSSION & ANALYSIS

- Providing bicycle amenities at transit stations promotes the combination of transit (for moderate to long-distance trips) and bicycling (for shorter-distance trips), as a comparable alternate to motor vehicle travel

IMPLEMENTATION CONSIDERATIONS

- The location of the parking spaces needs to be determined and will likely require additional right-of-way
- Coordination between Hennepin County and Metro Transit is necessary

RECOMMENDATION 13 — MEDIAN EXTENSION FOR PEDESTRIANS

LAKE ST & DREW AVE

Extend the Lake Street median nose through the crosswalk.

DISCUSSION & ANALYSIS

- Providing a curbed median on both sides of the crosswalk on Lake Street provides an improved buffer for pedestrian crossings at Drew Avenue, in particular during conflicting turns from Drew Avenue

IMPLEMENTATION CONSIDERATIONS

- This recommendation will require coordination between Hennepin County and the City of Minneapolis

RECOMMENDATION 14 – EXTEND TURN LANE

EXCELSIOR BOULEVARD & MARKET PLAZA

Extend the striping to 130-feet for the eastbound left turn lane to meet the volume demand.

DISCUSSION & ANALYSIS

- Providing enough storage for left turn lanes eliminates the potential for turning vehicles to block through traffic, improving the ability of the intersection to serve all the traffic

IMPLEMENTATION CONSIDERATIONS

- This recommendation will require coordination between Hennepin County and the City of Minneapolis

RECOMMENDATION 15 – OVERHEAD DIRECTIONAL SIGN

LAKE ST, BETWEEN THOMAS AVE AND MARKET PLAZA

Install an overhead directional sign on a new traffic signal mast arm at Thomas Avenue to direct motorists to the correct lane for the Lake Street and Excelsior Boulevard split.

DISCUSSION & ANALYSIS

- Giving vehicles clear direction on what lanes to be in before the split of the two roadways eliminates potential last minute maneuvers that can disrupt traffic and are higher risk for crashes
- Focus of drivers can be on other roadway items such as pedestrians, bicyclists and turning vehicles

IMPLEMENTATION CONSIDERATIONS

- The preferred signing style includes text only (not county road shields) to more clearly represent the two options while minimizing the size of the signs
- This recommendation will require coordination between Hennepin County and the City of Minneapolis

RECOMMENDATION 16 – LAKE & DEAN SIGNAL IMPROVEMENTS

LAKE STREET & DEAN PARKWAY

Add a left-turn phase and restrict right turns on red for northbound West Calhoun Parkway and southbound Dean Parkway. Adjust overall signal timing to better balance green time between roadways.

DISCUSSION & ANALYSIS

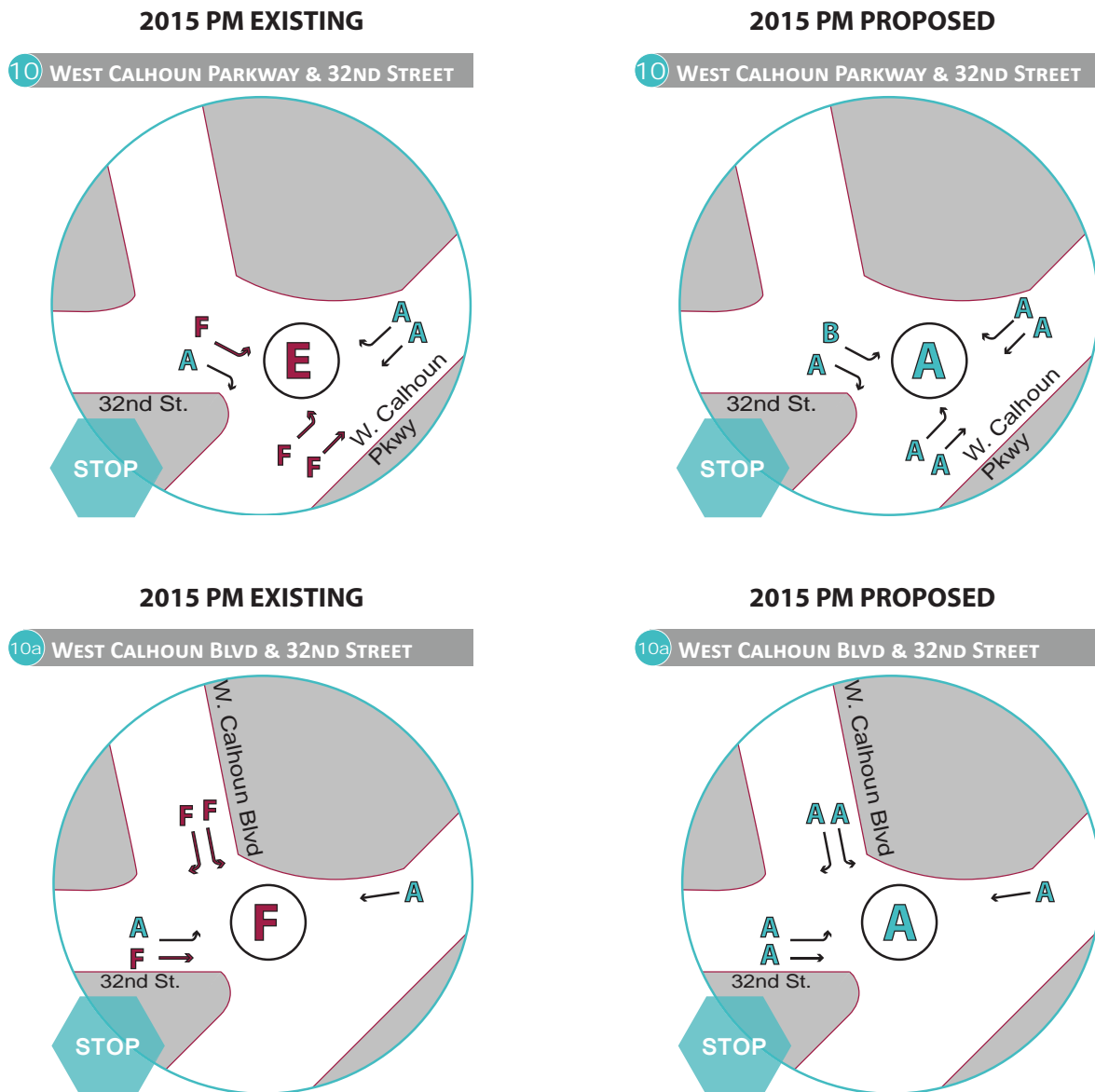
- Reduced delay for motorists may reduce risk taking behavior indicated by crash data and operations analysis and improve respect for pedestrian right of way
- No Turn On Red eliminates conflict between right turning vehicles and pedestrians in the crosswalk with right of way

Analysis

Under both the existing and 2040 analysis the intersection of Lake Street with Dean Parkway/West Calhoun Parkway (Intersection 15) exhibits issues on the northbound and southbound approaches, with excessive delay impacting upstream intersections. The traffic signal at this location does not have protected phases for the northbound and southbound left turns (no green arrow) which impacts the through and right turn movements as well with the left turns blocking.

Analysis was conducted under the existing volume condition during the PM peak hour which showed that the addition of protected/permissive left turn phasing for northbound and southbound improved traffic operations, balanced the delay and reduced the extended queues (Intersection 15, Figure 3-8). The other intersections along West Calhoun Parkway experienced less delay with the proposed phasing due to elimination of queues blocking the intersection. Figure 3-8 illustrates the reduction in delays at these intersections (Intersections 10, 10a, and 11). As stated above, reduced delay for motorists may reduce risk taking behavior indicated by crash data and operations analysis and improve respect for pedestrian right of way.

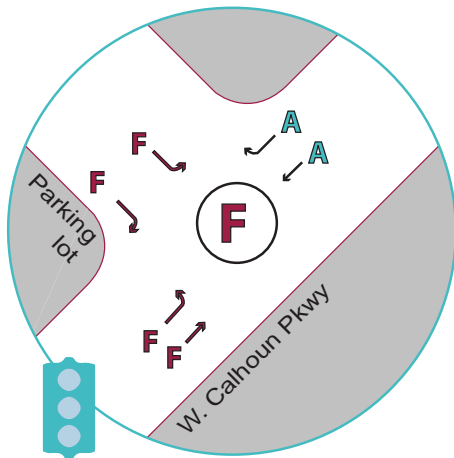
FIGURE 3-8
COMPARISON OF EXISTING & PROPOSED PHASING FOR DEAN PARKWAY/WEST CALHOUN PARKWAY



COMPARISON OF EXISTING & PROPOSED PHASING FOR DEAN PARKWAY/WEST CALHOUN PARKWAY, CONTINUED

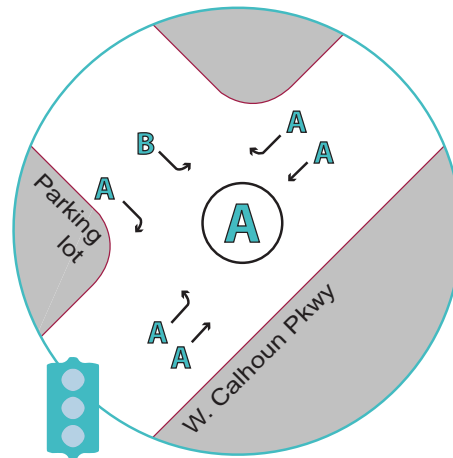
2015 PM EXISTING

11 WEST CALHOUN PARKWAY & PARKING LOT



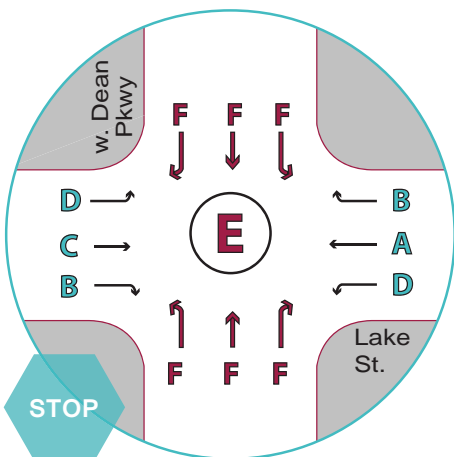
2015 PM PROPOSED

11 WEST CALHOUN PARKWAY & PARKING LOT



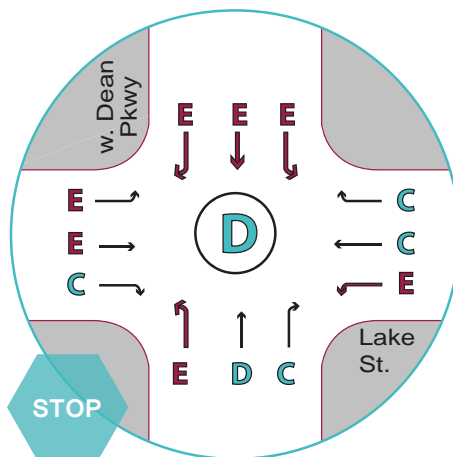
2015 PM EXISTING

15 LAKE STREET & DEAN PARKWAY



2015 PM PROPOSED

15 LAKE STREET & DEAN PARKWAY



IMPLEMENTATION CONSIDERATIONS

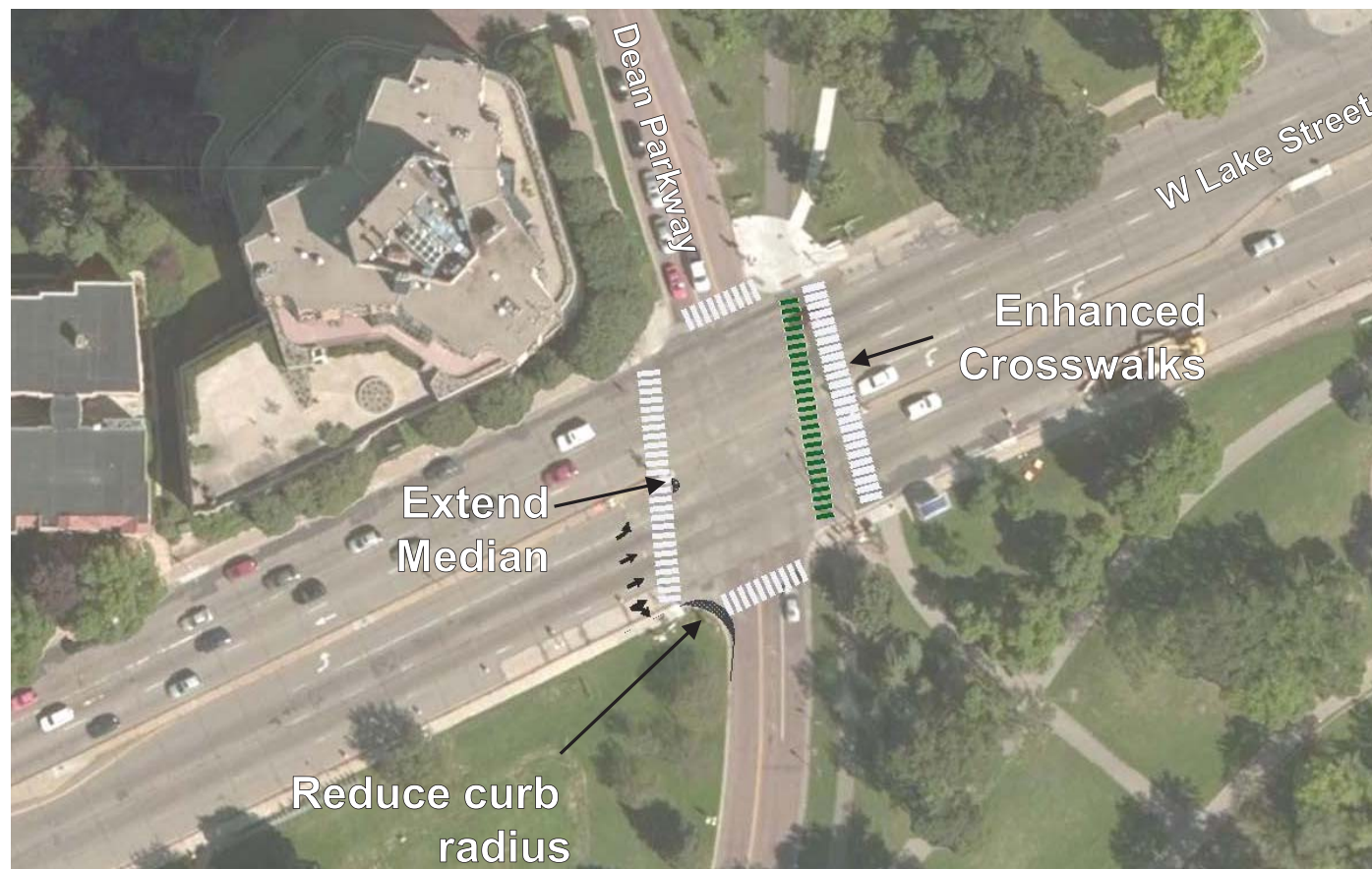
- Signal timing modifications to provide permissive/protected left-turn phasing and a leading pedestrian interval can be accommodated by the current traffic signal controller and new flashing yellow-arrow signal heads
- Consider seasonal traffic signal timing plans with extended pedestrian phases during recreational peaks (summer, weekends, etc.)
- Consider adaptive signal timing plans and pedestrian and bicycle detection strategies that would extend pedestrian phases automatically during recreational peaks. Both of which may require equipment and infrastructure upgrades

RECOMMENDATION 17 – LAKE & DEAN TRAIL CROSSING IMPROVEMENTS

LAKE STREET & DEAN PARKWAY

Add enhanced trail crosswalk markings on east leg, using green markings for the bicycle-only trail crossing on the east approach and poly-preform marking materials and continental design on all crosswalks. Extend the median to provide a pedestrian refuge midway through the crosswalk extension for the west approach and reduce the curb radius on the southwest corner.

FIGURE 3-9
LAKE STREET & DEAN PARKWAY TRAIL CROSSING IMPROVEMENTS



DISCUSSION & ANALYSIS

- Reducing the corner radius causes automobiles to turn at slower speeds
- Providing a curbed median on both sides of the crosswalk on Lake Street provides an improved buffer for pedestrian crossings, in particular during conflicting turns from the cross street
- Enhanced crosswalk markings at intersections address location where conflicts between bicyclists, pedestrians and automobiles would be most likely to occur, creating a higher quality facility
- Use of the continental design for crosswalk markings also improves visibility for motorists and crosswalk detection for people with low vision and cognitive impairments

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County, the Minneapolis Park and Recreation Board and the City of Minneapolis is necessary
- Review trail and ramp locations to align markings accordingly

RECOMMENDATION 18 – EAST CALHOUN PKWY CROSSING & TRAIL ENHANCEMENTS

INTERSECTION OF EAST CALHOUN PKWY AT LAGOON AVE, INTERSECTION OF EAST CALHOUN PKWY AT LAKE ST AND EAST CALHOUN PKWY BETWEEN LAKE ST AND LAGOON AVE

Provide a trail connection along the west side of East Calhoun Pkwy and reconstruct corners for additional space for bicyclist and pedestrians to stand while waiting for the traffic signal.

FIGURE 3-10
EAST CALHOUN PARKWAY CROSSING & TRAIL ENHANCEMENTS



DISCUSSION & ANALYSIS

- Enhanced crosswalk markings at intersections address location where conflicts between bicyclists, pedestrians and automobiles would be most likely to occur, creating a higher quality facility
- Use of the continental design for crosswalk markings also improves visibility for motorists and crosswalk detection for people with low vision and cognitive impairments

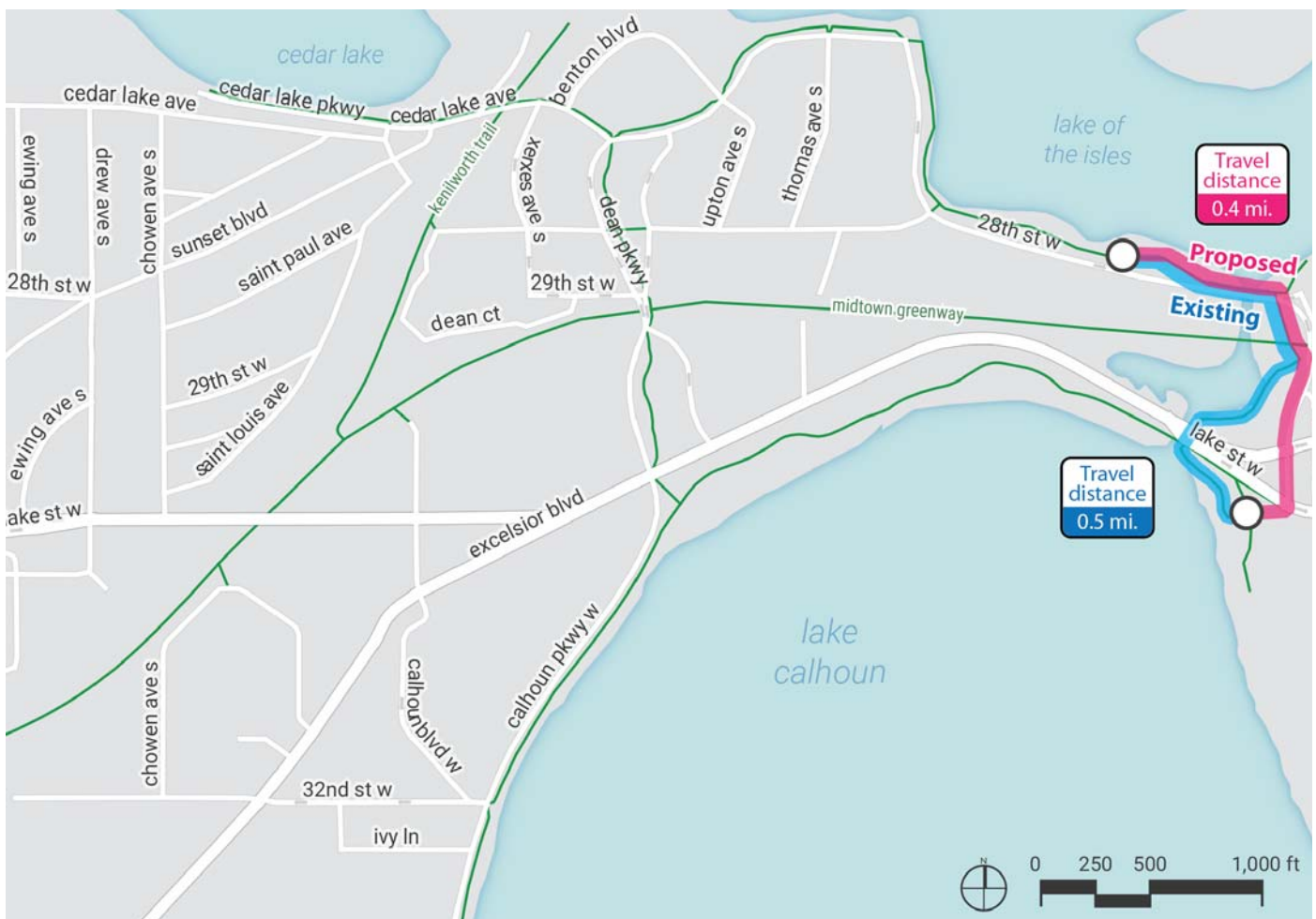
Analysis

As shown in Figure 3-11, the addition of an off-street shared use path on the west side of East Calhoun Parkway would slightly reduce the travel distance between Tin Fish Restaurant at Lake Calhoun and the Lake of the Isles boat launch. The existing bicycle connection between these two destinations is a very narrow, congested and dark path along the channel under the Lake Street Bridge – while this route is considered “low stress” by analysis measures, it is not comfortable for all bicyclists. In addition to reducing the low-stress travel distance by about 1/10 mile, this recommendation provides an additional path between the two locations that would help reduce congestion under the bridge.

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County, the Minneapolis Park and Recreation Board and the City of Minneapolis is necessary

FIGURE 3-11
BICYCLE CONNECTIVITY ANALYSIS MAP - EAST CALHOUN PARKWAY TRAIL



RECOMMENDATION 19 – LIGHTING

EAST CALHOUN PKWY INTERSECTIONS WITH LAKE ST AND LAGOON AVE

Install lighting at the intersections of East Calhoun Pkwy with West Lake Street and Lagoon Avenue, and along the new trail on the west side of East Calhoun Pkwy (see Recommendation 18).

DISCUSSION & ANALYSIS

- Lighting provides safety benefits including illumination of the walking path to avoid tripping, visibility to vehicles along the roadway and to other path users, and increased perception of personal safety

IMPLEMENTATION CONSIDERATIONS

- Coordination with the Minneapolis Park and Recreation Board and City of Minneapolis is necessary

RECOMMENDATION 20 – INTERIM LAKE STREET CROSS SECTION M

LAKE STREET (FROM EAST CALHOUN PARKWAY TO THOMAS AVENUE)

This recommendation reduces the travel lanes on eastbound Lake Street (between Thomas Avenue and East Calhoun Parkway) and, as an interim treatment, uses a temporary barrier to allow for additional trail width across the Channel Bridge.

Eastbound Lake Street currently drops from three lanes to two lanes between Dean Parkway and Thomas Avenue, with the rightmost lane becoming a right-turn only lane at the Thomas Avenue intersection. Across the intersection a third lane is introduced on the median side of the street. The recommended treatment provides a transition for motorists across the intersection to the two inside lanes using temporary concrete barrier and pavement markings as shown in Figure 3-12 below.

FIGURE 3-12
INTERIM EASTBOUND LAKE STREET AT THOMAS AVENUE



Further east of the Thomas Avenue intersection, the space between the barrier treatment and south curb may then be used to expand the trail width across the Channel Bridge between Lake Calhoun and Lake of the Isles. Currently at the bridge the bicycle and pedestrian trails converge to share a 13-foot space which is often congested and has been identified as a pinch point in the non-motorized network.

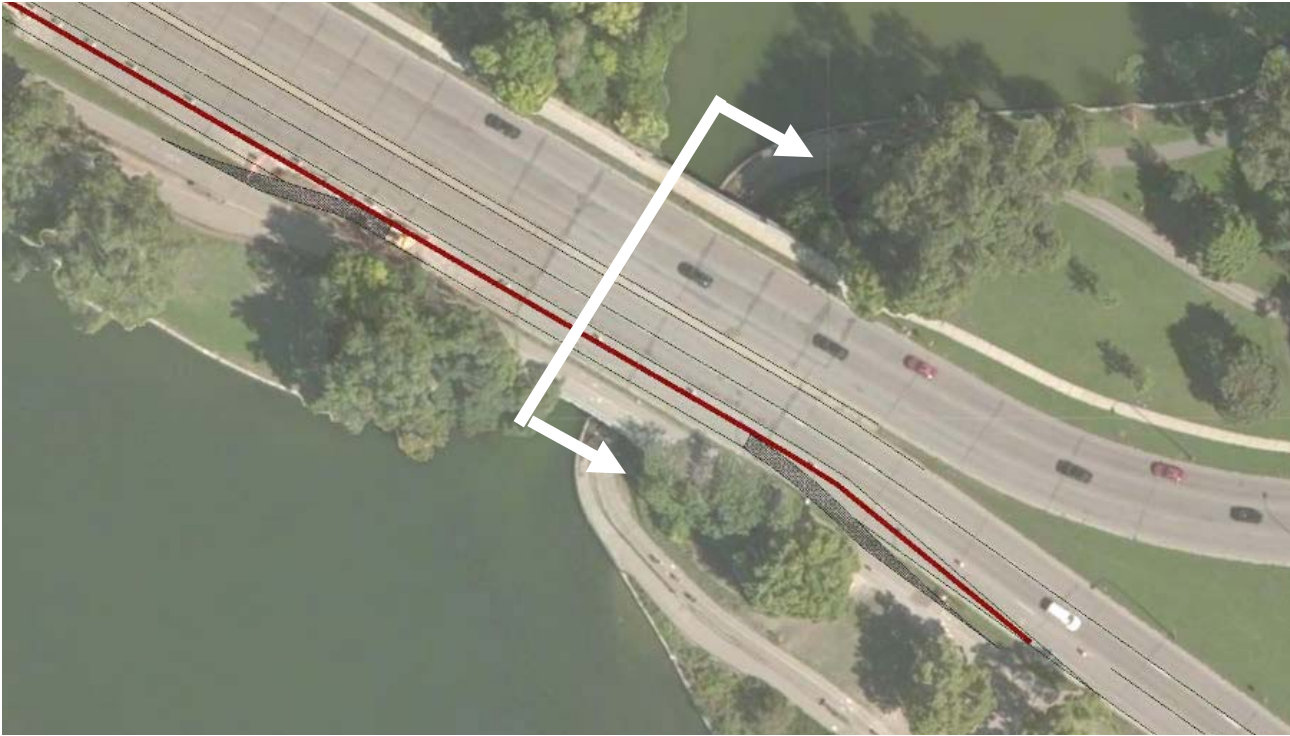


The existing and proposed cross sections for the interim treatment along this segment of Lake Street are shown below in Figure 3-13. After providing expanded trail width across the bridge, the concrete barrier is shown tapering back to the south curb to provide three eastbound lanes approximately 300-feet west of the East Calhoun Parkway intersection.

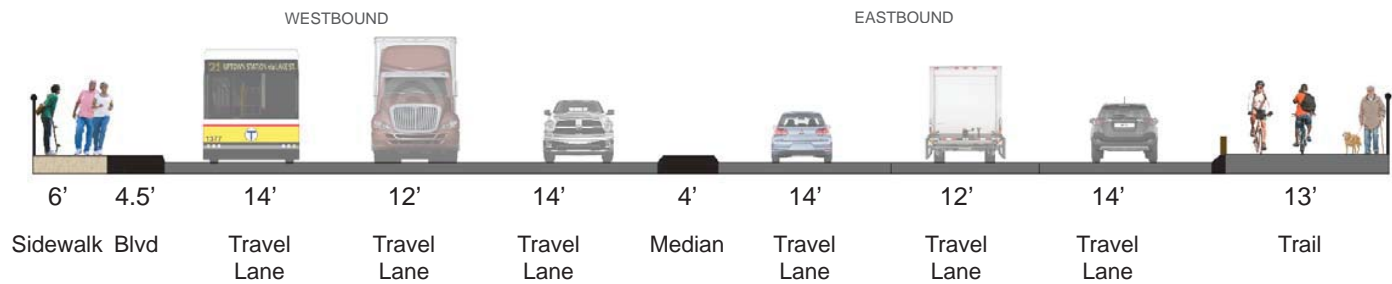
DISCUSSION & ANALYSIS

- The expanded trail accommodates more trail users and provides improved trail operation at this congested trail pinch point and stakeholder priority area
- The addition of a physical barrier adjacent to motorist lanes may reduce travel speeds of motorists along eastbound Lake Street where they are closest to bicyclists and pedestrians

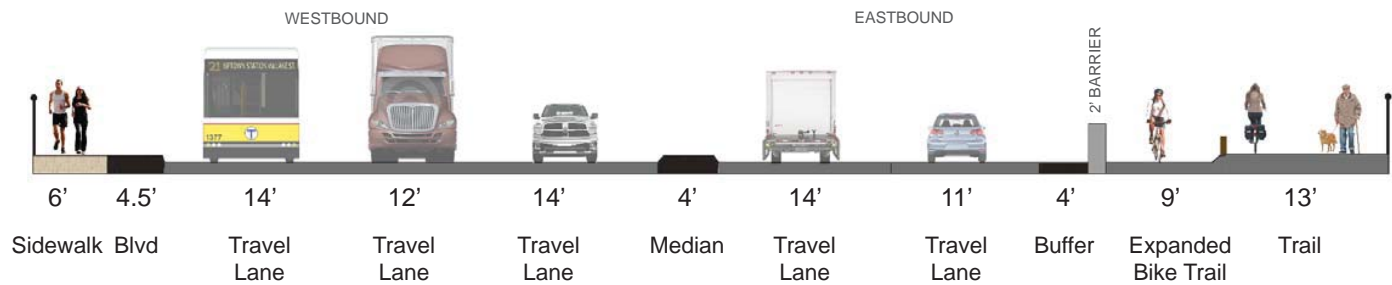
FIGURE 3-13
INTERIM LAKE STREET AT CHANNEL BRIDGE



CURRENT DESIGN



PROPOSED DESIGN



Analysis

Detailed traffic operations analysis was conducted for a related recommendation supporting this lane reduction. Recommendation 33b is a long term recommendation including full reconstruction of this segment of Lake Street to reduce the width of all lanes and remove the outside eastbound lane that is currently added east of Thomas Avenue. The traffic operations analysis conducted for Recommendation 33b demonstrates that 2040 traffic volumes may be served acceptably with two eastbound lanes in this location. If 2040 volumes can be accommodated by this configuration, then existing and near term traffic volumes will also be served acceptably through implementation of Recommendation 20.

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County, the Minneapolis Park and Recreation Board and the City of Minneapolis is necessary
- The height of the barrier must meet bicycle standards
- Additional engineering is required to determine the locations and design of the expanded space and the necessary ramp accesses between the existing trail and street-grade trail expansion

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4. LONG-TERM RECOMMENDATIONS



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4.0 LONG TERM RECOMMENDATIONS

Improvements were identified that would likely be implemented beyond opening day of the Green Line Extension (scheduled for 2020). These improvements do not have funding sources identified at this time, were not as highly prioritized by project stakeholders as near term recommendations were, and/or require additional coordination, significant investment and construction. Recommendations C, D and 21 through 44 are the long term recommendations.

FIGURE 4-1
LONG TERM RECOMMENDATION LOCATIONS

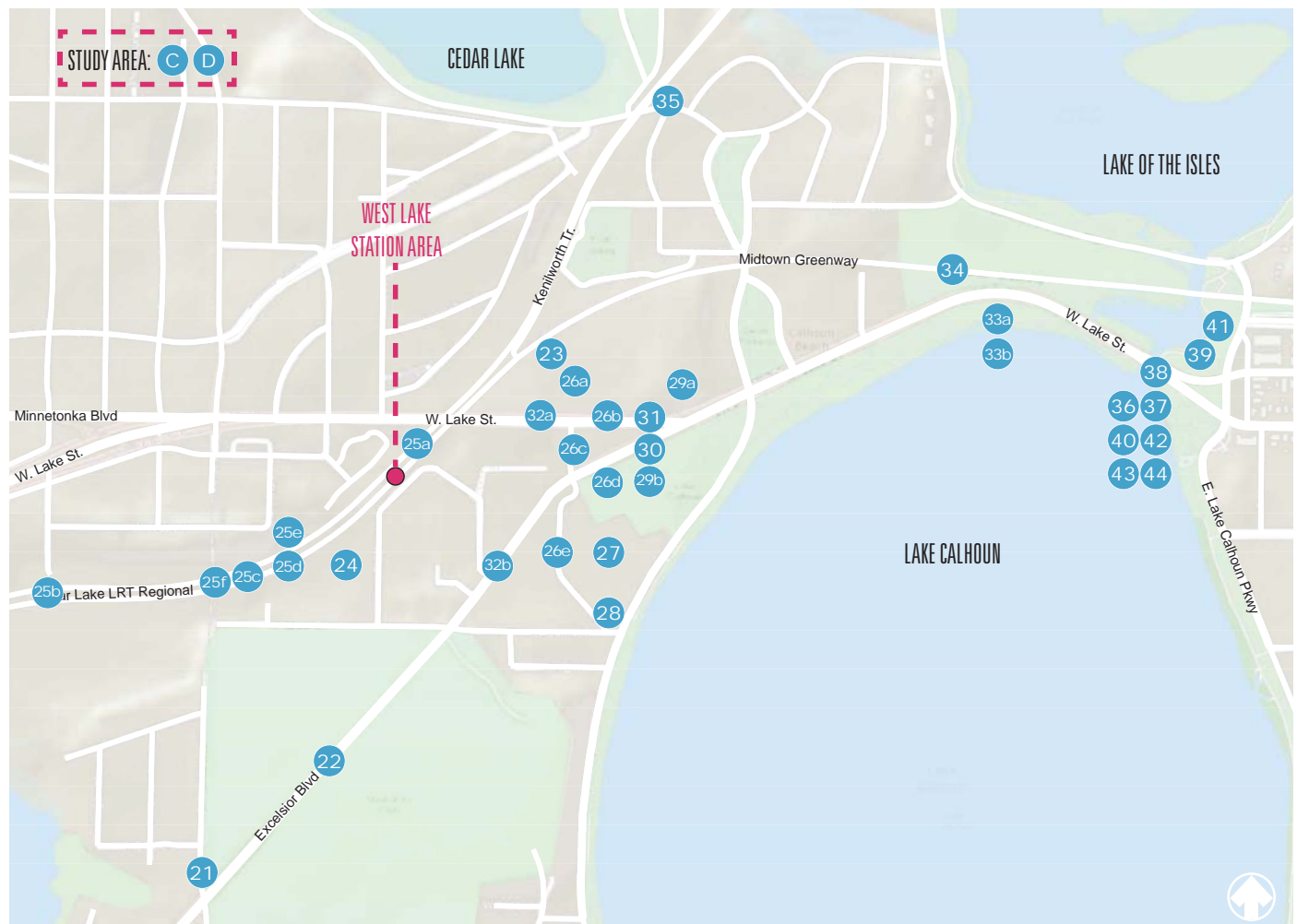


TABLE 4-1
LONG TERM RECOMMENDATIONS

ID	Location	Improvement	Agency*	Estimated Cost**
C	Study Area	Optimize traffic signal timing to improve multimodal operations	MPLS	\$98,000
D	Study Area	Wayfinding Plan for key destinations in the study area outside of the LRT station area	MPRB / MPLS	\$114,000
21	France/Excelsior Intersection	Reduce curb radius to slow turning motorists and reduce pedestrian crossing distances, extend median nose for pedestrian crossing	HC/SLP/ MPLS	\$51,000
22	Excelsior – France to Lake	Reduce travel lane widths to add a boulevard on the north side to buffer the north sidewalk	HC/ MPLS	\$254,000
23	Midtown/Kenilworth Trail Intersection	Install intersection lighting	HC	\$16,000
24	West Lake Station	Visual (RRFB) warning devices with infrared detection to notify trail users of pedestrians approaching to cross	MT/HC/ MPLS/TR	\$52,000
25a	West Lake Station Area - Freight/LRT crossing	At-grade crossing of the freight and LRT in the station area	MT/HC/ MPLS	\$1,144,000
25b	West Lake Station Area - Freight/LRT crossing	Bridge structure from Inglewood Ave S over freight and LRT; connects to Cedar Lake LRT Regional Trail	MT/HC/ MPLS	\$6,650,000
25c	West Lake Station Area - Freight/LRT crossing	Bridge structure from Ewing Ave S over freight and LRT; connects to Cedar Lake LRT Regional Trail.	MT/HC/ MPLS	\$6,507,000
25d	West Lake Station Area - Connection of Freight/LRT crossings/station	Sidewalk connection from Ewing Ave S to the West Lake Station. Connects to 25a	HC/MPLS	\$1,216,000
25e	West Lake Station Area - Connection of Freight/LRT crossings/station	Sidewalk connection from Ewing Ave S to the West Lake Station. Includes freight/LRT crossing to West Lake Platform. (Independent of 25a)	HC/MPLS	\$1,573,000
25f	West Lake Station Area - Connection of Freight/LRT crossings/station	Sidewalk connection from Lynn Ave to Ewing Ave. Connects to 25d	HC/MPLS	\$465,000

*Listed agencies are assumed partners for identified improvement.

**Estimated costs include 30% contingency in 2015 dollars without engineering fees.

MPLS = Minneapolis MT = Metro Transit HC = Hennepin County TR = Three Rivers Park Dist. MPPB = Minneapolis Park and Recreation Board

LONG TERM RECOMMENDATIONS, CONTINUED

ID	Location	Improvement	Agency*	Estimated Cost**	
26a	Market Plaza through Calhoun Village	Trail connection through Calhoun Village parking lot along east side of drive aisle (requires coordination with private property).	MPLS	\$97,000	\$196,000
26b	Market Plaza/Lake Intersection	Improve intersection to accommodate trail along Market Plaza by relocating signal controller and adding trail crossing markings. Address curb radius in northeast quadrant.	MPLS/HC/MPRB	\$35,000	
26c	Market Plaza	Reconfigure the street to provide a shared use trail along the east side of the roadway.	MPLS	\$54,000	
26d	Market Plaza/Excelsior Intersection	Improve intersection to accommodate potential trail on Market Plaza: trail crossing pavement markings.	HC/MPLS	\$6,000	
26e	W. Calhoun Blvd	Design street to include bike facility to provide access from Excelsior Blvd to Lake Calhoun. NB Counterflow Bicycle Lane and SB Bike Boulevard.	HC/MPLS	\$4,000	
27	Area between Excelsior and Lake Calhoun	Construct off-street trail providing connection between Excelsior Boulevard and W. Lake Calhoun Parkway.	MPRB	\$65,000	
28	32nd/Calhoun Blvd. Intersection	Realign W Calhoun Blvd Intersection to increase distance from Calhoun Pkwy	MPLS/ MPRB	\$260,000	
29a	Lake/Excelsior Intersection	Reconfigure median to add pedestrian staging space, shorten crossings, and add gateway landscaping *ROW NEEDED (not included in cost)	HC/ MPLS	\$909,000	
29b	Excelsior between Market Plaza and Lake Street	Reconstruct medians to clarify lanes and provide green space for landscaping	HC/MPLS	\$109,000	
30	Excelsior and Lake - In coordination with improvements over time	If areas are redeveloped and projects occur, locate infrastructure outside sidewalk accessible path	HC/ MPLS	NA	
31	Excelsior and Lake - In coordination with improvements over time	If areas are redeveloped and projects occur, fill lighting gaps	HC/ MPLS	NA	
32a	Lake Street between Market Plaza and Dean Parkway	As projects and redevelopment occur, maximize sidewalk widths reallocating surplus widths from travel lanes	HC/ MPLS	NA	
32b	Excelsior Boulevard between West 32nd Street and Lake Street	As projects and redevelopment occur, maximize sidewalk widths reallocating surplus widths from travel lanes	HC/ MPLS	NA	

*Listed agencies are assumed partners for identified improvement.

**Estimated costs include 30% contingency in 2015 dollars without engineering fees.

MPLS = Minneapolis MT = Metro Transit HC = Hennepin County TR = Three Rivers Park Dist. MPPB = Minneapolis Park and Recreation Board

LONG TERM RECOMMENDATIONS, CONTINUED

ID	Location	Improvement	Agency*	Estimated Cost**	
33a	Lake Street – Dean Parkway to East Calhoun Parkway	OPTION A - Reduce travel lane widths to provide space for a landscaped green median and boulevard to buffer trail and at bridge for more trail width - using 6-lane section	HC/ MPLS/ MPRB	\$425,000	
33b	Lake Street – Dean Parkway to East Calhoun Parkway	OPTION B - Full Roadway Reconstruction: 2 EB lanes, 3 WB lanes reduced widths, green median, boulevard and trail expansion. Implement overhead directional signage for Lake/Excelsior split (sign bridge)	HC/ MPLS/ MPRB	\$3,316,000	
34	Between W. Lake of the Isles Parkway and Lake Street near Thomas Ave	Evaluate potential trail connection along east side of Thomas Ave to north side of Greystar development across Midtown Greenway through soccer fields (this requires coordination with private property)	HC/MPLS/ MPRB	\$388,000	
35	St. Paul/Sunset near Cedar Lake Pkwy	Address sidewalk gap along St. Paul Ave in area of Cedar Lake Parkway and Sunset	MPLS	NA	
36	E Calhoun area (Tin Fish, Boat Launch)	Distinctive pavement materials to distinguish pedestrian path from bicycle path	MPRB	\$8,000	\$163,000
37	Trail intersection and alignment near Wheel Fun Rental	Realign "through" bicycle trail to be closer to southernmost pedestrian trail, widen trail intersection, eliminate middle pedestrian and bicycle trails	MPRB	\$20,000	
38	Channel Bridge	Improved lighting under bridges	MPRB	\$71,000	
39	North of Channel Bridge	Improved lighting in open area	MPRB		
40	Wayfinding	Improve wayfinding between various bike-only/ped only paths	MPRB	\$11,000	
41	Bike trail along E Lake Calhoun Pkwy between Knox and Lagoon	Provide pedestrian specific trail along bike only trail on west side of E Lake Calhoun Pkwy	MPRB	\$43,000	
42	Bike trail crossing of Boat Launch driveway	Green pavement markings for bike crossing	MPRB	\$3,000	
43	South leg of E Calhoun Pkwy and Boat launch driveway	Add curb cut and marked crossing at this intersection	MPRB	\$7,000	
44	West side of E Calhoun Pkwy	Add sidewalk	MPRB	NA	

*Listed agencies are assumed partners for identified improvement.

**Estimated costs include 30% contingency in 2015 dollars without engineering fees.

MPLS = Minneapolis MT = Metro Transit HC = Hennepin County TR = Three Rivers Park Dist. MPPB = Minneapolis Park and Recreation Board

RECOMMENDATION C — OPTIMIZE SIGNAL TIMING

STUDY AREA

Conduct a traffic signal timing study to better optimize the coordination, splits and cycle lengths of traffic signals within the study area. Include the recommended leading pedestrian intervals to allow pedestrians to begin crossing the street before cars are allowed to cross. Consider development of recreational peak signal timing plans.

DISCUSSION & ANALYSIS

- Analysis of existing and recommended conditions showed intersections, approaches and movements which would benefit from different signal timing
- Some recommendations include signal phasing modifications that will require updated traffic signal timing
- Traffic signal timing can be optimized for a multimodal traffic mix – not strictly serving auto throughput
- Balancing operations and reductions in delay for some movements in the area may result in less aggressive or risk-taking behavior by motorists and circuitous routes to avoid expected delays

IMPLEMENTATION CONSIDERATIONS

- Signal timing activities are conducted by City of Minneapolis staff for all traffic signals within the study area

RECOMMENDATION D — AREA WAYFINDING PLAN

STUDY AREA

Develop a wayfinding plan for the study area outside of the immediate West Lake Station area directing bicyclists and pedestrians to nearby destinations. The plan should recognize Three Rivers Park District, Grand Rounds, and MPRB wayfinding practices and include destinations such as:

- | | |
|--|---|
| <ul style="list-style-type: none">• Lake Calhoun• Lake of the Isles• Cedar Lake• Lake Harriet• Lake Calhoun Beaches• Calhoun Yacht Club/Tin Fish Restaurant• West Lake Station• Midtown Greenway• Kenilworth Trail | <ul style="list-style-type: none">• Cedar Lake Trail• Cedar Lake LRT Regional Trail• Uptown <p>Commercial destinations to consider:</p> <ul style="list-style-type: none">• Calhoun Commons• Calhoun Village Shopping Center• Lake Calhoun Executive Center |
|--|---|

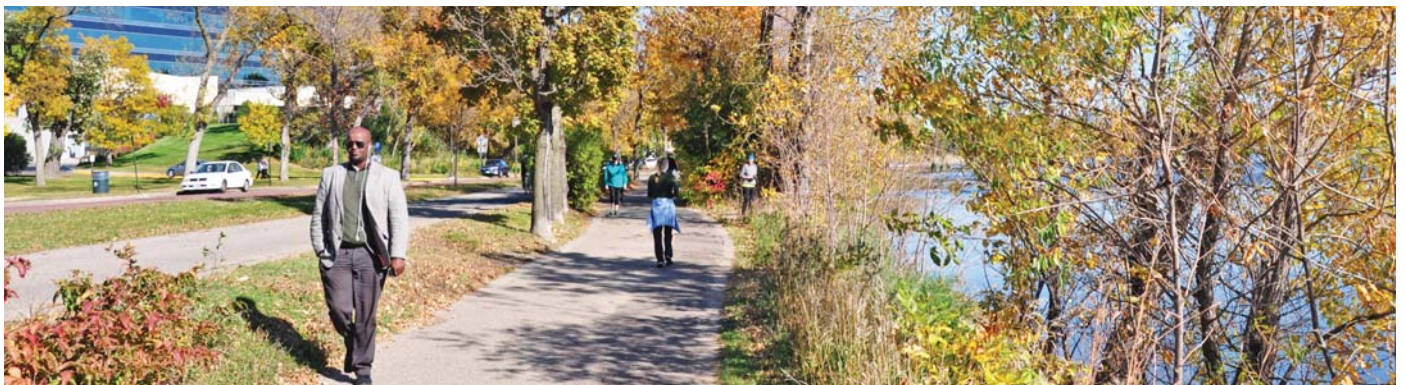


Figure 4-2 illustrates potential locations for additional wayfinding in the West Lake station area. Figure 4-3 illustrates potential wayfinding portal locations within the study area.

FIGURE 4-2
ADDITIONAL STATION AREA WAYFINDING

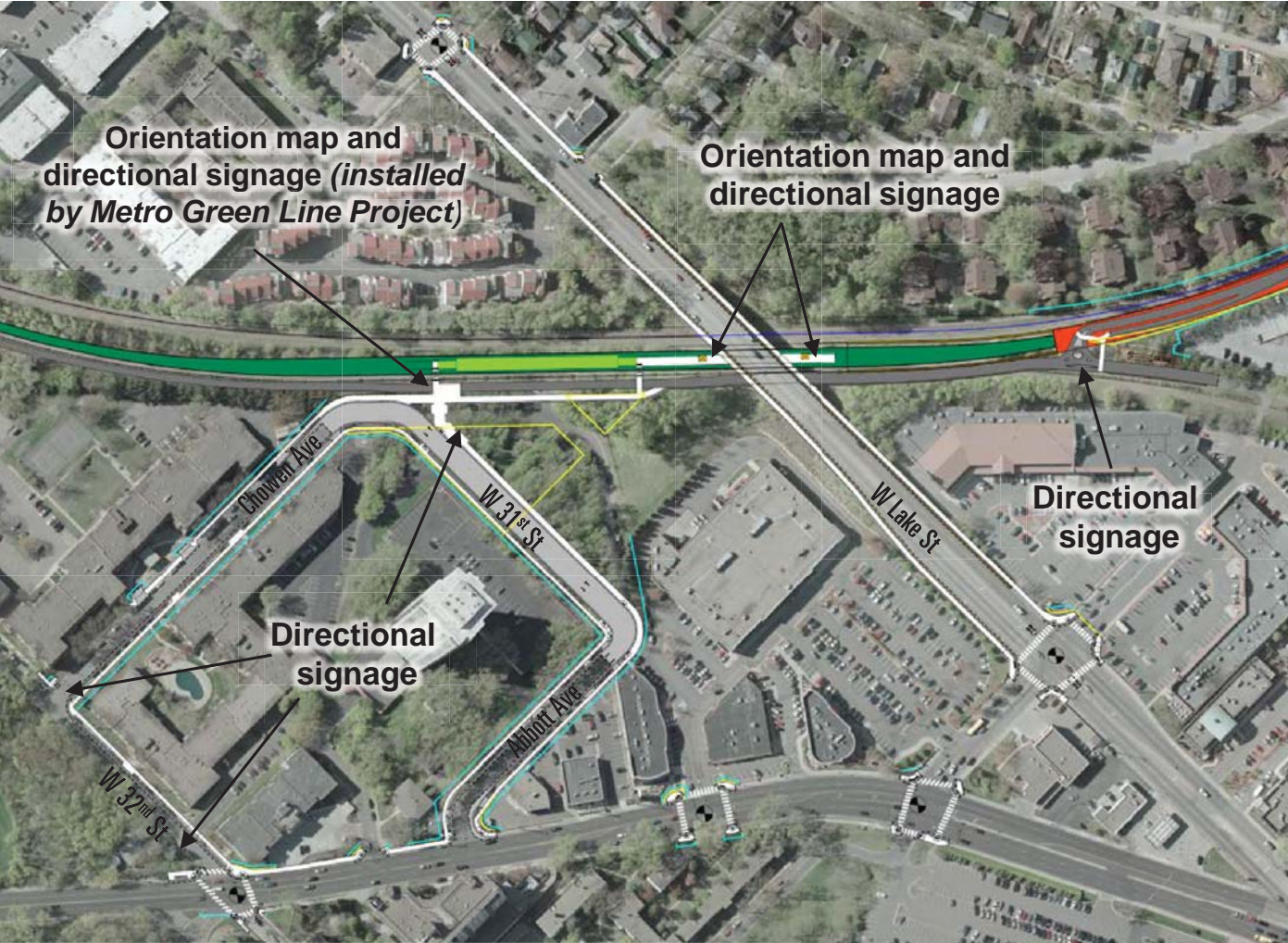


FIGURE 4-3
POTENTIAL STUDY AREA WAYFINDING PORTALS



DISCUSSION & ANALYSIS

- Wayfinding will encourage non-motorized users to navigate to destinations using the most direct connection or the most appropriate facility for their travel mode using bicycle facilities, sidewalks and trails

IMPLEMENTATION CONSIDERATIONS

- Coordination between the Minneapolis Park and Recreation Board, Three Rivers Park District, and the City of Minneapolis is necessary

RECOMMENDATION 21 – INTERSECTION PEDESTRIAN IMPROVEMENTS

INTERSECTION OF FRANCE AVENUE AND EXCELSIOR BOULEVARD

Reduce pedestrian crossing distances at the intersection by reducing the curb radius at the corners and extending the median to provide buffer for the pedestrian midway through the crosswalk. Enhanced crosswalks, including poly-preform marking materials and continental design, would be added to all approaches of the intersection.

DISCUSSION & ANALYSIS

- Reducing the corner radius causes automobiles to turn at slower speeds
- Providing a curbed median on both sides of the crosswalk provides an improved buffer for pedestrian crossings, in particular during conflicting turns from the cross street
- Enhanced crosswalk markings at intersections address location where conflicts between bicyclists, pedestrians and automobiles would be most likely to occur, creating a higher quality facility
- Use of the continental design for crosswalk markings also improves visibility for motorists and crosswalk detection for people with low vision and cognitive impairments

IMPLEMENTATION CONSIDERATIONS

- The historic Minikahda Golf Club is located in the southeast quadrant of the intersection
- Coordination between the City of St. Louis Park, Hennepin County and the City of Minneapolis is necessary

RECOMMENDATION 22 – REALLOCATION OF STREET WIDTH FOR PEDESTRIAN AMENITIES

EXCELSIOR BOULEVARD (FROM FRANCE AVENUE TO LAKE STREET)

Reduce travel lanes on Excelsior Boulevard to minimum widths providing additional space for a boulevard buffer between the street and the sidewalk along the north side of the roadway.

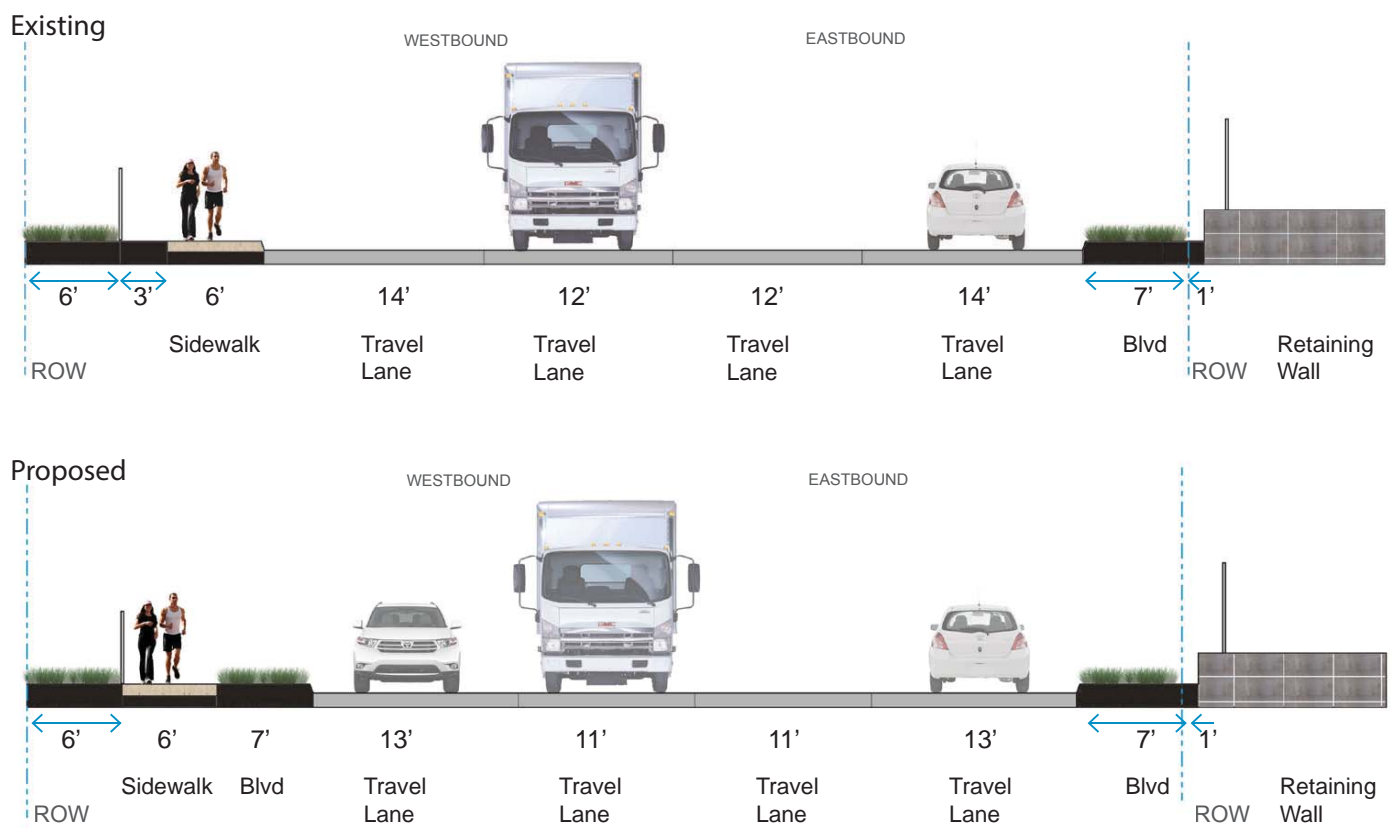
DISCUSSION & ANALYSIS

- A larger grass boulevard would increase separation between vehicles on the roadway and pedestrians on the sidewalk and a more comfortable environment for pedestrians
- Using the reallocated cross-section to improve the existing sidewalk was preferred to adding an additional sidewalk on the south side closer to the street
- Adding the sidewalk along the south side of Excelsior Blvd would not have allowed for boulevard space for either side of the street
- Identified as a high priority corridor in the Minneapolis Pedestrian Master Plan

IMPLEMENTATION CONSIDERATIONS

- The historic Minikahda Golf Club is adjacent to Excelsior Boulevard between France Avenue and West 32nd Street
- There is a pedestrian bridge over the street for the Minikahda Golf Club
- Coordination between Hennepin County and the City of Minneapolis is necessary

FIGURE 4-4
REALLOCATION OF STREET WIDTH FOR PEDESTRIAN AMENITIES



RECOMMENDATION 23— TRAIL INTERSECTION LIGHTING

INTERSECTION OF MIDTOWN GREENWAY AND KENILWORTH TRAIL

Install lighting at the intersection of the two regional trails.

DISCUSSION & ANALYSIS

- Lighting provides safety benefits such illumination of the walking path to avoid tripping, visibility of other trail users, and increased perception of personal safety
- Several fixture options exist for targeted lighting at the intersection that minimizes light pollution

IMPLEMENTATION CONSIDERATIONS

- There is currently no trail lighting on the Midtown Greenway nor the Kenilworth trails
- Lighting intensity/light pollution are stated concerns of trail area residents
- This recommendation is in Hennepin County Regional Rail Authority ROW and will need to be coordinated and implemented through Hennepin County.

RECOMMENDATION 24 – TRAIL PEDESTRIAN CROSSING WARNING DEVICE

WEST LAKE STATION

Install a Rectangular Rapid Flashing Beacon (RRFB), a visual warning device, to notify Cedar Lake LRT Regional Trail users of pedestrians crossing the trail to enter the West Lake Station platform. RRFBs are user-actuated amber LEDs that supplement warning signs at trail crossings, unsignalized intersections or mid-block crosswalks.

DISCUSSION & ANALYSIS

- Enhances safety of the trail crossing by increasing awareness of the trail users when people cross to and from the station
- The RRFB is recommended to be activated by either pedestrians pushing a button or passively by an infrared pedestrian detection system
- The RRFB will only flash when a crossing pedestrian is present
- RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles

IMPLEMENTATION CONSIDERATIONS

- Coordination between Metro Transit, Hennepin County, Three Rivers Park District and the City of Minneapolis is necessary
- The crossing area should have adequate lighting



Example of RRFB installation at street crossing.

RECOMMENDATION 25 – PEDESTRIAN CROSSING OF FREIGHT AND GREEN LINE LRT TRACKS

WEST LAKE STATION

Provide crossing of the freight and westbound LRT tracks to provide a more direct connection to the West Lake Station from the north side of the tracks. Various options could be implemented, including:

- **25a** – At-grade crossing of the freight and westbound LRT on the south end of the West Lake Station platform and sidewalk that connects to both the south and north side of West Lake Street near Chown Avenue.
- **25b** – A pedestrian bridge that crosses both the freight and LRT tracks located directly south of Inglewood Avenue on the north side and connecting to the Cedar Lake Regional Trail to connect to the West Lake Station.
- **25c** – A pedestrian bridge that crosses both the freight and LRT tracks located directly south of Ewing Ave S on the north side and connecting to the Cedar Lake Regional Trail to connect to the West Lake Station.
- **25d** – A sidewalk connection on the north side of the tracks from Ewing Ave S and connecting to the at-grade crossing and Lake Street sidewalk connections described in 25a.
- **25e** – A sidewalk connection on the north side of the tracks from Ewing Ave S and connecting to the West Lake Station. Includes freight/LRT crossing to West Lake Platform. (Independent of 25a sidewalk connections to Lake Street).
- **25f** – A sidewalk connection on the north side of the tracks from Lynn Ave to Ewing Ave that connects with recommendation 25d sidewalk connection.

FIGURE 4-5

RECOMMENDATION 25 – PEDESTRIAN CROSSING OF FREIGHT AND GREEN LINE LRT TRACKS

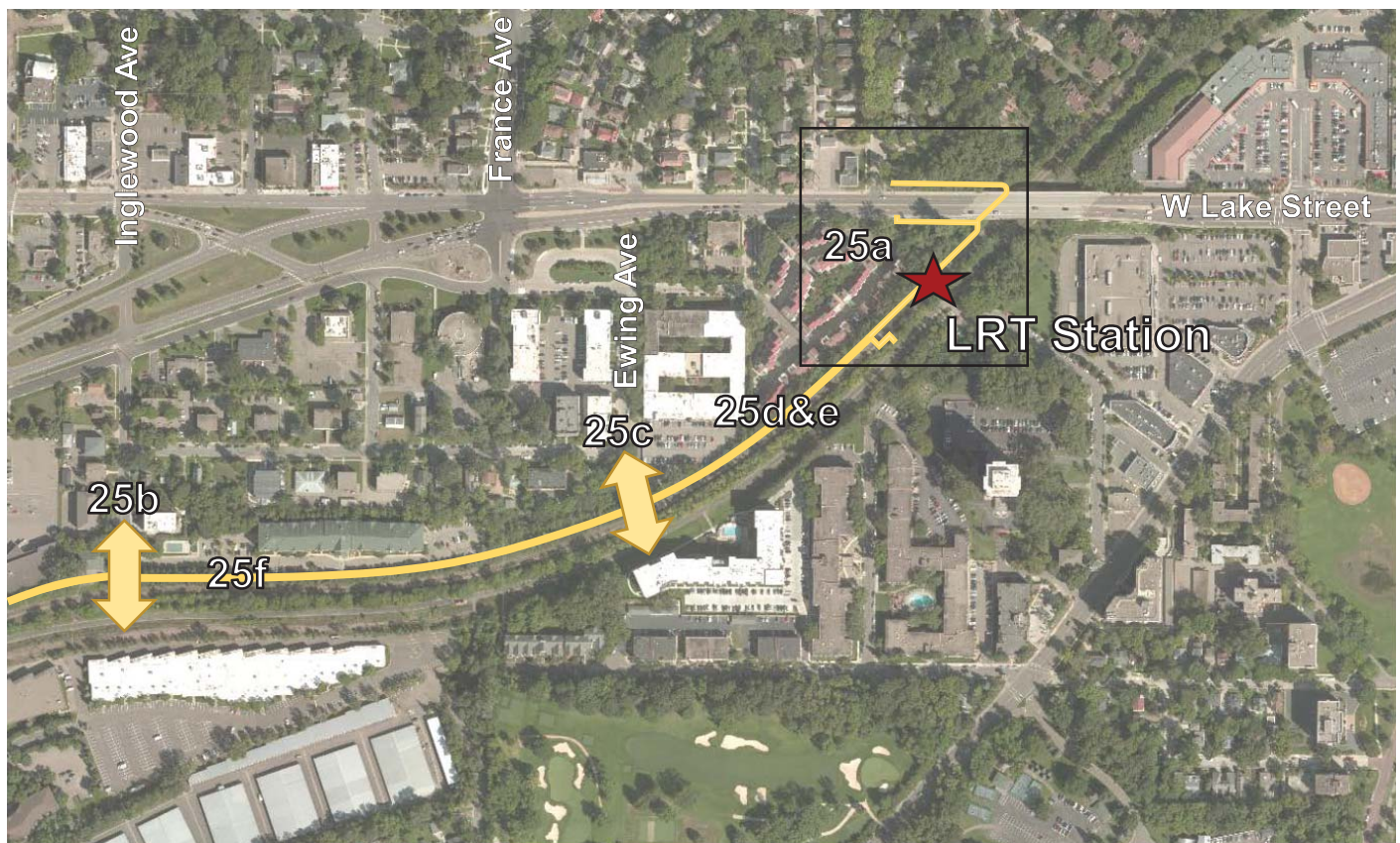
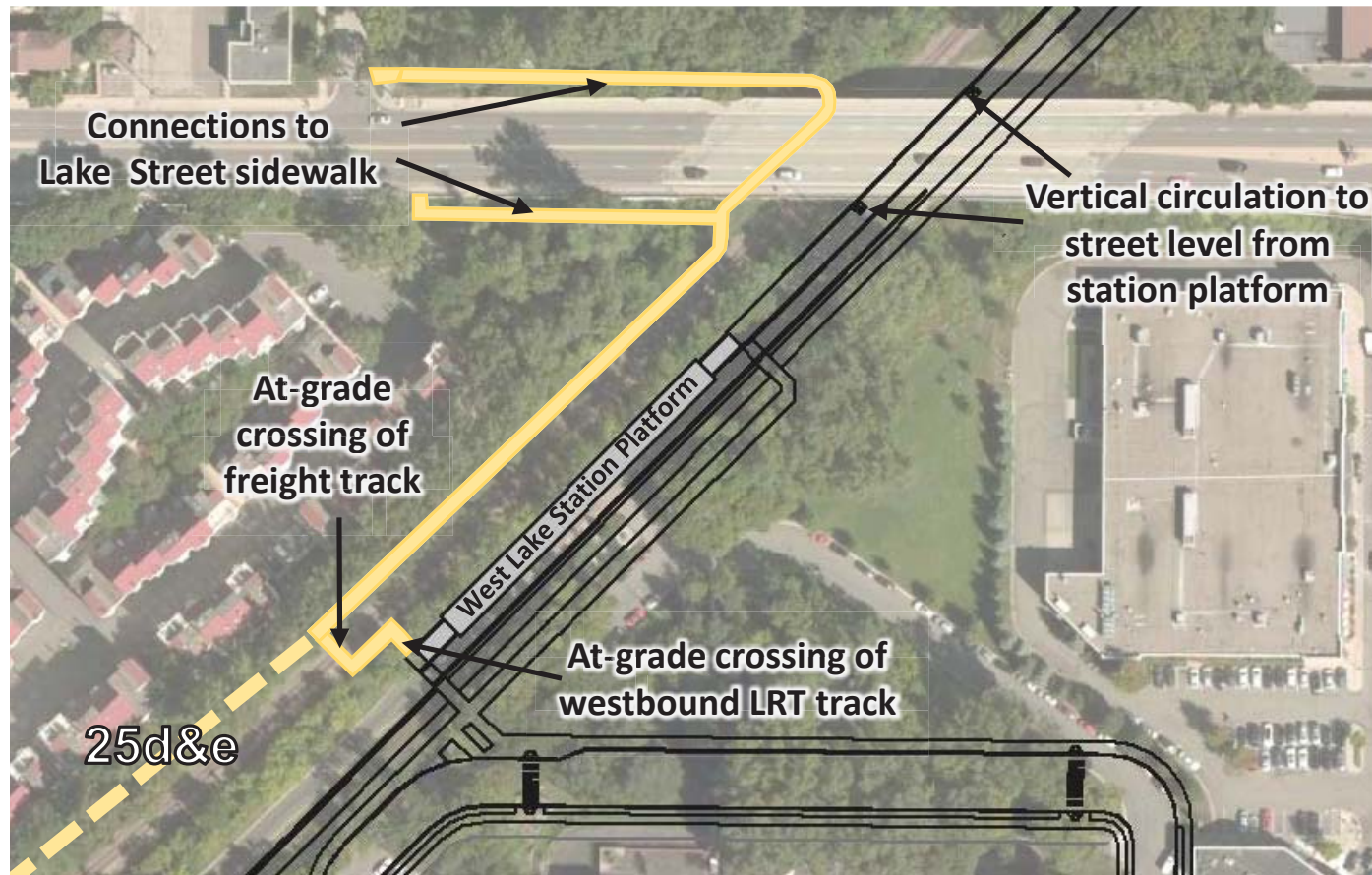


FIGURE 4-6
RECOMMENDATION 25A - AT-GRADE CROSSING NEAR LAKE STREET



DISCUSSION & ANALYSIS

- Community stakeholders have prioritized an at-grade freight and LRT track crossing and station access in the location of 25a
- Provides a more direct connection to the West Lake Station for residents and businesses on the north side of the freight and LRT tracks
- The north sidewalk connection along the rail corridor provides enhanced connectivity for northern parcels along the trail corridor when combined with at least one freight and LRT crossing option or station access.

Analysis

Three crossing locations were evaluated for this recommendation (25a, 25b, 25c), along with two options for sidewalks along the corridor on the north side of the freight rail tracks (25d/e, 25f). The following table summarizes the improvement in travel time/distance that might be achieved between two locations on either side of the freight rail corridor. In addition, the number of people that might be better able to get to the West Lake LRT Station, or cross the freight rail corridor are shown based on 2010 census data and current land use (Table 4-2).

Option 25a is parallel to Lake Street, so the additional population that would have access is technically zero. However, as shown in Figure 4-6, recommendation 25a would provide a more direct, low-stress bicycle route from the northwest neighborhood to the West Lake LRT Station. Bicyclists would be able to reach the station in 0.4 miles along Chowen Avenue and then down to the crossing – rather than traveling away from the station to access the Kenilworth Trail, which is a one-way trip of 0.8 miles.

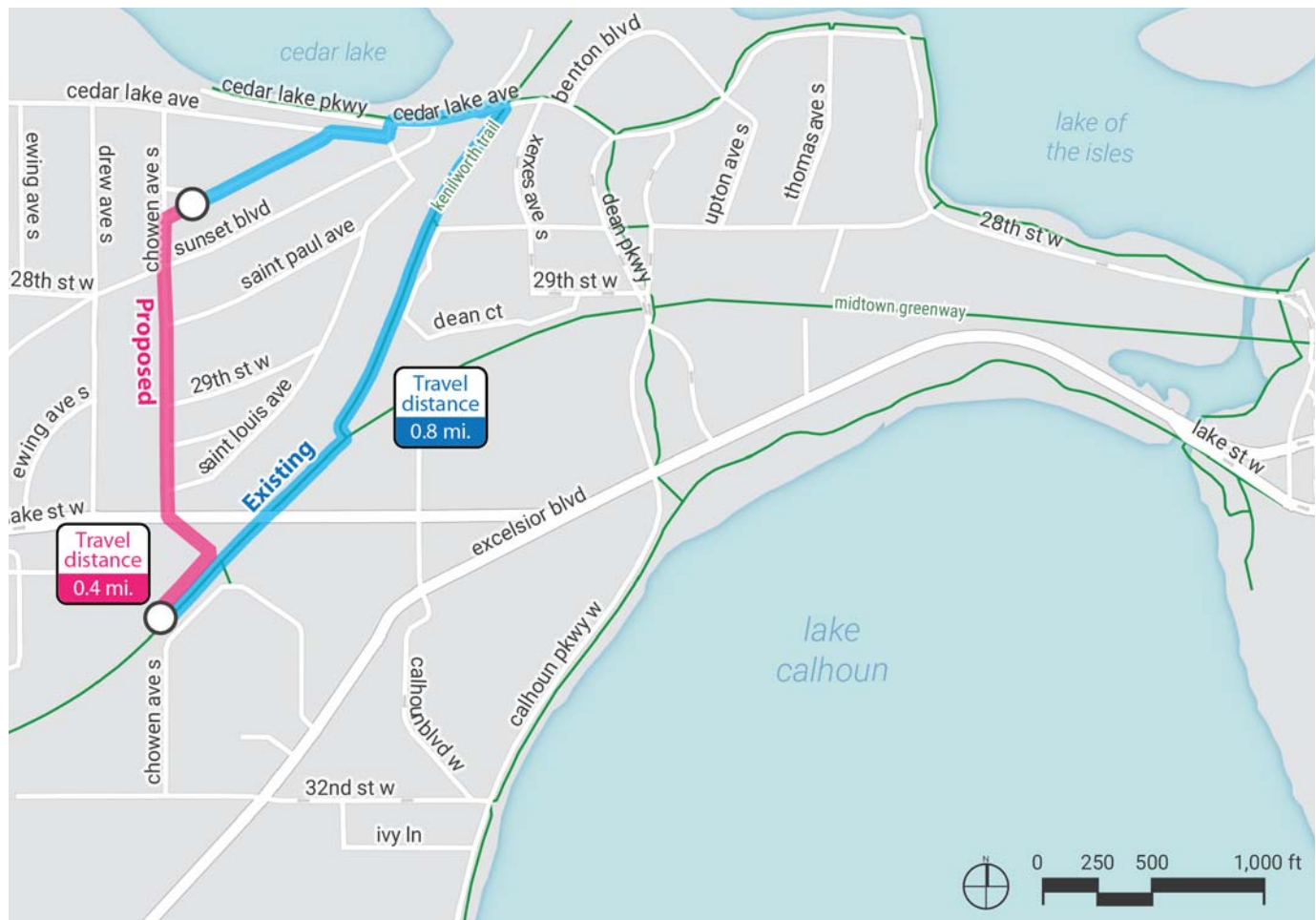
In addition, a pedestrian LOS analysis was performed for the crossing at 25a. On the Lake Street Bridge, under existing conditions, pedestrian level of service is LOS F. There is no barrier between the sidewalk and a high volume of high speed traffic. With the Green Line Extension project, a barrier between the existing sidewalk and vehicle traffic would be added, improving the pedestrian LOS to E. Walking along the trail created under Recommendation 25a would result in pedestrian LOS A because the trail is not adjacent to any vehicle traffic.

TABLE 4-2
COMPARISON MATRIX OF FREIGHT & GREEN LINE CROSSING ALTERNATIVES

Recommendation	Description	Travel Time & Distance Between Ewing St and Whole Foods		Additional Population* within 10 min walk of West Lake Station	Additional Population* within 5 minute walk of a freight rail crossing
		Base Project (Elevator on Lake St)	With Proposed Connection		
25a	<i>Sidewalk connection from Chowen Ave and W Lake St to West Lake Station (North & South side of W Lake St)</i>	<i>TIME: 15.5 min DISTANCE: 3135 ft</i>	<i>TIME: 14.5 min DISTANCE: 3090 ft</i>	0	0
25b	<i>Bridge structure from Inglewood Ave S over freight and LRT; connects to Cedar Lake LRT Regional Trail</i>	<i>TIME: 22.5 min DISTANCE: 4575 ft</i>	<i>TIME: 22 min DISTANCE: 4570 ft</i>	0	362
25c	<i>Bridge structure from Ewing Ave S over freight and LRT; connects to Cedar Lake LRT Regional Trail</i>	<i>TIME: 15.5 min DISTANCE: 3135 ft</i>	<i>TIME: 14 min DISTANCE: 2975 ft</i>	26	589
25d	<i>Sidewalk connection from Ewing Ave S to the West Lake Station. Connects to 25a</i>	<i>TIME: 15.5 min DISTANCE: 3135 ft</i>	<i>TIME: 10.5 min DISTANCE: 2230 ft</i>	26	589
25e	<i>Sidewalk connection from Ewing Ave S to the West Lake Station. Includes freight/LRT crossing to West Lake Platform. Independent of 25a</i>	<i>TIME: 15.5 min DISTANCE: 3135 ft</i>	<i>TIME: 10.5 min DISTANCE: 2230 ft</i>	26	589
25f	<i>Sidewalk connection from Lynn Ave to Ewing Ave. Connects to 25d</i>	N/A	N/A	N/A	68

* Population is based on 2010 Census and existing land use

FIGURE 4-7
BICYCLE CONNECTIVITY ANALYSIS MAP - NW NEIGHBORHOOD TO WEST LAKE STATION



IMPLEMENTATION CONSIDERATIONS

- The freight tracks next to the West Lake Station often have freight trains stopped, waiting for permission to continue onto the BNSF corridor near Interstate 394 during which the at-grade crossing would be blocked by these trains
- Implementation of the different options will require coordination across the following agencies depending upon location: Metro Transit, Hennepin County, Three Rivers Park District, the City of St. Louis Park and the City of Minneapolis

RECOMMENDATION 26 – MARKET PLAZA CONNECTION TO LAKE CALHOUN

MARKET PLAZA (FROM MIDTOWN GREENWAY TRAIL NORTH OF CALHOUN VILLAGE TO EXCELSIOR BOULEVARD),
WEST CALHOUN BOULEVARD (FROM EXCELSIOR BOULEVARD TO WEST CALHOUN PARKWAY)

Create a connection for bicyclists and pedestrians between the Midtown Greenway and Lake Calhoun through Calhoun Village, along Market Place and West Calhoun Boulevard. The recommendation includes:

- **26a** – A shared use trail connection through Calhoun Village parking lot along the east side of driveway aisle with raised crosswalks at aisle crossings within the parking lot. The proposed improvement would utilize the current sidewalk and patio space adjacent to the easternmost building and narrows the lanes of the entrance driveway to gain space to widen the existing sidewalk.
- **26b** – Relocation of the existing signal controller from the northeast quadrant to the northwest quadrant of West Lake Street and the Calhoun Village access to provide more pedestrian space on the corner. Include enhanced shared use trail crosswalk, using poly-preform markings and continental design at the east West Lake Street approach. Address curb radius in northeast quadrant.
- **26c** – Reallocate the current roadway right-of-way by narrowing the lanes on Market Plaza between West Lake Street and Excelsior Boulevard and widening the east side sidewalk to accommodate a shared use trail.
- **26d** – Provide an enhanced shared use trail crosswalk, using poly-preform markings and continental design at the east approach of the Market Plaza and Excelsior Boulevard intersection.
- **26e** – On West Calhoun Boulevard, from Excelsior Boulevard to West 32nd Street, the recommendation includes a northbound counter-flow bicycle lane and a southbound bicycle boulevard.



FIGURE 4-8
RECOMMENDATION 26A-D – MARKET PLAZA CONNECTION TO LAKE CALHOUN

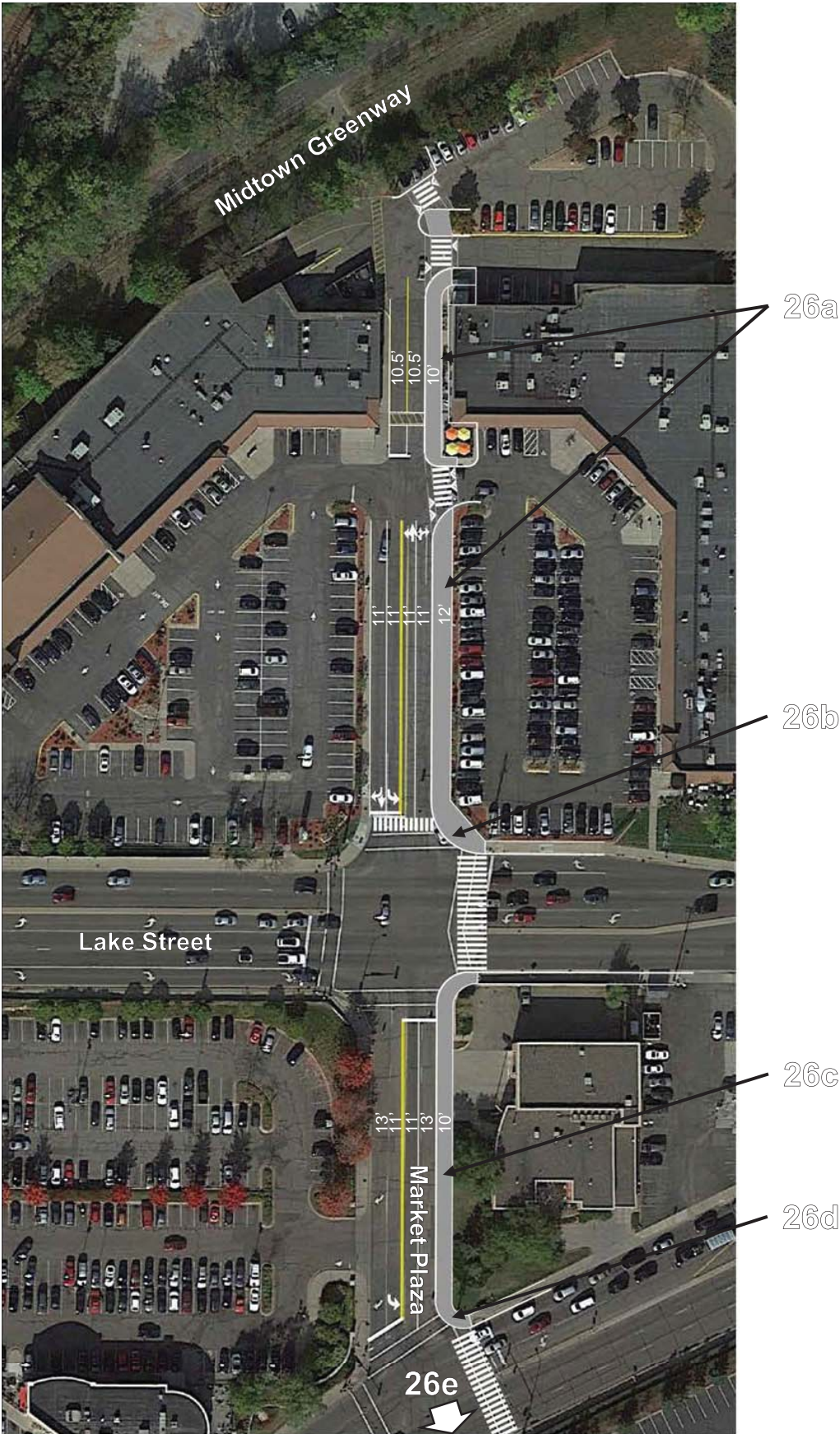
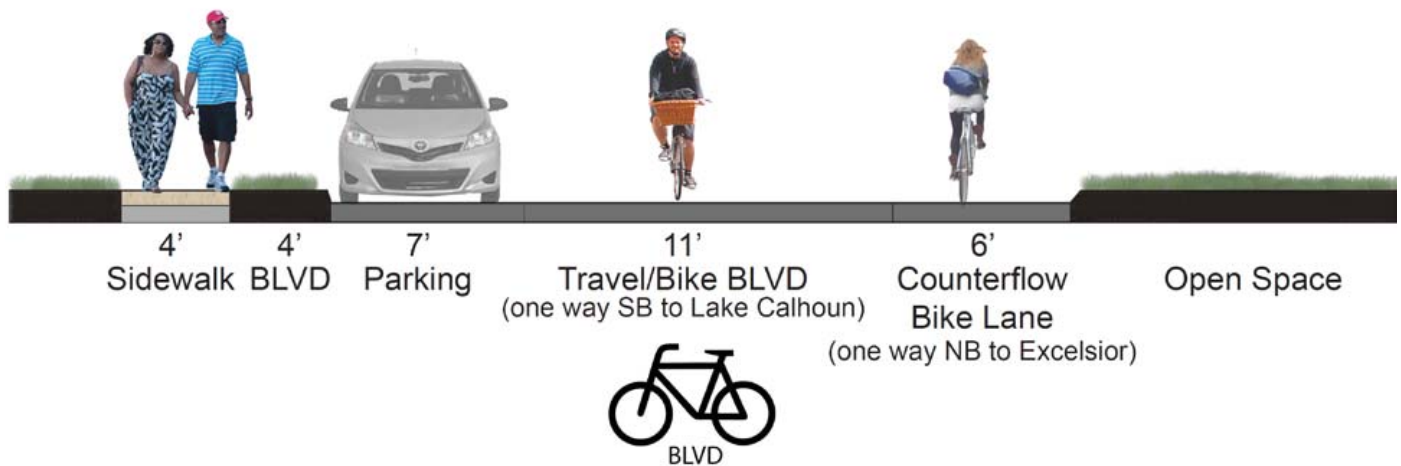


FIGURE 4-9

RECOMMENDATION 26E – WEST CALHOUN BOULEVARD – EXCELSIOR BLVD TO WEST 32ND STREET



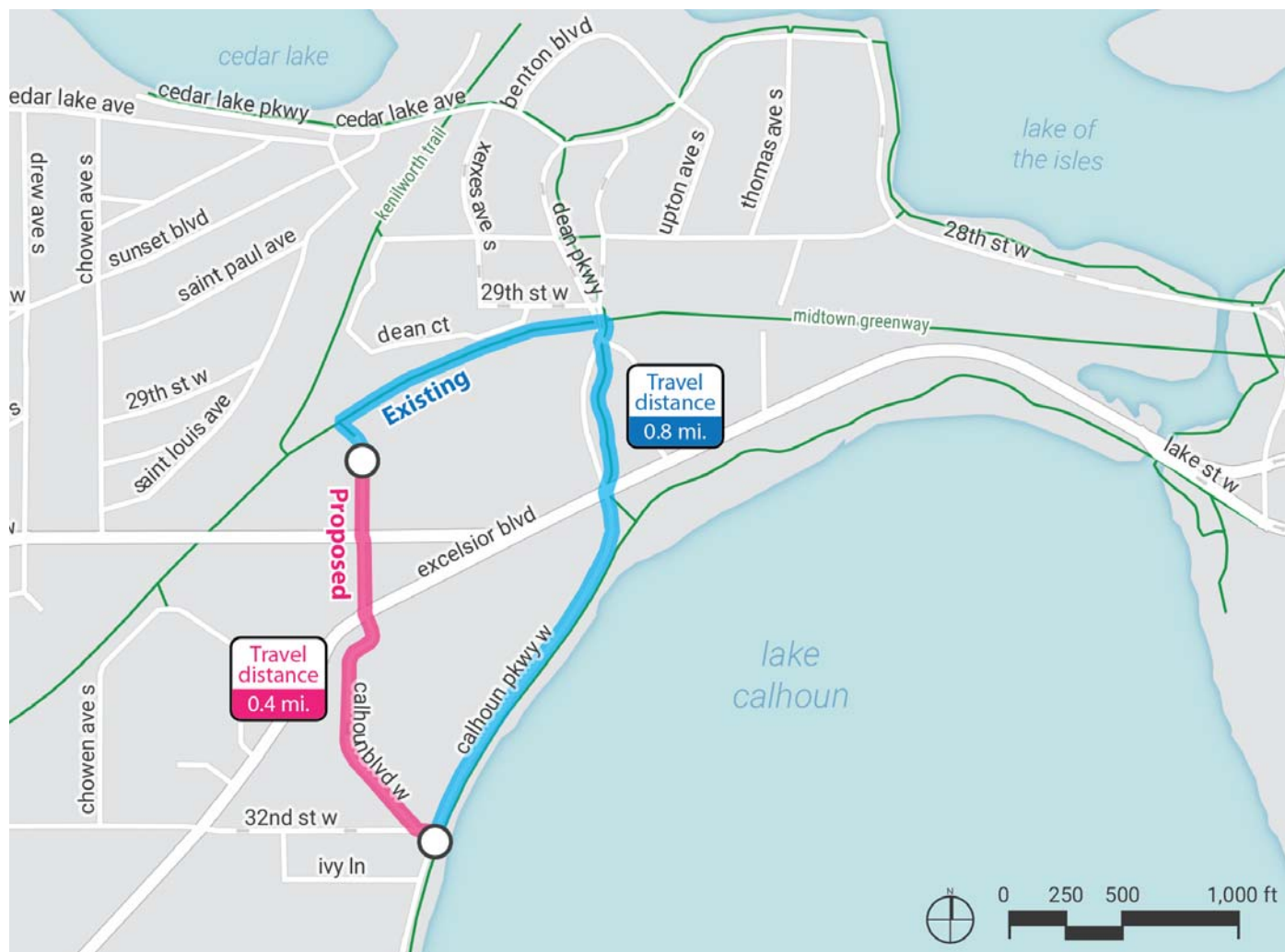
DISCUSSION & ANALYSIS

- Combined with wayfinding, the recommendation provides a clearly delineated pedestrian and bicycle facility that connects the Midtown Greenway and Lake Calhoun
- Raised crosswalks in the Calhoun Village property increases visibility of pedestrians and bicyclists and improves sense of right of way
- Enhanced crosswalk markings alert motorists to locations where conflicts between bicyclists, pedestrians and automobiles would most likely occur
- Use of the continental design for crosswalk markings also improves crosswalk detection for people with low vision and cognitive impairments
- Counter-flow bicycle lane south of Excelsior provides a circulation improvement for bicycle travel
- Off-street shared use trail north of Excelsior provides a low-stress facility for visitors and people with children

Analysis

As shown in Figure 4-10, the addition of an off-street shared use path along Market Plaza and a counter-flow bike lane on West Calhoun Boulevard would reduce the travel distance from the Calhoun Village shopping center to Lake Calhoun by about half. Under existing conditions, bicyclists would take the Midtown Greenway to Dean Parkway to West Calhoun Parkway to reach their destination in 0.8 miles, whereas the trip down Market Plaza is a more direct 0.4 miles.

FIGURE 4-10
CONNECTIVITY ANALYSIS MAP - CONNECTION BETWEEN MIDTOWN GREENWAY AT CALHOUN VILLAGE AND LAKE CALHOUN



IMPLEMENTATION CONSIDERATIONS

- The trail includes both private property and/or park property. Coordination would be required with property owners for implementation
- Coordination between Hennepin County, the Minneapolis Park and Recreation Board and the City of Minneapolis is necessary
- Detailed design is necessary to resolve ADA access at driveway crossing (between Punch Pizza and Nail Salon) and building entrances

RECOMMENDATION 27 — NEW TRAIL

AREA BETWEEN EXCELSIOR BOULEVARD AND LAKE CALHOUN

Construction of an off-street trail providing connection between Excelsior Boulevard near Market Plaza and West Lake Calhoun Parkway utilizing existing open space.



DISCUSSION & ANALYSIS

- Off-street shared use trail provides an alternate low-stress facility for visitors and people with children

IMPLEMENTATION CONSIDERATIONS

- Coordination between the Minneapolis Park and Recreation Board and the City of Minneapolis is necessary

RECOMMENDATION 28 – ROADWAY REALIGNMENT

INTERSECTION OF WEST CALHOUN BOULEVARD AND 32ND STREET

Realign West Calhoun Boulevard to remove the skewed intersection approach to 32nd Street. This realignment, Recommendation 28, is illustrated in Figure 3-6 along with improvements to the nearby intersection of West 32nd Street with West Calhoun Parkway.

DISCUSSION & ANALYSIS

- Perpendicular intersections are easier to negotiate because the path of travel is clear and direct, and sight lines are good in all directions
- The realignment increases the distance between the West Calhoun Boulevard and West Calhoun Parkway intersections with West 32nd Street
- Closely spaced intersections can cause confusion with various turning vehicles and unclear turning destinations

IMPLEMENTATION CONSIDERATIONS

- Realignment of the roadway requires additional right-of-way from property in the northwest quadrant
- Coordination between the Minneapolis Park and Recreation Board and the City of Minneapolis is necessary

RECOMMENDATION 29 – INTERSECTION AND ROADWAY IMPROVEMENTS

LAKE STREET AT EXCELSIOR BOULEVARD AND EXCELSIOR BOULEVARD (FROM MARKET PLAZA TO LAKE STREET)

Reconfiguration of the Excelsior Boulevard and Lake Street intersection that includes:

- **29a** – Reconfigure the median at the intersection of West Lake Street and Excelsior Boulevard that realigns the eastbound West Lake Street lanes to create a more compact intersection area with enhanced crosswalks, using poly-preform markings and continental design would be added to all approaches of the intersection. Extend the medians on Excelsior Boulevard to provide pedestrian refuge in the middle of the roadway.
- **29b** – Reconstruction of medians along Excelsior Boulevard between Market Plaza and Lake Street to provide better delineation of left turn lanes and convert excess turn lane length into median space.



FIGURE 4-11
RECOMMENDATION 29A – INTERSECTION OF EXCELSIOR BLVD AND LAKE STREET

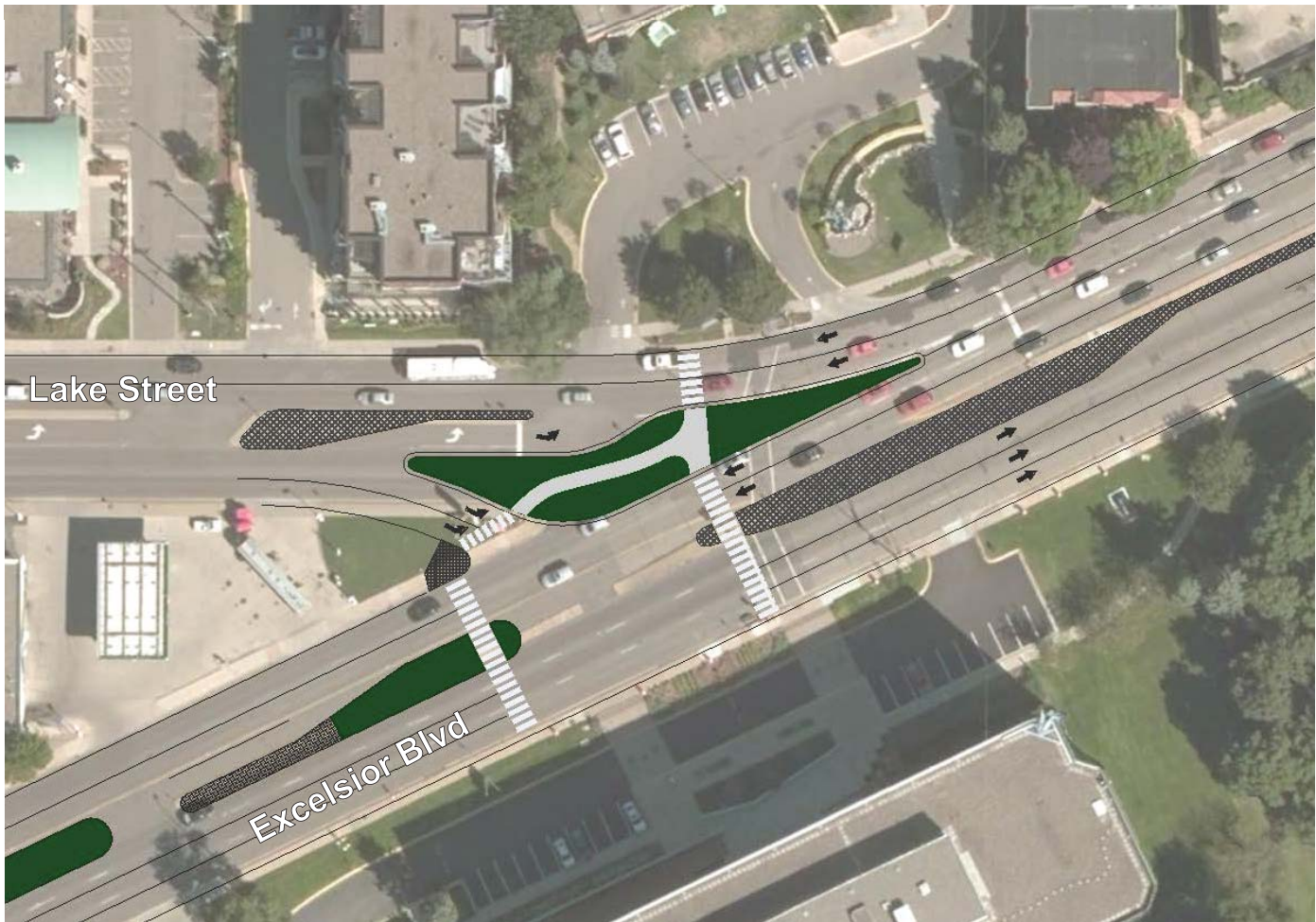


FIGURE 4-12

RECOMMENDATION 29B – EXCELSIOR BLVD BETWEEN MARKET PLAZA AND LAKE STREET



DISCUSSION & ANALYSIS

- The reconfigured median at the intersection of West Lake Street and Excelsior Boulevard would add pedestrian staging space, shorten roadway crossings for pedestrians, and provide an opportunity for gateway landscaping
- Providing a pedestrian refuge, with curbed median on both sides of the crosswalk on Excelsior Boulevard, allows pedestrians to cross one direction of traffic at a time
- Research has shown that the presence of a median refuge reduces the pedestrian crash risk
- Reconstruction of the medians on Excelsior Boulevard provides an opportunity for more green space and traffic calming
- Enhanced crosswalk markings would alert drivers to locations where conflicts between bicyclists, pedestrians and automobiles would be most likely occur
- Use of the continental design for crosswalk markings also improves motorist visibility and crosswalk detection for people with low vision and cognitive impairments
- Identified as a high priority corridor in the Minneapolis Pedestrian Master Plan

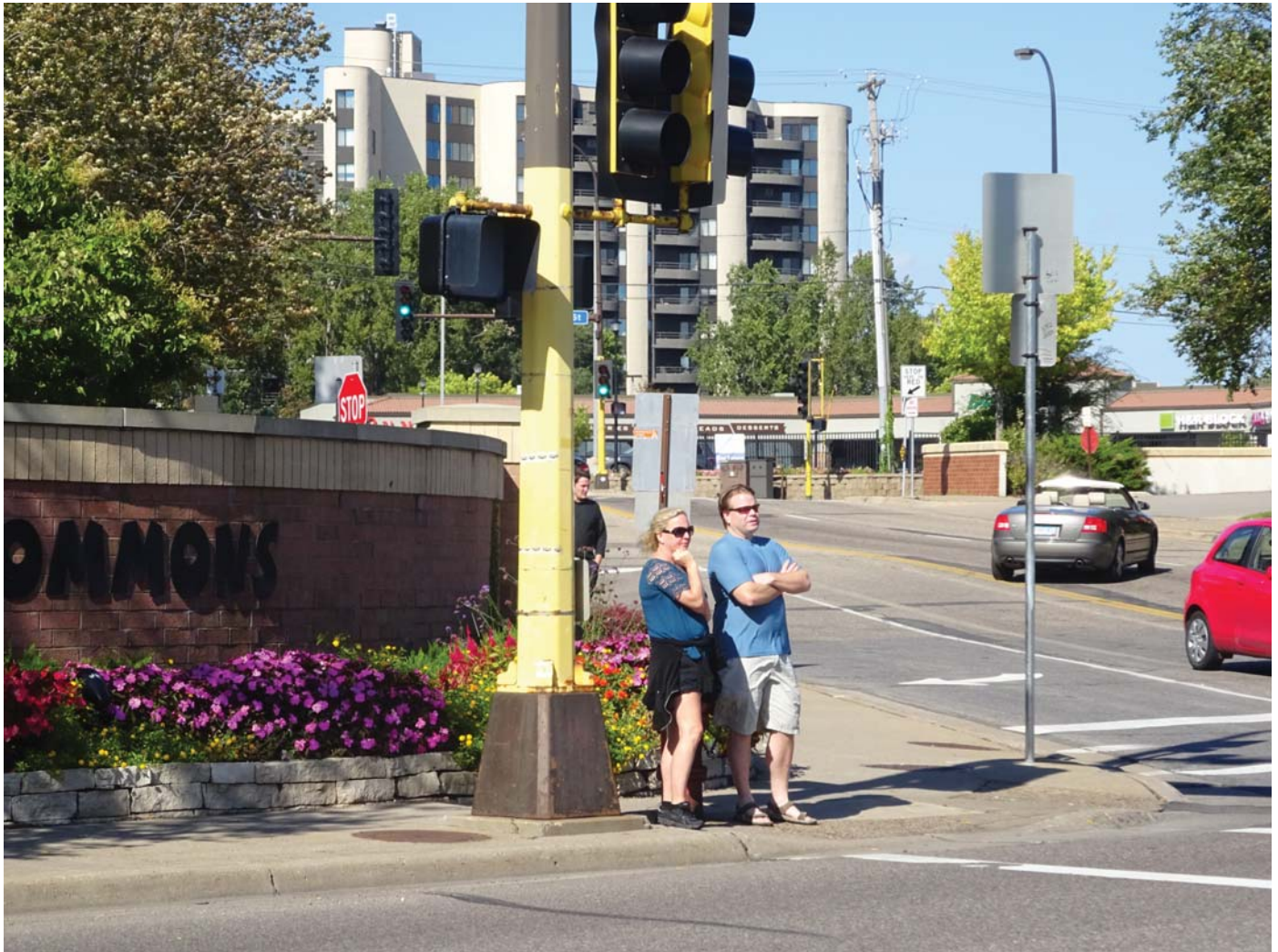
IMPLEMENTATION CONSIDERATIONS

- Realignment of eastbound West Lake Street lanes would require additional right-of-way from the adjacent property
- Coordination between Hennepin County and the City of Minneapolis is necessary
- Coordination needed as nearby redevelopment occurs

RECOMMENDATION 30 — REMOVE OBSTACLES WITHIN SIDEWALK

EXCELSIOR BOULEVARD AND LAKE STREET THROUGH STUDY AREA

As adjacent properties are redeveloped and roadway reconstruction projects occur, obstructions within the existing sidewalk, such as lights and utility poles, should be relocated to provide a more functional sidewalk with adequate clear space for pedestrians.



DISCUSSION & ANALYSIS

- The current sidewalk at the obstruction locations does not provide enough clear space for pedestrians in wheelchairs or with strollers.

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County and the City of Minneapolis is necessary
- Certain locations will also require coordination with private property and redevelopment opportunities due to existing sidewalk easements and constrained right-of-way

RECOMMENDATION 31 – PEDESTRIAN LIGHTING ALONG ROADWAY

EXCELSIOR BOULEVARD AND LAKE STREET THROUGH STUDY AREA

As adjacent properties are redeveloped and roadway reconstruction projects occur, gaps in sidewalk lighting should be completed to provide a consistent lighting of pedestrian facilities within the study area.

DISCUSSION & ANALYSIS

- Lighting provides safety benefits including illumination of the walking path to avoid tripping, visibility to vehicles along the roadway and to other path users, and increased perception of personal safety.

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County and the City of Minneapolis is necessary
- Certain locations will also require coordination with private property and redevelopment opportunities due to existing sidewalk easements and constrained right-of-way

RECOMMENDATION 32 – REALLOCATION OF RIGHT OF WAY WIDTH FOR PEDESTRIAN AMENITIES

32A: LAKE STREET (FROM MARKET PLAZA TO DEAN PARKWAY)

32B: EXCELSIOR BOULEVARD (FROM WEST 32ND STREET TO LAKE STREET)

As adjacent properties are redeveloped and roadway reconstruction projects occur, reduce travel lane widths as possible using surplus space to maximize sidewalk and boulevard widths.

DISCUSSION & ANALYSIS

- Wider sidewalks would accommodate more users and provide necessary clear space for two directional traffic.

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County and the City of Minneapolis is necessary



RECOMMENDATION 33 – REALLOCATION OF LAKE STREET RIGHT OF WAY WIDTH FOR PEDESTRIAN/BICYCLE AMENITIES

WEST LAKE STREET (FROM DEAN PARKWAY TO EAST CALHOUN PARKWAY)

Reallocate space within the existing right-of-way to enhance the pedestrian and bicycle facilities by narrowing or removing travel lanes on West Lake Street. Options include:

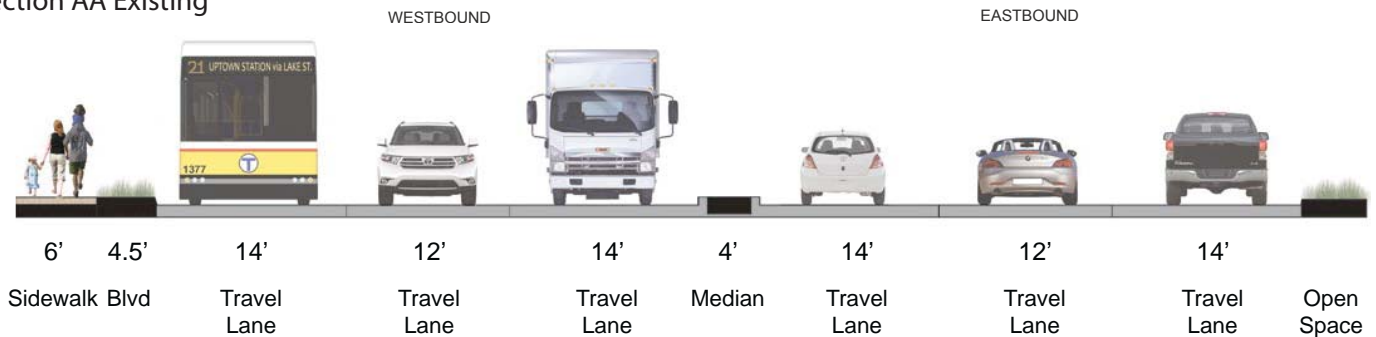
33a - Partial reconstruction of Lake Street curb lines to maintain existing number of travel lanes, but reduce all travel lane widths providing the space to the median, boulevard and trails/sidewalks as shown in Figure 4-13. Widen the median near Thomas Avenue and transition the placement of the additional width from the median to the south side, providing wider boulevard between travel lanes and sidewalk/trail on both sides of the roadway at the channel bridge near East Lake Calhoun Parkway intersection. The boulevard space may instead be used for expanded trail and/or sidewalk as needed.

FIGURE 4-13

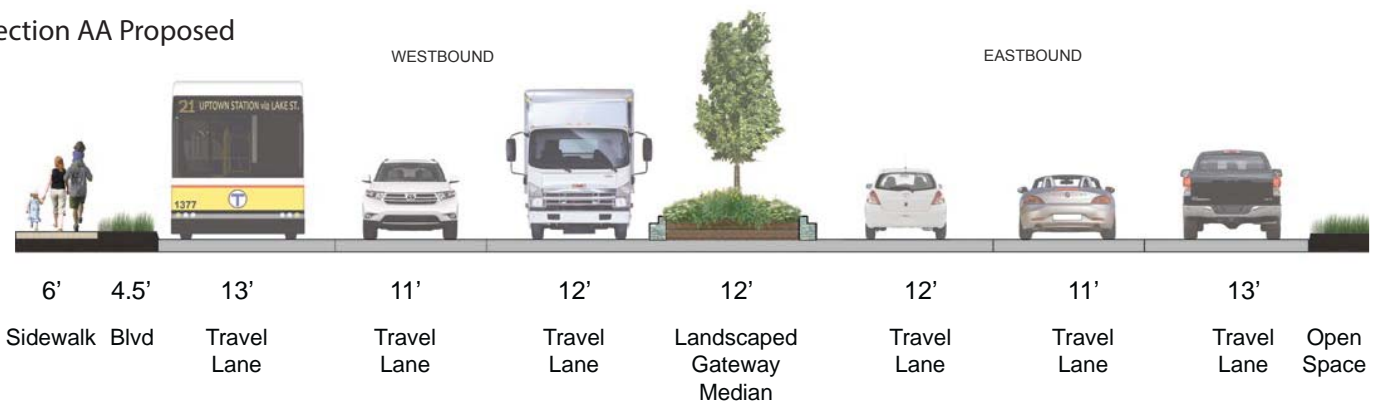
RECOMMENDATION 33A – PARTIAL RECONSTRUCTION OF LAKE STREET, 6 LANES



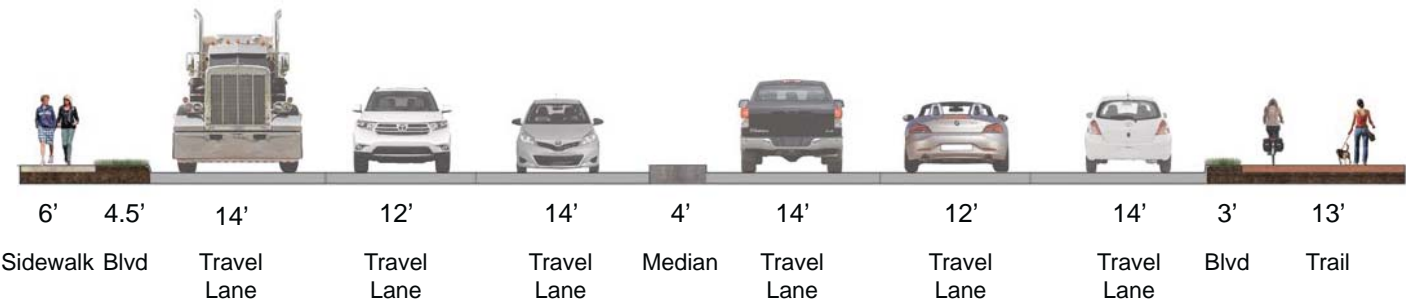
Section AA Existing



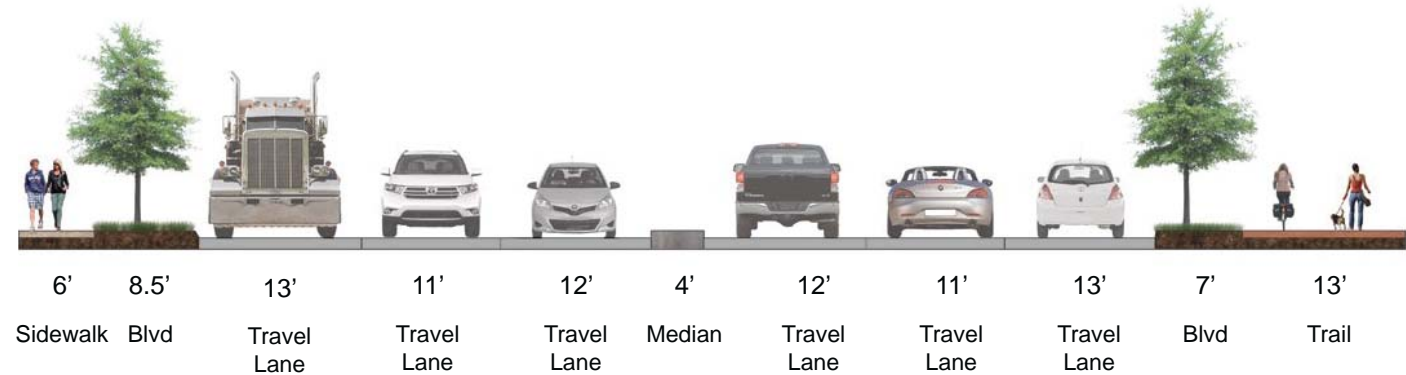
Section AA Proposed



Section BB Existing



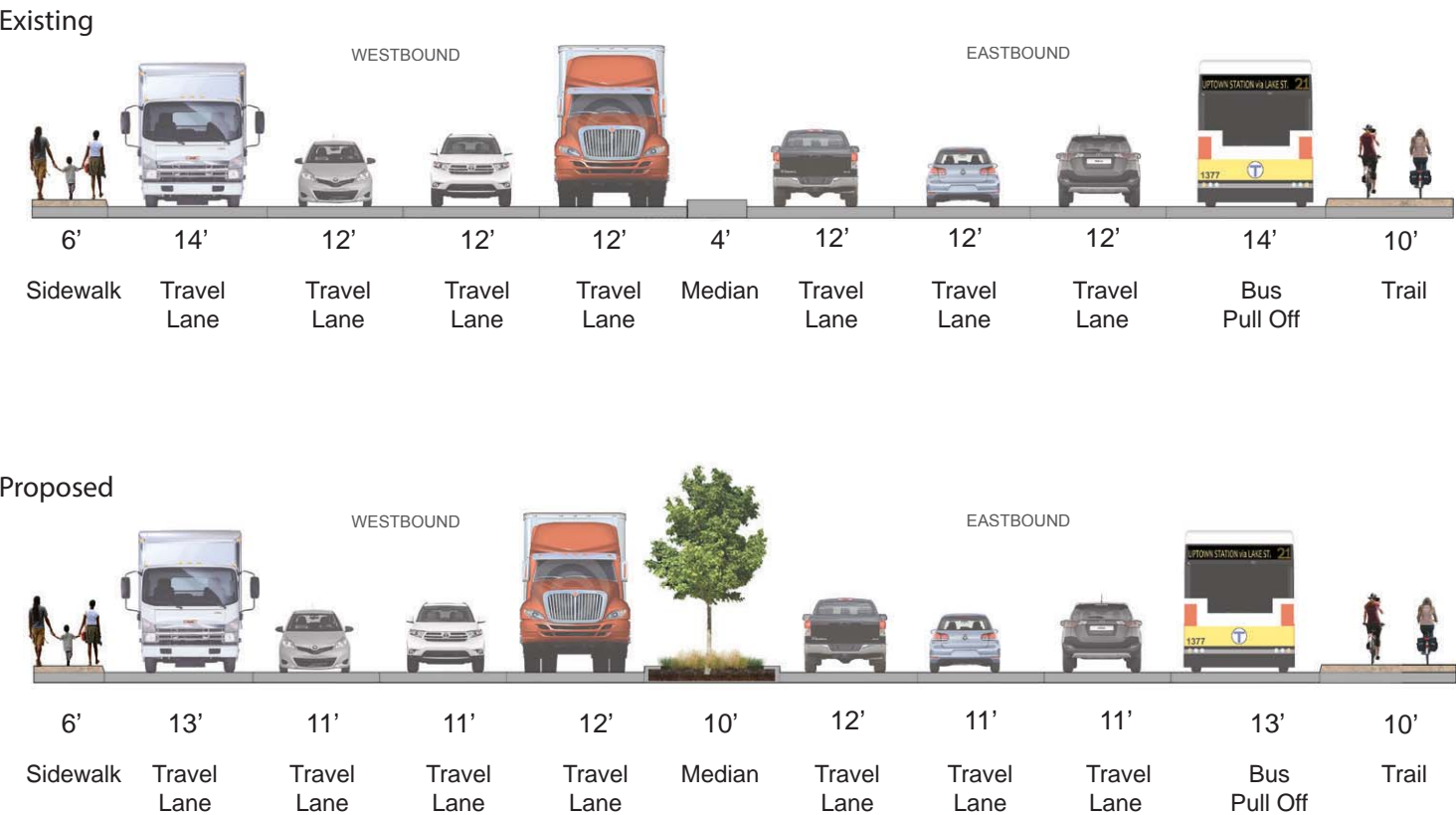
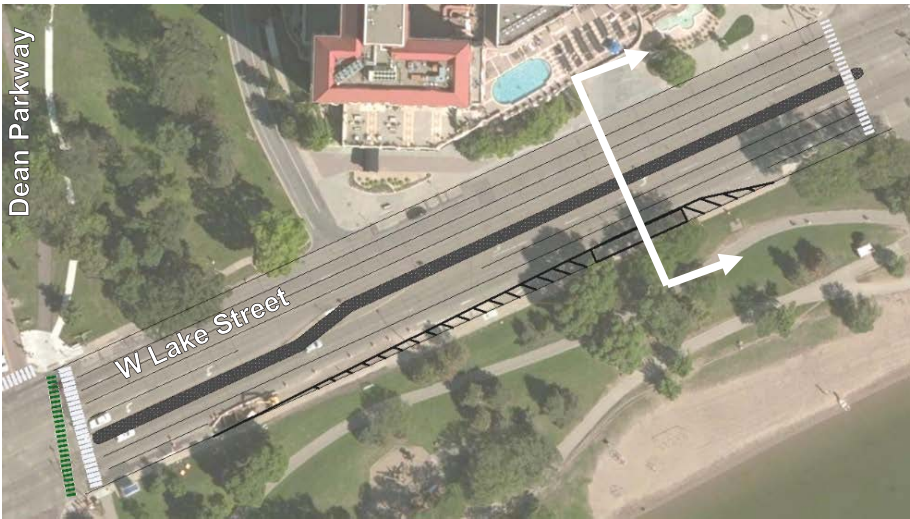
Section BB Proposed



33b - Full reconstruction of Lake Street to reduce width of all lanes on Lake Street and remove the outside eastbound lane that is currently added at Thomas Avenue.

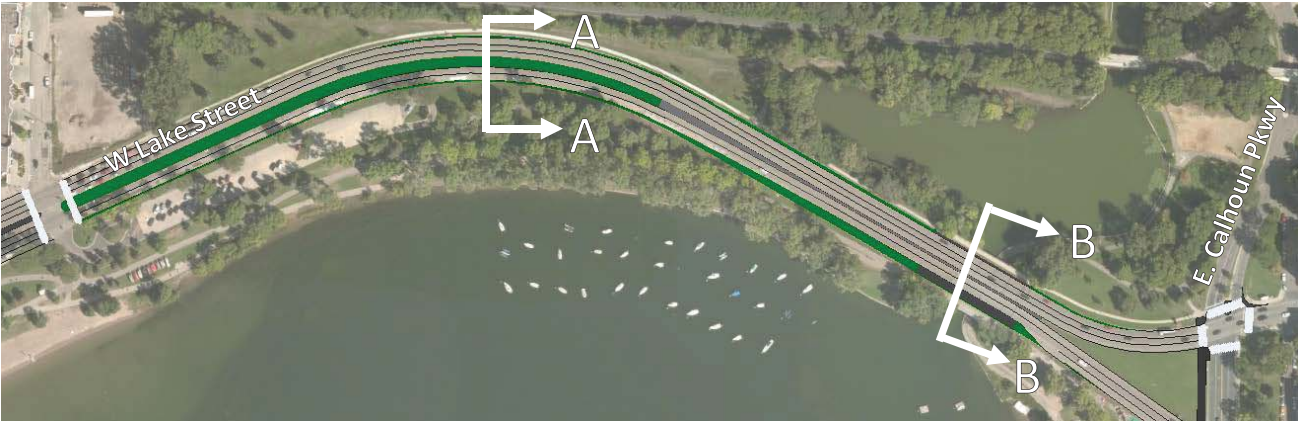
Between Dean Parkway and Thomas Avenue, the lane widths may be reduced to develop a wider median as shown in Figure 4-14, or add width to the sidewalks. The existing drop of the outside or rightmost lane in the eastbound direction is striped out as a bus stop location and a short right turn lane into the Lake Calhoun North Beach parking lot is striped. The lane width reduction could also result in the addition of a boulevard rather than a median as shown.

FIGURE 4-14
RECOMMENDATION 33B – FULL RECONSTRUCTION OF LAKE STREET: DEAN PARKWAY TO THOMAS AVENUE

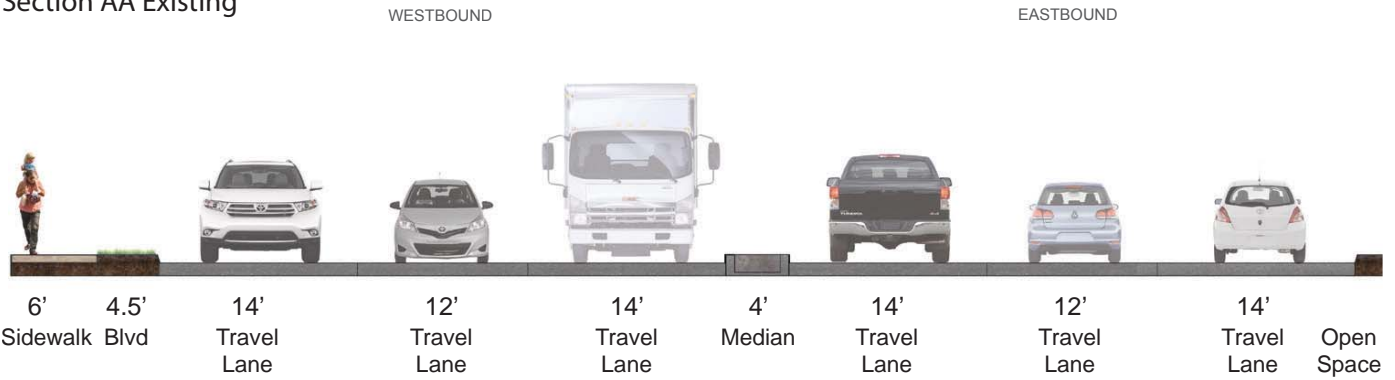


At Thomas Avenue, the existing third eastbound lane is eliminated rather than added, with the gained space allocated to a wider landscaped gateway median and a wider sidewalk and boulevard along the north side of Lake Street. The dimensions shown on Figure 4-13 balance the interests in gateway creation, traffic calming and pedestrian buffer needs, but may be further refined through the project development process. To support both substantial vertical hardscape elements and tree growth within the median, a width of 14-feet is preferred. Trees alone in a typical median require a minimum of 8-feet.

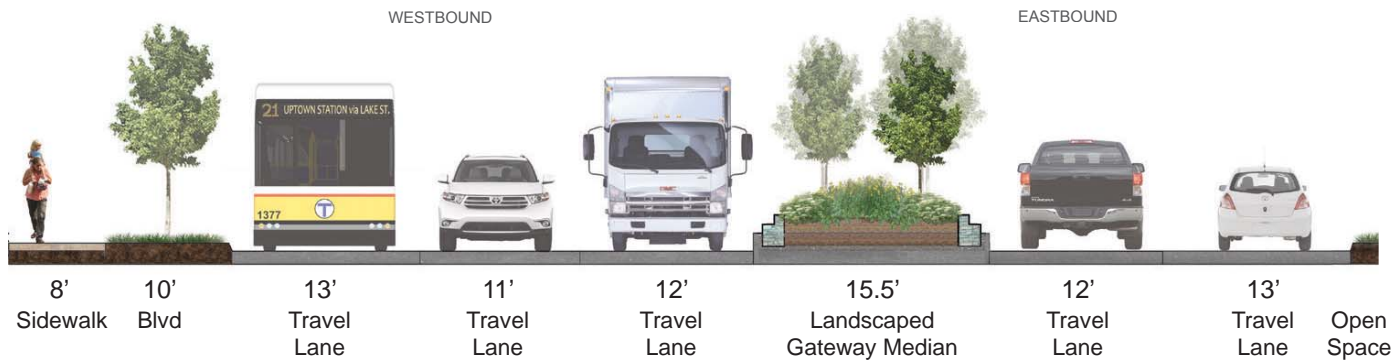
FIGURE 4-15
RECOMMENDATION 33B – FULL RECONSTRUCTION OF LAKE STREET, 5 LANES



Section AA Existing

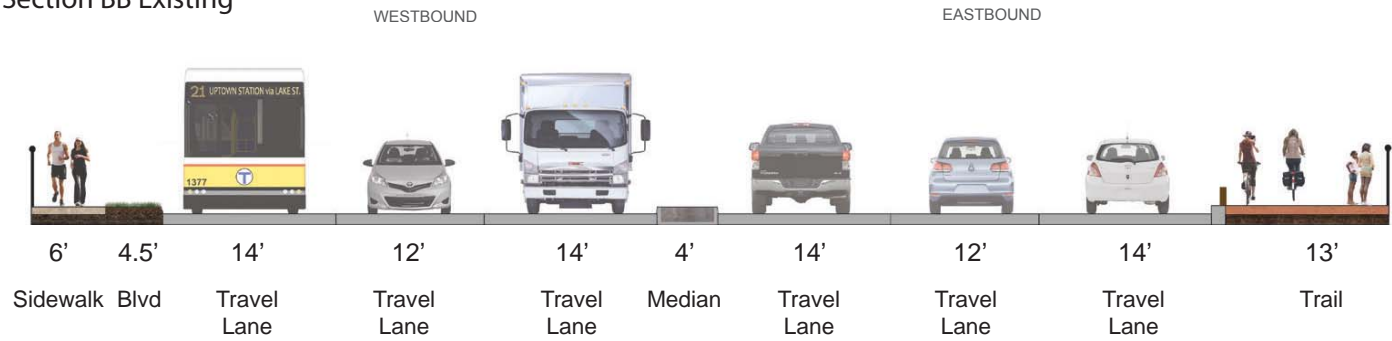


Section AA Proposed

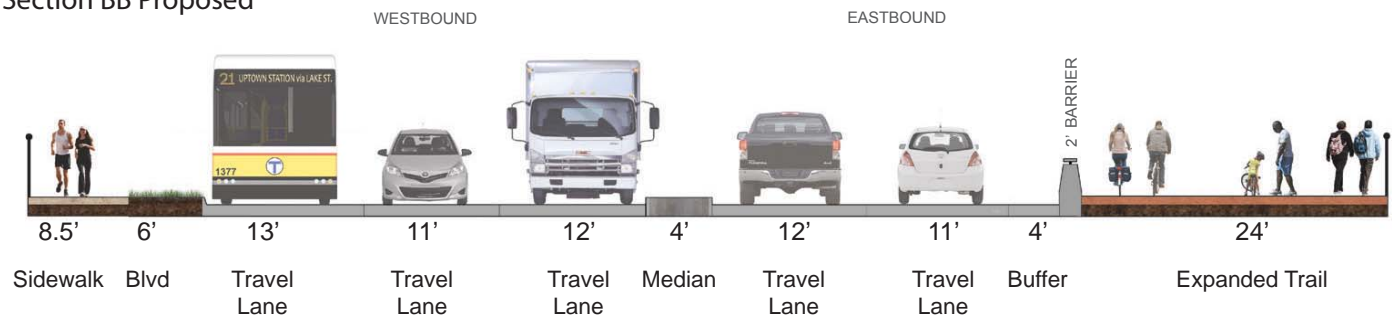


RECOMMENDATION 33B – FULL RECONSTRUCTION OF LAKE STREET, 5 LANES, CONTINUED

Section BB Existing



Section BB Proposed



Closer to the Channel Bridge, the gained space results in wider boulevard between travel lanes and sidewalk on the north side of the roadway and an expanded trail on the south side over the bridge. The trail expansion nearly doubles the trail width, going from 13-feet to 24-feet. The third lane may be added in advance of the East Lake Calhoun Parkway intersection if further analysis deems necessary. A sign bridge over westbound West Lake Street could provide directional signage for the West Lake Street and Excelsior Boulevard split.

FIGURE 4-16
RECOMMENDATION 33B – EXISTING AND PROPOSED TRAIL EXPANSION ALONG LAKE STREET CHANNEL BRIDGE



DISCUSSION & ANALYSIS

- The Lake Street road diet including lane width reduction and elimination of one lane balances the needs of autos and non-motorized modes along the major corridor in the study area
- The expanded Channel Bridge trail accommodates more trail users and provides improved trail operation at this congested trail pinch point, which is a stakeholder priority area
- A larger grass boulevard along the north sidewalk increases separation between vehicles on the roadway and pedestrians on the sidewalk and provides a more comfortable environment for pedestrians
- The addition of the landscaped gateway median, reduced lane widths and wider boulevard and trails is expected to contribute to traffic calming along the corridor
- A physical barrier adjacent to motorist lanes may reduce travel speeds of motorists along eastbound Lake Street where they are closest to bicyclists and pedestrians

Analysis

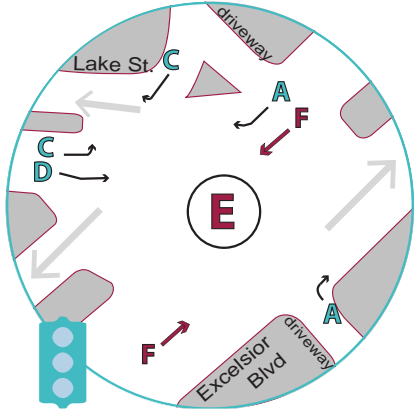
The traffic operations analysis conducted for Recommendation 33b demonstrated that the third lane in the eastbound direction may be eliminated without adverse impacts to eastbound traffic or nearby intersections. The PM peak traffic operations model was adjusted to remove the existing “lane-add” condition just east of Thomas Avenue and traffic signal timings were optimized with the existing cycle length. The LOS results of this concept are compared in Figure 4-17 to the 2040 No Build condition.

The removal of the third eastbound lane in conjunction with the signal timing reoptimization (with Dean Parkway signal phasing Recommendation 16) results in improved intersection LOS at four of the five nearby intersections. The East Calhoun Parkway intersection maintained LOS C across both conditions. The detailed traffic operations analysis tables showing the delay by movement can be found in Appendix A. (See Inventory & Analysis Report for complete details on all traffic analysis.)

FIGURE 4-17
2040 TRAFFIC ANALYSIS LAKE STREET NO BUILD AND FULL RECONSTRUCTION COMPARISON

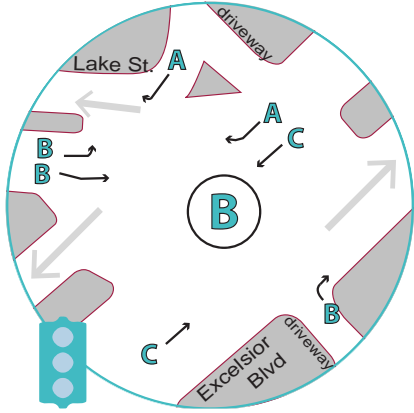
NO BUILD

14 LAKE ST. & EXCELSIOR BLVD

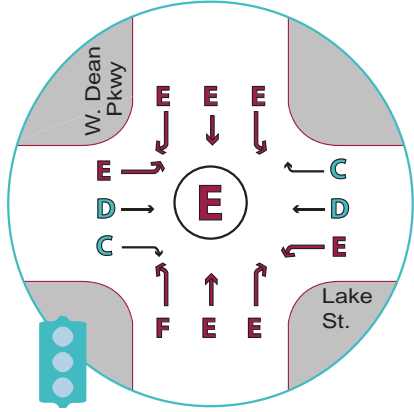


BUILD

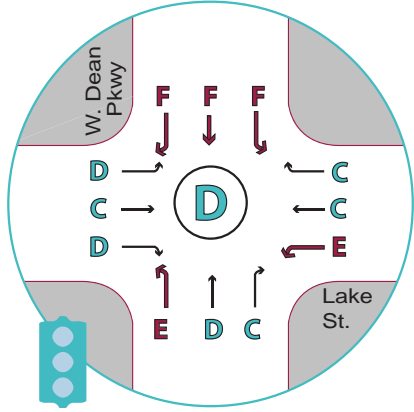
14 LAKE ST. & EXCELSIOR BLVD



15 LAKE STREET & W. DEAN PARKWAY



15 LAKE STREET & W. DEAN PARKWAY



Key

AM Intersection

E

OVERALL INTERSECTION
LEVEL OF SERVICE (LOS)

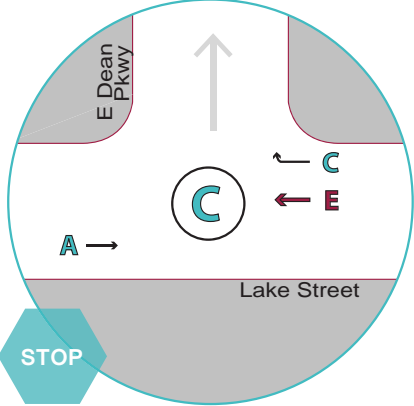
E

MOVEMENT LOS, E OR F

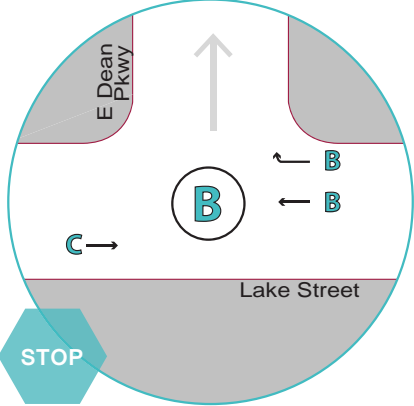
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VEHICLE MOVEMENT

17 LAKE STREET & EAST DEAN PARKWAY



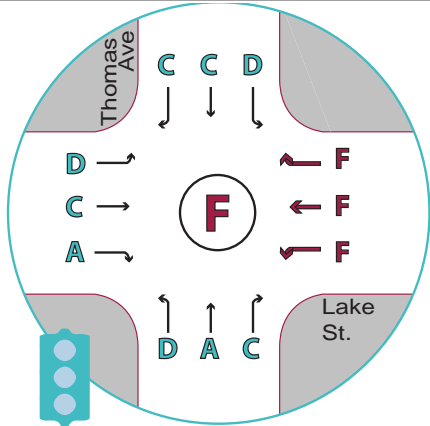
17 LAKE STREET & EAST DEAN PARKWAY



2040 TRAFFIC ANALYSIS LAKE STREET NO BUILD AND FULL RECONSTRUCTION COMPARISON. CONTINUED

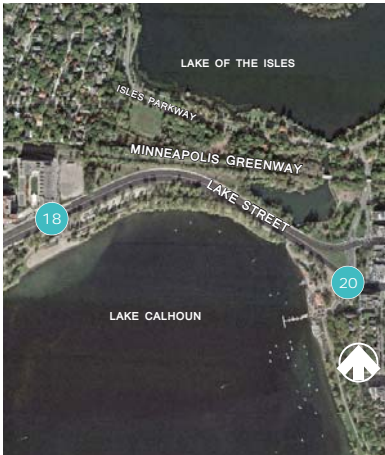
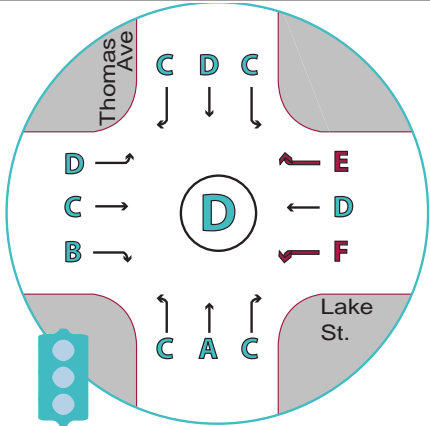
NO BUILD

18 LAKE STREET & THOMAS AVENUE

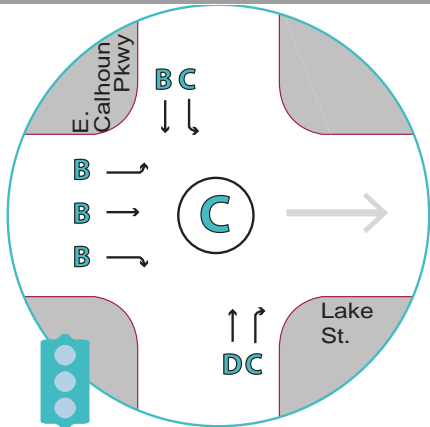


BUILD

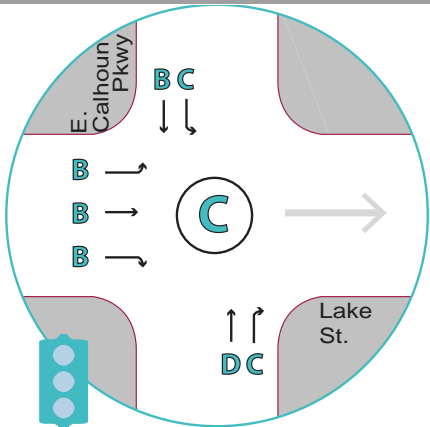
18 LAKE STREET & THOMAS AVENUE



20 LAKE STREET & EAST CALHOUN PARKWAY



20 LAKE STREET & EAST CALHOUN PARKWAY



Key

AM Intersection

E OVERALL INTERSECTION LEVEL OF SERVICE (LOS)

E MOVEMENT LOS, E or F

↵ ↶ ↷ VEHICLE MOVEMENT

IMPLEMENTATION CONSIDERATIONS

- Modifications to the existing trail, boulevard and sidewalk along the Channel Bridge may necessitate historic review (including design of new barrier adjacent to the travel lanes)
- Coordination between Hennepin County, Minneapolis Park and Recreation Board and the City of Minneapolis is necessary

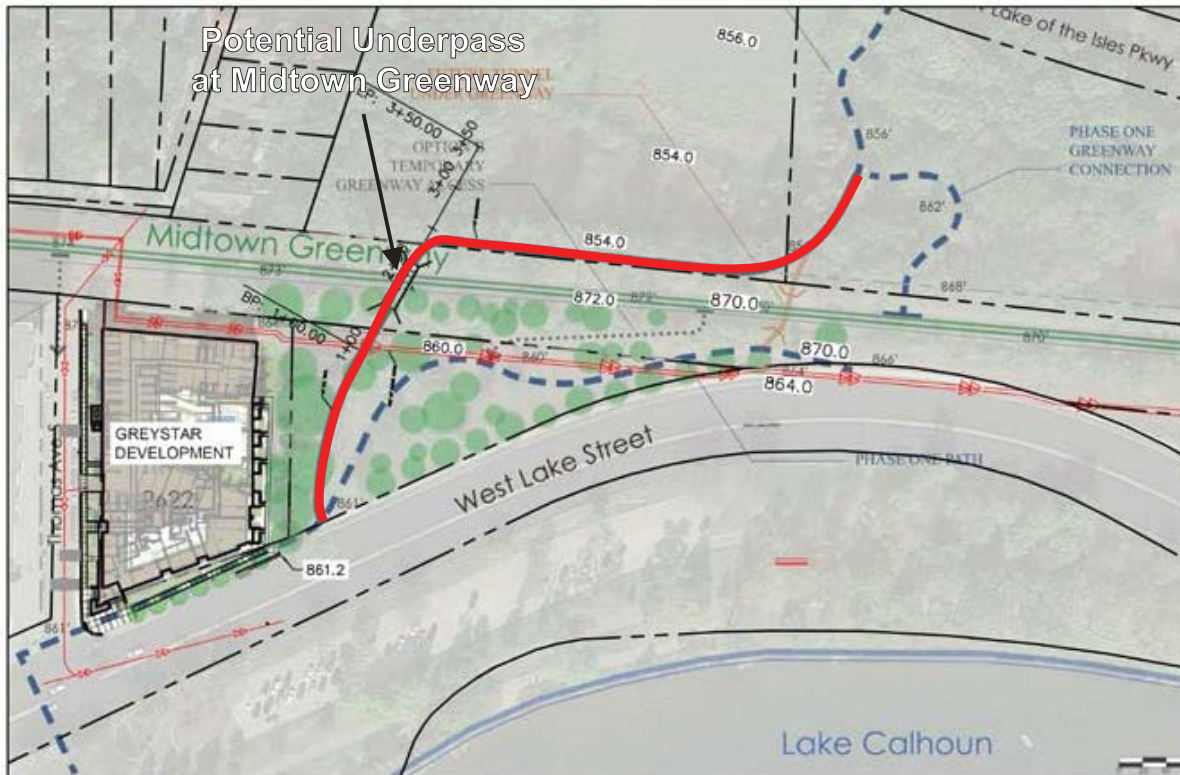
RECOMMENDATION 34 – ISLES TO CALHOUN TRAIL CONNECTION

BETWEEN LAKE STREET AND WEST LAKE OF THE ISLES PARKWAY, EAST OF THOMAS AVENUE

Trail connection between Lake Street, the Midtown Greenway and West Lake of the Isles Parkway through private property. Would include an underpass of trail and potential future transit corridor along the Midtown Greenway.

FIGURE 4-18

RECOMMENDATION 34 – ISLES TO CALHOUN TRAIL CONNECTION



DISCUSSION & ANALYSIS

- The concept provides a connection between the Lake of the Isles, Midtown Greenway and Lake Calhoun trail systems and was developed as part of the 2622 West Lake Street or Greystar Development Project
- CIDNA worked with the engineers and consultants for Greystar to develop an improved concept for a tunnel under the Midtown Greenway
- Concept provides connectivity at a location which requires minimum use of Hennepin County Regional Rail Authority (HCRRRA) property taking trail users along the north side of the Midtown Greenway berm farther away from Lake Street traffic where wetland nature could be observed

IMPLEMENTATION CONSIDERATIONS

- The improvements include private property and coordination would be required with property owners for implementation
- Coordination between Hennepin County, Minneapolis Park and Recreation Board, and the City of Minneapolis is also necessary

RECOMMENDATION 35 – NEW SIDEWALK

ST. PAUL AVENUE

Add sidewalk along St. Paul Avenue to provide continuous sidewalk along street in the area of Cedar Lake Parkway and Sunset Boulevard. See Figure 5-5 which includes this location as well as other recommendations.

DISCUSSION & ANALYSIS

- Providing continuous sidewalk connections encourages pedestrian use along roadways and eliminates the need for pedestrians to use travel lanes

IMPLEMENTATION CONSIDERATIONS

- Coordination with adjacent private property owners and City of Minneapolis
- Consideration for funding of system sidewalk gaps, currently 100% assessed

RECOMMENDATION 36 – CROSSWALK MARKINGS

EAST CALHOUN BOAT LAUNCH DRIVEWAY

Use distinctive pavement markings to distinguish pedestrian path from bicycle path as the trails cross the East Calhoun Boat Launch driveway.

Figure 4-19 shows the location of this improvement as well as nine other recommendations for the area between Lake Calhoun/Lake of the Isles and East Calhoun Parkway.

FIGURE 4-19

RECOMMENDATIONS 36 THROUGH 44 – EAST CALHOUN AREA IMPROVEMENTS



DISCUSSION & ANALYSIS

- Enhanced crosswalk markings alert motorists to locations where conflicts between bicyclist, pedestrians and automobiles would be most likely occur
- Clearly delineated pedestrian and bicycle crossings minimizes conflicts between the two trail users and dedicates space to each

IMPLEMENTATION CONSIDERATIONS

- Coordination with the Minneapolis Park and Recreation Board is necessary

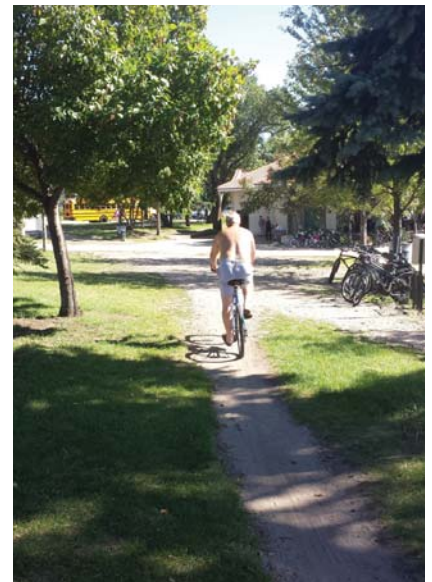
RECOMMENDATION 37 – TRAIL REALIGNMENT

LAKE CALHOUN TRAILS SOUTH TO WEST LAKE STREET ON THE WEST SIDE OF EAST CALHOUN PARKWAY

Realign “through” bicycle trail to be closer to the southernmost pedestrian trail, widening the pedestrian and bicycle trail intersection, and eliminating the middle pedestrian and bicycle trails leaving a share used trail along West Lake Street and the pedestrian and bicycle only trails along Lake Calhoun.

FIGURE 4-20

RECOMMENDATION 37 - TRAIL REALIGNMENT



DISCUSSION & ANALYSIS

- Eliminating redundant trails and simplifying the remaining trail system will provide for better compliance on the bicycle and pedestrian only paths and easier travel to destinations.

IMPLEMENTATION CONSIDERATIONS

- These recommendations are on park property and will need to be coordinated and implemented through the Minneapolis Park and Recreation Board

RECOMMENDATION 38 — TRAIL LIGHTING UNDER BRIDGES

LAKE CALHOUN AND LAKE OF THE ISLES TRAIL SYSTEM AROUND WEST LAKE STREET

Provide additional lighting for the trails under the West Lake Street, Midtown Greenway and West Lake of the Isles Parkway bridges.



DISCUSSION & ANALYSIS

- Lighting provides safety benefits such as illumination of the biking path to avoid obstructions, visibility to other path users, and increased perception of personal safety

IMPLEMENTATION CONSIDERATIONS

- These recommendations are on park property and will need to be coordinated and implemented through the Minneapolis Park and Recreation Board
- Additional lighting under the Channel Bridge may necessitate historic review

RECOMMENDATION 39 — TRAIL LIGHTING WITHIN PARK

LAKE OF THE ISLES TRAILS, NORTH OF LAKE STREET

Provide additional trail lighting along the Lake of the Isles trails between West Lake Street and West Lake of the Isles Parkway.

DISCUSSION & ANALYSIS

- Lighting provides safety benefits such illumination of the biking path to avoid obstructions, visibility to other path users, and increased perception of personal safety

IMPLEMENTATION CONSIDERATIONS

- These recommendations are on park property and will need to be coordinated and implemented through the Minneapolis Park and Recreation Board

RECOMMENDATION 40 — ISLES-CALHOUN WAYFINDING

CALHOUN LAKE AND LAKE OF THE ISLES TRAIL SYSTEMS NEAR LAKE STREET/EAST LAKE CALHOUN PARKWAY

Improve wayfinding between the various bicycle-only and pedestrian only trails and pathways to not only distinguish between the types of trails, but to direct to nearby amenities and features.

DISCUSSION & ANALYSIS

- Providing better wayfinding and markings on the trail system will provide for better compliance on the bicycle and pedestrian only paths and easier travel to destinations

IMPLEMENTATION CONSIDERATIONS

- These recommendations are on park property and will need to be coordinated and implemented through the Minneapolis Park and Recreation Board

RECOMMENDATION 41 – NEW PEDESTRIAN ONLY TRAIL

ADJACENT TO EAST LAKE CALHOUN PARKWAY BETWEEN WEST LAKE OF THE ISLES PARKWAY AND LAGOON AVENUE

Provide a pedestrian-only trail adjacent to the bicycle-only trail on the west side of E Lake Calhoun Parkway between West Lake Street and the lagoon area pedestrian path connection.

DISCUSSION & ANALYSIS

- Completes an existing gap in the trail network improving connectivity and delineation of the bicycle and pedestrian trails in the area

IMPLEMENTATION CONSIDERATIONS

- Coordination with the Minneapolis Park and Recreation Board and the Calhoun-Harriet Master Plan and Improvements is necessary

FIGURE 4-21

RECOMMENDATIONS 41 – NEW PEDESTRIAN ONLY TRAIL



RECOMMENDATION 42 – GREEN BICYCLE PAVEMENT MARKINGS

BICYCLE TRAIL CROSSING OF LAKE CALHOUN BOAT LAUNCH DRIVEWAY

Use green pavement markings for bicycle crosswalk at the Lake Calhoun Boat Launch driveway.

DISCUSSION & ANALYSIS

- Green pavement markings further delineate bicycle-only facilities from the pedestrian crosswalk highlighting the crossing of faster moving users
- Enhanced crosswalk markings would alert drivers to locations where conflicts between bicyclist and automobiles would be most likely occur

IMPLEMENTATION CONSIDERATIONS

- These recommendations are on park property and will need to be coordinated and implemented through the Minneapolis Park and Recreation Board

RECOMMENDATION 43 – UPDATE PEDESTRIAN TRAIL CROSSWALK

PEDESTRIAN TRAIL CROSSING OF LAKE CALHOUN BOAT LAUNCH DRIVEWAY

Improve pedestrian trail crossing at the Lake Calhoun Boat Launch driveway by providing a pedestrian curb ramp and enhanced crosswalks, using poly-preform markings and continental design.

DISCUSSION & ANALYSIS

- Enhanced crosswalk markings would alert drivers to locations where conflicts between bicyclist, pedestrians and automobiles would be most likely occur.
- Use of the continental design for crosswalk markings also improves crosswalk detection for people with low vision and cognitive impairments

IMPLEMENTATION CONSIDERATIONS

- These recommendations are on park property and will need to be coordinated and implemented through the Minneapolis Park and Recreation Board

RECOMMENDATION 44 – NEW SIDEWALK

WEST SIDE OF EAST CALHOUN PARKWAY (DRIVEWAY TO 31ST STREET)

Add a new sidewalk along the west side of East Calhoun Parkway between the Lake Calhoun Boat Launch Driveway to 31st Street.

DISCUSSION & ANALYSIS

- Provides for the missing ADA accessible connection along existing “goat path” to Lake Calhoun, in particular to the boat launch for those parked along East Calhoun Parkway
- Provides connection for the neighborhood along Lake Calhoun

IMPLEMENTATION CONSIDERATIONS

- Coordination with the Minneapolis Park and Recreation Board and the Calhoun-Harriet Master Plan and Improvements is necessary
- The east side of the parkway has a significant grade differential and slope stabilization issues to consider to accommodate a sidewalk

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5. PLANNING HORIZON RECOMMENDATIONS



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5.0 PLANNING HORIZON RECOMMENDATIONS

The planning horizon recommendations include improvements that are larger in nature, typically requiring further study and coordination. These improvements have no timetable for implementation but potential to be considered as part of longer term planning efforts. Planning horizon recommendations include E, F, and 45 through 50.

FIGURE 5-1
PLANNING HORIZON RECOMMENDATION LOCATIONS



TABLE 5-1
PLANNING HORIZON RECOMMENDATIONS

ID	Location	Improvement	Agency*	Estimated Cost**
E	Implement Planned Minneapolis Bikeways - France, Burnham, Sunset Blvd, and Ewing	Implement Planned Minneapolis Bikeways (time with other pavement projects). Connect to existing trails near Cedar Lake Avenue.	MPLS	NA
F	Study Area	Gateway treatments or transitions	HC/MPLS/MPRB	NA
45	Calhoun Commons/Market Plaza driveway	Improve sidewalk crossing Calhoun Commons Driveway (coordination with private property)	MPLS	\$18,000
46	France/Lake Intersection	Further study required to reduce lane widths, improve bike/pedestrian crossings	HC/MPLS	NA
47	Cedar Lake Pkwy/Sunset/Cedar Lk Rd	Coordinate with Metro Transit to remove Depot Street connection to Cedar Lake Pkwy	MPLS/MPRB/MT	\$5,000
48	Midtown Greenway - Dean - Calhoun Village	Further study required to determine the potential to add north-south pedestrian connections to Midtown Greenway (consistent with streetcar plans) *ROW NEEDED	MPLS/HC	NA
49	Midtown Greenway - Dean - Calhoun Village	Further study required to determine the potential to add a parallel path south of the Midtown Greenway and future streetcar alignment (consistent with streetcar plans) *ROW NEEDED	MPLS/HC	NA
50	Lake Street	Study opportunities to further develop the "Lid" concept which provides a land bridge over Lake Street	MPLS/MPRB	NA

*Listed agencies are assumed partners for identified improvement.

**Estimated costs include 30% contingency in 2015 dollars without engineering fees.

MPLS = Minneapolis MT = Metro Transit HC = Hennepin County TR = Three Rivers Park Dist. MPPB = Minneapolis Park and Recreation Board

RECOMMENDATION E – IMPLEMENT BICYCLE PLAN

FRANCE, BURNHAM, SUNSET AND EWING

In conjunction with related pavement projects implement the planned Minneapolis bikeways throughout the study area. This recommendation includes connecting the Sunset Boulevard bikeway to the existing trails near Cedar Lake Avenue via a marked bicycle crossing and ramp access locations. See Figure 5-5 which includes this location as well as other recommendations.

DISCUSSION & ANALYSIS

- Completion of the bicycle network including the filling of system gaps will benefit the entire multimodal transportation system

IMPLEMENTATION CONSIDERATIONS

- Coordination between Hennepin County, the Minneapolis Park and Recreation Board, City of St. Louis Park and City of Minneapolis is necessary

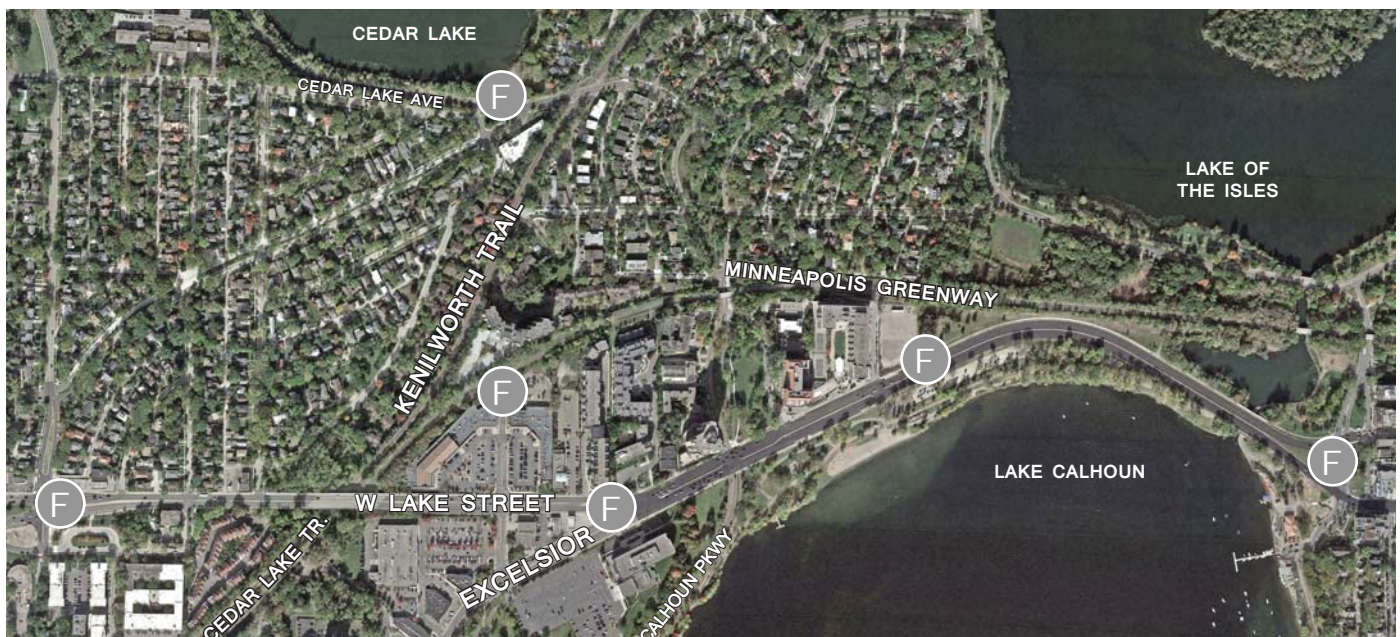
RECOMMENDATION F – GATEWAYS

STUDY AREA

The study area is one of the most vibrant places in the City of Minneapolis and also one of the most popular destinations in the state. The area's wealth of ecological and recreational resources is renowned and includes segments of the Grand Rounds National Scenic Byway.

The significance of this place cannot be overstated and is worthy of gateway treatments that communicate the area's identity, provide opportunities for interpretation, and transition people as they traverse the area. Gateways may include treatments such as intensive landscaping elements, large scale public art works, programmable lighting features, decorative pylons or columns of masonry, glass, and steel.

FIGURE 5-2
RECOMMENDATION F - GATEWAY LOCATIONS



DISCUSSION & ANALYSIS

- Strengthen district identity and community pride
- Provide additional wayfinding
- Support traffic calming functions

IMPLEMENTATION CONSIDERATIONS

- Coordination with the Minneapolis Park and Recreation Board's current Calhoun-Harriet Master Plan and Improvements and the City of Minneapolis is necessary
- Must be appropriately scaled to both the pathway they are on (major street, local road, trail, etc.) and the scale and orientation of buildings in the area they are entering (large buildings, smaller historic district, confluence of major features, etc.)
- Coordination between Hennepin County, the Minneapolis Park and Recreation Board and City of Minneapolis is necessary

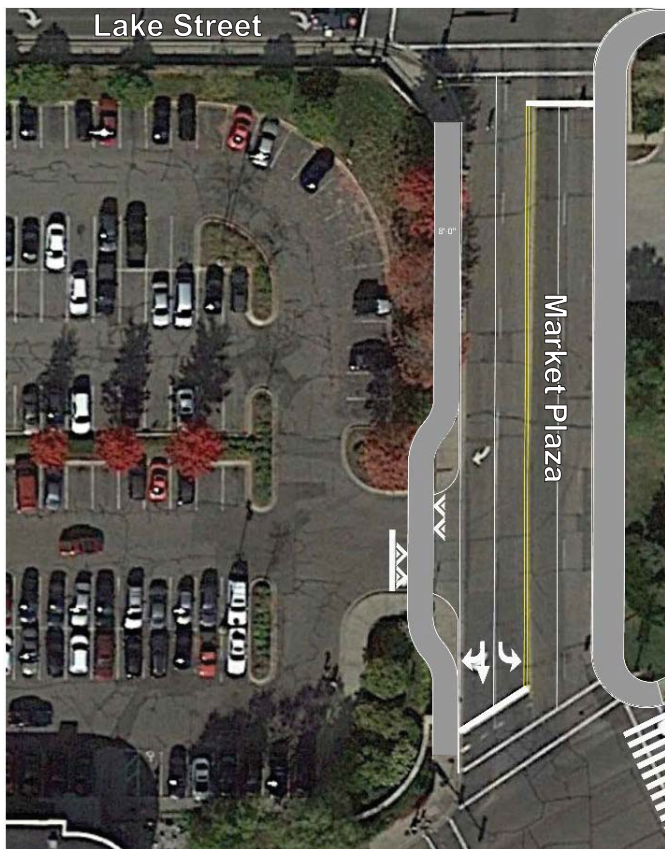


RECOMMENDATION 45 – CALHOUN COMMONS CROSSWALK

INTERSECTION OF MARKET PLAZA AND CALHOUN COMMONS DRIVEWAY

Realign the sidewalk on the west side of Market Plaza to shift to the west as it crosses the driveway into the Calhoun Commons shopping area. Realignment of the sidewalk would allow for a raised crosswalk section across the driveway.

FIGURE 5-3
RECOMMENDATION 45 – CALHOUN COMMONS CROSSWALK



DISCUSSION & ANALYSIS

- A raised crosswalk increases visibility of pedestrians and bicyclists and improves sense of right of way
- The setback location of the crosswalk places the pedestrian in the line of sight of the turning motorist
- The setback location of the crosswalk has the motorist stopping first for the pedestrian, and second to enter traffic
- Enhanced crosswalk markings alerts motorists to locations where conflicts between bicyclist, pedestrians and automobiles would be most likely occur.

Traffic Analysis

The Calhoun Commons Driveway at Market Plaza was reviewed to determine what improvements might be made to the conflicts between motorists and pedestrians crossing the driveway along the sidewalk. The work included review of traffic patterns, operational analysis and geometric analysis. The viability of modifying the access to right-in and right-out operation was reviewed as part of this effort.

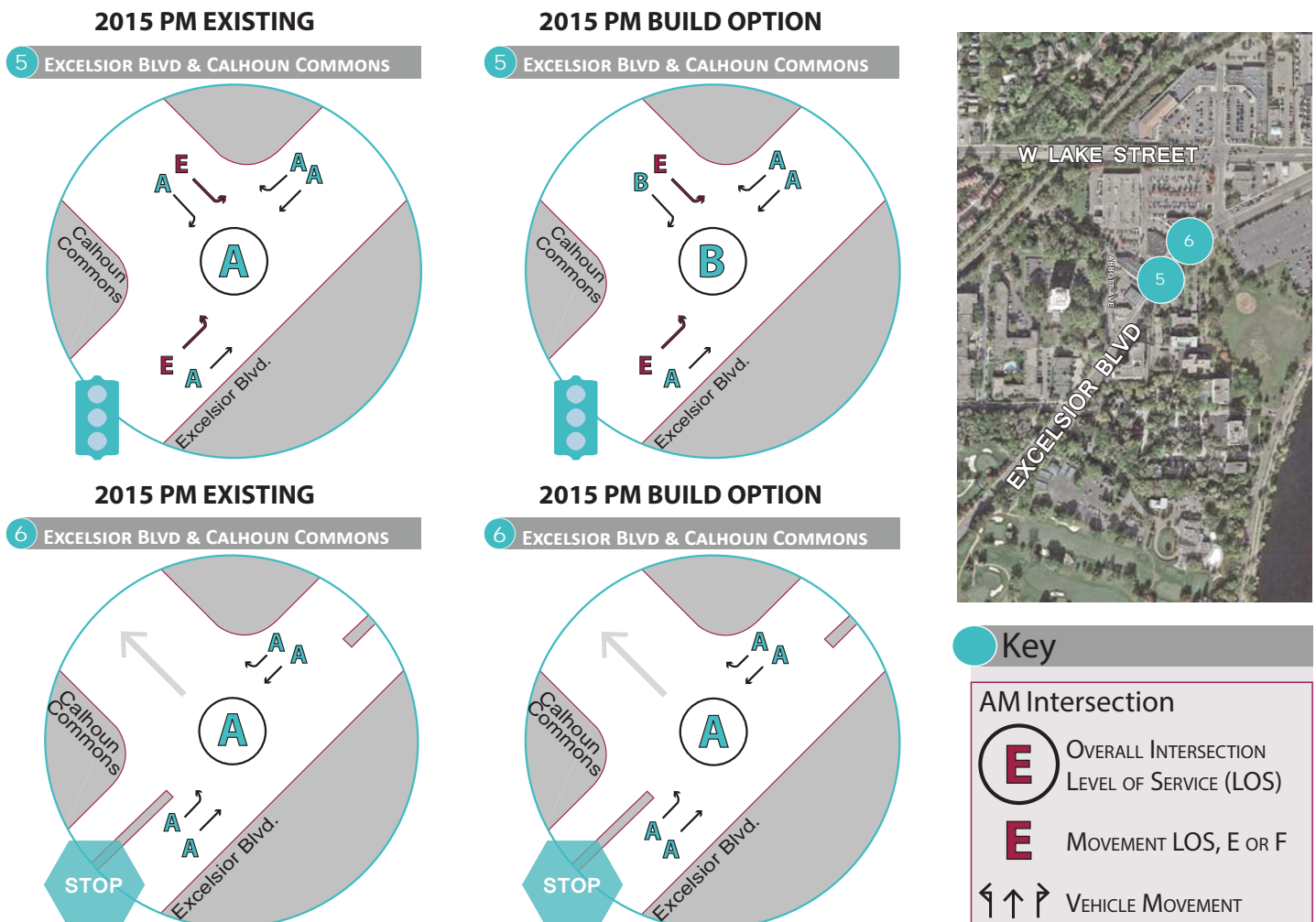
Counts were completed of the PM peak traffic at the intersection including origin-destination counts of the left-turning autos exiting the driveway to record their next turn at the Lake Street and Market Plaza intersection. It was learned that the motorists split as follows:

- 42% turn left onto Lake Street (104 vehicles)
- 3% travel straight to Calhoun Village (6 vehicles)
- 55% turn right onto Lake Street (190 vehicles)

This data was comparable to that obtained by neighborhood stakeholders who expressed interest in providing improved wayfinding at Calhoun Commons to better balance the distribution of motorists at intersections and reduce conflicts at the driveway and the short Market Plaza link.

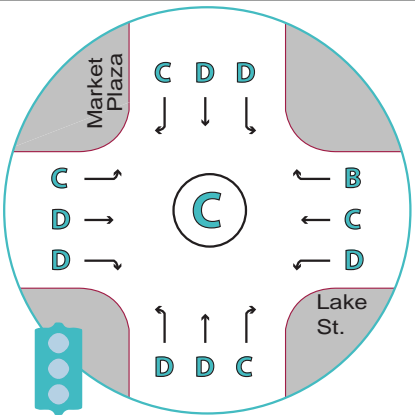
The right-in/right out driveway concept was modeled with the traffic volume redistributed to the network based on the data obtained. Figure 5-4 shows the comparison of LOS between the existing condition and the right-in/right-out condition. (See Inventory & Analysis Report for complete details on all traffic analysis.)

FIGURE 5-4
COMPARISON OF EXISTING ACCESS & POTENTIAL RIGHT-IN/RIGHT-OUT AT CALHOUN COMMONS/MARKET PLAZA

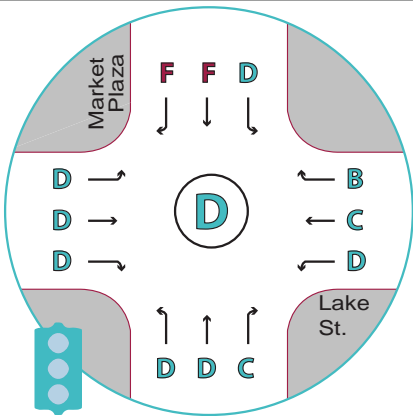


COMPARISON OF EXISTING ACCESS & POTENTIAL RIGHT-IN/RIGHT-OUT, CONTINUED

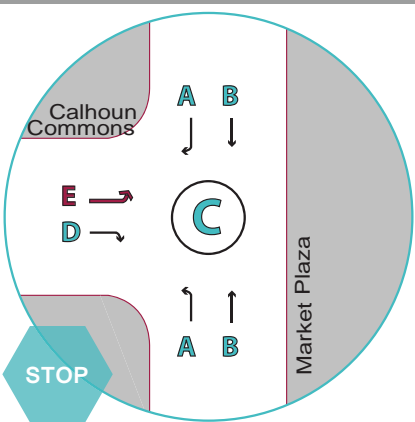
2015 PM EXISTING
7 MARKET PLAZA & LAKE STREET



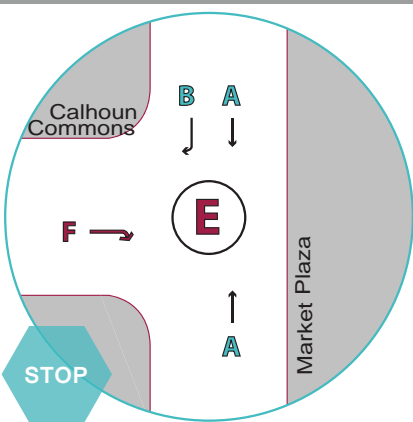
2015 PM BUILD OPTION
7 MARKET PLAZA & LAKE STREET



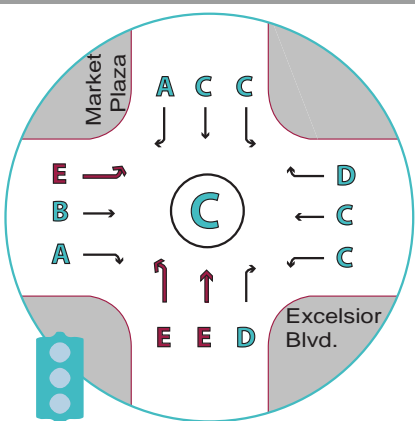
2015 PM EXISTING
8 MARKET PLAZA & CALHOUN COMMONS



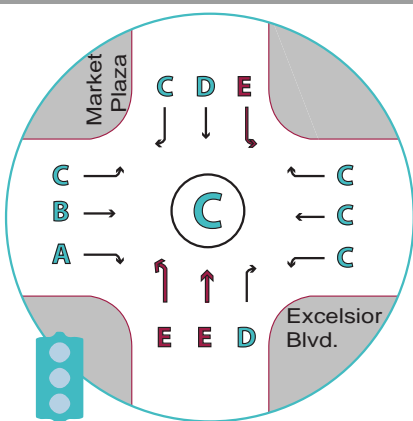
2015 PM BUILD OPTION
8 MARKET PLAZA & CALHOUN COMMONS



2015 PM EXISTING
9 MARKET PLAZA & EXCELSIOR BLVD



2015 PM BUILD OPTION
9 MARKET PLAZA & EXCELSIOR BLVD



Key

AM Intersection

- E** OVERALL INTERSECTION LEVEL OF SERVICE (LOS)
- E** MOVEMENT LOS, E OR F
- ↵ ↗ ↘ VEHICLE MOVEMENT

The model results showed operational issues occurred due to the additional volume at the southbound left turn from Market Plaza onto Excelsior Boulevard (Intersection 9). The southbound left-turn at Market Plaza operates at LOS E with an average queue of 100-feet. This movement under existing conditions operates at LOS C.

The queue at the southbound left turn blocks the Calhoun Commons driveway resulting in the exiting right-turn traffic from the driveway being unable to enter Market Plaza. This right-turn movement is at LOS F with an average delay of 297 seconds per vehicle and an average queue of 240-feet.

The alternate exit for Calhoun Commons is at Intersection 5, the signalized intersection of Excelsior Boulevard and Calhoun Commons. The exiting left turn operates at LOS E under both existing and proposed conditions. Distribution of more traffic to this intersection from the Market Plaza driveway is likely to result in LOS F for the left turn movement.

The results indicate that the right-in/right-out driveway concept does not work well from an operational perspective. Though it should be noted that extension of the eastbound left turn lane at Excelsior Boulevard/Market Plaza did show an improvement in operation despite the additional volume distributed under the right-in/right-out concept. The extension of the eastbound left-turn lane is simply a striping project and is Recommendation 14, a near term recommendation.

Geometric Analysis

The Calhoun Commons Driveway intersection with Market Plaza was also reviewed to determine if a right-in/right-out island treatment could be developed. Due to the minimal right-of-way, the island would be located across the entire sidewalk so ADA requirements would need to be addressed limiting the island's curb height. Without a higher curb, the island could easily be driven over by motorists, therefore not deterring inbound or outbound traffic from turning left across it. This could cause unexpected turning vehicles, and therefore an unsafe condition at the intersection. It was determined that a right-in/right out treatment would not be recommended.

Final Recommendation

Following the analysis of the right-in/right-out treatments, the driveway intersection was reviewed to determine what alternative treatments might improve the safety of crossing pedestrians at the intersection. The recommended treatment to set the pedestrian crossing of the driveway back from the sidewalk alignment with a raised crosswalk and markings improves the visibility of pedestrians to entering and exiting motorists.

IMPLEMENTATION CONSIDERATIONS

- The realignment of the sidewalk would impact fencing and landscaping space on private property and would require coordination with property owners to implement, or done potentially in conjunction with redevelopment on the site
- Review of the on-site wayfinding signing should be completed to ensure signs are well-placed and best direct motorists to eastbound/westbound Lake Street and Excelsior Boulevard

RECOMMENDATION 46 — INTERSECTION PEDESTRIAN IMPROVEMENTS

INTERSECTION OF FRANCE AVENUE AND WEST LAKE STREET

Further study is required to determine appropriate pedestrian and bicycle facility treatments at the intersection of France Avenue and West Lake Street. Options include reducing lane widths, adding enhanced crosswalks using poly-preform marking materials and continental design at all approaches of the intersection, and providing a gateway treatment to encourage auto traffic to transition to a slower speed entering the Lake Calhoun area. In particular, motorists arriving via CSAH 25 which operates at higher speeds.

DISCUSSION & ANALYSIS

- Roadway character to the west of the intersection, with shoulders and wide travel lanes, encourages higher speed driving
- Enhanced crosswalk markings would alert drivers to locations where conflicts between bicyclist, pedestrians and automobiles would be most likely occur
- Use of the continental design for crosswalk markings also improves crosswalk detection for people with low vision and cognitive impairments

IMPLEMENTATION CONSIDERATIONS

- Reconsidering the configuration of the streets in conjunction with potential redevelopment will better match the streets to the more urban character of the surrounding area
- Potential bicycle lanes on France Avenue north of the intersection should be accommodated at the intersection (Recommendation E)
- Coordination between Hennepin County, the Minneapolis Park and Recreation Board, City of St. Louis Park and City of Minneapolis is necessary

RECOMMENDATION 47 – REMOVE ROADWAY ACCESS

INTERSECTION OF DEPOT STREET AND CEDAR LAKE PARKWAY

Remove the Depot Street connection to Cedar Lake Pkwy.

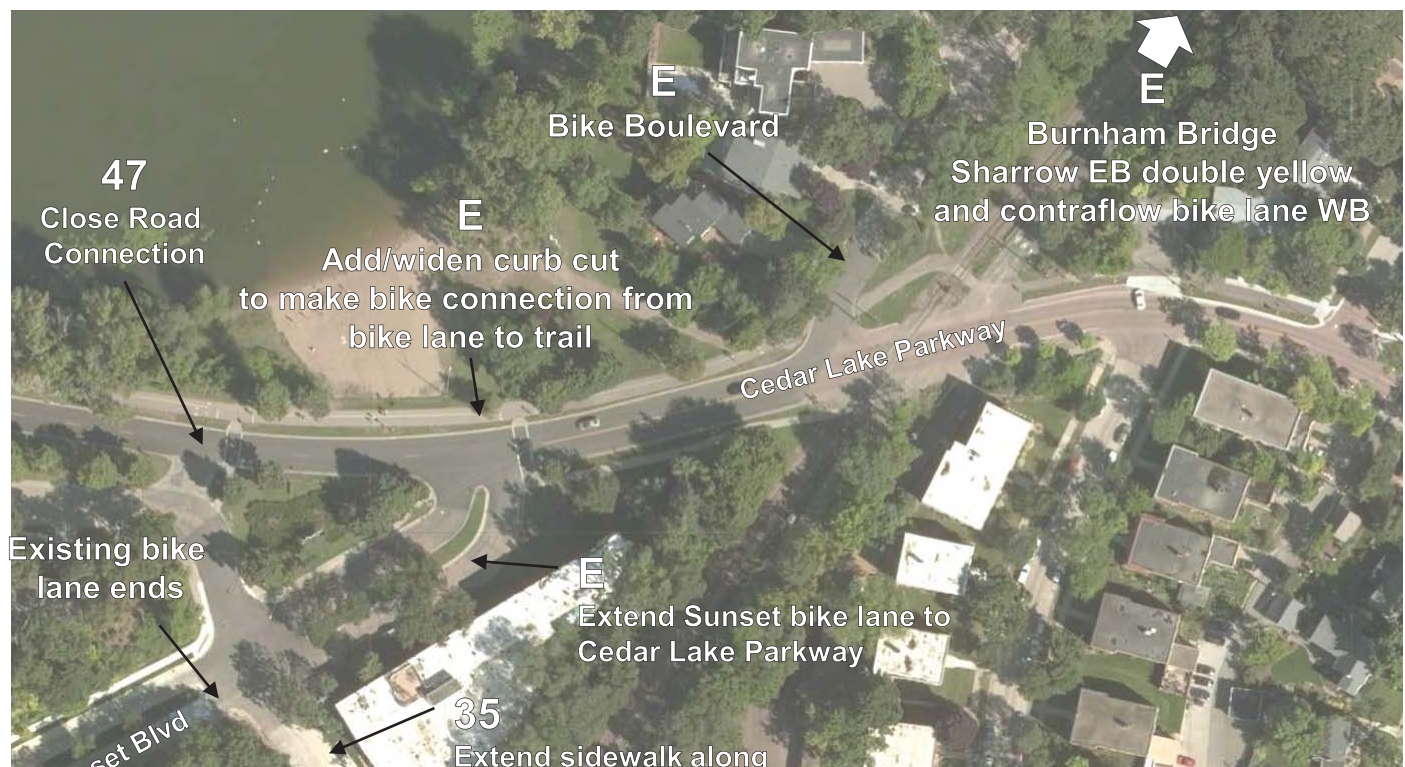
DISCUSSION & ANALYSIS

- Access from Cedar Lake Parkway is already provided by the access on Sunset Boulevard
- Closely spaced intersections can cause confusion for pedestrians and bicyclists crossing the roadway with various turning vehicles but multiple turning destinations

IMPLEMENTATION CONSIDERATIONS

- Coordination between Metro Transit, the Minneapolis Park and Recreation Board and City of Minneapolis is necessary

FIGURE 5-5
RECOMMENDATIONS 35, 47 AND E – CEDAR LAKE AREA



RECOMMENDATION 48 — NEW NORTH/SOUTH TRAIL CONNECTION TO MIDTOWN GREEWAY

PRIVATE DEVELOPMENT BETWEEN CALHOUN VILLAGE AND DEAN PARKWAY

Further study is required to determine the potential to add a direct connection to the Midtown Greenway Trail between Calhoun Village and Dean Parkway, between the trail and existing residential and commercial development.



DISCUSSION & ANALYSIS

- Connection with the Midtown Greenway is limited due to existing fencing and grades for the residential developments between Calhoun Village and Dean Parkway
- Current access for residents who are adjacent to the Midtown Greenway is to use the West Lake Street sidewalk and traverse through Calhoun Village
- A new north/south trail connection would provide a direct connection to the Midtown Greenway Trail

IMPLEMENTATION CONSIDERATIONS

- A potential trail connection could utilize existing green space on private property and would require coordination with property owners as well as Hennepin County, Minneapolis Park and Recreation Board and City of Minneapolis to implement
- The location and design of a potential trail connection would be subject to future plans for the proposed Midtown Corridor Transitway and the Midtown Greenway Trail

RECOMMENDATION 49 — NEW EAST/WEST TRAIL CONNECTION ALONG MIDTOWN GREEWAY

PRIVATE DEVELOPMENT BETWEEN CALHOUN VILLAGE AND DEAN PARKWAY

Further study required to determine the potential to add a parallel path on the south side of the Midtown Greenway between Calhoun Village and Dean Parkway, between the trail and existing residential and commercial development.

DISCUSSION & ANALYSIS

- A parallel connection could serve several parcels providing improved connectivity for residents to Calhoun Village and also the Midtown Greenway if done in conjunction with Recommendation 48
- Connection with the Midtown Greenway is limited due to existing fencing and grades for the residential developments between Calhoun Village and Dean Parkway
- Current access for residents who are adjacent to the Midtown Greenway is to use the West Lake Street sidewalk and traverse through Calhoun Village
- The trail would provide a direct connection to the Midtown Greenway Trail through the current access at the north end of Calhoun Village

IMPLEMENTATION CONSIDERATIONS

- A parallel connection would require coordination among several property owners
- A parallel connection could utilize existing green space on private property and would require coordination with property owners as well as Hennepin County, Minneapolis Park and Recreation Board and City of Minneapolis to implement
- The location and design of a parallel trail connection would be subject to future plans for the proposed Midtown Corridor Transitway and the Midtown Greenway Trail

RECOMMENDATION 50 — LAND BRIDGE OVER LAKE STREET

WEST LAKE STREET (FROM THOMAS AVENUE TO EAST CALHOUN PARKWAY)

Study opportunities to further develop a “lid” concept that would provide a land bridge over a segment of West Lake Street providing a direct park connection between Lake Calhoun and Lake of the Isles across the Midtown Greenway.

DISCUSSION & ANALYSIS

- Creates continuity between Lake of the Isles and Lake Calhoun
- Provides a low-stress connection for pedestrians and bicyclists to travel between the two lakes.
- Creates a signature park space above West Lake Street

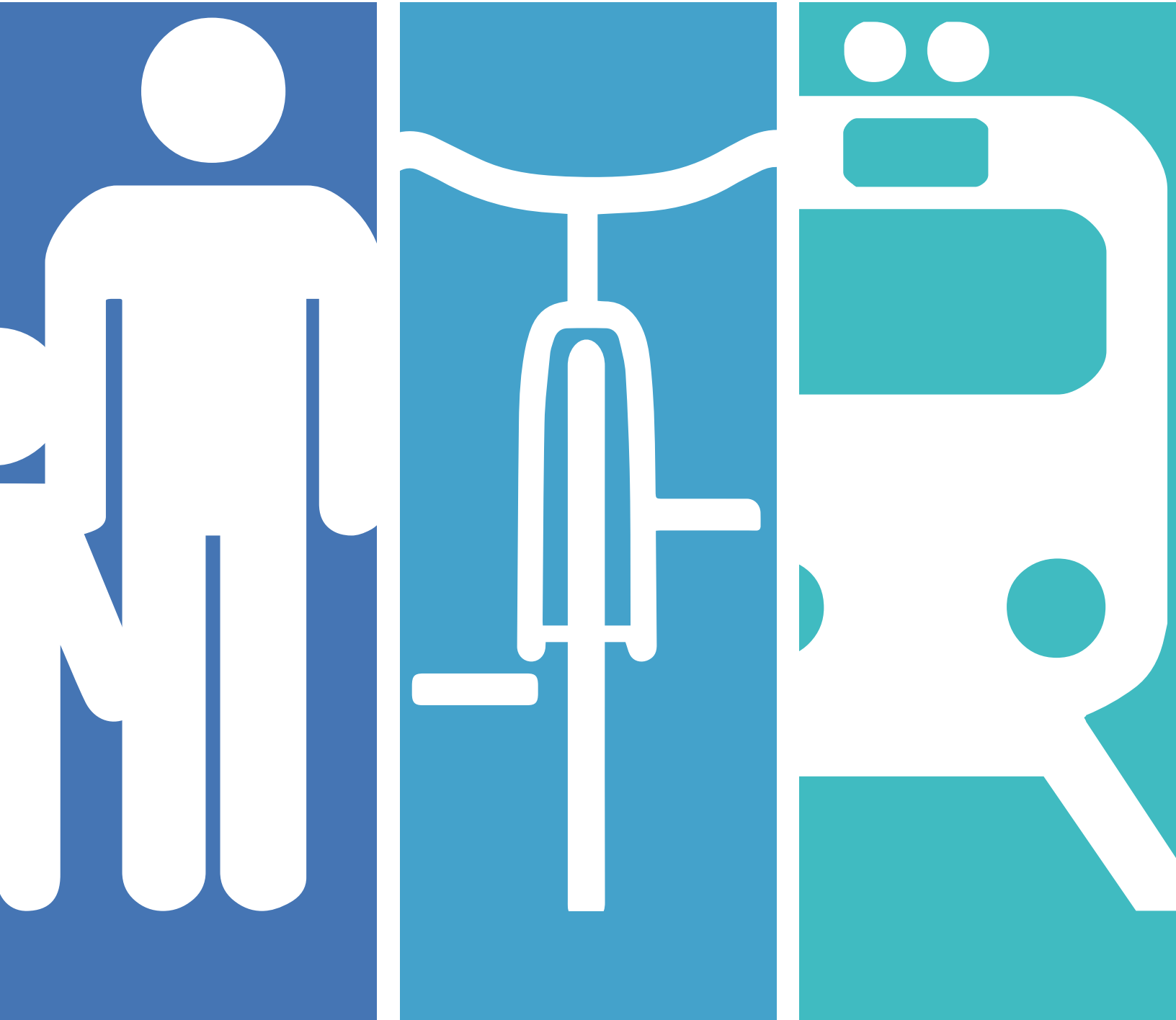
IMPLEMENTATION CONSIDERATIONS

- Coordination with the Minneapolis Park and Recreation Board’s current Calhoun-Harriet Master Plan and Improvements project is necessary
- Coordination between the Minneapolis Park and Recreation Board, Hennepin County and City of Minneapolis is necessary

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APPENDIX A - 2040 TRAFFIC OPERATIONS ANALYSIS - BUILD

LAKE STREET FULL RECONSTRUCTION



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End of Report