Application

17073 - 2022 Pedestrian Facilities (Sidewalks, Streetscaping, and ADA)

17447 - CSAH 23 (Marshall St NE) Pedestrian Project

Regional Solicitation - Bicycle and Pedestrian Facilities

Status:	Submitted
Submitted Date:	04/12/2022 8:32 AM

Primary Contact

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What Grant Programs are you most interested in?	Regional Solicitation - Roadways Including Multimodal Elements			

Organization Information

Name:	HENNEPIN COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: DPT OF PUBLIC WORKS

1600 PRAIRIE DR

*	MEDINA	Minnesota	55340
	City	State/Province	Postal Code/Zip

County: Hennepin

Phone:* 763-745-7600 Ext.

Fax:

PeopleSoft Vendor Number 0000028004A9

Project Information

Project Name CSAH 23 (Marshall St NE) Pedestrian Project

Primary County where the Project is Located Hennepin

Cities or Townships where the Project is Located: Minneapolis

Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Include location, road name/functional class, type of improvement, etc.)

The proposed project will reconstruct the existing sidewalk facilities and introduce a boulevard along the east side of CSAH 23 (Marshall St NE) between 3rd Ave NE and CSAH 153 (Lowry Ave) in the City of Minneapolis. While a sidewalk currently exists along the corridor, it is in relatively poor condition; with some areas obstructed by utility poles, fire hydrants, and signal poles. In addition, many of the pedestrian ramps do not meet current ADA design standards. Furthermore, the corridor lacks a consistent boulevard space and the curb is showing signs of deterioration; providing minimal comfort for people walking and rolling along the corridor. Attachment 2 shows the project location, and Attachment 3 provides photos illustrating the current conditions of the corridor.

It should be noted that Hennepin County is also submitting an application in the Bikeway Category for the construction of dedicated bikeway facilities along the west side of CSAH 23 (Marshall St NE). Although the application is located along the same roadway, the two requests for federal funding are mutually exclusive as it's feasible to deliver them as two separate projects; demonstrating independent utility. If Hennepin County is successful in receiving federal funding awards in both categories, county staff will work with Metropolitan Council and MnDOT State Aid staff to determine how synergy can be achieved throughout the project development process to promote efficiencies and minimize disruptions to the traveling public.

The project objectives are to improve accessibility, mobility, and safety for people walking along and across CSAH 23 (Marshall St NE) by reconstructing the existing sidewalk facilities, enhancing pedestrian crossings, and upgrading curb ramps to meet current ADA design standards. A corridor

study was completed in 2018 that engaged residents and businesses along the corridor; resulting in a recommended reallocation of space for people walking, biking, and driving (URL: hennepin.us/residents/transportation/marshallstne).

This project will include, but is not limited to, the following elements. The specific locations and types of improvements will be determined as part of the design process based on additional community input, data analysis, and environmental review. Attachment 4 shows a potential concept for the corridor.

- Pedestrian improvements; such as the reconstruction and upgrading of the existing sidewalk facilities, ADA compliant pedestrian ramps, Accessible Pedestrian Signals (APS), and curb extensions

- Streetscaping improvements; such as the introduction of a consistent boulevard space; pedestrian lighting, supplemented with plantings whenever feasible

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.

CSAH 23 (Marshall St NE) from 3rd Ave NE to CSAH 153 (Lowry Ave NE) in Minneapolis

Include both the CSAH/MSAS/TH references and their corresponding street names in the TIP Description (see Resources link on Regional Solicitation webpage for examples).

Project Length (Miles)

1.7

to the nearest one-tenth of a mile

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?

No

If yes, please identify the source(s)

Federal Amount $1,528,000.00

Match Amount $382,000.00

Minimum of 20% of project total

Project Total $1,910,000.00

For transit projects, the total cost for the application is total cost minus fare revenues.

Match Percentage 20.0%

Minimum of 20%
Compute the match percentage by dividing the match amount by the project total

Source of Match Funds Hennepin County

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one: 2027

Select 2024 or 2025 for TDM and Unique projects only. For all other applications, select 2026 or 2027.

Additional Program Years:

Select all years that are feasible if funding in an earlier year becomes available.

Project Information

County, City, or Lead Agency Hennepin County

Zip Code where Majority of Work is Being Performed 55413

(Approximate) Begin Construction Date 05/03/2027

(Approximate) End Construction Date 10/31/2028

Name of Trail/Ped Facility: CSAH 23 (Marshall St NE) Sidewalk

(i.e., CEDAR LAKE TRAIL)

TERMINI:(Termini listed must be within 0.3 miles of any work)

From:
(Intersection or Address) CSAH 23 (Marshall St NE) and 3rd Ave NE

To:
(Intersection or Address) CSAH 23 (Marshall St NE) and CSAH 153 (Lowry Ave NE)

DO NOT INCLUDE LEGAL DESCRIPTION; INCLUDE NAME OF ROADWAY IF MAJORITY OF FACILITY RUNS ADJACENT TO A SINGLE CORRIDOR

Or At:

Miles of trail (nearest 0.1 miles): 0

Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles): 0

Is this a new trail? No

Primary Types of Work SIDEWALK, ADA, CURB EXTENSIONS, LIGHTING, STREETSCAPING

Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

Structure is Over/Under (Bridge or culvert name):

Requirements - All Projects

All Projects

1.The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement. Yes

2.The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Briefly list the goals, objectives, strategies, and associated pages:

A) Transportation System Stewardship (p 2.2-2.4)

Objectives A & B; Strategies A1 & A2

The project will realize cost efficiencies through timely pedestrian improvements coordinated with locally funded roadway improvements into a single project. Pedestrian improvements will also encourage alternative transportation modes aside from the personal vehicle, reducing traffic, and extending the useful life of pavement assets.

B) Safety and Security (p 2.5-2.9)

Objectives A & B; Strategies B1, B3, B4, B6

Improving pedestrian facilities and intersections (potentially enhanced with curb extensions, raised medians, and crossing beacons) will promote safety for those rolling, walking, biking, and those using transit. Pedestrian improvements at intersections will also serve as traffic calming measures and reduce crash frequencies. Increased boulevard space will provide additional stormwater mitigation.

C) Access to Destinations (p 2.10-2.25)

Objectives A, B, C, D, and E; Strategies C1, C2, C3, C4, C8, C9, C15, C16, C17

The project will provide safer multimodal access to the dense commercial and retail destinations along CSAH 23 (Marshall St NE). Improved crossings will also allow for safer pedestrian connections to recreational assets along the Mississippi River. The

project will also tie into the planned Hennepin & 1st multimodal project and improve access to the Downtown Central Business District.

D) Competitive Economy (p2.26-2.29)

Objectives A, B & C; Strategies D1, D3, D4, D5

The segment of CSAH 23 (Marshall St NE) north of CSAH 66 (Broadway St NE) is a Tier 1 freight corridor. The project would reduce conflicts between freight users and those who are biking and walking. The corridor is regionally significant, with more than 29,000 jobs within 0.5 miles of the project area. Pedestrian improvements will provide enhanced multimodal access to these important job concentrations.

E) Healthy and Equitable Communities (p 2.30-2.34)

Objectives A, B, C, D; Strategies E1, E3, E4, E5, E6, E7

The project will build on outreach efforts conducted during the Marshall Street NE Feasibility Study, where several events were held to capture the input of key representative stakeholders. Additional outreach will occur during design with a particular focus on engaging historically underrepresented populations. The project will also provide a significantly improved pedestrian environment to encourage active transportation.

F) Leveraging Transportation Investments to Guide Lane Use (p 2.35-2.41)

Objectives: A & C; Strategies: F1, F2, F5, F6, F7

The project will provide multi-modal access to the regionally significant recreational assets along the Mississippi River and for those needing to access businesses and civic destinations in Northeast Minneapolis.

(Limit 2,800 characters; approximately 400 words)

3.The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages: Unique projects are exempt from this qualifying requirement because of their innovative nature.

1) Hennepin County Board Resolution 22-0109 (Attachment 5)

2) Marshall Street NE Feasibility Study

URL: hennepin.us/-/media/hennepinus/residents/transportation/marshall/marshall-street-2018-design-study.pdf

3) Hennepin County 2040 Transportation Plan (pages 2-11 - 2-18)

URL: hennepin.us/-/media/hennepinus/your-government/projects-initiatives/2040-comprehensive-plan/comp-plan-2040-2-transportation.pdf

4) Hennepin County Climate Action Plan (pages 50-54)

URL: hennepin.us/climate-action/-/media/climateaction/ hennepin-county-climate-action-plan-final.pdf

5) Hennepin County Complete Streets Policy

URL: hennepin.us/completestreets

6) Hennepin County Bike Plan (page 36)

URL: hennepin.us/-/media/hennepinus/residents/transportation/biking/bicycle-transportation-plan.pdf

7) Hennepin County Pedestrian Plan (page 8)

URL: hennepin.us/-/media/hennepinus/residents/transportation/documents/pedestrian-plan.pdf

8) City of Minneapolis Pedestrian Priority Network Map (Attachment 6)

(Limit 2,800 characters; approximately 400 words)

4.The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible. Unique project costs are limited to those that are federally eligible.

Check the box to indicate that the project meets this requirement. Yes

5.Applicant is a public agency (e.g., county, city, tribal government, transit provider, etc.) or non-profit organization (TDM and Unique Projects applicants only). Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement. Yes

6.Applicants must not submit an application for the same project in more than one funding sub-category.

Check the box to indicate that the project meets this requirement. Yes

7.The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below in Table 1. For unique projects, the minimum award is $500,000 and the maximum award is the total amount available each funding cycle (approximately $4,000,000 for the 2020 funding cycle).
Multiuse Trails and Bicycle Facilities: *$250,000 to $5,500,000*
Pedestrian Facilities (Sidewalks, Streetscaping, and ADA): *$250,000 to $2,000,000*
Safe Routes to School: *$250,000 to $1,000,000*

Check the box to indicate that the project meets this requirement. Yes

8.The project must comply with the Americans with Disabilities Act (ADA).

Check the box to indicate that the project meets this requirement. Yes

9.In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation. Yes

Date plan completed: 08/31/2015

Link to plan: hennepin.us/-/media/hennepinus/residents/transportation/documents/ada-sidewalk-transition-plan.pdf

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link

Upload as PDF

10.The project must be accessible and open to the general public.

Check the box to indicate that the project meets this requirement. Yes

11.The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017. Unique projects are exempt from this qualifying requirement.

Check the box to indicate that the project meets this requirement. Yes

12.The project must represent a permanent improvement with independent utility. The term independent utility means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match.
Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

Check the box to indicate that the project meets this requirement. Yes

13.The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.

Check the box to indicate that the project meets this requirement. Yes

14.The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.

Check the box to indicate that the project meets this requirement. Yes

Requirements - Bicycle and Pedestrian Facilities Projects

1.All projects must relate to surface transportation. As an example, for multiuse trail and bicycle facilities, surface transportation is defined as primarily serving a commuting purpose and/or that connect two destination points. A facility may serve both a transportation purpose and a recreational purpose; a facility that connects people to recreational destinations may be considered to have a transportation purpose.

Check the box to indicate that the project meets this requirement. Yes

Multiuse Trails on Active Railroad Right-of-Way:

2.All multiuse trail projects that are located within right-of-way occupied by an active railroad must attach an agreement with the railroad that this right-of-way will be used for trail purposes.

Check the box to indicate that the project meets this requirement.

Upload Agreement PDF

Check the box to indicate that the project is not in active railroad right-of-way. Yes

Multiuse Trails and Bicycle Facilities projects only:

3.All applications must include a letter from the operator of the facility confirming that they will remove snow and ice for year-round bicycle and pedestrian use. The Minnesota Pollution Control Agency has a resource for best practices when using salt. Upload PDF of Agreement in Other Attachments.

Check the box to indicate that the project meets this requirement.

Upload PDF of Agreement in Other Attachments.

Safe Routes to School projects only:

4.All projects must be located within a two-mile radius of the associated primary, middle, or high school site.

Check the box to indicate that the project meets this requirement.

5.All schools benefitting from the SRTS program must conduct after-implementation surveys. These include the student travel tally form and the parent survey available on the National Center for SRTS website. The school(s) must submit the after-evaluation data to the National Center for SRTS within a year of the project completion date. Additional guidance regarding evaluation can be found at the MnDOT SRTS website.

Check the box to indicate that the applicant understands this requirement and will submit data to the National Center for SRTS within one year of project completion.

Requirements - Bicycle and Pedestrian Facilities Projects

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$64,000.00
Removals (approx. 5% of total cost)	$64,000.00
Roadway (grading, borrow, etc.)	$20,000.00
Roadway (aggregates and paving)	$67,000.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$0.00
Ponds	$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$0.00
Traffic Control	$64,000.00
Striping	$0.00
Signing	$0.00
Lighting	$0.00
Turf - Erosion & Landscaping	$92,000.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00

Roadway Contingencies	$111,000.00
Other Roadway Elements	$0.00
Totals	**$482,000.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$0.00
Sidewalk Construction	$390,000.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$135,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$100,000.00
Pedestrian-scale Lighting	$340,000.00
Streetscaping	$94,000.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$329,000.00
Other Bicycle and Pedestrian Elements	$40,000.00
Totals	**$1,428,000.00**

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Fixed Guideway Elements	$0.00
Stations, Stops, and Terminals	$0.00
Support Facilities	$0.00
Transit Systems (e.g. communications, signals, controls, fare collection, etc.)	$0.00
Vehicles	$0.00
Contingencies	$0.00
Right-of-Way	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	$0.00
Subtotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$1,910,000.00
Construction Cost Total	$1,910,000.00
Transit Operating Cost Total	$0.00

Measure A: Project Location Relative to Jobs and Post-Secondary Education

Existing Employment Within One-Half Mile:	29245
Existing Post-Secondary Enrollment Within One-Half Mile:	554
Upload Map	1647291015210_2022 RS Map 02 - CSAH 23 (Marshall St NE) Pedestrian Project - Regional Economy.pdf

Please upload attachment in PDF form.

Measure A: Population Summary

Existing Population Within One-Half Mile	24875
Upload Map	1647290974601_2022 RS Map 04 - CSAH 23 (Marshall St NE) Pedestrian Project - Population & Employment Summary.pdf

Please upload attachment in PDF form.

Measure A: Engagement

i.Describe any Black, Indigenous, and People of Color populations, low-income populations, disabled populations, youth, or older adults within a ½ mile of the proposed project. Describe how these populations relate to regional context. Location of affordable housing will be addressed in Measure C.

ii.Describe how Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged, whether through community planning efforts, project needs identification, or during the project development process.

iii.Describe the progression of engagement activities in this project. A full response should answer these questions:

Response:

Within 0.5 miles of the project corridor, the population by census tract is 15% to 82% non-white (2020 Census). 8% to 35% of the population are people with a disability of any kind; 5% to 21% of people are over the age of 65; 11% to 33% of children under the age of 18; and 9% to 24% of residents are under the federal poverty level. The project is in an area of concentrated poverty. These demographic profiles are based on ACS 2014-2018 5-year estimates.

Public engagement for the project began as part of the Marshall Street NE Transportation Feasibility Study via in-person study group meetings, an open house, neighborhood association meetings, and online communication. The study group met 5 times and consisted of neighborhood association, corridor business, and agency representatives. The intent of forming a study group was to thoroughly engage a small group of individuals who represented a broad spectrum of the surrounding community. Study group representatives shared the views of their constituents and also brought back information, serving as a two-way conduit for information. See Attachment 7 for information about engagement through the Marshall Street NE Transportation Feasibility Study.

Future engagement will target Black, Indigenous, and People of Color, low-income residents, disabled people, youth, and older adults. Strategies are anticipated to include convening a study group, direct meetings with prominent corridor institutions and organizations, meetings with neighborhood associations, public events, and virtual engagement.

Project purpose and need were identified through an evaluation of roadway age, growth of

entertainment and dining along the corridor, connection to river and green space, lack of multimodal accommodations, user safety, and accessibility deficiencies. Project goals are to balance all modes of travel, improve connections to the Mississippi River, create safe and accessible spaces for people walking and biking, strengthen businesses with improved connections, improve connections with transit, and increase greening along the corridor.

The engagement activities described supported development of the study outcomes. Consultation with the study group and neighborhood stakeholders was an iterative process to fully understand community needs. Feedback from residents and businesses emphasized the following themes:

- Improved streetscaping and greening

- Parking opportunities for new developments

- Safety issues related to vehicle speeds, traffic volumes, and pedestrian crossings

- Interest in a protected bikeway

- Improved access to businesses for people walking, biking, and driving

- Enhanced mid-block pedestrian crossings

- Pedestrian lighting

- Burial of overhead utilities

(Limit 2,800 characters; approximately 400 words):

Measure B: Equity Population Benefits and Impacts

Describe the projects benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:
This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Equity populations residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Equity populations specifically identified through engagement, and substantiate benefits with data.
Acknowledge and describe any negative project impacts to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate these impacts. Unidentified or unmitigated negative impacts may result in a reduction in points.
Below is a list of potential negative impacts. This is not an exhaustive list.

Response:

The CSAH 23 (Marshall St NE) Pedestrian Project will benefit Black, Indigenous, and People of Color, low-income populations, people with disabilities, children, youth, and older adults through the upgrading of sidewalk facilities along the east side of the roadway along with proven safety countermeasures. It should be noted that this project is located within an area of concentrated poverty.

Up to 48% of households within census tracks 0.5 miles from the project do not own a car. These households walk, roll, bike, or take transit whenever they travel. Often low-income populations and People of Color, are the same residents living in zero car households. This project will ensure that these residents have safe and comfortable walking and rolling facilities on CSAH 23 (Marshall St NE) with pedestrian connections to North Minneapolis via the Lowry Ave Bridge. The project will address sidewalk deficiencies and ensure all features are ADA compliant. Safety and complete streets elements such as raised medians, curb extensions, and crossing beacons will be considered as part of the project development process.

Children and the elderly will benefit from the improved pedestrian realm and intersection safety improvements. These are vulnerable populations who require more time to cross intersections. Proven safety countermeasures such as raised medians, curb extensions, and crossing beacons will improve accessibility, safety, and comfort along CSAH 23 (Marshall St NE) and also whenever crossing at both signalized and unsignalized intersections.

People with disabilities will benefit from the improved pedestrian realm. The county's self-evaluation of sidewalk facilities identifies a number of obstructions and defects along CSAH 23

(Marshall St NE). Creating an ADA compliant sidewalk that is free of obstructions will ensure equal and convenient access to corridor jobs and destinations. Project elements such as curb extensions, APS, and high visibility pavement markings will increase awareness and predictability for all people crossing intersections. In addition, the introduction of a consistent boulevard will provide better separation between people driving and people walking.

Increased noise and impacts to the roadway and sidewalks are anticipated during construction. The contractor will be required to follow temporary traffic control plans which provide instructions on detour routes for all people traveling through the corridor. Access to adjacent buildings will be critical and staff will seek out opportunities to minimize impacts to nearby businesses and services during construction.

(Limit 2,800 characters; approximately 400 words):

Measure C: Affordable Housing Access

Describe any affordable housing developmentsexisting, under construction, or plannedwithin ½ mile of the proposed project. The applicant should note the number of existing subsidized units, which will be provided on the Socio-Economic Conditions map. Applicants can also describe other types of affordable housing (e.g., naturally-occurring affordable housing, manufactured housing) and under construction or planned affordable housing that is within a half mile of the project. If applicable, the applicant can provide self-generated PDF maps to support these additions. Applicants are encouraged to provide a self-generated PDF map describing how a project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship).

Describe the projects benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

This is not an exhaustive list. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements. A full response will support the benefits claimed, identify benefits specific to residents of affordable housing, identify benefits addressing a transportation issue affecting residents of affordable housing specifically identified through engagement, and substantiate benefits with data.

Response:

A total of 18 affordable, subsidized housing developments are located within 0.5 miles of the project area. Attachment 8 provides a map and full detail summary of these locations, including unit sizes and affordability limits based on area median incomes. As identified in the Met Council generated Socio-Economic Conditions map, 4,725 subsidized units exist in census tracts within 0.5 miles of the project. A notable development within the project area is Holmes Park Village Apartments, a 107-unit development designated for those with disabilities and seniors, which represents a significant population of those who would significantly benefit from multimodal improvements in the proposed project.

Residents of affordable housing will benefit through improved pedestrian crossings and reconstructed sidewalk assets that provide accessible connections to recreation areas along the Mississippi River and a variety of commercial destinations at key intersections such as 13th Ave NE, CSAH 153 (Lowry Ave NE), and CSAH 66 (Broadway St NE). Several places of worship are located within 0.5 miles from the project area, including the Dar Al-Qalam Islamic Center, Saint Anthony of Padua Catholic Church, and St Michael's Ukrainian Orthodox Church. Attachment 9 highlights nearby community resources including parks, places of worship, and schools.

Existing conditions create barriers for seniors and those with disabilities who live in affordable housing developments along the project corridor as sidewalks are uneven, obstructed, and narrow; with several crossings that do not have compliant pedestrian ramps. Families will also benefit through safer pedestrian access along CSAH 23 (Marshall St NE) as Webster and Sheridan Elementary, both public schools, are located within four blocks of the

proposed project.

An accessible pedestrian environment will also expand access to jobs for many residents of affordable housing as the corridor is home to several major employers such as Graco Inc, a manufacturing firm specializing in fluid management systems which employs several hundred manufacturing workers within the project area. Other employers include the Packaging Corporation of America and Siwek Lumber & Millwork.

(Limit 2,800 characters; approximately 400 words):

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:	Yes
Projects census tracts are above the regional average for population in poverty or population of color (Regional Environmental Justice Area):	
Project located in a census tract that is below the regional average for population in poverty or populations of color (Regional Environmental Justice Area):	
Upload the Socio-Economic Conditions map used for this measure.	1646929813765_2022 RS Map 03 - CSAH 23 (Marshall St NE) Pedestrian Project - Socio Economic Conditions.pdf

Measure A: Gaps, Barriers and Continuity/Connections

Response:

The CSAH 23 (Marshall St NE) Pedestrian Project will overcome accessibility barriers along a 1.7-mile corridor that connects Northeast Minneapolis to the Mississippi River and downtown Minneapolis. Even thought sidewalks currently exist on both sides of CSAH 23 (Marshall St NE), they are located immediately at the back of curb in many areas; creating a feeling of discomfort. The project will implement ADA best practices in terms of ramp design, placement, and orientation to promote a consistent user experience for people walking; especially for those with limited mobility. In addition, the new sidewalk facility along the east side of CSAH 23 (Marshall St NE) will be enhanced with a boulevard to provide adequate space for snow storage, signs, and utilities to resolve obstructions as identified in Hennepin County's ADA Transition Plan. Pedestrian lighting will also be incorporated along the east side of CSAH 23 (Marshall St NE). Furthermore, APS will be installed at each signalized intersection to accommodate users with sight impairments.

CSAH 23 (Marshall St NE) connects Northeast Minneapolis with St. Anthony Main, the Mill District, and downtown Minneapolis. As a result, the area attracts relatively high pedestrian crossing volumes. The proposed CSAH 23 (Marshall St NE) Pedestrian Project will promote safe pedestrian crossings through the strategic implementation of proven countermeasures such as raised medians, curb extensions, and crossing beacons. The specific type and location of crossing treatments will be determined as part of the project development process based on data analysis, stakeholder input, and environmental review. Consideration will be given to the location of the Mississippi River parks, including: BF Nelson, Boom Island, Gluek, and Edgewater.

It should be noted that Hennepin County is also submitting an application in the Pedestrian Category for sidewalk and ADA improvements along the east side of CSAH 23 (Marshall St NE). Although the application is located along the same roadway, the two requests for federal funding are not mutually exclusive as it's feasible to deliver them as two separate projects; demonstrating independent utility. If Hennepin County is successful in receiving federal funding awards in both categories, county staff will work with MetCouncil and MnDOT State Aid staff to determine how synergy can be achieved throughout the project development process to promote efficiencies and minimize disruptions to the travelling public.

(Limit 2,800 characters; approximately 400 words)

Measure B: Project Improvements

Response:

The segment of CSAH 23 (Marshall St NE) from 3rd Ave NE to CSAH 153 (Lowry Ave NE) experienced 14 bicycle-involved crashes and 8 pedestrian-involved crashes across the years 2012 to 2021; including 1 incapacitating injury, 11 non-incapacitating injuries, 8 possible injuries and 2 non-injury crashes. In total, the corridor experienced 325 crashes involving people walking, biking, and driving during that 10-year analysis period. Attachment 10 includes a summary of the reported crashes.

The proposed project is anticipated to include the following safety countermeasures to improve the walking experience along and across CSAH 23 (Marshall St NE). The location and type of improvement will be determined as part of the project development process based on data analysis, stakeholder input, and environmental review. Attachment 11 includes more detailed information for each of the proven safety countermeasures.

- Introduction of approximately 27 curb extensions to reduce the pedestrian crossing distance, improve sight lines, and better define on-street parking areas (45% reduction in pedestrian related crashes - MnDOT Best Practices for Pedestrian & Bicycle Safety)

- Introduction of raised medians to shorten the crossing distance and provide refuge. Three potential locations identified in the planning stage include Marshall/5th, Marshall/13th, and Marshall/17th (56% reduction in pedestrian related crashes - MnDOT Best Practices for Pedestrian & Bicycle Safety)

- Introduction of pedestrian crossing beacons to increase vehicle yielding rates (47% reduction in pedestrian related crashes - MnDOT Best Practices for Pedestrian & Bicycle Safety)

- Installation of high-visibility crosswalk markings, countdown timers, and APS to supplement traffic signal operation (No data on expected crash reduction - MnDOT Best Practices for Pedestrian & Bicycle Safety)

- Introduction of a consistent boulevard space to separate people walking and people driving (county staff was unable to find any information on the expected safety benefit)

It should be noted that Hennepin County is also submitting an application in the Bikeway Category for bikeway, sidewalk, and streetscaping improvements along the west side of CSAH 23 (Marshall St NE). Although the application is located along the same roadway, the two requests for federal funding are mutually exclusive as it's feasible to deliver them as two separate projects; demonstrating independent utility. If Hennepin County is successful in receiving federal funding awards in both categories, county staff will work with Metropolitan Council and MnDOT State Aid staff to determine how synergy can be achieved throughout the project development process to promote efficiencies and minimize disruptions to the travelling public.

(Limit 2,800 characters; approximately 400 words)

Measure A: Multimodal Elements and Connections

Response:

Hennepin County is also submitting an application in the Bikeway Category for a protected bikeway, sidewalk replacement, and streetscaping improvements along the west side of CSAH 23 (Marshall St NE). Although the application is located along the same roadway, these two requests for federal funding are mutually exclusive as it's feasible to deliver them as two separate projects; demonstrating independent utility.

Sidewalk facilities currently exist along both sides of CSAH 23 (Marshall St NE), however, they are primarily located at the back of curb; posing as challenges for proper placement of snow storage, signs, and utilities. This project will replace and upgrade the sidewalk facilities along the east side of CSAH 23 (Marshall St NE) that will meet current ADA design standards to promote consistency in ramp design, placement, and orientation. Pedestrian lighting will be incorporated on the east side of the roadway. In addition, proven safety countermeasures, such as curb extensions, medians, and crossing beacons will be implemented.

These sidewalk improvements along the east side of CSAH 23 (Marshall St NE) will complement the two-way cycle track that's planned for the west side of CSAH 23 (Marshall St NE). Given the roadway's proximity to the Mississippi River, a number of T-intersections exist that will allow for the optimization of pedestrian crossing enhancements since these intersections experience fewer turning movements by people driving.

On-street parking is currently permitted along both sides of CSAH 23 (Marshall St NE), however, recommendations included in the Marshall St NE Transportation Study described stakeholder

support to reduce on-street parking areas. The introduction of curb extensions will better define on-street parking areas and ensure adequate intersection sight distance. In addition, these curb extensions will improve the crossing experience for people biking who wish the access the planned two-way cycle track from side streets. Furthermore, consideration will be given to designating parking areas for shared transportation modes; specifically electric scooters and bicycles.

At this time, transit service does not operate along CSAH 23 (Marshall St NE), however, two intersections within the project area currently facilitate east/west transit service (Route 30 at Marshall/Broadway and Route 32 at Marshall/Lowry). Furthermore, the future E Line service is anticipated to include a station at the nearby Hennepin/2nd intersection just a few blocks south of this project. Improvements to the sidewalk facilities along the east side of CSAH 23 (Marshall St NE) will improve first/last mile connections and promote transit as an attractive transportation option.

Attachment 12 illustrates multimodal connections in the project area.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.
Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1.Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) specific to this project with the general public and partner agencies have been used to help identify the project need.

Yes

100%

At least one meeting specific to this project with the general public has been used to help identify the project need.

50%

At least online/mail outreach effort specific to this project with the general public has been used to help identify the project need.

50%

No meeting or outreach specific to this project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

25%

No outreach has led to the selection of this project.

0%

Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.

Public engagement for the project was conducted as part of the Marshall St NE Transportation Feasibility Study via in-person study group meetings, an open house, neighborhood association meetings, and online communication. The study group met 5 times and participation consisted of neighborhood association, corridor business, and agency representatives. The intent of forming a study group was to thoroughly engage individuals who represented a broad cross section of the surrounding community. Study group representatives would represent the views of their constituents and also bring back information, serving as a two-way conduit for information.

Response:

Project purpose and need were identified through an evaluation of roadway age, growth of entertainment and dining along the corridor, connection to river and green space, lack of multimodal accommodations, user safety, and accessibility deficiencies. Project goals were identified to balance all modes of travel, improve connections to the Mississippi River, create safe and accessible spaces for people walking and biking, strengthen businesses with improved connections, improve first/last mile connections to transit service, and improve greening along the corridor.

The engagement activities described above supported the development of the study outcomes. Consultation with the study group and neighborhood stakeholders was an iterative process to ensure community needs were well understood. Feedback from residents and businesses emphasized the following themes:

- Improving corridor streetscape with greening

- Reviewing parking options for new developments

- Addressing safety issues including: speed, traffic volumes, and pedestrian crossings

- Implementing separated bicycle facilities

- Improving access to businesses for people walking, biking and driving

- Burying overhead utilities

- Installing pedestrian scale lighting

- Improved mid-block pedestrian locations

Attachment 7 provides a summary of engagement activities completed in 2018 as part of the Marshall St NE Transportation Feasibility Study.

(Limit 2,800 characters; approximately 400 words)

2.Layout (25 Percent of Points)

Layout includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend; city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the projects termini does not suffice and will be awarded zero points. *If applicable*

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid colleen.brown@state.mn.us.

100%

For projects where MnDOT trunk highways are impacted and a MnDOT Staff Approved layout is required. Layout approved by the applicant and all impacted local jurisdictions (i.e., cities/counties), and layout review and approval by MnDOT is pending. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

75%

Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points. Yes

50%

Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

25%

Layout has not been started

0%

Attach Layout 1649630580060_Attachment 04 - Potential Concept.pdf

Please upload attachment in PDF form.

Additional Attachments

Please upload attachment in PDF form.

3.Review of Section 106 Historic Resources (15 Percent of Points)

No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100%

There are historical/archeological properties present but determination of no historic properties affected is anticipated. Yes

100%

Historic/archeological property impacted; determination of no adverse effect anticipated

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

Unsure if there are any historic/archaeological properties in the project area.

0%

Project is located on an identified historic bridge

4.Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - plat, legal descriptions, or official map complete

50%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels identified Yes

25%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels not all identified

0%

5.Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

100%

Signature Page

Please upload attachment in PDF form.

Railroad Right-of-Way Agreement required; negotiations have begun

50%

Railroad Right-of-Way Agreement required; negotiations have not begun. Yes

0%

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$1,910,000.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$1,910,000.00
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
Attachment 00 - List of Attachments.pdf	Attachment 00 - List of Attachments	77 KB
Attachment 01 - Project Narrative.pdf	Attachment 01 - Project Narrative	317 KB
Attachment 02 - Project Location Map.pdf	Attachment 02 - Project Location Map	591 KB
Attachment 03 - Existing Roadway Condition Photos.pdf	Attachment 03 - Existing Roadway Condition Photos	1.4 MB
Attachment 04 - Potential Concept.pdf	Attachment 04 - Potential Concept	4.3 MB
Attachment 05 - Hennepin County Board Resolution 22-0109.pdf	Attachment 05 - Hennepin County Board Resolution 22-0109	373 KB
Attachment 06 - Minneapolis Pedestrian Priority Network Map.pdf	Attachment 06 - Minneapolis Pedestrian Priority Network Map	100 KB
Attachment 07 - Marshall St NE Transportation Study Engagement.pdf	Attachment 07 - Marshall St NE Transportation Study Engagement	1.4 MB
Attachment 08 - Affordable Housing Access Map and Detail Summary.pdf	Attachment 08 - Affordable Housing Access Map and Detail Summary	1.2 MB
Attachment 09 - Socio-Economic Equity Map.pdf	Attachment 09 - Socio-Economic Equity Map	143 KB
Attachment 10 - Crash Summary and Detail Listing.pdf	Attachment 10 - Crash Summary and Detail Listing	115 KB
Attachment 11 - Crash Reduction Information.pdf	Attachment 11 - Crash Reduction Information	407 KB
Attachment 12 - Multimodal Connections Map.pdf	Attachment 12 - Multimodal Connections Map	404 KB
Attachment 13 - City of Minneapolis Support Letter.pdf	Attachment 13 - City of Minneapolis Support Letter	169 KB
Attachment 14 - Minneapolis Park and Recreation Board Support Letter.pdf	Attachment 14 - Minneapolis Park and Recreation Board Support Letter	180 KB

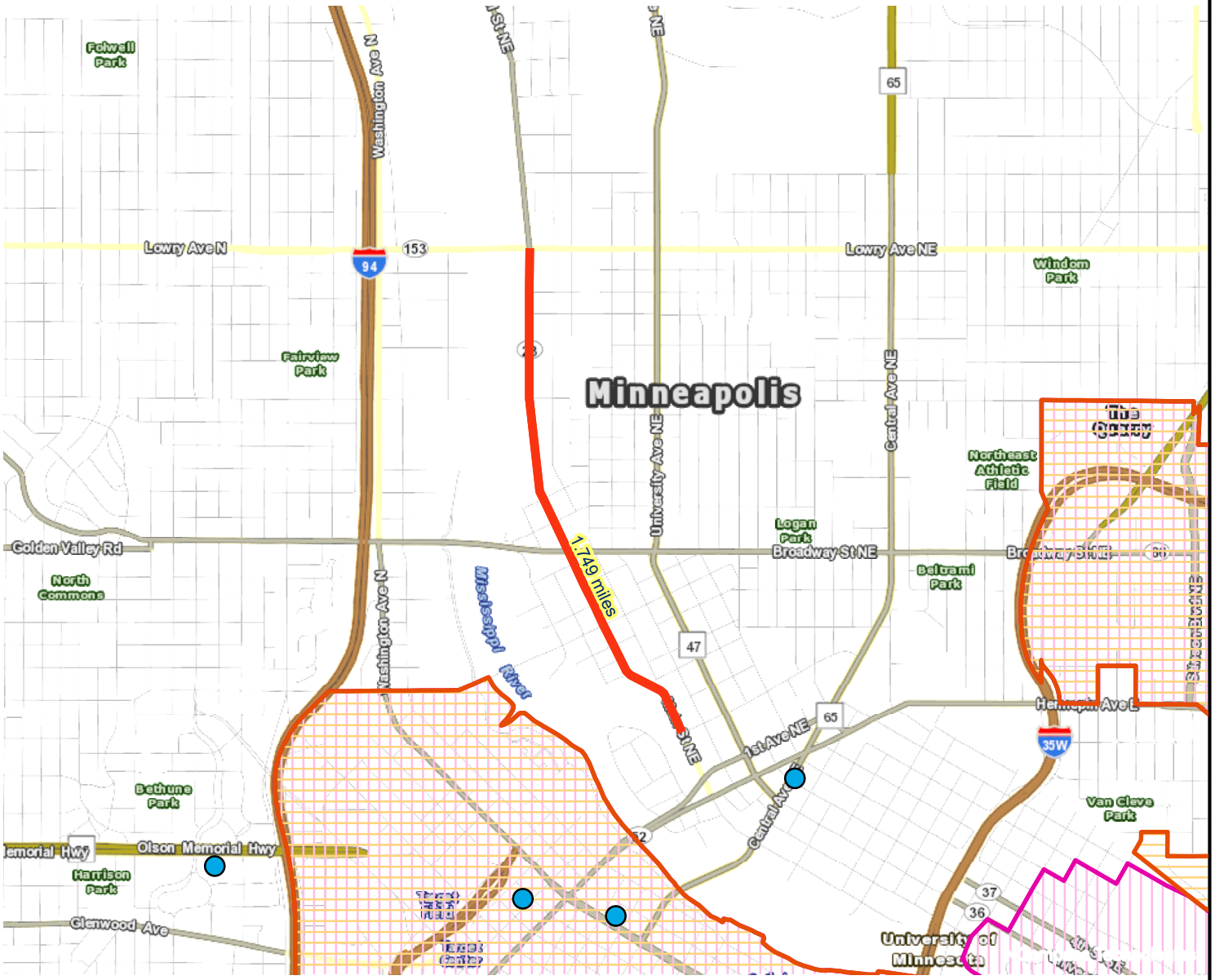
Regional Economy

Pedestrian Facilities Project: CSAH 23 (Marshall St NE) Pedestrian Project | Map ID: 1646876382034

Results

Within HALF Mi of project:
Postsecondary Students: 554

Total Population: 24875
Total Employment: 29245
Mfg and Dist Employment: 6417



Created: 3/9/2022
LandscapeRSA5

For complete disclaimer of accuracy, please visit
http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx

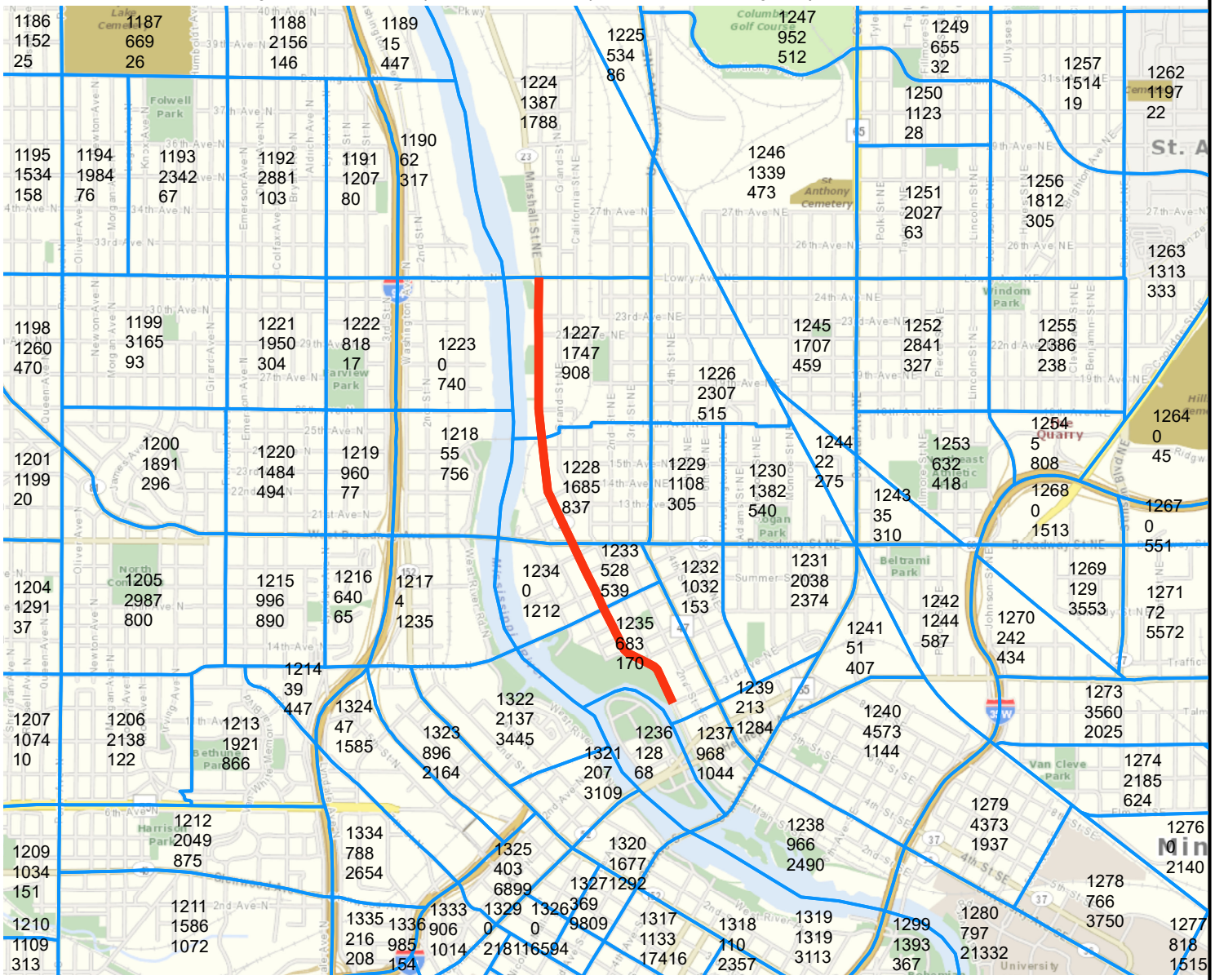
METROPOLITAN COUNCIL

Population/Employment Summary

Pedestrian Facilities Project: CSAH 23 (Marshall St NE) Pedestrian Project | Map ID: 1646876382034

Results

Within HALF Mile of project:
Total Population: 24875



Project Points
Project
Project Area
2016 TAZ

0 0.35 0.7 1.4 2.1 2.8 Miles

Created: 3/9/2022
LandscapeRSA4

For complete disclaimer of accuracy, please visit https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

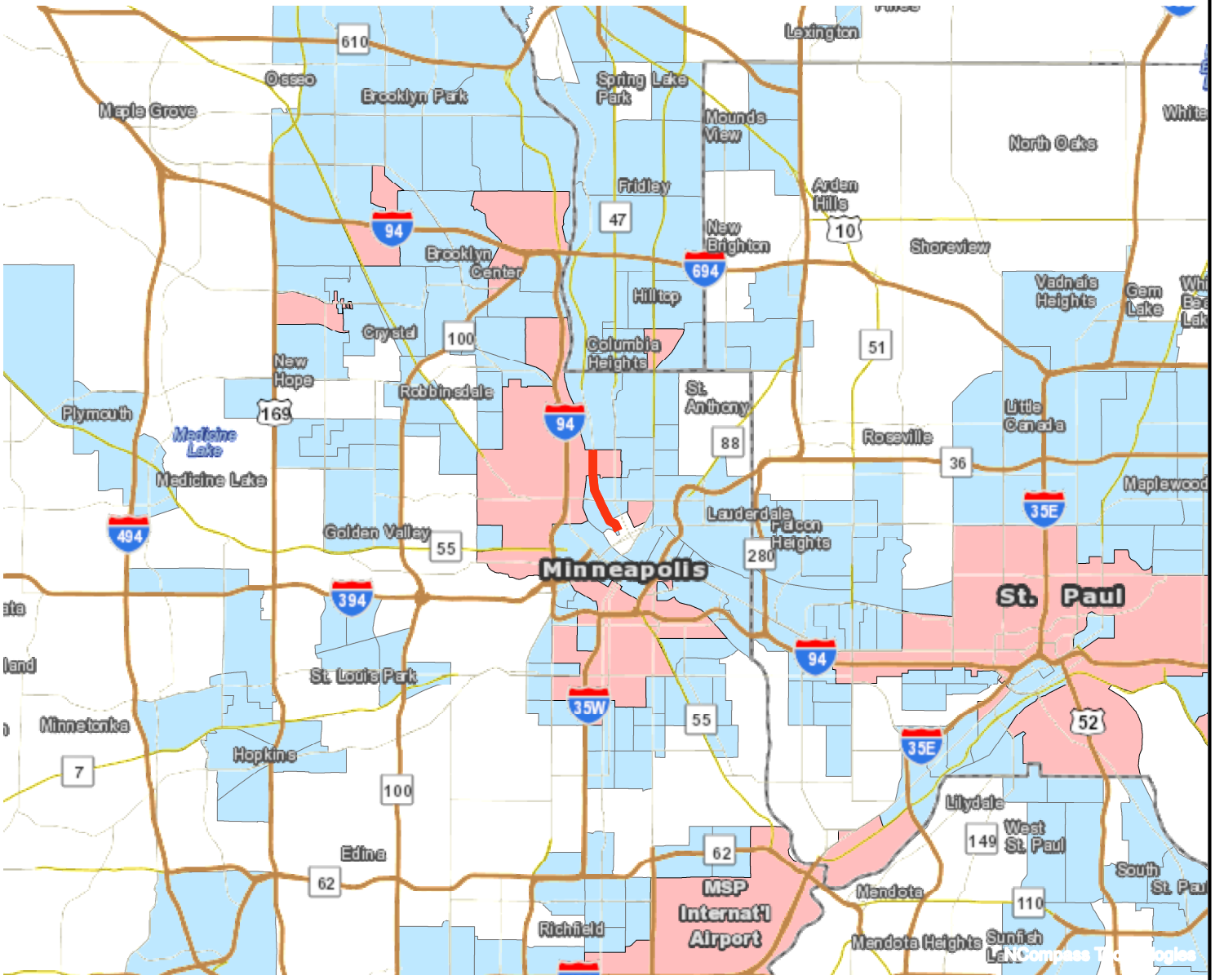
Socio-Economic Conditions

Pedestrian Facilities Project: CSAH 23 (Marshall St NE) Pedestrian Project | Map ID: 1646876382034

Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 4725

Project located IN an Area of Concentrated Poverty.



Lines

Regional Environmental Justice Area

Area of Concentrated Poverty

0 1.75 3.5 7 10.5 14 Miles

Created: 3/9/2022
LandscapeRSA2

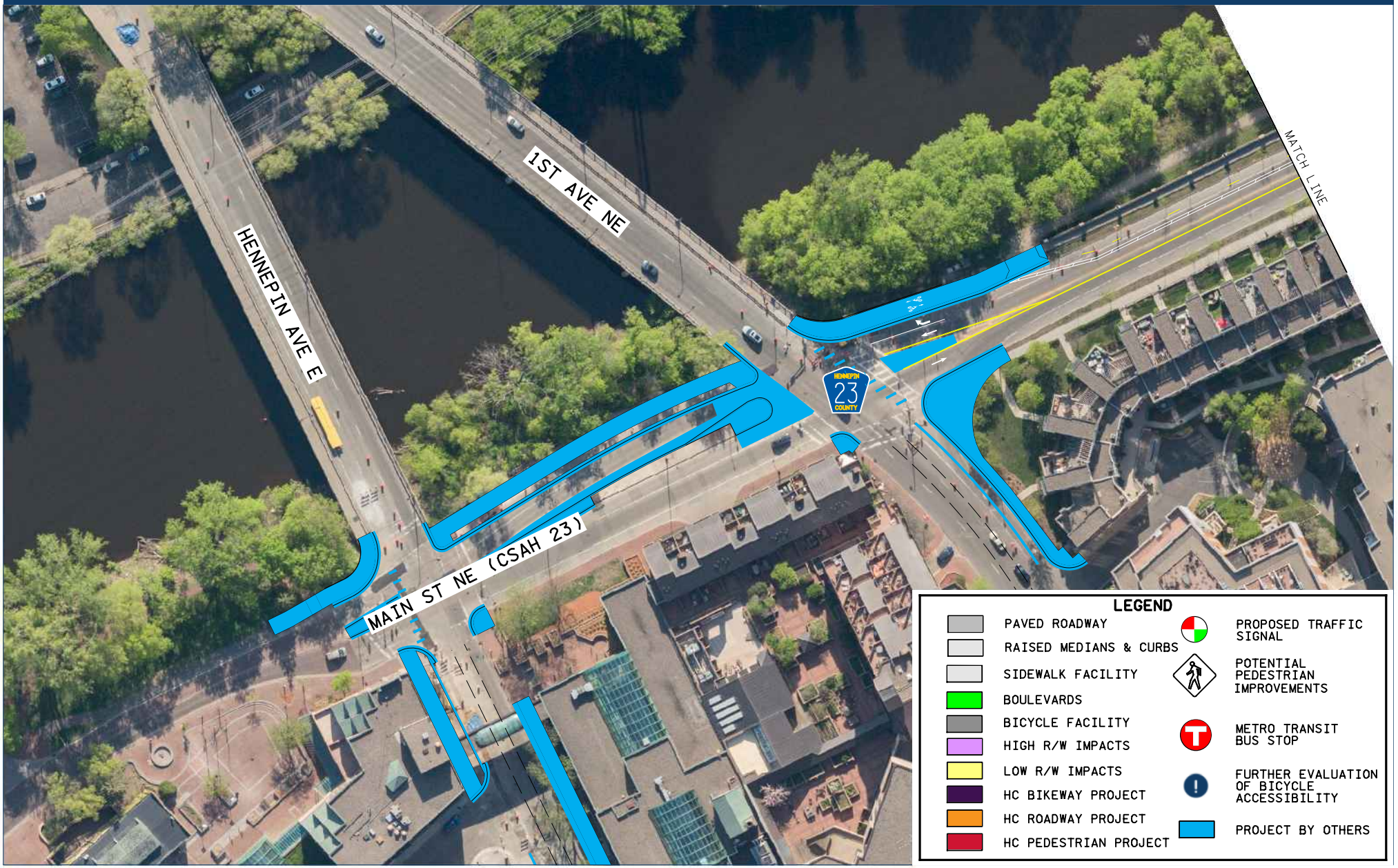
For complete disclaimer of accuracy, please visit http://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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4/5/2022
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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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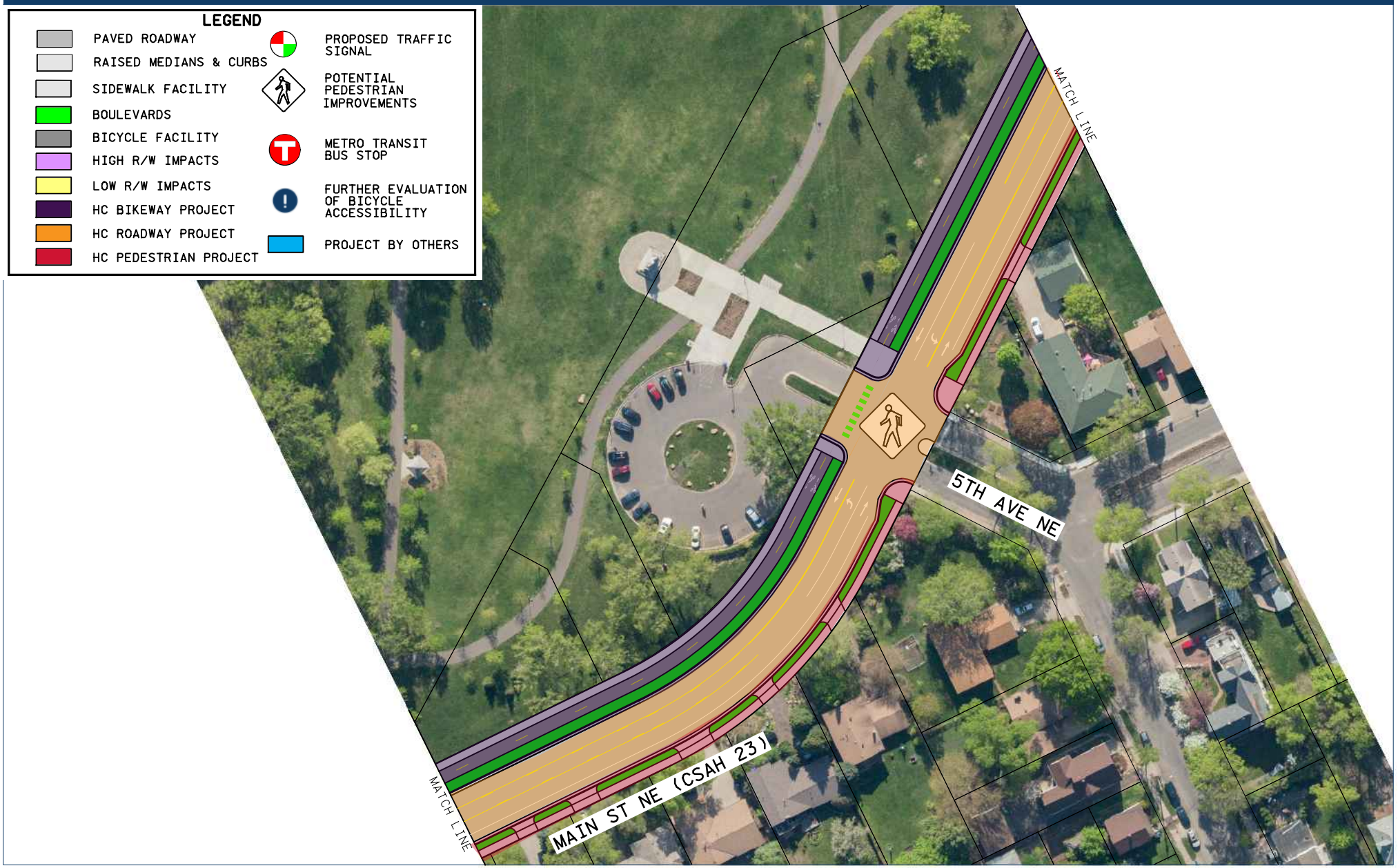
Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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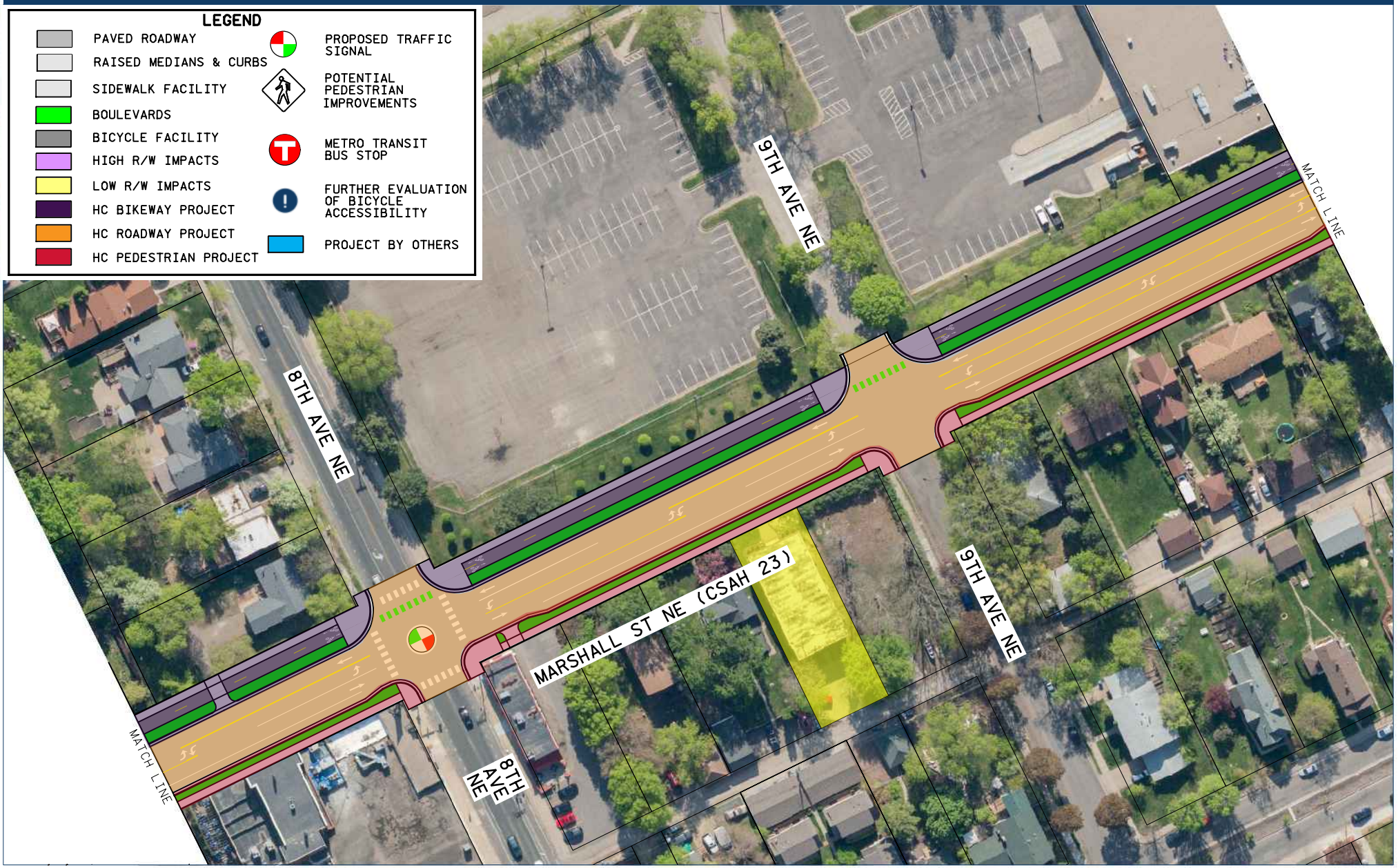
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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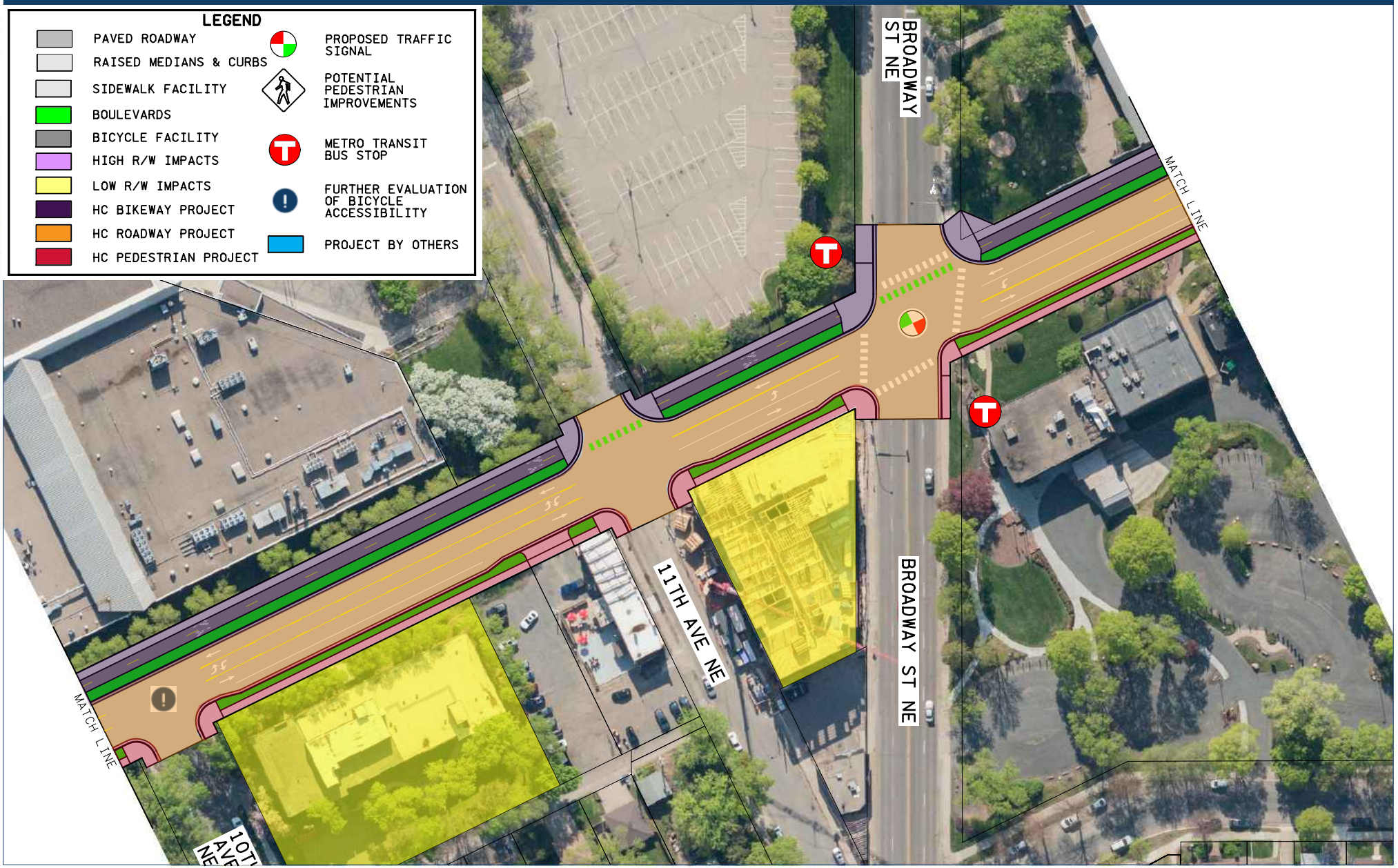
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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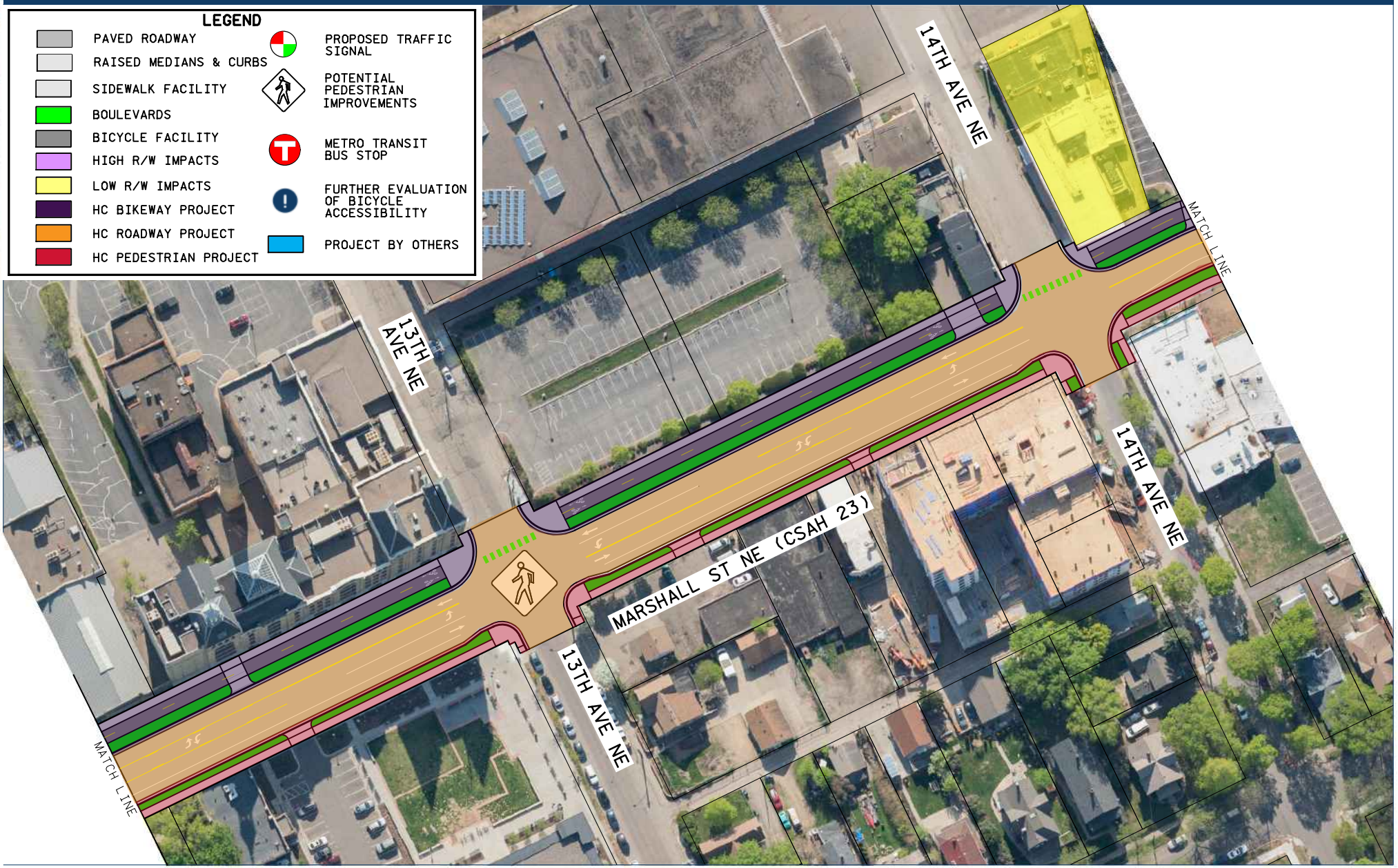
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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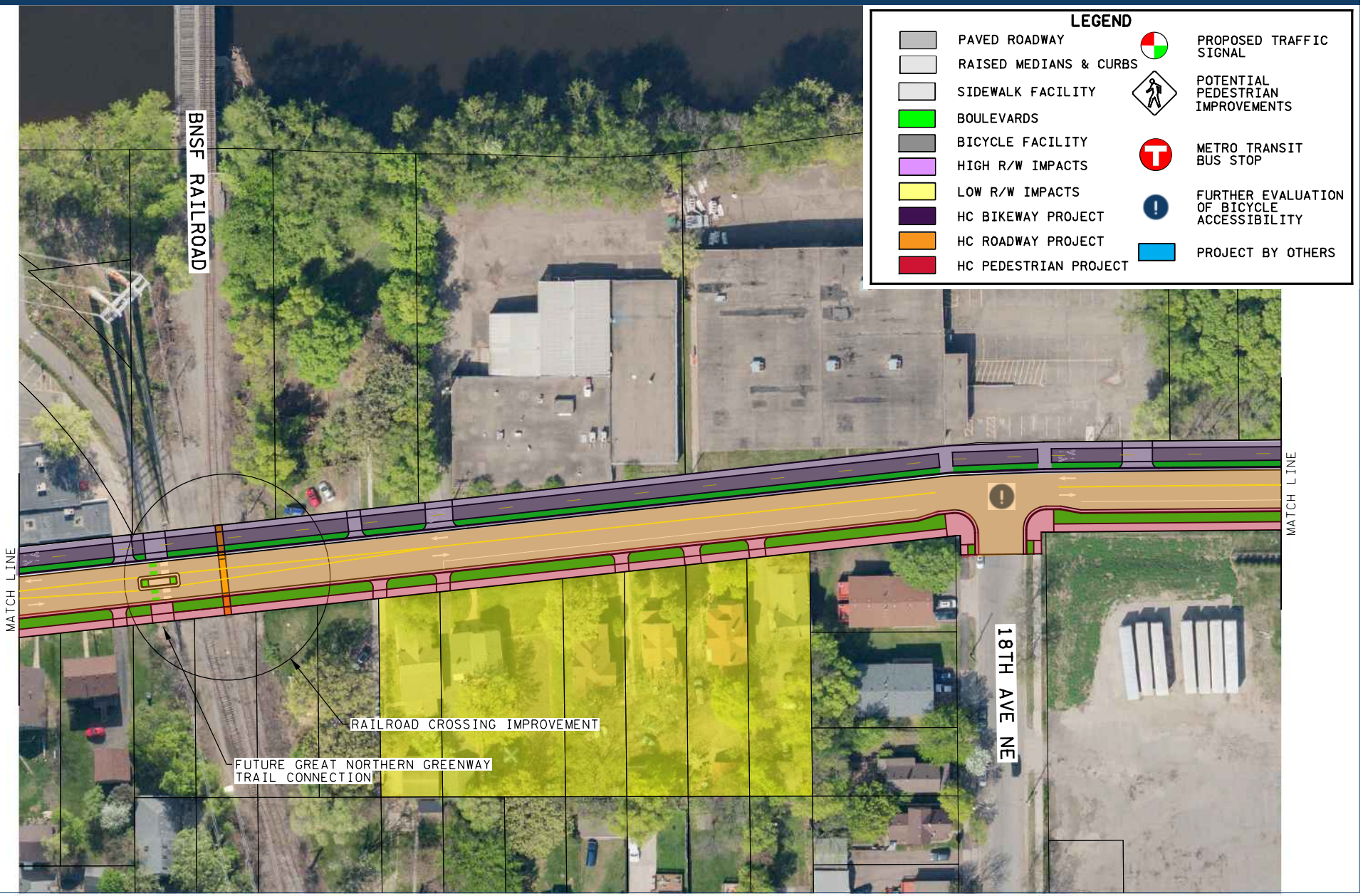
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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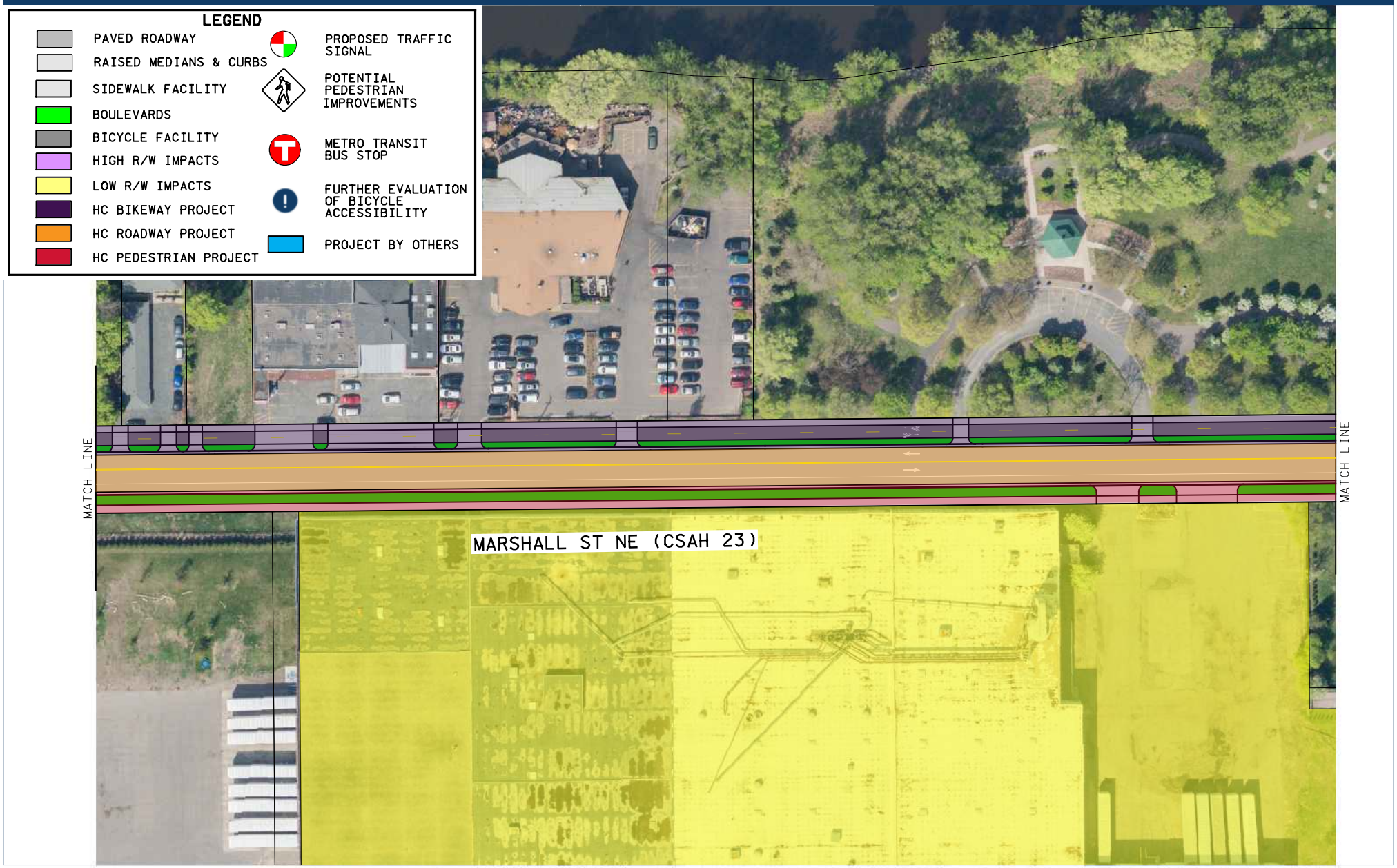
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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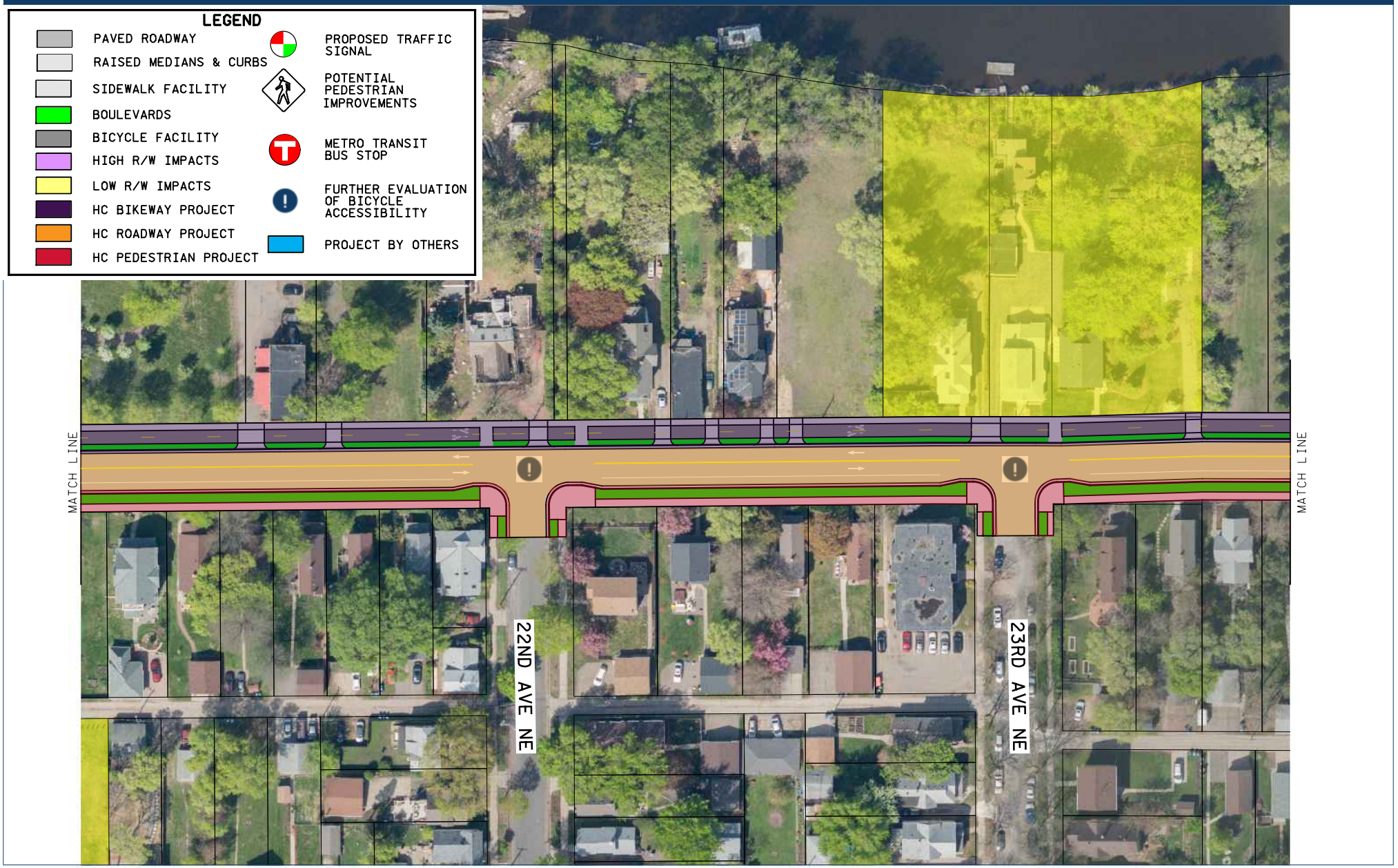
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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Job #14870
4/5/2022
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CSAH 23 (Marshall St NE) Pedestrian Project

List of attachments

1. Project Narrative
2. Project Location Map
3. Existing Roadway Condition Photos
4. Potential Concept
5. Hennepin County Board Resolution 22-0109
6. City of Minneapolis Pedestrian Priority Network Map
7. Marshall St NE Transportation Study Engagement Materials
8. Affordable Housing Access Map and Detail Summary
9. Socio-Economic Equity Map
10. Crash Summary and Detail Listing
11. Crash Reduction Information
12. Multimodal Connections Map
13. City of Minneapolis Support Letter
14. Minneapolis Park and Recreation Board Support Letter

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 1| Project Narrative

HENNEPIN COUNTY
MINNESOTA

Project Name
CSAH 23 (Marshall St NE) Pedestrian Project

City(ies)
Minneapolis

Commissioner District(s)
2

Capital Project Number
CP 2984500

Project Category
Pedestrian

Scoping Manager
Emily Buell

Scoping Form Revision Dates
4/7/2022

Project Summary

Reconstruct sidewalk and boulevard along the east side of Marshall Street NE (CSAH 23) from 3rd Avenue NE to CSAH 153 (Lowry Avenue) in the City of Minneapolis.

Roadway History

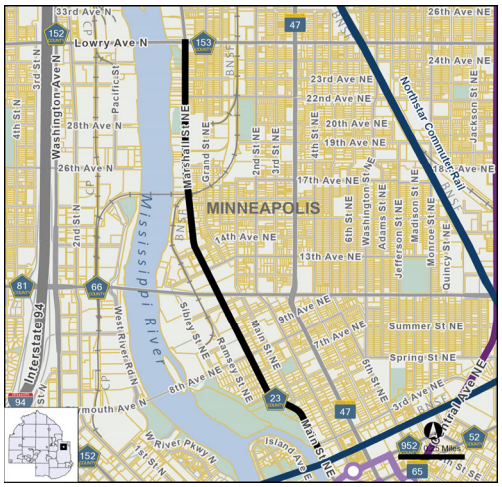
The existing sidewalk facilities along Marshall Street NE (CSAH 23) were originally constructed in 1959 and are showing signs of deterioration. The curb has settled, diminishing its ability to collect storm water and define the roadway edge. Also, minimal pedestrian crossing enhancements (such as curb extensions, raised medians, and beacons) exist along the corridor. Furthermore, the lack of a boulevard in many areas creates a constrained environment for people walking, especially during snowfall events, due the presence of signs, utility poles, and fire hydrants.

Project Description and Benefits

The proposed project will improve the accessibility, mobility, and safety of people walking through the reconstruction of the existing facilities, introduction of pedestrian crossing enhancements, installation of pedestrian lighting, and upgraded ADA accommodations. As a result, people walking and rolling will experience improved access to the Missisippi River as well as the numerious businesses located throughout Northeast Minneapolis.

Project Risks & Uncertainities

Project Map



Project Timeline

Scoping:	Q1 2022 - Q4 2023
Design:	Q1 2024 - Q4 2026
R/W Acquisition:	Q1 2025 - Q4 2026
Bid Advertisement:	Q1 2027
Construction:	Q2 2027 - Q4 2028

Project Delivery Responsibilities

Preliminary Design:	Consultant
Final Design:	Consultant
Construction Services:	Consultant

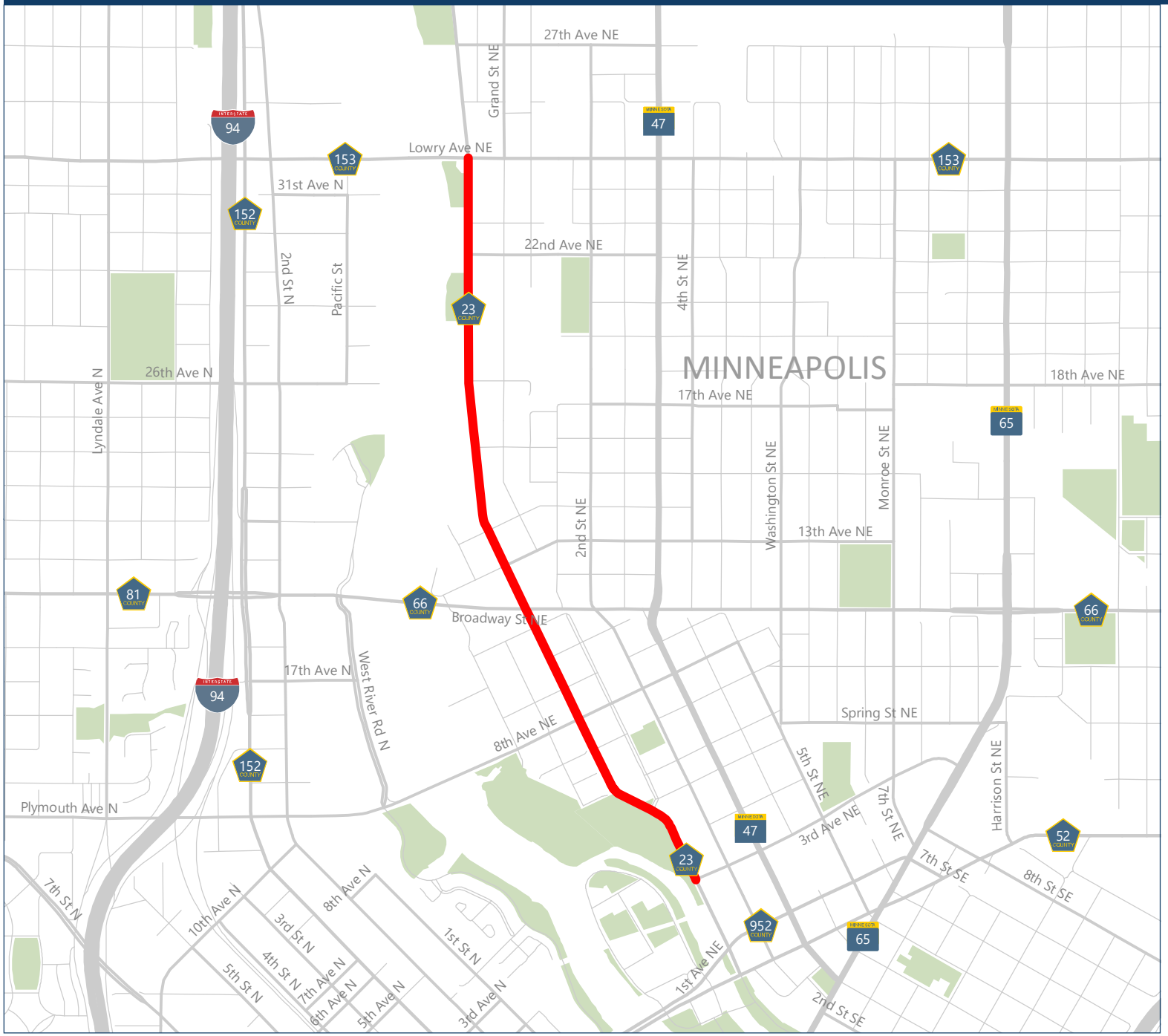
Project Budget -		Project Level
Construction:	$	1,470,000
Cost Estimate Year:		2022
Construction Year:		2022
Annual Inflation Rate:		2.0%
Inflated Construction:	$	1,470,000
Design Services:	$	220,000
R/W Acquisition:	$	-
Other (Utility Burial):	$	-
Construction Services:	$	150,000
Contingency:	$	440,000
Total Project Budget:	**$**	**2,280,000**

Funding Notes

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 02 | Project Location Map

HENNEPIN COUNTY
MINNESOTA



Key

Project Location

0 0.25 0.5 Miles

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Published date: 1/21/2022

N

Hennepin

CSAH 22 (Lyndale Ave) Reconstruction Project

Attachment 03 | Existing Roadway Condition Photos

Overview of the current 4-lane, undivided configuration. High vehicle speeds, a lack of boulevard space and wide crossing lengths serve as barriers to pedestrians, cyclists and those using transit.

The corridor experiences significant drainage issues, leading to pooling at intersections and crosswalks, such as this crossing at 27th Street.

Many of the signals along the corridor are past their useful lifespan, such as this signal at Lyndale and 22nd St. which was originally constructed in 1954.

Several pedestrian ramps throughout the project area lack truncated domes and are aging. Numerous sidewalk obstructions exist within the project area, such as the utility pole shown here.

Hennepin County Public Works
1600 Prairie Drive, Medina, MN 55340
612-596-0300 | hennepin.us

CSAH 22 (Lyndale Ave) Reconstruction Project

Attachment 03 | Existing Roadway Condition Photos

Even where truncated zones are present, ice and snow, as shown above at the 26th St. intersection, pool at crossings due to drainage issues, creating barriers to accessibility.

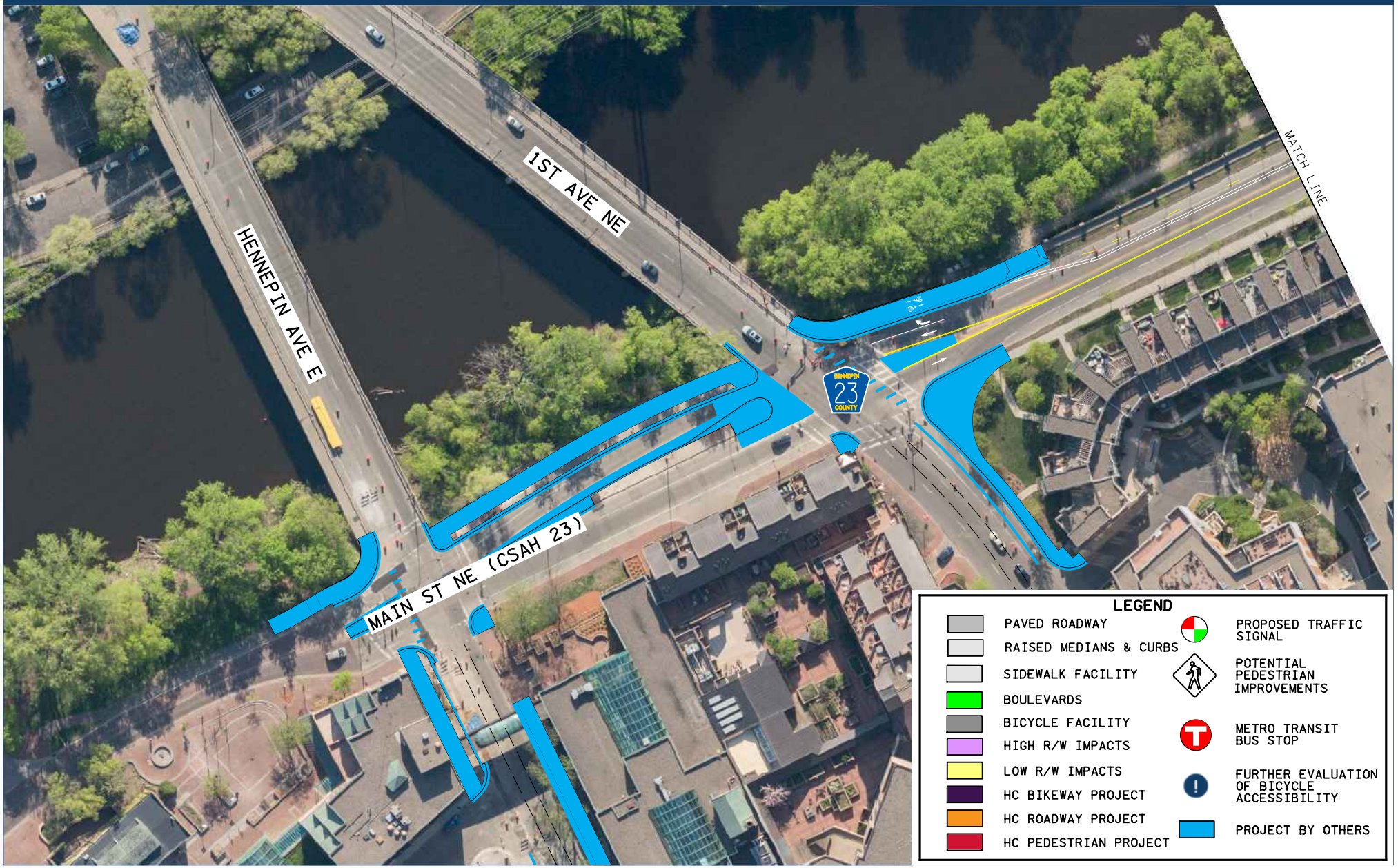
The Franklin Avenue and Lyndale Avenue intersection is within the top 25 intersections with the highest crash frequencies on the Hennepin County system (as of 2021).

(Left) The intersection of 27th and Lyndale Ave, is a barrier to pedestrians and cyclists due to high speeds and long crossing distances. Throughout the corridor, much of the roadway is experiencing significant cracking and pavement markings are worn.

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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4/5/2022
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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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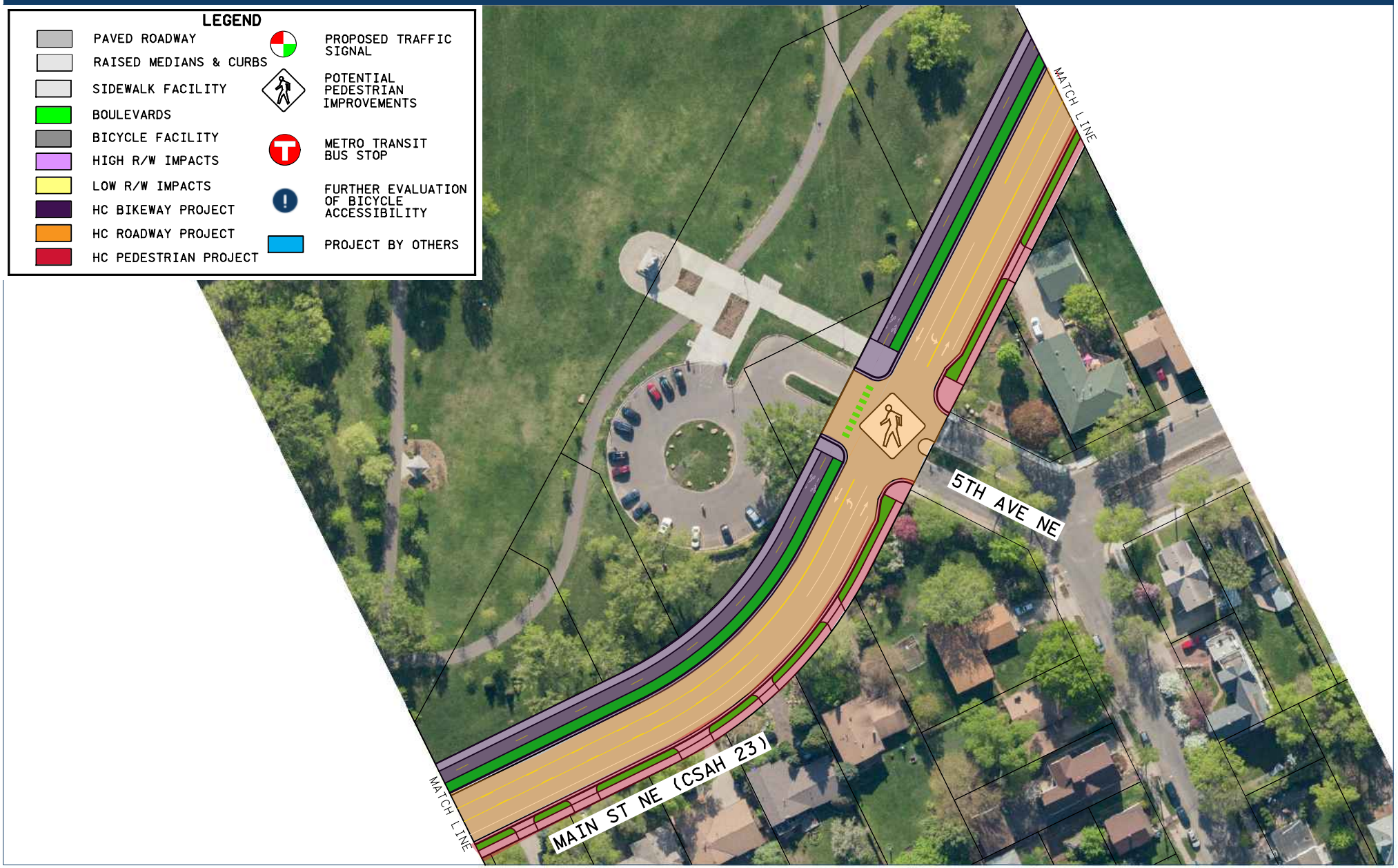
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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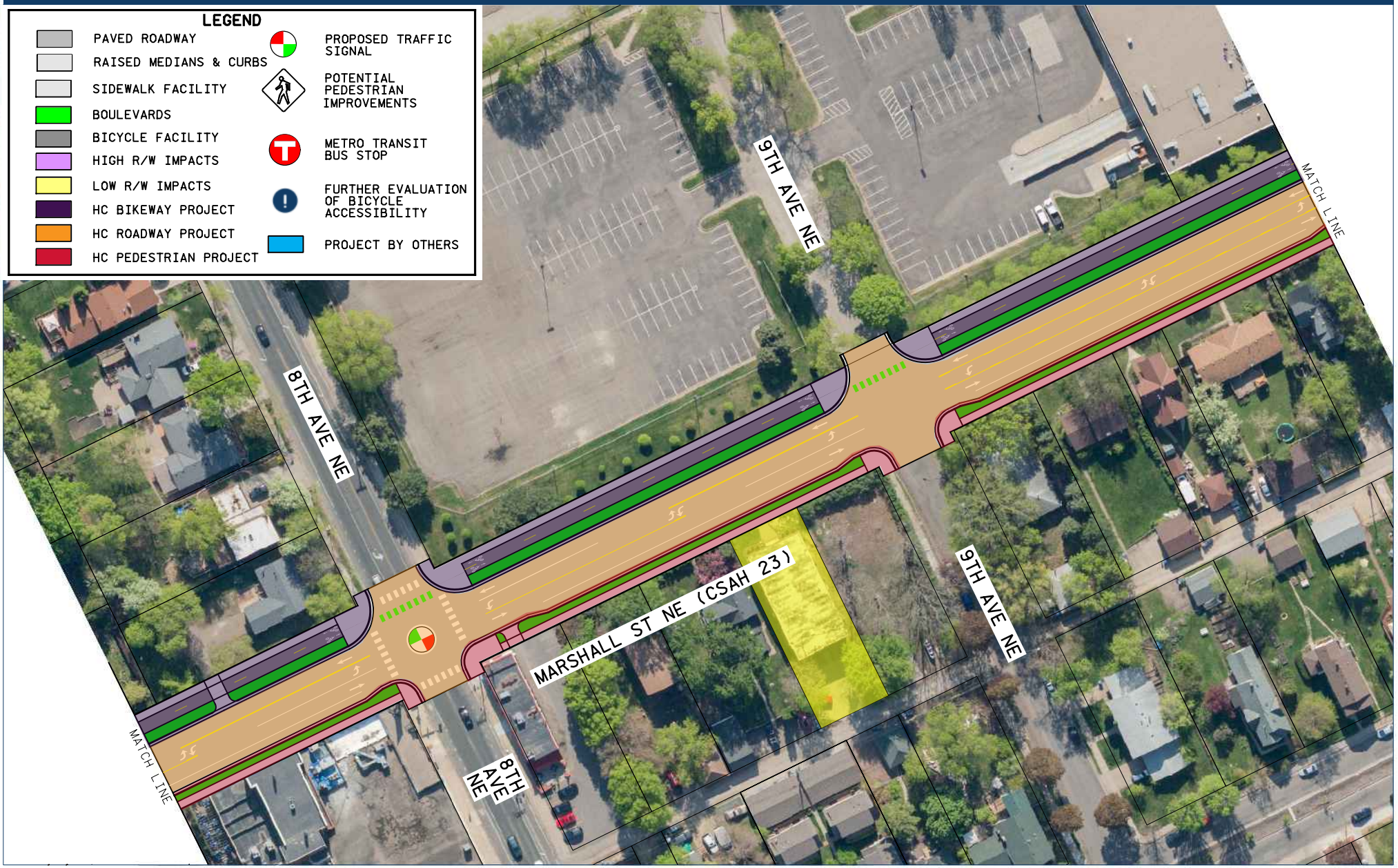
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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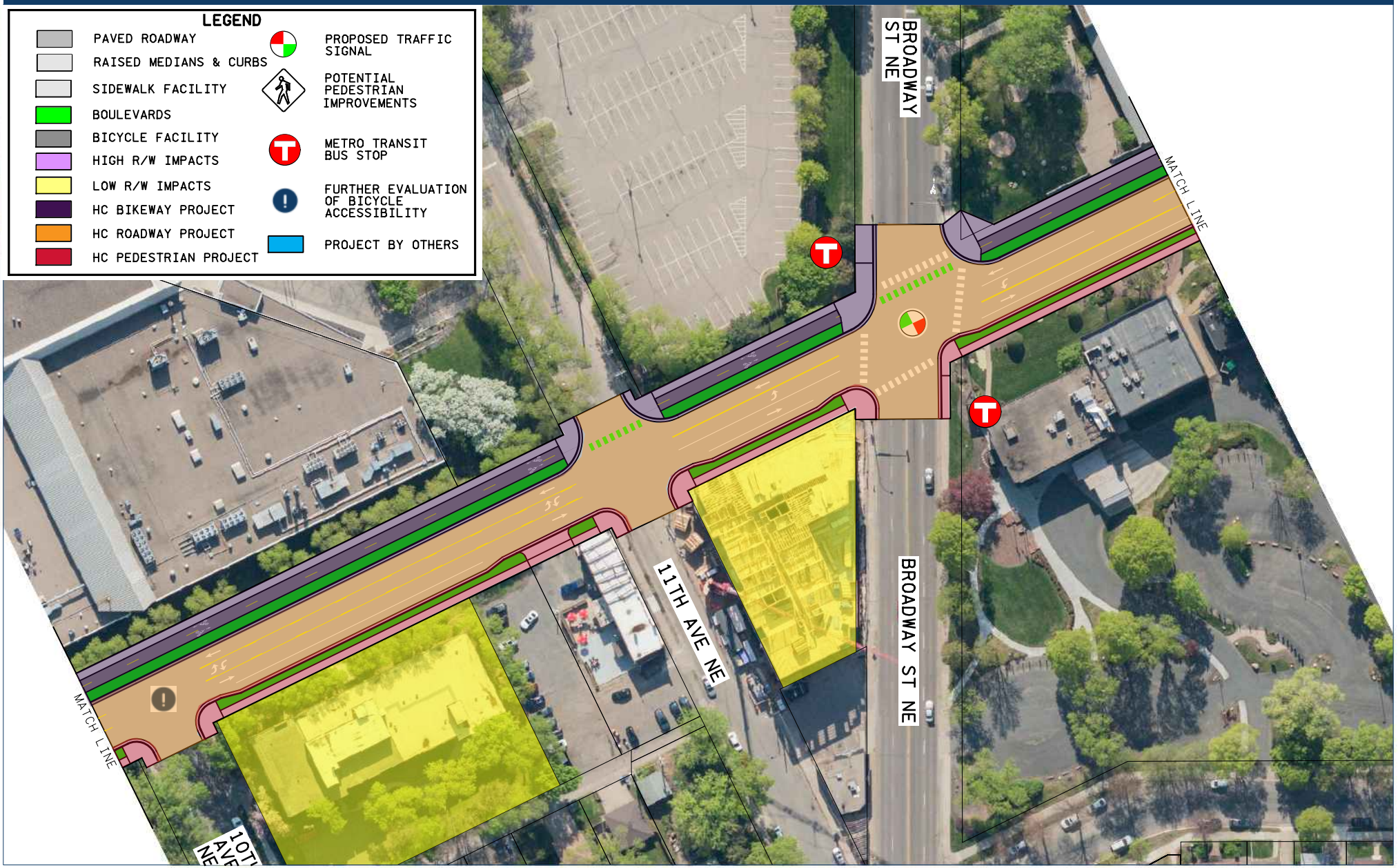
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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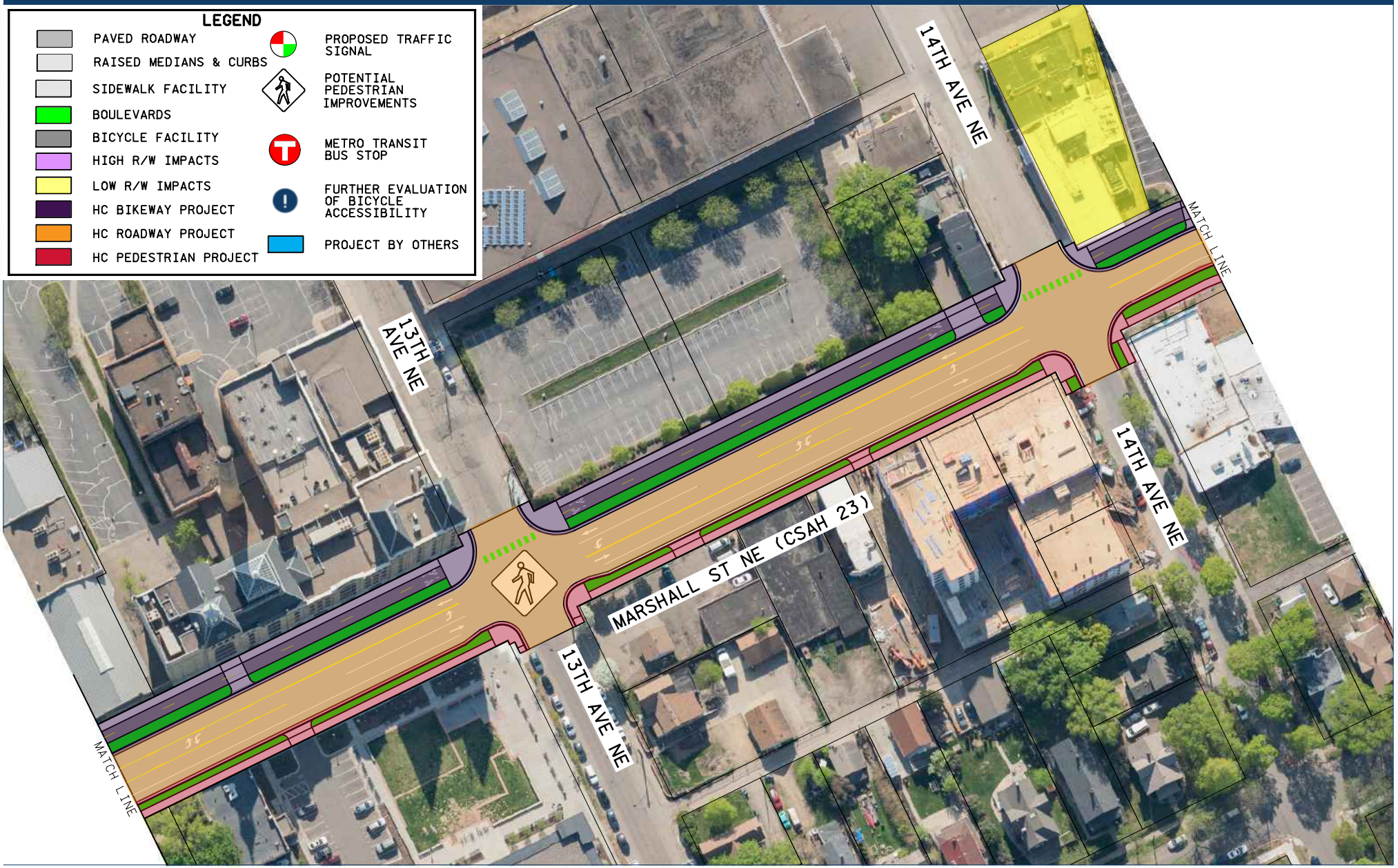
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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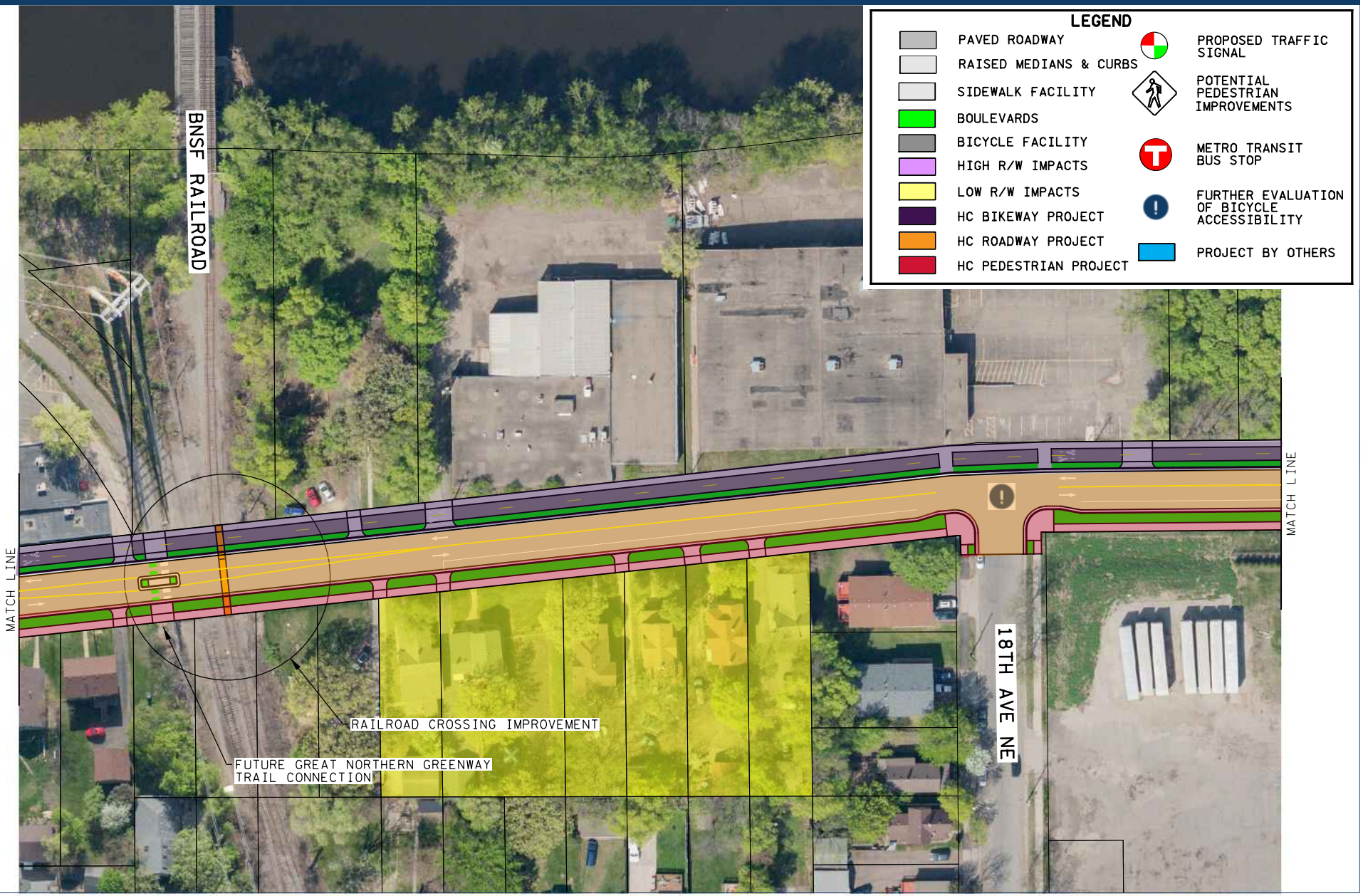
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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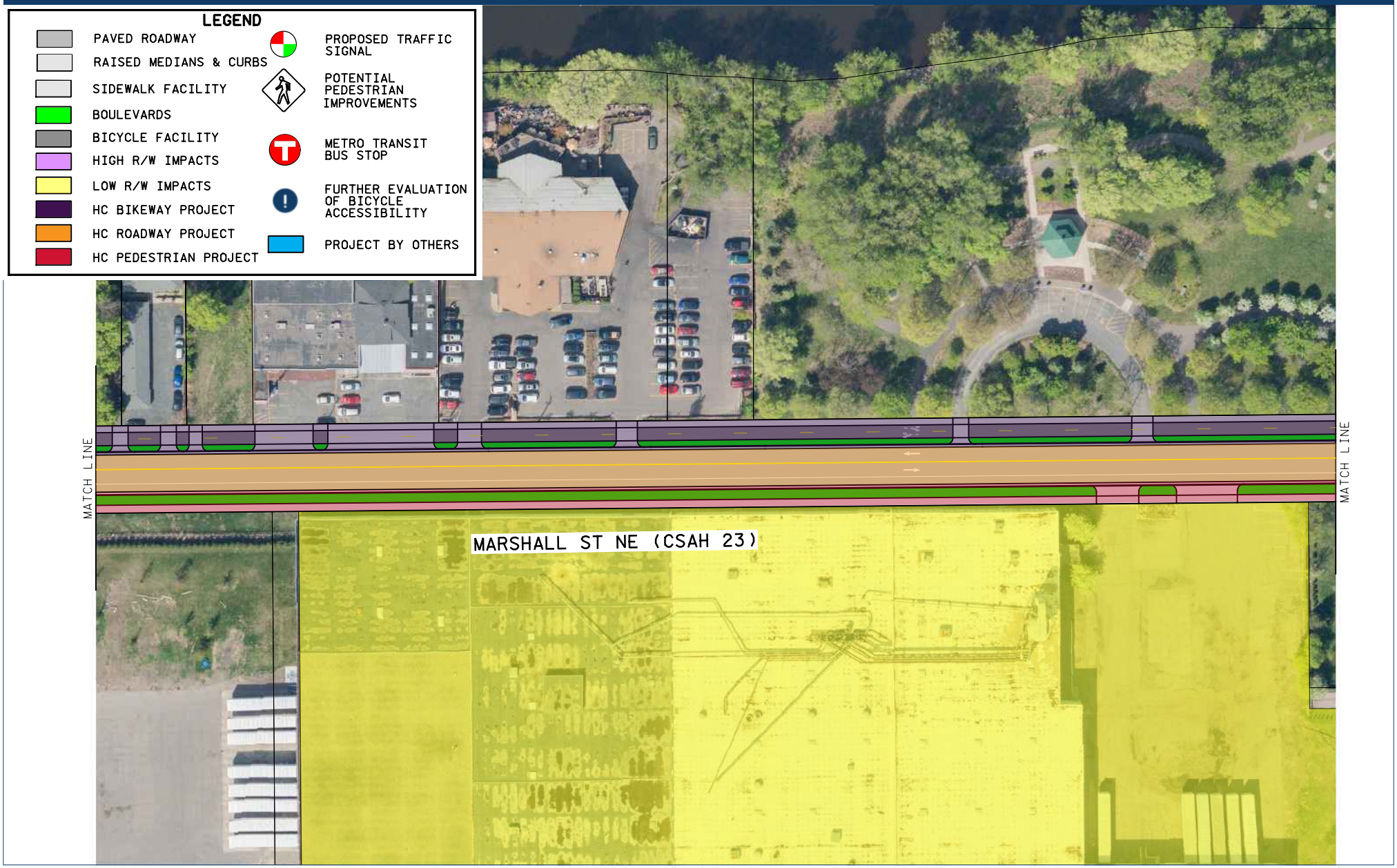
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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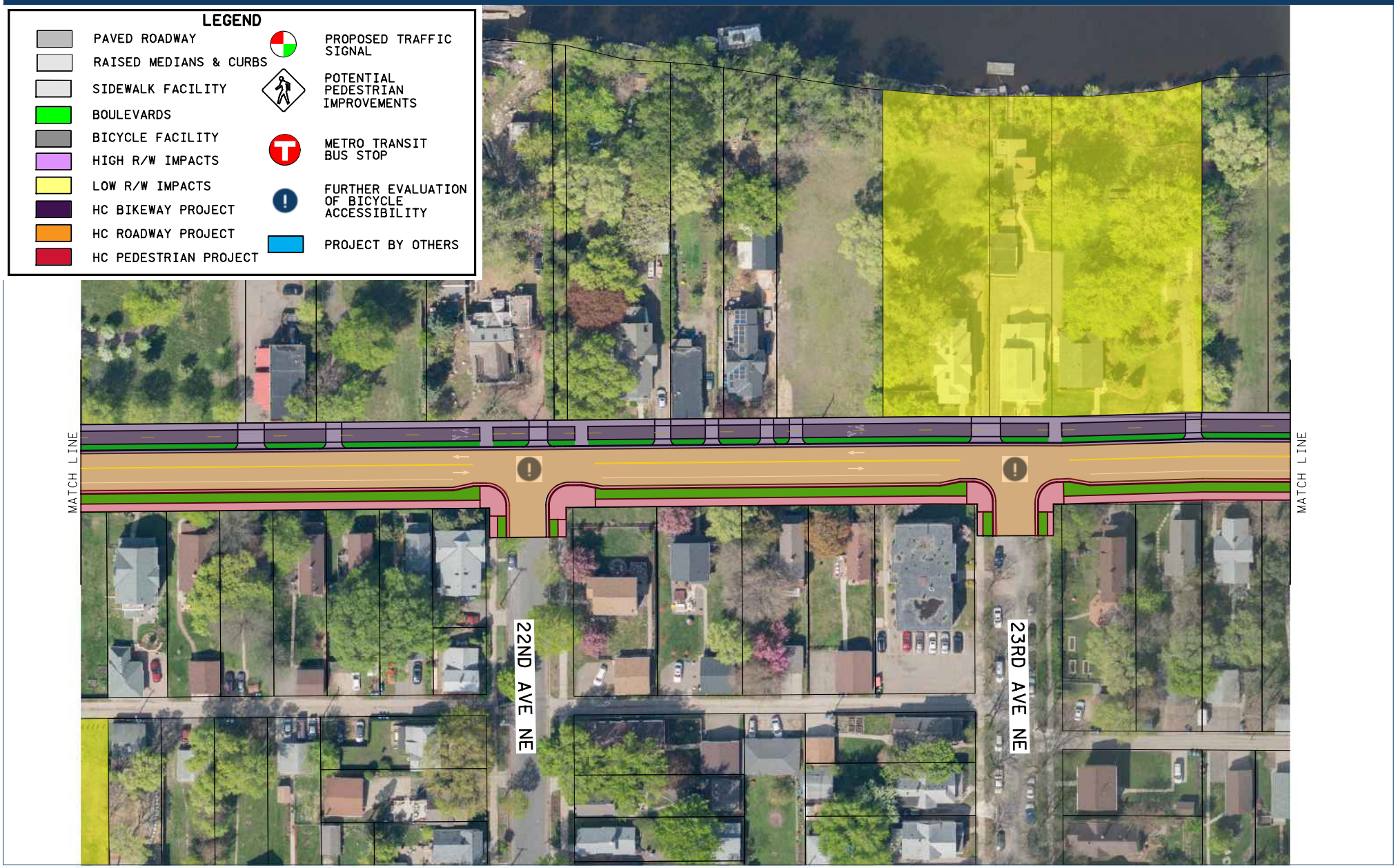
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 04 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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Job #14870
4/5/2022
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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 05 | Hennepin County Board Resolution 22-0109

HENNEPIN COUNTY
MINNESOTA

Hennepin County, Board of Commissioners

RESOLUTION 22-0109

2022

The following resolution was moved by Commissioner Angela Conley and seconded by Commissioner Debbie Goettel:

BE IT RESOLVED, that Hennepin County be authorized to apply for federal funding through the Regional Solicitation for the following projects (separated by category) on various County State Aid Highways (CSAHs) throughout the county:

Roadway Reconstruction/Modernization

Projects programmed in the 2022-2026 CIP:

- Franklin Avenue (CSAH 5) from Lyndale Avenue (CSAH 22) to Blaisdell Avenue in Minneapolis
- Dayton River Road (CSAH 12) from Colburn Street to North Diamond Lake Road (CSAH 144) in Dayton and Champlin
- Lyndale Avenue (CSAH 22) from the Hennepin County Regional Railroad Authority (HCRRA) bridge to Franklin Avenue (CSAH 5) in Minneapolis

Projects identified in the county's 10-year work-plan, but not programmed in the 2022-2026 CIP:

- Penn Avenue (CSAH 32) from 75th Street to the Trunk Highway 62 South Ramp in Richfield
- Cedar Avenue (CSAH 152) from Lake Street (CSAH 3) to 24th Street in Minneapolis

Bridge Rehabilitation/Replacement

Project programmed in the 2022-2026 CIP:

- Bass Lake Road (CSAH 10) bridge over the Twin Lakes Inlet in Brooklyn Center and Crystal

Projects identified in the county's 10-year work-plan, but not programmed in the 2022-2026 CIP:

- Pioneer Trail (CSAH 1) bridge over the HCRRA corridor in Eden Prairie
- Eden Prairie Road (CSAH 4) bridge over Twin Cities and Western Railroad in Eden Prairie

Multiuse Trails/Bicycle and Pedestrian Facilities (sidewalks, streetscaping and improved accessibility)

Project partially programmed in the 2022-2026 CIP:

- Lake Street (CSAH 3) from Dupont Avenue to the Mississippi River

Project identified in the county's 10-year work-plan, but not programmed in the 2022-2026 CIP:

- Marshall Street NE (CSAH 23) from Third Avenue NE to Lowry Avenue NE (CSAH 153).

Project not currently identified in the county's 2022-2026 CIP or 10-year work-plan:

- Park Avenue (CSAH 33) and Portland Avenue (CSAH 35) from Lake Street (CSAH 3) to the I-94/I-35W Bridge in Minneapolis

Mobility and Safety

Projects not currently identified in the county's 10-year work-plan or 5-year CIP:

- Rockford Road (CSAH 9) and Northwest Boulevard (CSAH 61) in Plymouth
- Hemlock Lane (CSAH 61) and Elm Creek Boulevard (CSAH 130) in Maple Grove

The question was on the adoption of the resolution and there were 7 YEAS and 0 NAYS, as follows:

County of Hennepin
Board of County Commissioners

YEAS	NAYS	ABSTAIN	ABSENT
Marion Greene			
Debbie Goettel			
Irene Fernando			
Angela Conley			
Jeff Lunde			
Chris LaTondresse			
Kevin Anderson			

RESOLUTION ADOPTED ON **3/22/2022**

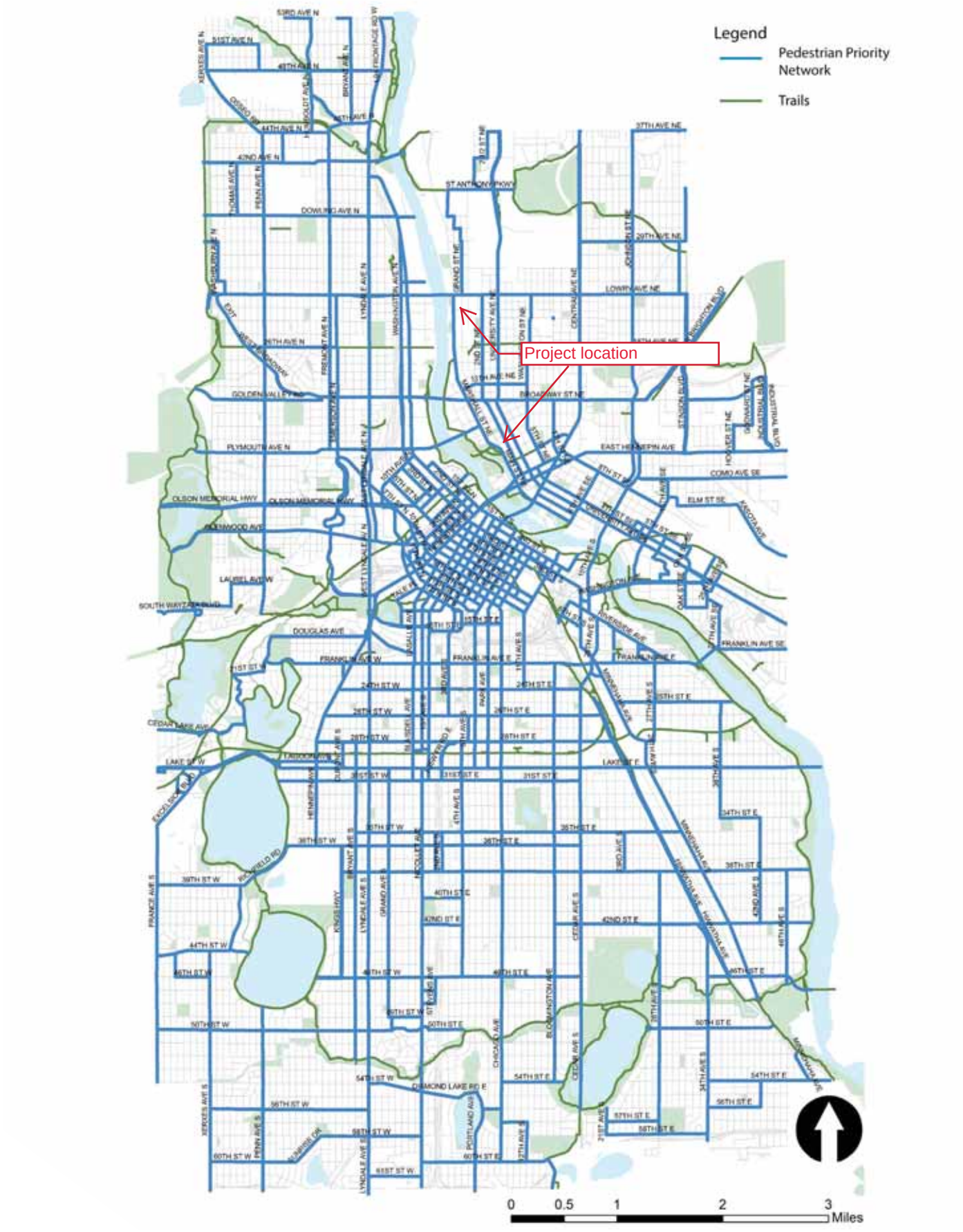
ATTEST: M. Rose

Deputy/Clerk to the County Board

Hennepin County Board of Commissioners
300 South Sixth Street, Minneapolis, MN 55487
hennepin.us

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 06 | City of Minneapolis Pedestrian Priority Network Map



CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 07 | Marshall St NE Transportation Study Engagement

MARSHALL ST. NE

TRANSPORTATION FEASIBILITY STUDY

LOOKING NORTH ON MARSHALL ST. NE

The two-mile Marshall St. NE Project Corridor is home to businesses, residents, industry, parks, and entertainment.

Hennepin County and the City of Minneapolis are partnering with local community stakeholders and residents to propose street design improvements to Marshall St. NE between Broadway St. and St. Anthony Parkway in Northeast Minneapolis.

CURRENT TRAFFIC PATTERNS

	North of Lowry Ave VOLUME PER DAY	South of Lowry Ave VOLUME PER DAY
Data from 2014	**40** pedestrians	**110** pedestrians
Data from 2014	**130** bicyclists	**200** bicyclists
Data from 2017	**8,200** vehicles	**10,800** vehicles
Data from 2011	**600** freight trucks	**800** freight trucks

MARSHALL ST. NE
TRANSPORTATION FEASIBILITY STUDY

Minneapolis
City of Lakes

Hennepin

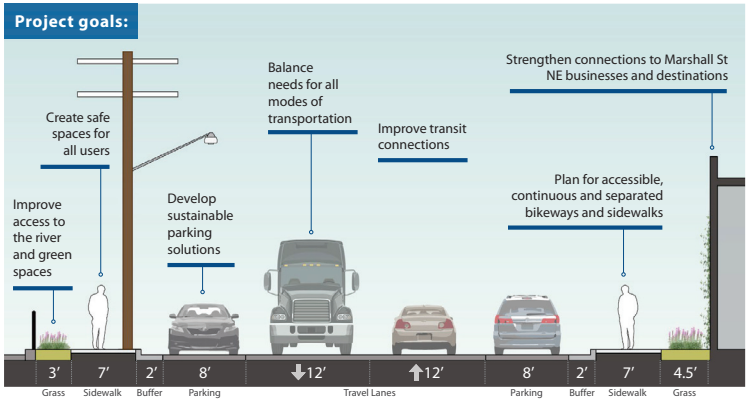
CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 07 | Marshall St NE Transportation Study Engagement

EXISTING CONDITIONS

The goals of the study were identified by working with all stakeholders to develop balanced planning concepts.

Project goals:



ENGAGEMENT EFFORTS

Local residents and businesses were engaged since 2000 and during the study to both determine design goals and to assess potential solutions.

EXISTING CHALLENGES

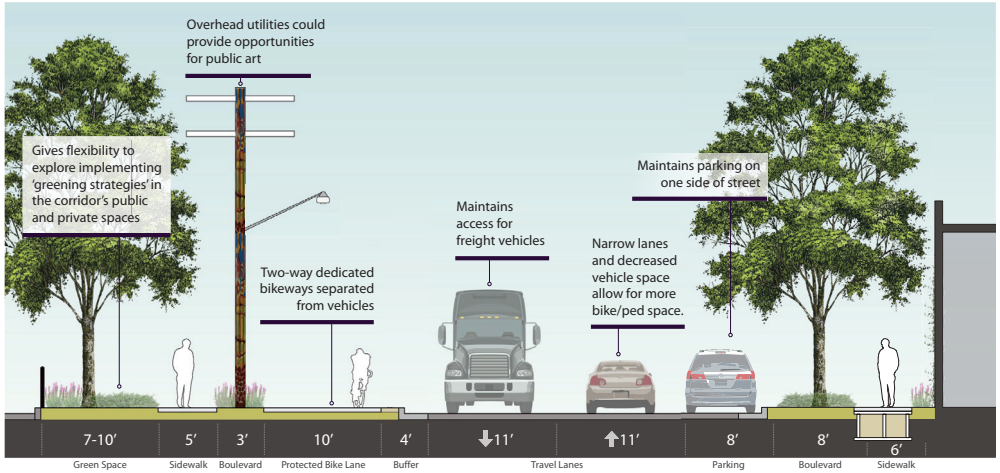
- Poor road and pavement condition.
- Typical street maintenance will soon be ineffective to keep the street in good condition.
- Lacks safe mid-block crossing points for pedestrians.
- Identified as a bike route on County and City networks, yet there is no dedicated facility along the route.
- Corridor growth from increase in entertainment, dining, retail, and multi-unit housing within walking and/or biking distance.

PREFERRED OPTION

The preferred option balances all modes of transportation with the needs of the corridor community.

Construction Cost

$18 to $22 million



NEXT STEPS

The county has applied for federal funding to construct a portion of the 16th Ave NE to 27th Ave NE corridor. If funding is received the county will continue to explore improving pedestrian and bicycle crossing treatments and identify greening strategies along this segment as they work on the design. Since stakeholders expressed a desire for transit along Marshall St NE, the county will explore this request with Metro Transit.

1. **Discuss transit needs with Metro Transit.**
2. **Obtain federal funding for construction.**
3. **Begin preliminary design.**

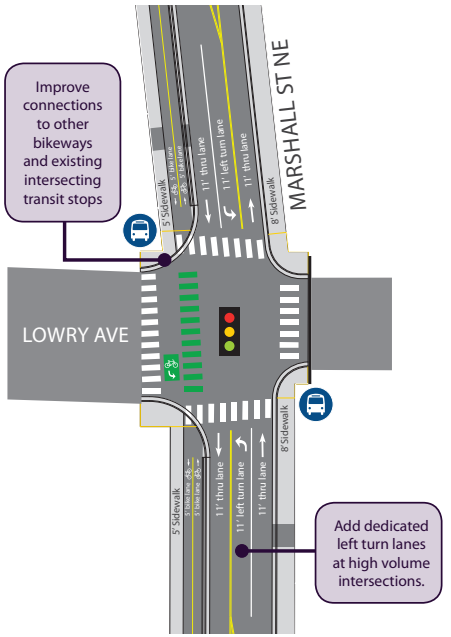
EXAMPLES OF BICYCLE AND PEDESTRIAN IMPROVEMENTS

The following treatments are examples of what will be considered as the design progresses to improve bicycle and pedestrian connections and crossings throughout the corridor.

IMPROVED STREET CROSSINGS

Safer crossings for pedestrians and bicyclists at high volume intersections.

BUSY INTERSECTIONS
(Lowry Ave. Example)

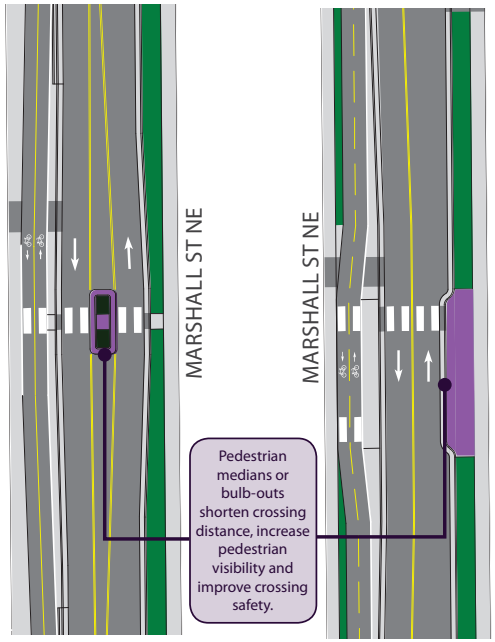


MID-BLOCK PEDESTRIAN CROSSINGS

Safer options for pedestrians to cross Marshall St. NE in between intersections at key destinations

OPTION 1
Pedestrian Median

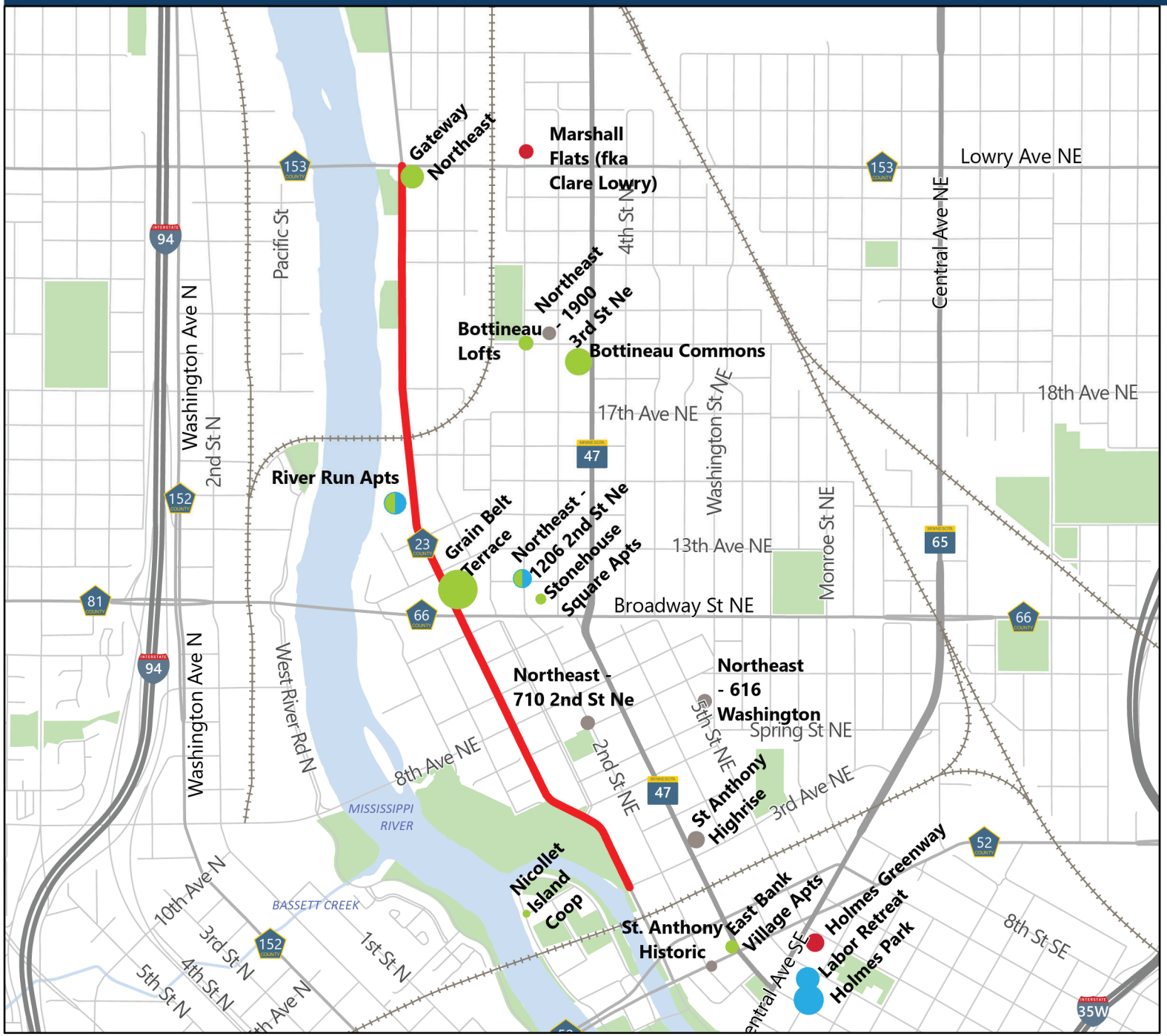
OPTION 2
Bulb-Out



CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 08 | Affordable Housing Access Map and Detail Summary

HENNEPIN COUNTY
MINNESOTA



Key

- Project Location

Population Served

- Family
- Elderly
- People with Disabilities
- Multiple
- Homeless
- No Information

Affordable Units

- 1-5
- 6 - 50
- 51-100
- 101 - 150

Construction Status

- Existing Affordable Housing
- Proposed or Under Construction

0 0.1 0.2 Miles

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Published date: 3/7/2022

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Hennepin

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 08 | Affordable Housing Access Map and Detail Summary

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Bottineau Lofts	37	37	11	0	0	2	7	17	11	0
Bottineau Commons	119	94	25	0	0	0	28	48	18	0
St. Anthony Historic	20	20	0	0	0	10	10	0	0	0
River Run Apts	74	74	0	0	0	0	9	48	17	0
Holmes Park	107	107	107	0	0	0	76	25	6	0
Labor Retreat	77	77	77	0	0	0	63	14	0	0
Holmes Greenway	54	54	0	0	0	0	18	36	0	0

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Stonehouse Square Apts	19	19	19	0	0	0	8	11	0	0
East Bank Village Apts	30	30	0	18	0	0	7	15	8	0
Northeast - 1206 2nd St Ne	57	57	57	0	0	0	56	1	0	0
Marshall Flats (fka Clare Lowry)	36	36	7	29	0	22	14	0	0	0
Grain Belt Terrace	150	150	0	0	150	8	72	58	12	0
Northeast - 1900 3rd St Ne	32	32	32	0	0	0	32	0	0	0
Northeast - 616 Washington	35	35	35	0	0	0	35	0	0	0

CSAH 23 (Marshall St NE) Pedestrian Project

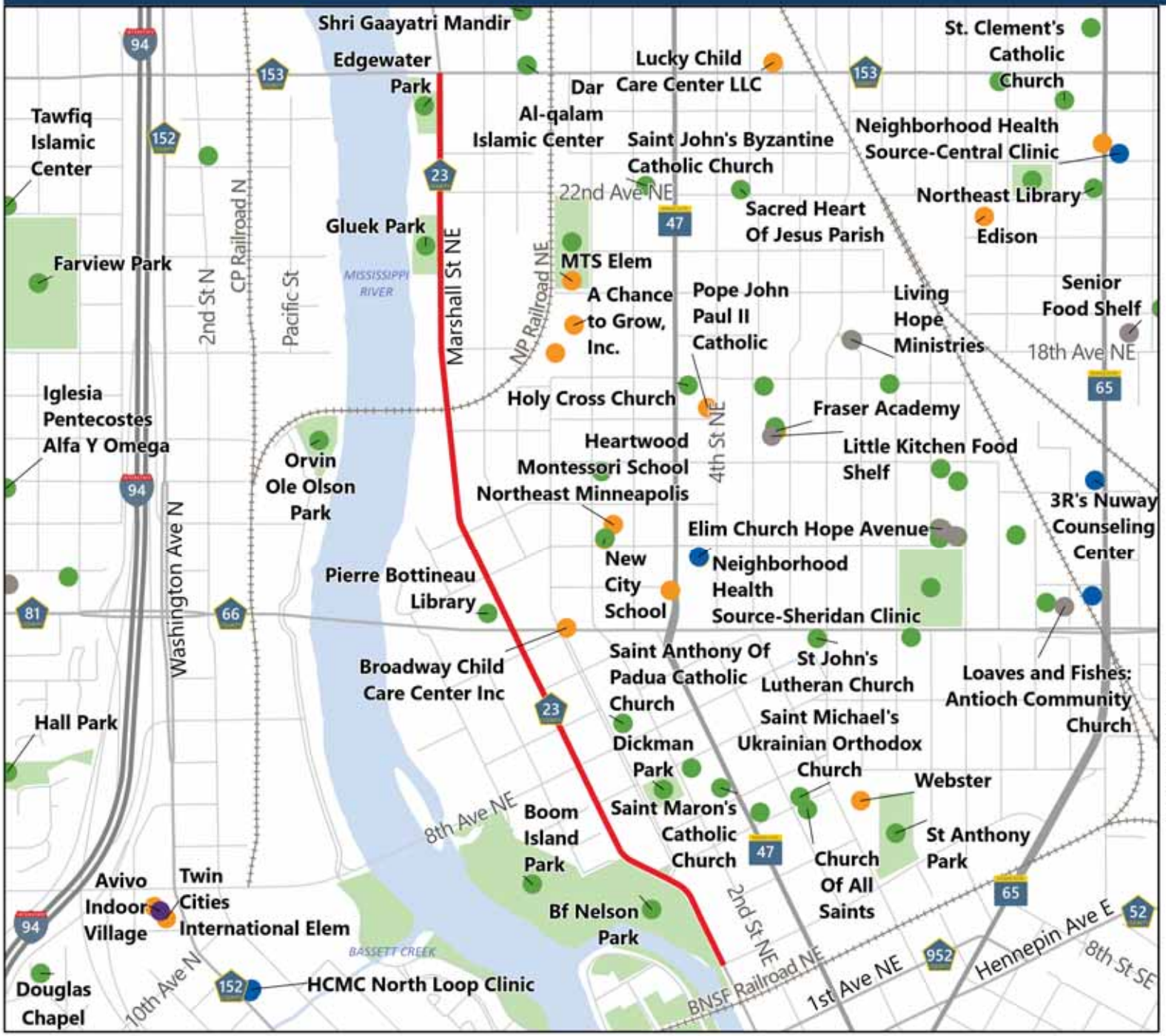
Attachment 08 | Affordable Housing Access Map and Detail Summary

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Northeast - 710 2nd St Ne	35	35	35	0	0	0	35	0	0	0
St Anthony Highrise	48	48	48	0	0	0	48	0	0	0
Gateway Northeast	129	77	10	16	0	51	46	21	10	
Nicollet Island Coop	22	5	0	5	0	0	10	12	0	0

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 09 | Socio-Economic Equity Map

HENNEPIN COUNTY
MINNESOTA



Key

Project Location

Resource Category

- Healthcare Facilities
- Schools & Childcare
- Community Facilities
- Homeless Shelters
- Food Shelves

0 0.2 0.4 Miles

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Published date: 3/21/2022

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CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 10 | Crash Summary and Detail Listing

Total number of reported crashes involving all users: 325

Table 01 | Pedestrian reported crashes: 8

Year	Total	K	A	B	C	N
2012	1	0	0	1	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	1	0	0	1	0	0
2019	2	0	0	0	2	0
2020	2	0	0	1	1	0
2021	2	0	0	2	0	0
Ten Year Totals	**8**	**0**	**0**	**5**	**3**	**0**

Table 02 | Bicycle reported crashes: 14

Year	Total	K	A	B	C	N
2012	2	0	0	1	1	0
2013	3	0	0	1	2	0
2014	1	0	0	1	0	0
2015	1	0	0	0	1	0
2016	2	0	0	2	0	0
2017	3	0	0	0	1	2
2018	0	0	0	0	0	0
2019	1	0	0	1	0	0
2020	0	0	0	0	0	0
2021	1	0	1	0	0	0
Ten Year Totals	**14**	**0**	**1**	**6**	**5**	**2**

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 10 | Crash Summary and Detail Listing

Incident ID	Roadway	Month	Day	Year	Hour	BASIC TYPE	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
00383541	MARSHALL ST NE	9	17	2016	9	Bike	B - Minor	0	1	2	44.995182	-93.266614
10885251	MARSHALL ST NE	8	12	2013	10	Bike	B - Minor	0	1	2	44.9952	-93.266625
00500638	MARSHALL ST NE	9	11	2017	13	Bike	C - Possib	0	1		44.99856	-93.269048
00454267	MARSHALL ST NE	5	23	2017	6	Bike	N - Prop I	0	1	2	44.998675	-93.269127
10979093	Marshall St NE	8	9	2014	22	Bike	B - Minor	0	3	18	44.998721	-93.26916
00910942	MARSHALL ST NE	6	9	2021	10	Bike	A- Serious	0	2	1	44.998872	-93.269264
11050349	Marshall St NE	6	18	2015	17	Bike	C - Possib	0	1	21	45.000076	-93.270088
00506179	MARSHALL ST NE	10	4	2017	15	Bike	N - Prop I	0	1	99	45.00008	-93.27009
00707793	NE MARSHALL ST	5	4	2019	15	Bike	B - Minor	0	1		45.005406	-93.271635
10812058	Marshall St. NE	10	24	2012	21	Bike	B - Minor	0	1	2	45.007331	-93.271733
10883738	Broadway St Ne	7	19	2013	19	Bike	C - Possib	0	1	2	44.998724	-93.269152
10872125	Broadway St NE	4	30	2013	0	Bike	C - Possib	0	1	1	44.998724	-93.269111
10809638	16 ave ne	9	14	2012	14	Bike	C - Possib	0	1	6	45.003895	-93.271307
00393514	11TH AVE NE	11	10	2016	15	Bike	B - Minor	0	1	99	44.998006	-93.268917
10797107	MARSHALL ST NE	5	26	2012	1	Pedestrian	B - Minor	0	1	18	44.994162	-93.265995
0972877	MARSHALL ST NE	11	11	2021	23	Pedestrian	B - Minor	0	1	1	44.994358	-93.266117
00651717	MARSHALL ST NE	10	13	2018	23	Pedestrian	B - Minor	0	1		44.997672	-93.268432
00822691	MARSHALL ST NE	7	30	2020	22	Pedestrian	C - Possib	0	2	99	44.998682	-93.269133
00907911	MARSHALL ST NE	5	26	2021	7	Pedestrian	B - Minor	0	1	99	44.998771	-93.269194
00759599	NE MARSHALL ST	11	3	2019	16	Pedestrian	C - Possib	0	1	90	45.009365	-93.271746
00741499	8TH AVE NE	8	19	2019	23	Pedestrian	C - Possib	0	1	2	44.995197	-93.266638
00834464	11TH AVE NE	8	9	2020	22	Pedestrian	B - Minor	0	1	90	44.998072	-93.268726

Total Crashes: 22

Curb Extensions and Curb Radii

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What is their purpose?

A curb extension is an extension of the sidewalk into the roadway that reduces the crossing distance of a roadway for pedestrians and pedestrian exposure to vehicular traffic. Curb extensions can provide visual cues to drivers that encourage them to reduce speeds and be aware of pedestrians and bicyclists. Curb extensions also improve intersection sight distance for vehicles and pedestrians since they restrict parking near the intersection. They can also provide additional space to construct ADA-compliant curb ramps, making them an effective strategy on ADA retrofit projects where constructing and ADA-compliant ramp may be otherwise difficult. Curb extensions are used at intersections and at mid-block crosswalks.

A curb extension at an intersection

Are they a proven strategy?

Curb extensions are **PROVEN** safety strategies. Research shows that reducing the crossing distance, restricting the street width, and reducing wide corner radii improve pedestrian safety and enhance the sight distance between motorists and pedestrians.

Supporting Documentation: MnDOT Enhanced Crosswalks

Where would we use them?

Curb extensions are most appropriate in urban settings when there is an on-street parking lane or a shoulder where the extensions will not impede bicycle travel. The curb extension physically precludes vehicles parking near an intersection or pedestrian crossing, improving sight lines and visibility both for and of crossing pedestrians near parked vehicles. Beyond being used at intersections, curb extensions can be applied in a variety of ways depending on the roadway's needs. Examples include the following:

- Mid-block curb extensions or pinch points
- Offset curb extensions or chicanes
- Bus stops

What are the maintenance impacts?

Partner with maintenance team members during design development to discuss strategies and issues related to routine maintenance, especially during winter months. Curb extensions may increase the level of effort required to remove snow from the parking lane. This can be minimized by adding delineators or markers on the curb extension to help guide snow plows, and by flattening the taper rate of the curb extension to 1:5 so plows can maintain a limited forward speed while clearing snow adjacent to the curb extension.

Curb Extensions and Curb Radii

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What are the advantages?

- May be temporarily implemented and evaluated using low-cost, interim materials such as gravel, planters, paint and striping, flexible posts, or bollards until a permanent improvement can be funded through a reconstruction project or other programming.
- Increase visibility of pedestrians and bicyclists crossing the street.
- Encourage slower turning speeds.
- Reduce crossing distance at mid-block crosswalks.
- Serve as a gateway or visual cue for drivers entering a slower, more residential area.
- May dedicate width for bus stops (bus bulbs).
- May dedicate width for on-street parking.
- Increase space for street furniture, landscaping, and stormwater treatment.
- Improve intersection sight distance (by prohibiting parking near the intersection)
- Provide additional space to construct ADA-compliant curb ramps.
- Studies show a reduction in crashes up to 45%.

What are the challenges?

- Design can be restricted by the turning radius of the larger design vehicles (trucks and buses).
- Stormwater management needs associated with the new curb alignment (e.g., catch basin locations) can bring additional design and construction costs.
- Require additional winter maintenance considerations.
- Curb extension retrofits may reduce the amount of available on-street parking

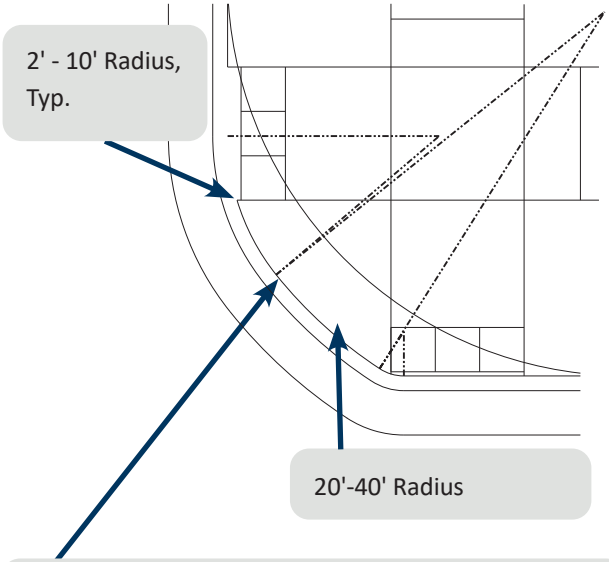
Supplemental treatments

Curb extensions and curb radii can be combined with the following treatments:

- High-visibility crosswalk markings
- Advanced warning signs
- Right turn on red restrictions at signalized intersections
- Landscaping or other aesthetic improvements

Best practices

Curb extensions can often be lengthened to provide additional space for landscaping, stormwater treatment, transit waiting areas, and bus shelters. In addition, curb extensions can create additional space to fit ADA-compliant curb ramps, improving accessibility in constrained locations where it may otherwise be difficult to do so.



A compound radius can increase available curb extension space while still allowing large vehicles to turn, especially on multi-lane roadways.

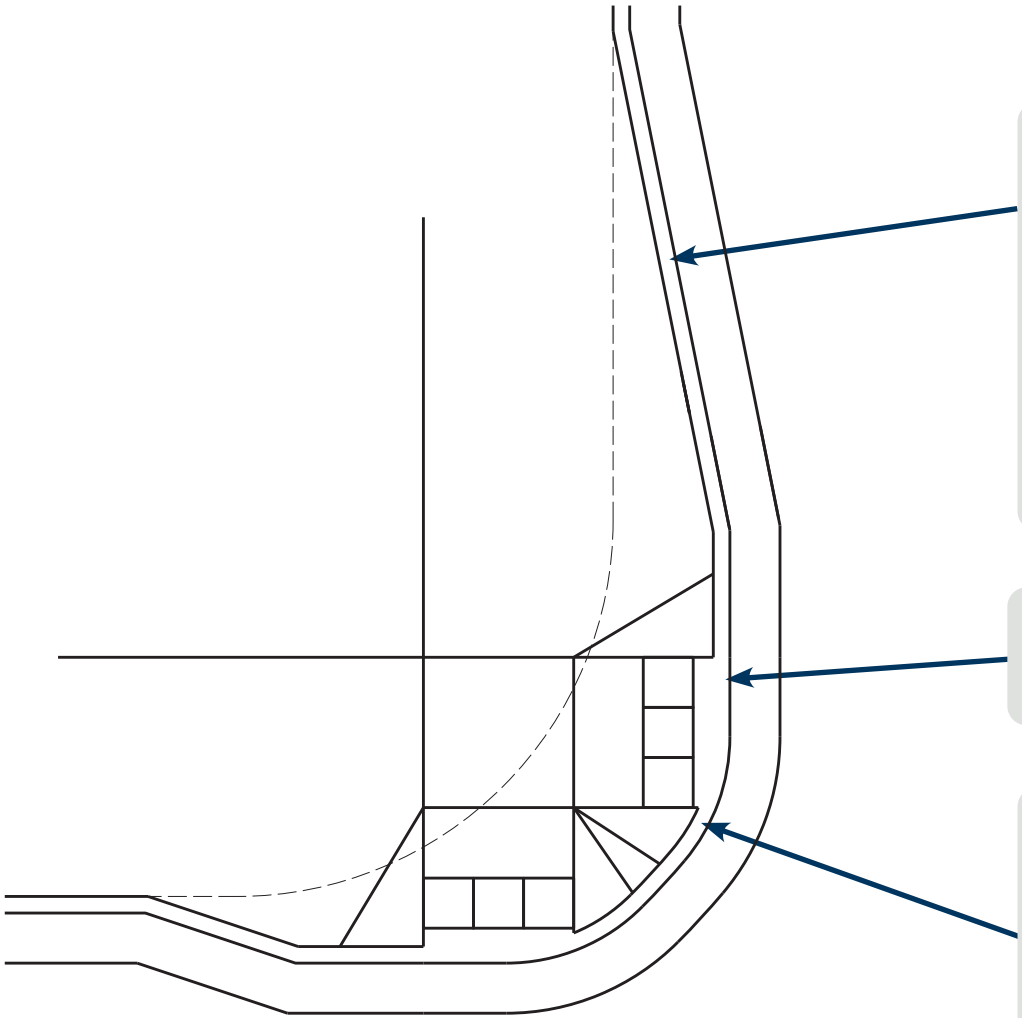
Compound radius detail, Source: MnDOT Curb Ramp Standard Plan

How much do they cost?

Costs depend on site conditions, drainage impacts, pavement design, and ADA accommodations. Curb extension installation can range between $2,000-$3,500 per corner if it does not cause storm sewer impacts and between $10,000-$20,000 per corner if it does cause storm sewer impacts.

Curb Extensions and Curb Radii

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information



1:3 minimum taper. Using a 1:5 taper on the upstream (plow-facing) side can improve ease of maintenance, but is so flat that vehicles may still attempt to park along the taper. Even with a 1:3 taper, signage may be needed such as "no parking here to corner".

Where prohibiting parking is a primary concern, a steeper taper can be helpful (some agencies have used as steep as 1:2 taper; designers should take care to adequately delineate steep tapers).

Having at least 5' of non-zero height tangent curb helps establish the presence of the curb ramp and

With the previous curbline, it would have been difficult to construct an ADA-compliant curb ramp at this location, especially if trying to match into a doorway at the intersection. This design creates enough space to construct ADA-compliant curb ramps, while still keeping the back of the sidewalk at the existing elevation.

Curb extension detail, Source: MnDOT Curb Ramp Standard Plan

Curb Extensions and Curb Radii

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

Curb retrofit on Snelling Avenue, Saint Paul, MN; Source: Google

Before/after photo of curb ramp retrofit. The curb extension allowed the construction of ADA-compliant ramps on an otherwise constrained corridor. Note the upstream side of curb extension has a flatter taper than the downstream side.

Design Features

Curb extensions should be tailored to the unique characteristics of the site at which they are installed, though MnDOT's Pedestrian Curb Ramp Standard Plans has details that may be helpful. See Curb Extensions and Curb Radii section of this handbook.

Designers should also consider or incorporate the following:

- Curb extensions should extend the full width of an adjacent parking lane.
- Maintain proper sight distance between pedestrians and motorists, including street furniture and landscaping features.
- Stormwater runoff may be impacted and additional catch basins may be required as part of the design. Avoid designs that cause water to pool on the sidewalk.

Resources

- Proven: http://www.dot.state.mn.us/stateaid/trafficsafety/county/CRSP-EnhancedCrosswalks.pdf
- https://safety.fhwa.dot.gov/intersection/conventional/signalized/fhwasa13027/ch9.cfm#s911
- Minnesota DOT Roadway Design Manual, Chapter 5-1.04
- http://www.pedbikeinfo.org/cms/downloads/Countermeasure%20Costs_Report_Nov2013.pdf
- Bump Outs: http://pedbikesafe.org/PEDSAFE/countermeasures_detail.cfm?CM_NUM=5
- https://nacto.org/publication/urban-street-design-guide/street-design-elements/curb-extensions/
- Curb Radii: http://pedbikesafe.org/PEDSAFE/countermeasures_detail.cfm?CM_NUM=28
- https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf

Medians and Crossing Islands

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What is their purpose?

Medians and crossing islands (also known as refuge islands or center islands) are raised areas that are constructed in the center portion of a roadway, serving as a place of refuge for people who cross the road mid-block or at an intersection. They allow pedestrians and bicyclists to concentrate their attention on one direction of traffic at a time while crossing the roadway. After crossing to the center island, users wait for motorists to stop for an adequate gap in traffic before crossing the second half of the street. Refuge islands can drastically reduce pedestrian delay and vehicle conflicts by increasing the number of safe gaps that are available.

Median at Maryland Avenue and Greenbrier Street, Saint Paul, MN

Are they a proven strategy?

FHWA research shows that median and crossing islands are a **PROVEN** safety countermeasure.

Supporting Document: FHWA Proven Countermeasures – Pedestrian Medians

Where would we use them?

When installing a median or crossing island, an agency should develop a design that allows accessibility for all users and adheres to ADA crossing standards. 6' is the minimum median width where detectable warning surfaces are required. However, to allow storage space for a bicycle and to allow space for a level landing and truncated domes, a best practice is to construct crossing islands or medians of at least 8' in width. 10' or greater width is preferred, especially where bicycle traffic is expected. Crossing islands less than 6' are not considered pedestrian refuges since they cannot include detectable warning surfaces and may not safely serve as a refuge for all users.

Crossing islands are commonly installed at:

- Mid-block crossing locations or candidate locations
- High-priority pedestrian crossing locations such as transit stops, schools, and parks
- On roadways where marked crosswalks alone may not be sufficient, including roadways with speeds greater than 35 mph, and when annual average daily traffic (AADT) is greater than 9000. The raised medians must be accessible by all users, and should adhere to ADA crossing standards.

Medians and Crossing Islands

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What are the advantages?

- Separates opposing vehicle travel lanes and allows pedestrians/bicyclists to cross the roadway in two stages rather than all at once.
- Reduces certain types of motor vehicle crashes, such as head-on crashes.
- Can help slow vehicle speeds by providing visual narrowing/traffic calming of the roadway.
- Can be implemented using low-cost, interim materials such as striping, flexible posts, and other bollards until a permanent improvement can be funded through a reconstruction project or other programming.
- Can provide area for landscaping and other visual enhancements as well as stormwater treatment.
- Studies show that a **raised median can reduce up to 46% of pedestrian crashes, and a pedestrian crossing island can reduce up to 56% of pedestrian crashes.**

What are the challenges?

- Permanent medians can be costly and are recommended to be included in larger construction projects.
- May restrict driveway access and on-street parking.
- Can introduce more significant design features and construction costs if stormwater management is impacted and additional inlets are required at locations with curb extensions.
- Require additional winter maintenance considerations.

What are the maintenance impacts?

Partner with maintenance team members during design development to discuss strategies and issues related to routine maintenance, especially during winter months, to keep the crossing island clear of snow and debris, along with the rest of the sidewalk network. Median crossings can pose an obstacle to snow plows, and to reduce plow strikes on median island curbs, designers should follow the pedestrian approach nose details in MnDOT Standard Plan 5-297.250.

Supplemental treatments

Raised medians and crossing islands are often combined with the following treatments:

- High-visibility crosswalk markings
- Advanced warning signs
- Curb extensions
- Street lighting
- Advance stop bars
- RRFBs or PHBs

A median with a refuge island

Best practices

To accommodate all users, medians must be fully accessible by ramp or cut through, and should provide tactile cues for pedestrians with visual impairments to indicate the border between the pedestrian refuge area and the motorized vehicle roadway.

How much do they cost?

The average cost for a raised island or crossing island is approximately $10/sf, and the total cost can vary widely from approximately $2,000 to $45,000. Costs depend on the design, site conditions, and whether the median can be included as part of a larger construction project.

Medians and Crossing Islands

Design Features

Continuously raised medians may not be appropriate or physically possible at all locations. They may need to be weighed against other roadway features such as wider sidewalks, bicycle lanes, landscaping buffers, or on-street parking.

At both intersections and mid-block locations, short sections of median at high-priority crossings such as schools and parks provide benefit to pedestrians. Pedestrian islands may be appropriate at unsignalized and signalized crossing locations.

Raised medians must incorporate the following:

- Fully accessible ramps.
- Tactile cues for pedestrians with visual impairments, that meet ADA standards.
- Adequate visibility between pedestrian and approaching vehicles.
- The median crossing can be angled (rather than perpendicular) to allow pedestrians easier visibility of on-coming traffic.
- Crossing islands may also be staggered (also known as a Z–crossing), which is a treatment that forces pedestrians to turn in the median and face the direction of traffic. Staggered crossings may be difficult for pedestrians with vision impairments to navigate, so it's important to provide a detectable edge along the crossing.

Pedestrian approach nose shown at a refuge island

Z-crossing treatment

Resources

- Proven countermeasure: https://safety.fhwa.dot.gov/provencountermeasures/ped_medians/
- http://pedbikesafe.org/PEDSAFE/countermeasures_detail.cfm?CM_NUM=6
- CRFs: https://safety.fhwa.dot.gov/tools/crf/resources/fhwasa08011/fhwasa08011.pdf
- https://www.dot.state.mn.us/ada/pdf/5-297-250.pdf

Rectangular Rapid Flashing Beacons

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What is their purpose?

A Rectangular Rapid Flashing Beacon (RRFB) is a crossing enhancement at uncontrolled intersections that can be activated manually by a pedestrian using a pushbutton or by a pedestrian detection system. The RRFB assembly typically includes one RRFB device on each end of a crosswalk. Each device includes two rapidly and alternatively flashing rectangular yellow indications attached to a pole supplementing the pedestrian warning sign (W11-2) or school crossing sign (S1-1) at a crosswalk. The irregular "wig-wag" flashing sequence is similar to emergency flashers on police vehicles (left light on, then right light on, etc.) with a pulsing light source.

MnDOT has received statewide Interim Approval from FHWA for the use of a pedestrian actuated RRFB (IA-21). Statewide Interim Approval allows any jurisdiction within Minnesota to use the device as long as the jurisdiction agrees to notify the MnDOT Traffic Standards Engineer of the location for each installation and agrees to the specific conditions outlined for Statewide Interim Approvals.

RRFB at Johnson Street NE & 22nd Avenue NE, Minneapolis, MN

Are they a proven strategy?

FHWA has reviewed studies related to the effectiveness of the RRFB device and have confirmed its success at uncontrolled marked crosswalks. Therefore, based on the number of successful experiments, the RRFB is a **PROVEN** safety countermeasure strategy for marked crosswalks.

Supporting Research: Evaluation of Pedestrian Hybrid Beacons and Rapid Flashing Beacons

Where would we use them?

The purpose of the RRFB is to increase driver awareness of the presence of pedestrians at crosswalks that are not across approaches controlled by YIELD signs, STOP signs, or traffic control signals. RRFBs can be used on crosswalks across the approach to and/or egress from a roundabout. Research shows that an RRFB is most effective on roadways with volumes less than 12,000 vehicles per day and with speeds less than 40 mph.

Per the IA-21 the use of an RRFB shall:

- Only be installed to function as a pedestrian-actuated enhancement
- Only be used to supplement a post-mounted or overhead-mounted W11-2 (Pedestrian), S1-1 (School), or W11-15 (Trail) crossing warning sign. A diagonal downward arrow (W16-7P) plaque shall supplement the post-mounted signs.

The IA-21 also provides information regarding sign/beacon assembly locations, beacon dimensions and placement, beacon flashing requirements, beacon operations, and accessible pedestrian features. Reference the Interim Approval-21 for more details regarding the federal guidance.

Rectangular Rapid Flashing Beacons

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What are the advantages?

- RRFBs can utilize power from the existing grid network or by solar panels furnished on the devices.
- Increases driver awareness of the crosswalks and driver yielding compliance, especially at night. Compliance rates vary per site, and are generally highest on low-speed, single-lane facilities. Studies have found compliance rates from 17% to as high as 98%, which are comparable to a traffic signal or pedestrian hybrid beacon system.
- Can reduce the number of multiple-threat crashes, especially when used in combination with other strategies noted below.
- 47% reduction in vehicle-pedestrian crashes.

What are the challenges?

- RRFB effectiveness varies depending on the type of roadway, traffic volumes, and speeds. On higher-speed (40 mph or higher), multilane, or high-volume (over 12,000 vehicles per day), RRFB's are less effective, and other strategies (or a combination of strategies) should be considered.
- Additional maintenance and operating costs, depending on power source

What are the maintenance impacts?

Maintenance for the RRFB is dependent on the power supply type. If solar power is used, the primary concern is removing nearby foliage and the amount of sun exposure throughout the day. Solar powered RRFBs typically function for several years without maintenance issues.

Solar powered RRFB systems do not require underground conduit, and would only require a push button to activate the system. The largest solar panel (55 watt) can accommodate around 1,000 activations per day. These solar panels typically can last up to 10 years or longer depending on usage. The batteries require replacement approximately every 5 years.

RRFB systems that are hardwired are powered from a nearby electrical source by running wire underground. Hard wired systems are typically recommended at crossing locations that experience very high pedestrian activity. A hardwired system can ensure consistent operation, especially during the fall and winter months when the sun is low in the sky and reducing the ability to charge the batteries as frequently.

Supplemental treatments

Rectangular Rapid Flashing Beacons are often combined with the following treatments:

- Marked crosswalk (required) and Advance STOP markings and signs (recommended if multi-lane)
- Warning signs (required)
- Parking restrictions (required)
- Curb extensions and ADA curb ramps
- Pedestrian refuge island
- Speed bumps

Best practices

The RRFB offers significant safety benefits, achieving high rates of compliance for a relatively low cost. The RRFB increases yield rates at uncontrolled crosswalks, and studies show they are most effective on roadways with volumes less than 12,000 vehicles per day and with speeds less than 40 mph. Reference the Interim Approval-21 for more details regarding the federal guidance.

How much do they cost?

Costs can vary widely for the installation of two RRFB units (one on either side of the street). For an RRFB system using a solar-powered system, the cost is approximately $15,000 for materials and installation. For an RRFB system that is hardwired, the costs range between $30,000 and $50,000 depending on the proximity of a power source. RRFB systems that include overhead flashers cost between $80,000 to $100,000, which includes a mast arm and pole for each direction of traffic and hardwired power.

Rectangular Rapid Flashing Beacons

Design Features

The installation of an RRFB must include two units: one on the right-hand side and one on the left-hand side of the roadway. It is also recommended to consider placing an additional unit within a median if available. The two yellow indications shall flash in a rapidly flashing pattern ("wig-wag"), at a rate not less than 50 or more than 60 times per minute (IA 21). The lights should rest in dark until activated, and should start and stop simultaneously. Additionally, the RRFB indication should be approximately 5" wide by 2" high and aligned horizontally between the bottom of the crossing warning sign and the top of the supplemental downward diagonal arrow plaque. Pedestrian push buttons should be properly installed, in accordance with ADA design standards, and in a position where the activated lights are visible to the pedestrian.

RRFBs typically receive power from solar panel units attached to each device, but can also be hard wired to a traditional power source.

RRFB at CSAH 16, Shakopee, MN

Resources

- https://safety.fhwa.dot.gov/ped_bike/step/docs/TechSheet_RRFB_508compliant.pdf
- https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/STEP-field-guide.pdf
- http://www.dot.state.mn.us/stateaid/trafficsafety/county/CRSP-EnhancedCrosswalks.pdf
- Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments: https://www.nap.edu/download/24627

Traffic Signals

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

What is their purpose?

Traffic signals assign right-of-way to various traffic movements at intersections and help reduce conflict between different roadway users. Signal design typically focuses on the operating characteristics of motorized vehicles, but can also benefit pedestrians and bicyclists by creating gaps in traffic to cross. For example, in areas with pedestrian activity, traffic signals can include features such as countdown timers, leading pedestrian intervals, and exclusive pedestrian signal timings.

MnMUTCD Chapter 4C includes a list of nine warrants, which are threshold conditions that should be analyzed to help determine if signalization is appropriate for an intersection. These warrants are based on the volume of pedestrians and vehicles crossing the intersection, the presence of a school crossing, coordinated signal system, a grade crossing, and the crash experience at the intersection location. Engineering judgment should always be used when assessing traffic control change and signal warrant analysis.

Bicyclists at a traffic signal

Are they a proven strategy?

A traffic signal alone is not a proven safety countermeasure for pedestrians and bicyclists. There are a number of reasons for this, including lack of attention and failure of motorists to yield to pedestrians, lack of signal compliance by drivers and pedestrians, and speeding.

Supplemental strategies should be considered to improve pedestrian accommodations at signalized intersections. Strategies include countdown timers, which are **PROVEN** countermeasures to reduce crashes; and leading pedestrian intervals, which are **PROVEN** countermeasures. No Turn on Red restrictions, which are a **TRIED** countermeasure; and exclusive pedestrian signal timings, which are **TRIED** countermeasures.

Where would we use them?

Traffic signals serve many purposes. Before they are used, an engineering study of traffic conditions, pedestrian activity, and location characteristics should be performed. Additionally, the MnMUTCD signal warrants must be analyzed as part of the study. It should be noted that a location meeting one or more traffic signal warrant criteria does not in itself mandate the installation of a traffic signal.

Traffic signals are most effective for pedestrian and bicycle safety when:

- The intersection needs additional enhancements to improve motorist yielding rates or address limited gaps in traffic.
- There is a high volume of pedestrian activity, near transit stops, schools, and parks.

Traffic Signals

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 11 | Crash Reduction Information

What are the advantages?

- Stop vehicles on red, allowing pedestrians and bicyclists to cross and create gaps in traffic flow to allow pedestrians and bicyclists to cross.
- Can be enhanced with many supplemental design features to further improve pedestrian safety.
- Widely used strategy to manage traffic
- Can reduce the severity of motor vehicle crashes.
- With countdown timers, pedestrian-vehicle crashes can be reduced up to 70% relative to signals without countdown timers.

What are the challenges?

- Installation of a traffic signal will increase delay and travel time for some motorists .
- Rely on driver attention and behavior to obey signals, to stop behind the stop bar, and to yield to crosswalks when turning.
- Some crash types could increase, including rear-end collisions.

What are the maintenance impacts?

Traffic signals require routine maintenance by properly trained technicians and ongoing funding to repair, replace, or upgrade signal controllers, detectors, and other signal hardware. It is also important to regularly assess the condition of traffic signal control equipment, including verifying that detectors are working properly, traffic signal controller timings are entered correctly, and signal displays are operational. Additionally, all traffic signal and pedestrian displays should be routinely checked to ensure they are visible to motorists and pedestrians. A maintenance management system database is typically employed to track these items.

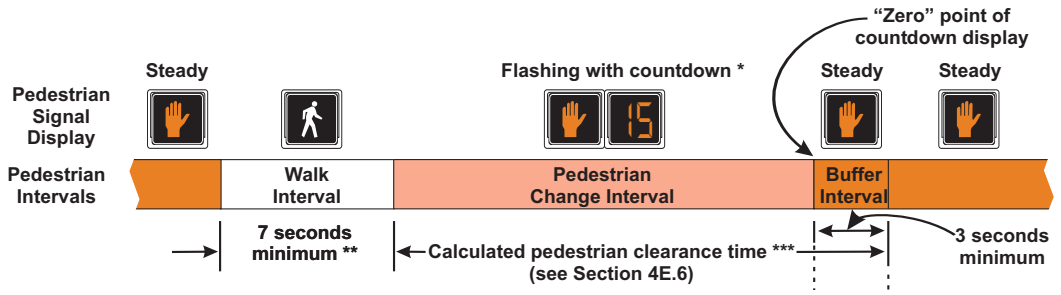
For pedestrians and bicyclists, it is especially important that all indications, push buttons, detectors, and other components are positioned and working properly.

Supplemental treatments

Traffic signals are often combined with one or more of the following treatments:

PROVEN treatments:

- Countdown pedestrian timers reduce pedestrian-vehicle crashes up to 70% after installation.
- Leading pedestrian intervals (LPI) reduce up to 60% of pedestrian-vehicle crashes at intersections.
- Backplates with retroreflective borders improve the visibility of the signal face during daytime and nighttime conditions. Research shows that the installation of retroreflective backplates can reduce total crashes by up to 15% at intersections.
- Yellow change intervals should be well-timed to reduce the number of red-light running vehicles. Red-light running vehicles cause a majority of the severe crashes at signalized intersections, and improvements to yellow change intervals can improve overall intersection safety. Research shows that optimized yellow change intervals can reduce red light running by up to 50%, reduce total crashes up to 14%, and reduce injury crashes up to 12%. Requirements and guidance about optimal yellow change interval timing can be found in the FHWA Traffic Signal Timing Manual.



Pedestrian signal display, Source: Minnesota MUTCD

Traffic Signals

CSAH 23 (Marshall St NE) Pedestrian Project
Attachment 11 | Crash Reduction Information

Other Common Treatments:

- Fixed pedestrian phases are common at intersections with steady pedestrian activity throughout the day.
- Pedestrian push buttons are common in areas with intermittent pedestrian activity. When push buttons are installed, the design should consider implementing an Accessible Pedestrian Signal (APS). An APS is a device that communicates information about WALK and DON'T WALK intervals at signalized intersections through audible tones, speech messages, and vibrating surfaces to assist pedestrians with visual impairments.
- Implementing shorter cycle lengths (approximately 90 seconds).
- Implementing turn restrictions or left-turn phasing for vehicles.
- Ensuring that the signal has proper crossing times for pedestrians per MnMUTCD guidance.
- Exclusive pedestrian signal timings are most common in urban areas. These stop vehicles from all directions to allow pedestrians the right-of-way to cross the street in any direction (including diagonally).

Best practices

Traffic signals are used to assign right-of-way to conflicting traffic modes at intersections. There are several proven safety countermeasures that can be paired with traditional signalized intersections to enhance safety. Examples include countdown pedestrian timers, leading pedestrian intervals, backplates with retroreflective borders, and yellow change intervals.

Resources

- Crash Modification Factors
- Cost
- http://www.dot.state.mn.us/trafficeng/publ/mutcd/mnmutcd2018/mnmutcd-4.pdf
- http://guide.saferoutesinfo.org/engineering/traffic_signals.cfm
- https://www.dot.state.mn.us/trafficeng/publ/fundamentals/2015-mndot-safety-handbook-

How much do they cost?

Installing a new traffic signal can vary from approximately $250,000 to $500,000, depending on the site conditions, existing utilities, and additional enhancements. Annual maintenance costs are approximately $2,000 to $4,000 per intersection.

Design Features

Reference the MnDOT Traffic Control Signal Design Manual for a detailed review of traffic signal design elements, including signal phasing and operations, detection design, and signing and pavement markings. The goals of the design should include providing a safe and efficient operation for the intersection's unique conditions.

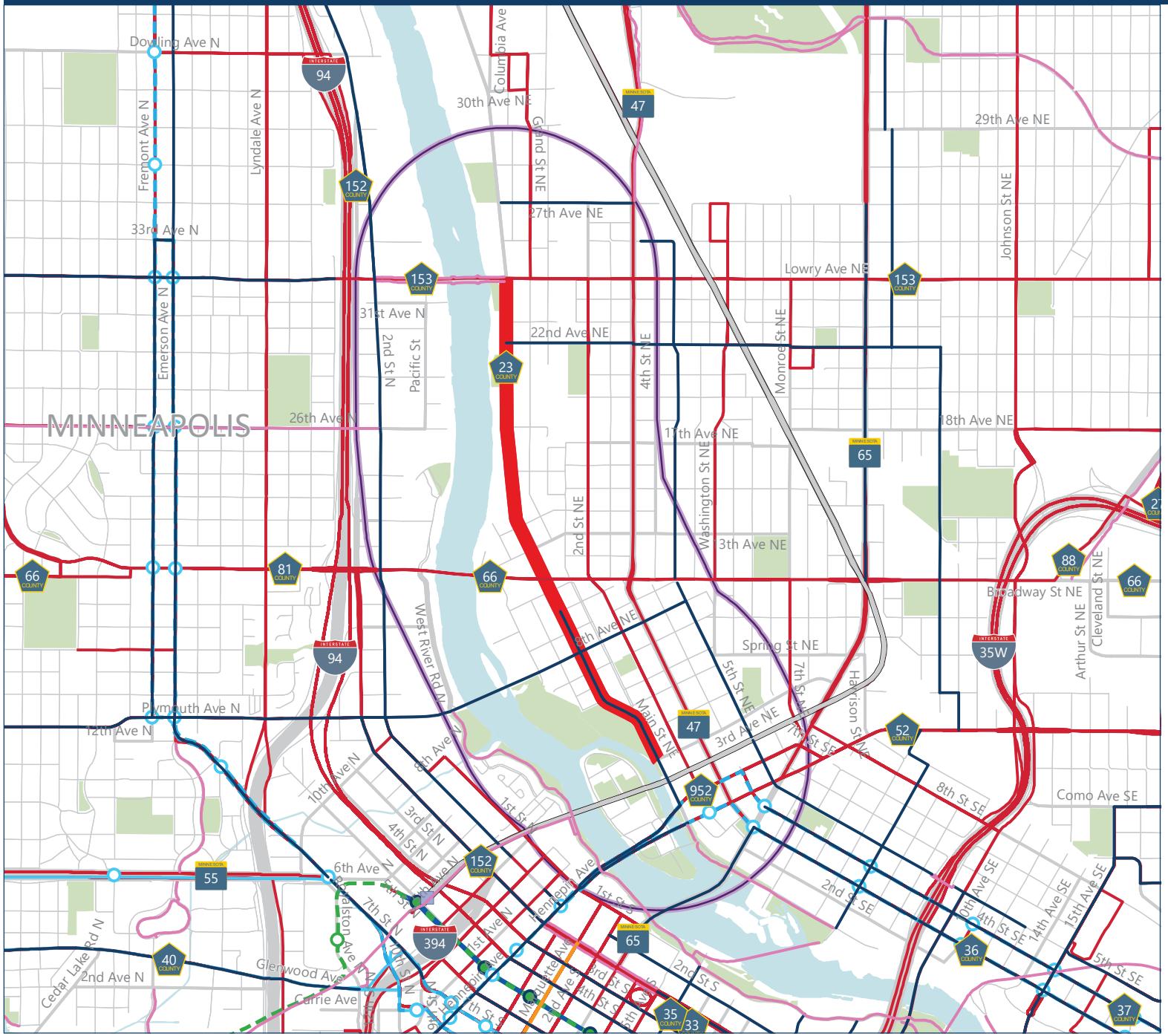
Key strategies for improving pedestrian accommodation at signalized intersections include the following:

- Adding accessible pedestrian push buttons where signals are pedestrian actuated.
- Implementing short cycle lengths (90 seconds maximum)
- Adding countdown timers, which are usually installed with pedestrian indication lights. These provide the number of seconds remaining during the pedestrian phase. MnMUTCD Chapter 4D.7 now requires countdown timers to be installed at signals with pedestrian signal heads at crosswalks with pedestrian change intervals greater than 7 seconds.
- Leading pedestrian intervals, which can be installed to improve the safety of the crossings by providing pedestrians 3-7 seconds to enter an intersection prior to giving the green indication to vehicles. More information can be found in the section on Leading and Separate Exclusive Signals.
- Using a fixed pedestrian phase - if pedestrian traffic is frequent, this timing strategy does not require pushing the pedestrian button to activate the WALK phase.
- Maintaining optimal sight distance and visibility of signals to pedestrians.
- Implementing MnMUTCD guidelines for creating optimal WALK and DON'T WALK times for pedestrians.

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 12 | Multimodal Connections Map

HENNEPIN COUNTY
MINNESOTA



Key

- Project Location
- 1/2 mi Buffer

Bikeways

- Off-Street
- On-Street

Transitway Stations

- Arterial BRT
- Green Line / Ext
- Blue / Green Line
- Northstar Line

Transitway Alignments

- Arterial BRT
- Commuter Rail
- Orange Line BRT
- Blue / Green Line LRT
- Planned Arterial BRT
- Planned Green Line LRT
- Transit Routes

0 0.25 0.5 Miles

Published date: 3/23/2022

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Minneapolis
City of Lakes

Public Works
350 S. Fifth St. - Room 203
Minneapolis, MN 55415
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Support for Hennepin County
Regional Solicitation Applications

Dear Ms. Stueve:

Hennepin County has requested letters of support for a series of grant applications as part of the Regional Solicitation process, by which the Metropolitan Council competitively allocates federal transportation funds. As a part of this request, Minneapolis conducted a review of completed plans, studies, and community engagement, as well as documented priorities and adopted policies to identify which projects to support. Improvements along Hennepin County streets offer significant opportunities to address some of the greatest safety and mobility needs within Minneapolis and are a critical part of the city's goal to address climate change, support mode shifts, and eliminate deaths and severe injuries resulting from traffic crashes.

Minneapolis hereby supports the following applications:

Roadway Reconstruction / Modernization

- Franklin Ave (CSAH 5) Reconstruction: Lyndale Ave (CSAH 22) to approx. 250' West of Blaisdell Ave
- Lyndale Ave (CSAH 22) Reconstruction: HCRRA to Franklin Ave (CSAH 5)
- Cedar Ave (CSAH 152) Reconstruction: 150' North of Lake St (CSAH 3) TO 24TH St

Multiuse Trail and Bicycle Facilities

- *Marshall St NE (CSAH 23) Bikeway: 3rd Ave NE to (CSAH 153) Lowry Ave NE
- Park Ave (CSAH 33) and Portland Ave (CSAH 35) Bikeway: Lake St (CSAH 3) to the I-35W/I-94 Bridges

Pedestrian Facilities

- *Marshall St NE (CSAH 23) Pedestrian Improvements: 3rd Ave NE to (CSAH 153) Lowry Ave NE
- Lake St (CSAH 3) Pedestrian Improvements: Dupont to the Mississippi River

*Whereas the County is pursuing grant funding in the Multiuse Trail and Bicycle Facilities and Pedestrian Facilities categories, the city supports the County applications with the understanding that this funding is applied to fully reconstruct Marshall St NE.

At this time, Minneapolis has no funding programmed in its adopted 2023-2028 Transportation Capital Improvement Program (CIP) for these projects. Therefore, Minneapolis is currently unable to commit cost participation in these projects. However, we request that Hennepin County includes city staff as part of the design process to ensure project success. Furthermore, Minneapolis agrees to provide maintenance, such as sweeping and plowing, for protected bikeways until such time Hennepin County has the resources to do so.

Thank you for making us aware of this application effort and the opportunity to provide support. Minneapolis Public Works looks forward to working with you on these projects.

Sincerely,

Margaret Anderson Kelliher

Margaret Anderson Kelliher
Director of Public Works
City of Minneapolis

CSAH 23 (Marshall St NE) Pedestrian Project

Attachment 14 | Minneapolis Park and Recreation Board Support Letter

Minneapolis
Park & Recreation Board

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March 30, 2022

Carla Stueve, P.E.
Director and County Highway Engineer
Hennepin County Transportation Project Delivery
1600 Prairie Drive
Medina, MN 55340

Dear Ms. Stueve:

The Minneapolis Park and Recreation Board (MPRB) hereby expresses its support for Hennepin County's Regional Solicitation federal funding application for the proposed pedestrian project on CSAH 23 (Marshall St NE) from 3rd Ave NE to CSAH 153 (Lowry Ave NE) in Minneapolis.

This project will involve the replacement of the existing sidewalk facility and is anticipated to include, but not be limited to, the following elements along the east side of CSAH 23 (Marshall St NE): new curb, streetscaping, and ADA accommodations. As proposed, this project will bring about accessibility, mobility, and safety improvements for walking.

MPRB acknowledges that it may be required to cost participate in this project as outlined in the county's cost participation policy that positively impact MPRB's park and trail system and are in alignment with the Central Mississippi River Regional Park Master Plan. Specific details regarding cost participation and maintenance responsibilities are anticipated to be determined during the design process as project development is advanced.

Thank-you for making us aware of this application and project, and the opportunity to provide support. The MPRB looks forward to working with you on this project.

Sincerely,

Adam Regn Arvidson, PLA, FASLA
Director of Strategic Planning
Minneapolis Park & Recreation Board