



Application

19842 - 2024 Multiuse Trails and Bicycle Facilities
20254 - CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project
Regional Solicitation - Bicycle and Pedestrian Facilities

Status: Submitted
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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

County: Hennepin

Phone: MEDINA Minnesota 55340
City State/Province Postal Code/Zip

763-745-7600
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PeopleSoft Vendor Number 0000028004A9

Project Information

Project Name CSAHs 33 and 35 (Park Ave and Portland Ave) Bikeway 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 includes multimodal enhancements along the CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridors between 38th Street and the Midtown Greenway in the City of Minneapolis. These one-way pairs are both A-Minor Arterials that function as Relievers. Attachment 02 includes a map of the project location.

The project objectives are to improve safety, mobility, and accessibility across the CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridors, with a focus on enhancing the corridors for multimodal users by slowing vehicle speeds and providing separation between people biking and people driving. Photos depicting existing conditions are included in Attachment 03.

In 2018, the county completed an enhanced bikeway network study, which identified the CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridors as potential enhanced bikeways due to factors such as high biking volumes and key connections (Attachment 04). These corridors are RBTN Tier 1 routes that will connect to additional corridor enhancements that are planned to the north and south, as well as other Tier 1 routes such as the Midtown Greenway.

The CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridors are crucial north-south commuter bike routes between downtown Minneapolis to the City of Bloomington. The current bicycle facilities include painted buffers and are not perceived as safe or comfortable due to vehicle volumes and speeds. Separation from people driving, along with crossing and accessibility upgrades, will make multimodal travel for work, school, errands, and recreation more appealing. These improvements will also directly connect to transit services, such as Metro Transit's B Line Arterial Bus Rapid Transit that intersects these corridors at CSAH 3 (Lake St).

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. The potential typical sections are included in Attachment 05 and the potential concept is shown in Attachment 06.

- Bicycle improvements; such as the introduction of protected bicycle facilities

- Pedestrian improvements; such as ADA compliant ramps, APS, high visibility crosswalk markings, curb extensions and countdown timers

- Safety improvements; such as the upgrading of traffic signal systems to accommodate new roadway configurations; relocating the parking lane to provide additional protection for people biking, and the installation of curb extensions to reduce the crossing distance for people walking and to manage speeds.

- Streetscaping improvements; such as additional greening, stormwater management, and boulevard space throughout the corridor

(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 33 (Park Ave) and CSAH 35 (Portland Ave) from 38th Street to the Midtown Greenway 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) 2.0

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 \$5,500,000.00

Match Amount \$3,560,000.00

Minimum of 20% of project total

Project Total \$9,060,000.00

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

Match Percentage 39.29%

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: 2028

Select 2026 or 2027 for TDM and Unique projects only. For all other applications, select 2028 or 2029.

Additional Program Years:

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

Project Information

If your project has already been assigned a State Aid Project # (SAP or SP)

Please indicate here SAP/SP#.

Location

County, City, or Lead Agency Hennepin County

Name of Trail/Ped Facility: CSAHs 33 and 35 (Park Ave and Portland Ave) Bikeway

(example; CEDAR LAKE TRAIL)

IF TRAIL/PED FACILITY IS ADJACENT TO ROADWAY:

Road System CSAH

(TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET)

Road/Route No. 33 and 35

(Example: 53 for CSAH 53)

Name of Road Park Ave and Portland Ave

(Example: 1st ST., Main Ave.)

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

From:
Road System MSAS

(TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET)

Road/Route No. 4106

(Example: 53 for CSAH 53)

Name of Road 38th Street

(Example: 1st ST., Main Ave.)

To:
Road System Hennepin County Regional Rail Authority

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

Road/Route No. N/A

(Example: 53 for CSAH 53)

Name of Road Midtown Greenway

(Example: 1st ST., Main Ave.)

In the City/Cities of: Minneapolis

(List all cities within project limits)

IF TRAIL/PED FACILITY IS NOT ADJACENT TO ROADWAY:
Termini listed must be within 0.3 miles of any work

From:

To:

Or

At:

In the City/Cities of:

(List all cities within project limits)

Primary Types of Work (Check all that apply)

Multi-Use Trail Yes

Reconstruct Trail

Resurface Trail

Bituminous Pavement

Concrete Walk

Pedestrian Bridge

Signal Revision Yes

Landscaping Yes

Other (do not include incidental items)

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

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

Zip Code where Majority of Work is Being Performed 55407

Approximate Begin Construction Date (MO/YR) 05/01/2027

Approximate End Construction Date (MO/YR) 10/31/2027

Miles of Pedestrian Facility/Trail (nearest 0.1 miles): 2.0

Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles): 2.0

Is this a new trail? No

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 is anticipated to close a gap in the enhanced bikeway network between previously funded projects. Off-street facilities for biking will encourage people to use modes other than driving, which can reduce traffic and extend the useful life of both CSAH 33 and CSAH 35 (Park and Portland Avenues).

B) Safety and security (p 2.5-2.9)

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

A separated facility for bicyclists will improve the safety and comfort for those users. Bump outs at intersections will increase visibility for people biking, reducing conflicts between all road users and improving user predictability. The current configuration includes unprotected on-street bike lanes that have conflicts with on-street parking.

C) Access to destinations (p 2.10-2.25)

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

CSAHs 33 and 35 (Park and Portland Avenues) are Tier 1 on the RBTN. The project will close a gap in the county's protected bicycle network and improve multimodal connections. The project enhances access for multiple modes between south and downtown Minneapolis, connecting residential, shopping, restaurant destinations and the Midtown Greenway.

D) Competitive economy (p 2.26-2.29)

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

The project invests in a multimodal transportation system that will retain and attract residents and businesses to the area. The dedicated protected facilities will connect to programmed projects on CSAHs 33 and 35 (Park and Portland Avenues) to connect residents to the central business district in downtown Minneapolis.

E) Healthy and equitable communities (p 2.30-2.34)

Objectives A, B, C & D; Strategies E1, E2, E3, E4, E5, E6 & E7

The protected bikeway will increase the attractiveness of non-motorized travel on the corridor, which can reduce transportation related emissions. The project will fulfill a gap in the county's protected bikeway network, resulting in a cohesive and connected non-motorized transportation system for all users.

F) Leveraging transportation investments to guide land use (p 2.35-2.41)

Objectives A & C; Strategies F1, F2, F3, F5, F6, F7

The project will tie into multiple projects, including north and south of CSAH 33 and CSAH 35 (Park and Portland Avenues), reconstruction projects on 35th Street and 36th Street and Safe Routes to School project on 34th Street. These projects enhance the attractiveness of the neighborhoods for businesses and people living within the neighborhood.

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 2040 Transportation Plan (pages 2-11 - 2-18)

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

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

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

3) Hennepin County Complete and Green Streets Policy (pages 10-11)

URL: hennepin.us/-/media/hennepinus/your-government/projects-initiatives/complete-streets/Complete-and-Green-Streets-Policy_Oct2023.pdf

4) Hennepin County Pedestrian Plan (page 8)

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

5) City of Minneapolis Vision Zero Action Plan (pages 16-35)

URL: lims.minneapolismn.gov/Download/RCAV2/31027/18-Vision-Zero-Action-Plan-2023-2025.pdf

6) Hennepin County Enhanced Bikeway Network Study (Attachment 04)

7) Minneapolis All Ages and Abilities Bicycle Network (See Attachment 07)

(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 2024 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 future Regional Solicitation funding cycles, this requirement may include that the plan has undergone a recent update, e.g., within five years prior to application.

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. This includes assurance of year-round use of bicycle, pedestrian, and transit facilities, per FHWA direction established 8/27/2008 and updated 4/15/2019. 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. Yes

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)	\$358,000.00
Removals (approx. 5% of total cost)	\$298,000.00
Roadway (grading, borrow, etc.)	\$1,256,180.00
Roadway (aggregates and paving)	\$0.00

Subgrade Correction (muck)	\$0.00
Storm Sewer	\$971,000.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$472,680.00
Traffic Control	\$358,000.00
Striping	\$22,230.00
Signing	\$0.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$324,000.00
Bridge	\$0.00
Retaining Walls	\$0.00
Noise Wall (not calculated in cost effectiveness measure)	\$0.00
Traffic Signals	\$1,020,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$1,524,020.00
Other Roadway Elements	\$0.00
Totals	\$6,604,110.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$938,800.00
Sidewalk Construction	\$278,040.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$290,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$14,000.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$320,000.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$567,050.00
Other Bicycle and Pedestrian Elements	\$48,000.00
Totals	\$2,455,890.00

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

PROTECT Funds Eligibility

One of the new federal funding sources is Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT). Please describe which specific elements of your project and associated costs out of the Total TAB-Eligible Costs are eligible to receive PROTECT funds. Examples of potential eligible items may include: storm sewer, ponding, erosion control/landscaping, retaining walls, new bridges over floodplains, and road realignments out of floodplains.

INFORMATION: [Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation \(PROTECT\) Formula Program Implementation Guidance \(dot.gov\)](https://www.fhwa.dot.gov/transportation/protection/protect/).

Response:

Based on a planning level review of the proposed scope of work that's primarily focused on constructing a new bikeway facility, county staff did not identify any project elements that were obviously eligible for the PROTECT Program.

Totals

Total Cost	\$9,060,000.00
Construction Cost Total	\$9,060,000.00
Transit Operating Cost Total	\$0.00

Measure A: Project Location Relative to the RBTN

Select one:

Tier 1, Priority RBTN Corridor Yes

Tier 1, RBTN Alignment

Tier 2, RBTN Corridor

Tier 2, RBTN Alignment

Direct connection to an RBTN Tier 1 corridor or alignment Yes

Direct connection to an RBTN Tier 2 corridor or alignment

OR

Project is not located on or directly connected to the RBTN but is part of a local system and identified within an adopted county, city or regional parks implementing agency plan.

Upload Map

1701455979110_2024 RS Map 03 - CSAHs 033_035 (Park_Portland) Bikeway - RBTN.pdf

Please upload attachment in PDF form

Measure A: Population Summary

Existing Population Within One Mile (Integer Only) 100484

Existing Employment Within One Mile (Integer Only) 44365

Upload the "Population Summary" map

1701456044645_2024 RS Map 02 - CSAHs 033_035 (Park_Portland) Bikeway - Population Employment.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:

1. What engagement methods and tools were used?
2. How did you engage specific communities and populations likely to be directly impacted by the project?
3. What techniques did you use to reach populations traditionally not involved in community engagement related to transportation projects?
4. How were the project's purpose and need identified?
5. How was the community engaged as the project was developed and designed?
6. How did you provide multiple opportunities for Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing to engage at different points of project development?
7. How did engagement influence the project plans or recommendations? How did you share back findings with community and re-engage to assess responsiveness of these changes?
8. If applicable, how will NEPA or Title VI regulations will guide engagement activities?

Response:

Within 0.5 miles of the project area, 63% of the population are Black, Indigenous, and People of Color (BIPOC). All census tracts within one half mile of the project are over the regional average for BIPOC populations. One of the largest urban American Indian communities is just east of the project centered on CSAH 152 (Cedar Ave) south of CSAH 5 (Franklin Ave). Black residents are more prevalent at the northern end of the project corridor and Hispanic residents are more prevalent at the southern end. Not only is the project corridor one of the most diverse areas in the region it is also one of the densest with over 15,000 people per sq mile in some census tracts. In addition 44% of households 0.5 miles from the project area have an income under 200% of the federal poverty level, and 12% have a disability of any kind. These demographic profiles are from the 2017 - 2021 5-year ACS estimates. The corridor is also home to many youth, as 30% of the population within 0.5 miles of the project is under the age of 18. These demographic factors indicate a high need for active transportation options, to be constructed by this project, that are safe, accessible and affordable to residents facing disparities in income, education, health outcomes and mobility.

Prior engagement for this project has occurred through our Hennepin County 2040 Bicycle Transportation Plan (Bike Plan). Through the Bike Plan, Hennepin County identified that that people are seeking bike facilities that are separated from vehicles. Residents shared that they would like to bike more but require a safe, and connected bikeway network. An overview of previous engagement conducted through the Bike Plan can be found in Attachment 08. Specific engagement for this corridor will begin in 2024 as part of phase one of this project; CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) from I-94 to 29th St and from 38th St to 42nd St. If the project is funded, Hennepin County anticipates engaging residents in one effort for the entire corridor from I-94 to 42nd Ave to ensure corridor priorities, needs, and design choices are consistently defined by resident engagement. Hennepin County anticipates significant engagement with and involvement from BIPOC individuals. Many residents do not speak English as their first language, with 40% of households within 0.5 miles of the project speaking a language other than English at home. Appropriate translated materials and services will be included to ensure that engagement does not preclude any individuals due to language barrier, and communications staff will be included as necessary to ensure the use of clear language and best practices in engagement materials.

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

Measure B: Disadvantaged Communities Benefits and Impacts

Describe the project's benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:

- ? pedestrian and bicycle safety improvements;
- ? public health benefits;
- ? direct access improvements for residents or improved access to destinations such as jobs, school, health care, or other;
- ? travel time improvements;
- ? gap closures;
- ? new transportation services or modal options;
- ? leveraging of other beneficial projects and investments;
- ? and/or community connection and cohesion improvements.

This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Disadvantaged communities residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Disadvantaged communities 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.

- ? Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
- ? Increased speed and/or cut-through traffic.
- ? Removed or diminished safe bicycle access.
- ? Inclusion of some other barrier to access to jobs and other destinations.

Response:

The CSAHs 33 and 35 (Park Ave and Portland Ave) Bikeway project will benefit BIPOC residents, low-income households, children, and other disadvantaged communities through the creation of a fully separated bikeway. This is in line with Hennepin County's Disparity Reduction line of business, which acknowledges that racial disparities exist in our transportation networks. In Hennepin County, vehicle ownership has a correlation to racial demographics, and within the project area up to 37 percent of households do not own a vehicle. The proposed project will benefit these residents by removing barriers to transportation, promoting active transportation through bicycling by reallocating existing right of way to complete streets elements.

Attachment 09 provides an overview of key community resources which will benefit from improved multimodal access as well as census tracts with high scores of the CDC's Social Vulnerability Index (SVI), a resource that uses census data to measure resilience to natural or human-caused disasters. Almost the entirety of the 0.5 mile project buffer has a high CVI score, indicating the community is more vulnerable than others as well as a higher number of users who walk, cycle, or utilize public transit. The project will construct a segment of enhanced bikeway network to allow these residents to access schools, jobs, and shopping while closing a gap between previously funded improvements directly north and south of the proposed project. This promotes network connectivity between residents throughout South Minneapolis to resources along CSAH 3 (Lake St) and in Downtown Minneapolis.

The proposed project will also benefit those walking and rolling. Hennepin County data shows that pedestrians who are Black or American Indian experience disproportionate negative safety outcomes in the form of higher rates of fatal and severe injuries from crashes with motor vehicles. As feasible, the project will construct crossing improvements including, but not limited to bumpouts, high visibility cross walk markings, upgraded signal systems, roadway alignments and adjustments to reduce vehicle speeds and calm traffic. Improving roadway safety, particularly for BIPOC residents who are walking and biking, will reduce disparities, provide a full range of modal options and reduce fatal and severe crashes.

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 ensure that nearby businesses and services are not negatively impacted during construction.

Measure C: Affordable Housing Access

Describe any affordable housing developments?existing, under construction, or planned?within 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 project?s benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

- ? specific direct access improvements for residents
- ? improved access to destinations such as jobs, school, health care or other;
- ? new transportation services or modal options;
- ? and/or community connection and cohesion improvements.

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 82 affordable, subsidized housing developments are located within 0.5 miles of the project area. Attachment 10 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, 2756 subsidized units exist in census tracts within 0.5 miles of the project. The project is fully within areas of concentrated poverty and regional environmental justice areas. In addition, over half of the population within 0.5 miles of the project area rent their homes and due to the age of the housing stock and mix of income levels for residents along the corridor, there are likely many naturally occurring affording housing units along the CSAH 33 and 35 (Park Ave) and (Portland Ave) corridor.

The project will benefit residents living in subsidized and naturally occurring affordable rental units by providing safe facilities to bike and walk to services and business. Within one half mile of the project corridor there is a library, childcare and elementary school, places of worship, hospitals and health care services and many businesses oriented to local community needs (Attachment 09). Most of these services and business are within an easy and comfortable walk or bike ride. The project will build separated bike lanes and safe pedestrian crossings, ensuring mobility and access for residents of all ages and abilities. Residents living in either subsidized or naturally occurring affordable housing do not have large amounts of disposable income. Spending less on transportation through increased walking and biking allows more money to be available for essential goods and services that can improve health and wellbeing.

Finally, this this project builds on other County and external partner investments in bikeway facilities; on CSAHs 33 and 35 (Park Ave) and (Portland Ave) to the north and south, along 34th St and the Midtown Greenway. Eventually, this will ensure bicycling as a viable modal choice and connect south Minneapolis to Downtown via all ages and abilities bicycle facilities. The project will also promote first and last mile connections to the future B line, ensuring that residents of affordable housing have access to a full range of transportation options.

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

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:

Yes

Project?s 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.

1701457015557_2024 RS Map 01 - CSAHs 033_035 (Park_Portland) Bikeway - Socio Economic.pdf

Measure A: Bikeway Network Gaps, Physical Barriers, and Continuity of Bicycle Facilities

PART 1: Qualitative assessment of project narrative discussing how the project will close a bicycle network gap, create a new or improved physical bike barrier crossing, and/or improve continuity and connections between jurisdictions.

Specifically, describe how the project would accomplish the following: Close a transportation network gap, provide a facility that crosses or circumvents a physical barrier, and/or improve continuity or connections between jurisdictions.

Bike system gap improvements include the following:

- *Providing a missing link between existing or improved segments of a local transportation network or regional bicycle facility (i.e., regional trail or RBTN alignment);*
- *Improving bikeability to better serve all ability and experience levels by:*
 - *Providing a safer, more protected on-street facility or off-road trail;*
 - *Improving safety of bicycle crossings at busy intersections (e.g., through signal operations, revised signage, pavement markings, etc.); OR*
 - *Providing a trail adjacent or parallel to a highway or arterial roadway or improving a bike route along a nearby and parallel lower-volume neighborhood collector or local street.*

Physical bicycle barrier crossing improvements include grade-separated crossings (over or under) of rivers and streams, railroad corridors, freeways and expressways, and multi-lane arterials, or enhanced routes to circumvent the barrier by channeling bicyclists to existing safe crossings or grade separations. Surface crossing improvements (at-grade) of major highway and rail barriers that upgrade the bicycle facility treatment or replace an existing facility at the end of its useful life may also be considered as bicycle barrier improvements. (For new barrier crossing projects, distances to the nearest parallel crossing must be included in the application to be considered for the full allotment of points under Part 1).

Examples of continuity/connectivity improvements may include constructing a bikeway across jurisdictional lines where none exists or upgrading an existing bicycle facility treatment so that it connects to and is consistent with an adjacent jurisdiction's bicycle facility.

Response:

The CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) project is within an RBTN Tier 1 alignment. The project limits are identified in the Hennepin County 2040 Bicycle Transportation Plan, City of Minneapolis All Ages and Abilities Bicycle Network and Hennepin County Enhanced Bikeway Network. There are existing on-street unseparated buffered bike facilities within the project limits. The project will upgrade these facilities to be off-street separated bike facilities, consistent with all ages and abilities bike network functionality.

Hennepin County has two programmed in-progress capital projects along the corridor at the northern and southern termini of this project that will be constructing separated bike facilities. Completing this project will close a gap in Hennepin County's enhanced bikeway network, creating continuous separated bikeways on CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) from 42nd St to Downtown Minneapolis. The CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) separated bikeway corridor will connect to east west separated bikeways at 34th St, Midtown Greenway, 28th St, 26th St and CSAH 5 (Franklin Ave). These east west bikeways either currently exist or are programmed and expected to be constructed by the time this project is completed. A complete and continuous separated bikeway network is critical for its use as an all ages and abilities transportation network. When considered in the context of the larger separated bikeway network this project fills an important network gap that expands the functionality and utility of bicycling for transportation to Downtown Minneapolis.

The project will construct a separated off-street bike facility that is safer than the existing on-street facility and will improve safety of bicycle crossings at busy intersections. The project will improve pedestrian safety at intersections and implement roadway and striping changes to reduce vehicle speeds, calm traffic and improve safety for all road users.

(Limit 2,800 characters; approximately 400 words)

PART 2: Regional Bicycle Barrier Crossing Improvements and Major River Bicycle Barrier Crossings

DEFINITIONS:

Regional Bicycle Barrier Crossing Improvements include crossings of barrier segments within the ?Regional Bicycle Barrier Crossing Improvement Areas? as updated in the 2019 Technical Addendum to the Regional Bicycle Barriers Study and shown in the RBBS online map (insert link to forthcoming RBBS Online Map). Projects must create a new regional barrier crossing, replace an existing regional barrier crossing at the end of its useful life, or upgrade an existing barrier crossing to a higher level of bike facility treatment, to receive points for Part 2.

Major River Bicycle Barrier Crossings include all existing and planned highway and bicycle/pedestrian bridge crossings of the Mississippi, Minnesota and St. Croix Rivers as identified in the 2018 update of the 2040 Transportation Policy Plan. Projects must create a new major river bicycle barrier crossing, replace an existing major river crossing at the end of its useful life, or upgrade the crossing to a higher level of bike facility treatment, to receive points for Part 2.

Projects that construct new or improve existing Regional Bicycle Barrier Crossings or Major River Bicycle Barrier Crossings will be assigned points as follows: (select one)

Tier 1

Tier 1 Regional Bicycle Barrier Crossing Improvement Area segments & any Major River Bicycle Barrier Crossings

Tier 2

Tier 2 Regional Bicycle Barrier Crossing Improvement Area segments

Tier 3

Tier 3 Regional Bicycle Barrier Crossing Improvement Area segments

Non-tiered

Crossings of non-tiered Regional Bicycle Barrier segments

No improvements

Yes

No Improvements to barrier crossings

If the project improves multiple regional bicycle barriers, check box.

Multiple

Projects that improve crossing of multiple regional bicycle barriers receive bonus points (except Tier 1 & MRBBCs)

Measure B: Deficiencies corrected or safety problems addressed

Response:

This segment of CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) experienced 3 bicycle-involved crashes and 7 pedestrian-involved crashes, including 2 serious injury crashes, across the years 2013-2022. A summary of the reported bicycle and pedestrian crashes is included in Attachment 11.

The corridor currently includes on-street bicycle facilities with no physical separation from people driving. While the roadways are signed for 30 mph, people driving often exceed the posted speed limit. The lack of vertical separation between people biking and people driving suggests that ride share vehicles, personal vehicles, and delivery vehicles often utilize the existing bicycle facility to load/unload passengers and packages. As a result, people biking are required to enter the general travel lane, negating the benefits of the existing bicycle facility. While much of both corridors have buffered bike lanes, the buffers are eliminated at major intersections where people driving cross over the bike lane to turn, creating a mixing zone at the intersection.

The proposed project is anticipated upgrade the existing on-street bike facility from a painted buffer design to a protected design that provides more separation from people driving. It's anticipated that on-street parking areas will be relocated to minimize conflicts with people biking along the corridor. In addition, intersections will be modified to create a more compact design through the introduction of curb extensions (where feasible), including at 34th St, in coordination with the City of Minneapolis' Green Central Safe Routes to School Project.

The following list identifies the key safety countermeasures that are anticipated with this project. The specific type and location of improvements will be determined as part of the project development process, based on data analysis, stakeholder input, and environmental review. Attachment 12 includes the applicable pages from Minnesota's Best Practices for Pedestrian and Bicycle Safety Guidebook.

- Protected bikeway facility anticipated along both corridors (undetermined reduction)

- Curb extensions anticipated at approximately 16 intersections (~45% reduction)

- Protected intersection designs (undetermined reduction)

- APS and signal design/operation considerations for people biking, such as: detection, phasing, and optimization (undetermined reduction)

(Limit 2,800 characters; approximately 400 words)

Measure A: Multimodal Elements

Response:

Pedestrian elements will be included along the CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridor. Existing pedestrian facilities include intersections that do not comply with ADA law. Intersection crossings are long and at unsignalized crossings driver yielding compliance is low. The project will correct these deficiencies by constructing all crossings and signal systems to fully comply with ADA law. By creating an enhanced bikeway and eliminating some turning and travel lanes the project will narrow the roadway. This will shorten the crossing distance, reduce exposure to vehicles travel lanes and reduce motor vehicle speeds. High visibility cross walks and other crossing enhancements will be utilized. Attachment 13 highlights the key multimodal connections within a half mile of the project corridors and shows that the CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridors are integral to the bikeway network within the City of Minneapolis.

Transit does not run the full length of the project corridor, between 29th St and 38th St, but multiple transit lines utilize some part of CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) or intersect with the corridors. Transit with a direct connection to the project includes bus lines 21, 23, 5, 924, 941, 945, B-Line aBRT and future Midtown Rail within the Midtown Greenway trench. D-Line aBRT service also utilizes a portion of the corridor and will continue to until the future of the Chicago Ave and 38th St intersection is resolved. Improved bicycling and walking facilities support access to transit. The project will improve first and last mile connections. The project will improve the safety of access transit stations.

The project will improve safety for people driving. Much of the project corridor has two general purpose travel lanes in each direction. Near CSAH 3 (Lake St) the bike lane buffer is reduced to accommodate three travel lanes in each direction. The speed limit is posted as 30mph but due to the wide roadway cross section and long stretches without signalized intersection many people drive much faster. The project will narrow the roadway and travel lanes and implement a consistent cross section of two travel lanes throughout the corridor, eliminating three lane sections. Visually and physically reducing the cross section supports slower driving speeds. Some signal systems along the corridor will be upgraded through this project. Safety treatments such as retro-reflective back plates and flashing yellow arrows, among others will be utilized as proven safety countermeasures.

(Limit 2,800 characters; approximately 400 words)

Upload Transit map

1701633328734_2024 RS Map 04 - CSAHs 033_035 (Park_Portland) Bikeway - Transit.pdf

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.

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.

Yes

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.

Response:

No outreach specific to this project has been completed to date, though existing outreach activities occurred related to the Hennepin County 2040 Bicycle Transportation Plan. Engagement activities for this project will be paired with engagement for the larger CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) corridor improvements to the north and south of this project. Outreach will include in-person events and meetings and online methods. Hennepin County's goal is to reach a wide and diverse cross section of residents and corridor users to gain public input that is representative of the community.

(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 project's 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

1701791288012_Attachment 06 - 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)

Yes

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.

0%

Measure A: Cost Effectiveness

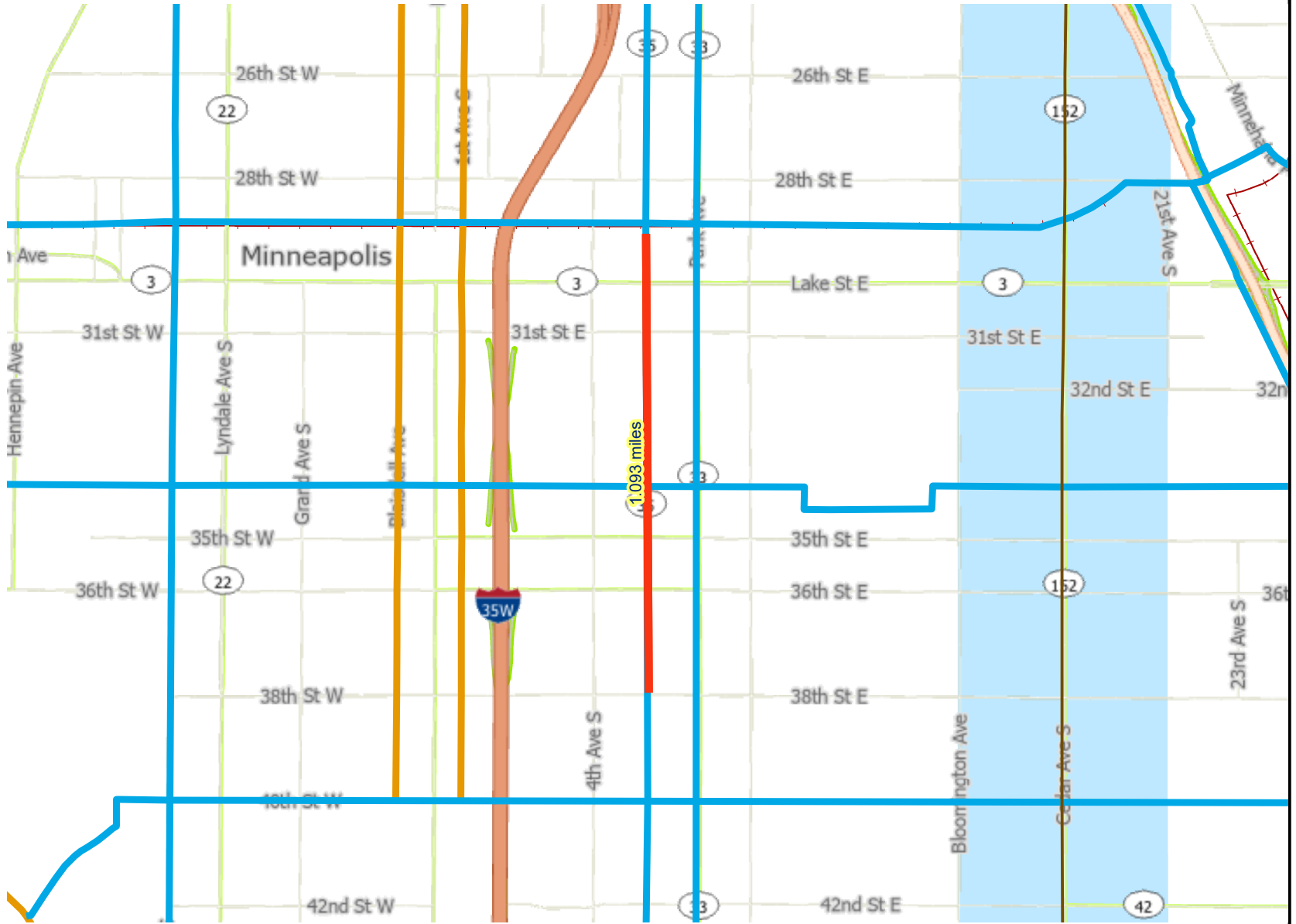
Total Project Cost (entered in Project Cost Form):	\$9,060,000.00
Enter Amount of the Noise Walls:	\$0.00
Total Project Cost subtract the amount of the noise walls:	\$9,060,000.00
Points Awarded in Previous Criteria	
Cost Effectiveness	\$0.00

Other Attachments

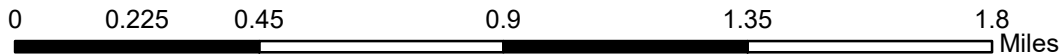
File Name	Description	File Size
Attachment 00 - List of Attachments.pdf	Attachment 00 - List of Attachments	77 KB
Attachment 01 - Project Narrative.pdf	Attachment 01 - Project Narrative	119 KB
Attachment 02 - Project Location Map.pdf	Attachment 02 - Project Location Map	778 KB
Attachment 03 - Existing Condition Photos.pdf	Attachment 03 - Existing Condition Photos	345 KB
Attachment 04 - Hennepin County Enhanced Bikeway Study Maps.pdf	Attachment 04 - Hennepin County Enhanced Bikeway Study Maps	3.3 MB
Attachment 05 - Potential Typical Sections.pdf	Attachment 05 - Potential Typical Sections	603 KB
Attachment 06 - Potential Concept.pdf	Attachment 06 - Potential Concept	3.1 MB
Attachment 07 - City of Minneapolis All Ages and Abilities Map.pdf	Attachment 07 - City of Minneapolis All Ages and Abilities Map	282 KB
Attachment 08 - Community Engagement Summary.pdf	Attachment 08 - Community Engagement Summary	112 KB
Attachment 09 - Disadvantaged Communities and Resources Map.pdf	Attachment 09 - Disadvantaged Communities and Resources Map	2.0 MB
Attachment 10 - Affordable Housing Access Map and Detail Summary.pdf	Attachment 10 - Affordable Housing Access Map and Detail Summary	342 KB
Attachment 11 - Crash Data Summary.pdf	Attachment 11 - Crash Data Summary	299 KB
Attachment 12 - Crash Reduction References.pdf	Attachment 12 - Crash Reduction References	463 KB
Attachment 13 - Multimodal Connections Map.pdf	Attachment 13 - Multimodal Connections Map	573 KB
Attachment 14 - City of Minneapolis Support Letter.pdf	Attachment 14 - City of Minneapolis Support Letter	348 KB

Project to RBTN Orientation

Multiuse Trails and Bicycle Facilities Project: CSAH 33 and 35 (Park Ave & Portland Ave) Bikeway Project | Map ID: 169901805



- Project
- RBTN Tier 2 Alignment
- RBTN Tier 1 Alignment
- RBTN Corridor Centerlines
- Principal Arterials
- Minor Arterials
- +— Railroads
- RBTN Tier 1
- RBTN Tier 2



Created: 11/3/2023
LandscapeRSA6

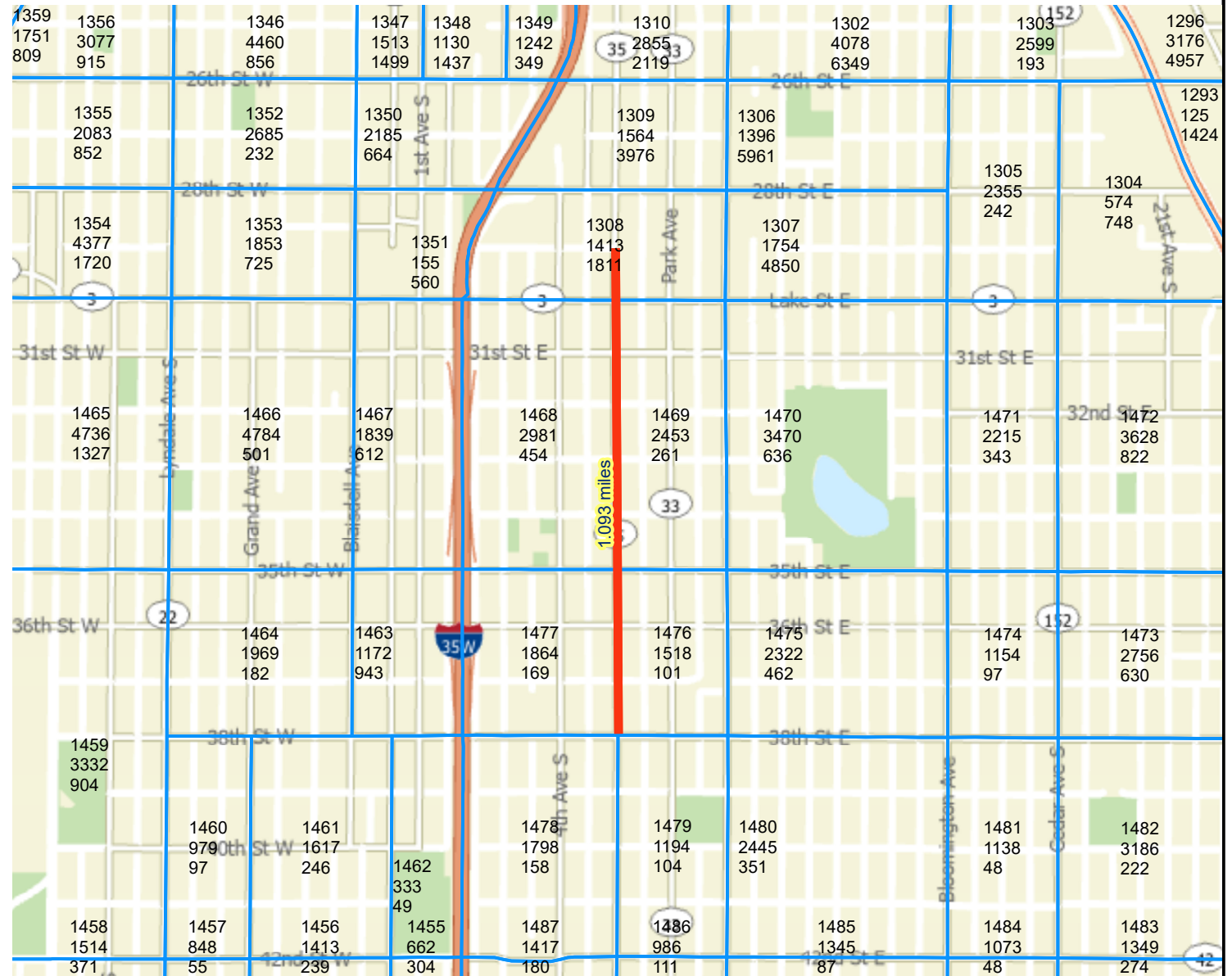


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Population/Employment Summary

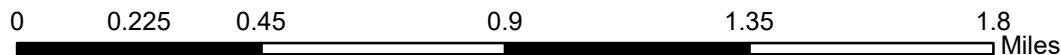
Multiuse Trails and Bicycle Facilities Project: CSAH 33 and 35 (Park Ave & Portland Ave) Bikeway Project | Map ID: 1



Results

Within ONE Mile of project:
 Total Population: 100484
 Total Employment: 44365

-  Project Points
-  Project Area
-  Project
-  2016 TAZ



Created: 11/3/2023
 LandscapeRSA4



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

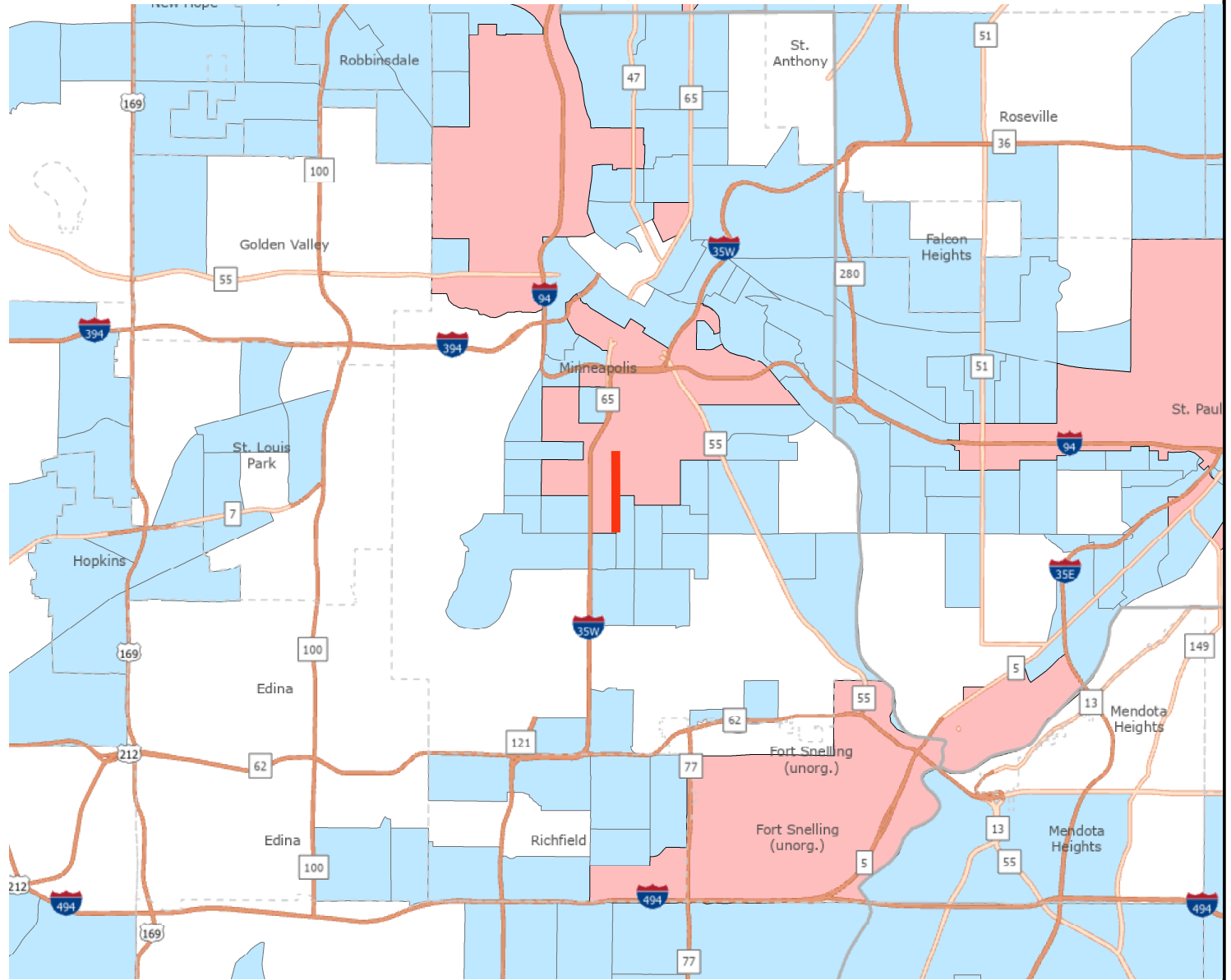


Socio-Economic Conditions

Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 2756

Project located IN an Area of Concentrated Poverty.



— Lines

Regional Environmental Justice Area

Area of Concentrated Poverty



Created: 11/3/2023
LandscapeRSA2

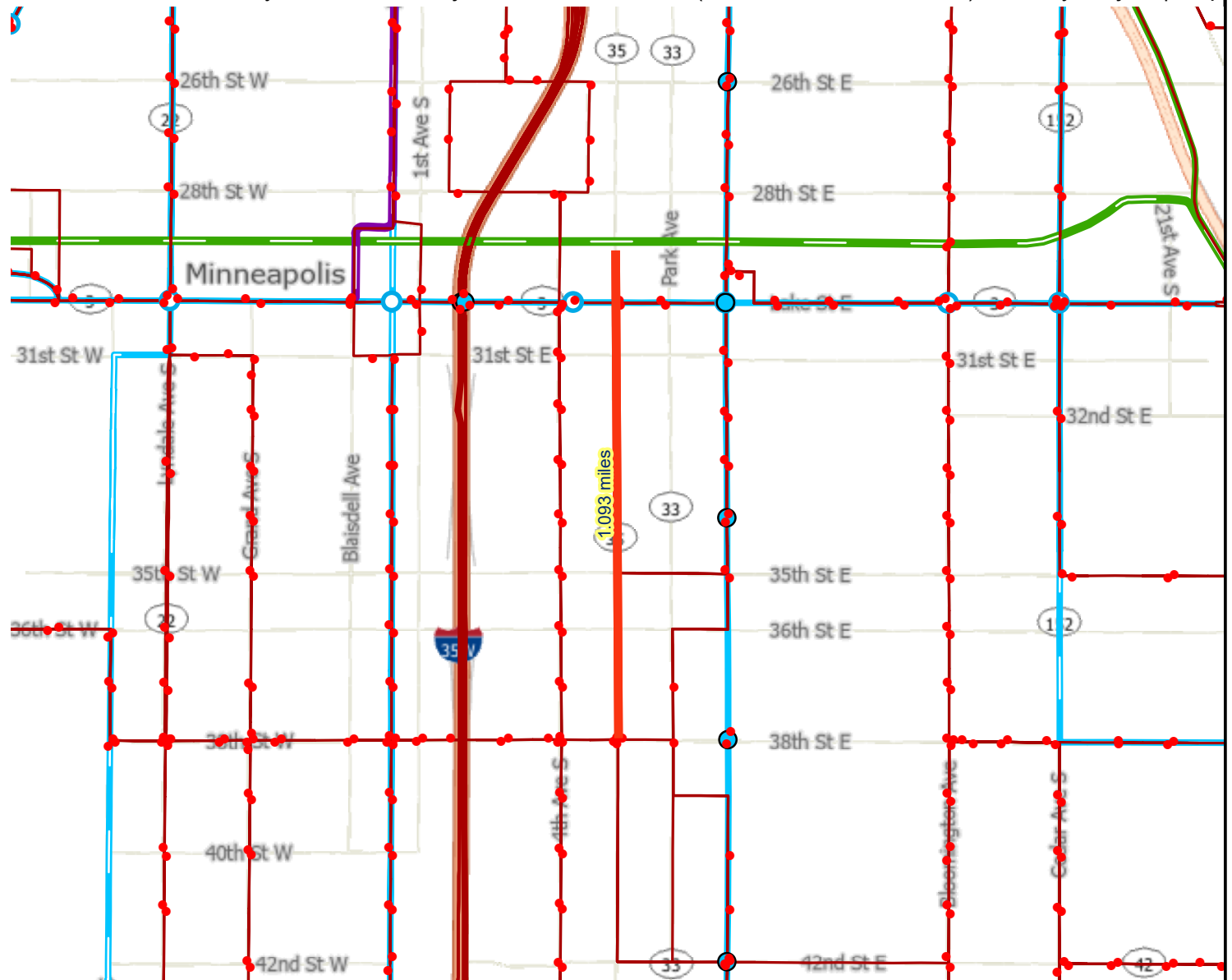


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<http://giswebsite.metc.state.mn.us/gis/site/notice.aspx>



Transit Connections

Multiuse Trails and Bicycle Facilities Project: CSAH 33 and 35 (Park Ave & Portland Ave) Bikeway Project | Map ID:



Results

Transit with a Direct Connection to project:

21 23 5 924 941 945

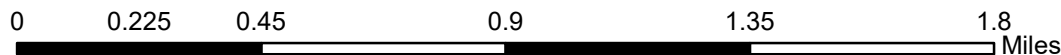
*B Line

*Midtown

*indicates Planned Alignments

Transit Market areas: 1

- | | | | | | |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------|
| Project Points | Commuter Rail | Commuter Rail | Arterial Bus Rapid Transit | Undetermined | Light Rail |
| Project Area | Dedicated Bus Rapid Transit | Dedicated Bus Rapid Transit | Dedicated Bus Rapid Transit | Arterial Bus Rapid Transit | Modern Streetcar |
| Active Stop | Highway Bus Rapid Transit | Highway Bus Rapid Transit | Highway Bus Rapid Transit | Commuter Rail | Undetermined |
| Arterial Bus Rapid Transit | Light Rail | Light Rail | Light Rail | Dedicated Bus Rapid Transit | Highway Bus Rapid Transit |
| Arterial Bus Rapid Transit | Transit Routes | Modern Streetcar | Modern Streetcar | | |



Created: 11/3/2023
LandscapeRSA3
















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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) Bikeway Project

Attachment XX | Potential Concept

LEGEND














	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND

	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project














Attachment 06 | Potential Concept



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














	PAVED ROADWAY		TRAFFIC SIGNAL REVISION
	PAVED ENTRANCE		TRAFFIC SIGNAL BY OTHERS
	RAISED MEDIANS & CURBS		METRO TRANSIT BUS STOP
	SIDEWALK FACILITY		PROJECT BY OTHERS
	BOULEVARDS		HIGH R/W IMPACTS
	BICYCLE FACILITY		LOW R/W IMPACTS
	TRAFFIC SIGNAL FULL RECONSTRUCT		



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND

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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 00 | List of Attachments

1. Project Narrative
2. Project Location Map
3. Existing Condition Photos
4. Hennepin County Enhanced Bikeway Network Study Maps
5. Potential Typical Sections
6. Potential Concept
7. City of Minneapolis All Ages and Abilities Bicycle Network Map
8. Community Engagement Summary
9. Disadvantaged Communities and Resources Map
10. Affordable Housing Access Map and Detail Summary
11. Crash Data Summary
12. Crash Reduction References
13. Multimodal Connections Map
14. Letter of Support – City of Minneapolis

CSAHs 33/35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 01 | Project Narrative

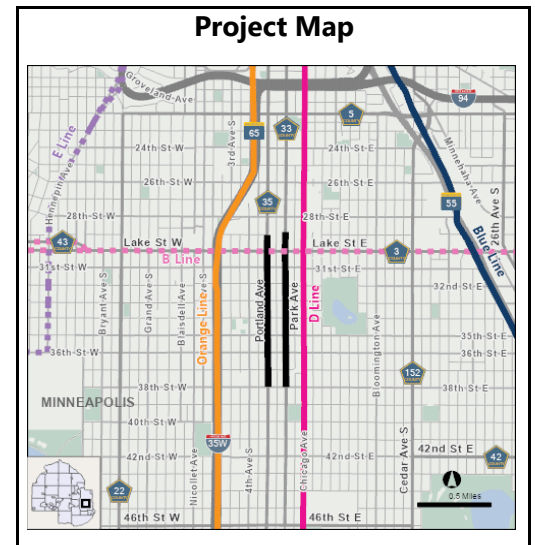
Project Name	
CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project	
City(ies)	
Minneapolis	
Commissioner District(s)	
4	
Capital Project Number	Project Category
Unfunded Candidate ID #2230502	Multimodal Safety (Corridor)
Scoping Manager	Scoping Form Revision Dates
James Weatherly	11/9/2023

Project Summary
Construct enhanced bikeway along Park Avenue (CSAH 33) and Portland Avenue (CSAH 35) from 38th Street to the Midtown Greenway in the City of Minneapolis.

Roadway History
The one-way current configurations of Park Avenue (CSAH 33) and Portland Avenue (CSAH 35) generally include two travel lanes, a buffered bike lane, parking lanes on both sides, and sidewalk facilities on both sides. These A-minor relievers are heavily used by both bicycle and motor vehicle commuter traffic. The existing conditions at intersections are uncomfortable for people walking, as the crossing distances are relatively long due to the absence of complete streets design elements. In addition, the bicycling experience along Park Avenue (CSAH 33) and Portland Avenue (CSAH 35) is also uncomfortable as there is no vertical separation between people driving and parked vehicles. As a result, a relatively high percentage of vehicles have been observed travelling above the posted 30 mph speed limit.

Project Description and Benefits
The project objectives include improving safety, comfort, and accessibility along Park Avenue (CSAH 33) and Portland Avenue (CSAH 35); with a focus on introducing complete streets design strategies to promote traffic calming. Intersections are anticipated to be redesigned to incorporate curb extensions to slow turning vehicles. The project will also introduce a protected bikeway design to provide better separation from people driving and parked vehicles, and also promote first and last mile connections to the planned B Line Arterial Bus Rapid Transit (BRT) service anticipated to begin operation along Lake Street (CSAH 3) in 2025. Lastly, ADA accommodations will be upgraded, including the installation of APS, to promote accessibility.

Project Risks & Uncertainties
No project risks or uncertainties identified at the time of application submittal.



Project Timeline
Scoping: Q1 2023 - Q4 2023
Design: Q1 2024 - Q3 2026
R/W Acquisition: Q3 2025 - Q3 2026
Bid Advertisement: Q4 2026
Construction: Q1 2027 - Q4 2027

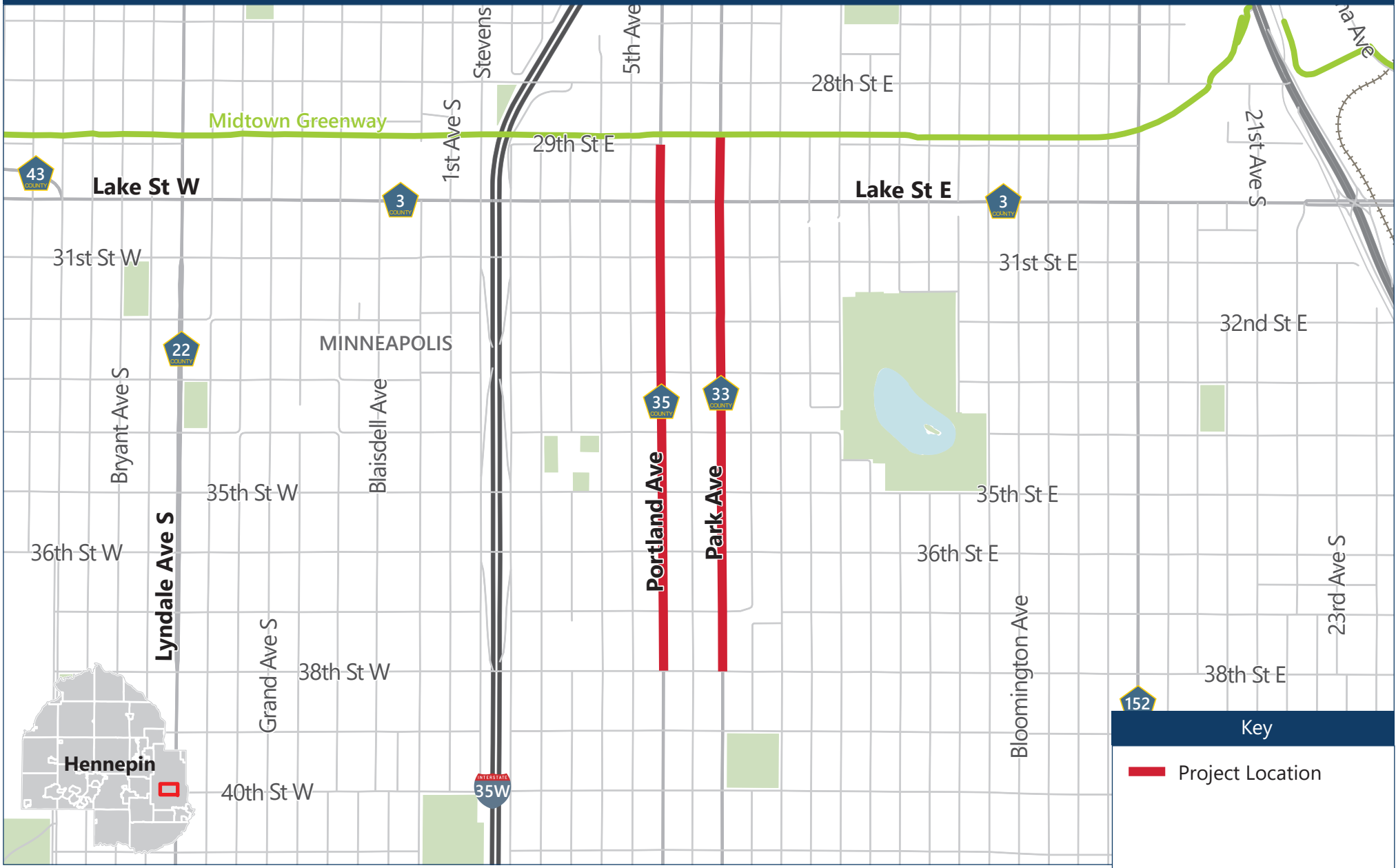
Project Delivery Responsibilities
Preliminary Design: Consultant
Final Design: Consultant
Construction Services: Consultant

Project Budget -	Project Level
Construction: \$	6,970,000
Cost Estimate Year:	2023
Construction Year:	2027
Annual Inflation Rate:	2.0%
Inflated Construction: \$	7,540,000
Design Services: \$	1,130,000
R/W Acquisition: \$	800,000
Other (Utility Burial): \$	-
Construction Services: \$	750,000
Contingency: \$	2,090,000
Total Project Budget: \$	12,310,000

Funding Notes
This project is a strong candidate for federal funding through the Metropolitan Council's Regional Solicitation based on the corridors' designation on the RBTN.

CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 02 | Project Location Map



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Publication date: 10/17/2023

Data sources (if applicable):



CSAH 033 and 035 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 03 | Existing Condition Photos



The intersection of Portland Ave (CSAH 35) and E 31st St contains non-compliant pedestrian ramps, similar to many intersections along the corridor.

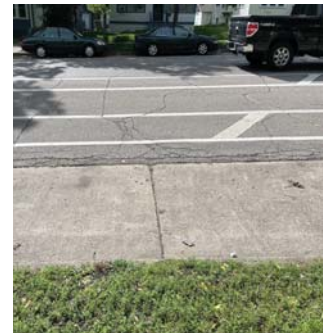


The intersection of Portland Ave (CSAH 35) and E 34th St, demonstrates aging pedestrian ramps. Obstructions within the pedestrian realm are common along the corridor.



The current infrastructure for people biking lacks separation from parked vehicles and people driving.

Existing roadway conditions contain aging, cracked pavement.



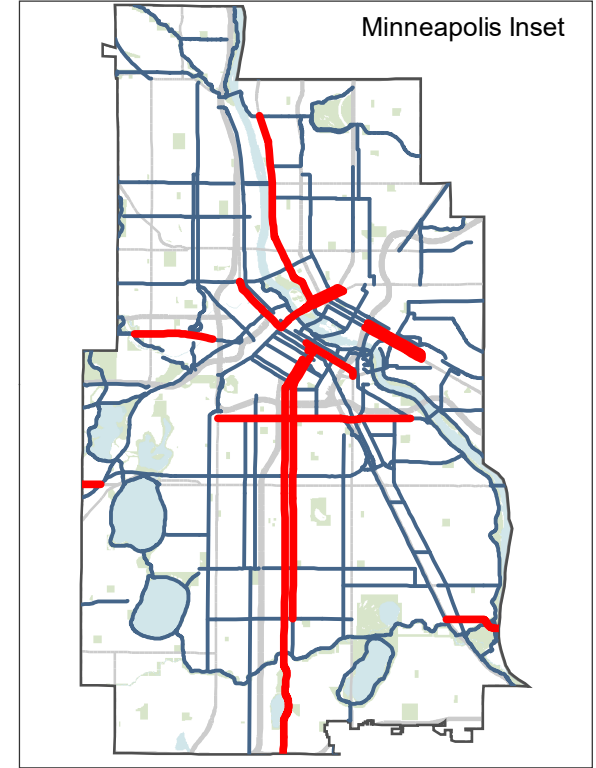
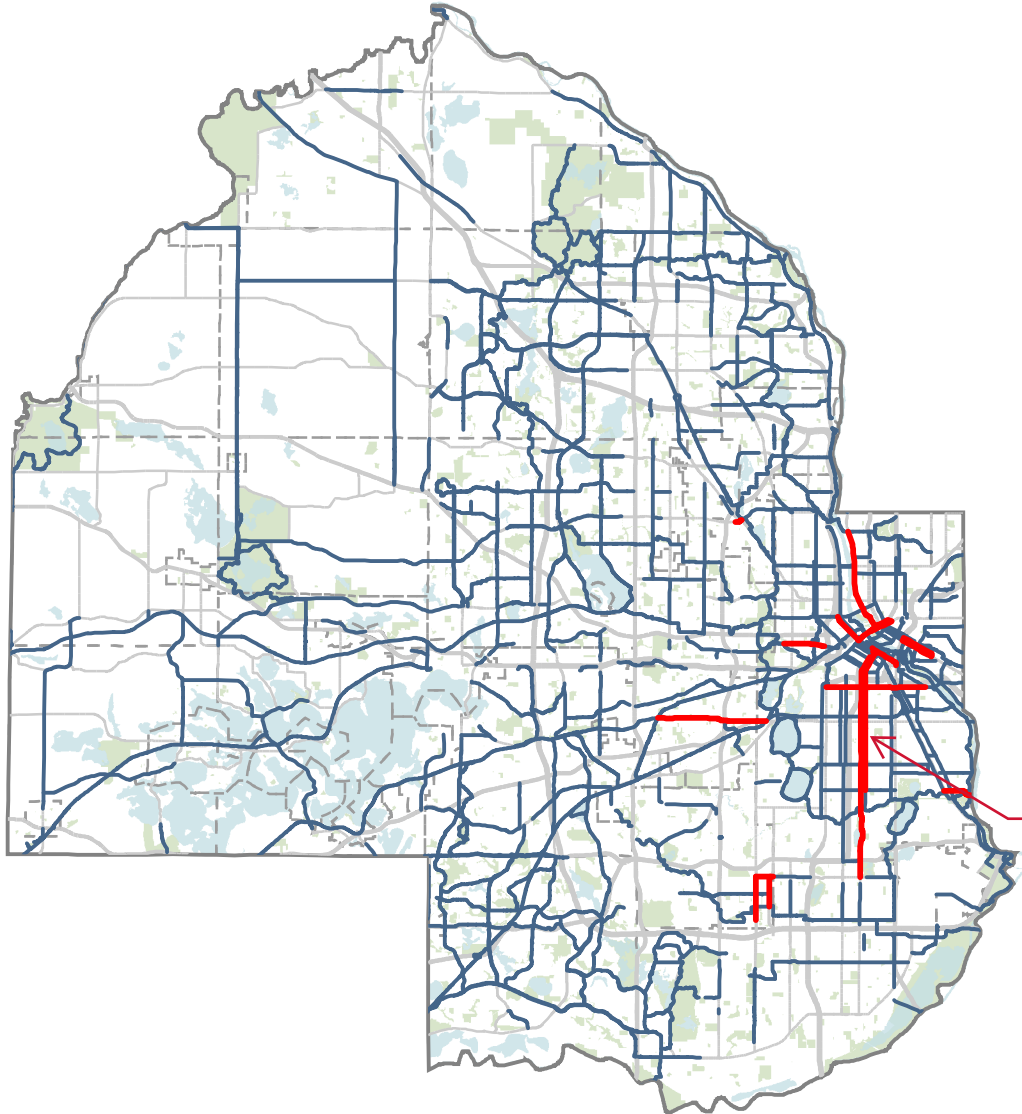
Park Ave (CSAH 33) existing bike infrastructure pictured.





CSAHs 033 and 035 (Park Ave and Portland Ave) Phase 2 Bikeway Project

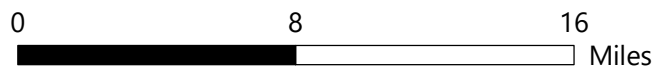
Attachment 04 | Hennepin County Enhanced Bikeway Study Maps

HENNEPIN COUNTY
MINNESOTA



Project location

-  Hennepin Proposed Enhanced Bikeway
-  Open Bikeway

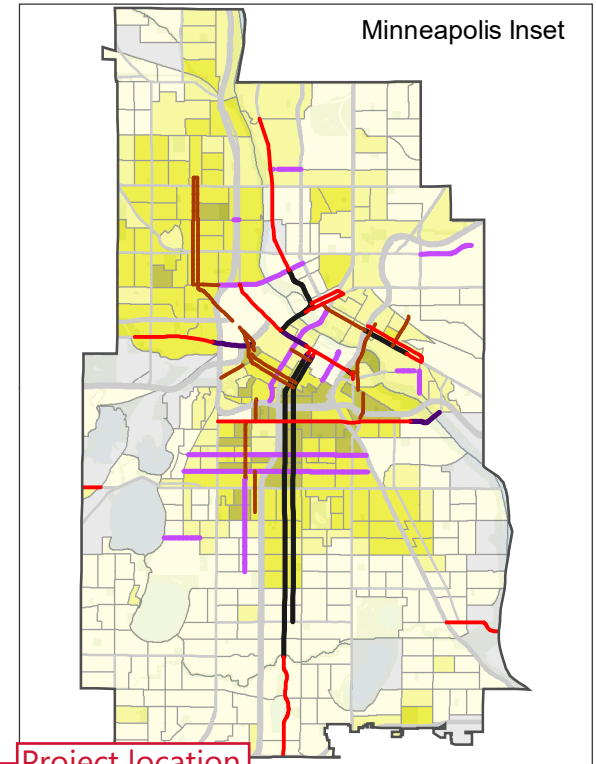
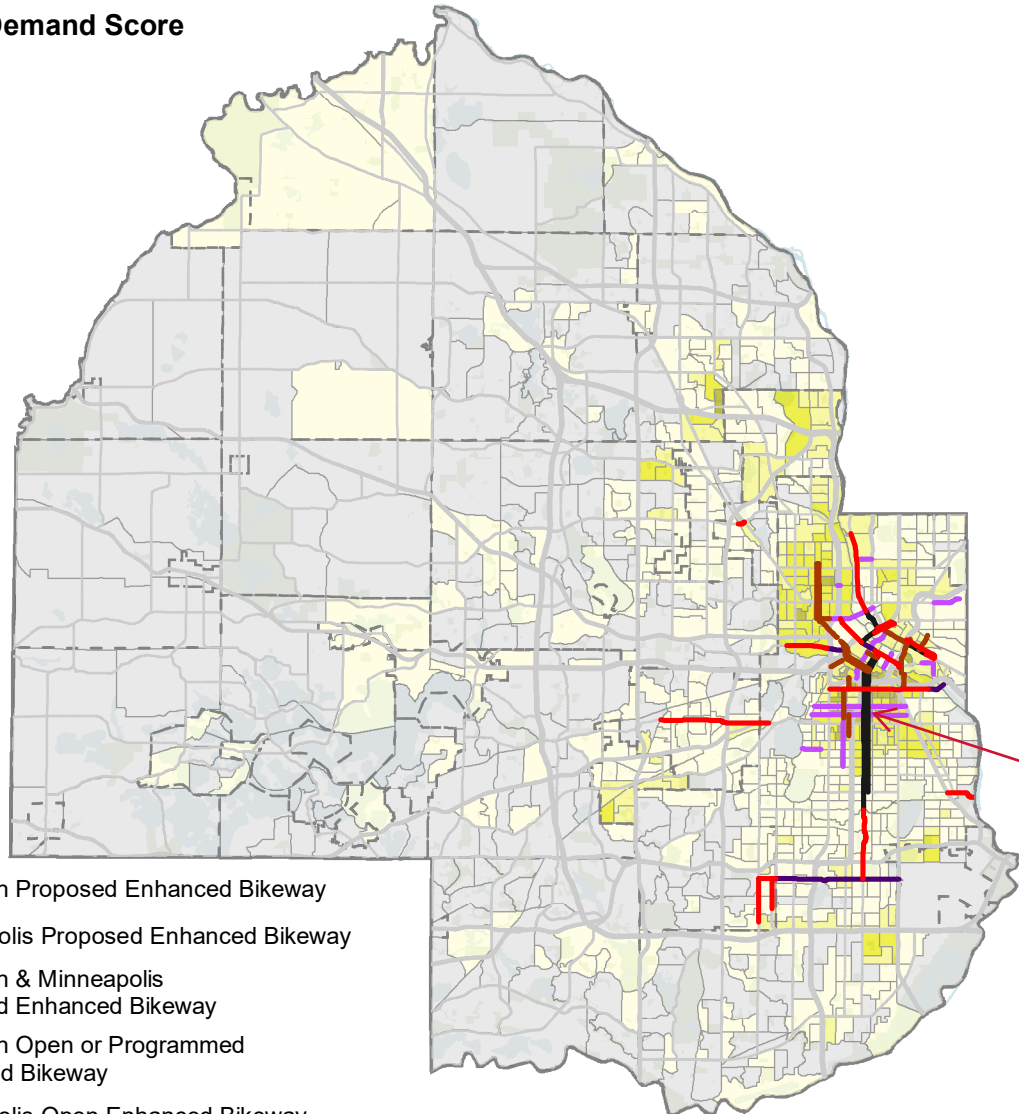
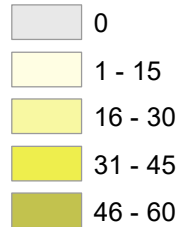


CSAHs 033 and 035 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 04 | Hennepin County Enhanced Bikeway Study Maps

HENNEPIN COUNTY
MINNESOTA

Equity and Demand Score



Project location

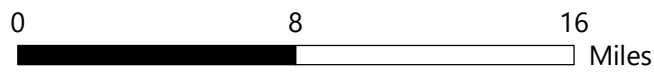
Equity and demand scores were calculated by summing scores using three criteria: areas of concentrated poverty, population density, percentage of households with no vehicle. Highly-scored areas should get more investment consideration based on these measures.

Area of concentrated poverty: Yes=20, No=0
 *Population density: 20,15,10,5,0
 *Households with no vehicle: 20,15,10,5,0

*These criteria were grouped into five categories and scored using the natural breaks classification scheme

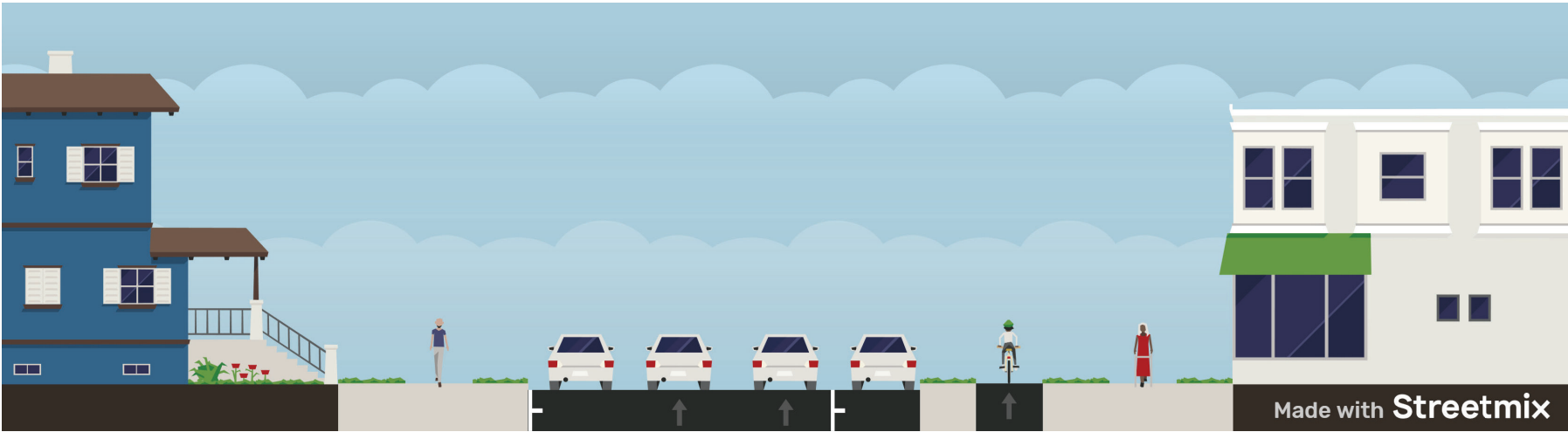
Source: Metropolitan Council, 2012-2016 American Community Survey

- Hennepin Proposed Enhanced Bikeway
- Minneapolis Proposed Enhanced Bikeway
- Hennepin & Minneapolis Proposed Enhanced Bikeway
- Hennepin Open or Programmed Enhanced Bikeway
- Minneapolis Open Enhanced Bikeway

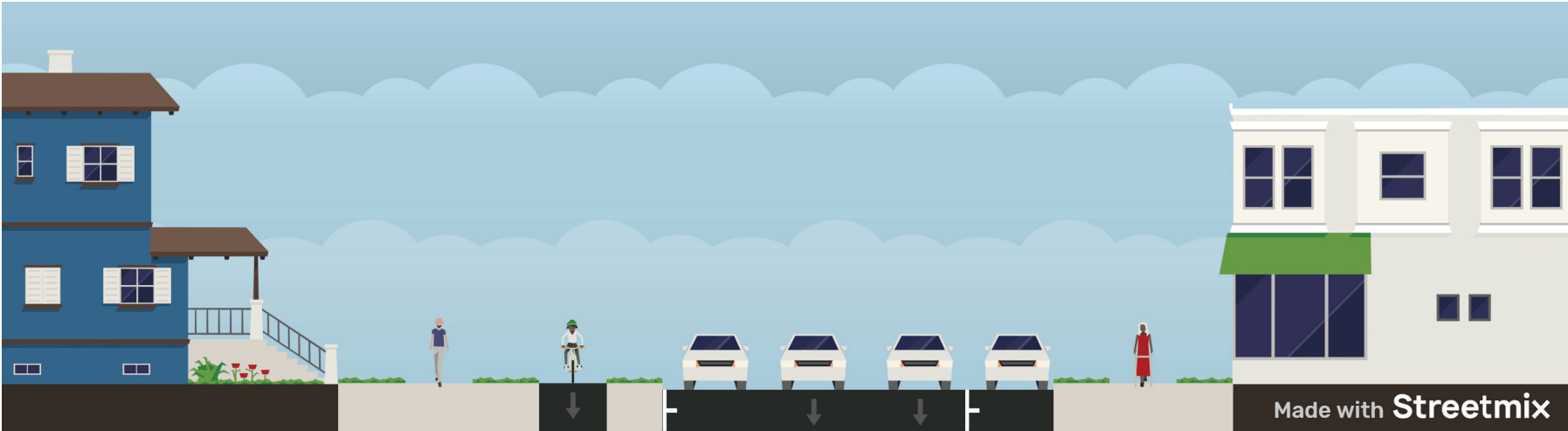


CSAH 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 05 | Potential Typical Sections



Above: Potential typical section for CSAH 33 (Park Ave)
















Above: Potential typical section for CSAH 35 (Portland Ave)

CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














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CSAH 33 (Park Ave) and CSAH 35 (Portland Ave) Bikeway Project

Attachment XX | Potential Concept

LEGEND














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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND

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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project














Attachment 06 | Potential Concept



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

LEGEND














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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

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

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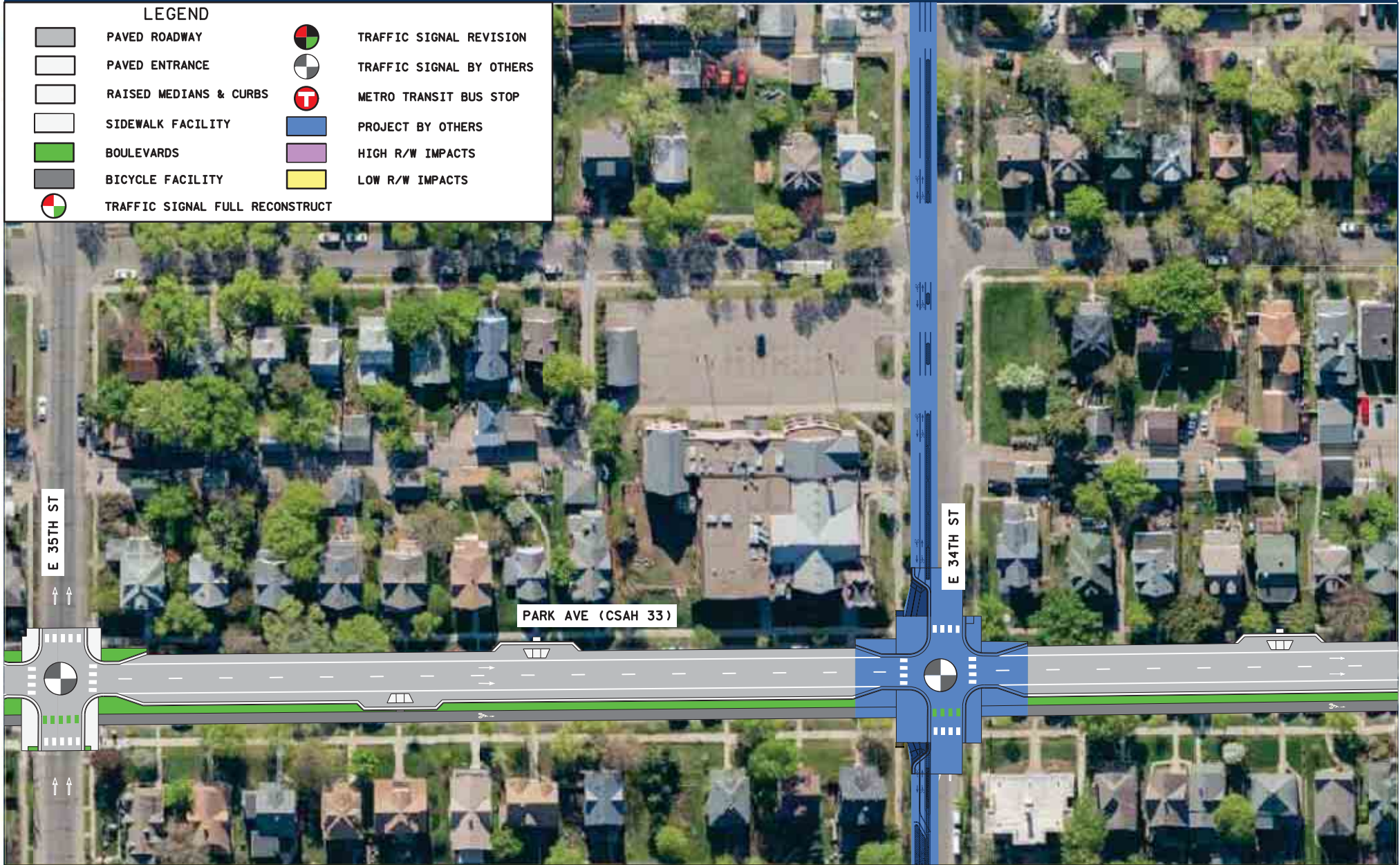


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

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

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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 06 | Potential Concept

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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

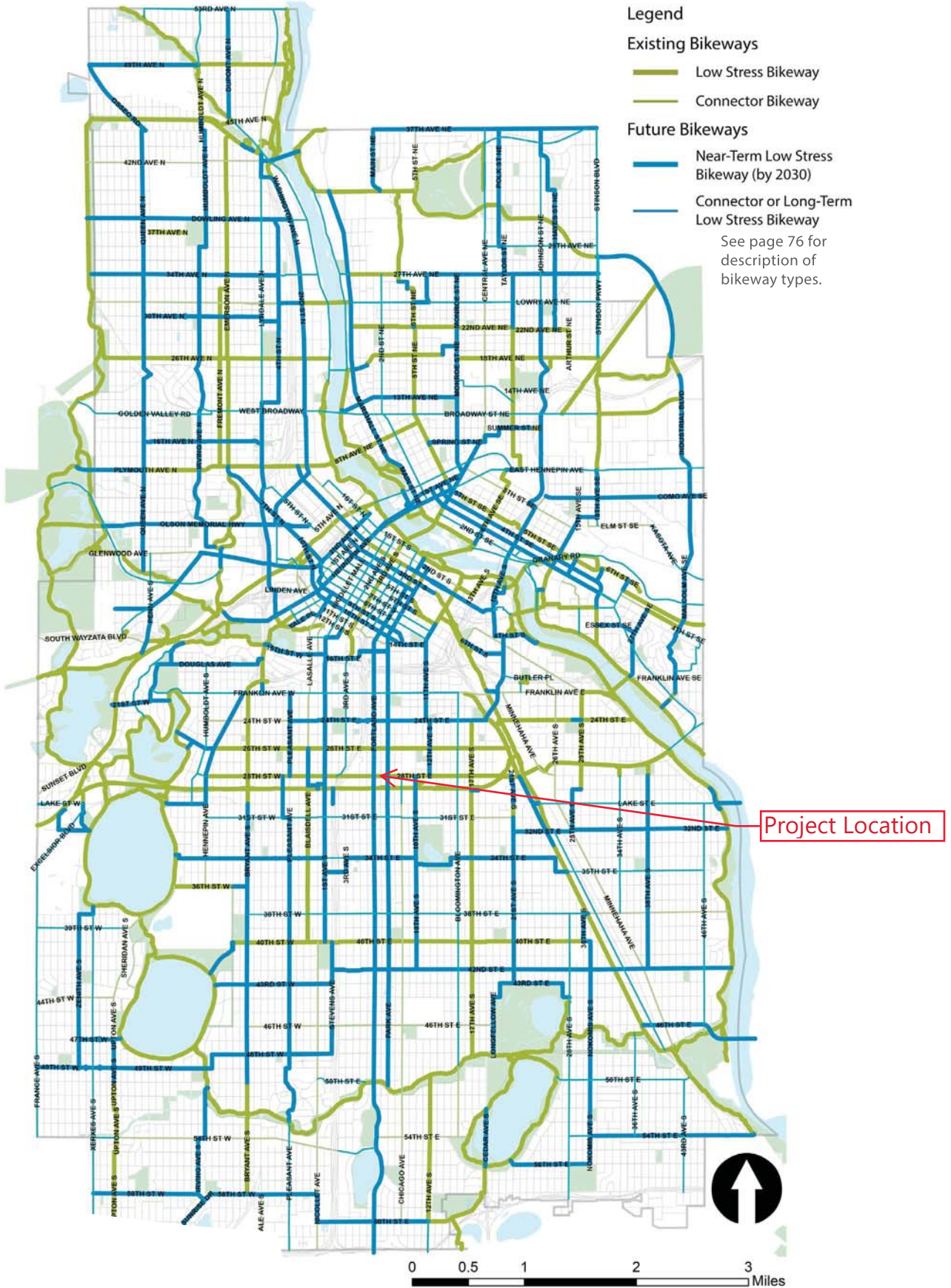
Attachment 06 | Potential Concept



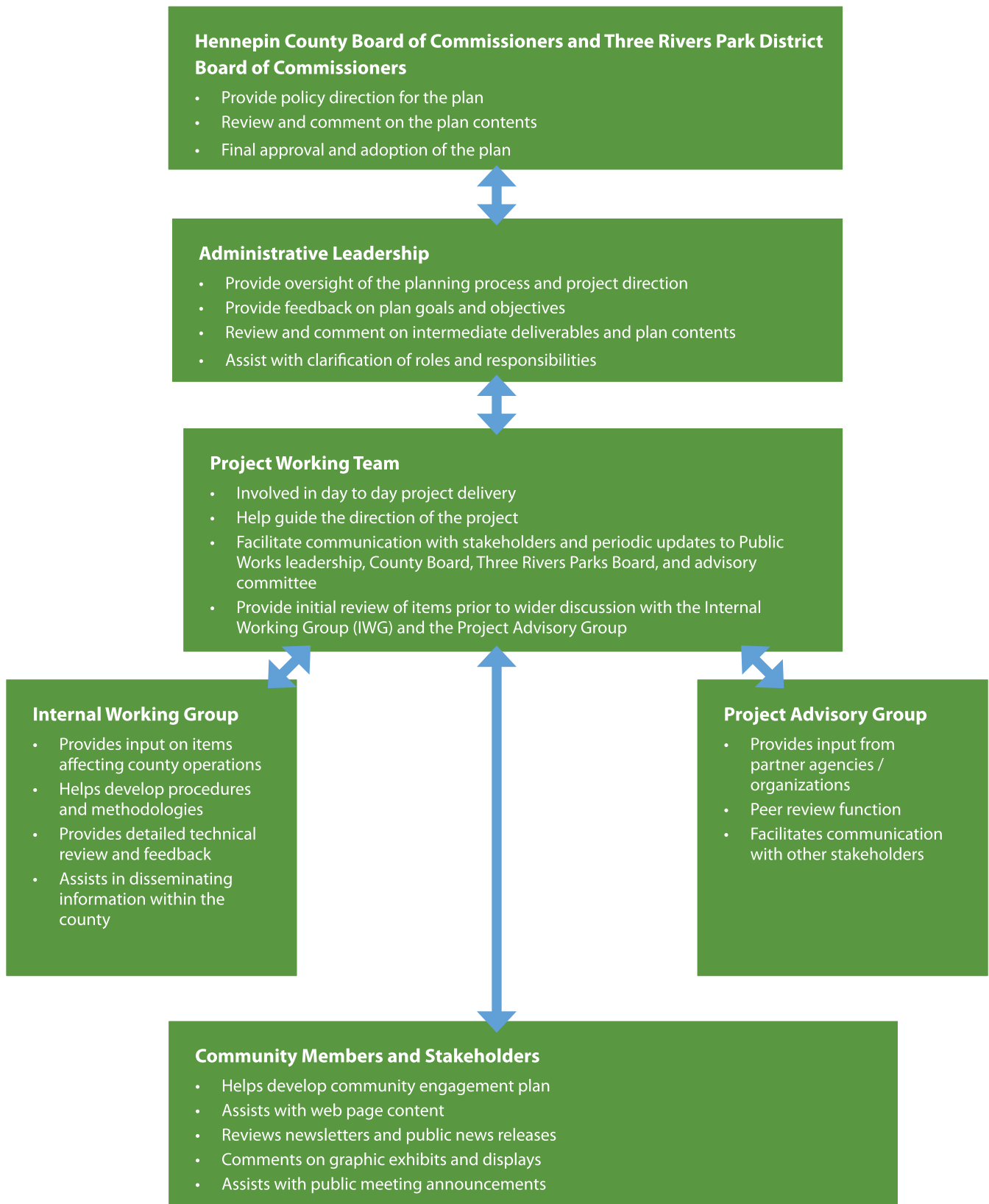
CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project



Attachment 07 | City of Minneapolis All Ages and Abilities Bikeway Network Map



Hennepin County bicycle transportation plan project organization structure



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 08 | Community Engagement Summary

- Project working team (PWT) composed of Hennepin County staff, Three Rivers Park District staff, a BAC representative, and the consultant team

The project working team reviewed previous and current planning efforts to ensure this plan complements other efforts by the county, park district, Metropolitan Council, the state, and other agencies. The policy framework chapter clarifies how this plan relates to other initiatives.

Community engagement and participation

Working together, Hennepin County and Three Rivers Park District developed and implemented community engagement to identify characteristics and attitudes of residents regarding bicycling. This outreach provided a wealth of information, including guidance on policy priorities, vision, network development, and preferred bikeway design treatments. More than 2,700 people contributed to this plan.

Public workshops

Three large format public workshops across the county yielded public guidance.

Community listening sessions

Ten community listening sessions with focus populations (including health-disparity populations) included small-group activities and discussion with assistance from community organizations.

Online engagement

A public website (www.hennepin.us/bikeplan) shared updates on engagement and project information. An online survey and an interactive map were engaged stakeholders who preferred those options or who could not attend events.

Community events and other in-person engagement

Feedback was gained during community festivals and meetings, including Minnehaha Open Streets, Lowry Open Streets, the Richfield Farmer's Market,

and at meetings of the Northwest Hennepin County League of Municipalities and the Hennepin County Bicycle Advisory Committee.

Please refer to appendix A for a full report on engagement activities and results.

Living document/plan updates

The plan will be a living document continually evaluated and updated to meet evolving community needs and innovations. Minor updates will occur regularly and may address:

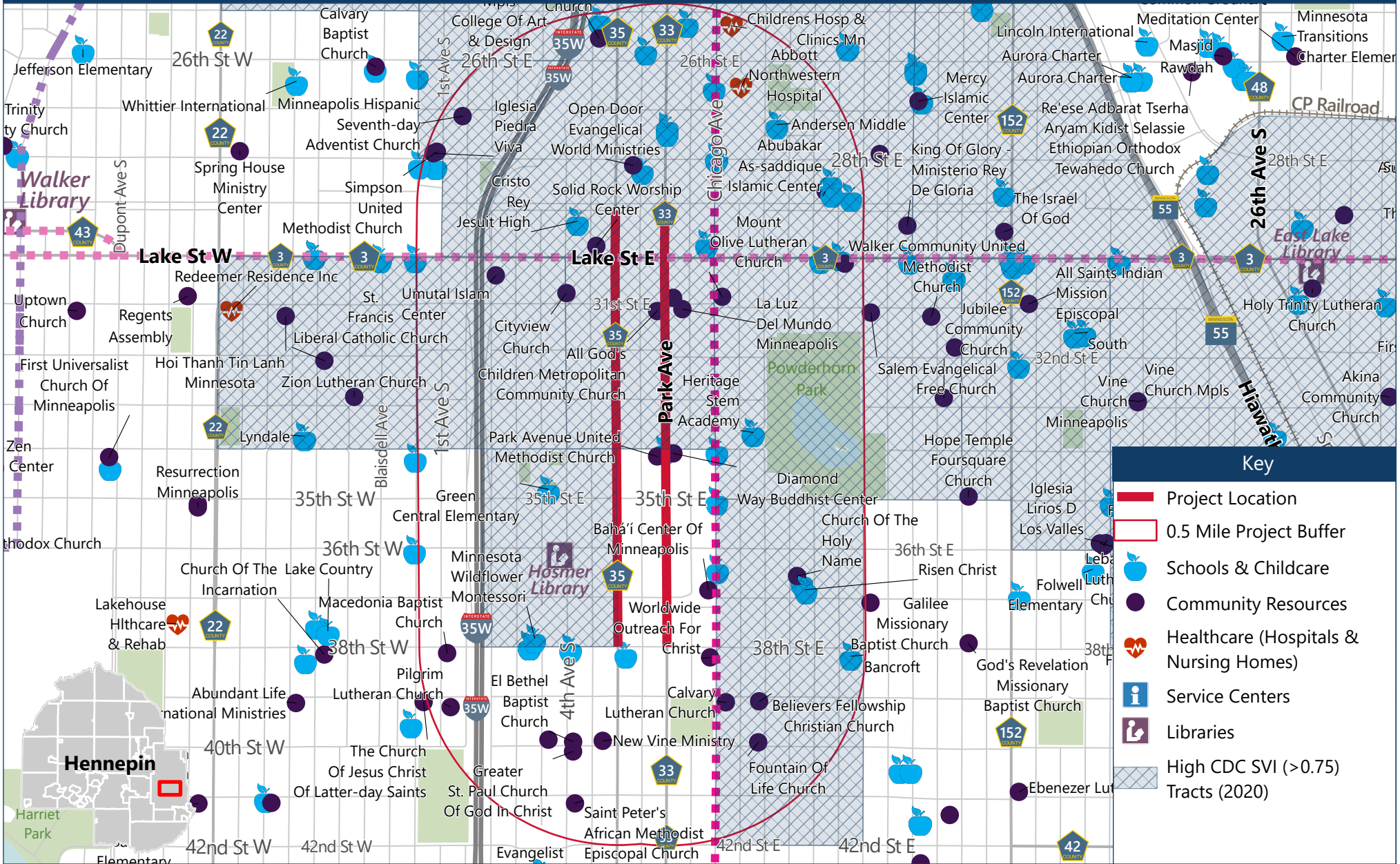
- Bikeway system map
- Gap map (top prioritized gaps)
- Measures / statistics (system mileage, miles built per year, gaps removed, etc.)
- Design guidelines — typical sections
- Appendices — any references to current capital improvement or paving projects

Major plan updates generally will follow a 10-year schedule to align with Metropolitan Council review of comprehensive plans. The plan update will likely precede the update of the county's transportation plan and its comprehensive plan. Due to emerging concepts and bikeway system maturity, it may be prudent to initiate a partial revision at five years. Comprehensive plans will be completed in 2018, so this plan could be revised in 2017-2018. The Hennepin County bicycle transportation plan and updates will be posted at www.hennepin.us/bike. Major plan updates may address:

- Policies (via board adoption)
- Vision, goals, objectives
- Strategies
- Cost participation policies
- Bulk of the Hennepin County bicycle transportation plan document text

CSAH 33 & 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 09 | Disadvantaged Communities and Resources Map

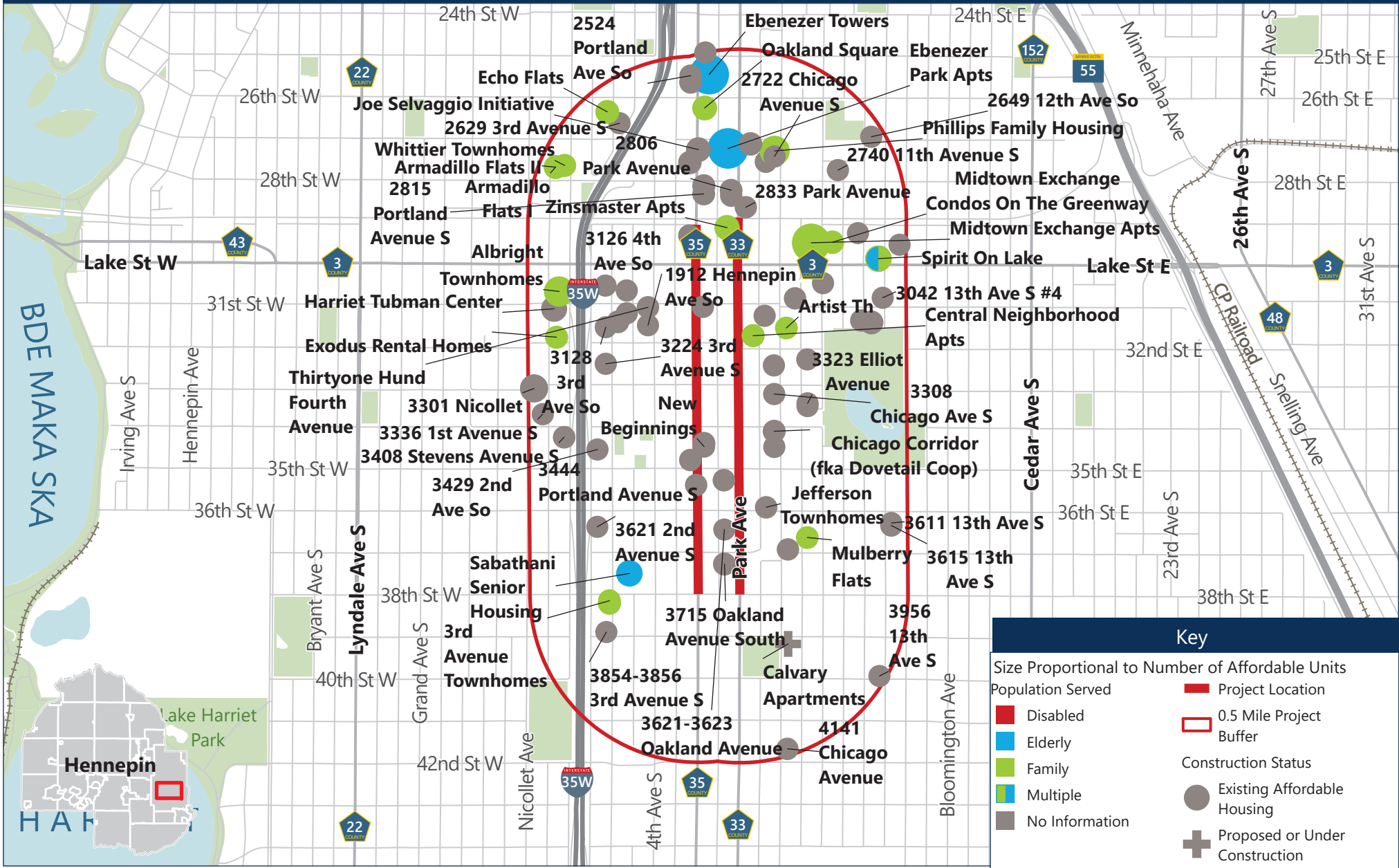


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CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 10 | Affordable Housing Access Map and Detail Summary



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Publication date: 11/6/2023

Data sources (if applicable):



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 10 | Affordable Housing Access Map and Detail Summary

Property ID	Property Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	80% AMI	0 BR	1 BR	2 BR	3 BR	4 BR
15776	1212 Powderhorn Terrace	20	20	0	0	20	0	0	0	0	0	0
15867	1912 Hennepin Ave So	6	4	0	0	4	0	0	0	0	0	0
15868	1916 Hennepin Ave	6	2	0	0	2	0	0	0	0	0	0
15920	2445 Portland Ave S	4	4	0	0	4	0	0	0	0	0	0
15927	2524 Portland Ave So	6	6	0	0	6	0	0	0	0	0	0
15929	2528 Portland Avenue S	10	10	0	0	10	0	0	0	0	0	0
15944	2629 3rd Avenue S	2	2	0	0	2	0	0	0	0	0	0
15952	2649 12th Ave So	2	2	0	0	2	0	0	0	0	0	0
15963	2722 Chicago Avenue S	3	2	0	0	2	0	0	0	0	0	0
15968	2740 11th Avenue S	4	2	0	0	2	0	0	0	0	0	0
15970	2801 Portland Ave S	12	12	0	0	12	0	0	0	0	0	0
14624	2806 Park Avenue	40	8	0	0	8	0	0	0	0	0	0
15973	2812 Park Avenue S	4	4	0	0	4	0	0	0	0	0	0
15974	2815 Portland Avenue S	12	9	0	0	9	0	0	0	0	0	0
15976	2833 Park Avenue	4	4	0	0	4	0	0	0	0	0	0
15980	2908 12th Avenue S	2	1	0	0	1	0	0	0	0	0	0
15985	2914 Portland Avenue	2	2	0	0	2	0	0	0	0	0	0
16299	2920 14th Ave So	1	1	0	0	1	0	0	0	0	0	0
15998	3024 3rd Avenue S	2	2	0	0	2	0	0	0	0	0	0
15999	3025 10th Ave So	2	2	0	0	2	0	0	0	0	0	0
16005	3034 Clinton Ave So	2	2	0	0	2	0	0	0	0	0	0
16007	3042 13th Ave S #4	1	1	0	0	1	0	0	0	0	0	0
16008	3044 Elliot Ave So	4	4	0	0	4	0	0	0	0	0	0
16011	3108 Clinton Ave S	2	2	0	0	2	0	0	0	0	0	0
16013	3113-3115 Columbus Avenue	2	2	0	0	2	0	0	0	0	0	0
16015	3121 3rd Avenue South	8	8	0	0	8	0	0	0	0	0	0
16016	3126 4th Ave So	2	1	0	0	1	0	0	0	0	0	0
16019	3128 3rd Ave So	2	1	0	0	1	0	0	0	0	0	0
16028	3215 Elliot Avenue S	2	1	0	0	1	0	0	0	0	0	0
16032	3224 3rd Avenue S	2	2	0	0	2	0	0	0	0	0	0
16040	3249 48th Ave So	2	2	0	0	2	0	0	0	0	0	0
16044	3300 Colfax Ave So	14	4	0	0	4	0	0	0	0	0	0
15698	3301 Nicollet	64	64	24	40	0	0	50	14	0	0	0
16047	3308 Chicago Ave S	2	2	0	0	2	0	0	0	0	0	0
16052	3323 Elliot Avenue	2	2	0	0	2	0	0	0	0	0	0
16053	3336 1st Avenue S	2	2	0	0	2	0	0	0	0	0	0
16057	3408 Stevens Avenue S	6	6	0	0	6	0	0	0	0	0	0
16058	3417 Portland Avenue S	10	10	0	0	10	0	0	0	0	0	0
16061	3429 2nd Ave So	2	2	0	0	2	0	0	0	0	0	0
16066	3444 Portland Avenue S	4	4	0	0	4	0	0	0	0	0	0
16068	3509 Oakland Avenue S	5	5	0	0	5	0	0	0	0	0	0

CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 10 | Affordable Housing Access Map and Detail Summary

Property ID	Property Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	80% AMI	0 BR	1 BR	2 BR	3 BR	4 BR
16072	3538 Portland Avenue S	4	4	0	0	4	0	0	0	0	0	0
16077	3611 13th Ave S	2	1	0	0	1	0	0	0	0	0	0
16079	3615 13th Ave S	4	4	0	0	4	0	0	0	0	0	0
16080	3621 2nd Avenue S	2	1	0	0	1	0	0	0	0	0	0
16081	3621-3623 Oakland Avenue	2	1	0	0	1	0	0	0	0	0	0
16084	3649 Chicago Ave So	4	4	0	0	4	0	0	0	0	0	0
10967	3715 Oakland Avenue South (sold 7/27/94)	10	10	0	10	0	0	0	0	0	0	0
16100	3854-3856 3rd Avenue S	2	1	0	0	1	0	0	0	0	0	0
16111	3956 13th Ave S	2	1	0	0	1	0	0	0	0	0	0
4569	3rd Avenue Townhomes	12	8	0	8	0	0	0	0	0	8	0
16124	4141 Chicago Avenue	4	4	0	0	4	0	0	0	0	0	0
9600	Albright Townhomes	89	89	0	68	21	0	0	10	79	0	0
4558	Armadillo Flats I	19	19	0	0	0	19	0	0	0	0	0
4559	Armadillo Flats II	19	19	0	0	19	0	0	0	0	0	0
10330	Artist Th	8	8	0	4	1	3	0	0	8	0	0
AFF1	Calvary Apartments	41	41	0	0	0	0	0	0	0	0	0
4696	Central Neighborhood Apts	12	12	0	12	0	0	0	2	4	0	6
13431	Chicago Corridor (fka Dovetail Coop)	10	10	0	0	10	0	0	0	0	0	0
5181	D0885 - No Name Provided	16	16	0	0	16	0	0	0	0	0	0
5157	D0886 - No Name Provided	4	4	0	0	4	0	0	0	0	0	0
5242	D0916 - No Name Provided	2	2	0	0	2	0	0	0	0	0	0
3514	Ebenezer Park Apts	200	200	0	200	0	0	0	190	10	0	0
3516	Ebenezer Towers	192	192	96	0	96	0	71	119	2	0	0
4015	Echo Flats (fka Whittier e" (np))"	20	20	0	16	4	0	0	0	4	12	4
3841	Exodus Rental Homes	12	12	0	3	9	0	0	0	8	4	0
5160	Harriet Tubman Center	43	43	0	43	0	0	0	0	0	0	0
15892	Jefferson Townhomes	5	5	0	0	5	0	0	0	0	0	0
4759	Joe Selvaggio Initiative	30	30	0	30	0	0	0	2	24	2	2
9350	Midtown Exchange Apts	219	178	0	62	116	0	4	128	43	3	0
8502	Midtown Exchange Condos On The Greenway	57	16	0	12	2	2	0	13	3	0	0
10332	Mulberry Flats	8	8	0	8	0	0	0	0	8	0	0
16059	New Beginnings	4	4	0	0	4	0	0	0	0	0	0
4390	Oakland Square	31	31	31	0	0	0	0	1	19	10	1
15957	Park Apartments	16	16	0	0	16	0	0	0	0	0	0
12388	Phillips Family Housing	89	89	0	0	89	0	0	0	0	0	0
14629	Sabathani Senior Housing	48	48	4	44	0	0	9	35	4	0	0
10312	Spirit On Lake	46	46	5	41	0	0	0	29	17	0	0
11094	Third Avenue Townhomes	12	12	0	0	12	0	0	0	1	7	4
5301	Thirtyone Hund Fourth Avenue	10	4	0	0	4	0	0	0	0	0	0
4150	Whittier Townhomes	12	12	0	12	0	0	0	0	8	3	1
4391	Zinsmaster Apts	36	36	0	0	36	0	0	5	18	13	0

CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Table 01 | Pedestrian reported crashes

Year	Total	K	A	B	C	N
2013	0	0	0	0	0	0
2014	0	0	1	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	1	1	0
2018	0	0	0	0	0	0
2019	0	0	0	1	0	0
2020	0	0	0	1	0	0
2021	0	0	1	0	0	0
2022	0	0	0	0	1	0
Ten Year Totals	0	0	2	3	2	0

Table 02 | Bicycle reported crashes

Year	Total	K	A	B	C	N
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	0	0	0	2	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	1	0	0
2022	0	0	0	0	0	0
Ten Year Totals	0	0	0	3	0	0



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Crash Severity/Crash Year												
Crash Severity	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0
B - Minor Injury	0	0	0	0	0	0	0	0	0	0	0	0
C - Possible Injury	0	0	0	0	0	0	0	0	0	0	0	0
N - Prop Dmg Only	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0

Crash Severity/Number of Vehicles					
Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	0	0	0	0	0
B - Minor Injury	0	0	0	0	0
C - Possible Injury	0	0	0	0	0
N - Prop Dmg Only	0	0	0	0	0
Total	0	0	0	0	0

Relationship to Intersection Summary		Total	%
Not at Intersection/Interchange		0	0.0
Four-Way Intersection		0	0.0
T or Y Intersection		0	0.0
Five-Way Intersection or More		0	0.0
Roundabout		0	0.0
Intersection Related		0	0.0
Driveway Access Related		0	0.0
At School Crossing		0	0.0
Railway Grade Crossing		0	0.0
Shared Use Path or Trail		0	0.0
Interchange or Ramp		0	0.0
Crossover Related		0	0.0
Acceleration/Deceleration Lane		0	0.0
Other/Unknown		0	0.0
Total		0	100.0

Basic Type Summary		Total	%
Pedestrian		0	0.0
Bike		0	0.0
Single Vehicle Run Off Road		0	0.0
Single Vehicle Other		0	0.0
Sideswipe Same Direction		0	0.0
Sideswipe Opposing		0	0.0
Rear End		0	0.0
Head On		0	0.0
Left Turn		0	0.0
Angle		0	0.0
Other		0	0.0
Total		0	100.0

Weather 1 Summary		Total	%
Clear		0	0.0
Cloudy		0	0.0
Rain		0	0.0
Snow		0	0.0
Sleet, Hail (Freezing Rain/Drizzle)		0	0.0
Fog/Smog/Smoke		0	0.0
Blowing Sand/Soil/Dirt/Snow		0	0.0
Severe Crosswinds		0	0.0
Other/Unknown		0	0.0
Total		0	100.0

First Harmful Event Summary		Total	%
Pedestrian		0	0.0
Bicyclist		0	0.0
Motor Vehicle In Transport		0	0.0
Parked Motor Vehicle		0	0.0
Train		0	0.0
Deer/Animal		0	0.0
Other - Non Fixed Object		0	0.0
Collision Fixed Object		0	0.0
Non-Collision Harmful Events		0	0.0
Other/Unknown		0	0.0
Total		0	100.0

Light Condition Summary		Total	%
Daylight		0	0.0
Sunrise		0	0.0
Sunset		0	0.0
Dark (Str Lights On)		0	0.0
Dark (Str Lights Off)		0	0.0
Dark (No Str Lights)		0	0.0
Dark (Unknown Light)		0	0.0
Other/Unknown		0	0.0
Total		0	100.0



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Time of Day/Day of Week														Total	%
From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59			
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0
%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Driver & Non-Motorist Age/Gender Summary						
Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	0	0	0	0	0	0.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	0	0	0	0	0	0.0
25-29	0	0	0	0	0	0.0
30-34	0	0	0	0	0	0.0
35-39	0	0	0	0	0	0.0
40-44	0	0	0	0	0	0.0
45-49	0	0	0	0	0	0.0
50-54	0	0	0	0	0	0.0
55-59	0	0	0	0	0	0.0
60-64	0	0	0	0	0	0.0
65-69	0	0	0	0	0	0.0
70-74	0	0	0	0	0	0.0
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	0	0	0.0
Total	0	0	0	0	0	100.0
%	0.0	0.0	0.0	0.0	100.0	100.0

Month Summary		Total	%
January		0	0.0
February		0	0.0
March		0	0.0
April		0	0.0
May		0	0.0
June		0	0.0
July		0	0.0
August		0	0.0
September		0	0.0
October		0	0.0
November		0	0.0
December		0	0.0
Total		0	100.0

Physical Condition Summary		Total	%
Apparently Normal (Including No Drugs/Alcohol)		0	0.0
Physical Disability (Short Term or Long Term)		0	0.0
Medical Issue (Ill, Sick or Fainted)		0	0.0
Emotional (Depression, Angry, Disturbed, etc.)		0	0.0
Asleep or Fatigued		0	0.0
Has Been Drinking Alcohol		0	0.0
Has Been Taking Illicit Drugs		0	0.0
Has Been Taking Medications		0	0.0
Other/Unknown		0	0.0
Not Applicable		0	0.0
Total		0	100.0

Selection Filter:

WORK AREA: County('659472') - FILTER: Date('01/01/2013','12/31/2022'), Basic Type('2') - SPATIAL FILTER APPLIED

Analyst:
James Weatherly

Notes:



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Crash Severity/Crash Year												
Crash Severity	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	1	0	0	0	0	0	0	0	0	1	0	0
B - Minor Injury	2	0	0	0	0	1	0	0	1	0	0	0
C - Possible Injury	1	0	0	0	0	1	0	0	0	0	0	0
N - Prop Dmg Only	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	0	0	0	0	2	0	0	1	1	0	0

Crash Severity/Number of Vehicles					
Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	1	0	1	0	0
B - Minor Injury	2	0	2	0	0
C - Possible Injury	1	0	1	0	0
N - Prop Dmg Only	0	0	0	0	0
Total	4	0	4	0	0

Relationship to Intersection Summary		Total	%
Not at Intersection/Interchange		1	25.0
Four-Way Intersection		2	50.0
T or Y Intersection		0	0.0
Five-Way Intersection or More		0	0.0
Roundabout		0	0.0
Intersection Related		1	25.0
Driveway Access Related		0	0.0
At School Crossing		0	0.0
Railway Grade Crossing		0	0.0
Shared Use Path or Trail		0	0.0
Interchange or Ramp		0	0.0
Crossover Related		0	0.0
Acceleration/Deceleration Lane		0	0.0
Other/Unknown		0	0.0
Total		4	100.0

Basic Type Summary		Total	%
Pedestrian		4	100.0
Bike		0	0.0
Single Vehicle Run Off Road		0	0.0
Single Vehicle Other		0	0.0
Sideswipe Same Direction		0	0.0
Sideswipe Opposing		0	0.0
Rear End		0	0.0
Head On		0	0.0
Left Turn		0	0.0
Angle		0	0.0
Other		0	0.0
Total		4	100.0

Weather 1 Summary		Total	%
Clear		2	50.0
Cloudy		1	25.0
Rain		0	0.0
Snow		0	0.0
Sleet, Hail (Freezing Rain/Drizzle)		0	0.0
Fog/Smog/Smoke		0	0.0
Blowing Sand/Soil/Dirt/Snow		0	0.0
Severe Crosswinds		0	0.0
Other/Unknown		1	25.0
Total		4	100.0

First Harmful Event Summary		Total	%
Pedestrian		2	50.0
Bicyclist		1	25.0
Motor Vehicle In Transport		0	0.0
Parked Motor Vehicle		0	0.0
Train		0	0.0
Deer/Animal		0	0.0
Other - Non Fixed Object		1	25.0
Collision Fixed Object		0	0.0
Non-Collision Harmful Events		0	0.0
Other/Unknown		0	0.0
Total		4	100.0

Light Condition Summary		Total	%
Daylight		2	50.0
Sunrise		0	0.0
Sunset		0	0.0
Dark (Str Lights On)		1	25.0
Dark (Str Lights Off)		0	0.0
Dark (No Str Lights)		0	0.0
Dark (Unknown Light)		0	0.0
Other/Unknown		1	25.0
Total		4	100.0



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Time of Day/Day of Week														Total	%
From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59			
SUN	0	0	0	0	0	1	0	0	0	0	0	0	0	1	25.0
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	0	0	0	0	1	0	0	0	1	2	50.0
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
THU	0	0	0	1	0	0	0	0	0	0	0	0	0	1	25.0
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Total	0	0	0	1	0	1	0	0	1	0	0	0	1	4	100.0
%	0.0	0.0	0.0	25.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary						
Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	1	0	0	0	1	10.0
15	0	0	0	0	0	0.0
16	1	0	0	0	1	10.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	1	0	0	0	1	10.0
25-29	2	0	0	0	2	20.0
30-34	0	0	0	0	0	0.0
35-39	0	0	0	0	0	0.0
40-44	1	0	0	0	1	10.0
45-49	1	0	0	0	1	10.0
50-54	0	0	0	0	0	0.0
55-59	0	0	0	0	0	0.0
60-64	0	0	0	0	0	0.0
65-69	0	0	0	0	0	0.0
70-74	0	1	0	0	1	10.0
75-79	1	0	0	0	1	10.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	1	1	10.0
Total	8	1	0	1	10	100.0
%	80.0	10.0	0.0	10.0	100.0	100.0

Month Summary		Total	%
January		0	0.0
February		1	25.0
March		0	0.0
April		0	0.0
May		0	0.0
June		0	0.0
July		0	0.0
August		0	0.0
September		0	0.0
October		3	75.0
November		0	0.0
December		0	0.0
Total		4	100.0

Physical Condition Summary		Total	%
Apparently Normal (Including No Drugs/Alcohol)		7	77.8
Physical Disability (Short Term or Long Term)		0	0.0
Medical Issue (Ill, Sick or Fainted)		0	0.0
Emotional (Depression, Angry, Disturbed, etc.)		0	0.0
Asleep or Fatigued		0	0.0
Has Been Drinking Alcohol		0	0.0
Has Been Taking Illicit Drugs		0	0.0
Has Been Taking Medications		0	0.0
Other/Unknown		2	22.2
Not Applicable		0	0.0
Total		9	100.0

Selection Filter:

WORK AREA: County('659472') - FILTER: Date('01/01/2013','12/31/2022'), Basic Type('1') - SPATIAL FILTER APPLIED

Analyst:

James Weatherly

Notes:

CSAH 33 Ped



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Crash Severity/Crash Year												
Crash Severity	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0
B - Minor Injury	3	0	0	0	0	0	2	0	0	1	0	0
C - Possible Injury	0	0	0	0	0	0	0	0	0	0	0	0
N - Prop Dmg Only	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	0	0	0	2	0	0	1	0	0

Crash Severity/Number of Vehicles					
Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	0	0	0	0	0
B - Minor Injury	3	0	3	0	0
C - Possible Injury	0	0	0	0	0
N - Prop Dmg Only	0	0	0	0	0
Total	3	0	3	0	0

Relationship to Intersection Summary		Total	%
Not at Intersection/Interchange		0	0.0
Four-Way Intersection		2	66.7
T or Y Intersection		0	0.0
Five-Way Intersection or More		0	0.0
Roundabout		0	0.0
Intersection Related		0	0.0
Driveway Access Related		0	0.0
At School Crossing		0	0.0
Railway Grade Crossing		0	0.0
Shared Use Path or Trail		0	0.0
Interchange or Ramp		0	0.0
Crossover Related		0	0.0
Acceleration/Deceleration Lane		0	0.0
Other/Unknown		1	33.3
Total		3	100.0

Basic Type Summary		Total	%
Pedestrian		0	0.0
Bike		3	100.0
Single Vehicle Run Off Road		0	0.0
Single Vehicle Other		0	0.0
Sideswipe Same Direction		0	0.0
Sideswipe Opposing		0	0.0
Rear End		0	0.0
Head On		0	0.0
Left Turn		0	0.0
Angle		0	0.0
Other		0	0.0
Total		3	100.0

Weather 1 Summary		Total	%
Clear		2	66.7
Cloudy		1	33.3
Rain		0	0.0
Snow		0	0.0
Sleet, Hail (Freezing Rain/Drizzle)		0	0.0
Fog/Smog/Smoke		0	0.0
Blowing Sand/Soil/Dirt/Snow		0	0.0
Severe Crosswinds		0	0.0
Other/Unknown		0	0.0
Total		3	100.0

First Harmful Event Summary		Total	%
Pedestrian		0	0.0
Bicyclist		2	66.7
Motor Vehicle In Transport		1	33.3
Parked Motor Vehicle		0	0.0
Train		0	0.0
Deer/Animal		0	0.0
Other - Non Fixed Object		0	0.0
Collision Fixed Object		0	0.0
Non-Collision Harmful Events		0	0.0
Other/Unknown		0	0.0
Total		3	100.0

Light Condition Summary		Total	%
Daylight		1	33.3
Sunrise		0	0.0
Sunset		0	0.0
Dark (Str Lights On)		2	66.7
Dark (Str Lights Off)		0	0.0
Dark (No Str Lights)		0	0.0
Dark (Unknown Light)		0	0.0
Other/Unknown		0	0.0
Total		3	100.0



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Time of Day/Day of Week														Total	%
From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59			
SUN	0	0	0	0	0	0	0	0	0	0	0	1	1	33.3	
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
WED	0	0	0	0	0	0	0	0	0	1	0	0	1	33.3	
THU	0	0	0	0	0	0	0	0	1	0	0	0	1	33.3	
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Total	0	0	0	0	0	0	0	0	1	1	0	1	3	100.0	
%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	33.3	0.0	33.3	100.0	100.0	

Driver & Non-Motorist Age/Gender Summary						
Age	M	F	NR	No Value	Total	%
<14	0	0	0	1	1	16.7
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	0	0	0	0	0	0.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	0	0	0	0	0	0.0
25-29	1	0	0	0	1	16.7
30-34	0	0	0	0	0	0.0
35-39	1	0	0	0	1	16.7
40-44	0	0	0	0	0	0.0
45-49	0	0	0	0	0	0.0
50-54	0	0	0	0	0	0.0
55-59	1	0	0	0	1	16.7
60-64	0	0	0	0	0	0.0
65-69	0	0	0	0	0	0.0
70-74	0	0	0	0	0	0.0
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	2	2	33.3
Total	3	0	0	3	6	100.0
%	50.0	0.0	0.0	50.0	100.0	100.0

Month Summary		Total	%
January		0	0.0
February		0	0.0
March		0	0.0
April		0	0.0
May		0	0.0
June		1	33.3
July		1	33.3
August		0	0.0
September		0	0.0
October		0	0.0
November		1	33.3
December		0	0.0
Total		3	100.0

Physical Condition Summary		Total	%
Apparently Normal (Including No Drugs/Alcohol)		3	75.0
Physical Disability (Short Term or Long Term)		0	0.0
Medical Issue (Ill, Sick or Fainted)		0	0.0
Emotional (Depression, Angry, Disturbed, etc.)		0	0.0
Asleep or Fatigued		0	0.0
Has Been Drinking Alcohol		0	0.0
Has Been Taking Illicit Drugs		0	0.0
Has Been Taking Medications		0	0.0
Other/Unknown		1	25.0
Not Applicable		0	0.0
Total		4	100.0

Selection Filter:

WORK AREA: County('659472') - FILTER: Date('01/01/2013','12/31/2022'), Basic Type('2') - SPATIAL FILTER APPLIED

Analyst:

James Weatherly

Notes:

CSAH 35 Bike Crashes 2013 - 2022



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Crash Severity/Crash Year												
Crash Severity	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	1	0	1	0	0	0	0	0	0	0	0	0
B - Minor Injury	1	0	0	0	0	0	0	1	0	0	0	0
C - Possible Injury	1	0	0	0	0	0	0	0	0	0	1	0
N - Prop Dmg Only	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	1	0	0	0	0	1	0	0	1	0

Crash Severity/Number of Vehicles					
Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	1	0	0	1	0
B - Minor Injury	1	0	1	0	0
C - Possible Injury	1	0	1	0	0
N - Prop Dmg Only	0	0	0	0	0
Total	3	0	2	1	0

Relationship to Intersection Summary		Total	%
Not at Intersection/Interchange		2	66.7
Four-Way Intersection		1	33.3
T or Y Intersection		0	0.0
Five-Way Intersection or More		0	0.0
Roundabout		0	0.0
Intersection Related		0	0.0
Driveway Access Related		0	0.0
At School Crossing		0	0.0
Railway Grade Crossing		0	0.0
Shared Use Path or Trail		0	0.0
Interchange or Ramp		0	0.0
Crossover Related		0	0.0
Acceleration/Deceleration Lane		0	0.0
Other/Unknown		0	0.0
Total		3	100.0

Basic Type Summary		Total	%
Pedestrian		3	100.0
Bike		0	0.0
Single Vehicle Run Off Road		0	0.0
Single Vehicle Other		0	0.0
Sideswipe Same Direction		0	0.0
Sideswipe Opposing		0	0.0
Rear End		0	0.0
Head On		0	0.0
Left Turn		0	0.0
Angle		0	0.0
Other		0	0.0
Total		3	100.0

Weather 1 Summary		Total	%
Clear		0	0.0
Cloudy		2	66.7
Rain		1	33.3
Snow		0	0.0
Sleet, Hail (Freezing Rain/Drizzle)		0	0.0
Fog/Smog/Smoke		0	0.0
Blowing Sand/Soil/Dirt/Snow		0	0.0
Severe Crosswinds		0	0.0
Other/Unknown		0	0.0
Total		3	100.0

First Harmful Event Summary		Total	%
Pedestrian		3	100.0
Bicyclist		0	0.0
Motor Vehicle In Transport		0	0.0
Parked Motor Vehicle		0	0.0
Train		0	0.0
Deer/Animal		0	0.0
Other - Non Fixed Object		0	0.0
Collision Fixed Object		0	0.0
Non-Collision Harmful Events		0	0.0
Other/Unknown		0	0.0
Total		3	100.0

Light Condition Summary		Total	%
Daylight		2	66.7
Sunrise		0	0.0
Sunset		0	0.0
Dark (Str Lights On)		1	33.3
Dark (Str Lights Off)		0	0.0
Dark (No Str Lights)		0	0.0
Dark (Unknown Light)		0	0.0
Other/Unknown		0	0.0
Total		3	100.0



CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 11 | Crash Data Summary

Time of Day/Day of Week														Total	%
From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59			
SUN	0	1	0	0	0	0	0	0	0	0	0	0	0	1	33.3
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
WED	0	0	0	0	0	1	0	0	1	0	0	0	0	2	66.7
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Total	0	1	0	0	0	1	0	0	1	0	0	0	0	3	100.0
%	0.0	33.3	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary						
Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	0	0	0	0	0	0.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	0	0	0	0	0	0.0
25-29	0	1	0	0	1	14.3
30-34	0	0	0	0	0	0.0
35-39	1	0	0	0	1	14.3
40-44	0	0	0	0	0	0.0
45-49	1	0	0	0	1	14.3
50-54	0	0	0	0	0	0.0
55-59	1	0	0	0	1	14.3
60-64	0	0	0	0	0	0.0
65-69	1	0	0	0	1	14.3
70-74	0	0	0	0	0	0.0
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	2	2	28.6
Total	4	1	0	2	7	100.0
%	57.1	14.3	0.0	28.6	100.0	100.0

Month Summary		Total	%
January		0	0.0
February		0	0.0
March		1	33.3
April		0	0.0
May		0	0.0
June		0	0.0
July		1	33.3
August		0	0.0
September		0	0.0
October		1	33.3
November		0	0.0
December		0	0.0
Total		3	100.0

Physical Condition Summary		Total	%
Apparently Normal (Including No Drugs/Alcohol)		4	66.7
Physical Disability (Short Term or Long Term)		0	0.0
Medical Issue (Ill, Sick or Fainted)		0	0.0
Emotional (Depression, Angry, Disturbed, etc.)		0	0.0
Asleep or Fatigued		0	0.0
Has Been Drinking Alcohol		0	0.0
Has Been Taking Illicit Drugs		0	0.0
Has Been Taking Medications		0	0.0
Other/Unknown		1	16.7
Not Applicable		1	16.7
Total		6	100.0

Selection Filter:

WORK AREA: County('659472') - FILTER: Date('01/01/2013','12/31/2022'), Basic Type('1') - SPATIAL FILTER APPLIED

Analyst:

James Weatherly

Notes:

CSAH 35 Ped Crashes 2013 - 2022

Separated Bicycle Lanes

What is their purpose?

Separated bike lanes, also known as cycle tracks and protected bike lanes, are exclusive facilities for bicycling that are located within or directly adjacent to a roadway. They are physically separated from motor vehicle traffic by a vertical element such as flexible post delineators, channelizing curb, rigid bollards, raised medians, concrete barriers, parked motor vehicles, planters and landscaping, and/or other physical objects. The presence of this vertical element is what differentiates separated bike lanes from conventional and buffered bike lanes.

Unlike sidepaths and shared use paths, separated bike lanes are bike-only facilities. The buffer between the bicycle facility and the roadway is known as the street buffer; the buffer between the bicycle facility and sidewalk is known as the sidewalk buffer. Separated bike lanes can be:

- One- or two-way facilities
- On the left or right-hand side of a street
- At road-grade, at sidewalk-grade, or at an intermediate-grade between the roadway and sidewalk.



Capital City Bikeway, Jackson Street, Saint Paul, MN

Are they a proven strategy?

Physical separation of bicyclists from motor vehicle traffic promotes multimodal safety. The specific impact of separated bike lanes is not yet quantified, but has been shown to be more comfortable for people of all ages and abilities. Because of the lack of specific data for this measure, it is considered **TRIED**.

Where would we use them?

Separated bike lanes can be considered at the following locations:

- In areas with traffic volumes over 6,000 ADT or high motor vehicle speeds (over 30 mph)
- In areas with peak hour bicycle traffic over 100 per hour
- In areas with a wide range of user types and variety of speeds
- In areas that connect existing or planned biking networks
- Freight movements, delivery locations, on-street parking, accessible parking, pedestrian curb ramps, bus and transit access, and curb cuts must be carefully considered when designing separated bike lanes.

What are the maintenance impacts?

Partner with maintenance team members to discuss strategies and issues related to routine maintenance for separated bicycle lanes, in particular for debris in the spring and snow in the winter. Separated bicycle lanes typically require special equipment to remove snow. If adequate snow storage space is not provided in the buffer

Separated Bicycle Lanes

zone, snow removal may be needed. If delineator posts are used in lieu of curb separation, agencies should plan on replacing delineators that are damaged or destroyed during regular use; in high-traffic areas, this may require replacing up to 1/3 of delineators annually.

+ What are the advantages?

- Minimize bicyclist exposure and reduce the interaction between bicyclists and motor vehicles through the corridor.
- If a separated bike lane is at sidewalk- or intermediate-level through driveways and intersections, this design reduces the speed of motor vehicles at conflict points. This reduces bicycle crash severity.
- The street buffer provides space outside of the pedestrian accessible route space for roadway signs, utility poles, and parking meters. The street buffer can also provide space for snow storage.
- The sidewalk buffer can provide space outside of the pedestrian accessible route for trash receptacles, landscaping, benches, and/or pedestrian scale lighting.
- A buffer width of 5' or more can create the opportunity for additional landscaping or for providing stormwater best management practices.

! What are the challenges?

- One-way separated bicycle lanes may attract wrong way riding if a separated bike lane is not provided in the opposite direction.
- Two-way separated bicycle lanes present unexpected conflicts between bicyclists and motorists at intersections and driveways because bicycles are riding against traffic.
- The design of the vertical separation must consider the drainage impacts.
- Consider freight movements and delivery locations when designing separated bike lanes.
- The design of the vertical separation will need to consider accessibility features, such as a space for paratransit needs since paratransit vehicles cannot park in bike lanes.



A separated bicycle lane in Minneapolis

\$ How much do they cost?

Typical costs range from \$16,000 per mile for restriping to \$500,000 per mile for overlay to \$5 million per mile for reconstruction.

Separated Bicycle Lanes

Design Features

- Coordinate with MnDOT ADA Group for guidance related to ADA needs and paratransit needs on roadways where separated bicycle lanes are proposed.
- For state specific design details, including preferred and minimum bike lane widths, see Chapter 5 of the [MnDOT Bicycle Facility Manual](#).
- If a separated bike lane is at sidewalk-level, the design should allow the bicycle facility to continue at grade and while motor vehicles change grade to cross the facility.
- On two-way roadways, one-way separated bike lanes on each side of the roadway are typically preferred over a two-way separated bike lane on one side of the roadway.
- If motorists and bike/pedestrian movements are concurrent or uncontrolled at conflict points, sight lines on the intersection or driveway approach must be kept clear to maintain visibility between street users.
- Separated bike lanes can present some specific accessibility challenges that must be carefully thought through during the initial planning process.
- Protected intersections are commonly used with separated bike lanes. Refer to Separated Bicycle Lanes section.
- The [MassDOT Separated Bicycle Lane Planning and Design Guide](#) provides additional detailed guidance for Separated Bicycle Lanes.



A separated bicycle lane along Minnesota Avenue, Glenwood, MN

Resources

- FHWA Separated Bike Lane Planning and Design Guide: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/separatedbikelane_pdg.pdf
- MnDOT Bicycle Facility Design Manual, Chapter 5
- MassDOT Separated Bicycle Lane Planning and Design Guide: <https://www.mass.gov/lists/separated-bike-lane-planning-design-guide>



A separated bicycle lane along Minnesota Avenue, Glenwood, MN

Curb Extensions and Curb Radii

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

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 an 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

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

+ 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

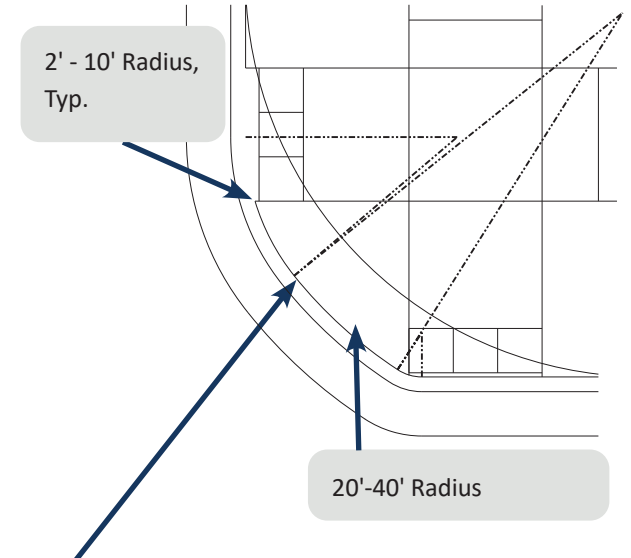
Supplemental treatments

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

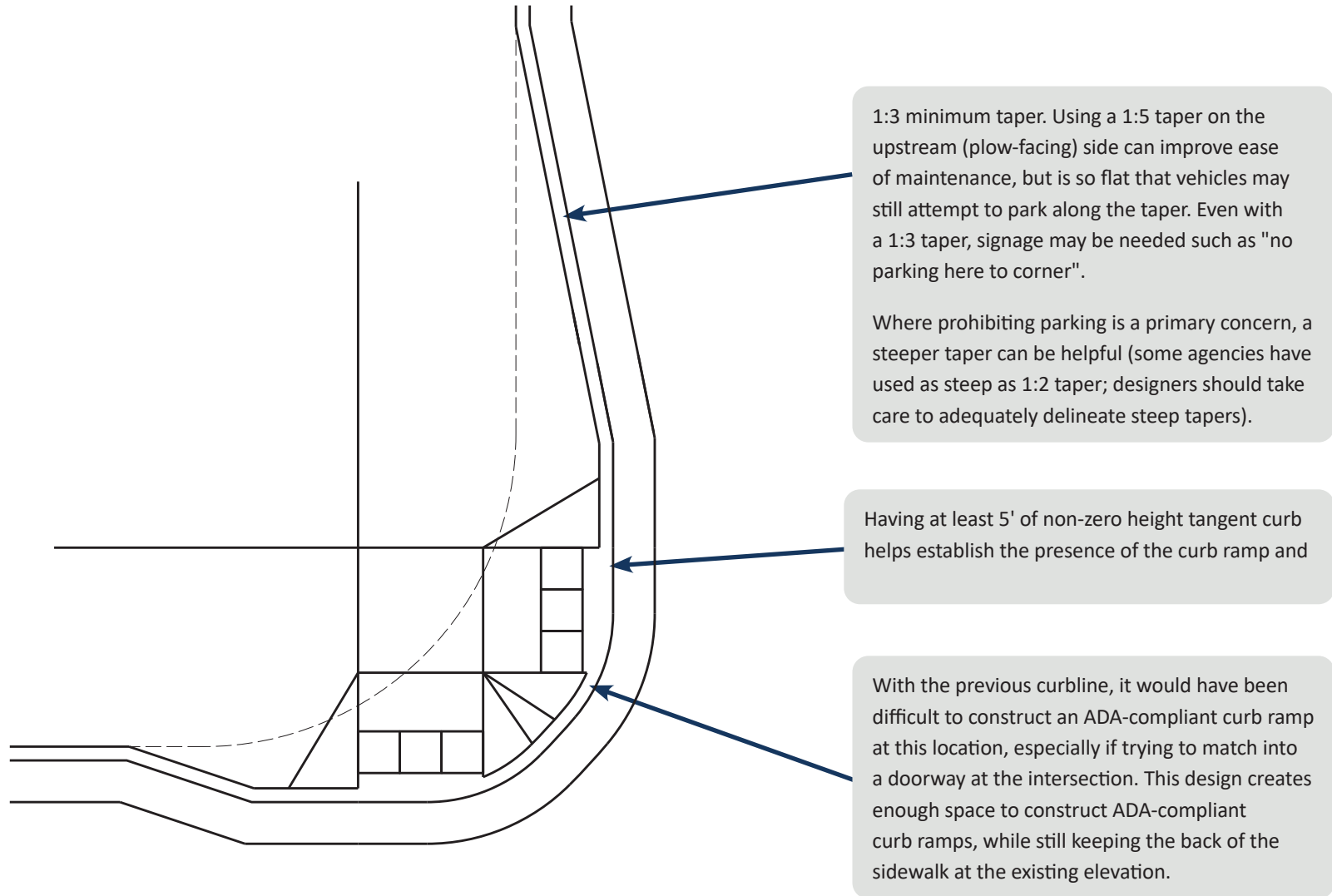
\$ How much do they cost?

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

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References



Curb extension detail, Source: MnDOT Curb Ramp Standard Plan

Curb Extensions and Curb Radii

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References



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

Protected Intersections

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

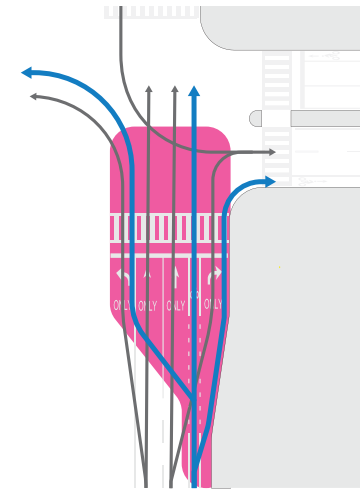
Attachment 12 | Crash Reduction References

What is their purpose?

Protected intersections separate pedestrians and bicyclists from motor vehicles using physical barriers that eliminate merging and weaving movements. Well-designed protected intersections are intuitive and comfortable, provide clear right-of-way assignment, promote predictability of movement, and allow eye contact between motorists, bicyclists, and pedestrians. A comparison of conflict points at conventional (on-road) bike lanes and at protected intersections is shown in pink on the figures to the right. The single conflict point at a protected intersection can be eliminated by providing a separated signal phase for turning traffic, when used in conjunction with dedicated turn lanes..

Protected intersections can also incorporate intersection design elements that reduce speeds (see Intersection Design section).

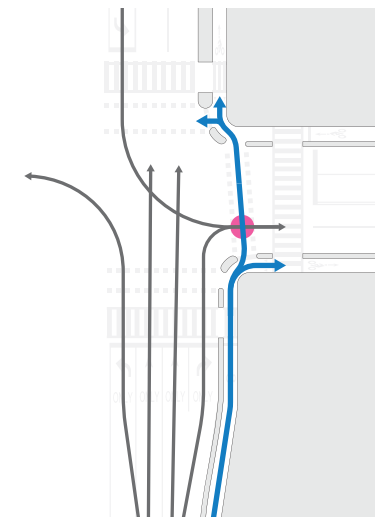
By moving the bicycle through movement further from the vehicle lane, it becomes easier for a cyclist to spot a right-turning vehicle in time to avoid a collision, and improves motorist sight lines as well.



Conflict area between bicycles and motor vehicles (in pink) at a conventional intersection, Source: MassDOT Separated Bike Lane Planning and Design Guide



A protected intersection



Conflict points with a protected intersection, Source: MassDOT Separated Bike Lane Planning and Design Guide

Protected Intersections

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

+ What are the advantages?

- Reduce motor vehicle speeds at intersections, which reduces bicycle and pedestrian crash severity.
- When combined with intersection design practices such as smaller curb radii, can reduce crossing distance, minimizing pedestrian and bicycle exposure at the intersection.
- Reduce the interaction between bicyclists and motor vehicles through an intersection, which minimizes bicycle exposure at the intersection.
- Improve the ability of drivers to perceive and react to bicyclist in the intersection, and improve ability of cyclists to recognize when a vehicle is turning right.
- Forward queuing area for bicyclists and pedestrian refuge median reduces crossing distances for both users and improves their visibility to motorists.
- Can reduce bicyclist speeds by adding deflection to the bike lane or sidepath.

! What are the challenges?

- Design may require additional right-of-way depending on the existing roadway's cross-section. Existing roadway amenities, such as on-street parking lanes, may need to be removed to fit the design.
- Reducing curb radii and removing channelized right turns can make it difficult for larger vehicles to navigate an intersection without encroaching into opposing lanes of travel.
- Adjustments to curb radii and channelized right turns may require modifications to existing drainage infrastructure.
- Channelized right-turn lanes may need to be removed from an intersection in order to make the design fit, which may increase motor vehicle delay.
- If motorists and bike/pedestrian movements are concurrent or uncontrolled, sight lines on the approach must be kept clear to maintain visibility between street users.
- Significant impacts on maintenance efforts.

Are they a proven strategy?

Individual strategies to slow vehicles at intersections have been **PROVEN**. Protected intersections have **PROVEN** safety benefits at signalized and unsignalized intersections where bicycle crossings are offset from the motorist travel way by a preferable distance of between 6' and 16.5'.

Where would we use them?

Protected intersections can be considered at the following locations:

- At signalized or stop-controlled intersections to create safe, comfortable conditions for people bicycling and walking, where there are high volumes of turning motor vehicle traffic.
- They are most commonly used with separated bike lanes and sidepaths, but can be used with conventional (on-road) bike lanes, paved shoulders, or shared lanes.

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 bike lane and small concrete islands free of snow and debris. The design should ensure that maintenance vehicles can clear snow and debris from the narrow bikeways.



How much do they cost?

The cost for a protected intersection varies widely depending on the site conditions, drainage impacts, and existing intersection features. On average, it costs approximately \$100,000 to upgrade a signalized intersection to a protected intersection with permanent features, without a separate bicycle phase. A seasonal or other short-term design (only intended for a few years) can be achieved at a much lower cost by using flexible posts.

Protected Intersections

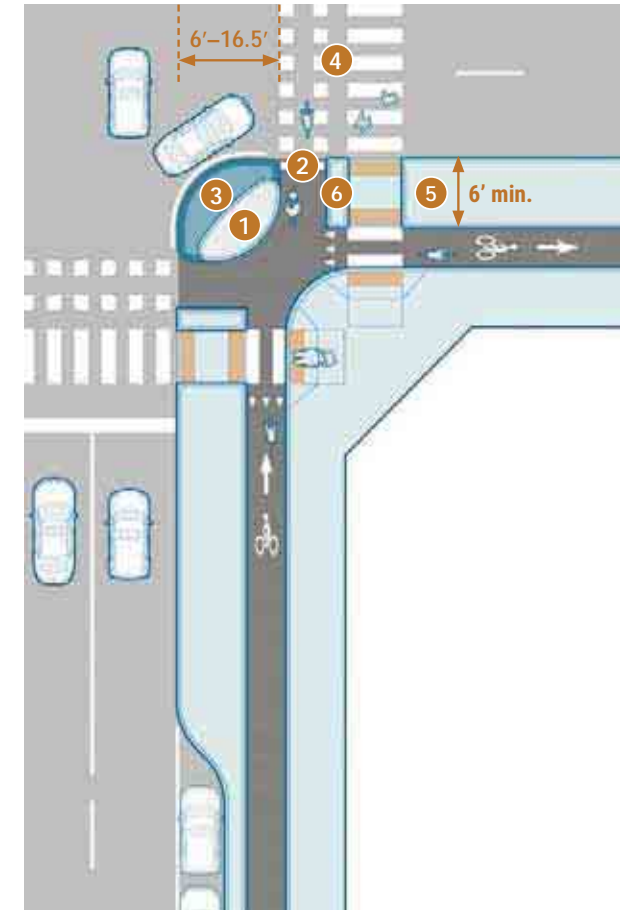
CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

Design Features

FHWA Achieving Multimodal Networks report and Chapter 4 of the MassDOT Separated Bicycle Lane Planning and Design Guide both provide additional detailed guidance for protected intersections. Noteworthy design features include the following (specific points in some notes are illustrated in the graphic on the right):

- Key features include a corner island, forward bicycle queuing area, driver yield zone, and pedestrian refuge median.
- Corner island – A corner island allows the bike lane to be physically separated from motor vehicle traffic up to the edge of the intersection and reduces motor vehicle turning speeds **1**. Mountable truck aprons can accommodate large vehicles **3**.
- Forward bicycle queuing area – Forward bicycle queuing area provides a waiting area for bicyclists that is fully within view of drivers waiting behind the pedestrian crosswalk **2**.
- Driver yield zone – A driver yield zone creates a space for turning drivers to yield to bicyclists and pedestrians by setting the bicycle and pedestrian crossings back from the intersection, similar to the offset geometry recommended for sidepath crossings **4**. If pedestrian and/or bicyclist movements are to be protected by signal phasing, a driver yield zone is not as critical.
- Pedestrian refuge median – A pedestrian refuge median enables pedestrians to cross bicycle and motor vehicle traffic separately and reduces the pedestrian crossing distance (**5** and **6**). Medians less than 6'-wide should not be considered refuges, and cannot include detectable warning surfaces.
- Can be constructed of curbs and more permanent features, or using flexible delineators and other rapid implementation materials.



A protected intersection. Source: FHWA Achieving Multimodal Networks

Supplemental treatments

Protected intersections include several other treatments discussed in more detail in the following sections of this handbook:

- Curb Extensions and Curb Radii
- Bicycle Signal Indications
- LPI and/or LBI

Resources

- FHWA Achieving Multimodal Networks: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks/fhwahep16055.pdf

- MnDOT's Bicycle Facility Manual: <http://www.dot.state.mn.us/bike/design-engineering.html>
- MassDOT Separated Bicycle Lane Planning and Design Guide: <https://www.mass.gov/lists/separated-bike-lane-planning-design-guide>

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

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.

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.



Bicyclists at a traffic signal

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

+ 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.

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:

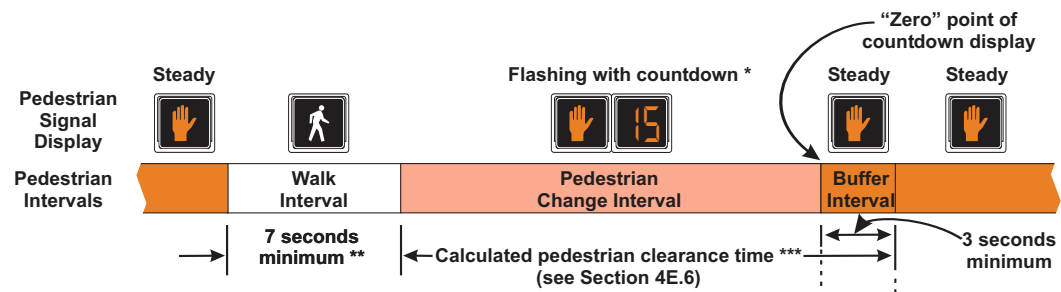
PROVEN treatments:

- 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.

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.



Pedestrian signal display, Source: Minnesota MUTCD

Traffic Signals

CSAHs 33 and 35 (Park Ave & Portland Ave) Phase 2 Bikeway Project

Attachment 12 | Crash Reduction References

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

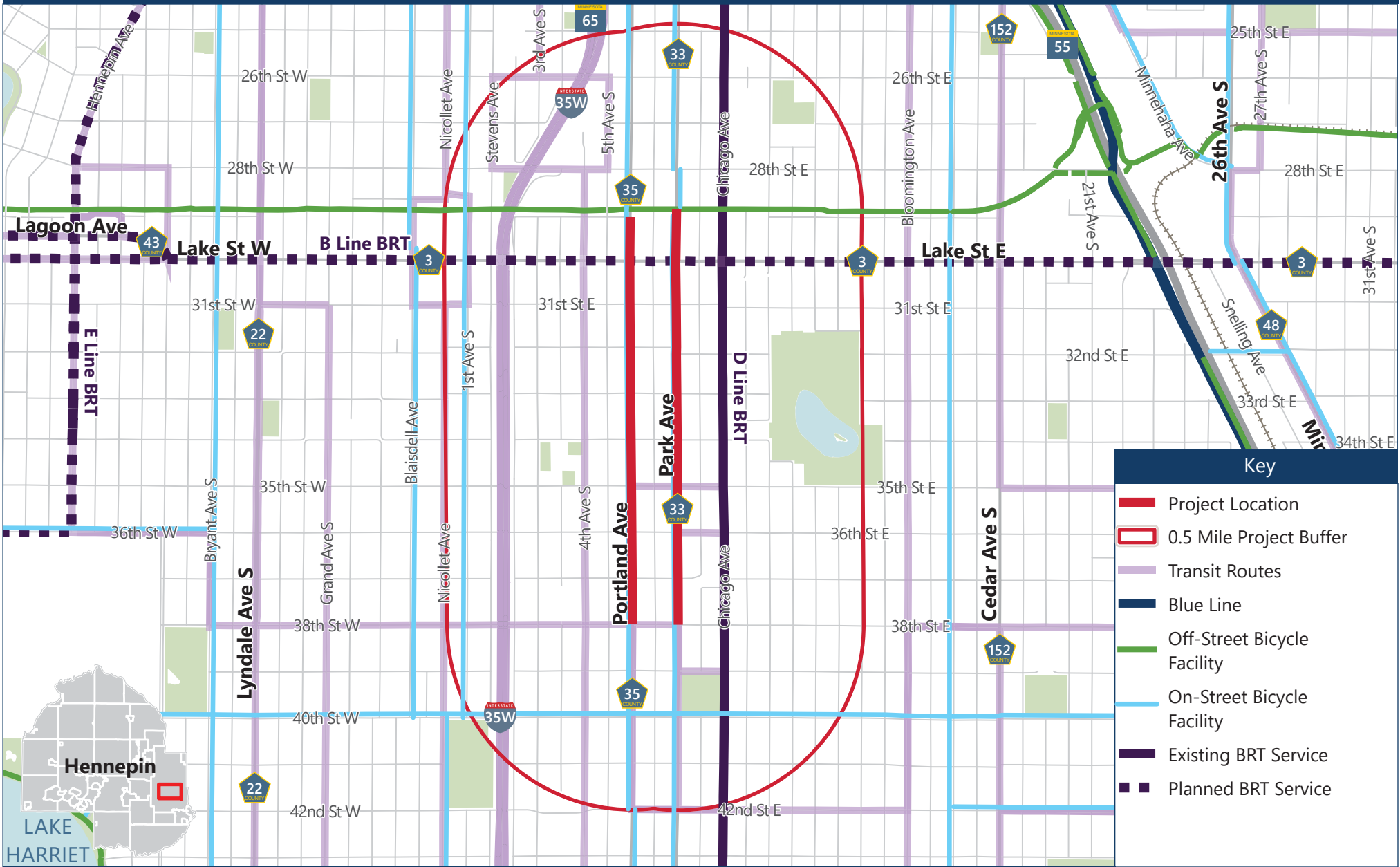
Reference the [MnDOT Traffic Control Signal Design Manual](#) for a detailed review of traffic signal design elements, including signal phasing and operations, detection design, and signing and pavement markings. The goals of the design should include providing a safe and efficient operation for the 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.

CSAHs 33 and 35 (Park Ave and Portland Ave) Phase 2 Bikeway Project

Attachment 13 | Multimodal Connections Map



Key

- Project Location
- 0.5 Mile Project Buffer
- Transit Routes
- Blue Line
- Off-Street Bicycle Facility
- On-Street Bicycle Facility
- Existing BRT Service
- Planned BRT Service

Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Publication date: 10/23/2023

Data sources (if applicable):





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

- Cedar Avenue South (CSAH 152) Reconstruction Phase 2: 42nd Street East (CSAH 42) to East Lake Street (CSAH 3)

Multimodal/Trail

- Park Avenue (CSAH 33) and Portland Avenue (CSAH 35) Bikeway Project: 38th Street East to the Midtown Greenway

Pedestrian Facilities

- Portland Avenue (CSAH 35) Pedestrian Upgrades: Diamond Lake Road to 350 ft north of 52nd Street East

Bridges

- Glenwood Avenue (CSAH 40) Bridge: Replacement/rehabilitation of Bridge #94282

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 included with these projects and in alignment with Minneapolis' proposed All Ages and Abilities Network. This maintenance commitment will require close coordination with city staff so that designs meet acceptable city standards, 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,

A handwritten signature in blue ink that reads "Jenifer Hager".

Jenifer Hager
Transportation Planning and Programming Director
Minneapolis Public Works