City of Minneapolis 4-Lane Street Study



September 2024



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1. Executive Summary

Background

4-lane undivided streets have 2 traffic lanes in each direction without left-turn lanes. 4-lane streets present significant safety challenges in urban environments, especially when there are frequent left turns. Safety conversions of 4-lane streets—most typically 4-to-3 lane conversions—are proven effective at reducing crashes and injuries.

The City of Minneapolis and Hennepin County have converted more than 25 miles of 4-lane streets to safer configurations since 2004. There are 18.1 miles of remaining 4-lane streets in Minneapolis as of summer 2024. This study analyzes these remaining 4-lane streets and makes recommendations to improve traffic safety.

Key safety findings for 4-lane streets:

- 4-lane streets are among the highest crash and injury streets in Minneapolis.
 - 91% of existing 4-lane streets are identified as <u>High Injury Streets</u>.
 - Most 4-lane street segments in Minneapolis (21 of 26 segments) have more fatal and severe crashes per mile than the *average* High Injury Street.
- The <u>Federal Highway Administration identifies</u> reconfiguration of 4-lane streets to include leftturn lanes as a "proven safety countermeasure" that will typically see a 19-47% reduction in total crashes.

Recommendations

Analysis and recommendations for each current 4-lane street are included in this study. Most 4-lane streets are either set for a safety conversion in an upcoming project or are actively part of discussions for a project being planned. These projects provide a significant opportunity to improve traffic safety in Minneapolis.

Recommendations for existing 4-lane streets	
 Set for safety conversion in 2024-2026: Hennepin Avenue between Colfax Avenue and Lake Street Johnson Street NE between Broadway St NE and I-35W on-ramp Lake Street segments between Dupont Avenue and 21st Avenue S Lowry Avenue NE between Marshall St and Central Avenue NE Oak Street SE from Washington Ave to University Ave SE University Avenue SE between 26th Ave SE and St. Mary's Avenue SE 	6.8
 Recommended for safety conversion with project actively in planning: <u>6th Ave N from 5th St to 7th St</u> <u>7th St N near Oak Lake Ave intersection</u> Broadway Ave W from 4th St N to Fremont Ave N and Broadway Ave W & NE from 4th Street NE to 2nd St N <u>Cedar Ave from 7th St to 9th St</u> <u>Central Ave NE/3rd Ave S from 8th St SE to 2nd St S</u> 	7.7

 <u>Central Ave NE from 27th Ave NE to 13th Ave NE</u> Hawthorne Ave N from 8th St to 11th St 	
 Hennepin Ave E from 13th Ave SE to 33rd Ave SE 	
Marshall Street NE between 13th Ave NE and 11th Ave NE	
University Ave NE from Central Ave to 27th Ave NE	
Washington Ave N from Plymouth Ave N to 16th Ave N	
Recommended for safety conversion as part of a future project (not currently funded):	1.4
<u>3rd Ave S from Washington Ave to 12th St</u>	
Lowry Ave N from 4th St to 2nd St	
 Washington Ave N from 23rd Ave N to 26th Ave N 	
Washington Avenue S/Cedar Avenue between Interstate 35W to 3 rd Street	
Recommended for additional analysis:	1.8
Excelsior Blvd from France to Abbott Ave	
Hennepin Ave from Washington Ave to Maple St	
Huron Blvd from Delaware St SE to Fulton St SE	
Not recommended for change at this time:	0.4
• <u>3rd Ave S bridge over the Mississippi River</u>	
Total existing 4-lane streets (summer, 2024)	18.1

2. Introduction and Background

Study Purpose

The purpose of this study is to analyze the 4-lane undivided streets in Minneapolis and make recommendations to advance implementation of street configuration changes to improve traffic safety. 4-lane undivided streets are the most consistently dangerous street configuration in Minneapolis. This study includes the following for each 4-lane street:

- basic crash analysis;
- overview of considerations for safety conversion, including transit, bikeway, pedestrian, and traffic analysis;
- recommendations; and
- likely timing of safety conversion, resource needs, and next steps.

The study will fulfill Transportation Action Plan <u>Street Operations Action 2.2</u> to prepare final evaluation of 4-lane undivided streets for safety conversions and supports <u>Vision Zero Action Plan</u> Safe Streets actions 2.1 and 2.2 to proactively implement safety conversions on 4-lane undivided streets.

Background on 4-Lane Streets

4-lane undivided streets—where there are 2 traffic lanes in each direction without left-turn lanes present significant safety challenges in urban environments, especially when there are frequent left turns. Safety conversions of 4-lane streets—most typically 4-to-3 lane conversions—are proven effective at reducing crashes and injuries. The City of Minneapolis and Hennepin County have done more than 35 safety conversions on 4-lane undivided streets in the last 20 years¹. A 2019 City evaluation of 11 recent safety conversions found injury crashes dropped an average of 36% and all crashes dropped 25% after conversions. The <u>Federal Highway Administration</u> says 4-to-3 lane conversions typically see a "crash reduction of 19 to 47 percent."

A variety of factors need to be considered when evaluating the potential of a 4-to-3 lane conversion. The Federal Highway Administration has a <u>guide on the feasibility of 4-to-3 lane conversions</u> that includes vehicle, transit, biking, walking, freight, parking, and community engagement considerations. While the traffic thresholds for a 3-lane cross section depend in part on local conditions and goals, the FHWA guidance provides a starting point to help with traffic analysis:

- Probably feasible at or below 750 vehicles per hour per direction (vphpd) during the peak hour.
- Consider cautiously between 750 875 vphpd during the peak hour.
- Feasibility less likely above 875 vphpd during the peak hour and expect reduced arterial LOS during the peak period.

Minneapolis Public Works weighs multi-modal considerations (including pedestrian, bicycle, transit, and traffic analysis) along with potential safety benefits to inform the recommendations in this study based on adopted City goals and plans, including <u>Vision Zero</u> and the <u>Transportation Action Plan</u>.

¹ See the Appendix for a list of safety conversions.

Study Process

City of Minneapolis Public Works staff led this study in coordination with Hennepin County Public Works and Minnesota Department of Transportation staff². Recommendations are from Minneapolis Public Works.

² See Acknowledgements section in the Appendix for list of staff involved with the study.

3. Corridor Analysis and Recommendations

4-Lane Streets in Minneapolis

There are currently 18.1 miles of 4-lane undivided streets in Minneapolis in 26 different street segments (see map on page 8). They include 4.3 miles of City streets, 9.5 miles of County roads, and 4.3 miles of MnDOT roads. Over 90% of these streets (16.5 miles) are <u>High Injury Streets</u> (the 9% of streets that have the most severe and fatal crashes) identified in the <u>Minneapolis Vision Zero Action Plan</u>.

Total	18.1 miles
City streets	4.3 miles
County streets	9.5 miles
MnDOT streets	4.3 miles
High Injury Streets	16.5 miles
(all jurisdictions)	10.5 111162

Existing 4-lane undivided streets (as of April 2024)

The City and partner agencies have been regularly converting 4-lane undivided streets since 2001. Since then, more than 25 miles of 4-lane undivided streets have been converted to safer configurations. Since the Transportation Action Plan and 2020-2023 Vision Zero Action Plan were adopted in 2020, 7.5 miles of 4-lane streets have been converted. An additional 6.2 miles of 4-lane streets are set for conversion in upcoming projects being implement in 2024 to 2026.

Current City-owned 4-lane undivided streets in Minneapolis (* denotes a street with a safety conversion actively being implemented or in planning):

- 3rd Avenue S between Washington Ave and 12th Street S
- 6th Avenue N between 7th Street and 5th Street*
- 7th Street N near the Oak Lane Avenue intersection*
- Hawthorne Avenue N between 11th Street and 8th Street*
- Hennepin Avenue between Washington Avenue and Maple Street
- Hennepin Avenue between Colfax Avenue and Lake Street*
- Huron Boulevard SE between Fulton Street SE and Delaware Street SE
- Johnson Street NE between Broadway Avenue NE and Interstate 35W freeway entrance ramp*
- Oak Street SE between Washington Avenue and University Avenue SE*

Current County-owned 4-lane undivided streets in Minneapolis include:

- Broadway Avenue W and NE segments between Fremont Avenue N and University Avenue NE*
- Cedar Avenue between 7th Street and 9th Street*
- Excelsior Boulevard between France Avenue and Abbott Avenue S
- Franklin Avenue between Lyndale Avenue S and Chicago Avenue*
- Hennepin Avenue E segments between 14th Avenue SE and 33rd Ave SE*
- Lake Street segments between Dupont Avenue and 21st Avenue S*
- Lowry Avenue N between 4th Street N and 2nd Street N
- Lowry Avenue NE between Marshall St NE and Central Avenue NE*

- Marshall Street NE by the Broadway intersection
- University Avenue SE between 26th Avenue SE and St. Mary's Avenue SE*
- Washington Avenue N between Plymouth Avenue N and 16th Avenue N*
- Washington Avenue N between 23rd Avenue N and 26th Avenue N
- Washington Avenue S/Cedar Avenue between Interstate 35W to 3rd Street

Current MnDOT-owned 4-lane undivided streets in Minneapolis include:

- Central Avenue NE segments between 27th Avenue NE and 2nd Street SE and 3rd Avenue S between 1st Street and 2nd Street*
- University Avenue NE and SE between Central Avenue and 27th Avenue NE*

Summary of Corridor Analysis

Crash analysis

4-lane undivided streets in Minneapolis generally have significant crash challenges. Even compared to High Injury Streets, the average 4-lane street has twice as many fatal and severe crashes per mile, nearly twice as many total crashes per mile, and twice as many pedestrian and bicycle crashes per mile (see Figure 3).

Type of street	Fatal & severe crashes per mile per year	Total crashes per mile per year	Pedestrian & bicycle crashes per mile per year	Length (miles)
4-lane streets average	1.2	69.2	6.0	22.4
High Injury Streets average	0.6	37.5	3.0	114
All streets average	0.1	7.3	0.5	1062

Crashes on 4-lane streets compared to other streets, 2011 to 2020

Excludes crashes not properly located, freeway crashes, intentional crashes, and medical emergency crashes. 4-lane streets average includes 6 street segments that received safety conversion after 2021. Source: MnDOT MnCMAT.

Most 4-lane street segments in Minneapolis (21 of 26 segments) have more fatal and severe crashes per mile than the average High Injury Street. The table on page 9 shows the crashes per mile per year for current and recently converted longer (greater than 0.5 mile) 4-lane street segments in Minneapolis and the table on page 10 shows crash rates for shorter segments. The shorter (less than 0.5 mile) segments are more likely to be dominated by one high crash intersection.

Map of 4-lane streets in Minneapolis



Minneapolis 4-Lane Street Study Last updated 9/18/24

Street Segment	Fatal & severe crashes per mile per year	Total crashes per mile per year	Pedestrian & bicycle crashes per mile per year	Length (miles)
Broadway Ave W from 4th St N to Fremont Ave N	3.6	157.7	11.1	0.5
Lyndale Ave S (recent safety conversion) from Franklin Ave to 31st St	2.1	124.9	11.5	1.1
Hennepin Ave from Washington Ave to Maple St	2.1	96.5	13.9	1.1
Lake Street from 21st Ave S to Dupont Ave	1.9	120.1	12.5	2.5
Franklin Ave from Lyndale Ave to Chicago Ave	1.9	101.3	10.5	1.3
Hennepin Ave S from Colfax Ave to Lake St	1.4	84.8	7.8	1.0
Lowry Ave NE from Marshall St to Central Ave	1.3	64.0	3.5	1.2
Central Ave NE/3rd Ave S from 8th St SE to 2nd St S	1.3	42.6	4.9	1.0
Broadway Ave W & NE from 4th Street NE to 2nd St N	1.1	67.0	3.2	0.9
University Ave NE from Central Ave to 27th Ave NE	0.8	49.6	2.2	2.2
Lake Street E (recent safety conversion) from W River Pkwy to Minnehaha Ave	0.8	36.0	3.7	1.4
3rd Ave S from Washington Ave to 12th St	0.6	88.9	8.2	0.8
31st Street E (recent safety conversion) from 1st Ave S to Park Ave	0.6	74.6	3.9	0.5
Central Ave NE from 27th Ave NE to 13th Ave NE	0.5	47.7	3.4	1.1
Marshall St NE (recent safety conversion) from 30th Ave NE to 36th Ave NE	0.4	7.4	0.6	0.7
Hennepin Ave E from 13th Ave SE to 33rd Ave SE	0.4	22.5	1.2	1.3
Excelsior Blvd from France to Abbott Ave	0.4	13.7	0.6	0.5
High Injury Streets average	0.6	37.5	3.0	114

Crashes on longer 4-lane street segments (> 0.5 mile), 2011-2020

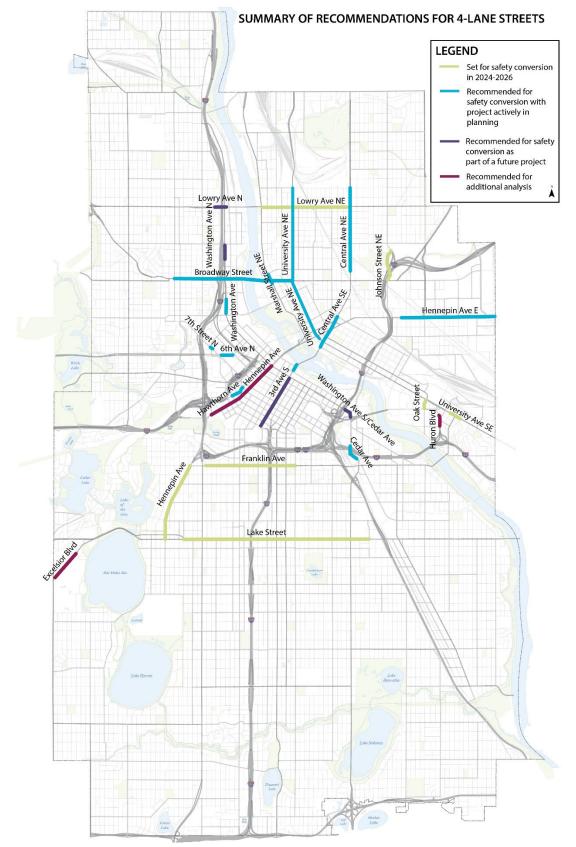
Excludes unlocated crashes, freeway crashes, intentional crashes, and medical emergency crashes. Source: MnDOT MnCMAT.

Street Segment	Fatal & severe crashes per mile per year	Total crashes per mile per year	Pedestrian & bicycle crashes per mile per year	Length (miles)
Marshall St NE near Broadway St intersection	3.3	115.6	5.6	0.09
Oak Street SE from Washington Ave to University Ave SE	2.7	51.3	8.7	0.15
Hawthorne Ave from 8th St to 11th St	1.7	49.6	8.3	0.23
Lowry Ave N (recent safety conversion) from Queen Ave to Oliver Ave	1.4	105.0	10.0	0.14
Lowry Ave N from 4th St to 2nd St	1.3	88.7	3.9	0.23
University Ave SE from 26th Ave SE to St. Mary's Ave	1.2	38.2	5.3	0.17
Cedar Ave from 7th St to 9th St	1.2	46.9	3.5	0.26
Johnson Street NE from Broadway Ave to I-35W ramp	1.1	42.4	0.9	0.45
Marshall St NE (recent safety conversion) near Lowry Ave intersection	1.1	91.1	1.1	0.09
Huron Blvd from Delaware St SE to Fulton St SE	1.1	93.2	4.7	0.19
Washington Ave S/Cedar Ave from I-35W to 3 rd St	1.0	47.0	5.0	0.10
Washington Ave N from Plymouth Ave N to 16th Ave N	0.9	20.9	0.0	0.23
6th Ave N from 5th St to 7th St	0.8	24.6	0.8	0.24
Washington Ave N from 23rd Ave N to 26th Ave N	0.4	33.8	1.3	0.24
Harmon PI (recent safety conversion) from Spruce PI to 10th St	0.3	14.3	2.0	0.3
7th Street N near Oak Lake Ave intersection	0.0	34.6	3.1	0.13
High Injury Streets average	0.6	37.5	3.0	114

Crashes on shorter 4-lane street segments (< 0.5 mile), 2011-2020

Excludes unlocated crashes, freeway crashes, intentional crashes, and medical emergency crashes. Source: MnDOT MnCMAT

Summary of Recommendations



Segments set for safety conversion

The following existing 4-lane street segments are set for safety conversion in an upcoming project:

- Franklin Avenue between Lyndale Avenue S and Chicago Avenue
 - o <u>2025/2026 street reconstruction</u>
- Hennepin Avenue between Colfax Avenue and Lake Street
 - o <u>2024/2025 street reconstruction</u>
- Johnson Street NE between Broadway St NE and I-35W on-ramp
 - o <u>2024 Vision Zero capital program safety improvements</u>
- Lake Street segments between Dupont Avenue and 21st Avenue S
 2024 B-line bus rapid transit and safety improvements
 - Lowry Avenue NE between Marshall St and Central Avenue NE
 - 2024/2025/2026 street reconstruction
- Oak Street SE from Washington Ave to University Ave SE
 - o <u>2024 bikeway and safety improvements</u>
- University Avenue SE between 26th Ave SE and St. Mary's Avenue SE
 - o <u>2025 E-line bus rapid transit</u>

Recommendations

- Recommended for safety conversion with project actively in planning:
 - 6th Ave N from 5th St to 7th St
 - 7th St N near Oak Lake Ave intersection
 - Broadway Ave W from 4th St N to Fremont Ave N and Broadway Ave W & NE from 4th Street NE to 2nd St N
 - Cedar Ave from 7th St to 9th St
 - Central Ave NE/3rd Ave S from 8th St SE to 2nd St S
 - Central Ave NE from 27th Ave NE to 13th Ave NE
 - Hawthorne Ave N from 8th St to 11th St
 - Hennepin Ave E from 13th Ave SE to 33rd Ave SE
 - Marshall Street NE between 13th Ave NE and 11th Ave NE
 - University Ave NE from Central Ave to 27th Ave NE
 - Washington Ave N from Plymouth Ave N to 16th Ave N
- Recommended for safety conversion as part of a future project:
 - 3rd Ave S from Washington Ave to 12th St
 - Lowry Ave N from 4th St to 2nd St
 - Washington Ave N from 23rd Ave N to 26th Ave N
 - Washington Avenue S/Cedar Avenue between Interstate 35W to 3rd Street
- Recommended for additional analysis:
 - Excelsior Blvd from France to Abbott Ave
 - Hennepin Ave from Washington Ave to Maple St
 - Huron Blvd from Delaware St SE to Fulton St SE

The 3rd Avenue bridge is not recommended for conversion from 4 lanes at this time given that it does not include any intersections and does not have significant crash history.

Individual Corridor Analysis and Recommendations

Corridor analysis and recommendations are included for all 4-lane segments that are not already set for a safety conversion.



3rd Avenue S (12th St to Washington Ave)

Background

- Location: Between 12th Street and Washington Avenue
- Length: 0.9 miles
- Jurisdiction: City of Minneapolis
- Current operations:
 - Generally 4-lane undivided with one-way bollard protected bike lanes in each direction.
 - Left-turn lanes included in both directions at Washington Avenue.
 - On-street parking provided on east side between 4th Street and 5th Street.
 - Unloading zones provided on west side between 5th Street and 6th Street and on east side between 9th Street and 10th Street.
- Traffic counts (daily): 24,032 (at 11th Street, May 11, 2022, MioVision) and 18,769 (at 3rd Street, July 14, 2022, MioVision)
- Pedestrian counts (daily): 3,720 (at 7th Street, 2013/2016/2017)
- Bicycle counts (daily): 419 (at 7th Street, July 26, 2022, MioVision)
- **Transit usage:** Most of this segment does not currently include transit routes. Several routes stop southbound just north of 11th Street.

- High Injury Street? Yes.
- Total crashes 2011-2020: 702
- Total crashes per mile per year: 88.9

- Fatal and severe crashes 2011-2020: 5
- Fatal and severe crashes per mile per year: 0.6
- Pedestrian and bicycle crashes 2011-2020: 65
- Pedestrian and bicycle crashes per mile per year: 8.2
- Crash notes:
 - The 4-lane undivided configuration on 3rd Avenue S contributes to crash challenges due to the frequency of left turns. The percentage of left-turn crashes is higher than the citywide average (4.4% vs. 3.2% citywide). A higher percentage of crashes are at intersections than citywide average (11.8% not at intersection vs. 37.6% citywide).
 - This segment has consistent safety challenges that are not focused at a single intersection. 6 of 13 intersections are in top 100 highest crash intersections citywide. All intersections have 2 or more crashes per year. 3rd Ave and Washington Ave is the highest crash intersection (102 from 2011-2020).
 - The percentage of pedestrian crashes is higher than the citywide average (5.6% vs. 3.9% citywide). The percentage of bicycle crashes is higher than the citywide average (3.7% vs. 3.0% citywide).

Considerations for safety conversion

3rd Avenue S is a complex corridor with many demands across modes. This study included analysis of some potential options for a safety conversion in the corridor. 3rd Ave S is also being considered for potential changes as part of work around moving buses from Nicollet Mall (details from July 2024).

- **Planned projects:** None currently. Potentially a street reconstruction in coordination with Nicollet Mall planning work.
- Transit:
 - Existing routes use 3rd Ave S north of Washington Avenue, and several routes stop southbound just north of 11th Street.
 - Potential location of BRT and local bus service moved from Nicollet Mall.
- Pedestrian Priority Network? Yes
- **Bikeways:** Existing All Ages and Abilities Bikeway with in-street painted bike lanes and bollards; interest to improve the existing bollard-protected bike lanes
- Traffic analysis:

A 2021 traffic analysis looked at two potential options for a safety conversion on 3rd Avenue S:

- a 4-to-3 lane conversion
- o converting to generally a northbound one-way street with a two-way bikeway

Looking at pre-COVID traffic levels, the 2021 analysis found:

While some tradeoffs would be expected with either of the proposed build alternatives, the results of the operations analysis indicate that either option would be feasible with the capacity improvements noted at the key intersections. Some bottleneck locations would still be expected in either alternative, but intersection delays would not be expected to be substantially higher than they are under the existing conditions.

The preferred options for both the one-way and 4-to-3 lane conversion alternatives would be expected to result in an increase in AM peak hour network delay of approximately 13% and 22%, respectively, with the one-way alternative resulting in slightly better performance than the 4-to-3 lane alternative.

Both alternatives would be expected to result in a minimal network delay changes during the PM peak hour, with the one-way alternative expected to operate slightly more efficiently than existing conditions and the 4-to-3 lane alternative expected to operate slightly less efficiently than existing conditions.

The 2021 traffic analysis included recommendations for managing potential challenges with either option.

Additional traffic analysis was done in 2023-2024 to inform decisions around Nicollet Mall and downtown transit. That analysis evaluated a concept which contained one general purpose traffic lane in each direction, one transit priority lane in each direction, and left turn lanes at most intersections. The results indicated similar operations to those analyzed in 2021, with the conclusion that left turn lanes are important for maintaining acceptable operations at key intersections. The evaluated concept is also expected to accommodate a two-way protected bikeway and BRT platforms at several intersections, which results in some space constraints. Further evaluation is needed to determine the feasibility of all design elements.

- **Challenging intersections:** Washington Avenue is the most challenging intersection. 5th Street also provides some challenges.
- Access points: There are parking ramp access points and building drop off areas that need to be considered and managed in any scenario for 3rd Avenue.

Safety conversion recommendations

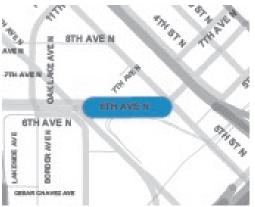
Public Works recommends safety improvements on 3rd Ave S. If 3rd Ave S is selected as the preferred option for moving buses from Nicollet Mall, then safety improvements will be incorporated as part of that project. If 3rd Ave S is not selected in that process, then Public Works will engage with local stakeholders to determine the preferred approach for a safety conversion on 3rd Ave S in downtown with the goal of developing a future project or grant proposal. All engagement and analysis related to 3rd Ave S will be coordinated with other projects in the nearby area, including the Nicollet Mall project and Safe Streets for All projects on 4th Ave S and 5th Ave S.

Implementation timeline, funding considerations, and next steps

• Implementation timeline: Preferred concept for downtown transit in coordination with Nicollet Mall will be finalized by early 2025; that decision will determine whether implementation is done in coordination with that project or a potential future separate 3rd Ave S project focused on safety improvements.

- **Funding considerations:** Potential for reconstruction funding in coordination with Nicollet Mall/downtown transit project. 3rd Ave S is also a candidate for a potential Regional Solicitation application in Bikeway category.
- Next steps: Finalize Nicollet Mall transit analysis and engagement and determined preferred concept for transit and implications for 3rd Ave S.

6th Avenue N



Background

- Location: Between 5th Street and 7th Street
- Length: 0.24 miles
- Jurisdiction: City of Minneapolis
- Current operations:
 - Between 5th Street to 7th Street is a 4-lane undivided street.
 - There is a dedicated left turn lane from northbound 6th Avenue to eastbound 5th Street.
 - Approaching the intersection with 7th Street, the road becomes separated and the rightof-way widens as it turns into Olson Memorial Highway on the other side of the intersection.
 - There is a slip lane from westbound 7th Street onto northbound 6th Avenue.
- Traffic counts (daily): 7,012 (at Metro Transit Driveway, August 23, 2022, MioVision)
- Pedestrian counts (daily): 116 (at Metro Transit Driveway, August 23, 2022, MioVision)
- **Bicycle counts (daily):** 102 (at Metro Transit Driveway, August 23, 2022, MioVision)
- **Transit usage:** No active transit service, but bus access to and from Metro Transit's Heywood Garage is along this segment.

- High Injury Street? No
- Total crashes 2011-2020: 59
- Total crashes per mile per year: 24.6
- Fatal and severe crashes 2011-2020: 2
- Fatal and severe crashes per mile per year: 0.8
- Pedestrian and bicycle crashes 2011-2020: 2
- Pedestrian and bicycle crashes per mile per year: 0.8
- Crash notes:
 - 6th Avenue N is not a High Injury Street. The intersection with 7th St/Olson is a high crash intersection, but that is primarily driven by the other legs of that intersection. The intersection with 5th St has modest crash history that could be improved. The section in between does not have a lot of crash history.

• While a safety conversion on 6th Avenue N could be expected to maintain or improve safety, this conversion is a relatively lower priority from a safety perspective.

Considerations for safety conversion

- **Planned projects:** Blue Line Light Rail Transit Extension includes western portion of 6th Avenue N, including 7th St intersection. Coordination with 7th Street reconstruction and likely future project on Olson Memorial Highway.
- **Transit:** No existing or planned transit routes are on 6th Avenue N, although Blue Line LRT extension is planned to go over 6th Ave N
- Pedestrian Priority Network? Yes
- **Bikeways:** Planned All Ages and Abilities Bikeway; recommend that a 2-way bikeway on the north side of the street is likely preferred in this section because it has fewer conflicts at the 7th Street intersection.
- **Traffic analysis:** Traffic analysis has been done in coordination with the Blue Line LRT Extension and 7th Street reconstruction projects. 6th Ave N will operate acceptably with one thru lane in each direction with turn lanes where appropriate and considerations at the 7th Street intersection/Blue Line LRT crossing.
- Challenging intersections: 7th Street
- Access points: No anticipated access point challenges for a safety conversion. There are 2 driveways on the northside and 1 on the southside.

Safety conversion recommendations

Public Works recommends conversion to 1 lane in each direction with 2-way protected bike lane on the north side of the street. This conversion should be implemented in coordination with the Blue Line Extension LRT project.

- Implementation timeline: In coordination with the Blue Line Extension LRT project (2028-2030)
- Funding considerations: Consider funding restriping with protected bike lane east of 7th Street intersection as part of connections to Blue Line Extension LRT or with a local source if needed (VZ01, BIK28, or Active Mobility)
- Next steps:
 - Finalize 7th St intersection design with Blue Line LRT extension project
 - \circ Determine funding source for conversion east of 7th Street intersection
 - o Finalize design details based on additional analysis and engagement

7th Street N



Background

- Location: Both sides of intersection with Oak Lake Ave
- Length: 0.13 miles
- Jurisdiction: City
- Current operations:
 - o 4 lane undivided street
 - Unprotected bike lanes on each side of street
- Traffic counts (daily): 20,054 (August 24, 2022, MioVision)
- Pedestrian counts (daily): 106 (August 24, 2022, MioVision)
- Bicycle counts (daily): 209 (August 24, 2022, MioVision)
- Transit usage: METRO D Line, route 5, route 22

Crash information

- High Injury Street? Yes
- Total crashes 2011-2020: 45
- Total crashes per mile per year: 34.6
- Fatal and severe crashes 2011-2020: 0
- Fatal and severe crashes per mile per year: 0
- Pedestrian and bicycle crashes 2011-2020: 4
- Pedestrian and bicycle crashes per mile per year: 3.1
- Crash notes:
 - The existing design contributes to 7th Street being a High Injury Street.

Considerations for safety conversion

- **Planned projects:** Street reconstruction in coordination with Blue Line Extension LRT project, to be implemented sometime 2027-2030 pending final construction sequencing.
- Transit:
 - METRO D Line, route 5, route 22
 - \circ $\;$ Bus stop for routes 5 & 22 at Oak Lake Ave SB only $\;$

- Buses going to and from Heywood Garage
- Blue Line Extension LRT track will run along 7th between the intersections of 6th Ave/Olson Memorial Highway and Oak Lake Avenue; two travel lanes will be eliminated along this stretch and a protected bikeway will be implemented
- Pedestrian Priority Network? Yes
- Bikeways: Planned Low Stress Bikeway
- **Traffic analysis:** A traffic analysis in this corridor and determined that the corridor would operate acceptably with one thru lane in each direction with turn lanes where appropriate.
- **Challenging intersections:** 6th Ave N/Olson Memorial Highway
- Access points: There are 2 driveways on the southside

Safety conversion recommendations

Public Works recommends implementing a safety conversion to generally 1 thru lane in each direction with turn lanes as appropriate in coordination with the 7th Street reconstruction and Blue Line Extension LRT project. Include protected bike lanes and transit advantages.

- Implementation timeline: In coordination with 7th Street N reconstruction and Blue Line Extension LRT, ~2027
- Funding considerations: Funded
- Next steps: Finalize design in coordination with Blue Line Extension LRT project

W Broadway Avenue/Broadway Street NE



Background

- Location: Fremont Ave N to 4th Street N and 2nd Street N to 4th Street NE
- Length: 0.9 and 0.53 miles
- Jurisdiction: Hennepin County
- **Current operations:** 4 lane undivided street, left-turn lanes added recently between 2nd Street N to West River Road.
- Traffic counts (daily): 23,336 (at University Ave NE, May 19, 2021, MioVision)
- Pedestrian counts (daily): 111 (at University Ave NE, May 19, 2021, MioVision)
- Bicycle counts (daily): 28 (at University Ave NE, May 19, 2021, MioVision)
- Transit usage: Routes 14 and 30

- High Injury Street? Yes
- Total crashes 2011-2020: 603 eastern portion and 836 western portion
- Total crashes per mile per year: 67.0 and 157.7
- Fatal and severe crashes 2011-2020: 10 and 19
- Fatal and severe crashes per mile per year: 1.1 and 3.6
- Pedestrian and bicycle crashes 2011-2020: 29 and 59
- Pedestrian and bicycle crashes per mile per year: 3.2 and 11.1
- Crash notes:
 - West Broadway between 4th Street N and Fremont Ave N has the highest concentration of crashes and severe/fatal crashes of any street segment in Minneapolis. The 4-lane undivided configuration contributes very significantly to that reality. It has above average proportion of left-turn crashes (5.3% vs. 3.3%) and intersection crashes.

- Broadway from 2nd Street NE to 4th Street NE also has significant crash and injury challenges. Those are most heavily concentrated at the University Avenue NE, Marshall Street NE, and 2nd St N intersections.
- 5 intersections on/near these sections of Broadway are in the top 20 highest crash intersections in Minneapolis (Lyndale Ave N, University Ave NE, 4th St N, Washington Ave N, and Emerson Ave N). Marshall St, 2nd St N, Dupont Ave N, and Fremont Ave N are also in the top 100 highest crash intersection. Broadway clearly has corridor-wide safety challenges not just intersection challenges.

Considerations for safety conversion

- Planned projects: Potential project in coordination with Blue Line Extension LRT
- Transit: Existing routes 14, 22, and 30 and planned Blue Line Extension LRT
- Pedestrian Priority Network? Yes
- **Bikeways:** Planned connector or long-term low stress bikeway; will remove this designation with Blue Line Extension LRT as a transit mall/bikeway planned on 21st Ave N from James to 4th St N, with a protected bikeway extending over I-94 on a new bridge to 2nd St N.
- **Traffic analysis:** None done with this study; a 2022 Hennepin County study recommended additional detailed traffic analysis to inform a potential traffic analysis on this section of Broadway.
- Challenging intersections: Many
- Access points: 5 driveways on north side of the street and 2 on the south side.

Safety conversion recommendations

- Public Works supports a safety conversion on West Broadway away from 4 lane undivided in coordination with the Blue Line Extension LRT project.
- Public Works supports the County and City collaborating on more detailed analysis and engagement of the section east of I-94 with the goal of converting to generally a 3-lane section with potential transit advantages.

- Implementation timeline: Western section in coordination with Blue Line Extension LRT, (2028-2030); eastern section to be determined
- **Funding considerations:** Western section is currently planned to be funded as part of Blue Line Extension LRT; from Lyndale to Washington to be led as separate project by the County, and eastern section is currently not funded
- Next steps:
 - Coordinate with Hennepin County for additional analysis and engagement for western portion.
 - Coordinate with Hennepin County to determine potential future funding opportunities and timelines for eastern portion.

Cedar Avenue



Background

- Location: 7th Street to 9th Street
- Length: 0.26 miles
- Jurisdiction: Hennepin County
- **Current operations:** 4 lane undivided street
- Traffic counts (daily): 15990 (at 7th Street, August 20, 2020, MioVision)
- Pedestrian counts (daily): 31 (at 7th Street, August 20, 2020, MioVision)
- **Bicycle counts (daily):** 77 (at 7th Street, August 20, 2020, MioVision)
- Transit usage: Route 22

- High Injury Street? Yes
- Total crashes 2011-2020: 122
- Total crashes per mile per year: 46.9
- Fatal and severe crashes 2011-2020: 3
- Fatal and severe crashes per mile per year: 1.2
- Pedestrian and bicycle crashes 2011-2020: 9
- Pedestrian and bicycle crashes per mile per year: 3.5
- Crash notes:
 - \circ Pedestrian crashes are overwhelmingly concentrated at 7th Street intersection.

Considerations for safety conversion

- **Planned projects:** Hennepin County planning to repave and restripe this section of Cedar Avenue in 2025 (<u>details</u>)
- Transit: Existing route 22, no bus stops in the 4-lane section
- Pedestrian Priority Network? Yes
- Bikeways: Planned Low Stress Bikeway
- Traffic analysis:

A peak hour traffic analysis of a potential 4-to-3 lane conversion was done in 2021. Key findings:

- The 4-lane to 3-lane conversion may increase overall intersection delay slightly for most intersections; however, all intersections would generally maintain their existing LOS grade.
- LOS F would be anticipated on the 7th Street approach (stop sign approach) during the PM peak hour under the proposed 3-lane configuration. This would result from decreased gaps available for the side street due to Cedar Avenue volumes using a single lane under proposed conditions. Because of low volumes on 7th Street, this would not be anticipated to cause significant impacts beyond the 7th Street approach at this intersection.
- The Cedar Avenue corridor would be expected to operate and an acceptable arterial LOS of D or better with the proposed 3-lane configuration.
- The existing two through traffic lanes are needed at both 20th Avenue and Franklin Avenue to maintain acceptable LOS. The 4-to-3 lane transition should occur just north of 20th Avenue.
- **Challenging intersections:** 7th Street should be evaluated for right in/right out given pedestrian crossing challenges and potential operational challenges with a conversion.
- Access points: Limited. There is 1 driveway on the east and 1 driveway on the west side providing access to a community garden

Safety conversion recommendations

- Public Works supports the County converting to generally 1 thru lane in each direction from 6th Street to past the I-94 interchange with left-turn lanes where appropriate and a right-turn lane for the access to EB I-94. The City also supports adding pedestrian safety and crossing improvements at each intersection with 7th and Cedar as the highest priority given crash history. The City is supporting County-led engagement and analysis for these changes.
- The City also supports future evaluation of bus-only lanes or other transit advantages in this area as part of broader effort to improve transit on Cedar Avenue from Washington Avenue to Lake Street.

- Implementation timeline: In coordination with County 2025 repaying project
- Funding considerations: County has funding secured for safety conversion
- **Next steps:** Coordinating with Hennepin County on detailed layout for implementation in coordination with upcoming repaying project.



Central Avenue NE (13th Ave NE to 27th Ave NE)

Background

- Location: 13th Ave NE to 27th Ave NE
- Length: 1.11 miles
- Jurisdiction: MnDOT
- Current operations:
 - 4 lane undivided street
 - Parking on both sides of street
 - Unprotected bike lane on both sides of street
 - Dedicated left turn lanes at Lowry and 27th
- Traffic counts (daily): 19,214 (at Lowry Ave, April 29, 2021, MioVision)
- Pedestrian counts (daily): 561 (at Lowry Ave, April 29, 2021, MioVision)
- Bicycle counts (daily): 82 (at Lowry Ave, April 29, 2021, MioVision)
- Transit usage: Route 10

- High Injury Street? Yes
- Total crashes 2011-2020: 530
- Total crashes per mile per year: 47.7
- Fatal and severe crashes 2011-2020: 6

- Fatal and severe crashes per mile per year: 0.5
- Pedestrian and bicycle crashes 2011-2020: 38
- Pedestrian and bicycle crashes per mile per year: 3.4
- Crash notes:
 - Central Avenue is a High Injury Street. The 4-lane undivided configuration contributes very significantly to that reality. It has above average proportion of left-turn crashes (4.9% vs. 3.3%) and intersection crashes.
 - The crash challenges in the 4-lane undivided section are far greater between 18th Ave NE and 27th Ave NE than between 13th Ave NE and 18th Ave NE. All of the severe and fatal crashes and nearly all of the pedestrian and bicycle crashes are in the northern section.
 - The Central Ave and Lowry Ave is the 15th highest crash intersection in Minneapolis and had half of the severe/fatal crashes in this section. The 18th Ave NE intersection is the 2nd highest crash in this section.
 - Additional crash analysis is available in MnDOT's <u>Highway 47/Highway 65 planning</u> study.

Considerations for safety conversion

- **Planned projects:** Metro Transit F Line and coordinated MnDOT improvements project with construction starting in 2028
- Transit:
 - Existing route 10 with bus stops at 14th Avenue NE, 18th Avenue NE, 18 ½ Avenue NE, 19th Avenue NE, 22nd Avenue NE, 23rd Avenue NE, 2th Avenue NE, Lowry Avenue, 26th Avenue NE, and 27th Avenue NE
 - Planned METRO F Line with stations at 14th Avenue, 18 1/2th Avenue, 22nd Avenue, & Lowry Avenue
- Pedestrian Priority Network? Yes
- Bikeways: Existing connector bikeway and planned All Ages and Abilities bikeway
- **Traffic analysis:** MnDOT's <u>Highway 47/Highway 65 planning study</u> has determined that a general 4-to-3 lane conversion is feasible.
- Challenging intersections: Lowry Ave NE and 18th Ave NE
- Access points: Moderate. There are 13 driveways on the east side that are all commercial and 14 driveways on the west side that are also commercial.

Safety conversion recommendations

- Public Works supports converting Central Avenue to generally 1 thru lane in each direction with left-turn lanes where appropriate.
- The City also supports providing a protected bikeway and transit advantages wherever possible along the full length of the corridor.
- The City is committed to partnering with MnDOT on their Central Avenue planning efforts to support these goals and hopes to see them implemented as soon as possible after the planning is completed in coordination with F Line BRT implementation and MnDOT's Central Avenue project.

- Implementation timeline: Planned for 2028 with joint MnDOT and Metro Transit project
- **Funding considerations:** Metro Transit has funding for F Line BRT; MnDOT is pursuing full funding necessary for 2028 construction
- **Next steps:** Public Works is coordinating with MnDOT and Metro Transit for analysis and engagement related to safety and access improvements on Central Ave in coordination with the F Line BRT project.

Central Avenue NE/3rd Avenue S (from 2nd St S to 8th Street NE)



Background

- Location: 3rd Ave S and 2nd St S to Central Ave NE and 8th St NE
- Length: 1.02 miles
- Jurisdiction: MnDOT
- Current operations:
 - 4 lane undivided street
 - Delineator protected in-street bike lanes on both side of the street between 2nd St and University Ave NE (barrier protected on the bridge)
 - Parking on both sides of street between University Ave NE and 8th St NE
 - Dedicated left turn lanes at several intersections
 - 3rd Ave bridge project was recently completed and retains 4 lane configuration
- Traffic counts (daily): 5,341 with construction nearby (between 4th and 5th St SE, 2021, MnDOT); 14,500 (over 3rd Ave bridge 2017, MnDOT)
- Pedestrian counts (daily): 1,933 (at 4th St SE, June 22, 2021, MioVision)
- Bicycle counts (daily): 146 (at 4th St SE, June 22, 2021, MioVision)
- Transit usage: Route 10

- High Injury Street? Yes
- Total crashes 2011-2020: 435
- Total crashes per mile per year: 42.6
- Fatal and severe crashes 2011-2020: 13
- Fatal and severe crashes per mile per year: 1.3
- Pedestrian and bicycle crashes 2011-2020: 50
- Pedestrian and bicycle crashes per mile per year: 4.9

- Crash notes:
 - Central Avenue/3rd Ave S is a High Injury Street. The 4-lane undivided configuration contributes very significantly to that reality. It has a significantly above average proportion of left-turn crashes (6.2% vs. 3.3%) and intersection crashes.
 - The crash challenges in this section are spread widely across all intersections. All intersections in this section have more than 20 crashes in the 10-year period. 6 of 9 intersections in this stretch had at least 1 serve or fatal crash.
 - Additional crash analysis is available in MnDOT's <u>Highway 47/Highway 65 planning</u> study.

Considerations for safety conversion

- **Planned projects:** Metro Transit F Line and coordinated MnDOT improvements project planned for north of 2nd St NE for ~2028; MnDOT HSIP project at 3rd Ave S and 2nd St intersection planned for 2027.
- Transit:
 - Existing route 10
 - Planned METRO F Line with stations at 3rd Ave S and 2nd St, Central Ave NE and University/4th St, and Central Ave NE and 1st Ave NE/7th St
- Pedestrian Priority Network? Yes
- **Bikeways:** Existing delineator protected bikeway south of University Ave with planned low streets bikeway for the entire stretch
- **Traffic analysis:** MnDOT's <u>Highway 47/Highway 65 planning study</u> has determined that a general 4-to-3 lane conversion is feasible for the Central Ave NE section. Analysis of the 3rd Ave S section was included as part of 2021 traffic analysis. That analysis identified some likely traffic operational challenges in peak hours with a 3-lane configuration; additional analysis is needed with updated traffic counts.
- Challenging intersections: Most intersections offer somewhat unique challenges
- Access points: Moderate. Some driveaway or alley access points.

Safety conversion recommendations

- Outside of the 3rd Avenue bridge, which was recently rehabilitated, Public Works supports converting Central Avenue/3rd Avenue to generally 1 thru lane in each direction with left-turn lanes where appropriate. Additional analysis is needed to determine lane configuration on 3rd Ave S between Washington Ave and 1st Street in coordination with potential changes on 3rd Ave S south of Washington Ave.
- The City also supports providing a protected bikeway and transit advantages wherever possible along the full length of the corridor.
- The City is committed to partnering with MnDOT on their Central Avenue planning efforts and 3rd Ave S HSIP project to support these goals and hopes to see them implemented as soon as possible after the planning is completed in coordination with F Line BRT implementation and MnDOT's Central Avenue project.

- Implementation timeline: MnDOT HSIP project planned at 3rd Ave S and 2nd Street in 2027; Planned for 2028 with joint MnDOT and Metro Transit project
- **Funding considerations:** HSIP project funded at 2nd St. Metro Transit has funding for F Line BRT; MnDOT is pursuing full funding necessary for 2028 construction
- **Next steps:** Public Works is coordinating with MnDOT on HSIP project and with MnDOT and Metro Transit for analysis and engagement related to safety and access improvements on Central Ave in coordination with the F Line BRT project.

Excelsior Boulevard



Background

- Location: Abbot Avenue to France Avenue
- Length: 0.51 miles
- Jurisdiction: Hennepin County
- Current operations: 4 lane undivided street
- Traffic counts (daily): 16001 (at 32nd Street, September 20, 2023, MioVision)
- Pedestrian counts (daily): 290 (at 32nd Street, September 20, 2023, MioVision)
- Bicycle counts (daily): 11 (at 32nd Street, September 20, 2023, MioVision)
- Transit usage: Route 612

Crash information

- High Injury Street? Yes, in 2020-2022 Vision Zero Action Plan, but not in 2023-2025 Action Plan
- Total crashes 2011-2020: 81
- Total crashes per mile per year: 15.9
- Fatal and severe crashes 2011-2020: 2
- Fatal and severe crashes per mile per year: 0.4
- Pedestrian and bicycle crashes 2011-2020: 3
- Pedestrian and bicycle crashes per mile per year: 0.6
- Crash notes:
 - There are relatively few crashes in the stretch from 42nd Street to France Avenue (only 7% of the crashes in the 4-lane section).
 - While there are only a few left-turn locations in this stretch, 7.4% of crashes here involve left-turns, which is higher than the average of all 4-lane streets in this analysis (5.2%).

Considerations for safety conversion

- Planned projects: None
- **Transit:** Existing route 612 with bus stop at 32nd Street
- Pedestrian Priority Network? Yes

- Bikeways: Planned connector or long-term low stress bikeway
- **Traffic analysis:** None done with this study; a 2022 Hennepin County study found that a 3-lane configuration would not drastically impact operations. That study recommended this stretch for potential safety conversion.
- Challenging intersections: None
- Access points: There is one driveway on the south side but none on the north side.

Safety conversion recommendations

Minneapolis Public Works supports the County and City collaborating on additional analysis and engagement on safety, walking, and biking improvements on Excelsior Blvd when the street is next up for repaving or reconstruction. The City supports a goal of eliminating most or all 4-lane undivided sections, especially where there are intersections, and other measures to improve safety and pedestrian and bicycle access.

- **Implementation timeline:** In coordination with the next repaving project, which is not yet scheduled, or potentially as part of a proactive project if funding becomes available.
- Funding considerations: None
- **Next steps:** Collaborate with the County for analysis and engagement when the section is up for repaving.

Hawthorne Avenue



Background

- Location: 8th Street to 11th Street
- Length: 0.23 miles
- Jurisdiction: City of Minneapolis
- Current operations:
- Traffic counts (daily): 22,062 (at 10th Street, August 31, 2022, MioVision)
- Pedestrian counts (daily): 887 (at 10th Street, August 31, 2022, MioVision)
- **Bicycle counts (daily):** 187 (at 10th Street, August 31, 2022, MioVision)
- Transit usage: Route 9

Crash information

- High Injury Street? Yes
- Total crashes 2011-2020: 114
- Total crashes per mile per year: 49.6
- Fatal and severe crashes 2011-2020: 4
- Fatal and severe crashes per mile per year: 1.7
- Pedestrian and bicycle crashes 2011-2020: 19
- Pedestrian and bicycle crashes per mile per year: 8.3
- Crash notes:
 - Hawthorne Ave has higher than average rates of fatal and severe crashes per mile and pedestrian and bicycle crashes per mile compared to other 4-lane streets in this study.
 - Crashes are fairly evenly distributed between intersections with 10th St, 11th St, and 12th St, although the 10th Street intersection has the highest number of crashes related to Hawthorne Ave (versus the intersecting street).

Considerations for safety conversion

- **Planned projects:** Safety improvements, including adding turn lanes where appropriate, funded by Safe Streets for All grant
- **Transit:** Existing route 9 with bus stop at 10th Street (northbound service only)
- Pedestrian Priority Network? Yes

- **Bikeways:** Existing connector bikeway 11th Street to 9th Street, planned low stress bikeway 9th Street to 8th Street
- **Traffic analysis:** Additional traffic analysis is needed in this area to help inform the final design. Initial high-level analysis determined that this area is not a good candidate for a standard 3-lane configuration given the nature of turning movements with the intersecting one-way streets. Westbound traffic is higher than eastbound traffic.
- Challenging intersections: 10th Street
- Access points: There are 2 driveways on the north side, including one that provides entrance/exit for the Hawthorne Ramp. There are no driveways on the south side.

Safety conversion recommendations

Public Works recommends eliminating the 4-lane undivided section of Hawthorne Avenue as part of the upcoming Safe Streets for All-funded project planned for 2029.

- Implementation timeline: 2029
- Funding considerations: Funded through Safe Streets for All
- Next steps: Detailed planning will begin in 2026 or 2027



Hennepin Avenue (Washington Ave to 12th St)

Background

- Location: Washington Avenue to 12th Street
- Length: 0.75
- Jurisdiction: City of Minneapolis
- **Current operations:** 4-lane undivided with protected bike lanes
- Traffic counts (daily): 16,654 (at 7th Street, October 18, 2022, MioVision)
- Pedestrian counts (daily): 3583 (at 7th Street, October 18, 2022, MioVision)
- Bicycle counts (daily): 262 (at 7th Street, October 18, 2022, MioVision)
- Transit usage: Routes 4, 6, 9, 14, 61

- High Injury Street? Yes
- Total crashes 2011-2020: 853
- Total crashes per mile per year: 113.7
- Fatal and severe crashes 2011-2020: 22
- Fatal and severe crashes per mile per year: 2.9
- Pedestrian and bicycle crashes 2011-2020: 131
- Pedestrian and bicycle crashes per mile per year: 17.5
- Crash notes:
 - These crash figures are based on the street before it was reconstructed (the street fully reopened in fall 2022). Prior to reconstruction, this section had the second highest rate of fatal and severe injury crashes per mile of any street section in Minneapolis and the highest rate of pedestrian and bicycle crashes per mile.
 - In the initial 18 months of available crash data since the reconstruction, total crashes per year are down 48% and total pedestrian and bicycle crashes are down 24%.
 However, the rate per year of severe and fatal crashes is up to start (with a small sample size). 4 of 5 severe/fatal crashes since the reconstruction involve left-turn vehicles, which suggests this continues to be a challenge on this street.

Considerations for safety conversion

- **Planned projects:** None, although additional analysis of potential transit improvements is planned as part of Nicollet Mall and downtown transit efforts.
- Transit:
 - Existing routes 4, 6, 9, 14, and 61 with stops at 3rd/4th, 5th, 7th/8th, 10th/11th, 12th
 - Planned METRO E Line with stations at 3rd/4th, 5th, 7th/8th, 10th/11th already built
- Pedestrian Priority Network? Yes
- Bikeways: Existing low stress bikeway Washington Avenue to 12th Street
- Traffic analysis: Not completed with this analysis
- Challenging intersections: Most are complex

Safety conversion recommendations

Hennepin Avenue reconstruction was completed in late 2022 with safety improvements included. We will do a complete safety evaluation of the project once two full years of crash data are available after the reconstruction. Any potential future changes would be done with safety and improving transit speed and reliability as key priorities.

- Implementation timeline: None
- **Funding considerations:** Potential collaboration with transit priority project and/or Nicollet Mall/downtown transit improvements
- **Next steps:** Detailed post-reconstruction crash analysis in early 2025 and evaluation of potential transit priorities (timing to be determined)

Hennepin Avenue (12th St to Maple St)



Background

- Location: 12th Street to Maple Street
- Length: 0.32
- Jurisdiction: City of Minneapolis
- Current operations: 4-lane undivided with unprotected bike lanes
- Traffic counts (daily): 11,966 (at 13th St N, August 17, 2022, MioVision)
- Pedestrian counts (daily): 1,544 (at 13th St N, August 17, 2022, MioVision)
- Bicycle counts (daily): 755 (at 13th St N, August 17, 2022, MioVision)
- Transit usage: Routes 4, 6

Crash information

- High Injury Street? Yes
- Total crashes 2011-2020: 180
- Total crashes per mile per year: 56.3
- Fatal and severe crashes 2011-2020: 1
- Fatal and severe crashes per mile per year: 0.3
- Pedestrian and bicycle crashes 2011-2020: 18
- Pedestrian and bicycle crashes per mile per year: 5.6
- Crash notes:
 - This section has an above average rate of total crashes per mile and pedestrian and bicycle crashes per mile compared to all High Injury Streets, but a lower than average rate of severe/fatal crashes per mile.
 - This section has an above average rate of left-turn crashes compared to other streets in this study.

- Planned projects: <u>Hennepin-Dunwoody protected bikeway project in 2024</u>
- Transit:

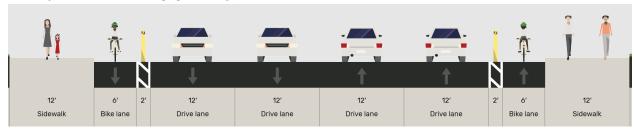
- Existing routes 4, 6 with stops at Spruce/Laurel, 16th/Maple
- o Planned METRO E Line with stations at Spruce/Laurel
- Pedestrian Priority Network? Yes
- **Bikeways:** Planned low stress bikeway 12th Street to Maple Street
- Traffic analysis: For this study, a traffic analysis was done looking at two possible options:
 - o 2 general purpose eastbound lanes, a center left-turn lane, and 1 westbound lane
 - 1 eastbound general purpose lane, 1 eastbound bus-only lane, a center left-turn lane, and 1 westbound lane.

This analysis found some potential rush hour traffic operations challenges, including transit delays. The Maple Street intersection is a particular challenge point.

• Challenging intersections: Maple Street

Safety conversion recommendations

• Evaluate further a potential safety conversion between 12th St and Maple St. A potential configuration is 2 northbound lanes, 1 southbound lane, and a center left-turn lane. Additional analysis is needed after updated traffic counts, the implementation of the Hennepin-Dunwoody bikeway project, and transit priority project to the south.



Hennepin Avenue existing (generally)

Hennepin Avenue potential option



- Implementation timeline: To be determined
- Funding considerations: Not funded
- Next steps: In 2025 or 2026, analyze further the potential of a safety conversion in this area.

Hennepin Avenue E



Background

- Location: 13th Avenue SE to 33rd Avenue SE
- Length: 1.27 miles
- Jurisdiction: Hennepin County
- Current operations: 4-lane undivided
- Traffic counts (daily): 21,544 (at 18th Avenue, May 4, 2021, MioVision)
- Pedestrian counts (daily): 85 (at 18th Avenue, May 4, 2021, MioVision)
- Bicycle counts (daily): 170 (at 18th Avenue, May 4, 2021, MioVision)
- Transit usage: Routes 25, 61

Crash information

- **High Injury Street?** Partially; from 13th Avenue to 18th Avenue
- Total crashes 2011-2020: 286
- Total crashes per mile per year: 22.5
- Fatal and severe crashes 2011-2020: 5
- Fatal and severe crashes per mile per year: 0.4
- Pedestrian and bicycle crashes 2011-2020: 15
- Pedestrian and bicycle crashes per mile per year: 1.2
- Crash notes:
 - This section has lower crash rates than most other streets in this analysis, but still some crash challenges from the 4-lane undivided alignment.

- **Planned projects:** 2025 Hennepin County repaving and restriping with safety conversion and bike lanes
- **Transit:** Existing routes 25 & 61
- Pedestrian Priority Network? Yes
- **Bikeways:** Planned connector or long-term low stress bikeway
- **Traffic analysis:** None done with this study; a 2022 Hennepin County study found some potential rush hour challenges west of Stinson with a 3-lane design.
- Challenging intersections: near 35W and Stinson
- Access points: There are 20 driveways on the north side and 18 driveways on the south side.

Minneapolis Public Works supports the general <u>County design</u> being considered as of June 2024, which converts to generally 1-thru lane in each direction east of Stinson with dedicated turn lanes where appropriate and bike lanes while retaining a 2nd lane in each direction from Stinson to the west. The City is supporting County-led engagement and analysis for this change.

- Implementation timeline: 2025
- Funding considerations: Funded with County repaving project
- Next steps: County finalizing engagement and design in 2024

Huron Boulevard



Background

- Location: Delaware Street SE to Fulton Street SE
- Length: 0.19 miles
- Jurisdiction: City of Minneapolis
- Current operations: 4-lane undivided
- Traffic counts (daily): 21,205 (at Essex St, September 14, 2021, MioVision)
- Pedestrian counts (daily): 905 (at Essex St, September 14, 2021, MioVision)
- Bicycle counts (daily): 107 (at Essex St, September 14, 2021, MioVision)
- Transit usage: none

Crash information

- High Injury Street? No
- Total crashes 2011-2020: 177
- Total crashes per mile per year: 93.2
- Fatal and severe crashes 2011-2020: 2
- Fatal and severe crashes per mile per year: 1.1
- Pedestrian and bicycle crashes 2011-2020: 9
- Pedestrian and bicycle crashes per mile per year: 4.7
- Crash notes:
 - Crashes in this segment are highly concentrated at the Fulton St. intersection, although the Essex St and Delaware St intersections are also fairly high crash. Left-turn related crash challenges are highly concentrated at the Fulton St. intersection, which currently has a left-turn lane northbound.
 - There are no left turns from Huron at the Essex St intersection given as Essex has converging one-way streets from each direction.

- Planned projects: None
- Transit: No current or planned transit service

- Pedestrian Priority Network? Yes
- Bikeways: None
- **Traffic analysis:** A high-level traffic analysis was done for this study. Given operations in the area, including the low rates of left-turns outside of existing turn lanes, it was determined that a lane configuration change in this area does not make sense in the near term.
- Challenging intersections: Fulton
- Access points: There are 2 driveways on the east side but no driveways on the west side.

Public Works recommends evaluating further the potential of providing additional pedestrian space by converting to one southbound traffic lane north of Essex and one northbound lane at or just north of Fulton. Such a change should be considered in coordination with the next resurfacing project.

- Implementation timeline: To be determined
- Funding considerations: Not funded; potential for a pedestrian focused grant application
- Next steps: Evaluate further ahead of next street resurfacing project

Lowry Avenue N



Background

- Location: 4th Street to 2nd Street
- Length: 0.23 miles
- Jurisdiction: Hennepin County
- Current operations: 4-lane undivided
- Traffic counts (daily): 16,971 (at Washington Ave, July 14, 2021, MioVision)
- Pedestrian counts (daily): 12 (at Washington Ave, July 14, 2021, MioVision)
- Bicycle counts (daily): 40 (at Washington Ave, July 14, 2021, MioVision)
- Transit usage: Route 32

Crash information

- High Injury Street? Yes
- Total crashes 2011-2020: 204
- Total crashes per mile per year: 88.7
- Fatal and severe crashes 2011-2020: 3
- Fatal and severe crashes per mile per year: 1.3
- Pedestrian and bicycle crashes 2011-2020: 9
- Pedestrian and bicycle crashes per mile per year: 3.9
- Crash notes:
 - This section sees fairly average crash challenges for a 4-lane undivided street in Minneapolis. The 4-lane configuration undoubtably contributes to it being a High Injury Street.
 - In a 2022 Hennepin County study, this segment received the highest benefit score from a potential safety conversion of any County 4-lane street.

- Planned projects: None
- **Transit:** Existing route 32 with stops at 4th and Washington (WB only), 3rd and 2nd (EB only); identified in Metro Transit's Network Next as a future BRT corridor
- Pedestrian Priority Network? Yes
- **Bikeways:** Planned low stress bikeway

- **Traffic analysis:** A 2022 Hennepin County study recommended additional traffic analysis in this area. It did find that a base 3-lane configuration would likely have significant PM peak hour delays, but would operate acceptably with signal timing changes.
- Challenging intersections: Washington Ave and 2nd St.
- Access points: There is 1 driveway on the north side and 2 driveways on the south side.

Minneapolis Public Works supports the County converting to generally one thru lane in each direction with dedicated turn lanes where appropriate with the addition of pedestrian safety measures and buffered or protected bike lanes. The City hopes this change is done proactively as soon as possible. The City is happy to support County-led engagement for these changes.

- Implementation timeline: None determined
- Funding considerations: No funding currently allocated
- **Next steps:** The City will explore whether a collaborative with the County can be implemented before the next street repaying project (which is likely not to be until past 2030).

University Avenue NE



Background

- Location: Central Avenue SE to 27th Avenue NE
- Length: 2.19
- Jurisdiction: MnDOT
- Current operations: 4-lane undivided with off-peak parking allowed
- Traffic counts (daily): 19,334 (at Broadway Street, May 19, 2021, MioVision)
- Pedestrian counts (daily): 132 (at Broadway Street, May 19, 2021, MioVision)
- Bicycle counts (daily): 51 (at Broadway Street, May 19, 2021, MioVision)
- Transit usage: Route 6

Crash information

- High Injury Street? Yes
- Total crashes 2011-2020: 1087
- Total crashes per mile per year: 49.6
- Fatal and severe crashes 2011-2020: 17
- Fatal and severe crashes per mile per year: 0.8
- Pedestrian and bicycle crashes 2011-2020: 49
- Pedestrian and bicycle crashes per mile per year: 2.2

- Crash notes:
 - University Ave NE has crash and severe/fatal crash rates above the average High Injury Street. The 4-lane undivided configuration contributes to those crash and injury challenges.
 - Additional crash analysis is available in MnDOT's <u>Highway 47/Highway 65 planning</u> study.

Considerations for safety conversion

- Planned projects: <u>Street reconstruction in 2027</u>
- Transit: Existing route 6 stop at Central
- Pedestrian Priority Network? Yes
- **Bikeways:** Existing low stress bikeway 26 ½ Avenue NE to 27th Avenue NE only
- **Traffic analysis:** MnDOT traffic analysis has determined that a general 3-lane configuration will operate sufficiently.
- Challenging intersections: Broadway
- Access points: There are 46 driveways on the east side and 40 driveways on the west side. A significant number of them are residential.

Safety conversion recommendations

Public Works supports converting University Avenue NE to generally one thru lane in each direction with left-turn lanes where appropriate. The City is committed to partnering with MnDOT on their University Avenue planning efforts to support safety and other goals and hopes to see them implemented as soon as possible. The City submitted a 2024 Regional Solicitation application for a section of University Ave NE; this application was funded.

- Implementation timeline: 2027
- **Funding considerations:** MnDOT-led project; the City submitted a Regional Solicitation grant application to support the project, which was successful
- Next steps: MnDOT in project planning

Washington Avenue N



Background

- Location: from Plymouth Avenue N to 16th Avenue N and 23rd Avenue N to 26th Avenue N
- Length: 0.47 miles total
- Jurisdiction: Hennepin County
- **Current operations:** 4-lane undivided
- Traffic counts (daily): 11,185 (at 26th Ave, June 30, 2021, MioVision)
- Pedestrian counts (daily): 37 (at 26th Ave, June 30, 2021, MioVision)
- Bicycle counts (daily): 72 (at 26th Ave, June 30, 2021, MioVision)
- Transit usage: none

Crash information

- High Injury Street? Yes
- Total crashes 2011-2020: 129
- Total crashes per mile per year: 27.4
- Fatal and severe crashes 2011-2020: 3
- Fatal and severe crashes per mile per year: 0.6
- Pedestrian and bicycle crashes 2011-2020: 3
- Pedestrian and bicycle crashes per mile per year: 0.6
- Crash notes:
 - There are relatively few left turns at most intersections, but the percentage of left-turn crashes is higher than most other streets in this analysis.

- It has a rate of severe/fatal crashes similar to the average High Injury Street. The overall crash rate is lower than average High Injury Street.
- Given the nature of the street in this area, this is a lower priority for safety conversion relatively to most other streets in this analysis.

Considerations for safety conversion

- **Planned projects:** Southern section is part of planned route for the Blue Line Light Rail Extension
- Transit: Southern section is part of planned route for the Blue Line Light Rail Extension
- Pedestrian Priority Network? Yes
- Bikeways: None
- **Traffic analysis:** None done with this study and none done with the 2022 Hennepin County study. Given traffic volumes, it's likely that a safety conversion could operate well, although there would need to be consideration for connections to the 5-lane section in between these sections.
- Challenging intersections: Plymouth
- Access points: There are 2 driveways on the east side but no driveways on the west side.

Safety conversion recommendations

Minneapolis Public Works supports the County plans to reduce lane configuration and add light rail transit south of 21st Avenue N as part of the <u>Blue Line LRT Extension project</u>. Public Works also supports the County converting to generally 1 thru lane in each direction with dedicated turn lanes where appropriate for the section between 23rd Avenue N and 26th Avenue N. The City is happy to support engagement and analysis for this change.

- Implementation timeline: Southern section in coordination with Blue Line extension LRT project, likely in 2028-2030; northern section in coordination with a to be determined future County resurfacing project
- Funding considerations: Southern section funded with Blue Line extension
- Next steps: Working with County and Metro Transit on Blue Line extension

Washington Avenue S/Cedar Avenue



Background

- Location: from Interstate 35W to 3rd Street
- Length: 0.10 miles total
- Jurisdiction: Hennepin County
- Current operations: 4-lane undivided
- Traffic counts (daily): 13,157 (at 15th Ave S, July 9, 2024, MioVision)
- Pedestrian counts (daily): 949 (at 15th Ave S, July 9, 2024, MioVision)
- Bicycle counts (daily): 255 (at 15th Ave S, July 9, 2024, MioVision)
- Transit usage: Routes 3, 7, and 22

Crash information

- High Injury Street? Yes
- Total crashes 2014-2023: 47
- Total crashes per mile per year: 47.0
- Fatal and severe crashes 2014-2023: 1
- Fatal and severe crashes per mile per year: 1.0
- Pedestrian and bicycle crashes 2014-2023: 5
- Pedestrian and bicycle crashes per mile per year: 5.0
- Crash notes:
 - Most crashes in this stretch (greater than 70%) are at the Washington Ave/ Cedar Ave/15th Ave S intersection, although the one severe injury crash in the last 10 years was at the Cedar Ave/3rd St intersection.

- Planned projects: None
- Transit: H Line BRT planned for construction in 2028-2029
- Pedestrian Priority Network? Yes
- **Bikeways:** Unprotected bike lanes currently north of 15th Ave S intersection; identified as a near-term low stress bikeway

- **Traffic analysis:** None done with this study and none done with the 2022 Hennepin County study.
- Challenging intersections: 15th Ave S
- Access points: There are 2 driveways on the east side and 1 driveway on the west side.

Minneapolis Public Works supports dedicated left-turn lanes at the 15th Ave S intersection in coordination with the H Line BRT project, particularly for eastbound to northbound movement. Public Works also supports implementation of protected bikeways to align with the AAA network. Public Works supports additional evaluation of transit advantages in the area.

- Implementation timeline: 2028-2029 in coordination with H Line BRT
- **Funding considerations:** H Line BRT received federal grant in 2024; funding for complimentary safety improvements is not yet determined
- **Next steps:** Working with Hennepin County and Metro Transit on H Line BRT planning and connected street improvements

4. Appendix

Acknowledgements

This study was written by Minneapolis Public Works staff. Ethan Fawley led the study with support from Ben Brasser, Andrew Degerstrom, Kathleen Mayell, Julie Swanson, and Leoma Van Dort.

The study process and content was reviewed by the study core team: Ben Brasser, Minneapolis Public Works--Traffic Julie Swanson, Minneapolis Public Works--Traffic Kenneth Levin, Hennepin County Public Works David Sheen, Hennepin County Public Works Aaron Tag, Minnesota Department of Transportation

List of previous safety conversions (2004-2023)

Between 2004 and 2023, there were 39 safety conversions in Minneapolis on 25.5 miles of previous 4-lane undivided streets.

Roadway	Agency	Length (mi)	Year
			Converted
1 st Avenue N, 4 th St to 8 th St	City	0.3	2016
1 st Street N/S, 1 st Ave N to 3 rd Ave S	City	0.3	2012
10th Avenue Bridge SE	City	0.5	2021
10th Avenue SE, University Ave to 8th St	City	0.4	2010
19th Street S, Washington Ave to Riverside Ave	City	0.3	2011
27th Avenue SE, University Ave to Yale Ave	County	0.5	2010
31 st Street E/W, Blaisdell Ave to 1 st Ave	City	0.1	2013
31st Street E, 1st Ave to Oakland Ave	City	0.5	2022
46 th Street E, Nicollet Ave to Park Ave	County	0.6	2016
50th Street W, France Ave to Dupont Ave	County	1.7	2004
50th Street W, Dupont Ave to Lyndale Ave	County	0.3	2010
Broadway Street NE, Johnson St to 5th St	County	1.2	2019
Broadway Street NE, Stinson Ave to Industrial Blvd	City	0.8	2016
Cedar Avenue S, 24th St to 38th St	County	1.8	2020
Cedar Avenue S, 4th St to 7th St	County	0.3	2014
Dowling Avenue N, Washington Ave to Lyndale Ave	City	0.3	2015
Franklin Avenue E, Park Ave to Chicago Ave	County	0.1	2020
Franklin Avenue E, Riverside Ave to E. River Pkwy	County	0.5	2011
Franklin Avenue W, Hennepin Ave to Lyndale Ave	City	0.2	2022
Glenwood Avenue N, Cedar Lake Rd to 12 th St	County	0.9	2012
Harmon Place, 10th St to Spruce Pl	City	0.3	2021
Johnson Street NE, Winter Ave to Broadway Ave	City	0.4	2012

Lake Street E, 28th Ave to Mississippi River Bridge	County	1.4	2023
LaSalle Avenue, Grant St to 12 th St	City	0.2	2015
Lowry Avenue N, Bryant Ave to Oliver Ave & Queen Ave to Washburn Ave	County	0.9	2008
Lowry Avenue N, Oliver Ave to Queen Ave	County	0.2	2022
Lyndale Ave S, Franklin Ave to 31st St	County	1.1	2022
Lyndale Avenue N, Plymouth Ave to 21st Ave	City	0.6	2021
Lyndale Avenue S, 31st St to Minnehaha Pkwy	County	2.5	2008
Lyndale Avenue S, Minnehaha Pkwy to 56th St	County	0.5	2012
Marshall Street NE, 30th Ave to 36th Ave & near Lowry Ave intersection	County	0.8	2022
Minnehaha Avenue, 26th St to 28th Ave	City	0.4	2010
Osseo Road N, 44th Ave to 49th Ave	County	0.8	2013
Plymouth Avenue N, Girard Ave to Lyndale Ave	City	0.5	2013
Plymouth Avenue N, Lyndale Ave to W River Rd	City	0.6	2012
Plymouth Avenue N, Penn Ave to Girard Ave	City	0.6	2006
Plymouth Avenue N/8th Ave NE, W River Rd to Marshall St	City	0.5	2014
Riverside Avenue, Cedar Ave to Franklin Ave	City	1	2010
Washington Avenue N, 4th St to Plymouth Ave	County	0.6	2017