



Application

10354 - 2018 Roadway Modernization

10614 - CSAH 153 (Lowry Ave NE) Reconstruction Project

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted

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

Organization Information

Name: HENNEPIN COUNTY

Jurisdictional Agency (if different):

Organization Type:

County Government

Organization Website:

Address:

DPT OF PUBLIC WORKS
1600 PRAIRIE DR

*

MEDINA

Minnesota

55340

City

State/Province

Postal Code/Zip

County:

Hennepin

Phone:*

763-745-7600

Ext.

Fax:

PeopleSoft Vendor Number

0000028004A9

Project Information

Project Name

CSAH 153 (Lowry Ave NE) Reconstruction 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):

This project includes the reconstruction of the CSAH 153 (Lowry Ave NE) corridor within the the City of Minneapolis. CSAH 153 (Lowry Ave NE) is classified as an A-Minor Arterial roadway that functions as an augmentor. Attachment 2 provides an illustration of the project location.

The project objectives include: improving safety and operations, along with facilitating vehicle, freight, transit, bicycle, and pedestrian movements through the area. Photos depicting the roadway's current condition are included in Attachment 3. This project will be considered in two sections based on the roadway environment. The west section (between Washington St NE and Central Ave NE) does not yet have a defined typical section. County staff and community members continue to evaluate the corridor's potential to accommodate bicyclists within this section. The east section (between Central Ave NE and Johnson St NE) will maintain a two-lane configuration that includes bikeway facilities and an enhanced pedestrian environment. The proposed typical section and concept are included in Attachments 4 and 5, respectively.

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

The project will include, but is not limited to, the following elements:

- Roadway improvements; such as the replacement of the deteriorated curb and gutter, storm sewer structures, and pavement substructure.
- Safety improvements, such as the upgrading of traffic signal systems to include mast arms and dedicated left-turn phasing, the conversion of the existing four-lane configuration to a three-lane or two-lane (depending on the section of the

roadway), and the installation of curb extensions to reduce the pedestrian crossing distance and provide traffic calming.

- Pedestrian improvements such as ADA compliant ramps and sidewalk, Accessible Pedestrian Signals (APS), high-visibility crosswalk markings, curb extensions, and countdown timers.

- Bicycle improvements, such as a dedicated bicycle facility, bicycle pavement markings and wayfinding signage.

- Streetscaping enhancements, such as the introduction of a boulevard and lighting. As part of the planning and design phases of the project, staff will evaluate the potential for burying overhead utilities that would be completed as a supplemental activity to this project.

(Limit 2,800 characters; approximately 400 words)

TIP Description Guidance (will be used in TIP if the project is selected for funding)

CSAH 153 (Lowry Ave NE) from 0.03 miles West of Washington St NE to 0.03 miles East of Johnson St NE in Minneapolis

Project Length (Miles)

1.02

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

\$7,000,000.00

Match Amount

\$3,490,000.00

Minimum of 20% of project total

Project Total

\$10,490,000.00

Match Percentage

33.27%

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: 2023

Select 2020 or 2021 for TDM projects only. For all other applications, select 2022 or 2023.

Additional Program Years:

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

Project Information-Roadways**County, City, or Lead Agency**

Hennepin County

Functional Class of Road

A-Minor Augmentor

Road System

CSAH

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

Road/Route No.

153

i.e., 53 for CSAH 53

Name of Road

Lowry Ave NE

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed

55418

(Approximate) Begin Construction Date

04/03/2023

(Approximate) End Construction Date

11/15/2024

TERMINI:(Termini listed must be within 0.3 miles of any work)**From:****(Intersection or Address)**

Washington St NE

To:**(Intersection or Address)**

Johnson St NE

DO NOT INCLUDE LEGAL DESCRIPTION

Or At**Primary Types of Work**

Grading, aggregate base, bituminous base & surface, stormwater, sidewalk, ADA, traffic signals, streetscaping, bicycle facilities, and curb/gutter

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

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)**Old Bridge/Culvert No.:****New Bridge/Culvert No.:**

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

Requirements - All Projects

All Projects

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

A) Transportation System Stewardship (P 2.17-2.19)

The reconstruction of Lowry Ave NE provides a new and structurally adequate roadway that accommodates 2040 forecasted traffic volumes and meets multi-modal transportation goals. The project provides a new pavement surface, curb, traffic signals, sidewalk, bike facility and stormwater systems.

B) Safety/Security (P 2.20-2.23)

Improvements such as ADA compliant facilities, Accessible Pedestrian Signals, high-visibility crosswalk markings, and countdown timers improve pedestrian safety and comfort. Lighting upgrades will improve safety and comfort for users. The project will address known crash issues, including three signalized intersections that exceed the critical crash rate. Improvements are anticipated to result in a crash reduction of 24%.

List the goals, objectives, strategies, and associated pages:

C) Access to Destinations (P 2.24-2.37)

This roadway section serves as an east/west connection over the the Mississippi River and accommodates eight Metro Transit routes. Additionally, the roadway serves as a critical regional connection for the historically disadvantaged business community of North Minneapolis.

D) Competitive Economy (P 2.38-2.41)

With 14,658 employees within 1 mile, including 2,995 manufacturing and distribution employees, this route is essential to the regional economy. Shoreham Yards, an FHWA designated truck-rail

facility, generates freight traffic along Lowry Ave NE which provides connections over the railroad and Mississippi River. A vehicle count performed in 2017 indicated that 4,200 commercial vehicles travel along Lowry Ave NE daily.

E) Healthy Environment (P 2.42-2.45)

The bike/pedestrian enhancements provide first/last mile connections. These features aim to provide choices in transportation. With the current roadway drainage deficiencies, modernizing the stormwater infrastructure will minimize negative impacts within the Mississippi Watershed.

F) Leveraging Transportation Investments to Guide Land Use (P 2.46-2.55)

The multi-modal enhancements made through this project optimize existing and planned infrastructure. Northeast Minneapolis is experiencing growth in industrial, commercial & entertainment businesses. Upper Harbor Terminal, a planned 50-acre development in North Minneapolis, will be the largest development opportunity along the Mississippi River and will rely on Lowry Ave NE to serve as a critical route. Furthermore, Lowry Ave NE serves the growing business community and population within the Northeast Arts District.

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.

2018-2022 Hennepin County Community Works
CIP (Attachment 6)

2018-2022 Hennepin County Transportation CIP
(Attachment 7)

List the applicable documents and pages:

Lowry Ave NE Corridor Implementation Framework
Plan (Attachment 8)

Hennepin County Board Resolution - 2018
Regional Solicitation (Attachment 9)

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.

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

5. Applicants that are not 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 elements in more than one funding application 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.

Roadway Expansion: \$1,000,000 to \$7,000,000

Roadway Reconstruction/ Modernization Modernization and Spot Mobility: \$1,000,000 to \$7,000,000

Traffic Management Technologies (Roadway System Management): \$250,000 to \$7,000,000

Bridges Rehabilitation/ Replacement: \$1,000,000 to \$7,000,000

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, or be substantially working towards, completing 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 applicant is a public agency that employs 50 or more people and has an adopted ADA transition plan that covers the public right of way/transportation.

Date plan adopted by governing body

The applicant is a public agency that employs 50 or more people and is currently working towards completing an ADA transition plan that covers the public rights of way/transportation. Yes 05/02/2011 04/06/2020
Date process started Date of anticipated plan completion/adoption

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

The applicant is a public agency that employs fewer than 50 people and is working towards completing an ADA self-evaluation that covers the public rights of way/transportation. Date process started Date of anticipated plan completion/adoption

(TDM Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.

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

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

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

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

Roadways Including Multimodal Elements

1. All roadway and bridge projects must be identified as a principal arterial (non-freeway facilities only) or A-minor arterial as shown on the latest TAB approved roadway functional classification map.

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

Roadway Expansion and Reconstruction/Modernization and Spot Mobility projects only:

2. The project must be designed to meet 10-ton load limit standards.

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

Bridge Rehabilitation/Replacement projects only:

3. Projects requiring a grade-separated crossing of a principal arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using MnDOTs Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

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

4. The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.

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

5. The length of the bridge must equal or exceed 20 feet.

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

6. The bridge must have a sufficiency rating less than 80 for rehabilitation projects and less than 50 for replacement projects. Additionally, the bridge must also be classified as structurally deficient or functionally obsolete.

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

Roadway Expansion, Reconstruction/Modernization and Spot Mobility, and Bridge Rehabilitation/Replacement projects only:

7. All roadway projects that involve the construction of a new/expanded interchange or new interchange ramps must have approval by the Metropolitan Council/MnDOT Interchange Planning Review Committee prior to application submittal. Please contact Michael Corbett at MnDOT (Michael.J.Corbett@state.mn.us or 651-234-7793) to determine whether your project needs to go through this process.

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

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	\$550,000.00
Removals (approx. 5% of total cost)	\$400,000.00
Roadway (grading, borrow, etc.)	\$900,000.00
Roadway (aggregates and paving)	\$1,150,000.00
Subgrade Correction (muck)	\$90,000.00
Storm Sewer	\$960,000.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$135,000.00
Traffic Control	\$250,000.00
Striping	\$130,000.00
Signing	\$50,000.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$385,000.00
Bridge	\$0.00
Retaining Walls	\$150,000.00
Noise Wall (not calculated in cost effectiveness measure)	\$0.00

Traffic Signals	\$1,125,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$1,880,000.00
Other Roadway Elements	\$0.00
Totals	\$8,155,000.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$0.00
Sidewalk Construction	\$305,000.00
On-Street Bicycle Facility Construction	\$230,000.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$415,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$75,000.00
Pedestrian-scale Lighting	\$520,000.00
Streetscaping	\$250,000.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$540,000.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$2,335,000.00

Specific Transit and TDM Elements

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

Other Transit and TDM Elements	\$0.00
Totals	\$0.00

Transit Operating Costs

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

Totals

Total Cost	\$10,490,000.00
Construction Cost Total	\$10,490,000.00
Transit Operating Cost Total	\$0.00

Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor	CSAH 66 (Broadway St NE)
Adjacent Parallel Corridor Start and End Points:	
Start Point:	Washington St NE
End Point:	Johnson St NE
Free-Flow Travel Speed:	22
<i>The Free-Flow Travel Speed is black number.</i>	
Peak Hour Travel Speed:	15
<i>The Peak-Hour Travel Speed is red number.</i>	
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):	31.82%
Upload the "Level of Congestion" map:	1527872673436_2018 RS Map 01 - CSAH 153 (Lowry Ave NE) Reconstruction Project - Level of Congestion - Combined.pdf

Principal Arterial Intersection Conversion Study:

Proposed at-grade project that reduces delay at a High Priority Intersection:

(65 Points)

Proposed at-grade project that reduces delay at a Medium Priority Intersection:

(55 Points)

Proposed at-grade project that reduces delay at a Low Priority Intersection:

(45 Points)

Not listed as a priority in the study: Yes

(0 Points)

Congestion Management and Safety Plan IV:

Proposed at-grade project that reduces delay at a CMSP opportunity area:

(65 Points)

Not listed as a CMSP priority location: Yes

(0 Points)

Measure B: Project Location Relative to Jobs, Manufacturing, and Education

Existing Employment within 1 Mile: 14658

Existing Manufacturing/Distribution-Related Employment within 1 Mile: 2995

Existing Post-Secondary Students within 1 Mile: 0

Upload Map 1527873074874_2018 RS Map 02 - CSAH 153 (Lowry Ave NE) Reconstruction Project - Regional Economy.pdf

Please upload attachment in PDF form.

Measure C: Current Heavy Commercial Traffic

RESPONSE: Select one for your project, based on the Regional Truck Corridor Study:

Along Tier 1:

Along Tier 2:

Along Tier 3:

The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: Yes

None of the tiers:

Measure A: Current Daily Person Throughput

Location West of Johnson St NE

Current AADT Volume 10900

Existing Transit Routes on the Project 4, 10, 17, 32, 59, 118, 141, 888-Northstar Commuter Rail

For New Roadways only, list transit routes that will likely be diverted to the new proposed roadway (if applicable).

Upload Transit Connections Map

1527876744296_2018 RS Map 04 - CSAH 153 (Lowry Ave NE) Reconstruction Project - Transit Connections.pdf

Please upload attachment in PDF form.

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	1391.0
Current Daily Person Throughput	15561.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume No

If checked, METC Staff will provide Forecast (2040) ADT volume

OR

Identify the approved county or city travel demand model to determine forecast (2040) ADT volume

2040 Hennepin County Transportation Systems Plan which is based on the Metropolitan Council model (Attachment 11).

Forecast (2040) ADT volume 14200

Measure A: Connection to disadvantaged populations and projects benefits, impacts, and mitigation

Select one:

Project located in Area of Concentrated Poverty with 50% or more of residents are people of color (ACP50): Yes

(up to 100% of maximum score)

Project located in Area of Concentrated Poverty:

(up to 80% of maximum score)

Projects census tracts are above the regional average for population in poverty or population of color:

(up to 60% of maximum score)

Project located in a census tract that is below the regional average for population in poverty or populations of color or includes children, people with disabilities, or the elderly:

(up to 40% of maximum score)

1.(0 to 3 points) A successful project is one that has actively engaged low-income populations, people of color, children, persons with disabilities, and the elderly during the project's development with the intent to limit negative impacts on them and, at the same time, provide the most benefits.

Describe how the project has encouraged or will engage the full cross-section of community in decision-making. Identify the communities to be engaged and where in the project development process engagement has occurred or will occur. Elements of quality engagement include: outreach to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in the community engagement related to transportation projects; residents or users identifying potential positive and negative elements of the project; and surveys, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

The CSAH 153 (Lowry Ave) Reconstruction Project will engage and gather input from the community through an inclusive and accessible process. This dialogue will deliver a successful project with a community-focused solution. Attachment 12 includes a one page summary of the community engagement plan for a similar reconstruction project that is currently in process.

The engagement process will continue off the success of the Lowry Ave NE Community Works Framework Plan (finalized in 2015) which encouraged an inclusive community process that actively listens and responds to all citizens.

Response:

The Community Works Framework Plan included two local advisory committees, one steering committee, one business owners' focus group, three public workshops, small group meetings with local high school students, an Open Streets Festival booth, online surveys, and presentations to four neighborhood groups. Establishing these various groups was key to obtaining strong participation across the diverse demographic.

Hennepin County will partner with local residents, employers, business associations, neighborhood associations (specifically Holland, Windom Park, and Audubon Park), property and business owners, transit riders, local students and youth, City of Minneapolis, Minneapolis Park and Recreation Board, Metro Transit, Minneapolis Public Schools and others.

(Limit 1,400 characters; approximately 200 words)

2.(0 to 7 points) Describe the projects benefits to low-income populations, people of color, children, people with disabilities, and the elderly. Benefits could relate to safety; public health; access to destinations; travel time; gap closure; leveraging of other beneficial projects and investments; and/or community cohesion. Note that this is not an exhaustive list.

The CSAH 153 (Lowry Ave NE) Reconstruction Project is located in a census tract Area of Concentrated Poverty with 50% or more of the residents being people of color. One major theme of this project will be to provide substantial improvements for pedestrians who are currently under-served by this roadway. This project will enhance pedestrian facilities (wider sidewalks with boulevards) that benefit users who rely on walking for transportation. Additionally, this project will remove barriers (such as utility poles, signs, and fire hydrants) that existing within the walking areas. Furthermore, this project will include APS at signalized intersections which will provide audible assistance to users with visual impairments. These pedestrian enhancements and ADA features are critical to maintaining consistent transit ridership.

Response:

Various streetscaping elements (such as street trees, ornamental fencing, benches, etc.) will be incorporated into the project to improve aesthetics along the corridor. Special consideration will be made in the design process to ensure that the proposed streetscaping elements align with the character of the neighborhoods in an effort to bring communities together. The existing sidewalk facilities are located adjacent to the roadway, making it not feasible to incorporate these elements within the existing environment.

Additionally, the closest parallel bikeway route exists along 22nd Ave NE (located three blocks south of Lowry Ave NE), however, this route lacks a direct connection across the Mississippi River and lacks direct access to the various commercial destinations along Lowry Ave NE.

The Lowry Ave NE/Central Ave NE intersection is

the heart of a critical regional connection over the Mississippi River that directly serves the historically disadvantaged business community of North Minneapolis and the growing industrial, commercial and entertainment businesses of Northeast Minneapolis. This commercial node in Northeast Minneapolis is a diverse community and is home to bustling minority-owned shops, restaurants, an acclaimed arts district, and a growing microbrewery industry. This project will provide improvements for all modes at this intersection by modifying the existing geometry, constructing curb extensions, and enhancing the sidewalk environment that is currently constrained.

Lowry Ave NE provides one of the few Mississippi River crossings in North/Northeast Minneapolis. This project will maintain this vital link between the industrial jobs of Shoreham Intermodal Yards and neighborhood communities.

(Limit 2,800 characters; approximately 400 words)

3.(-3 to 0 points) Describe any negative externalities created by the project along with measures that will be taken to mitigate them. Negative externalities can result in a reduction in points, but mitigation of externalities can offset reductions.

Below is a list of negative impacts. Note that this is not an exhaustive list.

Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.

Increased noise.

Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.

Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, 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.

Displacement of residents and businesses.

Construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings. These tend to be temporary.

Other

The CSAH 153 (Lowry Ave NE) Reconstruction Project will include temporary construction disturbances such as: construction noise, dust, and disruption to utilities. Hennepin County will follow the allowable working hours as required by the Minneapolis Permits Office. Additionally, staff will work with Minneapolis Traffic to assign logical detours, discourage cut-through traffic on local neighborhood streets (especially since this project is located within a grid network), and manage driveway access for local residents and property owners. The relationships formed in the planning and design stages will allow for effective communication during construction activities to minimize response times whenever concerns are raised.

Response:

This project is not anticipated to have significant right of way impacts to private properties along the Lowry Ave NE corridor. However, minor disturbances to private landscaping, trees, driveways, and alleyways will occur during construction activities. Property owners will be informed of these impacts prior to construction and will be recompensed for any significant alternations (such as damaging a private retaining wall).

The potential removal of the traffic signal at Washington St NE may cause negative public reaction due to the perceptions of decreased traffic operations and safety. However, this project element will be a focal point of the public outreach process to provide opportunities for any questions or concerns to be addressed. Furthermore, if it is determined that the traffic signal is removed, it is anticipated an enhanced pedestrian crossing (that may include a raised concrete median) would be provided for traffic calming.

Additionally, the 4-lane configuration west of Central Ave NE will be modified to either a 3-lane configuration or 2-lane configuration (with left-turn lanes provided at signalized intersections). This revised configuration eliminates the ability for vehicles to bypass a slow moving vehicle (such as a garbage truck) that creates delay for users. Furthermore, the new striping configuration will provide a much safer roadway in comparison to the existing 4-lane undivided configuration (which generally experience the highest crash rates among all roadway configurations).

(Limit 2,800 characters; approximately 400 words)

Upload Map

1527883191655_2018 RS Map 03 - CSAH 153 (Lowry Ave NE) Reconstruction Project - Socio Economic Conditions.pdf

Measure B: Affordable Housing

City	Segment Length (For stand-alone projects, enter population from Regional Economy map) within each City/Township	Segment Length/Total Project Length	Score	Housing Score Multiplied by Segment percent
Minneapolis	1.02	1.0	100.0	100.0

Total Project Length

Total Project Length (as entered in the "Project Information" form) 1.02

Affordable Housing Scoring

Total Project Length (Miles) or Population	1.02
Total Housing Score	100.0

Affordable Housing Scoring

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1968	1.02	2007.36	1968.0
	1	2007	1968

Total Project Length

Total Project Length (as entered in "Project Information" form) 1.02

Average Construction Year

Weighted Year 1968

Total Segment Length (Miles)

Total Segment Length 1.02

Measure B: Geometric, Structural, or Infrastructure Improvements

Improved roadway to better accommodate freight movements: Yes

Lowry Ave NE is a 10-ton roadway that is acknowledged by the National Highway System. A traffic count in 2017 indicated 4,200 commercial vehicles use Lowry Ave NE daily (Attachment 13). This project will better facilitate commercial traffic by redesigning intersections to accommodate truck turns, modifying driveway aprons to improve delivery truck operation, and provide left-turn phasing to serve vehicles that have difficulty finding gaps.

Response:

These improvements are critical near the Central Ave NE and Johnson St NE intersections which experience high truck volumes. Furthermore, the existing curb along Lowry Ave NE is damaged and has settled; replacing it will better define the roadway limits.

(Limit 700 characters; approximately 100 words)

Improved clear zones or sight lines:

Yes

The roadway network near Lowry Ave NE follows a grid system that includes straight streets, therefore, sight distance is generally adequate. The proposed locations of fencing, retaining walls, lighting, signs, and landscaping will not obstruct sight lines. The inclusion of a boulevard will allow for proper locating of these vertical elements.

Response:

The west segment (from Washington St NE to Central Ave NE) will be modified to either a 3-lane or 2-lane section, while the east segment (from Central Ave NE to Johnson St NE) will include parking prohibitions to allow for the inclusion of a bikeway. These improvements will improve sight lines for pedestrian crossings and turning vehicles.

(Limit 700 characters; approximately 100 words)

Improved roadway geometrics:

Yes

The west segment (from Washington St NE to Central Ave NE) will be modified from its current 4-lane environment to improve access and safety. Significant revisions will occur at intersections (whenever feasible) that include curb extensions, dedicated turn lanes, and adequate facilities for all modes. Additionally, vehicles in opposing directions are adjacent to one another, creating a sense of discomfort for users.

Response:

The roadway has experienced numerous overlays that have extended over the gutter pan, reducing the drainage and safety benefits provided by the curb. A full reconstruction is needed to re-establish the roadway environment and provide clear definition of each facility.

(Limit 700 characters; approximately 100 words)

Access management enhancements:

Yes

Lowry Ave NE provides access to diverse traffic generators in the area. Striping revisions and on-street parking modifications will improve service (by reducing left-turn and rear-end conflicts) for users desiring to access local businesses. Additionally, consolidation of private and commercial driveways will be investigated during the project's design phase.

Response:

The introduction of a bikeway facility will offer a new connection for bicyclists in the area. The enhancement of sidewalk facilities, most notably the elimination of obstructions and defects, will improve accessibility for pedestrians. Additionally, these elements will improve connections to existing transit stops along the corridor.

(Limit 700 characters; approximately 100 words)

Vertical/horizontal alignment improvements:

Yes

The area surrounding the project is mainly developed, offering limited opportunities to make significant changes to the roadway's vertical and horizontal alignment without significantly impacting adjacent properties.

Response:

Adequate lane transition lengths and vehicle lane alignments will be designed according to MnDOT requirements to ensure a high level of safety and mobility for users. Specific improvements will be made at the Washington St NE intersection which includes a nearby grade separated railroad crossing that poses potential sight obstructions for users.

(Limit 700 characters; approximately 100 words)

Improved stormwater mitigation:

Yes

Hennepin County Environment and Energy staff will be directly involved during design phases of the project to investigate the feasibility of incorporating various strategies and project elements to minimize storm water runoff. Adequate storm water structures will be constructed to accommodate the required flood year events. Streetscaping elements will be key in collecting rain water to avoid ponding in undesirable areas. Project elements will be able to sustain harsh weather conditions, especially snowfall events that require salt application.

Response:

Additionally, the contractor will be required to follow the Stormwater Pollution Prevention Plan to ensure proper sediment and erosion control.

(Limit 700 characters; approximately 100 words)

Signals/lighting upgrades:

Yes

The project will replace and/or upgrade existing traffic signal systems by including the following improvements (but not limited to): exclusive left-turn phasing, mast arms, signal communications, and various ITS components. The intersection at Washington St NE will be further evaluated to determine the preferred intersection control device in an effort to provide safe, efficient, and environmentally-friendly mobility along Lowry Ave NE.

Response:

The existing lighting along the corridor is outdated and needs replacement. The specific type and location of lighting will be consistent with guidelines included in Access Minneapolis as recommended by the Minneapolis Street Lighting Plan (Attachment 14)

(Limit 700 characters; approximately 100 words)

Other Improvements

Yes

Significant improvements within the pedestrian environment are anticipated to occur as part of this project through the introduction of a boulevard, curb extensions, and other pedestrian crossing enhancements. The presence of commercial buildings, private landscaping features, utility poles, and private driveways create a challenging walkway for users that is especially disruptive during snowfall events. These barriers will either be removed or minimized to provide a consistent walkable space for all users, especially those with limited mobility. Specific consideration will be made for pedestrian crossing treatments at key locations to ensure that users may access popular destinations.

Response:

(Limit 700 characters; approximately 100 words)

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/Vehicle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/Vehicle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/Vehicle)	Volume (Vehicles per hour)	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
26.0	19.0	7.0	2067	14469.0	At Johnson St NE	15308033680 14_04 - CSAH 153 - CP 1409 - At Johnson St.pdf
11.0	16.0	-5	1249	-6245	At Monroe St NE	15308032993 42_02 - CSAH 153 - CP 1409 - At Monroe St NE.pdf
30.0	35.0	-5	2417	-12085	At TH 65 (Central Ave NE)	15308033355 61_03 - CSAH 153 - CP 1409 - At TH 65 (Central Ave NE).pdf
20.0	2.0	18.0	1298	23364.0	At Washington St NE	15308032782 95_01 - CSAH 153 - CP 1409 - At Washington St NE.pdf

Vehicle Delay Reduced

Total Peak Hour Delay Reduced 19503.0

Measure B: Roadway projects that do not include new roadway segments or railroad grade-separation elements

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
12.97	12.31	0.66

Total

Total Emissions Reduced: 0.66

Upload Synchro Report 1530803867952_CSAH 153 - CP 1409 - MOE Report - Combined.pdf

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only):

Total (CO, NOX, and VOC)
Peak Hour Emissions
without the Project
(Kilograms):

0

Total (CO, NOX, and VOC)
Peak Hour Emissions with
the Project (Kilograms):

0

Total (CO, NOX, and VOC)
Peak Hour Emissions
Reduced by the Project
(Kilograms):

0

Total Parallel Roadway

Emissions Reduced on Parallel Roadways 0

Upload Synchro Report

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

New Roadway Portion:

Cruise speed in miles per hour with the project: 0

Vehicle miles traveled with the project: 0

Total delay in hours with the project: 0

Total stops in vehicles per hour with the project: 0

Fuel consumption in gallons: 0

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or
Produced on New Roadway (Kilograms): 0

EXPLANATION of methodology and assumptions used:(Limit
1,400 characters; approximately 200 words)

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the
Project (Kilograms): 0.0

Measure B: Roadway projects that include railroad grade-separation elements

Cruise speed in miles per hour without the project:	0
Vehicle miles traveled without the project:	0
Total delay in hours without the project:	0
Total stops in vehicles per hour without the project:	0
Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons (F1)	0
Fuel consumption in gallons (F2)	0
Fuel consumption in gallons (F3)	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	

Measure A: Roadway Projects that do not Include Railroad Grade-Separation Elements

The following are CMFs from the CMF Clearinghouse or other known resource (Attachment 15)

XX - Improvement (CMF ID, % reduction)

01) Raised median: Ped (8799, 48%)

02) Curb extensions: Ped (CMF N/A, 20-39%)

03) Bike lanes: Bike (1719, 35%)

04) Signal mast arms: All (1420, 49%)

Crash Modification Factor Used:

05) Remove unwarranted signal: All (332, 24%)

06) LT lanes on major approaches: LT (271, 42%)

07) LT lanes on CSAH 153: Crashes on CSAH 153 (7998, 12%)

08) Convert to 2-lane roadway with turn lanes: All (199, 29%)

09) Ground-in, wet-reflective pavement markings: All (8109, 18%)

10) FYA prot/perm phasing: LT crashes on CSAH 153 (7684, 40%)

11) Prohibit on-street parking: All (153/154, 20-27%)

(Limit 700 Characters; approximately 100 words)

The Benefit/Cost Analysis evaluated the project corridor in seven separate sections (comprised of major intersections and segments) in an effort to target crash themes. Up to two (of the eleven selected) CMFs were applied to each crash based on the reported crash type along with the anticipated benefit provided by each safety countermeasure. A maximum of three CMFs were applied to each individual segment or intersection since the project corridor experiences diverse crash types (vehicle, bicycle and pedestrian related).

Rationale for Crash Modification Selected:

The expected service life for each improvement ranged from 10 years to 20 years (primarily 20 years), therefore, staff assumed an average value to enter into the Benefit/Cost Worksheets. If a service life value was not stated within the guidelines of the 2018 Highway Safety Improvement Program Criteria, then staff identified an expected service life value based on information provided in the 2015 MnDOT Traffic Engineering Manual.

The overall average crash reduction expected from the project is 24% (Based on a 76% crash modification factor). Approximately 24% (45) of the total number of reported crashes from the years 2013 to 2015 (185) will be reduced through the implementation of various safety countermeasures as part of this project.

(Limit 1400 Characters; approximately 200 words)

Project Benefit (\$) from B/C Ratio

\$20,065,889.00

Worksheet Attachment

1530718671639_CSAH 153 (Lowry Ave NE) Reconstruction
Project - BC Analysis Worksheets.pdf

Please upload attachment in PDF form.

Roadway projects that include railroad grade-separation elements:

Current AADT volume:	0
Average daily trains:	0
Crash Risk Exposure eliminated:	0

Measure A: Multimodal Elements and Existing Connections

The CSAH 153 (Lowry Ave NE) Reconstruction Project will transform the corridor to benefit users by reallocating space within the existing cross section.

Pedestrian Improvements

It is anticipated that pedestrians will benefit most from this project. The existing sidewalk facilities are located adjacent to the roadway, include obstructions and defects, and offer poorly designed pedestrian ramps (many of which include steep slopes). The intersection at Monroe St NE is especially difficult to transverse given the presence of signal poles, fire hydrants, and building entrances. Additionally, the lack of a boulevard area along the corridor results in poor placement of signs and utility poles. It also creates challenges when performing snow removal activities, resulting in a reduced walking width. This project will replace all sidewalks and pedestrian ramps to meet current ADA requirements. APS and countdown timers will be installed at signalized intersections to provide additional guidance to users, especially those with sight impairments. Curb extensions, crossing beacons, and raised medians will be considered for implementation along the corridor during the design phase. Furthermore, a consistent boulevard will be introduced to provide separation from vehicles and provide adequate space for trees, lighting, signs, and other streetscaping elements.

Response:

Bicycle Improvements

The project will expand the bicycle network east of Central Ave NE, as identified in the Lowry Ave NE Framework Plan, by providing bicycle accommodations in lieu of the existing parking areas. The roadway environment west of Central

Ave NE is not yet determined, however, bicycle accommodations will be considered during the planning and design phases. Continued expansion of bicycle accommodations along Lowry Ave NE will provide users with a direct connection over the Mississippi River and access to existing north/south routes, including: 2nd St N, 5th St NE, and Central Ave NE.

Transit Improvements

Lowry Ave NE currently serves eight Metro Transit routes that include stops at various locations along the corridor. The Lowry Ave NE/Central Ave NE intersection experiences frequent transit activity, therefore, staff is proposing to construct curb extensions in all four quadrants (if feasible) to shorten the crossing distance, improve boarding/disembarking operations, and enhance visibility of the transit stop. The pedestrian and bicycle improvements listed above will provide non-motorized users with safe and accessible options to maintain high levels of transit ridership. This project will improve accessibility at approximately 15 intersections along the corridor, ensuring that each transit stop is accessible from all directions.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.

Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1)Layout (30 Percent of Points)

Layout should include proposed geometrics and existing and proposed right-of-way boundaries.

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties that the project goes through or agencies that maintain the roadway(s)). A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

Attach Layout

Please upload attachment in PDF form.

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

50%

Attach Layout

1530646125670_CSAH 153 - CP 1409 - 2018.06.26.pdf

Please upload attachment in PDF form.

Layout has not been started

Yes

0%

Anticipated date or date of completion

12/18/2020

2)Review of Section 106 Historic Resources (20 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

Yes

100%

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

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

3)Right-of-Way (30 Percent of Points)

Right-of-way, permanent or temporary easements either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements required, plat, legal descriptions, or official map complete

50%

Right-of-way, permanent or temporary easements required, parcels identified

25%

Right-of-way, permanent or temporary easements required, parcels not all identified Yes

0%

Anticipated date or date of acquisition 12/16/2022

4)Railroad Involvement (20 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%

Anticipated date or date of executed Agreement

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form): \$10,490,000.00

Enter Amount of the Noise Walls: \$0.00

Total Project Cost subtract the amount of the noise walls: \$10,490,000.00

Points Awarded in Previous Criteria

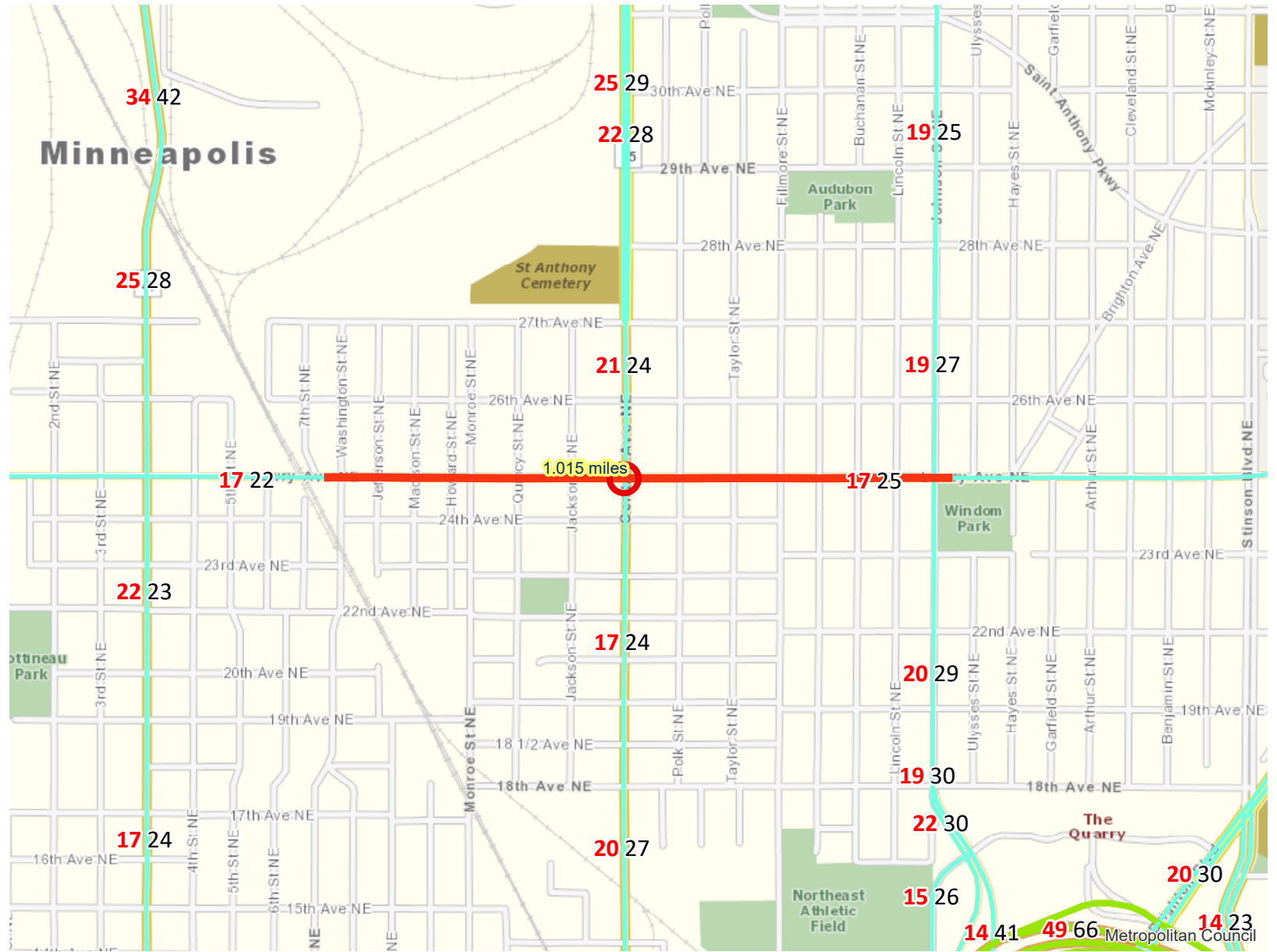
Cost Effectiveness \$0.00

Other Attachments

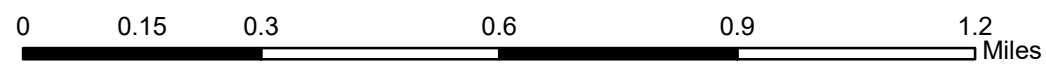
File Name	Description	File Size
Attachment 00 - List of Attachments.pdf	List of Attachments	50 KB
Attachment 01 - Project Narrative.pdf	Project Narrative	690 KB
Attachment 02 - Project Location Map.pdf	Project Location Map	180 KB
Attachment 03 - Existing Roadway Deficiencies.pdf	Existing Roadway Deficiencies	846 KB
Attachment 04 - Proposed Typical Sections.pdf	Proposed Typical Sections	949 KB
Attachment 05 - Proposed Concept.pdf	Proposed Concept	1.9 MB
Attachment 06 - Hennepin County 2018-2022 Community Works Capital Improvement Program.pdf	Hennepin County 2018-2022 Community Works CIP	702 KB
Attachment 07 - Hennepin County 2018-2022 Transportation Capital Improvement Program.pdf	2018-2022 Hennepin County Transportation CIP	1.2 MB
Attachment 08 - Lowry Avenue NE Framework Plan.pdf	Lowry Ave NE Framework Plan	752 KB
Attachment 09 - Hennepin County Board Resolution - 2018 Regional Solicitation.pdf	Hennepin County Board Resolution	665 KB
Attachment 10 - MnDOT 50 Series Map.pdf	MnDOT 50 Series Map	2.1 MB
Attachment 11 - Draft Hennepin County 2040 TSP - Forecasted Traffic Volumes.pdf	2040 Forecasted Traffic Volumes	936 KB
Attachment 12 - Public Engagement Plan Example.pdf	Public Engagement Plan Example	676 KB
Attachment 13 - 2017 CSAH 153 HCAADT Report.pdf	2017 HCAADT Report	615 KB
Attachment 14 - Minneapolis Street Lighting Plan.pdf	Minneapolis Street Lighting Plan	740 KB
Attachment 15 - Crash Modification Factors.pdf	Crash Modification Factors	1.6 MB
Attachment 16 - Crash Detail Listing (2013-2015).pdf	Crash Detail Listing	794 KB
Attachment 17 - MnDOT Support Letter.pdf	MnDOT Support Letter	1.1 MB
Attachment 18 - City of Minneapolis Support Letter.pdf	City of Minneapolis Support Letter	1.5 MB

Level of Congestion

Roadway Reconstruction/Modernization Project: CSAH 153 (Lowry Ave NE) Reconstruction Project | Map ID: 1527857617306



- Project Points
- Project
- Principal Arterials
- - - Principal Arterials Planned
- A Minor Arterials
- - - A Minor Arterials Planned



Created: 6/1/2018
LandscapeRSA1



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



Regional Economy

Roadway Reconstruction/Modernization Project: CSAH 153 (Lowry Ave NE) Reconstruction Project | Map ID: 1527857

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

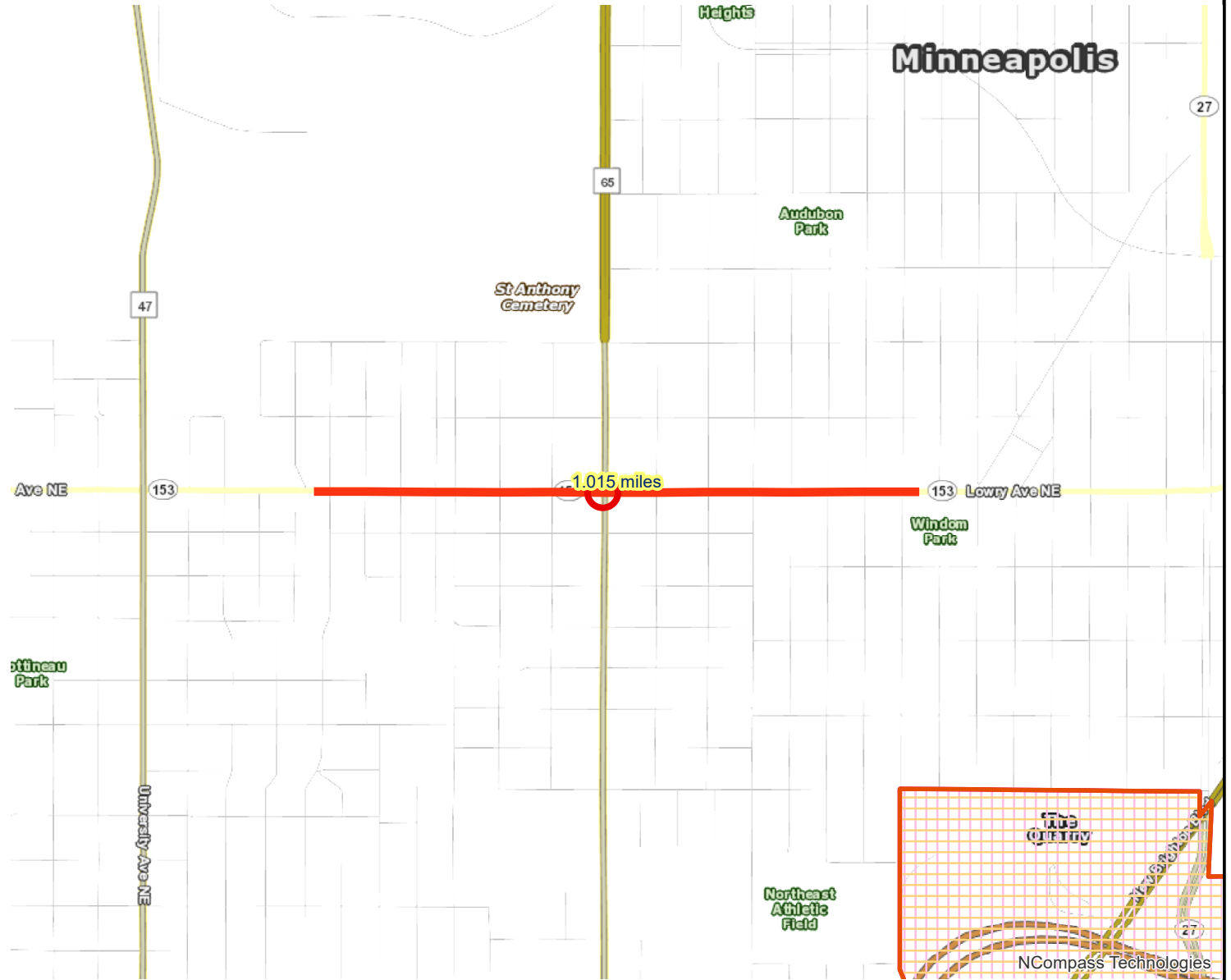
Totals by City:





Minneapolis

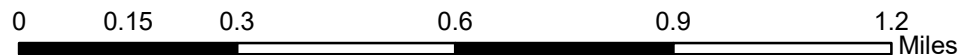
Population: 32322

Employment: 14658

Mfg and Dist Employment: 2995



-  Project Points
-  Project
-  Manufacturing/Distribution Centers
-  Job Concentration Centers



Created: 6/1/2018
LandscapeRSA5



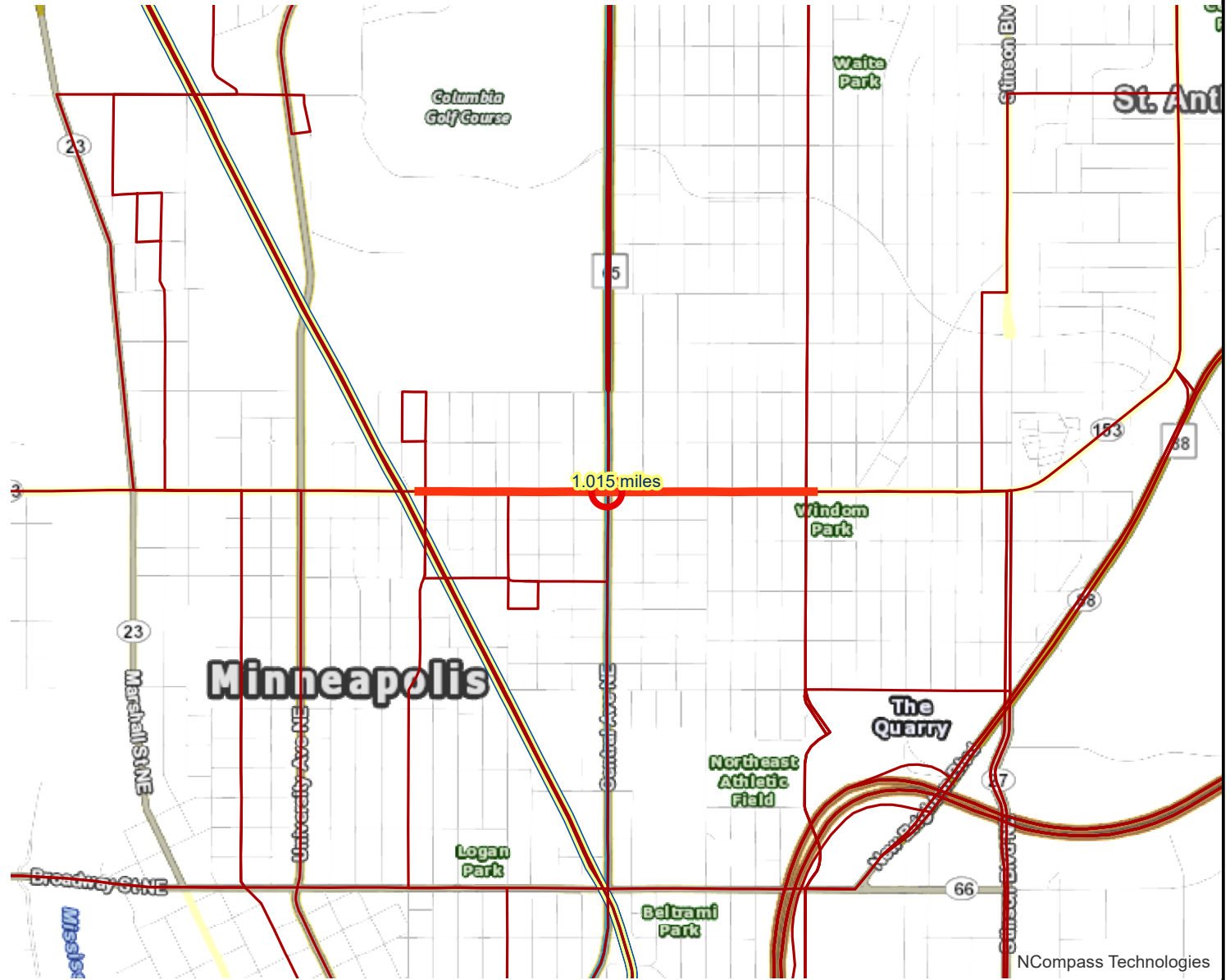
For complete disclaimer of accuracy, please visit <http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx>



NCompass Technologies

Transit Connections

Roadway Reconstruction/Modernization Project: CSAH 153 (Lowry Ave NE) Reconstruction Project | Map ID: 152785



Results

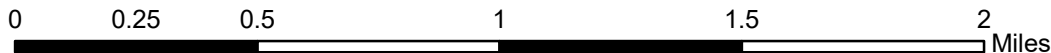
Transit with a Direct Connection to project:

10 118 141 17 32 4 59 888

*Central

*indicates Planned Alignments

○ Project Points
 — Transit Routes
 Transitway
 Planned Transitway Alignments
— Project
— Northstar Line
— Arterial BRT



Created: 6/1/2018
LandscapeRSA3



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

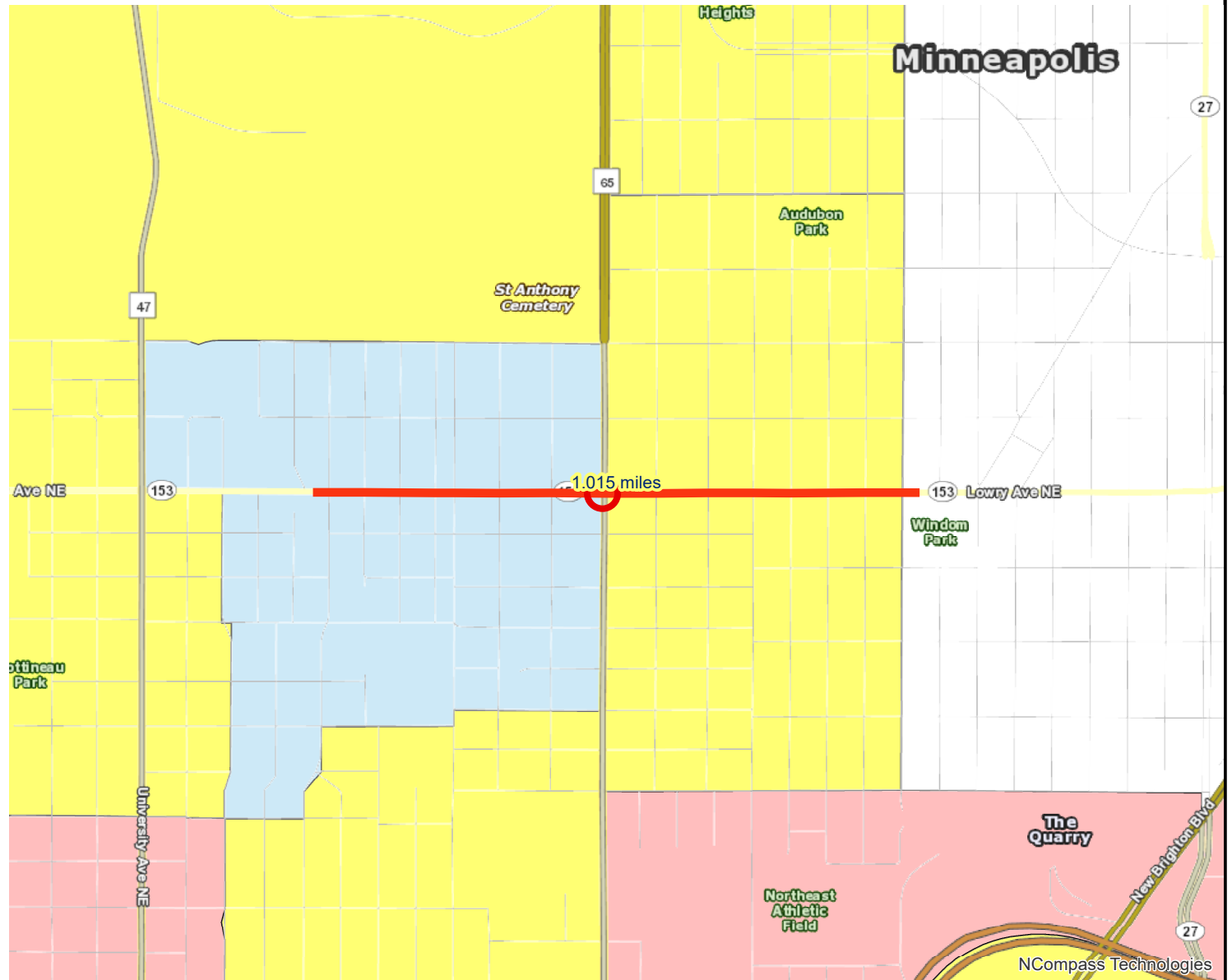





NCompass Technologies



Socio-Economic Conditions

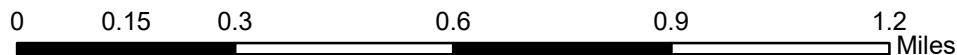
Results

Project located **IN**
Area of Concentrated Poverty
with 50% or more of residents
are people of color (ACP50):
(0 to 30 Points)



-  Project Points
-  Project
-  Area of Concentrated Poverty > 50% residents of color

-  Area of Concentrated Poverty
-  Above reg'l avg conc of race/poverty



Created: 6/1/2018
LandscapeRSA2



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



NCompass Technologies

Lowry Avenue NE Corridor Study
Existing Conditions (PM PEAK)

Existing Conditions

848: Johnson St NE & Lowry Av NE

Direction	All
Future Volume (vph)	2067
Total Delay / Veh (s/v)	26
CO Emissions (kg)	2.80
NOx Emissions (kg)	0.55
VOC Emissions (kg)	0.65

Lowry Avenue NE Corridor Study
3 Lane Conditions (PM PEAK)

Proposed Conditions

848: Johnson St NE & Lowry Av NE

Direction	All
Future Volume (vph)	2067
Total Delay / Veh (s/v)	19
CO Emissions (kg)	2.54
NOx Emissions (kg)	0.49
VOC Emissions (kg)	0.59



Phase Number	2	4
Movement	NBSB	EBWB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	49	41
Maximum Split (%)	54.4%	45.6%
Minimum Split (s)	26.4	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.9	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	3	3
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	9	8
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	65	24
End Time (s)	24	65
Yield/Force Off (s)	18.6	59.6
Yield/Force Off 170(s)	9.6	51.6
Local Start Time (s)	0	49
Local Yield (s)	43.6	84.6
Local Yield 170(s)	34.6	76.6

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 65 (72%), Referenced to phase 2:NBSB, Start of 1st Green	

Splits and Phases: 848: Johnson St NE & Lowry Av NE





Phase Number	2	4
Movement	NBSB	EBWB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	33.2	26.8
Maximum Split (%)	55.3%	44.7%
Minimum Split (s)	26.4	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.9	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	3	3
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	9	8
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	0	33.2
End Time (s)	33.2	0
Yield/Force Off (s)	27.8	54.6
Yield/Force Off 170(s)	18.8	46.6
Local Start Time (s)	0	33.2
Local Yield (s)	27.8	54.6
Local Yield 170(s)	18.8	46.6

Intersection Summary

Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of 1st Green	

Splits and Phases: 848: Johnson St NE & Lowry Av NE



Existing Conditions

Lowry Avenue NE Corridor Study

Existing Conditions (PM PEAK)

308: Monroe St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1249
Total Delay / Veh (s/v)	11
CO Emissions (kg)	1.28
NOx Emissions (kg)	0.25
VOC Emissions (kg)	0.30

Proposed Conditions

Lowry Avenue NE Corridor Study

3 Lane Conditions (PM PEAK)

308: Monroe St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1249
Total Delay / Veh (s/v)	16
CO Emissions (kg)	1.41
NOx Emissions (kg)	0.27
VOC Emissions (kg)	0.33



Phase Number	2	4
Movement	EBWB	NBSB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	63	27
Maximum Split (%)	70.0%	30.0%
Minimum Split (s)	26.3	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.8	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	0.2	0.2
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	8	10
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	54	27
End Time (s)	27	54
Yield/Force Off (s)	21.7	48.6
Yield/Force Off 170(s)	13.7	38.6
Local Start Time (s)	0	63
Local Yield (s)	57.7	84.6
Local Yield 170(s)	49.7	74.6

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 54 (60%), Referenced to phase 2:EBWB, Start of 1st Green	

Splits and Phases: 308: Monroe St NE & Lowry Av NE



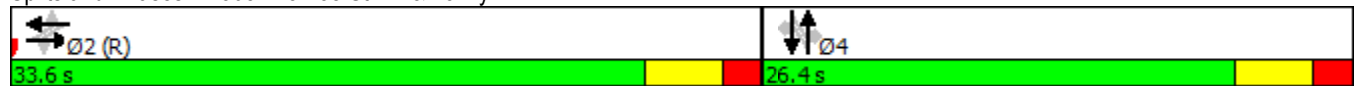


Phase Number	2	4
Movement	EBWB	NBSB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	33.6	26.4
Maximum Split (%)	56.0%	44.0%
Minimum Split (s)	26.3	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.8	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	0.2	0.2
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	8	10
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	0	33.6
End Time (s)	33.6	0
Yield/Force Off (s)	28.3	54.6
Yield/Force Off 170(s)	20.3	44.6
Local Start Time (s)	0	33.6
Local Yield (s)	28.3	54.6
Local Yield 170(s)	20.3	44.6

Intersection Summary

Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green	

Splits and Phases: 308: Monroe St NE & Lowry Av NE



Existing Conditions

Lowry Avenue NE Corridor Study

Existing Conditions (PM PEAK)

398: Central Av NE & Lowry Av NE

Direction	All
Future Volume (vph)	2417
Total Delay / Veh (s/v)	30
CO Emissions (kg)	3.37
NOx Emissions (kg)	0.66
VOC Emissions (kg)	0.78

Proposed Conditions

398: Central Av NE & Lowry Av NE

Direction	All
Future Volume (vph)	2417
Total Delay / Veh (s/v)	35
CO Emissions (kg)	3.65
NOx Emissions (kg)	0.71
VOC Emissions (kg)	0.84

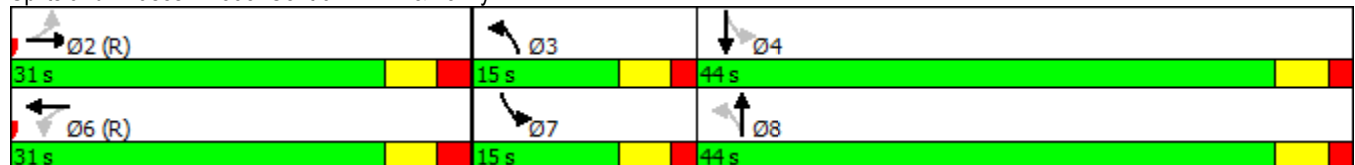


Phase Number	2	3	4	6	7	8
Movement	EBTL	NBL	SBTL	WBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	C-Max	Max	Max
Maximum Split (s)	31	15	44	31	15	44
Maximum Split (%)	34.4%	16.7%	48.9%	34.4%	16.7%	48.9%
Minimum Split (s)	30	12.3	28.3	30	12.3	28.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	1.8	1.8	2.5	1.8	1.8
Minimum Initial (s)	15	7	15	15	7	15
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	12		12	12		12
Flash Dont Walk (s)	12		6	12		6
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	2	33	48	2	33	48
End Time (s)	33	48	2	33	48	2
Yield/Force Off (s)	27	42.7	86.7	27	42.7	86.7
Yield/Force Off 170(s)	15	42.7	80.7	15	42.7	80.7
Local Start Time (s)	0	31	46	0	31	46
Local Yield (s)	25	40.7	84.7	25	40.7	84.7
Local Yield 170(s)	13	40.7	78.7	13	40.7	78.7

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green	

Splits and Phases: 398: Central Av NE & Lowry Av NE



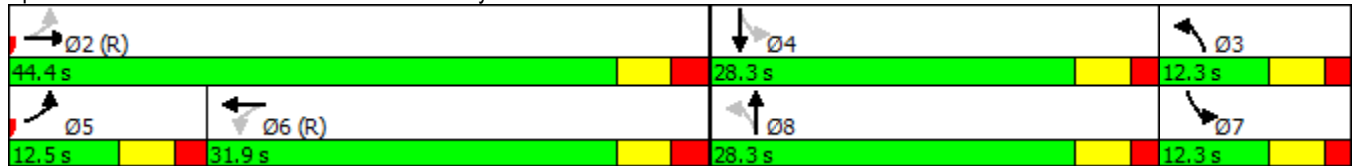


Phase Number	2	3	4	5	6	7	8
Movement	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag		Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Max	Max	Max	None	C-Max	Max	Max
Maximum Split (s)	44.4	12.3	28.3	12.5	31.9	12.3	28.3
Maximum Split (%)	52.2%	14.5%	33.3%	14.7%	37.5%	14.5%	33.3%
Minimum Split (s)	30	12.3	28.3	12.5	30	12.3	28.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	1.8	1.8	2	2.5	1.8	1.8
Minimum Initial (s)	15	7	15	7	15	7	15
Vehicle Extension (s)	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0
Walk Time (s)	12		12		12		12
Flash Dont Walk (s)	12		6		12		6
Dual Entry	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	72.7	44.4	0	12.5	72.7	44.4
End Time (s)	44.4	0	72.7	12.5	44.4	0	72.7
Yield/Force Off (s)	38.4	79.7	67.4	7	38.4	79.7	67.4
Yield/Force Off 170(s)	26.4	79.7	61.4	7	26.4	79.7	61.4
Local Start Time (s)	0	72.7	44.4	0	12.5	72.7	44.4
Local Yield (s)	38.4	79.7	67.4	7	38.4	79.7	67.4
Local Yield 170(s)	26.4	79.7	61.4	7	26.4	79.7	61.4

Intersection Summary

Cycle Length	85
Control Type	Actuated-Coordinated
Natural Cycle	85
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green	

Splits and Phases: 398: Central Av NE & Lowry Av NE



Existing Conditions

Lowry Avenue NE Corridor Study

Existing Conditions (PM PEAK)

310: Washington St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1298
Total Delay / Veh (s/v)	20
CO Emissions (kg)	1.63
NOx Emissions (kg)	0.32
VOC Emissions (kg)	0.38

Proposed Conditions

310: Washington St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1298
Total Delay / Veh (s/v)	2
CO Emissions (kg)	1.04
NOx Emissions (kg)	0.20
VOC Emissions (kg)	0.24

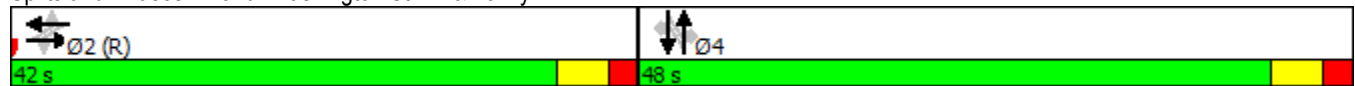


Phase Number	2	4
Movement	EBWB	NBSB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	42	48
Maximum Split (%)	46.7%	53.3%
Minimum Split (s)	26.5	26.6
Yellow Time (s)	3.5	3.5
All-Red Time (s)	2	2.1
Minimum Initial (s)	10	10
Vehicle Extension (s)	0.2	0.2
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	10	11
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	21	63
End Time (s)	63	21
Yield/Force Off (s)	57.5	15.4
Yield/Force Off 170(s)	47.5	4.4
Local Start Time (s)	0	42
Local Yield (s)	36.5	84.4
Local Yield 170(s)	26.5	73.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 21 (23%), Referenced to phase 2:EBWB, Start of 1st Green	

Splits and Phases: 310: Washington St NE & Lowry Av NE



Staff is proposing to remove the signal at Washington St NE (pending further evaluation and local approval), therefore, there are no proposed signal timing plans.

Existing Conditions

Lowry Avenue NE Corridor Study

Existing Conditions (PM PEAK)

310: Washington St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1298
Total Delay / Veh (s/v)	20
CO Emissions (kg)	1.63
NOx Emissions (kg)	0.32
VOC Emissions (kg)	0.38

Proposed Conditions

310: Washington St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1298
Total Delay / Veh (s/v)	2
CO Emissions (kg)	1.04
NOx Emissions (kg)	0.20
VOC Emissions (kg)	0.24

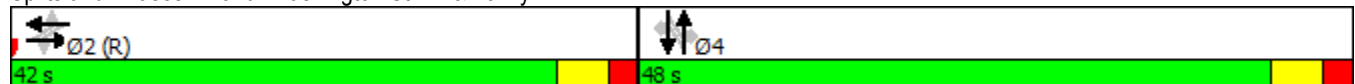


Phase Number	2	4
Movement	EBWB	NBSB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	42	48
Maximum Split (%)	46.7%	53.3%
Minimum Split (s)	26.5	26.6
Yellow Time (s)	3.5	3.5
All-Red Time (s)	2	2.1
Minimum Initial (s)	10	10
Vehicle Extension (s)	0.2	0.2
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	10	11
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	21	63
End Time (s)	63	21
Yield/Force Off (s)	57.5	15.4
Yield/Force Off 170(s)	47.5	4.4
Local Start Time (s)	0	42
Local Yield (s)	36.5	84.4
Local Yield 170(s)	26.5	73.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 21 (23%), Referenced to phase 2:EBWB, Start of 1st Green	

Splits and Phases: 310: Washington St NE & Lowry Av NE



Staff is proposing to remove the signal at Washington St NE (pending further evaluation and local approval), therefore, there are no proposed signal timing plans.

Existing Conditions

Lowry Avenue NE Corridor Study

Existing Conditions (PM PEAK)

308: Monroe St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1249
Total Delay / Veh (s/v)	11
CO Emissions (kg)	1.28
NOx Emissions (kg)	0.25
VOC Emissions (kg)	0.30

Proposed Conditions

Lowry Avenue NE Corridor Study

3 Lane Conditions (PM PEAK)

308: Monroe St NE & Lowry Av NE

Direction	All
Future Volume (vph)	1249
Total Delay / Veh (s/v)	16
CO Emissions (kg)	1.41
NOx Emissions (kg)	0.27
VOC Emissions (kg)	0.33



Phase Number	2	4
Movement	EBWB	NBSB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	63	27
Maximum Split (%)	70.0%	30.0%
Minimum Split (s)	26.3	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.8	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	0.2	0.2
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	8	10
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	54	27
End Time (s)	27	54
Yield/Force Off (s)	21.7	48.6
Yield/Force Off 170(s)	13.7	38.6
Local Start Time (s)	0	63
Local Yield (s)	57.7	84.6
Local Yield 170(s)	49.7	74.6

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 54 (60%), Referenced to phase 2:EBWB, Start of 1st Green	

Splits and Phases: 308: Monroe St NE & Lowry Av NE



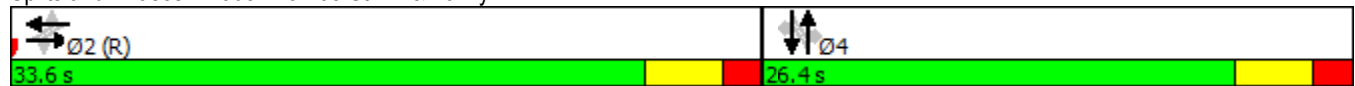


Phase Number	2	4
Movement	EBWB	NBSB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	33.6	26.4
Maximum Split (%)	56.0%	44.0%
Minimum Split (s)	26.3	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.8	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	0.2	0.2
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	8	10
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	0	33.6
End Time (s)	33.6	0
Yield/Force Off (s)	28.3	54.6
Yield/Force Off 170(s)	20.3	44.6
Local Start Time (s)	0	33.6
Local Yield (s)	28.3	54.6
Local Yield 170(s)	20.3	44.6

Intersection Summary

Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of 1st Green	

Splits and Phases: 308: Monroe St NE & Lowry Av NE



Existing Conditions

Lowry Avenue NE Corridor Study

Existing Conditions (PM PEAK)

398: Central Av NE & Lowry Av NE

Direction	All
Future Volume (vph)	2417
Total Delay / Veh (s/v)	30
CO Emissions (kg)	3.37
NOx Emissions (kg)	0.66
VOC Emissions (kg)	0.78

Proposed Conditions

398: Central Av NE & Lowry Av NE

Direction	All
Future Volume (vph)	2417
Total Delay / Veh (s/v)	35
CO Emissions (kg)	3.65
NOx Emissions (kg)	0.71
VOC Emissions (kg)	0.84

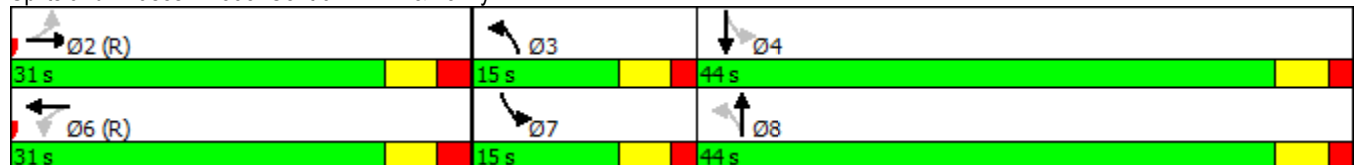


Phase Number	2	3	4	6	7	8
Movement	EBTL	NBL	SBTL	WBTL	SBL	NBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	C-Max	Max	Max
Maximum Split (s)	31	15	44	31	15	44
Maximum Split (%)	34.4%	16.7%	48.9%	34.4%	16.7%	48.9%
Minimum Split (s)	30	12.3	28.3	30	12.3	28.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	1.8	1.8	2.5	1.8	1.8
Minimum Initial (s)	15	7	15	15	7	15
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	12		12	12		12
Flash Dont Walk (s)	12		6	12		6
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	2	33	48	2	33	48
End Time (s)	33	48	2	33	48	2
Yield/Force Off (s)	27	42.7	86.7	27	42.7	86.7
Yield/Force Off 170(s)	15	42.7	80.7	15	42.7	80.7
Local Start Time (s)	0	31	46	0	31	46
Local Yield (s)	25	40.7	84.7	25	40.7	84.7
Local Yield 170(s)	13	40.7	78.7	13	40.7	78.7

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green	

Splits and Phases: 398: Central Av NE & Lowry Av NE



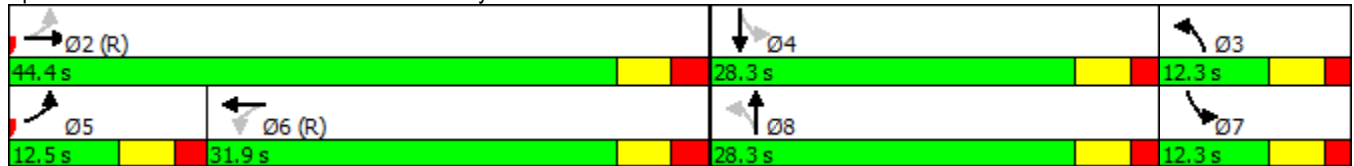


Phase Number	2	3	4	5	6	7	8
Movement	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag		Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Max	Max	Max	None	C-Max	Max	Max
Maximum Split (s)	44.4	12.3	28.3	12.5	31.9	12.3	28.3
Maximum Split (%)	52.2%	14.5%	33.3%	14.7%	37.5%	14.5%	33.3%
Minimum Split (s)	30	12.3	28.3	12.5	30	12.3	28.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	1.8	1.8	2	2.5	1.8	1.8
Minimum Initial (s)	15	7	15	7	15	7	15
Vehicle Extension (s)	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0
Walk Time (s)	12		12		12		12
Flash Dont Walk (s)	12		6		12		6
Dual Entry	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	72.7	44.4	0	12.5	72.7	44.4
End Time (s)	44.4	0	72.7	12.5	44.4	0	72.7
Yield/Force Off (s)	38.4	79.7	67.4	7	38.4	79.7	67.4
Yield/Force Off 170(s)	26.4	79.7	61.4	7	26.4	79.7	61.4
Local Start Time (s)	0	72.7	44.4	0	12.5	72.7	44.4
Local Yield (s)	38.4	79.7	67.4	7	38.4	79.7	67.4
Local Yield 170(s)	26.4	79.7	61.4	7	26.4	79.7	61.4

Intersection Summary

Cycle Length	85
Control Type	Actuated-Coordinated
Natural Cycle	85
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green	

Splits and Phases: 398: Central Av NE & Lowry Av NE



Lowry Avenue NE Corridor Study
Existing Conditions (PM PEAK)

Existing Conditions

848: Johnson St NE & Lowry Av NE

Direction	All
Future Volume (vph)	2067
Total Delay / Veh (s/v)	26
CO Emissions (kg)	2.80
NOx Emissions (kg)	0.55
VOC Emissions (kg)	0.65

Lowry Avenue NE Corridor Study
3 Lane Conditions (PM PEAK)

Proposed Conditions

848: Johnson St NE & Lowry Av NE

Direction	All
Future Volume (vph)	2067
Total Delay / Veh (s/v)	19
CO Emissions (kg)	2.54
NOx Emissions (kg)	0.49
VOC Emissions (kg)	0.59



Phase Number	2	4
Movement	NBSB	EBWB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	49	41
Maximum Split (%)	54.4%	45.6%
Minimum Split (s)	26.4	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.9	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	3	3
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	9	8
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	65	24
End Time (s)	24	65
Yield/Force Off (s)	18.6	59.6
Yield/Force Off 170(s)	9.6	51.6
Local Start Time (s)	0	49
Local Yield (s)	43.6	84.6
Local Yield 170(s)	34.6	76.6

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 65 (72%), Referenced to phase 2:NBSB, Start of 1st Green	

Splits and Phases: 848: Johnson St NE & Lowry Av NE








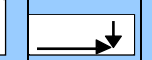
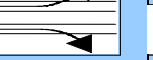

Phase Number	2	4
Movement	NBSB	EBWB
Lead/Lag		
Lead-Lag Optimize		
Recall Mode	C-Max	Max
Maximum Split (s)	33.2	26.8
Maximum Split (%)	55.3%	44.7%
Minimum Split (s)	26.4	26.4
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.9	1.9
Minimum Initial (s)	10	10
Vehicle Extension (s)	3	3
Minimum Gap (s)	3	3
Time Before Reduce (s)	0	0
Time To Reduce (s)	0	0
Walk Time (s)	10	10
Flash Dont Walk (s)	9	8
Dual Entry	No	No
Inhibit Max	Yes	Yes
Start Time (s)	0	33.2
End Time (s)	33.2	0
Yield/Force Off (s)	27.8	54.6
Yield/Force Off 170(s)	18.8	46.6
Local Start Time (s)	0	33.2
Local Yield (s)	27.8	54.6
Local Yield 170(s)	18.8	46.6

Intersection Summary






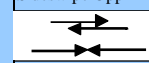
Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of 1st Green	

Splits and Phases: 848: Johnson St NE & Lowry Av NE



B/C worksheet		Control Section	T.H. / Roadway	Location			Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
		A	CSAH 153	At Washington St NE			3.01	3.07	Hennepin County	1/1/2013	12/31/2015
		Description of Proposed Work Remove unwarranted traffic signal - All Crashes (CMF ID 332) Install raised median - Pedestrian Crashes (CMF ID 8799)									
Accident Diagram Codes		1. Rear End	2. Sideswipe Same Direction	3. Left-Turn	5. Right Angle	4, 7 Run Off Road	8, 9 Head-On Sideswipe Opp		6, 90, 98, 99		
											
Study Period: Number of Crashes	Fatal	F									
	Personal Injury (PI)	A									
		B							1		1
		C				1		1			2
Property Damage	PD		1	2	3	1				7	
% Change in Crashes <small>*Use FHWA cmfclearingho use for Crash Reduction Factors</small>	Fatal	F									
	PI	A									
		B							-48%		
		C				-24%		-24%			
Property Damage	PD		-24%	-24%	-24%	-24%					
Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F									
	PI	A									
		B							-0.48		-0.48
		C				-0.24		-0.24			-0.48
Property Damage	PD		-0.24	-0.48	-0.72	-0.24				-1.68	
Year (Safety Improvement Construction)			2023								
Project Cost (exclude Right of Way)		\$ 10,490,000		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit	<div style="border: 1px solid black; padding: 5px; display: inline-block; background-color: #FFDAB9;">B/C= 0.10</div> <i>Using present worth values,</i> B= \$ 1,070,149 C= \$ 10,490,000 <i>See "Calculations" sheet for amortization.</i>		
Right of Way Costs (optional)				F			\$ 1,180,000				
Traffic Growth Factor		3%		A			\$ 590,000				
Capital Recovery				B	-0.48	-0.16	\$ 170,000	\$ 27,168			
1. Discount Rate		1.3%		C	-0.48	-0.16	\$ 87,000	\$ 13,933			
2. Project Service Life (n) See Appx F		20		PD	-1.68	-0.56	\$ 7,800	\$ 4,372			
				Total				\$ 45,473			

B/C worksheet	Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	B	CSAH 153	From Washington St NE to Monroe St NE	3.08	3.21	Hennepin County	1/1/2013	12/31/2015
	Description of Proposed Work		Convert 4-lane undivided roadway to 2-lane roadway with turning lanes - All Crashes (CMF ID 199) Upgrade existing pavement markings to ground-in wet-reflective pavement markings - All Crashes (CMF ID 8109)					

Accident Diagram Codes	1. Rear End	2. Sideswipe Same Direction	3. Left-Turn	5. Right Angle	4, 7 Run Off Road	8, 9 Head-On Sideswipe Opp	6, 90, 98, 99	
							Pedestrian	Other

Study Period: Number of Crashes	Fatal	F							
	Personal Injury (PI)	A							
		B							
		C	2						1
Property Damage	PD		1			1			2

% Change in Crashes <small>*Use FHWA cmfclearingho use for Crash Reduction Factors</small>	Fatal	F							
	PI	A							
		B							
		C	-41%						-41%
Property Damage	PD		-41%			-41%			

Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F							
	PI	A							
		B							
		C	-0.83						-0.41
Property Damage	PD		-0.41			-0.41			-0.83






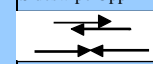
Year (Safety Improvement Construction) **2023**




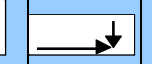

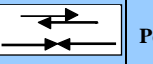
	Project Cost (exclude Right of Way)	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
Project Cost (exclude Right of Way)	\$ 10,490,000	F			\$ 1,180,000	
Right of Way Costs (optional)		A			\$ 590,000	
Traffic Growth Factor	3%	B			\$ 170,000	
Capital Recovery		C	-1.24	-0.41	\$ 87,000	\$ 36,051
1. Discount Rate	1.3%	PD	-0.83	-0.28	\$ 7,800	\$ 2,155
2. Project Service Life (n) See Appx F	15					
		Total			\$ 38,206	






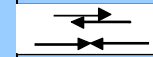
B/C= 0.06

Using present worth values,
B= \$ 645,559
C= \$ 10,490,000







See "Calculations" sheet for amortization.

B/C worksheet		Control Section	T.H. / Roadway	Location		Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
		C	CSAH 23	At Monroe St NE		3.22	3.28	Hennepin County	1/1/2013	12/31/2015
		Description of Proposed Work Convert 4-lane undivided roadway to 2-lane roadway with turning lanes - All Crashes on CSAH 153 (CMF ID 199) Install left-turn lanes on major roadway approaches - Left-Turn Related Crashes on CSAH 153 (CMF ID 271) Install mast arms on traffic signal - All Crashes on Monroe St NE (CMF ID 1420)								
Accident Diagram Codes		1. Rear End 	2. Sideswipe Same Direction 	3. Left-Turn 	5. Right Angle 	4, 7 Run Off Road 	8, 9 Head-On Sideswipe Opp 		6, 90, 98, 99	
								Pedestrian	Other	Total
Study Period: Number of Crashes	Fatal	F								
	Personal Injury (PI)	A			1	1				2
		B		1				1		2
		C		1	1	2				4
Property Damage	PD	1	6	2	1			2	12	
% Change in Crashes <small>*Use FHWA cmfclearingho use for Crash Reduction Factors</small>	Fatal	F								
	PI	A			-42%	-49%				
		B		-29%				-29%		
		C		-29%	-42%	-49%				
Property Damage	PD	-29%	-29%	-36%	-49%			0%		
Change in Crashes = No. of crashes X % change in crashes	Fatal	F								
	PI	A			-0.42	-0.49				-0.91
		B		-0.29				-0.29		-0.58
		C		-0.29	-0.42	-0.98				-1.69
Property Damage	PD	-0.29	-1.74	-0.71	-0.49			0.00	-3.23	
Year (Safety Improvement Construction)		2023								
Project Cost (exclude Right of Way)		\$ 10,490,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit	<div style="border: 1px solid black; padding: 5px; display: inline-block; background-color: #fce4ec;"> B/C= 0.60 </div> <i>Using present worth values,</i> B= \$ 6,342,061 C= \$ 10,490,000 <i>See "Calculations" sheet for amortization.</i>		
Right of Way Costs (optional)			F			\$ 1,180,000				
Traffic Growth Factor		3%	A	-0.91	-0.30	\$ 590,000	\$ 179,130			
Capital Recovery			B	-0.58	-0.19	\$ 170,000	\$ 32,897			
1. Discount Rate		1.3%	C	-1.69	-0.56	\$ 87,000	\$ 49,055			
2. Project Service Life (n) See Appx F		20	PD	-3.23	-1.08	\$ 7,800	\$ 8,406			
			Total			\$ 269,487				

B/C worksheet		Control Section	T.H. / Roadway	Location		Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
		D	CSAH 153	From Monroe St NE to TH 65 (Central Ave NE)		3.29	3.46	Hennepin County	1/1/2013	12/31/2015
		Description of Proposed Work Convert 4-lane undivided roadway to 2-lane roadway with turning lanes - All Crashes (CMF ID 199) Upgrade existing pavement markings to ground-in wet-reflective pavement markings - All Crashes (CMF ID 8109)								
Accident Diagram Codes      		1. Rear End	2. Sideswipe Same Direction	3. Left-Turn	5. Right Angle	4, 7 Run Off Road	8, 9 Head-On Sideswipe Opp	6, 90, 98, 99		
									Pedestrian	Other
Study Period: Number of Crashes	Fatal	F								
	Personal Injury (PI)	A								
		B								
		C	1	1	1			1		4
Property Damage	PD	3	4		7	2		1	17	
% Change in Crashes <small>*Use FHWA cmfclearingho use for Crash Reduction Factors</small>	Fatal	F								
	PI	A								
		B								
		C	-29%	-41%	-29%				-29%	
Property Damage	PD	-29%	-41%		-29%	-18%		0%		
Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F								
	PI	A								
		B								
		C	-0.29	-0.41	-0.29				-0.29	-1.28
Property Damage	PD	-0.87	-1.66		-2.03	-0.35		0.00	-4.91	
Year (Safety Improvement Construction)			2023							
Project Cost (exclude Right of Way)		\$ 10,490,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit	<div style="border: 1px solid black; padding: 5px; display: inline-block; background-color: #FFC0CB;"> B/C= 0.08 </div> Using present worth values, B= \$ 845,477 C= \$ 10,490,000 See "Calculations" sheet for amortization.		
Right of Way Costs (optional)			F			\$ 1,180,000				
Traffic Growth Factor		3%	A			\$ 590,000				
Capital Recovery			B			\$ 170,000				
1. Discount Rate		1.3%	C	-1.28	-0.43	\$ 87,000	\$ 37,270			
2. Project Service Life (n) See Appx F		15	PD	-4.91	-1.64	\$ 7,800	\$ 12,767			
						Total	\$ 50,037			

B/C worksheet		Control Section	T.H. / Roadway	Location		Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends	
		E	CSAH 23	At TH 65 (Central Ave NE)		3.47	3.53	Hennepin County	1/1/2013	12/31/2015	
Description of Proposed Work		Install left-turn lanes on CSAH 153 - Crashes involving vehicles on CSAH 153 (CMF ID 7998) Change left-turn phasing from permissive only to FYA protected/permissive - Left-Turn Crashes on CSAH 153 (CMF ID 7684) Install curb extensions in all four quadrants - Pedestrian crashes (CMF ID N/A)									
Accident Diagram Codes		1. Rear End 	2. Sideswipe Same Direction 	3. Left-Turn 	5. Right Angle 	4, 7 Run Off Road 	8, 9 Head-On Sideswipe Opp 	Pedestrian	6, 90, 98, 99 Other	Total	
Study Period: Number of Crashes	Fatal	F									
	Personal Injury (PI)	A						1		1	
		B				1			2	1	4
		C	2		2	1			1	2	8
Property Damage	PD	9	8	3	9	2	2		7	40	
% Change in Crashes <small>*Use FHWA cmfclearingho use for Crash Reduction Factors</small>	Fatal	F									
	PI	A						-39%			
		B				-12%			-39%		
		C	-12%		-48%	-12%			-39%		
Property Damage	PD	-12%	-12%	-48%	-12%						
Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F									
	PI	A						-0.39		-0.39	
		B				-0.12			-0.78	0.00	-0.90
		C	-0.25		-0.95	-0.12			-0.39	0.00	-1.71
Property Damage	PD	-1.12	-0.99	-1.43	-1.12	0.00	0.00	0.00	0.00	-4.65	
Year (Safety Improvement Construction)		2023									
Project Cost (exclude Right of Way)		\$ 10,490,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit	<div style="border: 1px solid black; padding: 5px; display: inline-block; background-color: #fce4ec;">B/C= 0.43</div> Using present worth values, B= \$ 4,469,097 C= \$ 10,490,000 See "Calculations" sheet for amortization.			
Right of Way Costs (optional)			F			\$ 1,180,000					
Traffic Growth Factor		3%	A	-0.39	-0.13	\$ 590,000	\$ 76,770				
Capital Recovery			B	-0.90	-0.30	\$ 170,000	\$ 51,273				
1. Discount Rate		1.3%	C	-1.71	-0.57	\$ 87,000	\$ 49,751				
2. Project Service Life (n) See Appx F		20	PD	-4.65	-1.55	\$ 7,800	\$ 12,106				
Total						\$ 189,901					

B/C worksheet	Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	F	CSAH 153	From TH 65 (Central Ave NE) to Washington St NE	3.64	3.96	Hennepin County	1/1/2013	12/31/2015
	Description of Proposed Work Prohibit on-street parking on both sides of CSAH 153 - Injury Crashes (CMF ID 153) Prohibit on-street parking on both sides of CSAH 153 - Property Damage Crashes (CMF ID 154) Provide on-road bicycle lanes along CSAH 153 - Bicycle Crashes (CMF ID 1719)							

Accident Diagram Codes	1. Rear End	2. Sideswipe Same Direction	3. Left-Turn	5. Right Angle	4, 7 Run Off Road	8, 9 Head-On Sideswipe Opp	Pedestrian	6, 90, 98, 99	Other	Total
										

Study Period: Number of Crashes	Fatal	F									
	Personal Injury (PI)	A									
		B							2	2	
		C				4			1	5	
Property Damage	PD		6	7		4		2	3	4	26

% Change in Crashes	Fatal	F								
	PI	A								
		B								-42%
		C					-20%			-20%
Property Damage	PD		-27%	-27%						-27%

**Use FHWA cmfclearingho use for Crash Reduction Factors*

Change in Crashes = No. of crashes X % change in crashes	Fatal	F										
	PI	A										
		B								-0.83	-0.83	
		C					-0.80			-0.20	-1.00	
Property Damage	PD		-1.62	-1.89			-1.08	0.00	0.00		-1.08	-5.67

Year (Safety Improvement Construction) **2023**

Project Cost (exclude Right of Way)	\$ 10,490,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
Right of Way Costs (optional)		F			\$ 1,180,000	
Traffic Growth Factor	3%	A			\$ 590,000	
Capital Recovery		B	-0.83	-0.28	\$ 170,000	\$ 47,076
1. Discount Rate	1.3%	C	-1.00	-0.33	\$ 87,000	\$ 29,027
2. Project Service Life (n) See Appx F	20	PD	-5.67	-1.89	\$ 7,800	\$ 14,755
Total					\$ 90,858	

B/C= 0.20

Using present worth values,
B= \$ 2,138,240
C= \$ 10,490,000

See "Calculations" sheet for amortization.

B/C worksheet		Control Section	T.H. / Roadway	Location		Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends					
		G	CSAH 153	At Johnson St NE		3.97	4.03	Hennepin County	1/1/2013	12/31/2015					
Description of Proposed Work		Install mast arms on traffic signal - All Crashes on CSAH 153 (CMF ID 1420)													
		Change left-turn phasing from permissive only to FYA protected/permissive - Left-Turn Crashes on CSAH 153 (CMF ID 7684)													
Accident Diagram Codes		1. Rear End		2. Sideswipe Same Direction		3. Left-Turn		5. Right Angle		4, 7 Run Off Road		8, 9 Head-On Sideswipe Opp		6, 90, 98, 99	
														Pedestrian	Other
Study Period: Number of Crashes	Fatal	F													
	Personal Injury (PI)	A											1		1
		B				2									2
		C		3	2	2		1							8
Property Damage	PD		7	9	6	4	1	2					3	32	
% Change in Crashes	Fatal	F													
	PI	A											-19%		
		B				-70%									
		C			-25%	-70%									
Property Damage	PD		-49%	-22%	-23%	-49%									
Change in Crashes = No. of crashes X % change in crashes	Fatal	F													
	PI	A											-0.19		-0.19
		B				-1.39									-1.39
		C		0.00	-0.49	-1.39		0.00							-1.88
Property Damage	PD		-3.43	-1.96	-1.39	-1.96	0.00	0.00				0.00		-8.74	
Year (Safety Improvement Construction)		2023													
Project Cost (exclude Right of Way)		\$ 10,490,000		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit							
Right of Way Costs (optional)				F			\$ 1,180,000								
Traffic Growth Factor		3%		A	-0.19	-0.06	\$ 590,000	\$ 37,401							
Capital Recovery				B	-1.39	-0.46	\$ 170,000	\$ 78,839							
1. Discount Rate		1.3%		C	-1.88	-0.63	\$ 87,000	\$ 54,570							
2. Project Service Life (n) See Appx F		20		PD	-8.74	-2.92	\$ 7,800	\$ 22,755							
				Total				\$ 193,565							

B/C= 0.43

Using present worth values,
B= \$ 4,555,306
C= \$ 10,490,000

See "Calculations" sheet for amortization.

CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works

HENNEPIN COUNTY
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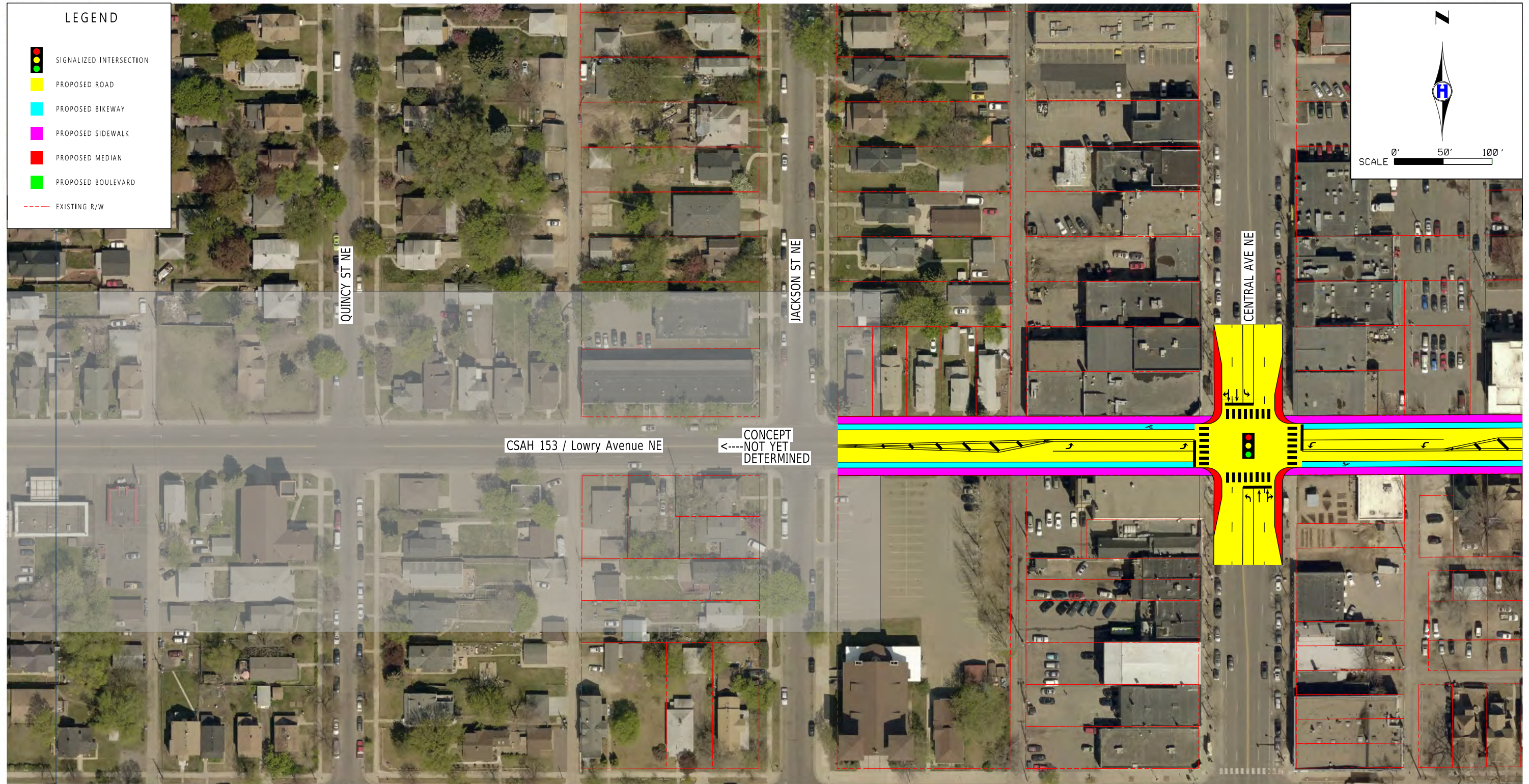


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CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works



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CSAH 153 / Lowry Avenue NE

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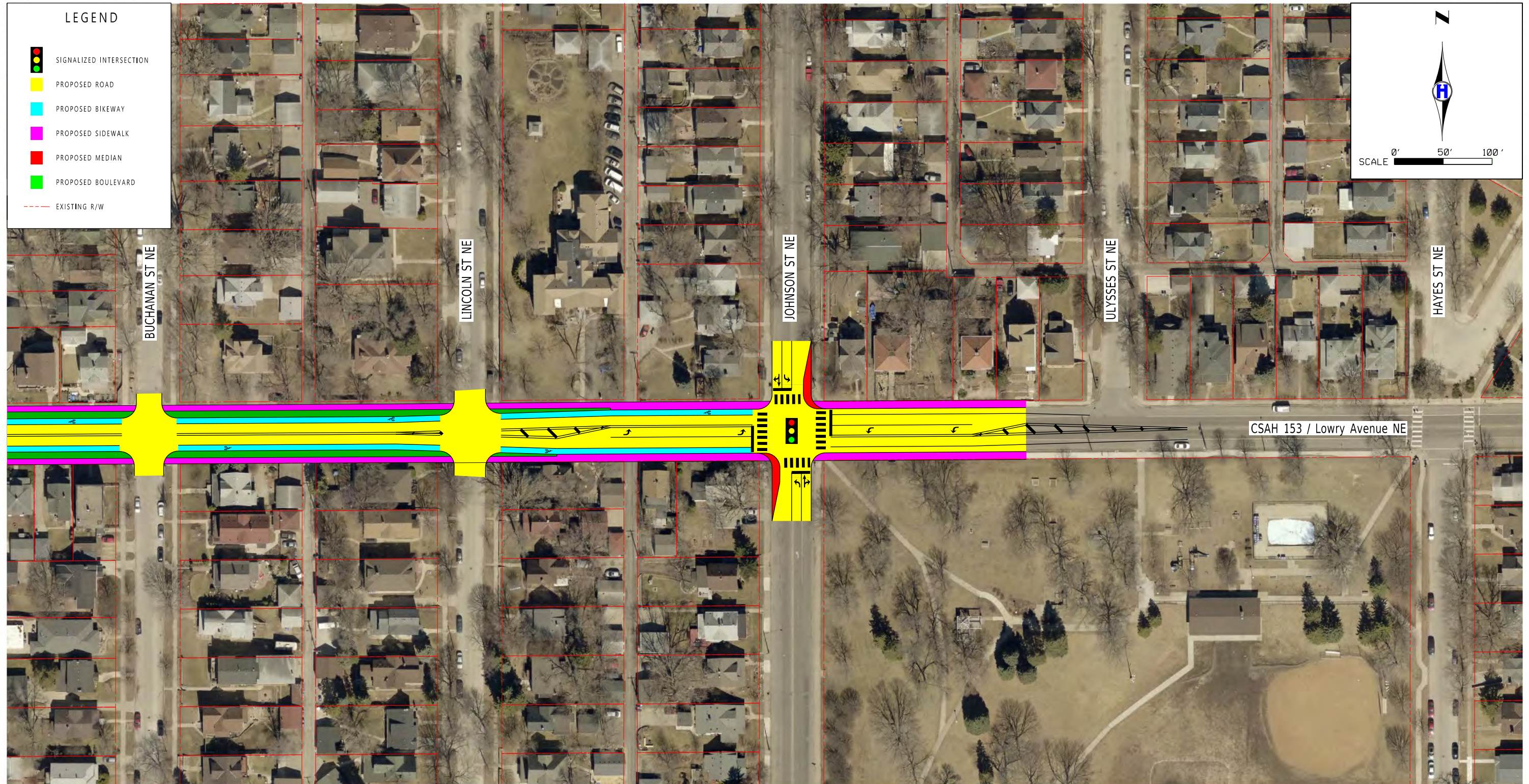
Figure 3



CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works

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Figure 4



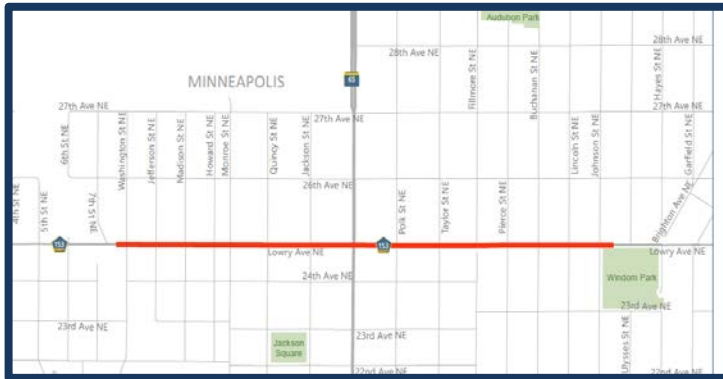
CSAH 153 (Lowry Ave NE) Reconstruction Project

List of Attachments

1. Project Narrative
2. Project Location Map
3. Existing Roadway Deficiencies
4. Proposed Typical Sections
5. Proposed Concept
6. Hennepin County 2018-2022 Community Works Capital Improvement Program
7. Hennepin County 2018-2022 Transportation Capital Improvement Program
8. Lowry Ave NE Framework Plan
9. Hennepin County Board Resolution – 2018 Regional Solicitation
10. MnDOT 50 Series Map
11. 2040 Draft Hennepin County Transportation Systems Plan – Forecasted Traffic Volumes
12. Public Engagement Plan Example
13. 2017 CSAH 153 HCAADT Report
14. Minneapolis Street Lighting Plan
15. Crash Modification Factors
16. Crash Detail Listing (2013-2015)
17. MnDOT Support Letter
18. City of Minneapolis Support Letter



Project Location



Existing Conditions



Project Overview

Project Name: CSAH 153 (Lowry Ave NE) Reconstruction Project
Roadway: CSAH 153 (Lowry Ave NE)
Project Termini: From Washington St NE to Johnson St NE
Project Location: City of Minneapolis

Solicitation Information

Applicant: Hennepin County
Funding Requested: \$7,000,000
Total Project Cost: \$10,490,000

Project Information

The proposed project will reconstruct CSAH 153 (Lowry Ave NE) to extend the service life of the roadway. Improvements will include (but are not limited to): new pavement, sidewalk, bikeway, streetscaping, curb, drainage structures, and traffic signals. It is anticipated that the existing roadway configurations (four-lane on the west end and two-lane with on-street parking on the east end) will be modified to improve safety and mobility along the corridor. Specific safety improvements will be included; such as the upgrading of traffic signal systems to include mast arms and dedicated left-turn phasing, providing traffic calming elements to minimize pedestrian exposure to vehicles, and enhancing the pedestrian environment by providing a boulevard.

Project Benefits

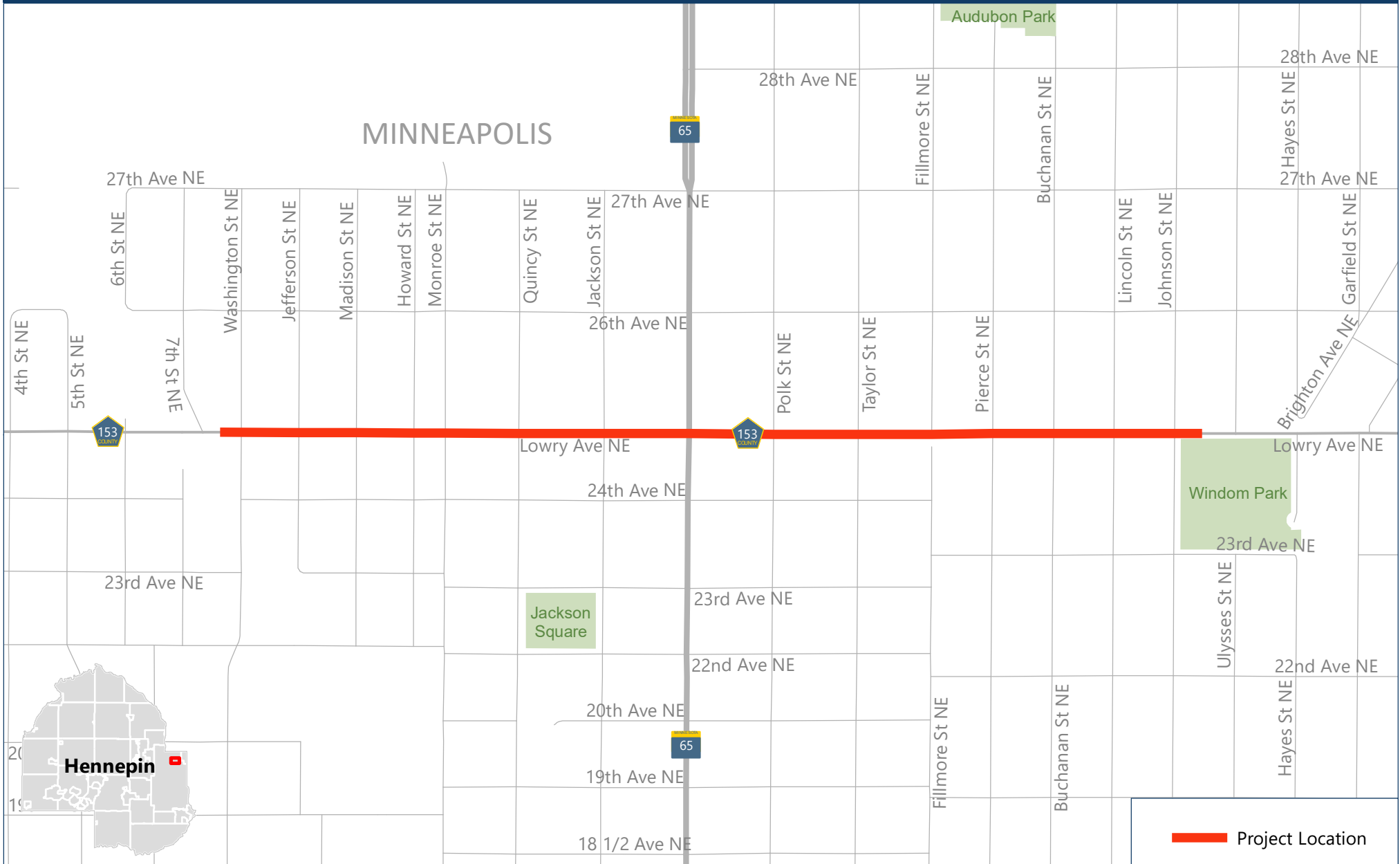
The existing CSAH 153 (Lowry Ave NE) roadway has reached the end of its useful life and warrants a full reconstruction. Routine maintenance activities (such as a pavement overlay) are no longer effective in preserving critical roadway assets. Previous overlays extended over the existing gutter, reducing the benefits provided by the curb in terms of drainage and safety.

Additionally, various defects (cracking, discontinuities, and settlement) and obstructions (utility poles, signs, and signal equipment) are present within the sidewalk. This project will address these issues and improve mobility and accessibility for pedestrians.

2018 Regional Solicitation | Project Location Map

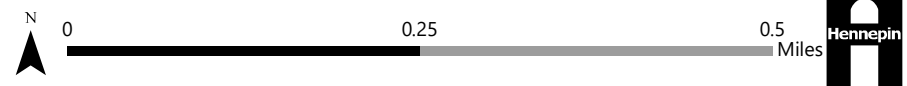
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CSAH 153 (Lowry Ave NE) Reconstruction Project



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Publication date: 5/10/2018

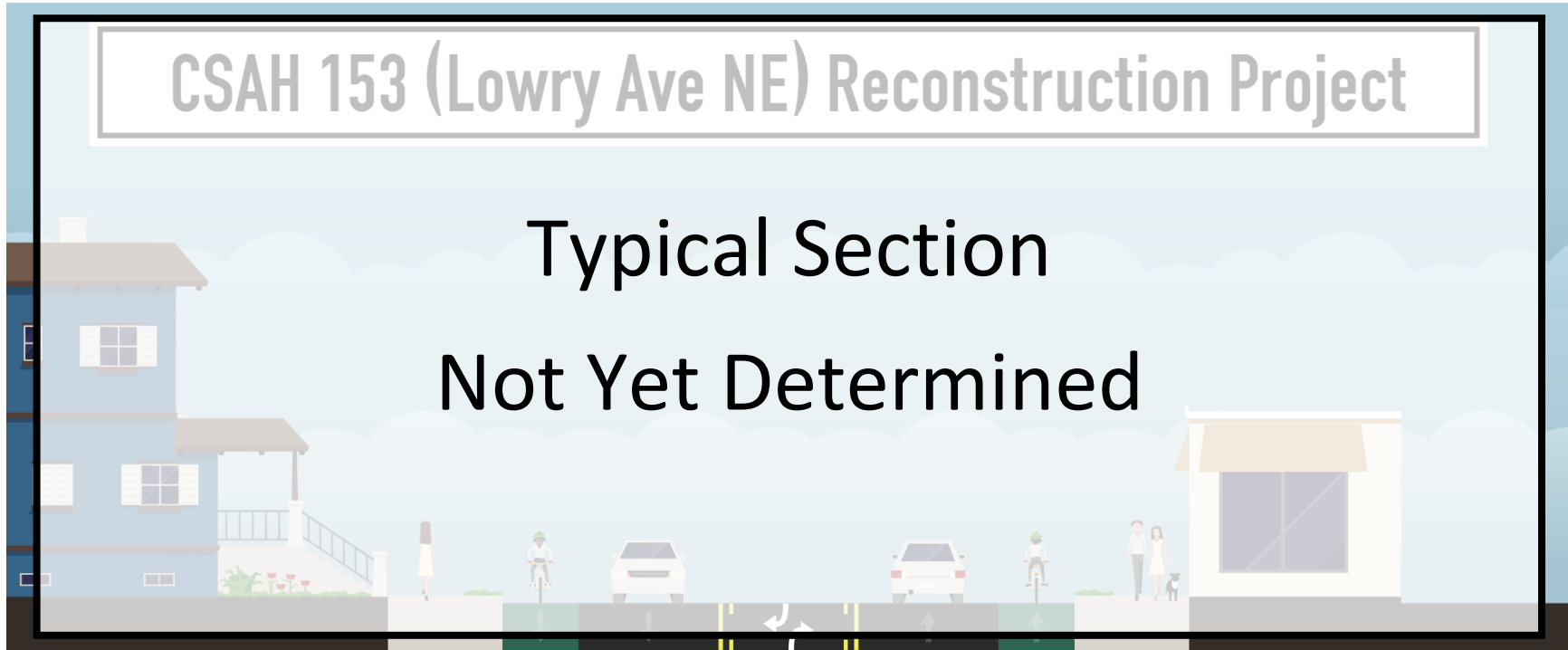


Attachment 3 - Existing Roadway Deficiencies



Attachment 4 - Proposed Typical Sections

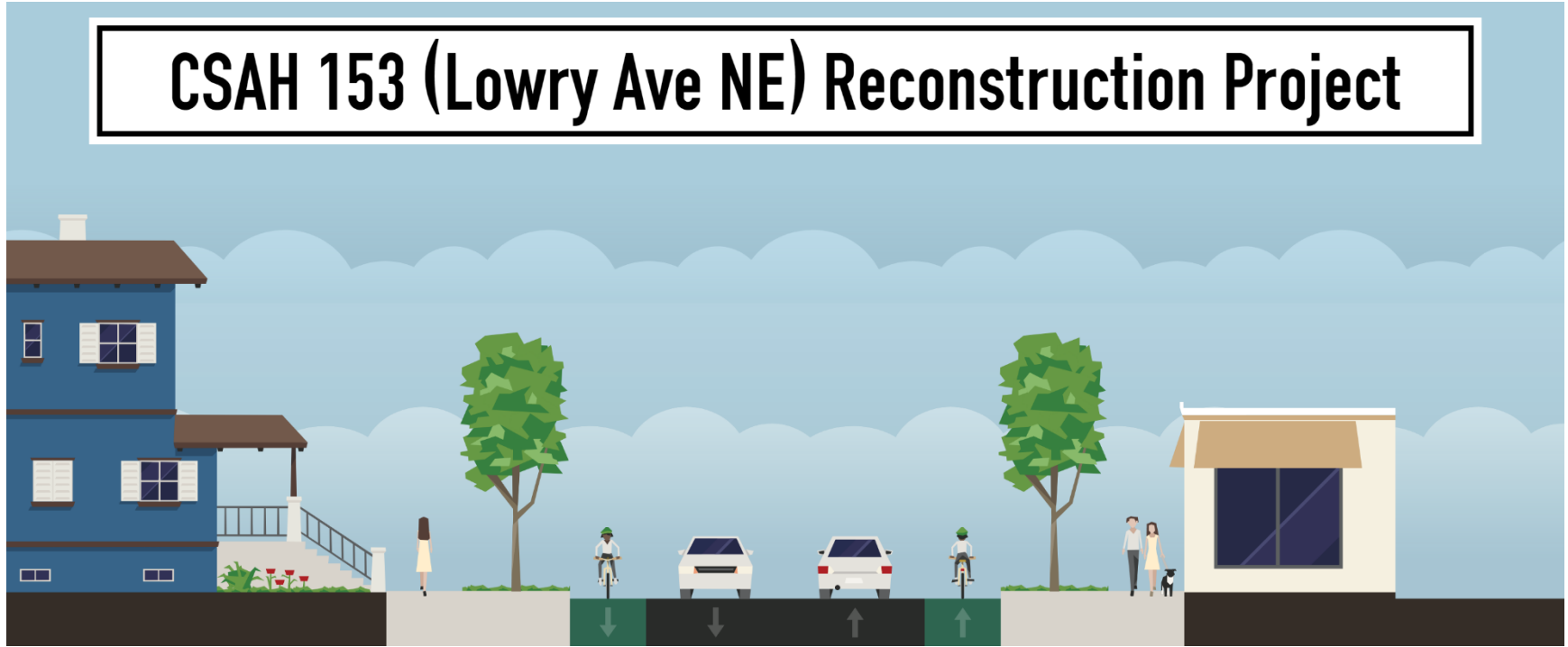
West Section (From Washington St NE to Central Ave NE)



Attachment 4 - Proposed Typical Sections

East Section (From Central Ave NE to Johnson St NE)

CSAH 153 (Lowry Ave NE) Reconstruction Project



Sidewalk and Boulevard Bicycle Lane Vehicle Lane Vehicle Lane Bicycle Lane Sidewalk and Boulevard

Attachment 5 - Proposed Concept

CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works

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Publication date: 6/26/2018 pw0220 \\tempo\proj\Transportation Planning\Reconstruction\153_01\Micro_Station\Plan-sheets.dgn

Figure 1

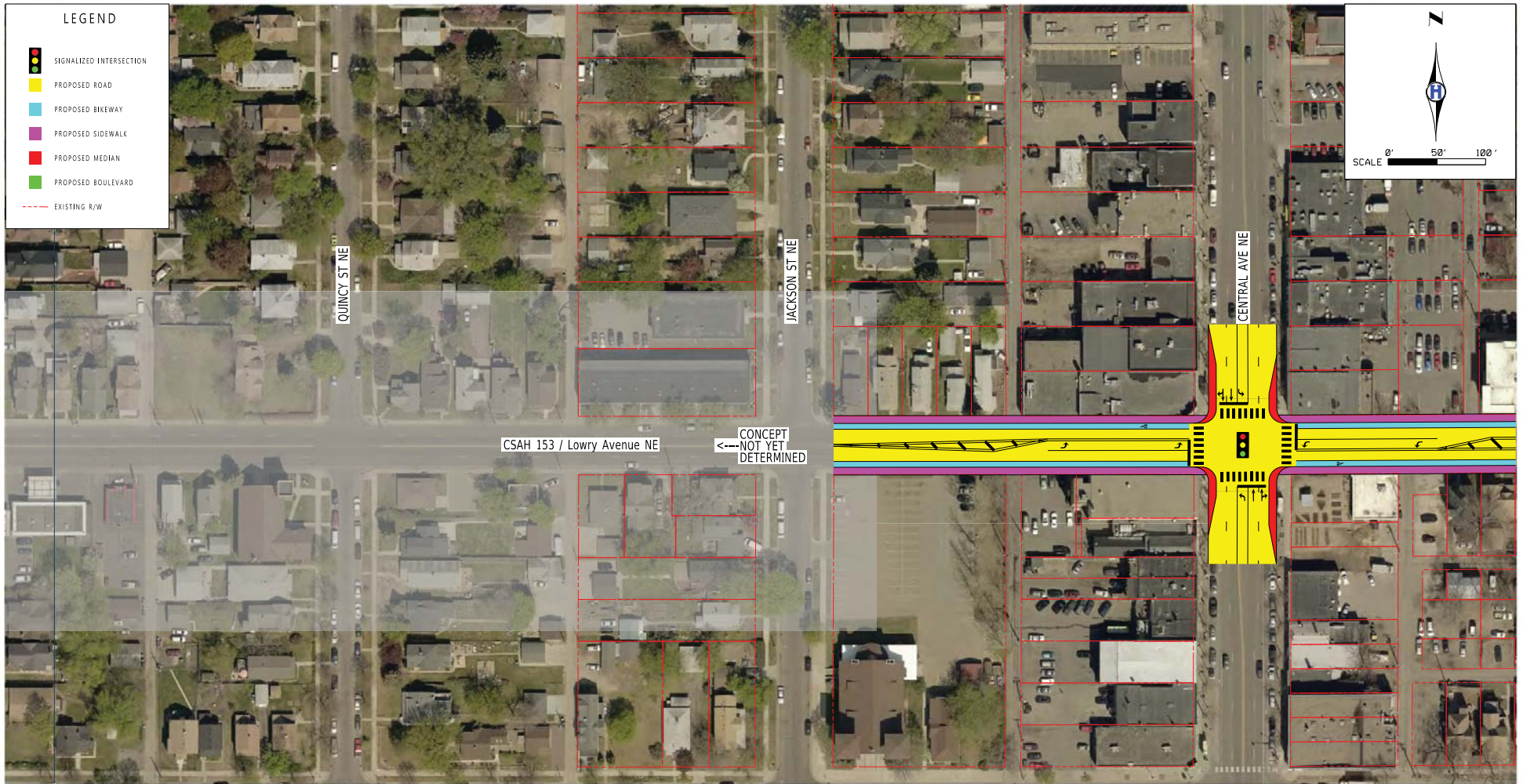


Attachment 5 - Proposed Concept

CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works

HENNEPIN COUNTY
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Publication date: 6/26/2018 pw0220 \\tempo\proj\Transportation Planning\Reconstruction\153_01\Micro_Station\Plan-sheets.dgn

Figure 2

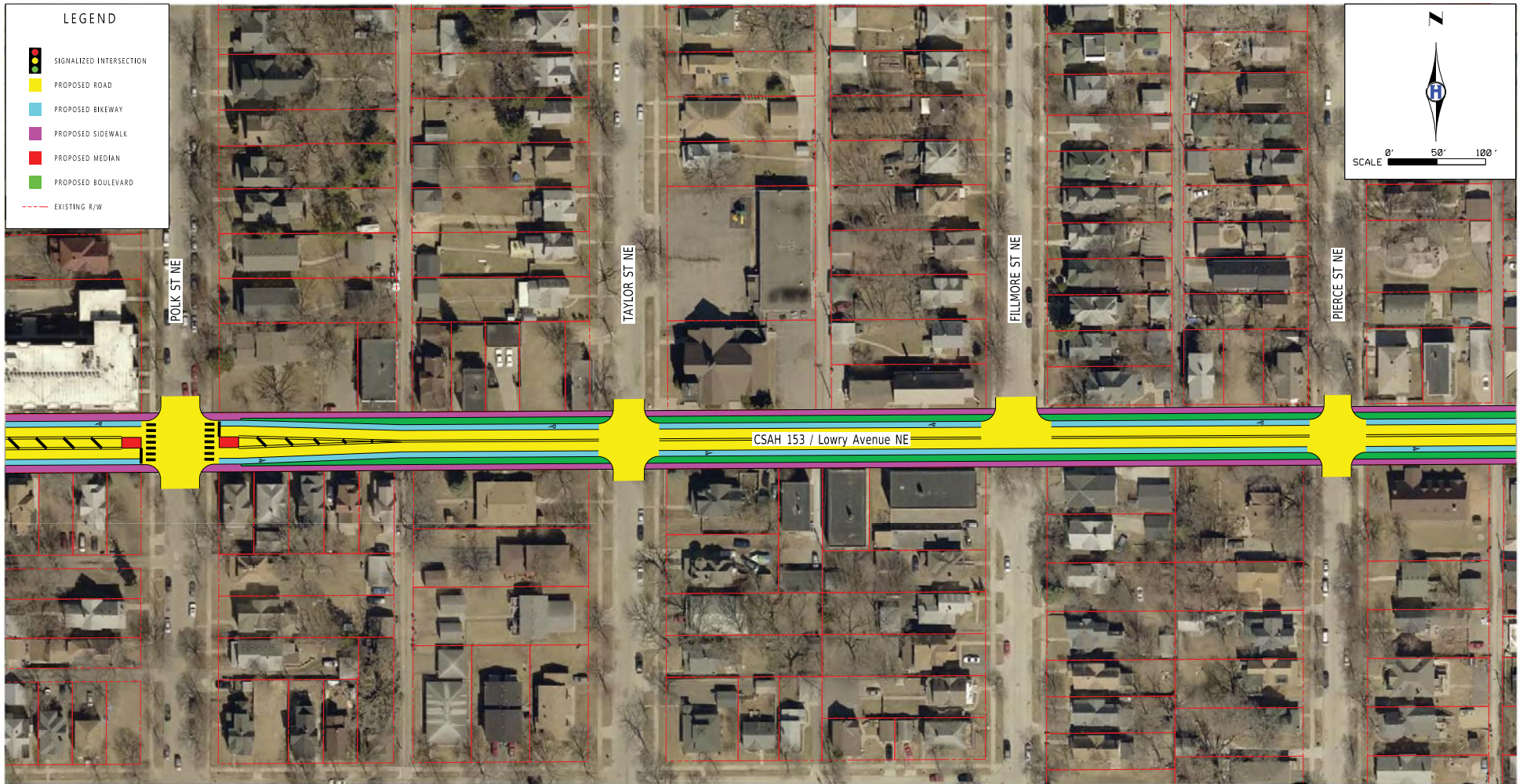


Attachment 5 - Proposed Concept

CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works

HENNEPIN COUNTY
MINNESOTA



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: 6/26/2018 pw0220 \\tempo\proj\Transportation Planning\Reconstruction\153_01\Micro_Station\Plan-sheets.dgn

Figure 3

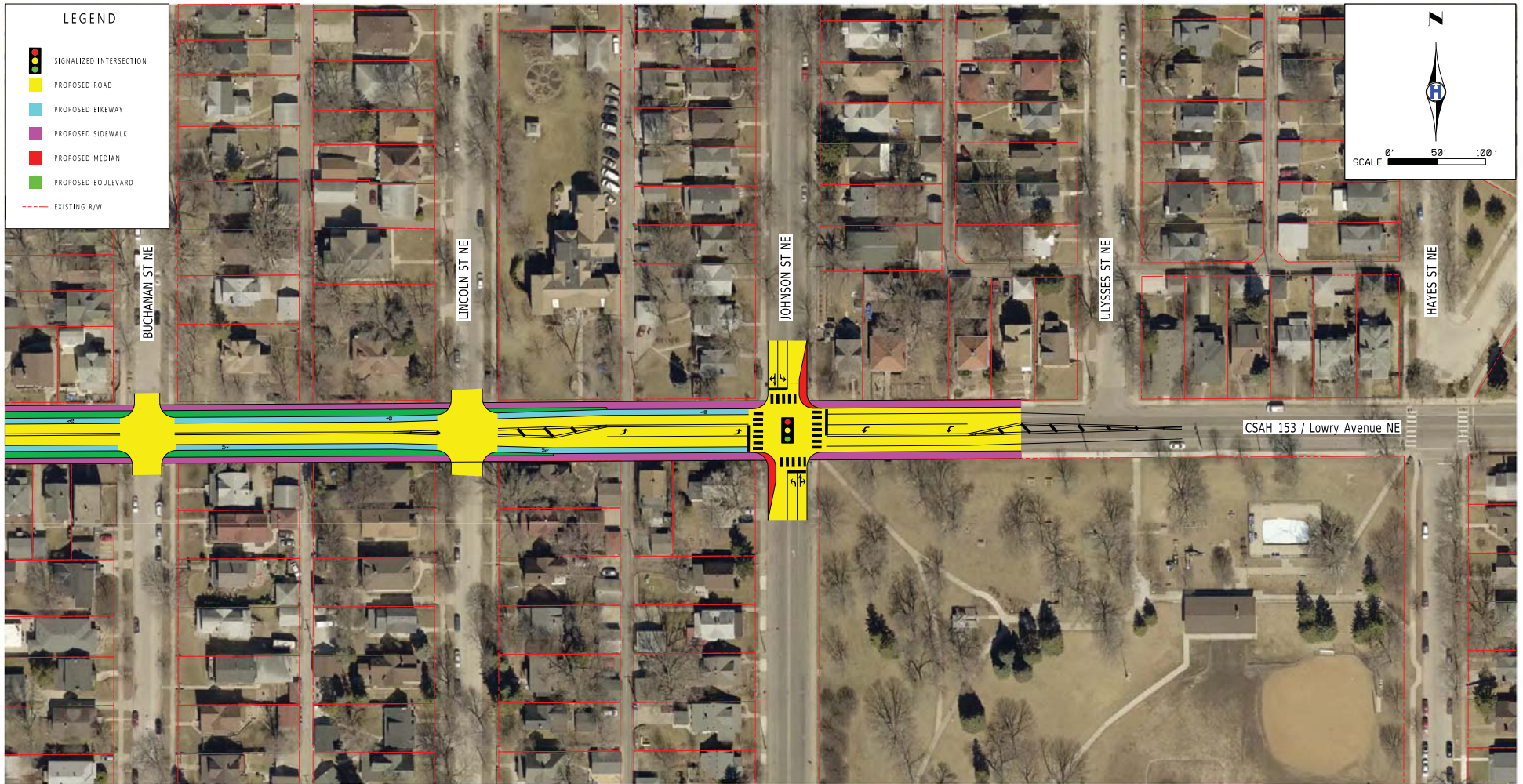


Attachment 5 - Proposed Concept

CSAH 153 / Lowry Avenue NE

Washington St NE to Johnson St NE | Hennepin County Public Works

HENNEPIN COUNTY
MINNESOTA



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: 6/26/2018 pw0220 \\tempo\proj\Transportation Planning\Reconstruction\153_01\Micro_Station\Plan-sheets.dgn

Figure 4



Attachment 6 - Hennepin County 2018-2022 Community Works Capital Improvement Program

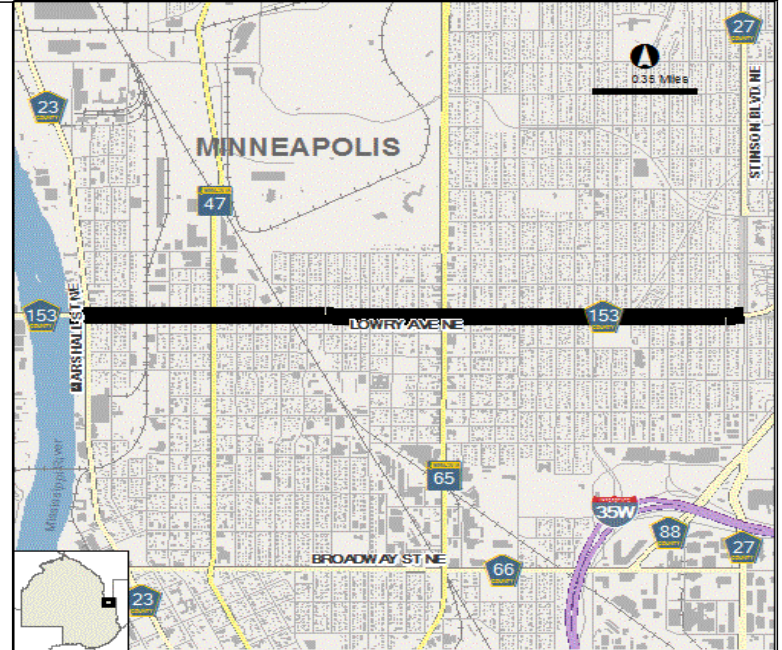
Project Name: 1001648 Lowry Avenue NE Community Works
Major Program: Public Works
Department: Community Works

Funding Start: 2014
Funding Completion: 2025

Summary:
 The Lowry Avenue Community Works Northeast project encompasses the Lowry Avenue corridor segment in Northeast Minneapolis, east of the Mississippi River between Marshall Street and Stinson Boulevard. While Lowry Avenue forms the spine of the project, the study area expands several blocks north and south of Lowry Avenue at the study nodes of Marshall Street NE, 2nd Street NE, University Avenue NE, Washington Street NE, Monroe Street NE, Central Avenue NE and Johnson Street.

Purpose & Description:
 The purpose of the Lowry Avenue Community Works Northeast project is to improve transportation options, offer housing choice, improve the natural environment, and support business growth at key intersections. To achieve these goals Hennepin County (Resolution 13-0358R1) funded the creation of the "Lowry Avenue Northeast Plan and Implementation Framework" report in 2014. This plan identifies the short-term need to redevelop the Lowry Avenue NE intersections of University and Central avenues and the long-term need to reconstruct the right-of-way to make it safer for pedestrians, bicyclists and vehicles. Pedestrians feel unsafe walking on the narrow back-of-curb sidewalks and semi-trucks using the University Avenue intersection experience difficulty navigating turns without encroaching on the sidewalk.

The Lowry Avenue and Central Avenue southeast quadrant of the intersection is the first priority for redevelopment. Three anchor buildings at the corner of the Lowry and Central avenues intersection were destroyed by fire in May of 2005 and never rebuilt. Within this block, six properties are tax forfeit vacant land and eight properties have potential for environmental contamination.



REVENUES	Budget to Date	12/31/17 Act & Enc	Balance	2018 Budget	2019 Estimate	2020 Estimate	2021 Estimate	2022 Estimate	Beyond 2022	Total
Property Tax	325,000	325,000	-	-	-	-	-	-	-	325,000
County Bonds	1,000,000	-	1,000,000	-	500,000	1,100,000	-	2,650,000	-	5,250,000
State	350,000	350,000	-	-	-	-	-	-	-	350,000
Total	1,675,000	675,000	1,000,000	-	500,000	1,100,000	-	2,650,000	-	5,925,000
EXPENDITURES	Budget to Date	12/31/17 Act & Enc	Balance	2018 Budget	2019 Estimate	2020 Estimate	2021 Estimate	2022 Estimate	Beyond 2022	Total
Land	1,000,000	-	1,000,000	-	-	-	-	1,000,000	-	2,000,000
Construction	-	-	-	-	-	1,100,000	-	1,450,000	-	2,550,000
Consulting	675,000	294,960	380,040	-	500,000	-	-	200,000	-	1,375,000
Equipment	-	-	-	-	-	-	-	-	-	-
Furnishings	-	-	-	-	-	-	-	-	-	-
Other Costs	-	336	(336)	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-	-	-	-
Total	1,675,000	295,295	1,379,705	-	500,000	1,100,000	-	2,650,000	-	5,925,000

Attachment 6 - Hennepin County 2018-2022 Community Works Capital Improvement Program

Project Name: 1001648 Lowry Avenue NE Community Works				Funding Start: 2014				
Major Program: Public Works				Funding Completion: 2025				
Department: Community Works								
Current Year's CIP Process Summary	Budget to Date	2018 Budget	2019 Estimate	2020 Estimate	2021 Estimate	2022 Estimate	Beyond 2022	Total
Department Requested	1,675,000	-	500,000	1,100,000	-	2,650,000	-	5,925,000
Administrator Proposed	1,675,000	-	500,000	1,100,000	-	2,650,000	-	5,925,000
CBTF Recommended	1,675,000	-	500,000	1,100,000	-	2,650,000	-	5,925,000
Board Approved Final	1,675,000	-	500,000	1,100,000	-	2,650,000	-	5,925,000
Scheduling Milestones (major phases only):				Board Resolutions / Supplemental Information:				
Scoping: Complete				<p>Resolution 13-0358R2 (adopted November 19, 2013) approved Agreement A131292 with Stantec, Inc. for planning and design services to update the 2002 Lowry Avenue Corridor Plan for the Lowry Avenue corridor in Northeast Minneapolis. The planning process evaluated opportunities for bicycle and pedestrian improvements along the Northeast corridor, with a focus on infrastructure improvements and redevelopment opportunities at six intersections along Lowry Avenue Northeast: Marshall Street Northeast, 2nd Street Northeast, University Avenue Northeast, Washington Street Northeast, Monroe Street Northeast, and Central Avenue Northeast.</p> <p>The plan also identifies opportunities to improve the bicycle and pedestrian environment for the entire Lowry Avenue Northeast segment between Marshall Street and Stinson Boulevard. Improvements include reducing the vehicle travel lanes from four lanes to three west of Central Avenue and using the extra footage gained by this conversion to create wider sidewalks and boulevards that buffer bicyclists and pedestrians from vehicle traffic.</p> <p>Resolution 15-0403 (adopted October 20, 2015) adopted the Lowry Avenue Northeast Corridor Plan and Implementation Framework.</p> <p>Based on coordination with an anticipated MnDot project, intersection improvements at the intersections of Central Avenue Northeast and University Avenue Northeast would include installation of ADA compliant ramps, signal enhancements and intersection modifications.</p> <p>Resolution 17-0338 (adopted September 7, 2017) approved Agreement A177721 with the City of Minneapolis to provide for reimbursement of 50% of eligible costs associated with property acquisition for right-of-way purposes at the intersection of Lowry Avenue Northeast and Central Avenue.</p> <p>In September 2017, Lowry Avenue was reclassified as an A-Minor roadway making it eligible for regional solicitation.</p> <p>"Budget to Date" includes \$350,000 of County Program Aid which is categorized as a "State" funding source. County Program Aid is a general purpose state aid and is used by the county as an off-set to county levied property tax.</p>				
Design: 2017-2019								
Procurement: 2018-2020								
Construction: 2018-2020								
Completion: 2020								
Project's Effect on Annual Operating Budget:								
Annual Impact for Requesting Department:				0				
Annual Impact for all other Depts:				0				
Total				0				
Changes from Prior CIP:								
The project is not requesting any additional funds for 2018. The project team is awaiting the necessary financial matches from project partners.								
Last Year's CIP Process Summary	Budget to Date	2017	2018	2019	2020	2021	Beyond	Total
Department Requested	1,675,000	-	500,000	1,100,000	-	-	2,650,000	5,925,000
Administrator Proposed	1,675,000	-	500,000	1,100,000	-	-	2,650,000	5,925,000
CBTF Recommended	1,675,000	-	500,000	1,100,000	-	-	2,650,000	5,925,000
Board Approved Final	1,675,000	-	500,000	1,100,000	-	-	2,650,000	5,925,000

Attachment 7 - Hennepin County 2018-2022 Transportation CIP

Project Name: 2140900 CSAH 153 Lowry Ave - Reconst fr Washington St NE to Johnson
Major Program: Public Works
Department: Transportation Provisional Roads & Bridges Projects

Funding Start: Provisional Project
Funding Completion: Provisional Project

Summary:
 Reconstruct Lowry Avenue Northeast (CSAH 153) from Washington Street Northeast to Johnson Street Northeast in the City of Minneapolis.

Purpose & Description:
 The proposed project would include new pavement, curb and gutter, stormwater structures, sidewalk, ADA accommodations, and traffic signals. In many areas along the corridor the pavement extends over the gutter pan which results in poor drainage. The sidewalk facilities exhibit severe cracking and the driveway transitions are not designed adequately to serve persons with disabilities. A full reconstruction is warranted to address these issues.

Community Works conducted a corridor study on Lowry Avenue Northeast (CSAH 153) that evaluated potential improvements and recommended converting the existing four-lane configuration to a three-lane to better accommodate vehicle turning movements and provide additional space for pedestrians. The existing sidewalk is located adjacent to vehicle lanes which results in a feeling of discomfort. Additionally, signs are located within the sidewalk facility which obstruct persons with disabilities from easily traversing the corridor. Pedestrians would greatly benefit from a wider sidewalk facility and streetscaping that better aligned with the character of the area. This project would include improvements to the intersection at University Avenue Northeast (TH 47) which has been identified as a high priority from the corridor study.

This is a provisional project dependent upon the availability of funding.



REVENUES	Budget to Date	12/31/17 Act & Enc	Balance	2018 Budget	2019 Estimate	2020 Estimate	2021 Estimate	2022 Estimate	Beyond 2022	Total
EXPENDITURES	Budget to Date	12/31/17 Act & Enc	Balance	2018 Budget	2019 Estimate	2020 Estimate	2021 Estimate	2022 Estimate	Beyond 2022	Total
Land	-	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	15,776,000	15,776,000
Consulting	-	-	-	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-	-	-	-
Furnishings	-	-	-	-	-	-	-	-	-	-
Other Costs	-	-	-	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	15,776,000	15,776,000

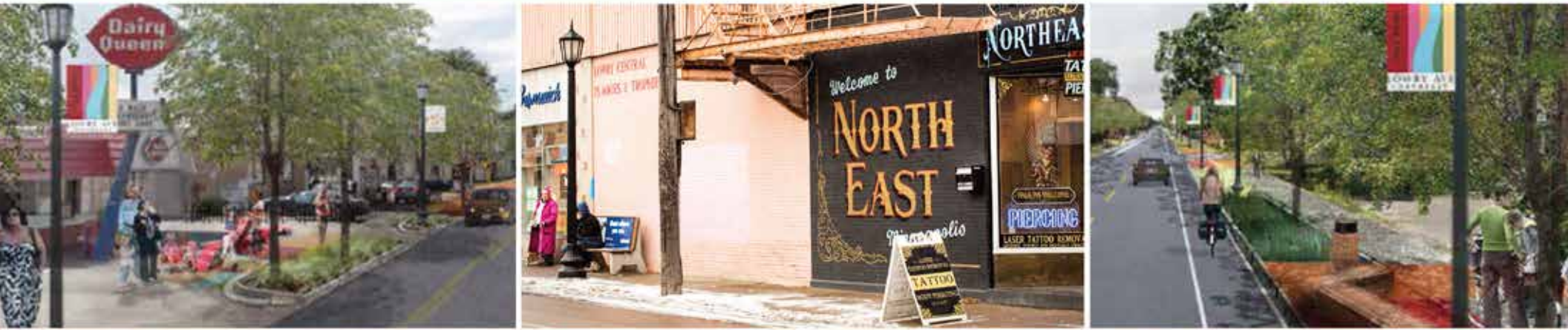
Attachment 7 - Hennepin County 2018-2022 Transportation CIP

Project Name: 2140900 CSAH 153 Lowry Ave - Reconst fr Washington St NE to Johnson				Funding Start: Provisional Project				
Major Program: Public Works				Funding Completion: Provisional Project				
Department: Transportation Provisional Roads & Bridges Projects								
Current Year's CIP Process Summary	Budget to Date	2018 Budget	2019 Estimate	2020 Estimate	2021 Estimate	2022 Estimate	Beyond 2022	Total
Department Requested	-	-	-	-	-	-	-	-
Administrator Proposed	-	-	-	-	-	-	-	-
CBTF Recommended	-	-	-	-	-	-	-	-
Board Approved Final	-	-	-	-	-	-	-	-
Scheduling Milestones (major phases only): Scoping: Design: Procurement: Construction: Completion:				Board Resolutions / Supplemental Information: This is a provisional project dependent upon the availability of funding.				
Project's Effect on Annual Operating Budget: Provisional Project: No impact to department staff or annual operating cost. Annual Impact for Requesting Department: 0 Annual Impact for all other Depts: 0 Total 0								
Changes from Prior CIP:								
Last Year's CIP Process Summary	Budget to Date	2017	2018	2019	2020	2021	Beyond	Total
Department Requested	-	-	-	-	-	-	-	-
Administrator Proposed	-	-	-	-	-	-	-	-
CBTF Recommended	-	-	-	-	-	-	-	-
Board Approved Final	-	-	-	-	-	-	-	-

HENNEPIN COUNTY

Attachment 8 - Lowry Ave NE Corridor Plan and Implementation Framework

LOWRY AVENUE COMMUNITY WORKS



LOWRY AVENUE NORTHEAST CORRIDOR PLAN AND IMPLEMENTATION FRAMEWORK

www.hennepin.us/LOWRY

NORTHEAST



EXECUTIVE SUMMARY

LOWRY AVENUE NE CORRIDOR PLAN

The creation of the Lowry Avenue NE corridor plan in 2014 was a collaboration between Hennepin County, the City of Minneapolis, the Minnesota Department of Transportation, the Minneapolis Parks and Recreation Board, Metro Transit and the five Lowry Avenue NE neighborhoods.

The corridor plan includes analyses of land use, building conditions, market conditions, potential for environmental contamination, parking, sidewalk width, traffic, bicycle and pedestrian circulation.

Outlined in this summary are key findings that were based on significant input from the project’s steering, technical advisory, community advisory teams and the community:

- Redevelopment scenarios for each of the six study intersections.
- The need to create a pedestrian-friendly environment.
- The need to consider facilities that serve bicyclists.

REDEVELOPMENT RECOMMENDATIONS FOR THE SIX STUDY INTERSECTIONS

Marshall Street NE and Lowry Avenue NE

Development Potential Retail: High Office: Medium Housing: High

Because of assets such as access to the Mississippi River, river views and strong traffic counts, this intersection presents opportunities for new housing, restaurants and businesses. Betty Danger’s Country Club, a restaurant featuring a dine-on Ferris wheel at the intersection’s northeast corner, should generate additional energy in the area when combined with the existing and planned park space along the Mississippi River. Development in the southeast quadrant of the intersection is likely. Within the Lowry Avenue NE corridor, this intersection has the greatest potential to support new development without public assistance.

The corridor plan proposes narrowing Lowry Avenue NE east of Marshall Street NE from four travel lanes to two, plus a continuous left-hand turn lane. Shifting the curbs inward allows space for a treed boulevard and wider sidewalks. These road improvements do not require building removal.

2nd Street NE and Lowry Avenue NE

Development Potential Retail: Medium Office: Low Housing: Medium

With large parcels under single ownership, this intersection has considerable potential for redevelopment. All four quadrants offer opportunities for redevelopment or reuse as a mix of uses or commercial. Reuse of the Little Jack’s site could create momentum and quickly catalyze other projects.

The intersection experiences infrequent flooding. Stormwater ponds incorporated into redevelopment sites in intersection’s northeast and southeast quadrants, as well as a larger underground stormwater pipe, will alleviate the flooding situation.

The corridor plan proposes narrowing Lowry Avenue NE on either side of 2nd Street NE from four travel lanes to two travel lanes and a continuous left-hand turn lane. Reducing the right-of-way space dedicated to vehicle travel lanes allows for the creation of a treed boulevard and wider sidewalks in the vicinity.

University Avenue NE and Lowry Avenue NE

Development Potential Retail: Medium Office: Low Housing: Medium

This intersection could evolve into a mixed-use urban village with new housing choices, restaurants and businesses to serve the neighborhoods. This transformation depends on the ability to acquire property and to combine smaller parcels into larger development parcels through this acquisition.

This intersection is a nexus for semi-truck traffic. Lowry Avenue NE and Central Avenue are city designated freight routes and Lowry Avenue NE is a federal freight route between University Avenue NE and Marshall Street NE. Current turning radii at this intersection make it extremely difficult for semis to move efficiently through the intersection.

Attachment 8 - Lowry Ave NE Corridor Plan and Implementation Framework

PEDESTRIAN AND BICYCLE IMPROVEMENTS

Currently the roadway and narrow sidewalks almost entirely occupy Lowry Avenue NE's public right-of-way. This limits options for bicycle facilities, comfortable sidewalk widths or planted boulevards. The project team studied current use of the avenue by vehicles, pedestrians and bicyclists and forecasted future vehicle use.

In addition, a parking analysis completed in April 2014 showed parking was not heavily used on Lowry Avenue NE except for at the Central Avenue NE intersection during Friday afternoon worship service and in the vicinity of the Fillmore Street NE intersection during Sunday morning worship service. This limited use of parking allowed for the removal of on-street parking in the recommended roadway sections.

Because of differing transportation functions, the recommendations for the segments west of Central and east of Central are different.

Central Avenue west to Marshall Street NE: wider sidewalks

The corridor plan proposes reducing vehicle travel lanes from four lanes to three: a westbound travel lane, an eastbound travel lane and a center left-turn lane. Dropping a travel lane provides up to twelve feet in the right-of-way for pedestrian improvements, including wider sidewalks and treed boulevards.

Wider sidewalks allow two people to walk comfortably side-by-side and provide sufficient clearance for people with disabilities. A boulevard allows space for utilities, vegetation, and snow storage. This scenario does not include a dedicated bicycle facility on Lowry Avenue, relying instead on parallel bicycle boulevards about a quarter-mile to the north and south to accommodate through bicycle traffic.

Central Avenue NE east to Stinson Boulevard: wider sidewalks and bicycle facilities

The corridor plan proposes a two vehicle travel lanes and two on-street bicycle lanes (one 11-foot travel lane and one 6-foot bicycle lane in each direction), and optional parking at selected locations. It proposes removing parking for most of this segment and reallocates this space for the bicycle lanes and wider sidewalks



*Central Avenue NE to Marshall Street NE:
Proposed view at 2nd Street NE and Lowry Avenue NE*



*Central Avenue NE to Stinson Boulevard:
Proposed view near Polk Street NE and Lowry Avenue NE*



Hennepin County, Board of Commissioners

RESOLUTION 18-0258

2018

The following resolution was moved by Commissioner Mike Opat and seconded by Commissioner Debbie Goettel:

WHEREAS, the Metropolitan Council has given notice that funding through the Regional Solicitation is available; and

WHEREAS, a board resolution must be submitted with the application for Regional Solicitation funding;

BE IT RESOLVED, that Hennepin County be authorized to apply for funding grants through the Regional Solicitation and recognize its role as the public agency sponsor for the following projects (separated by category), if funding is awarded:

Roadway reconstruction/modernization

- Programmed in 2018-2022 CIP
- 1. County State Aid Highway 5 (CSAH 5) (Minnetonka Boulevard) from Trunk Highway 100 to France Avenue in Saint Louis Park - CP 2168100
- 2. CSAH 152 (Osseo Rd) from CSAH 2 (Penn Avenue) to 49th Avenue in Minneapolis - CP 2174100
- 3. CSAH 153 (Lowry Avenue) from Washington Street NE to Johnson Street NE in Minneapolis - CP 1001648 & 2140900
- Project Not Programmed in 2018-2022 CIP
- 4. CSAH 23 (Marshall St NE) from 16th Avenue NE to 27th Avenue NE in Minneapolis - CP 2984500

Roadway expansion

- Programmed in 2018-2022 CIP
- 5. CSAH 109 (85th Avenue) at TH 252 in Brooklyn Park - CP 2167700

Bridges

- Programmed in 2018-2022 CIP
- 6. CSAH 15 (Shoreline Drive) Bridge #27592 over Tanager Channel in Orono - CP 2163400
- Projects Not Programmed in 2018-2022 CIP
- 7. CSAH 152 (Washington Avenue) Bridge #91333 at Bassett Creek in Minneapolis - CP 2176400
- 8. CSAH 158 (Vernon Avenue) Bridge #4510 over CP Rail in Edina - CP 2176600

Multi-use trails and bicycle facilities

- Programmed in 2018-2022 CIP
- 9. Midtown Greenway ramp access between Garfield Avenue and Harriet Avenue in Minneapolis - CP 0031547
- 10. CSAH 10 (Bass Lake Road) from CSAH 8 (West Broadway Avenue) to Xenia Avenue in Crystal - CP 2172800
- 11. CSAH 52 (Hennepin Avenue/First Avenue) from CSAH 23 (Main Street NE) to Eighth Street SE in Minneapolis - CP 2182100
- 12. CSAH 36 (University Avenue)/CSAH 37 (Fourth Street) from I-35W to Oak Street SE in Minneapolis - CP 2167301
- 13. CSAH 81 (Bottineau Boulevard) from CSAH 109 (85th Avenue) to First Avenue NW in Brooklyn Park and Osseo - CP 2182200

Pedestrian facilities

Attachment 9 - Hennepin County Board Resolution - 2018 Regional Solicitation

- Programmed in 2018-2022 CIP

14. A r i c a s with Disabiliti s Act r trofits at a r i o u s locatio s to compl t bus rapi tra sit and light rail transit s r i c s - CP 999965

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

**County of Hennepin
Board of County Commissioners**

YEAS	NAYS	ABSTAIN	ABSENT
------	------	---------	--------

Mike Opat

Linda Higgins

Marion Greene

Peter McLaughlin

Debbie Goettel

Jan Callison

Jeff Johnson

RESOLUTION ADOPTED ON **6/26/2018**

ATTEST:

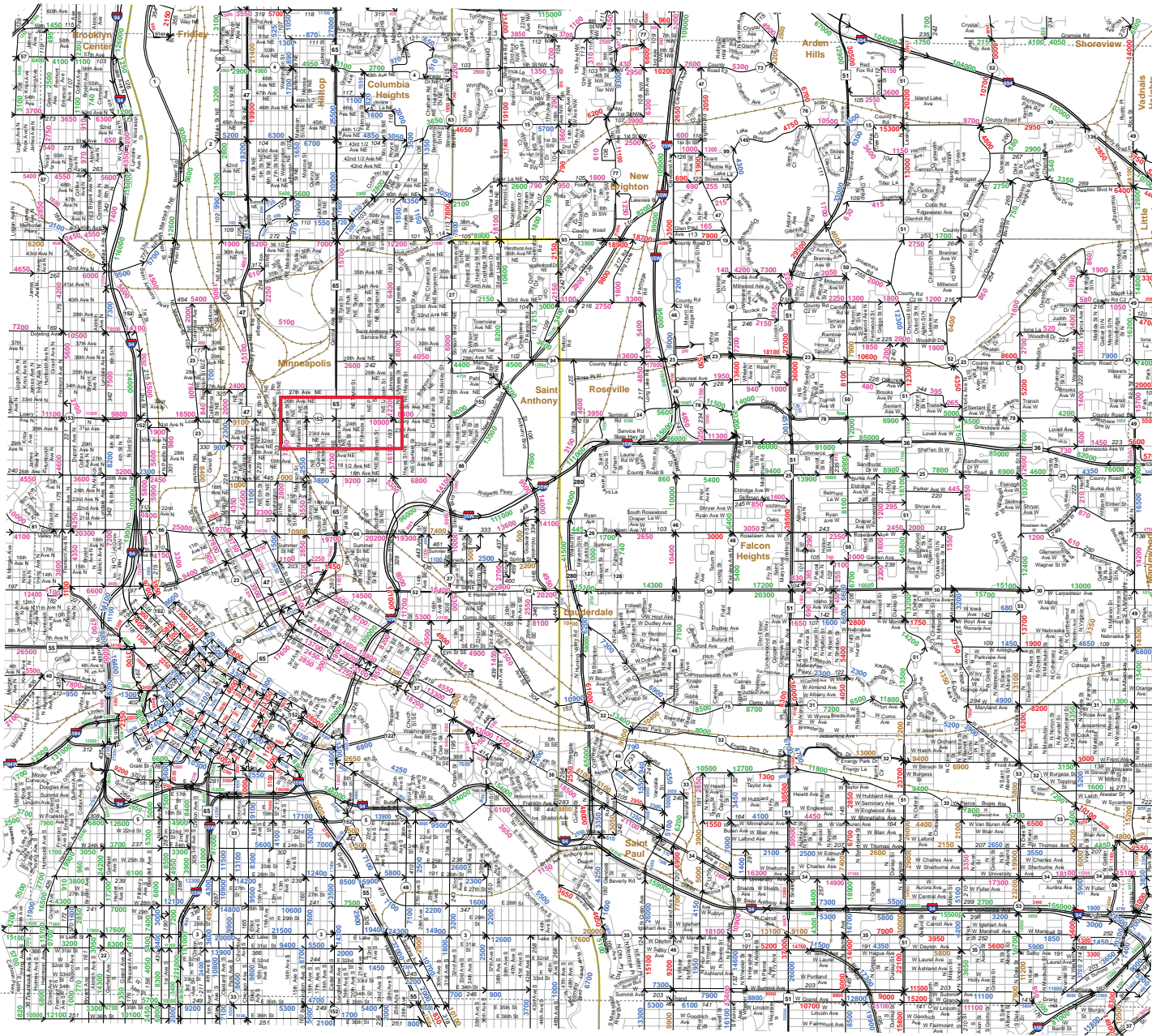
M. Roge

Deputy/Clerk to the County Board



Attachment 10 - MnDOT 50 Series Map

2015 Publication Traffic Volumes Metro Street Series - 3E



0 0.25 0.5 0.75 1 Mi.

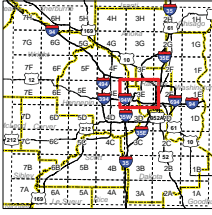
Numerals Indicate Average Annual Daily Traffic (AADT) Volumes on Designated Roads

Traffic Volumes are Subject to Variability and Construction Effects For More Info Visit: <http://www.dot.state.mn.us/traffic-data/call-methods.html>

Minnesota Department of Transportation Office of Transportation Data and Analysis Traffic Volume Program <http://www.dot.state.mn.us/traffic-data/index.html>

MAP LEGEND

- AADT Year
 - 2015 2014
 - 2013 2012
 - 2011 and older
- Interstate
- US Highway
- MN Highway
- CSAH
- MSAS
- COUNTY ROAD
- Other Roads
- Railroads
- Street Series Grid
- CITIES
- COUNTIES
- LAKES
- RIVERS
- Perennial Streams
- Ditches
- National Forests
- National Parks
- Tribal Gov'ts
- State Forests
- State Parks

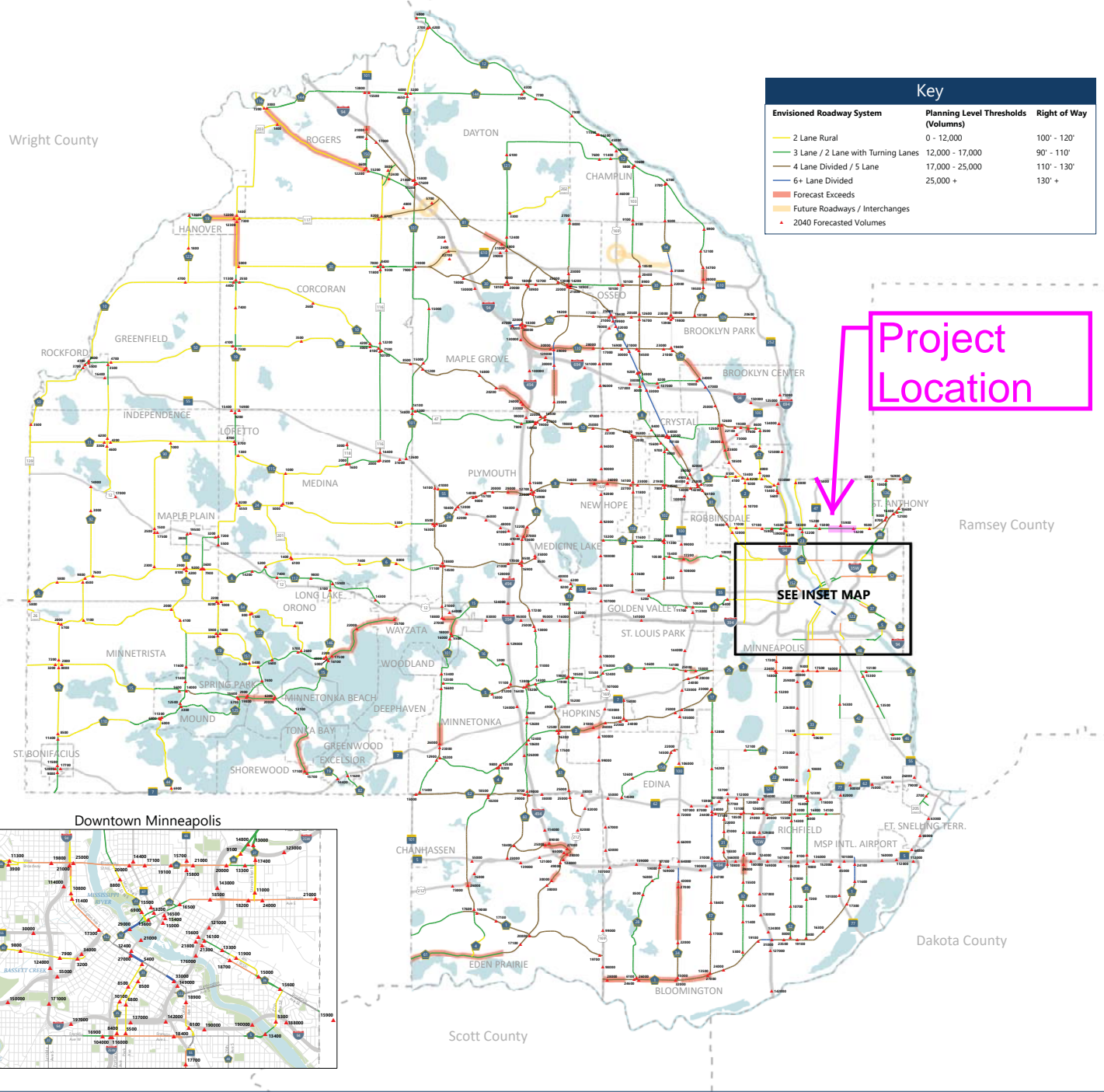


Map Source: Minnesota Department of Transportation Office of Transportation Data and Analysis Traffic Volume Program 2015 AADT Product <http://www.dot.state.mn.us/traffic-data/data-products.html>

Hennepin County Draft 2040 Transportation Systems Plan

Attachment 11 | 2040 Forecasted Traffic Volumes

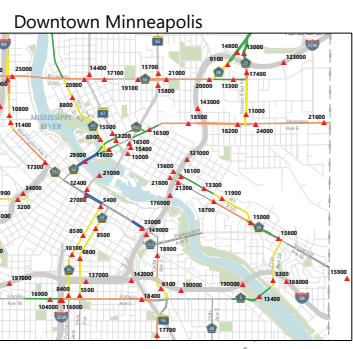
HENNEPIN COUNTY
MINNESOTA



Envisioned Roadway System	Planning Level Thresholds (Volumes)	Right of Way
2 Lane Rural	0 - 12,000	100' - 120'
3 Lane / 2 Lane with Turning Lanes	12,000 - 17,000	90' - 110'
4 Lane Divided / 5 Lane	17,000 - 25,000	110' - 130'
6+ Lane Divided	25,000 +	130' +
Forecast Exceeds		
Future Roadways / Interchanges		
▲ 2040 Forecasted Volumes		

Project Location

SEE INSET 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: 7/5/2018

Data sources: SRF Consulting, Hennepin County Transportation Planning



Webber 44 Community Engagement

Purpose

Hennepin County is planning for the reconstruction of CSAH 152 (portions of Osseo Road, 44th Street, Webber Parkway, and Lyndale Avenue). Tentatively named Webber 44, the project seeks to engage and gather input from all within the community through an inclusive and accessible process. This dialogue between the community and the project team will deliver a successful project with a community-focused solution.

Messaging

The key overall messages to the public include that this project:

- Benefits the community through the development of a multimodal corridor serving pedestrians, bicyclists, transit riders, and drivers
- Addresses existing issues with safety, aesthetics, and substandard conditions, with safe, attractive, and functional new design
- Accommodates the new D Line bus rapid project, bringing a high quality service for local transit riders
- Complements existing local parks, institutions, and businesses, and sets the stage for more positive change
- Builds upon an inclusive community process that listens and responds to everyone

Community groups and stakeholders

Local residents, employers, business associations, neighborhood associations (particularly Webber Camden and Victory), property and business owners, transit riders, local students and youth, City of Minneapolis, Minneapolis Park and Recreation Board, Metro Transit, Minneapolis Public Schools and others

Online and in-person engagement



Text and email surveys



Pop-up engagement and tactical urbanism



Project video



Partnership and agency coordination



Input ID



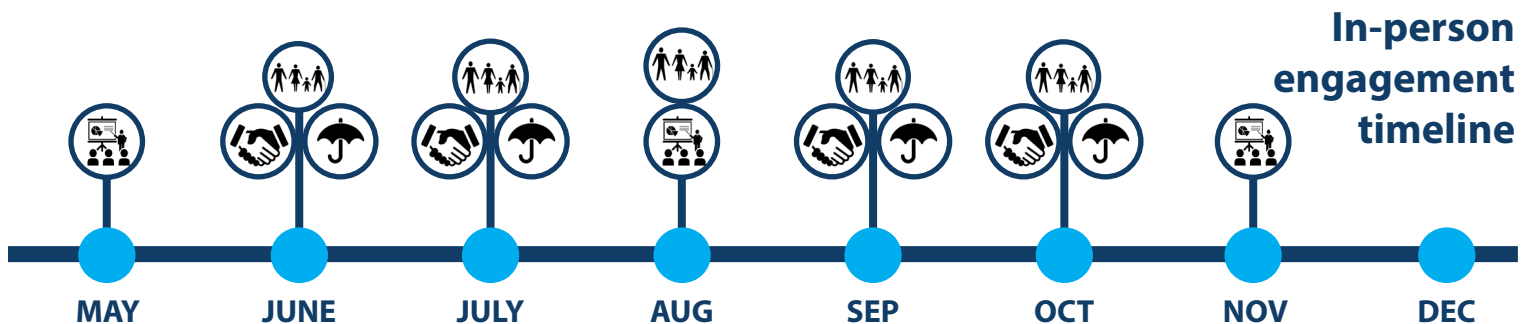
Open houses



Digital and social media campaign



Community stakeholder/youth outreach



Goals

Respect and listen to public questions and concerns

Relay information to the public in a timely, clear, and effective manner

Maintain and strengthen the relationship between Hennepin County and project stakeholders

Coordinate outreach and engagement across multiple projects impacting the area

Attachment 13 - 2017 HCAADT Count

HENNEPIN COUNTY
TRANSPORTATION PLANNING DIVISION

48 HR. CLASSIFICATION DATA
CSAH 153 E. OF 6TH. ST. N.E.
STUDY # 4338

Site: 03
Monday, 3/6/2017 10:00 AM -
Wednesday, 3/8/2017 10:00 AM

Classification Grand Totals

Hourly Averages

E.B.

Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
12:00 AM	75.5	0.0	57.5	15.0	0.0	2.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	44.5	0.0	38.0	4.0	0.0	1.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	39.5	0.0	34.0	4.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	32.5	0.0	23.5	7.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	47.0	0.0	33.0	11.0	0.0	1.0	1.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
5:00 AM	120.5	0.0	85.0	27.0	1.0	4.0	3.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
6:00 AM	250.5	0.0	170.5	55.0	11.0	10.5	1.0	0.0	1.0	1.0	0.0	0.5	0.0	0.0	0.0
7:00 AM	580.0	0.0	404.5	124.5	20.5	22.0	2.0	0.0	4.0	1.5	0.5	0.5	0.0	0.0	0.0
8:00 AM	586.5	0.0	404.5	133.0	18.5	24.5	2.5	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.0
9:00 AM	386.5	0.0	268.0	82.0	7.5	22.5	1.0	0.0	3.0	2.5	0.0	0.0	0.0	0.0	0.0
10:00 AM	347.0	0.0	238.5	74.0	11.5	14.5	2.0	0.0	3.5	2.5	0.0	0.0	0.5	0.0	0.0
11:00 AM	393.0	0.0	277.5	83.5	7.0	14.0	2.0	0.0	3.5	4.0	1.0	0.5	0.0	0.0	0.0
12:00 PM	404.0	0.0	284.0	92.5	3.5	14.5	2.0	0.0	2.0	5.0	0.0	0.0	0.0	0.0	0.5
1:00 PM	447.5	0.0	306.0	111.0	7.5	17.0	1.0	0.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0
2:00 PM	527.0	0.0	357.5	113.0	16.0	24.5	6.0	0.5	3.0	4.5	0.0	2.0	0.0	0.0	0.0
3:00 PM	578.0	0.0	410.5	118.5	11.5	23.5	2.0	0.0	7.5	3.5	0.0	0.5	0.0	0.5	0.0
4:00 PM	665.5	0.5	488.0	133.5	17.0	11.0	1.5	0.5	7.0	3.5	0.0	2.5	0.5	0.0	0.0
5:00 PM	686.5	0.0	529.5	110.0	14.0	13.5	1.0	0.0	11.0	3.0	0.0	4.5	0.0	0.0	0.0
6:00 PM	485.5	0.0	390.5	75.0	7.0	8.5	0.0	1.0	2.0	0.5	0.0	1.0	0.0	0.0	0.0
7:00 PM	336.0	0.0	280.5	47.5	0.0	6.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
8:00 PM	281.0	0.0	226.0	50.0	0.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9:00 PM	207.0	0.0	170.0	32.5	0.0	4.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
10:00 PM	152.5	0.0	129.5	22.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11:00 PM	112.5	0.0	90.5	19.5	0.5	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Daily Average	7786.0	0.5	5697.0	1545.5	154.5	247.5	31.5	2.0	54.5	37.5	1.5	12.0	1.0	0.5	0.5

Study Grand Totals

Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating	
E.B.	15572	1	11394	3091	309	495	63	4	109	75	3	24	2	1	1
		0.0 %	73.2 %	19.8 %	2.0 %	3.2 %	0.4 %	0.0 %	0.7 %	0.5 %	0.0 %	0.2 %	0.0 %	0.0 %	0.0 %

EASTBOUND ONLY - SUM OF THE DAILY AVERAGE OF CLASSES 4 THROUGH 13 = 2,101
 WESTBOUND ONLY - SUM OF THE DAILY AVERAGE OF CLASSES 4 THROUGH 13 = 2,090

DAILY TOTAL OF HEAVY COMMERCIAL VEHICLES =

4,191

Attachment 13 - 2017 HCAADT Count

HENNEPIN COUNTY
TRANSPORTATION PLANNING DIVISION

48 HR. CLASSIFICATION DATA
CSAH 153 E. OF 6TH. ST. N.E.
STUDY # 4338

Site: 03
Monday, 3/6/2017 10:00 AM -
Wednesday, 3/8/2017 10:00 AM

Classification Grand Totals

Hourly Averages

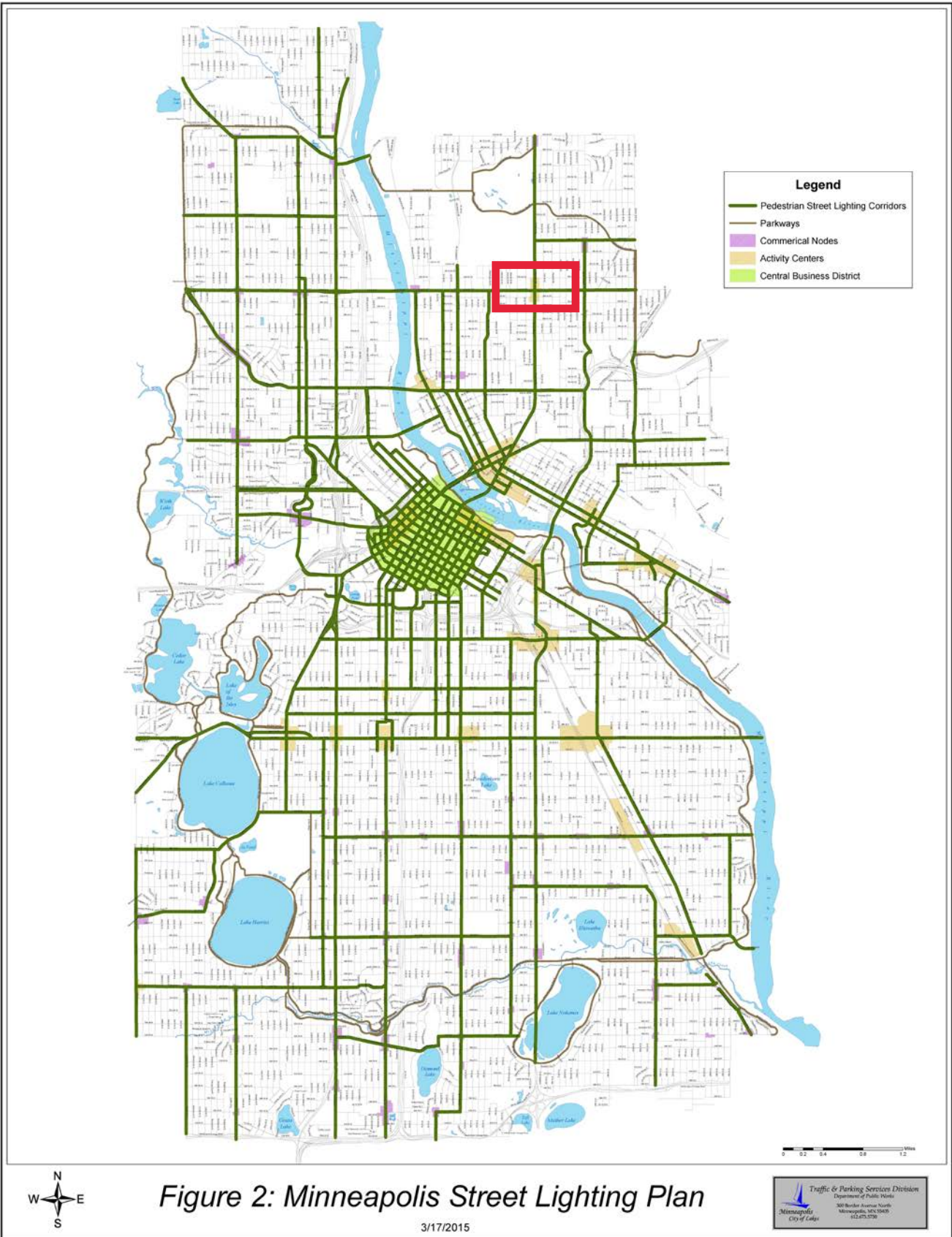
W.B.

Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
12:00 AM	63.5	0.0	52.5	10.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	33.0	0.0	27.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	41.5	0.0	30.5	7.5	0.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	25.0	0.0	17.0	5.0	0.0	0.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	45.0	0.0	34.5	9.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5:00 AM	136.0	0.0	100.5	31.5	0.5	1.5	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
6:00 AM	324.5	0.0	227.5	61.0	17.5	10.0	1.0	0.5	2.0	5.0	0.0	0.0	0.0	0.0	0.0
7:00 AM	643.5	0.0	497.0	97.0	13.5	24.0	3.0	0.0	5.5	2.0	0.5	1.0	0.0	0.0	0.0
8:00 AM	554.0	0.5	416.5	93.0	11.0	21.0	2.5	0.0	3.5	5.0	0.0	1.0	0.0	0.0	0.0
9:00 AM	396.5	0.0	280.0	84.5	5.0	17.0	3.0	0.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0
10:00 AM	353.0	0.0	235.0	79.5	6.5	21.5	0.5	0.0	5.0	4.0	1.0	0.0	0.0	0.0	0.0
11:00 AM	380.0	0.0	260.0	86.5	9.5	13.5	3.5	0.0	2.0	5.0	0.0	0.0	0.0	0.0	0.0
12:00 PM	441.0	0.0	322.5	89.5	5.0	13.0	2.0	0.0	3.5	4.5	0.5	0.5	0.0	0.0	0.0
1:00 PM	481.5	0.0	351.5	99.5	7.5	14.5	2.0	0.0	2.0	3.5	0.0	1.0	0.0	0.0	0.0
2:00 PM	538.5	0.0	365.0	133.5	12.0	21.0	2.0	0.0	3.0	1.5	0.0	0.5	0.0	0.0	0.0
3:00 PM	683.5	0.0	500.0	127.5	18.5	23.5	2.5	0.0	8.5	2.5	0.0	0.5	0.0	0.0	0.0
4:00 PM	783.5	1.5	584.5	153.0	11.5	20.5	1.5	0.0	7.0	2.0	0.5	1.5	0.0	0.0	0.0
5:00 PM	780.5	0.0	611.5	131.0	15.0	14.0	1.0	0.0	5.0	0.5	0.5	2.0	0.0	0.0	0.0
6:00 PM	531.5	0.0	430.0	87.0	2.0	11.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0
7:00 PM	369.0	0.0	300.5	57.5	0.0	9.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
8:00 PM	312.5	0.0	258.0	48.5	0.5	4.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
9:00 PM	229.0	0.0	192.0	32.5	0.0	4.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
10:00 PM	144.5	0.0	123.0	19.5	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11:00 PM	99.5	0.0	83.0	14.5	0.5	1.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Daily Average	8390.0	2.0	6300.0	1564.0	136.0	250.0	29.0	1.5	55.5	40.5	3.0	8.5	0.0	0.0	0.0

Study Grand Totals

	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
W.B.	16780	4	12600	3128	272	500	58	3	111	81	6	17	0	0	0
		0.0 %	75.1 %	18.6 %	1.6 %	3.0 %	0.3 %	0.0 %	0.7 %	0.5 %	0.0 %	0.1 %	0.0 %	0.0 %	0.0 %

Attachment 14 - Minneapolis Street Lighting Plan



Document Information and Disclaimer (2 of 4)

- **Tried Strategies** have been implemented in a number of locations where the results of the evaluations have not been fully evaluated or are inconsistent.
- **Experimental Strategies** are ideas that have been suggested and at least one agency has considered sufficiently promising to try on a small scale in at least one location.
- **Typical Characteristics of Candidate Locations**—The appropriate use of the strategy based on roadway characteristics
 - Typical Costs—A summary of the typical costs for installation of the safety strategies and any applicable maintenance costs based on available past projects
 - Design Features—Information on the latest design of the safety strategy and the appropriate design criteria to be used during implementation
 - Best Practice—A short summary of the current best practice relating to the safety strategy
 - Sources—Related resources and cited materials

	Strategies	Pages	Crash Reduction/ Crash Features	Proven/Tried/ Experimental	Operational Effects (Mobility)	Candidate Locations	Design Features	Construction Costs
Pedestrian Safety Strategies	Sidewalks	1-2	50 to 90% reduction in "walking in roadway" pedestrian crashes	Proven	N/A	Urban arterials & collectors	Curb ramps, cross slope, buffer zones	\$4 to \$5 per square foot
	Crosswalks and Crosswalk Enhancements	3-8	Varies	Proven/Tried	N/A	Intersections	Should be part of package including crosswalk enhancements	\$200 per crosswalk
	Medians and Crossing Islands	9-10	39 to 46%	Proven	May provide operational benefits	Wide 2-lane roads and multi-lane roadways	4 to 8 feet wide	\$15,000 to \$30,000 per 100 feet
	Curb Extensions	11-12	39 to 46%	Proven	Potential reduction in speeds	Urban arterials and collectors with curb parking	Roadway with parking or shoulder	\$5,000-\$10,000 per extension
	Pedestrian Hybrid Beacon System	13-15	60%	Tried	Additional delay for vehicles stopping for pedestrians	Mid-Block Crosswalk locations — Not at intersections	Pedestrian activated	\$80,000
	Rectangular Rapid Flashing Beacon	16-17	78 to 100% yield to pedestrian rate	Tried	Additional delay for vehicles stopping for pedestrians	Mid-Block Crosswalk	Passive or active pedestrian activation	\$10K to \$15K
	Crosswalk Lighting	18-19	33 to 44%	Proven	N/A	Isolated crosswalks not along a continuously lit roadway	Require a power source	\$10k to \$25K per intersection
	Traffic Signals	20-22	Leading Pedestrian Interval — 60%	Tried	Increases delay and reduces mobility of major roadway	Intersections that meet signal warrants	Short cycle lengths, countdown timers, easy accessibility	New Signal - \$175,000 to more than \$300,000 per intersection





CMF / CRF Details

CMF ID: 153

Prohibit on-street parking

Description:

Prior Condition: *No Prior Condition(s)*

Category: On-street parking

Study: [Handbook of Road Safety Measures, Elvik, R. and Vaa, T., 2004](#)

Star Quality Rating: ★★★★★

Crash Modification Factor (CMF)

Value: 0.8

Adjusted Standard Error: 0.05

Unadjusted Standard Error: 0.03

Crash Reduction Factor (CRF)

Value: 20 *(This value indicates a **decrease** in crashes)*

Adjusted Standard Error: 5

Unadjusted Standard Error: 3

Applicability

Crash Type: All

Crash Severity: A (serious injury),B (minor injury),C (possible injury)

Roadway Types: Minor Arterial

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type: Urban

Traffic Volume:



CMF / CRF Details

CMF ID: 154

Prohibit on-street parking

Description:

Prior Condition: *No Prior Condition(s)*

Category: On-street parking

Study: [Handbook of Road Safety Measures, Elvik, R. and Vaa, T., 2004](#)

Star Quality Rating: ★★★★★

Crash Modification Factor (CMF)

Value: 0.73

Adjusted Standard Error: 0.02

Unadjusted Standard Error: 0.01

Crash Reduction Factor (CRF)

Value: 27 (This value indicates a **decrease** in crashes)

Adjusted Standard Error: 2

Unadjusted Standard Error: 1

Applicability

Crash Type: All

Crash Severity: O (property damage only)

Roadway Types: Minor Arterial

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type: Urban

Traffic Volume:



CMF / CRF Details

CMF ID: 199

Road diet (Convert 4-lane undivided road to 2-lanes plus turning lane)

Description:

Prior Condition: *No Prior Condition(s)*

Category: Roadway

Study: [Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008](#)

Star Quality Rating:	
	★★★★★

Crash Modification Factor (CMF)	
Value:	0.71
Adjusted Standard Error:	0.02
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	29 (This value indicates a decrease in crashes)
Adjusted Standard Error:	2
Unadjusted Standard Error:	

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Minor Arterial
Number of Lanes:	4
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	



CMF / CRF Details

CMF ID: 271

Provide a left-turn lane on both major-road approaches

Description:

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [Safety Effectiveness of Intersection Left- and Right-Turn Lanes, Harwood et al., 2002](#)

Star Quality Rating:	
	★★★★★

Crash Modification Factor (CMF)	
Value:	0.58
Adjusted Standard Error:	0.04
Unadjusted Standard Error:	0.03

Crash Reduction Factor (CRF)	
Value:	42 (This value indicates a decrease in crashes)
Adjusted Standard Error:	4
Unadjusted Standard Error:	3

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Not Specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	



CMF / CRF Details

CMF ID: 332

Remove unwarranted signal (one-lane, one-way streets, excluding major arterials)

Description:

Prior Condition: *No Prior Condition(s)*

Category: Intersection traffic control

Study: [*Crash Reductions Related to Traffic Signal Removal in Philadelphia, Persaud et al., 1997*](#)

Star Quality Rating:



Crash Modification Factor (CMF)

Value: 0.76

Adjusted Standard Error: 0.09

Unadjusted Standard Error: 0.07

Crash Reduction Factor (CRF)

Value: 24 *(This value indicates a **decrease** in crashes)*

Adjusted Standard Error: 9

Unadjusted Standard Error: 7

Applicability

Crash Type: All

Crash Severity: All

Roadway Types: Not specified

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type: Not specified



CMF / CRF Details

CMF ID: 1420

Convert signal from pedestal-mounted to mast arm

Description:

Prior Condition: Existing pedestals were removed and replaced with mast arm signals

Category: Intersection traffic control

Study: [Signalized Intersections: Informational Guide, Rodegerdts et al., 2004](#)

Star Quality Rating:	
★★★★☆	[View score details]

Crash Modification Factor (CMF)	
Value:	0.51
Adjusted Standard Error:	
Unadjusted Standard Error:	0.031

Crash Reduction Factor (CRF)	
Value:	49 (This value indicates a decrease in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	3.1

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	



CMF / CRF Details

CMF ID: 1719

Provide bike lanes

Description:

Prior Condition: *No Prior Condition(s)*

Category: Bicyclists

Study: [Signalized Intersections: Informational Guide, Rodegerdts et al., 2004](#)

Star Quality Rating: [View score details]

Crash Modification Factor (CMF)

Value: 0.65

Adjusted Standard Error:

Unadjusted Standard Error: 0.2

Crash Reduction Factor (CRF)

Value: 35 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 20.3

Applicability

Crash Type: Vehicle/bicycle

Crash Severity: K (fatal),A (serious injury),B (minor injury),C (possible injury)

Roadway Types: Not specified

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Traffic Volume:



CMF / CRF Details

CMF ID: 7684

Change from permissive only to flashing yellow arrow protected/permissive left turn

Description: Change from permissive only to FYA - protected/permissive left turn

Prior Condition: Permissive phasing

Category: Intersection traffic control

Study: [Safety Effectiveness of Flashing Yellow Arrow: Evaluation of 222 Signalized Intersections in North Carolina, Simpson and Troy, 2015](#)

Star Quality Rating: [View score details]

Crash Modification Factor (CMF)

Value: 0.598

Adjusted Standard Error:

Unadjusted Standard Error: 0.105

Crash Reduction Factor (CRF)

Value: 40.2 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 10.5

Applicability

Crash Type: Left turn

Crash Severity: All

Roadway Types: Not specified

Number of Lanes:

Road Division Type:

Speed Limit: 35-55

Area Type: Not specified



CMF / CRF Details

CMF ID: 7998

Install left-turn lane

Description:

Prior Condition: Intersections without left turn lanes

Category: Intersection geometry

Study: [*Safety Evaluation of Signal Installation With and Without Left Turn Lanes on Two Lane Roads in Rural and Suburban Areas, Srinivasan et al., 2014*](#)

Star Quality Rating: [View score details]

Crash Modification Factor (CMF)

Value: 0.876

Adjusted Standard Error:

Unadjusted Standard Error: 0.066

Crash Reduction Factor (CRF)

Value: 12.4 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 6.6

Applicability

Crash Type: All

Crash Severity: All

Roadway Types: Not specified

Number of Lanes: 2

Road Division Type:

Speed Limit:

Area Type: All



CMF / CRF Details

CMF ID: 8109

Upgrade existing markings to wet-reflective pavement markings

Description: This strategy involves upgrading existing markings from standard marking materials to wet-reflective markings applied as paint, tape, or thermoplastic material.

Prior Condition: Standard pavement markings

Category: Delineation

Study: [Safety Evaluation of Wet Reflective Pavement Markers, Lyon et al., 2015](#)

Star Quality Rating: [View score details]

Crash Modification Factor (CMF)

Value: 0.825

Adjusted Standard Error:

Unadjusted Standard Error: 0.051

Crash Reduction Factor (CRF)

Value: 17.5 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 5.1

Applicability

Crash Type: All

Crash Severity: All

Roadway Types: Not specified

Number of Lanes: multilane

Road Division Type:

Speed Limit:

Area Type:



CMF / CRF Details

CMF ID: 8799

Install raised median with or without marked crosswalk (uncontrolled)

Description:

Prior Condition: No median

Category: Pedestrians

Study: [Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments, Zegeer et al., 2017](#)

Star Quality Rating: [View score details]

Crash Modification Factor (CMF)

Value: 0.685

Adjusted Standard Error:

Unadjusted Standard Error: 0.183

Crash Reduction Factor (CRF)

Value: 31.5 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 18.3

Applicability

Crash Type: Vehicle/pedestrian

Crash Severity: All

Roadway Types: Minor Arterial

Number of Lanes: 2 to 8

Road Division Type: Divided by Median

Speed Limit:

Area Type: Urban and suburban

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
Intersection - CSAH 153 (Lowry Ave NE) at Washington St NE																					
153	3.04	0	0	0	12	2015	11	21	18	7	153250148	27	2585	N	2	1	2	4	1	1	98
153	3.03	0	0	0	12	2013	5	13	16	2	131640060	27	2585	N	3	1	2	1	1	1	98
153	3.04	0	0	0	12	2015	6	9	10	3	151600078	27	2585	N	3	1	2	1	1	1	98
153	3.05	0	0	0	12	2013	10	9	17	4	132820155	27	2585	N	5	1	2	1	1	1	98
153	3.04	0	0	0	12	2014	6	7	21	7	141690086	27	2585	C	5	1	2	1	2	1	98
153	3.04	0	0	0	12	2014	6	17	5	3	142020037	27	2585	N	5	1	2	4	1	1	98
153	3.04	0	0	0	12	2015	11	13	21	6	153180011	27	2585	N	5	1	2	4	1	1	98
153	3.06	0	0	0	12	2015	4	14	18	3	151040156	27	2585	N	7	2	2	1	1	1	98
153	3.07	0	0	0	12	2014	6	22	16	1	141740032	27	2585	C	9	1	2	1	1	1	1
153	3.04	0	0	0	12	2014	10	27	18	2	143000194	27	2585	B	90	7	1	4	1	1	98
Segment - CSAH 153 (Lowry Ave NE) - E of Washington St NE to W of Monroe St NE																					
153	3.09	0	0	53	0	2013	2	14	7	5	130770129	27	2585	C	1	1	2	1	5	3	98
153	3.21	0	0	53	0	2013	9	27	17	6	133020099	27	2585	C	1	1	2	1	1	1	98
153	3.16	0	0	53	0	2013	5	14	20	3	131340205	27	2585	N	2	1	2	1	1	1	98
153	3.15	0	0	53	0	2013	3	11	13	2	130700085	27	2585	N	90	2	2	1	1	2	98
153	3.16	0	0	53	0	2013	5	28	17	3	131480169	27	2585	C	90	6	1	1	2	1	98
Intersection - CSAH 153 (Lowry Ave NE) at Monroe St NE																					
153	3.24	0	0	0	12	2013	5	15	20	4	131360008	27	2585	N	1	1	2	4	1	1	98
153	3.25	0	0	0	12	2013	11	2	0	7	133060074	27	2585	N	2	2	2	99	1	1	98
153	3.25	0	0	0	12	2013	12	16	18	2	133500276	27	2585	N	2	1	2	4	4	3	98
153	3.26	0	0	0	12	2014	7	19	14	7	142000054	27	2585	C	2	1	2	1	1	1	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.26	0	0	0	12	2015	5	9	21	7	151420187	27	2585	N	2	1	2	4	1	1	98
153	3.26	0	0	0	12	2015	6	2	5	3	151540010	27	2585	N	2	1	1	1	1	1	98
153	3.22	0	0	0	12	2015	5	10	22	1	151610095	27	2585	N	2	1	2	4	3	2	98
153	3.23	0	0	0	12	2015	7	1	13	4	151830037	27	2585	N	2	1	2	1	1	1	98
153	3.27	0	0	0	12	2015	9	8	17	3	152510124	27	2585	N	2	1	2	1	1	1	98
153	3.23	0	0	0	12	2015	11	30	9	2	153340226	27	2585	N	2	1	2	1	4	5	98
153	3.26	0	0	0	12	2014	9	12	17	6	142550139	27	2585	N	3	1	2	1	1	1	98
153	3.25	0	0	0	12	2015	7	28	11	3	152090123	27	2585	N	3	1	2	1	2	1	98
153	3.25	0	0	0	12	2015	12	29	16	3	153630148	27	2585	C	3	1	2	3	2	5	98
153	3.24	0	0	0	12	2013	1	26	15	7	130260098	27	2585	N	5	1	2	1	2	1	98
153	3.25	0	0	0	12	2015	8	26	13	4	152380121	27	2585	C	5	1	2	1	1	1	98
153	3.23	0	0	0	12	2013	10	8	15	3	132810170	27	2585	B	9	1	2	1	1	1	98
153	3.22	0	0	0	12	2014	4	9	12	4	140990095	27	2585	N	90	56	2	1	1	1	98
153	3.25	0	0	0	12	2015	8	26	17	4	152380182	27	2585	C	90	6	1	1	1	1	98
153	3.25	0	0	0	12	2015	9	5	15	7	152480101	27	2585	A	90	6	1	1	1	1	98
153	3.27	0	0	0	12	2015	10	13	22	3	152880093	27	2585	A	90	6	1	4	99	1	98
Segment - CSAH 153 (Lowry Ave NE) - E of Monroe St NE to W of TH 65																					
153	3.42	0	0	53	0	2013	1	14	14	2	130140169	27	2585	N	1	1	3	1	1	1	98
153	3.41	0	0	53	0	2013	5	20	23	2	131410007	27	2585	C	1	1	2	4	2	2	98
153	3.36	0	0	53	0	2014	9	24	21	4	142670156	27	2585	N	1	2	2	4	1	1	98
153	3.38	0	0	53	0	2013	1	4	1	6	130040016	27	2585	N	2	1	2	4	2	1	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.46	0	0	53	0	2013	1	7	19	2	130420072	27	2585	N	2	1	2	6	1	1	98
153	3.34	0	0	53	0	2013	11	30	17	7	133340090	27	2585	C	2	1	2	4	1	1	98
153	3.45	0	0	53	0	2015	1	19	0	2	150190005	27	2585	N	2	2	2	6	1	2	98
153	3.41	0	0	53	0	2014	12	10	17	4	143500247	27	2585	C	3	1	2	7	1	2	98
153	3.42	0	0	53	0	2013	9	8	4	1	132510018	27	2585	N	4	26	1	4	1	1	98
153	3.41	0	0	53	0	2013	7	17	7	4	131980048	27	2585	N	5	1	2	1	1	1	98
153	3.33	0	0	53	0	2013	9	16	14	2	132590156	27	2585	N	5	1	2	1	1	1	98
153	3.41	0	0	53	0	2013	9	25	10	4	133020125	27	2585	N	5	1	2	1	1	1	98
153	3.45	0	0	53	0	2014	2	27	7	5	140910083	27	2585	N	5	1	2	2	2	5	98
153	3.41	0	0	53	0	2015	2	19	16	5	150500132	27	2585	N	5	1	2	1	1	1	98
153	3.33	0	0	53	0	2015	6	25	19	5	151760189	27	2585	N	5	1	2	1	1	1	98
153	3.41	0	0	53	0	2015	7	20	17	2	152290063	27	2585	N	5	1	2	1	1	1	98
153	3.40	0	0	53	0	2015	2	10	15	3	150410226	27	2585	N	7	26	1	1	4	4	98
153	3.41	0	0	53	0	2015	9	1	11	3	152440087	27	2585	N	7	1	2	1	1	1	98
153	3.41	0	0	53	0	2013	8	22	17	5	132350087	27	2585	B	90	51	1	1	1	1	98
153	3.44	0	0	53	0	2013	9	20	10	6	132940082	27	2585	N	90	90	2				
153	3.33	0	0	53	0	2014	7	27	15	1	142080081	27	2585	C	90	7	1	1	1	1	98
Intersection - CSAH 153 (Lowry Ave NE) at TH 65																					
153	3.50	0.02	0	0	14	2013	1	22	8	3	130570059	27	2585	N	1	1	2	1	2	2	98
153	3.50	0	0.03	0	14	2013	4	20	18	7	131100116	27	2585	N	1	1	2	1	1	1	98
153	3.50	0.03	0	0	14	2013	5	23	13	5	131430073	27	2585	N	1	1	2	1	1	1	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.48	0	0	0	14	2013	5	24	16	6	131440153	27	2585	N	1	1	2	1	2	1	98
153	3.49	0	0	0	14	2014	11	13	14	5	143170178	27	2585	N	1	2	2	1	2	2	98
153	3.50	0	0.03	0	14	2015	1	12	14	2	150120174	27	2585	N	1	1	2	1	1	3	98
153	3.50	0	0.03	0	14	2015	3	11	13	4	150700088	27	2585	N	1	1	2	1	1	1	98
153	3.48	0	0	0	14	2015	6	26	17	6	151770157	27	2585	N	1	2	2	1	2	1	98
153	3.50	0	0	0	14	2015	9	2	11	4	152450083	27	2585	N	1	1	2	1	2	1	2
153	3.50	0	0	0	14	2015	9	5	17	7	152590105	27	2585	C	1	1	2	1	99	99	98
153	3.50	0	0	0	14	2015	9	21	13	2	152640104	27	2585	C	1	1	2	1	1	1	98
153	3.50	0	0	0	14	2015	10	7	14	4	152800121	27	2585	N	1	2	2	1	1	1	98
153	3.50	0	0	0	14	2015	11	23	18	2	153270205	27	2585	N	1	1	2	7	1	1	98
153	3.50	0	0	0	14	2015	12	24	12	5	153580125	27	2585	N	1	1	2	1	2	1	98
153	3.50	0	0.03	0	14	2013	3	4	7	2	130630034	27	2585	N	2	1	2	1	4	3	98
153	3.51	0	0	0	14	2013	5	8	10	4	131280090	27	2585	N	2	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2013	8	21	14	4	132330107	27	2585	N	2	1	2	1	2	1	98
153	3.52	0	0	0	14	2014	4	9	11	4	140990085	27	2585	N	2	2	2	1	1	1	98
153	3.51	0	0	0	14	2014	8	24	13	1	142460096	27	2585	N	2	2	2	1	1	1	98
153	3.51	0	0	0	14	2014	10	29		4	143370066	27	2585	N	2	1	2	4	1	1	98
153	3.50	0	0.03	0	14	2015	2	5	9	5	150360089	27	2585	N	2	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2015	10	3	7	7	152760051	27	2585	N	2	1	2	1	1	1	98
153	3.50	0.02	0	0	14	2015	10	23	10	6	152960099	27	2585	N	2	1	2	1	3	2	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.49	0	0	0	14	2015	11	6	12	6	153100151	27	2585	N	2	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2015	11	9	17	2	153130161	27	2585	N	2	1	2	4	1	1	98
153	3.50	0	0.03	0	14	2015	11	20	11	6	153240123	27	2585	N	2	2	2	1	1	1	98
153	3.50	0	0.03	0	14	2013	4	8	14	2	130980096	27	2585	C	3	1	2	1	2	1	98
153	3.50	0	0.03	0	14	2013	5	2	15	5	131220105	27	2585	N	3	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2013	12	8	19	1	133430010	27	2585	N	3	1	2	3	4	3	98
153	3.50	0	0.03	0	14	2014	9	27	19	7	142700134	27	2585	N	3	1	2	3	1	1	99
153	3.50	0	0.03	0	14	2015	11	16	9	2	153200045	27	2585	C	3	1	2	1	2	2	98
153	3.50	0	0.03	0	14	2013	6	17	9	2	131690087	27	2585	N	5	1	2	1	1	1	98
153	3.53	0	0	0	14	2014	7	18	14	6	141990111	27	2585	B	5	1	2	1	1	1	98
153	3.50	0.03	0	0	14	2014	8	15	7	6	142270040	27	2585	N	5	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2014	8	7	9	5	142520079	27	2585	N	5	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2015	1	1	1	5	150010077	27	2585	N	5	1	2	1	2	2	98
153	3.50	0	0.03	0	14	2015	2	20	6	6	150510026	27	2585	N	5	1	2	2	2	4	98
153	3.51	0	0	0	14	2015	3	13	11	6	150720087	27	2585	N	5	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2015	4	26	14	1	151160068	27	2585	N	5	1	3	1	1	1	98
153	3.50	0	0.03	0	14	2015	7	6	10	2	151870099	27	2585	N	5	1	2	1	2	2	98
153	3.50	0	0.03	0	14	2015	9	16	23	4	152600004	27	2585	C	5	1	2	4	2	1	98
153	3.50	0	0.03	0	14	2015	9	18	17	6	152610134	27	2585	N	5	1	3	3	3	2	98
153	3.50	0	0.03	0	14	2013	10	23	9	4	132960049	27	2585	N	7	29	1	1	2	1	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.53	0	0	0	14	2015	1	11	11	1	150120122	27	2585	N	7	26	1	1	1	2	98
153	3.50	0	0.02	0	14	2013	11	25	11	2	133610098	27	2585	N	9	1	2	1	1	1	98
153	3.50	0	0.03	0	14	2015	12	13	2	1	153470012	27	2585	N	9	1	2	4	3	2	98
153	3.50	0	0.03	0	14	2013	2	2	14	7	130330208	27	2585	A	90	7	1	1	1	2	98
153	3.50	0	0.03	0	14	2013	6	18	22	3	131700008	27	2585	C	90	6	1	7	2	1	98
153	3.50	0	0.03	0	14	2013	9	14	15	7	132570113	27	2585	C	90	6	1	1	2	1	98
153	3.50	0	0	0	14	2013	9	22	17	1	132650098	27	2585	C	90	7	1	1	1	1	98
153	3.50	0	0.03	0	14	2014	8	6	18	4	142180134	27	2585	B	90	7	1	1	1	1	98
153	3.50	0	0	0	14	2015	1	12	22	2	150120413	27	2585	B	90	7	1	4	1	1	98
153	3.52	0	0	0	14	2015	8	14	3	6	152280084	27	2585	B	90	6	1	4	99	1	98
Segment - CSAH 153 (Lowry Ave NE) - E of TH 65 to W of Johnson ST NE																					
153	3.75	0	0	53	0	2013	3	21	8	5	130800074	27	2585	N	1	2	2	1	1	1	98
153	3.67	0	0	53	0	2014	1	18	9	7	140180074	27	2585	N	1	1	2	1	1	3	98
153	3.59	0	0	53	0	2014	1	31	8	6	140310074	27	2585	N	1	1	2	1	1	5	98
153	3.82	0	0	53	0	2014	2	25	7	3	140560100	27	2585	N	1	1	2	1	1	5	98
153	3.93	0	0	53	0	2014	2	7	16	6	140700073	27	2585	N	1	1	2	1	1	1	98
153	3.87	0	0	53	0	2014	4	21	20	2	141420075	27	2585	N	1	1	2	3	1	1	98
153	3.96	0	0	53	0	2015	6	25	8	5	152090119	27	2585	N	1	1	2	1	1	1	98
153	3.66	0	0	53	0	2013	3	8	17	6	130670149	27	2585	N	2	2	2	1	1	1	98
153	3.82	0	0	53	0	2013	4	5	13	6	130950103	27	2585	N	2	1	2	1	2	1	98
153	3.58	0	0	53	0	2013	10	27	18	1	133000094	27	2585	N	2	1	2	1	1	1	90

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.73	0	0	53	0	2014	1	18	13	7	140180179	27	2585	N	2	2	2	1	1	4	98
153	3.67	0	0	53	0	2014	2	14	8	6	140450040	27	2585	N	2	1	2	1	1	2	98
153	3.59	0	0	53	0	2014	10	19	10	1	142920041	27	2585	N	2	1	2	1	1	1	98
153	3.75	0	0	53	0	2015	1	24	18	7	150570064	27	2585	N	2	2	1	4		1	
153	3.94	0	0	53	0	2015	6	13	13	7	151640077	27	2585	N	2	2	2	1	2	1	98
153	3.94	0	0	53	0	2015	8	21	15	6	152330123	27	2585	N	2	1	2	1	2	1	98
153	3.96	0	0	53	0	2015	11	6	10	6	153100107	27	2585	N	2	1	2	1	2	1	98
153	3.59	0	0	53	0	2013	2	26	15	3	130570141	27	2585	N	5	1	2	1	2	1	98
153	3.59	0	0	53	0	2013	7	14	17	1	132040006	27	2585	C	5	1	2	1	1	1	98
153	3.81	0	0	53	0	2013	9	15	15	1	132580088	27	2585	N	5	1	2	1	1	1	98
153	3.59	0	0	53	0	2013	9	23	12	2	132660092	27	2585	N	5	1	2	1	1	1	98
153	3.59	0	0	53	0	2014	5	30	14	6	141500122	27	2585	C	5	1	2	1	1	1	98
153	3.67	0	0	53	0	2014	10	15	20	4	142880175	27	2585	C	5	1	2	4	1	1	98
153	3.61	0	0	53	0	2015	3	11	17	4	150700122	27	2585	C	5	1	2	1	1	1	98
153	3.87	0	0	53	0	2015	8	6	17	5	152180170	27	2585	N	5	1	2	1	3	2	98
153	3.78	0	0	53	0	2014	4	24	23	5	141760017	27	2585	C	7	12	1	4	2	1	98
153	3.59	0	0	53	0	2014	9	28	15	1	142710066	27	2585	N	7	26	1	1	1	1	98
153	3.59	0	0	53	0	2013	7	8	16	2	131890128	27	2585	N	9	1	2	1	1	1	98
153	3.74	0	0	53	0	2014	2	23	15	1	140840056	27	2585	N	9	1	3	1	1	5	98
153	3.54	0	0	53	0	2015	11	25	12	4	153290114	27	2585	N	9	1	2	1	2	1	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	3.81	0	0	53	0	2013	7	19	13	6	132000089	27	2585	B	90	6	1	1	1	1	98
153	3.61	0	0	53	0	2013	9	21	10	7	132640059	27	2585	B	90	6	1	1	1	1	98
153	3.75	0	0	53	0	2015	1	4	17	1	150040128	27	2585	C	90	7	1	3	2	5	98
Intersection - CSAH 153 (Lowry Ave NE) at Johnson St NE																					
153	4.00	0	0	0	12	2013	2	23	20	7	130540121	27	2585	N	1	1	2	4	1	2	98
153	4.00	0	0	0	12	2013	11	2	15	7	133060100	27	2585	N	1	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	11	5	18	4	143450131	27	2585	N	1	1	2	4	3	2	
153	4.00	0	0	0	12	2014	12	27	19	7	143610245	27	2585	C	1	1	2	4	1	5	98
153	4.00	0	0	0	12	2015	1	12	21	2	150120228	27	2585	N	1	2	2	4	1	5	98
153	4.00	0	0	0	12	2015	1	15	15	5	150150144	27	2585	N	1	1	2	1	1	2	98
153	4.00	0	0	0	12	2015	2	1	0	1	150320014	27	2585	C	1	2	2	4	1	1	98
153	4.00	0	0	0	12	2015	2	9	22	2	150410012	27	2585	C	1	1	2	4	2	1	98
153	4.00	0	0	0	12	2015	4	22	14	4	151420106	27	2585	N	1	1	3	1	1	1	
153	4.03	0	0	0	12	2015	10	9	17	6	152820155	27	2585	N	1	1	3	1	1	1	98
153	4.00	0	0	0	12	2015	11	17	17	3	153210176	27	2585	N	1	1	2	4	3	2	98
153	4.00	0	0	0	12	2015	11	19	13	5	153230141	27	2585	C	1	1	2	1	2	1	98
153	4.00	0	0	0	12	2013	2	6	7	4	130370044	27	2585	N	2	1	2	1	2	1	98
153	4.00	0	0	0	12	2013	5	10	8	6	131300034	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	3	17	17	2	140760149	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	3	5	15	4	140980070	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	4	27	20	1	141490071	27	2585	N	2	1	2	4	3	2	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	4.00	0	0	0	12	2014	6	4	15	4	141550127	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	7	18	17	6	141990158	27	2585	C	2	1	3	1	1	1	98
153	4.00	0	0	0	12	2014	11	1	15	7	143050101	27	2585	C	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	3	23	8	2	151170045	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	6	1	13	2	151870125	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	12	5	10	7	153390064	27	2585	N	2	1	2	1	1	1	98
153	4.00	0	0	0	12	2013	5	31	11	6	131830069	27	2585	N	3	1	2	1	1	1	98
153	4.00	0	0	0	12	2013	11	18	9	2	133220066	27	2585	N	3	1	2	1	1	1	98
153	3.97	0	0	0	12	2014	5	25	14	1	141460026	27	2585	B	3	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	9	18	7	5	142610071	27	2585	N	3	1	2	1	1	1	98
153	4.00	0	0	0	12	2014	12	8	14	2	143420119	27	2585	N	3	1	2	1	2	1	98
153	4.00	0	0	0	12	2015	3	24	8	3	150840063	27	2585	B	3	1	2	1	2	2	98
153	4.00	0	0	0	12	2015	5	21	14	5	151410162	27	2585	N	3	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	6	30	13	3	151810127	27	2585	C	3	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	9	16	13	4	152590107	27	2585	C	3	1	3	1	1	1	98
153	4.00	0	0	0	12	2015	10	28	8	4	153010066	27	2585	N	3	1	2	1	3	2	98
153	3.98	0	0	0	12	2014	1	11	17	7	140110134	27	2585	C	4	31	1	4	1	2	98
153	4.00	0	0	0	12	2013	4	21	13	1	131110051	27	2585	N	5	1	2	1	2	1	98
153	4.00	0	0	0	12	2013	7	19	13	6	132000086	27	2585	N	5	1	2	1	1	1	3
153	4.00	0	0	0	12	2014	8	4	7	2	142160032	27	2585	N	5	1	2	1	2	1	98

Hennepin County Public Works
 CSAH 153 (Lowry Ave NE) - 150' W of Washington St NE to 150' E of Johnson St NE
 2013 - 2015

Attachment 16 - Crash Detail Listing (2013-2015)

RD NO	MILE PT	LEFT DIST	RIGHT DIST	ROAD TYPE	INTER TYPE	CRSH YR	CRSH MONT H	CRSH DAY	CRSH HOUR	CRSH D O WK	CRSH NO	MUN	CITY CODE	MAX SEV	CRSH DIAG	CRSH TYPE	NO VEH	CRSH LIGHIN G	CRSH PRI WEATH ER	RD SUR	CRSH WKZO TYPE
153	4.00	0	0	0	12	2015	4	22	14	4	151420100	27	2585	N	5	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	10	10	16	7	152830094	27	2585	N	7	37	2	1	1	1	98
153	4.00	0	0	0	12	2013	1	11	10	6	130110182	27	2585	N	9	1	2	1	3	2	98
153	4.00	0	0	0	12	2015	6	15	15	2	151660154	27	2585	N	9	1	2	1	1	1	98
153	4.00	0	0	0	12	2015	1	28	18	4	150280139	27	2585	A	90	7	1	4	3	2	98
153	4.00	0	0	0	12	2015	10	19	11	2	152920066	27	2585	N	90	1	2	1	1	1	98
Total						185															

Attachment 17 - Letter of Support from MnDOT



MnDOT Metro District
1500 West County Road B-2
Roseville, MN 55113

June 12, 2018

Carla Stueve, P.E., P.T.O.E
Hennepin County Engineer
Transportation Project Delivery
1600 Prairie Drive
Medina, MN 55340

**Re: Letter of Support for Hennepin County
Metro Council/Transportation Advisory Board 2018 Regional Solicitation Funding Request for Lowry
Avenue NE (CSAH 153) Roadway Reconstruction Project – Washington Street NE to Johnson Street NE**

Dear Ms. Stueve,

This letter documents MnDOT Metro District's support for Hennepin County's funding request to the Metro Council for the 2018 regional solicitation for 2022-23 funding for its proposed Lowry Avenue NE (CSAH 153) Roadway Reconstruction Project – Washington Street NE to Johnson Street NE.

As proposed, this project would impact MnDOT right-of-way on MN 65. As the agency with jurisdiction over MN 65, MnDOT will support Hennepin County and will allow the improvements proposed in the application for the Lowry Avenue/CSAH 153 project. Details of a future maintenance agreement with Hennepin County will need to be determined during project development to define how the project improvements on MN 65 will be maintained for the project's useful life.

No funding from MnDOT is currently programmed for this project. In addition, the Metro District currently does not anticipate any available discretionary funding in years 2022-23 that could fund project construction, nor do we have the resources to assist with construction or with MnDOT services such as the design or construction engineering of the project. However, I would request that you please continue to work with MnDOT Area staff to coordinate project development and to periodically review needs and opportunities for cooperation.

MnDOT Metro District looks forward to continued cooperation with Hennepin County as this project moves forward and as we work together to improve safety and travel options within the Metro Area.

If you have questions or require additional information at this time, please reach out to your Area Manager at April.Crockett@state.mn.us or 651-234-7728.

Sincerely,

A handwritten signature in blue ink that reads 'Scott R McBride'.

Scott McBride
Metro District Engineer

CC: April Crockett, Metro District West Area Manager
Lynne Bly, Metro Program Director
Dan Erickson, Metro State Aid Engineer

Attachment 18 - Support Letter from City of Minneapolis

Support for Hennepin County
Regional Solicitation Applications

Dear Mrs. Stueve:

Hennepin County has requested letters of support for a series of grant applications across three funding categories as part of the Regional Solicitation process, by which the Metropolitan Council competitively allocates federal transportation funds. Due to the number of application submittals by Hennepin County in the Roadway Reconstruction and Modernization category, Minneapolis Public Works has submitted a prioritized list of support.

Minneapolis Public Works evaluated Hennepin County's requested letters of support for Roadway Reconstruction and Modernization projects to develop a priority list for which the City wishes to express its support. This evaluation included a review of completed plans, studies, and community engagement, as well as documented City priorities and funding capacity. Minneapolis Public Works supports the following list of projects, in priority order based on this evaluation and overall anticipated benefit for Minneapolis and Hennepin County residents, workers, businesses, freight operators, and visitors:

1. Lowry Avenue NE (CSAH 153) Reconstruction: Washington Street NE to Johnson Street NE
2. Marshall Street NE (CSAH 23) Reconstruction: 16th Avenue NE and 27th Avenue NE
3. Osseo Road (CSAH 152) Reconstruction: Penn Avenue N (CSAH 2) to 49th Avenue N

In addition to the letters of support requested for Roadway Reconstruction and Modernization projects, Hennepin County requested letters of support for three projects in the Multiuse Trail and Bicycle Facilities category and one project in the Bridge Rehabilitation/ Replacement category. The City of Minneapolis hereby expresses its support, in no particular order, for the following two federal funding applications:

- University Avenue (CSAH 36) / 4th Avenue (CSAH 37) Protected Bikeway
- Basset Creek (Washington Avenue – CSAH 152) Bridge Replacement

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,



Robin Hutcheson
Director of Public Works
City of Minneapolis