



Public Works, Environment and Transportation Commission Agenda

Tuesday, April 25, 2023

6:30 PM

City Council Chambers

Members of the public who wish speak during public comment or an agenda item during this meeting can do so virtually by registering at www.cityofroseville.com/attendmeeting

(Any times listed are approximate – please note that items may be earlier or later than listed on the agenda)

- 6:30 p.m. **1. Roll Call**
- 6:32 p.m. **2. Swearing in of New Commissioner**
 - a. Swearing in of New Commissioner
- 6:35 p.m. **3. Public Comments**
- 6:40 p.m. **4. Approval of Meeting Minutes**
 - a. Approve March Minutes
- 6:45 p.m. **5. Communication Items**
 - a. Communication Items
- 6:55 p.m. **6. U of M Climate Policy Student Group - Walk Friendly Community Project**
 - a. U of M Climate Policy Student Group - Walk Friendly Community Project
- 7:15 p.m. **7. Speed Limits Update**
 - a. Speed Limits Update
- 7:50 p.m. **8. Pavement Management Update**
 - a. Pavement Management Update
- 8:25 p.m. **9. Future Agenda Items**
 - a. Future Agenda Items
- 8:30 p.m. **10. Adjourn**

**Roseville Public Works, Environment and Transportation Commission
Agenda Item**

DATE: April 25, 2023

ITEM: 2.a.

ITEM DESCRIPTION: Swearing in of New Commissioner

Background

At their March 7th meeting, the City Council appointed Desiree Mueller to the Public Works, Environment and Transportation Commission. We welcome Des to the commission.

Recommendation

The Commission Chair will swear in Ms. Mueller as a Commission member.

Attachments

1. Commissioner Oath



OFFICIAL OATH

for

Desiree Mueller

Public Works, Environment and Transportation Commission

I, Desiree Mueller, do solemnly swear that I will support the Constitution of the United States of America and the Constitution of the State of Minnesota, and that I will faithfully, justly, and impartially discharge the duties of the Public Works, Environment and Transportation Commission for the City of Roseville, Minnesota, to the best of my judgment and ability.

Desiree Mueller

Subscribed and sworn to before me this twenty-fifth day of April, 2023.



Bryant Ficek, Chair

**Roseville Public Works, Environment and Transportation Commission
Agenda Item**

DATE: April 25, 2023

ITEM: 4.a.

ITEM DESCRIPTION: Approve March Minutes

Background

Attached are the minutes from the March 28, 2023 meeting.

Recommendation

Motion approving the minutes of March 28, 2023, subject to any necessary corrections or revision.

Attachments

1. March Draft Minutes

Roseville Public Works, Environment and Transportation Commission Meeting Minutes

Tuesday, March 28, 2023, at 6:30 p.m.
City Council Chambers, 2660 Civic Center Drive
Roseville, Minnesota 55113

1. Introduction / Roll Call

Chair Ficek called the meeting to order at approximately 6:30 p.m. and at his request, Public Works Director Jesse Freihammer called the roll.

Present: Chair Bryant Ficek; and Members Jarrod Cicha, Nancy Misra, Mike Collins, Edwin Hodder, and Allison Luongo

Absent: Member Michael Joyce (Excused)

Staff Present: Public Works Director Jesse Freihammer; Assistant Public Works Director/City Engineer Jennifer Lowry, and Environmental Manager Ryan Johnson

2. Public Comments

3. Approval of February 28, 2023 Meeting Minutes

Comments and corrections to draft minutes had been submitted by PWETC commissioners prior to tonight's meeting and those revisions incorporated into the draft presented in meeting materials.

Motion

Member Cicha moved, Member Luongo seconded, approval of the February 28, 2023 meeting minutes as amended.

Ayes: 5

Nays: 0

Motion carried.

Member Hodder arrived at the meeting at 6:32 p.m.

31 **4. Election of Officers**

32 Public Works Director Jesse Freihammer explained that each year the Commission
33 is asked to elect a chair, vice-chair and a member to serve on the Ethics
34 Commission.

35
36 Chair Ficek asked for nominations for chair of the PWETC.

37
38 Chair Ficek indicated he would be happy to continue as Chair, but someone else
39 could do it as well.

40
41 **Motion**

42 **Member Misra moved, Member Hodder seconded, election of Ficek for Chair**
43 **of the PWETC.**

44
45 **Ayes: 6**

46 **Nays: 0**

47 **Motion carried.**

48
49 Chair Ficek asked for nominations for vice-chair of the PWETC. He noted the
50 current Vice-Chair Joyce is not at the meeting.

51
52 Mr. Freihammer indicated he has not heard from Commissioner Joyce.

53
54 Member Collins indicated he would be interested in Vice-Chair.

55
56 **Motion**

57 **Member Collins moved, Member Cicha seconded, election of Collins for Vice-**
58 **Chair of the PWETC.**

59
60 **Ayes: 6**

61 **Nays: 0**

62 **Motion carried.**

63
64 Chair Ficek asked if there were any Commissioners who wanted to volunteer for
65 the Ethics Commission.

66
67 **Motion**

68 **Member Hodder moved, Member Collins seconded, elect Hodder to serve on**
69 **the Ethics Commission.**

70
71 **Ayes: 6**

72 **Nays: 0**

73 **Motion carried.**

75 **5. Communication Items**

76 Public Works Director Jesse Freihammer provided a brief review and update on
77 projects and maintenance activities listed in the staff report dated March 28, 2023.
78

79 Mr. Freihammer introduced Assistant Public Works Director/City Engineer
80 Jennifer Lowry to the Commission.
81

82 Environmental Manager Ryan Johnson updated the Commission on sustainability
83 efforts being made in the city.
84

85 Member Collins asked if there are any measures the City uses if there is a fuel spill
86 and is there a way the City checks for pond contamination and things like that.
87

88 Mr. Johnson explained that, when talking about actual spills, a lot of the PCA
89 guidelines are followed. He reviewed the PCA guidelines. He noted when the spill
90 is smaller it is up to the entity that spills it because those are not typically reported
91 to the City.
92

93 Member Collins asked if the City has any baseline information on how much
94 contaminants are in the ponds so after a spill happens the City knows how much it
95 needs to remove.
96

97 Mr. Johnson indicated if there is a spill the City does get information in order to
98 clean up the spill. It is visually inspected as well.
99

100 **6. Metropolitan Council and Metro Transit Update**

101 Public Works Director Jesse Freihammer explained Senior Transit Planner, Steven
102 Baisden, and Peter Lindstrom, area representative from the Metropolitan Council
103 were at the meeting to share updates on transit and other projects in the area.
104

105 Member Misra wondered how many Met Council-like programs there are in other
106 metro areas.
107

108 Mr. Lindstrom indicated there were not many. Nearly every large metropolitan area
109 has something similar called a council of governments but the Met Council
110 Minnesota has, there is maybe one similar organization across the whole Nation
111 that has similar powers. Other councils of government may make transportation
112 decisions about where federal funds should be spent in their city but they do not
113 have powers over waste water, comprehensive land use planning, affordable
114 housing, transit and transportation, like the Met Council has. The Met Council is
115 unique in how the council is set up. Everyone on the Met Council is appointed by
116 the Governor and serve at the pleasure of the Governor.
117

118 Mr. Baisden made a presentation to the Commission on Roseville Transit.
119

120 Member Luongo wondered how Metro Mobility related to Metro Transit.

121
122 Mr. Baisden explained Metro Mobility is technically under the umbrella of the Met
123 Council. There is a federally-mandated service area that encompasses the entire
124 seven county area and Metro Mobility has specific qualifications that need to be
125 met by a perspective rider. Metro Mobility provides door-to-door service whereas
126 fixed route service does not.

127
128 Mr. Lindstrom noted where there is a connection between Metro Transit and Metro
129 Mobility it is all under the Met Council and they are required to provide Metro
130 Mobility services within a certain area of a Metro Transit regular bus route.

131
132 Mr. Baisden indicated that is Transit Link. Metro Mobility is provided for the entire
133 seven county areas. Transit Link has different stipulations for providing service.

134
135 Member Collins wondered if there were any plans of updating the current bus stops
136 that are out of ADA compliance.

137
138 Mr. Baisden explained every new bus stop must be ADA compliant. Any bus stops
139 that were in existence prior to the Americans with Disabilities Act in the early
140 nineties, that is a situation where he believed is grandfathered in.

141
142 Mr. Baisden reviewed crime on Metro Transit and the steps they are taking to
143 provide safe passage for people.

144
145 Member Misra asked how Metro Transit is approaching carbon goals and she also
146 wondered about Micro Transit because it seemed at one point that had potential for
147 taking off and she wondered if that is still the case.

148
149 Mr. Baisden explained they have a zero emissions bus plan which identifies how
150 they are going to transition their fleet to more energy efficient resources by 2040.
151 Regarding Micro Transit, it is currently considered a pilot project in North
152 Minneapolis that has just recently expanded, and the pilot ends later in the year and
153 at that point he thought they will end up determining, in part, what becomes of that
154 service.

155
156 Chair Ficek asked for information on what Micro Transit was.

157
158 Mr. Baisden reviewed Micro Transit with the Commission.

159
160 Chair Ficek thanked Mr. Baisden and Mr. Lindstrom for the presentation and
161 discussion.

162 163 **7. 2023 Eureka Recycling Annual Update**

164 Environmental Manager Ryan Johnson introduced Ms. Joanna Stone, Director of
165 Customer Relations at Eureka, and Ms. Stone reviewed the highlights of the annual
166 recycling report and gave a presentation on future recycling efforts.

Chair Ficek indicated Roseville is bi-weekly in its recycling and he wondered how it is decided between weekly and bi-weekly and the tradeoffs that might bring.

Ms. Stone stated it is a matter of cost; collecting half the City each week saves the City a lot of money.

Mr. Johnson explained from the City-wide level staff ended up looking at, the last time the RFP was looked at, and something staff will do this round too is looking at what every other week costs versus weekly costs. Staff also did work with Ramsey County on this as well.

Ms. Stone noted there is also the option to get more than one recycle cart, if needed, for the bi-weekly recycling pickup.

Member Hodder asked how Eureka helped the businesses at some of the events with compostables. How were the businesses guided to make sure what the customer was given was able to be recycled.

Ms. Stone explained that with the support of the City, the City actually buys the compostables for the events and her team goes to each business and asks a lot of questions about serving and condiments, so the items are ordered correctly and then the City covers the cost of the compostable, recyclable containers which lowers the barriers for the vendors as well.

Member Misra explained she really appreciated some of the things brought up at the beginning of the presentation, specifically some of the equity issues and the living wage issue. She thought those sort of considerations should factor into the City's determination as contracts are renewed, not just in this area, but others as well to meet the City's goals. The other thing is she remembered several years ago the whole shut down of the Chinese plastic market in particular and as she recalled, the fact that Eureka was doing so much of its selling locally it made a big difference and she knew in other parts of the Country there are cities shutting down way stream recycling because those cities do not have markets for it. She suspected Minnesota is doing better than a lot of other places because of those local markets. She encouraged Eureka and the City to continue to look at that as well.

Mr. Johnson explained, regarding diversity, equity and inclusion, staff included that in the last RFP. That was one of the first RFP's in the City that included it.

Chair Ficek thanked Ms. Stone for the presentation.

8. Commission Name Change Discussion

Chair Ficek explained this item is to discuss possible name changes to the Public Works Environment and Transportation Commission. He reviewed previous Commission discussion that occurred.

213
214 Mr. Freihammer noted the City Council did initiate a review of the Commissions.
215 The City Council will discuss this at their April 24, 2023 meeting.
216

217 Chair Ficek reviewed the proposed changes on how to take the four scope, duties
218 and functions of the Commission and change them into some other things or a
219 different way to look at them. He indicated the first two remain the same, the
220 highlighted portion is the change in name of the Commission. He explained the
221 interest and understanding of the other regions is crossed out but will not prevent
222 the Commission of doing it but does not need to be listed as a part of the scope of
223 the Commission. The next three proposed changes in red are the new ones,
224 "Collaborate with City staff to review, evaluate and develop policies and practices
225 regarding sustainability and management of environmental resources."
226 "Collaborate with City staff to review, evaluate and develop policies and practices
227 regarding transportation infrastructure as it relates to the multi-model needs and
228 demands of the community. This includes related public safety issues and
229 coordination with the Traffic Safety Committee if necessary." And "Engage with
230 the Roseville community and serve as a community liaison for issues, ideas and
231 proposals while providing appropriate feedback." He indicated the last duties and
232 functions item would remain the same. He asked for staff and Commission
233 feedback and discussion.
234

235 Mr. Freihammer indicated offhand it seemed like good suggestions to him. He
236 thought having the traffic safety is there. He reviewed what the Traffic Safety
237 Committee does in the City.
238

239 Member Collins thought everything looked great and omitting the one part was
240 reasonable and if the Commission wanted to still look at that it could do so.
241

242 Member Luongo asked what the Ordinance says that is referenced in the crossed
243 out part (ORD.1313,12.6.2004).
244

245 Mr. Freihammer explained all of section 206 is what the existing public works is.
246 He thought the ordinance is just referencing them working with other agencies. He
247 agreed that is kind of inherent with the job and could be listed but the City, as a
248 whole, is always working with outside agencies.
249

250 Chair Ficek explained if the Commission went this route he assumed it would
251 reference some ordinances once finalized.
252

253 Mr. Freihammer indicated that was correct. He indicated if the Commission
254 recommended something to the City Council, the Council would more than likely
255 have to amend Chapter 206 as an Ordinance change.
256

257 Member Misra indicated she liked it as well. She thought what was still valuable to
258 keep and helpful for the Commission is to have some sort of language that connects

the Commission with federal, state, county, and regional entities because so much of what the Commission does is connected to other bodies and it is not really a Roseville decision. It almost always involves some other entity. She thought that language is valuable to keep a highlight on the fact that the Commission needs to look beyond just Roseville borders, especially when it comes to environment, transportation and those sort of things, but environment in particular is not local, it is very much broader than that.

Member Hodder agreed. He liked the overall intent of this as well and he thought Member Misra's point is very well taken. He would support leaving the crossed-out point in somewhere in this.

Member Cicha indicated he liked the word collaborate that was used in C and D. His suggestion would be instead of "maintain an interest in and an understanding of," he would change it to "Collaborate with federal, state, county, regional, and other public works, environmental, and transportation services that impact City services." He thought that was a good way of summing up how the Commission interacts with those organizations. He liked the additions of the new C, D, and E and felt these were appropriate and thought making a recommendation to the City Council today would also be appropriate. It is a recommendation, and the Council will look at it and make their own edits as well. He thought this is a good framework to hand the Council.

The Commission concurred.

Chair Ficek summarized discussion of the Council. He thought that new Item C could read: "Collaborate with City staff, and federal, state, county, regional, other public works, as needed..."

Member Misra indicated new Item C is only regarding sustainability and management of environmental resources.

Chair Ficek indicated the reworked sentence would also be added into Item D as well so it would cover both of those in order to not only collaborate with City staff but to also capture other agencies.

Member Misra indicated she would consider going with the new Items C, D and E and then just move it further down and change the verb from Maintain an interest in and an understanding to collaborate but leave the rest of that as a separate Item F and then move Item F to Item G.

The Commission agreed.

Motion

Member Hodder moved, Member Luongo seconded, to recommend the City Council the proposed changes in 206.2: Scope, Duties and Functions.

Ayes: 6

Nays: 0

Motion carried.

Chair Ficek indicated the name has not been touched. He wondered if the Commission wanted to review the name change now or wait to see what comes out of the Council.

Member Collins thought the Commission should wait to see what the City Council decides before moving forward.

9. Future Agenda Items

Discussion ensued regarding the future PWETC agenda:

April 2023

- Speed limits
- Pavement Management update

May 2023

- Tour

June 2023

- MS4 update
- Sustainability Topic
- Prep for Joint Council meeting in July

Future

- Envision Roseville

Chair Ficek thanked Member Misra for her time on the Commission and appreciated her perspective and point of view that she brought to the Commission.

Member Misra thought this was a great Commission to serve on and the staff has been really professional and very supportive of the work the Commission has done and she thought that has been remarkable. She thanked staff and the Commission.

10. Adjourn

Motion

Member Collins moved, Member Misra seconded, adjournment of the meeting at approximately 8:40 p.m.

Ayes: 6

Nays: 0

Motion carried.

**Roseville Public Works, Environment and Transportation Commission
Agenda Item**

DATE: April 25, 2023

ITEM: 5.a.

ITEM DESCRIPTION: Communication Items

Background

At each commission meeting, City staff provides updates on City activities and projects ongoing within the city that pertain to public works activities.

Recommendation

Receive report and provide feedback.

Attachments

1. Communications Memo
2. 2023 Roseville Project Map
3. April Development Activity Report
4. Sustainable Roseville March/April Update



Memo

To: Public Works Environmental and Transportation Commission Members

From: Jennifer Lowry, City Engineer

Date: April 25, 2023

Re: Communications Items

The following are updates to projects and other activities happening in Roseville since the last commission meeting.

Public Works Project updates:

- Villa Storm Water Improvements
 - Kevitt Companies will replace outlet by end of June. City is currently stabilizing and restoring the site.
 - Dredging has been delayed until next year.
- 2023 PMP
 - Bid opening scheduled for May 2.
- Long Lake Lift Station
 - Bid opening scheduled for May 16.

Ramsey County Updates:

- Ramsey County Mill and Overlays & ADA Upgrades
 - Work in Roseville is on three County Roads:
 - Rice Street, County Road B2 to I-694
 - County Road B, Dale Street to Rice Street
 - Lexington Avenue, TH 36 - County Road C2
 - Permanent pavement markings will be installed in the spring.

MnDOT Updates:

- TH 36 Ramps at Hamline Construction
 - Began construction April 17.
- Highway 36 Study
 - Currently in Phase 1 to establish purpose and need.
 - Public survey is available on the [project website](#) (search for "Hwy 36 Maplewood to Roseville study").

Miscellaneous Updates:

- Commission Updates
 - Thank you for attending Ethics Training on April 12.

- Xcel Pole Project
 - Xcel Energy replaced or painted large transmission poles between Lake Bennett and Rice Street. Most poles run along the north side of South Owasso Boulevard. Work is substantially complete.

Council Update:

- Below is a highlight of items recently presented to and/or acted on by the City Council. More information can be found in the agenda packets and minutes for the referenced Council meetings:
 - April 10
 - Received Update on City-wide Community Visioning Process.
 - Approved Proposal for Engineering Services for Project 22-22, South McCarrons Retaining Wall Construction Observation.
 - Approved Resolution Authorizing Revocation and Designation of Municipal State Aid Roads.
 - Approved Ramsey County Ditch 4 Maintenance and Inspection Memorandum of Agreement.
 - Approved Metropolitan Council Environmental Services Municipal Inflow and Infiltration Grant Agreement.
 - April 17
 - Discussed Classification and Compensation Study.
 - April 24 – planned agenda
 - Recognize Out-Going City Commissioners.
 - Discuss Commission Interview Process.
 - Discussion on City Commission scope, duties, and functions.
 - Approve St Paul Regional Water System (SPRWS) Contract Amendment No. 3.
 - Approve Metropolitan Council Easement Agreements.

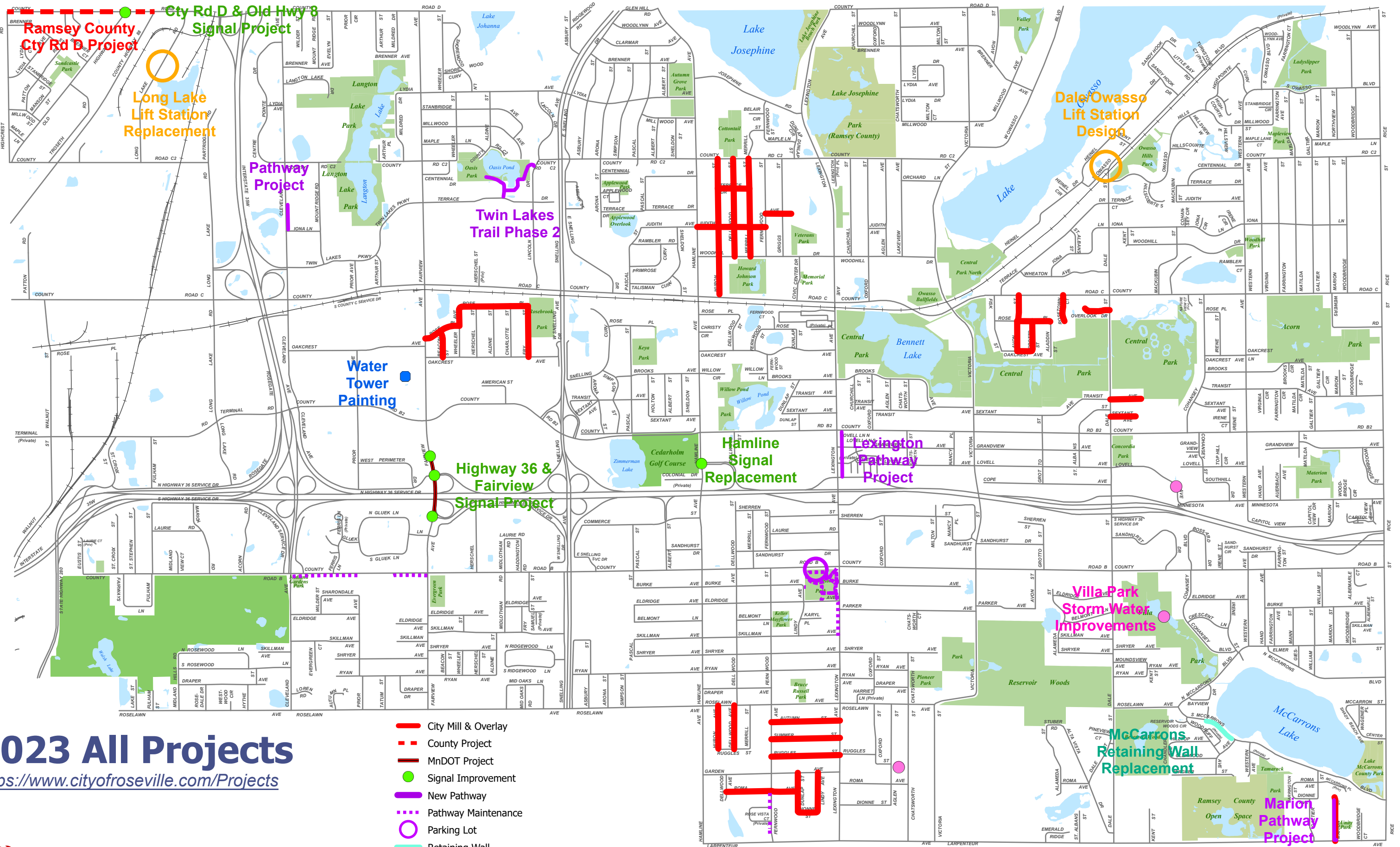
Sustainability Update

- Conservation Minnesota is hosting a conference for MN cities Environment Commissions to learn from other environmental commissions, see what issues are affecting other communities in Minnesota, and network with other commission members. There are in-person and virtual options available. The event is scheduled for Saturday May 20 from 9am – 12:30pm at the Ridgedale Library in Minnetonka. Registration is required. An Eventbrite page is set up. Search for “2023 Environment Commissions Conference MN.”
- Staff submitted a pre-award information sheet to receive formula funding from the Energy Efficiency and Conservation Block Grant program, which is part of the Bipartisan Infrastructure Law. Roseville is allocated to receive \$76,370, which staff requested to receive in the form of a technical assistance voucher to aid in climate action planning.
- Staff attended Roseville’s annual Earth Day event at the Harriet Alexander Nature Center, providing a DIY bee house activity for kids, and outreach about sustainability and Less Mow May.

- Staff will be working with the University of Minnesota's Institute on Environment Sustainability Corps program during the summer with a part-time Sustainability Intern starting on June 5.

Major Maintenance Activities:

- Street and Storm
 - Responded to 30+ tree calls from April 1 storm.
 - Snow season total 94.75" (Roseville measurements).
 - All plow equipment deep cleaned.
 - Ongoing repairs due to plow damage, storm sewer maintenance work, sign work, asphalt patching, and monitoring of water break patch conditions.
 - Commercial area swept and began sweep of residential areas.
- Water and Sanitary Sewer
 - Located City-owned utilities for Gopher State One Call locate requests.
 - Made weekly site visits to all lift stations.
 - Continued replacing water meters and radios.
 - One repair on our water main system for the month of April.
 - Collected water samples for bacteriological and disinfection byproducts.
 - New fence and gates installed around the generator for City Hall.
 - Resumed jetting of 2022 season (behind due to equipment failures).
 - Repaired 9 hydrants since the beginning of April.
 - Inspected Sanitary manholes for the 2023 PMP.
 - Generators serviced at City Hall, Fernwood lift station, and Cleveland lift station.
 - Tree fell on A/C unit at the booster station (getting a quote to repair).
 - City Hall elevator repaired, heat pump for boiler replaced as well.
 - Garage door #10 at public works building currently out of service (broken springs).
 - Minnesota Department of Health (MDH) Sanitary Survey complete.
 - MDH Consumer Confidence Report completed.
 - MDH Cybersecurity self-assessment in progress (due in 2024).
 - MDH Lead and Copper Rule service line inventory reporting in progress (due in 2024).



Prepared by: Engineering Department
 3/15/2023

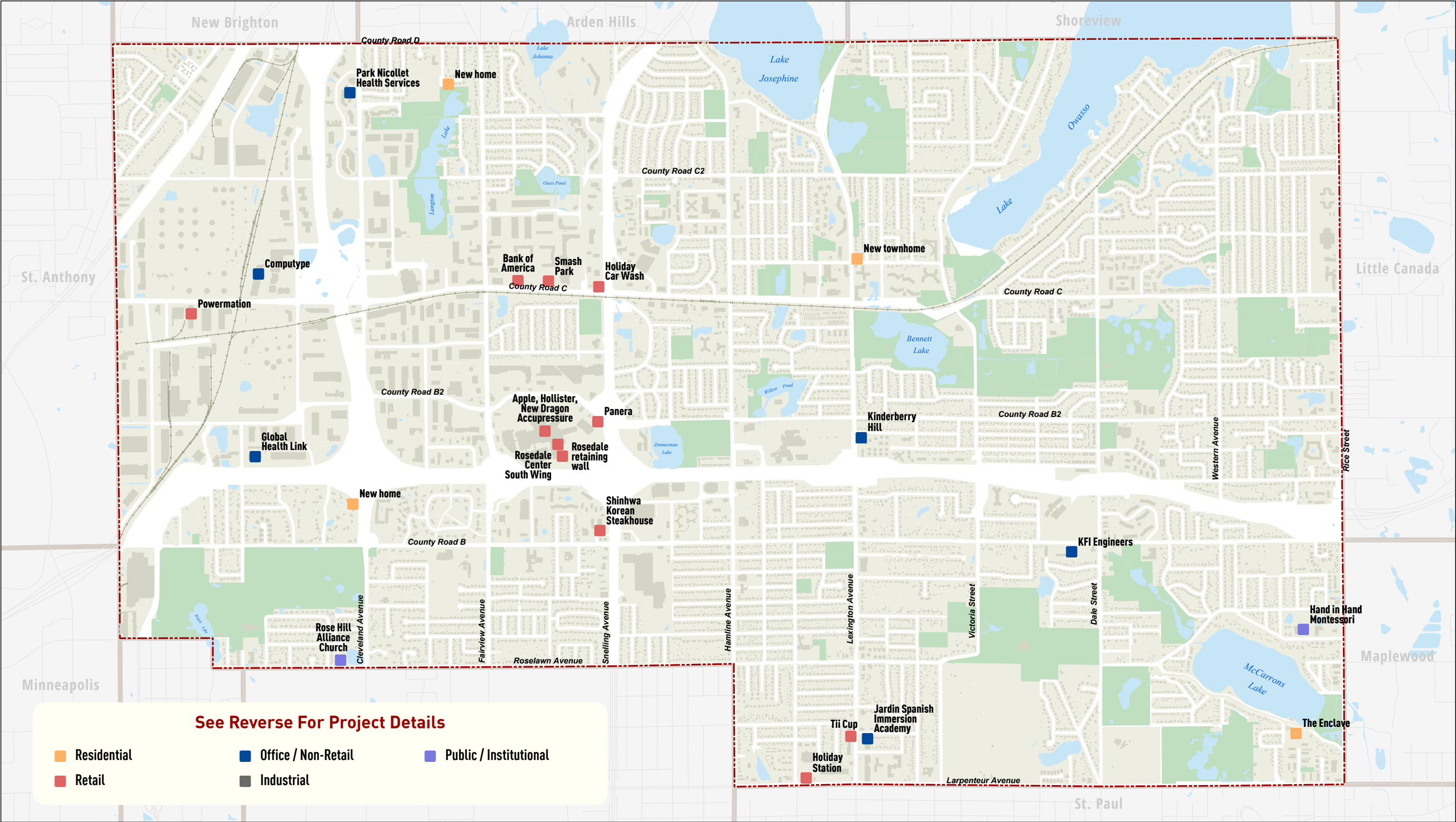
Data Sources

* Ramsey County GIS (3/1/2023)
 * City of Roseville Community Development
 * City of Roseville Finance Department

DISCLAIMER:
 This map is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information and data located in various city, county, state and federal offices and other sources regarding the area shown, and is to be used for reference purposes only. The City does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and the City does not represent that the GIS Data can be used for navigational, tracking or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. If errors or discrepancies are found please contact 651-792-7075. The preceding disclaimer is provided pursuant to Minnesota Statutes §466.03, Subd. 21 (2000), and the user of this map acknowledges that the City shall not be liable for any damages, and expressly waives all claims, and agrees to defend, indemnify, and hold harmless the City from any and all claims brought by User, its employees or agents, or third parties which arise out of the user's access or use of data provided.

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 Proposed2023_AllProjectsLabels





Development Projects: April 2023

ROSEVILLE COMMUNITY DEVELOPMENT DEPARTMENT					
Updated: April 11, 2023					
	Project Name	Address	Project Description	Applicant/Owner Information	Starting
RESIDENTIAL	The Enclave	201-261 McCarrons Pl	20 detached townhomes	Ovation Homes	Summer 2021
	New Townhomes	1095 Woodhill Dr	4 Unit Townhome	RMX Construction LLC	Summer 2022
	Residential New Construction	2239 Cleveland Ave	New single family home	Bald Eagle Builders Inc	Fall 2022
	Residential New Construction	1882 Brenner Ave	New single family home	O’meara Custom building Inc	Fall 2022
RETAIL	Panera	1620 County Road B2	New Restaurant	VCC LCC	Spring 2022
	Holiday Car Wash	1583 County Road C	Addition	L & D Maintenance Co	Spring 2022
	Mall Retaining Wall	1595 Highway 36	Retaining Wall	Hardscape Construction	Spring 2022
	Holiday Stationstores	1215 Larpenteur Ave	New Construction	Gardner Builders	Summer 2022
	Shinhwa Korean Steakhouse	2181 Snelling Ave	Interior Remodel	Chans Consulting	Summer 2022
	Rosedale Center South Wing	1595 Highway 36	Demo of South Wing Entry	VCC LLC	Fall 2022
	Bank of America	1761 County Road C	New Construction	Leopardo Companies Inc	Fall 2022
	Tii Cup	1771 Lexington Ave	Interior Remodel	Monaghan Construction	Fall 2022
	New Dragon Accupressure	1595 Highway 36	Tenant Remodel	Damien Reiten Construction	Spring 2023
	Hollister Abercrombie & Fitch	1595 Highway 36	Tenant Remodel	GGC National Contractors	Spring 2023
	Smash Park	1751 County Road C	New Construction	Rochon Corp	Spring 2023
	Powermation	2360 County Road C	Interior Remodel	Guptil Contracting Inc	Spring 2023
	Apple	1595 Highway 36	Interior Remodel and Expansion	Gardner Builders	Spring 2023
	Mall Entry and Corridor	1595 Highway 36	New Mall entry and Corridor	VCC LCC	Spring 2023
NON-RETAIL/OFFICE	Park Nicollet Health Services	3050 Centre Pointe Dr #200	Interior Remodel	RJM Construction	Winter 2022
	Hand in Hand Montessori	211 North McCarrons Blvd	Interior Build-Out	Vanguard Builders Inc	Summer 2022
	Computype	2285 County Road C	Interior Demo	Prime General Contractors	Summer 2022
	Global Health Link	2277 Highway 36 #300	Interior Remodel	Vy Management LLC	Fall 2022
	KFI Engineers	670 County Road B	Interior Remodel	McGough Construction	Winter 2022
	Rose Hill Alliance Church	2105 Roselawn Ave	Interior Remodel	Rose Hill Alliance Church	Winter 2022
	Kinderberry Hill	2360 Lexington Ave	Interior Remodel	V & E Contracting Services	Winter 2022
	Homel Realty Management	2924 Snelling Ave	Demo Swimming Pool and Sauna	Home Improvement Shop	Spring 2023
	Jardin Spanish Immersion Academy	1754 Lexington Ave	Tenant Improvement	Protech Enterprises Inc	Spring 2023
	Computype	2285 County Road C	Tenant Remodel	Prime General Contractors	Spring 2023

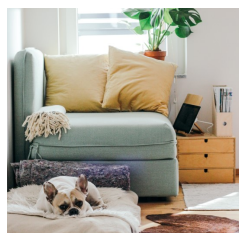


ROSEVILLE
SUSTAINABILITY

Sustainability Newsletter

**Public Works &
Engineering Division**

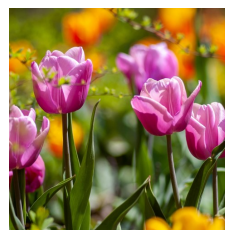
MARCH/APRIL 2023



**Sustainability Tip
of the Month—
Tips for Renters**



Less Mow May



**Spring Garden
Resources**



Positive Climate News

Contact Us:

Noelle Bakken
2660 Civic Center Dr.
Roseville, MN 55113
651-792-7057
[Email Us](#)
[Find us Online!](#)

Inside this issue:

Sustainability Tip

Less Mow May

Spring Garden Re-
sources

Upcoming Events

Good Climate News

Sustainability Tip of the Month

Sometimes sustainability conversations focus a lot on big projects homeowners can do, so this month we are promoting actions that are attainable for people renting their homes and apartments!

- Swap out your light bulbs for LEDs (where possible).
- Install smart power strips that cut power to devices that don't need it.
- Compost food scraps—you can collect them in a used ice cream bucket on your counter and later bring them to [Roseville's drop site](#) when it's full.
- Do you have a balcony? Consider putting a few native plants in pots (especially if you get a good amount of daily sun).
 - [What can I plant for pollinators on my balcony?](#)
 - [How to grow a butterfly garden pot](#)
- Do you pay for your unit's utilities? Sign up for [Windsource®](#) or [Renewable*Connect®](#) through Xcel Energy to source your electricity from renewable sources.
- Furnish your home with secondhand furniture and accessories. Take advantage of the Twin Cities' [rich network of vintage and reuse stores!](#)

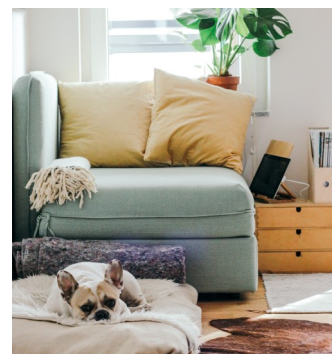


Photo by [Brina Blum](#) on [Unsplash](#)

Less Mow May



After an enthusiastic response from the community in May 2022, Roseville City Council passed a resolution in January 2023 supporting the initiative known as "No Mow May" in many areas, rebranding Roseville's response as "Less Mow May" based on feedback from residents and staff.

Less Mow May is an effort to support pollinators who emerge from hibernation or migrate to Minnesota in early spring and are in deep need of nectar and pollen for food. Common lawn "weeds" such as dandelion, clover, wood sorrel, and even Creeping Charlie can provide much-needed nutrition to these important insects. One in three bites of the food we eat are available thanks to pollinators!

Homeowners and renters of homes with lawns (with property owner consent) can visit cityofroseville.com/lessmowmay to learn more and reserve a free yard sign.

Spring Garden Resources

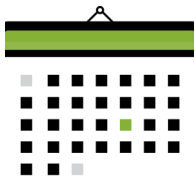
Even though winter feels like it will never end (and, fun fact, [increased frequency of snowstorms](#) is an effect of climate change), spring is coming. There are lots of resources for gardeners looking ahead to spring projects that we've assembled here:



Photo by [Yoksel Zok](#) on [Unsplash](#)

- **[City of Roseville Tree sale](#)**—the tree sale is now open, and residents can purchase up to 2 trees per Roseville address. Act fast to purchase your favorite trees since they sell out quickly! Trees will be available to pick up on May 13th, 2023 from 9am-noon at the [Roseville Public Works Building](#).
- **[Roseville Community Garden Plots](#)**—Roseville has 120 plots available at Oasis Park. Reservations are currently open for returning gardeners, and will open to new applicants on Marcy 27th. Single plots are \$24, or \$22 for Roseville residents.
- **[Compost bin sale](#)**—The Recycling Association of Minnesota is selling compost bins for \$76 plus tax this year, and **Ramsey County residents can receive a \$20 discount**. Order online at [RecycleMinnesota.org](#) and enter promo code "Ramsey."
- **Looking for help with a pollinator-friendly garden project?** Grants are available for development of rain gardens, bee lawns, and other similar garden projects from the following places:
 - **[Lawns to Legumes](#)**—taking applications for cost-share grants of up to \$350 to create pollinator habitat for the 2023 fall cohort.
 - **Watershed districts** also have similar grant programs for projects that improve water quality and protect native plants and wildlife. **[Check which watershed you are in](#)** and learn more about their grant options:
 - [Capitol Region Watershed District](#)
 - [Ramsey Washington Metro Watershed District](#)
 - [Rice Creek Watershed District](#)

Upcoming Events



[Tapping Time at Harriet Alexander Nature Center](#)—Saturday, March 25th, 10am-4pm and again on Sunday, March 26, noon-4pm. Volunteers will be tapping maple trees, collecting sap and boiling it to make delicious maple syrup. We'll also have hands-on youth activities, exploration stations, naturalist-led tree ID walks, maple popcorn samples, and product sales and syrup tasting by Faxon Farms. Drop in anytime; stay as long as you like!

[Earth Day at Harriet Alexander Nature Center](#)—Saturday, April 22nd, 10am-2pm. Celebrate the Earth, as well the Nature Center's 33rd birthday! There will be lots of fun activities for kids—we will be creating DIY bee and insect hotels!

[Citywide Clean-Up Day](#)—Saturday, April 22nd, 8am-3pm. Do you have items sitting around your house that need to be disposed of but can't go in a trash cart? Bring them to Roseville's Clean Up Day at the Dale Street Soccer Field Parking Lot, 2555 Dale Street.

[Environmental Service Center Community Conversations](#)—Ramsey County is planning to build a new Environmental Service Center at 1700 Kent Street, Roseville for hazardous waste and electronic waste disposal, along with reuse and fix-it opportunities. Learn more at an upcoming community meeting, in person or on Zoom!

[Active Living Ramsey Communities Walking and Biking Team Meeting](#)—Thursday April 6th, 6pm-8pm. Join Active Living partners and MnDOT staff to discuss the [Highway 36 Multimodal Study](#) and provide your input.

Upcoming Events (continued)

Trees: Guardians of Health, Happiness, and Equity—Tuesday April 18th, 6:30pm. Join this webinar co-sponsored by Ramsey County Library and the Roseville Area League of Women Voters to learn about societal benefits of trees and the “100 Trees Project.” Register on Zoom via the link provided.

Sustainability Open House—Saturday, May 6th, 10am-12pm. Join Resilient Roseville, a local citizen group focused on sustainability, with other local groups to connect and learn what others are working on. In-person at the Autumn Grove Park Building, 1395 Lydia Ave W, Roseville. RSVP to alana.howey@gmail.com to indicate your interest and ask questions, and share with other Roseville groups!

Positive Climate News

New study proves success of insecticide regulations near the Great Lakes:

Concentrations of three banned insecticides are now too low for researchers to quantify, and are expected to disappear completely in 5-10 years.

City of Nottingham using spent EV batteries to store solar-generated power:

Used EV batteries that are too weak for vehicle usage are being put to work storing energy provided by solar panels, helping manage energy usage for city operations during both peak and off-peak times.



Thank you from your Roseville Sustainability Team!

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Environmental Manager

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Sustainability Intern

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Minnesota
GreenStep Cities



Roseville Public Works, Environment and Transportation Commission Agenda Item

DATE: April 25, 2023

ITEM: 6.a.

ITEM DESCRIPTION: U of M Climate Policy Student Group - Walk Friendly Community Project

Background

Roseville is involved in the Gold Leaf program, which is a pilot recognition program through the Minnesota GreenStep Cities program offered by the Minnesota Pollution Control Agency. The Gold Leaf program focuses on adding climate action components to the existing GreenStep Cities program.

A climate action program through GreenStep helps address the concerning climate trends in Minnesota. Temperatures are warming, especially during winter. Summers are becoming drier while precipitation events have become more severe. Our natural environment is increasingly unreliable for migratory animals, birds, pollinators, and, indeed, us. Local governments are already seeing these impacts in their communities. Cities, tribal nations, and other governmental units are at the vanguard for climate action. However, there is still an unfilled niche or support for a climate action program specifically for local governments.

The University of Minnesota has a course on climate policy, offered as an undergraduate course through the Humphrey School. The City of Roseville was introduced to Professor Fred Rose through our involvement with the Gold Leaf program. After a discussion with Professor Rose, staff thought involving this student group to help expand our existing program and help move Roseville toward being certified as a Walk Friendly Community (CM7 in the Gold Leaf program) would be a great idea to encourage active transportation within the community.

Recommendation

Receive presentation from the University of Minnesota Climate Policy Student Group, provide feedback and ask questions.

Attachments

1. Presentation
2. Course Syllabus
3. Gold Leaf Program



Achieving Walk Friendly Certification

How the city of Roseville
can achieve certification
to help reach Green-Step
requirements



SIMON | PATRICIJA | BEN |
FIRDAUS | AVA



ROSEVILLE Minnesota

Agenda



1 Introduction

Why is Walkability and the Walk Friendly Community Certification is Important

2 Overview of Application

What does the application look like for Certification

3 Roseville's Progress

What has Roseville done so far with Walkability

4 Other Cities

What other cities have achieved Walkability Certification

5 Strategies and Next Steps

What does the future of Roseville Walkability look like

6 Conclusion

Why this work matters and what we envision for Roseville

Team Introduction



Firdaus



Ava



Ben



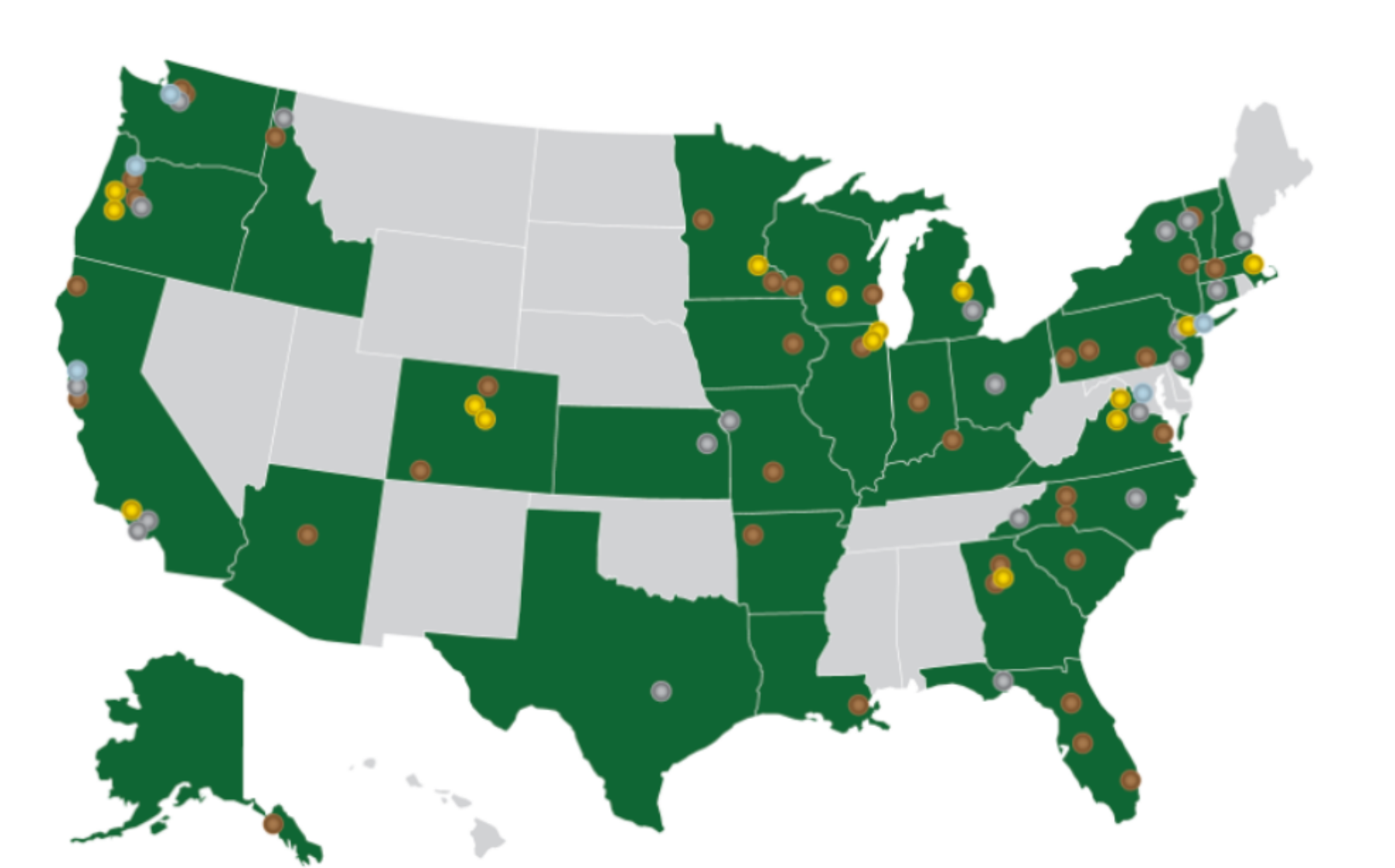
Patricija



Simon

We are all part of the University of Minnesota Clean Energy Leaders program and enrolled in a Science, Technology, and Environmental Policy Class

Walk Friendly Communities is a national recognition program developed to **encourage towns and cities across the U.S. to establish or recommit to a high priority for supporting safer walking environments.**



- **82 Cities** across the US have been recognized
- Cities can achieve 4 levels of certification including **Bronze, Silver, Gold, and Platinum**



Examples of Walk Friendly Communities



New Orleans, Louisiana



Columbus, Ohio



Minneapolis, Minnesota



Arlington, Virginia



What are the Benefits of Walkability?



1

Designing streets for people instead of cars improves safety for all users.

2

Walking infrastructure serves all members of the community and contributes to equitable causes.

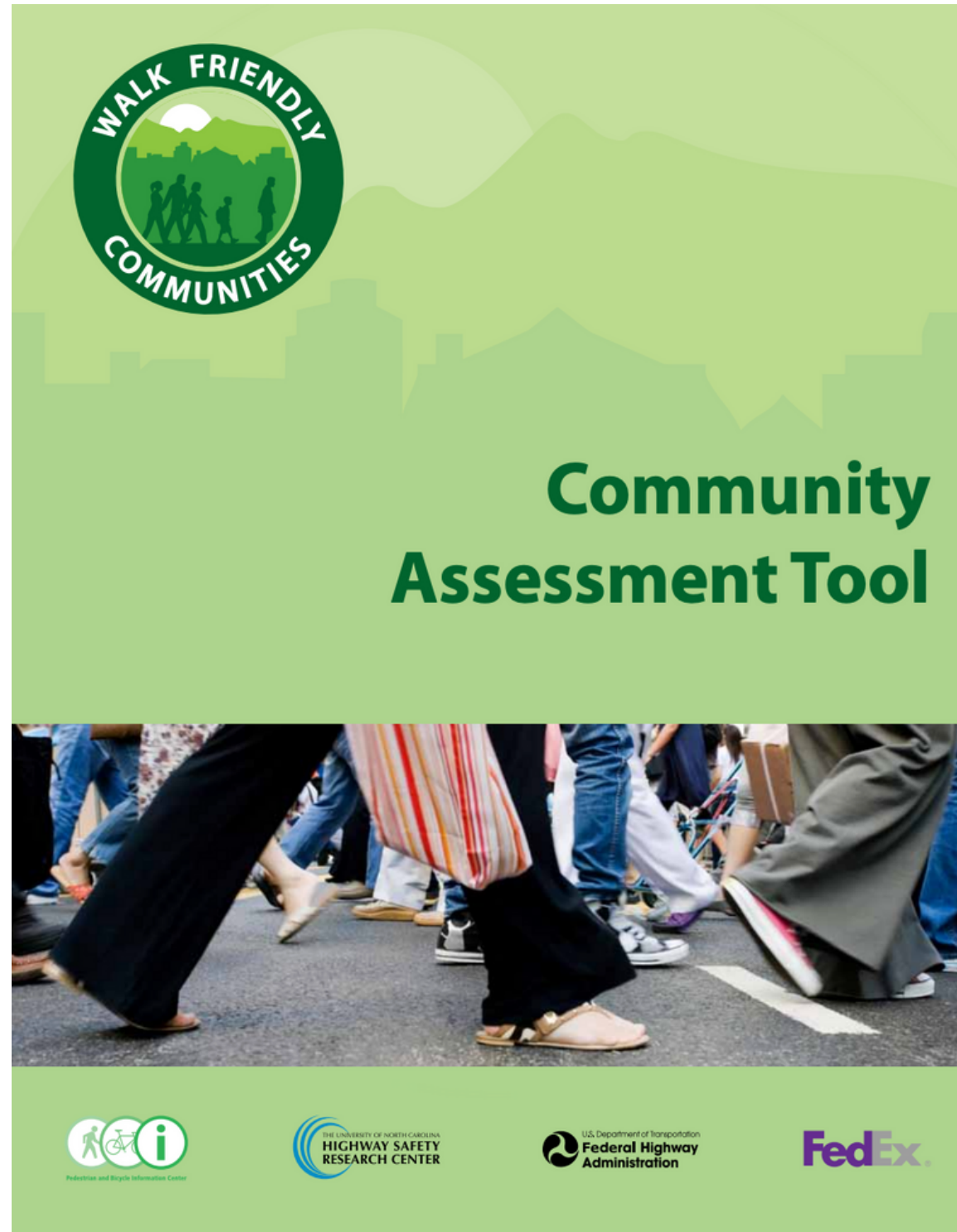
3

More walking, biking and transit use means less air pollution from motor vehicles and a reduced dependence on fossil fuels.

4

Regular physical activity reduces the risk of chronic disease and improves quality of life for people of all ages.

What does Roseville Need to Apply for Certification?



The current application process is nuanced and long

- **61 Pages long and contains 8 sections** (Community Profile , Status of Walking , Planning, Education & Encouragement , Engineering, Enforcement, Evaluation, Additional Questions)

- **Except for the Community Profile section, none of the questions in the application require a response.** Communities are, however, encouraged to respond to as many questions as they possibly can.

Application Process - To Be Determined!



- New System/Application Anticipated - Fall 2023
- No Application Fee Required
- Community Assessment Tool
 - Guideline for information needed for application

Why We Want Roseville to Apply



Benefits of Applying

- Contains **information and resources** to assist agencies in improving walking conditions for your community.
- Through the questions and resources in this form, communities will be able to **identify areas of needed improvement**

Increased
Collaboration Across
Departments



Greater
Understanding of
Walkability Goals



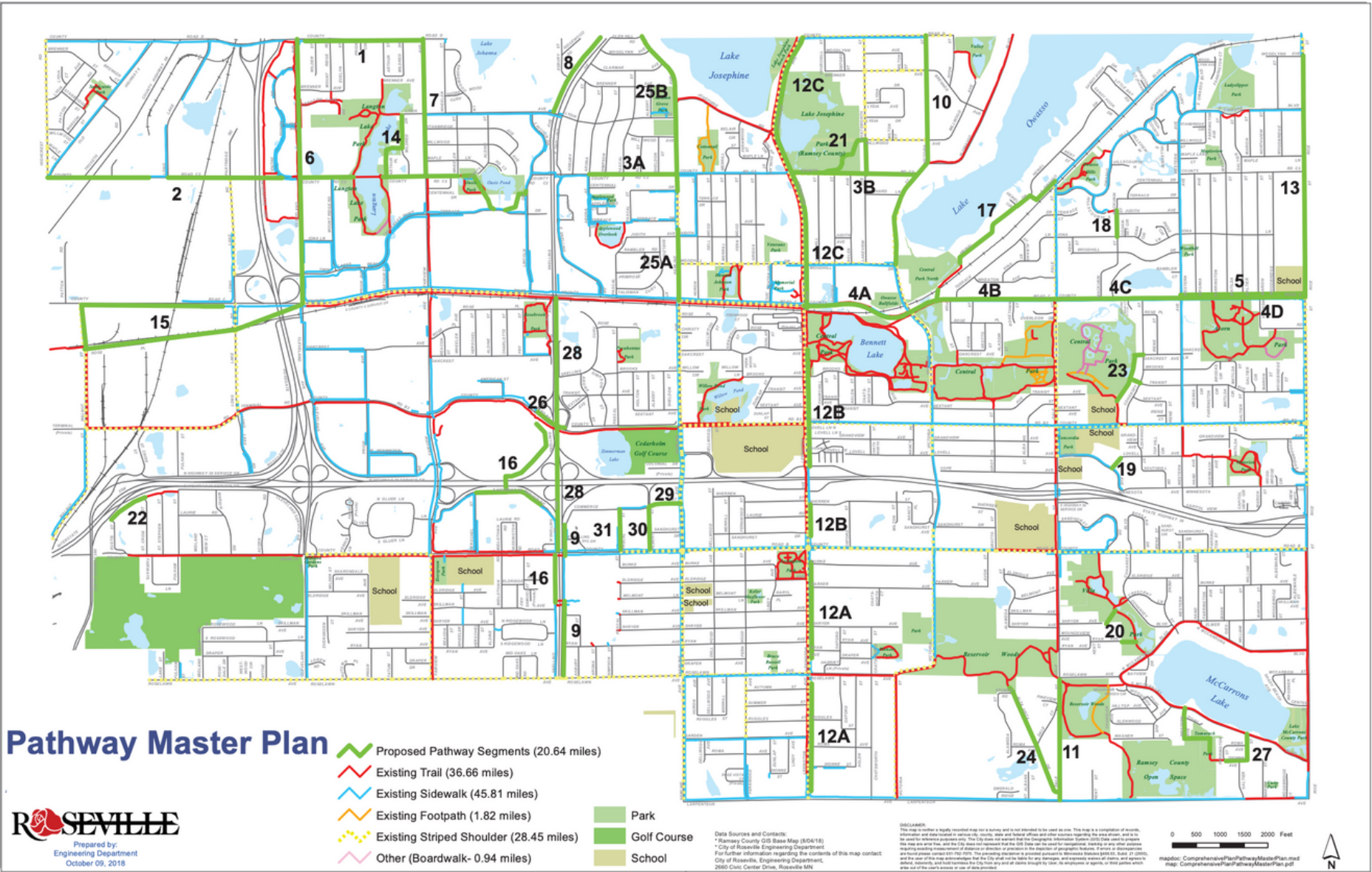
Help Meet Green
Step City
Requirements



What Roseville has already done



Roseville already has a detailed plan for Improving Walkability and is slowly moving in the right direction



- Roseville has put together a master plan for **paths all across the city**
- Roseville **specifically put together segments around public transportation lines**, which they are looking to expand by 2040

Minneapolis and Walk Friendly Certification



Minneapolis has already achieved Walk Friendly certification and can serve as an example for Roseville



Move Minneapolis

<https://moveminneapolis.org/>



Safe Routes to School

<https://cws.mpls.k12.mn.us/sr2s>



Open Street Minneapolis

<https://www.openstreetsmpls.org/>



Public Transportation Route (Light Rail)

<https://www.metrotransit.org/>

Sidewalk Inspections Office

<https://www2.minneapolismn.gov/government/departments/public-works/transportation-maintenance-repair/sidewalk-inspections/>

Pedestrian Advisory Committee

<https://www2.minneapolismn.gov/government/departments/public-works/tpp/committees/pedestrian-advisory-committee/>

Strategies to Achieve Certification



**Community
Data and
Evaluation**



**Planning
and Policy**



**Engineering
and Design**

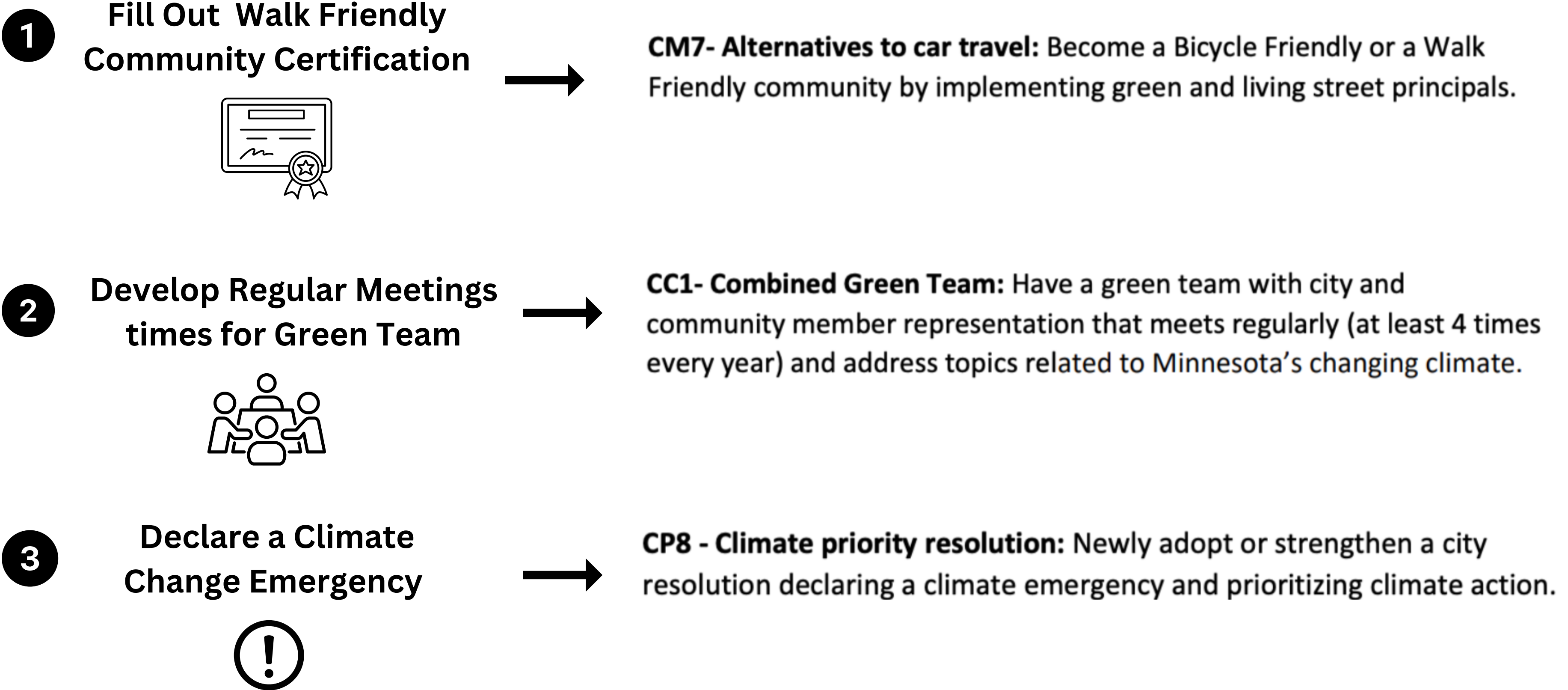


**Education and
Encouragement**



**Law
Enforcement**

Next Steps for Roseville



A photograph of a family walking away from the camera on a paved path in a park. The mother is on the left, wearing a blue dress. The father is on the right, wearing a blue polo shirt and khaki shorts. A young child is in the middle, holding hands with both parents. The path is surrounded by green grass and trees. The text "Additional Recommendations" is overlaid in the center.

Additional Recommendations

Moving to Green-Step 3 Stars for Green Team



Bloomington - ★★★★★

Duluth - ★★★★★

Edina - ★★★★★

Hopkins - ★★★★★

La Crescent - ★★★★★

Lakeville - ★★★★★

Maplewood - ★★★★★

Marshall - ★★★★★

Morris - ★★★★★

Northfield - ★★★★★

Oakdale - ★★★★★

Richfield - ★★★★★

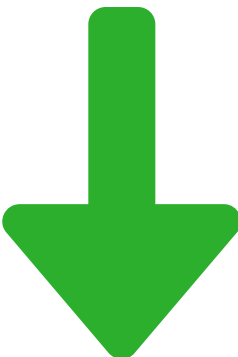
Saint Louis Park - ★★★★★

Stillwater - ★★★★★

West Saint Paul - ★★★★★



A community group, city task force/commission or committee of city staff/officials exists to lead and coordinate sustainability/GreenStep implementation; city has a dedicated sustainability position on city staff that works with the staff and/or community green team/commission.



A joint committee of city staff/officials and community members (business, education, religious, etc.) exists and meets regularly; community members on the committee represent the community’s racial, economic, abilities, and other diverse representation.

Roseville Green Team is able to help achieving walk-friendly certification by:

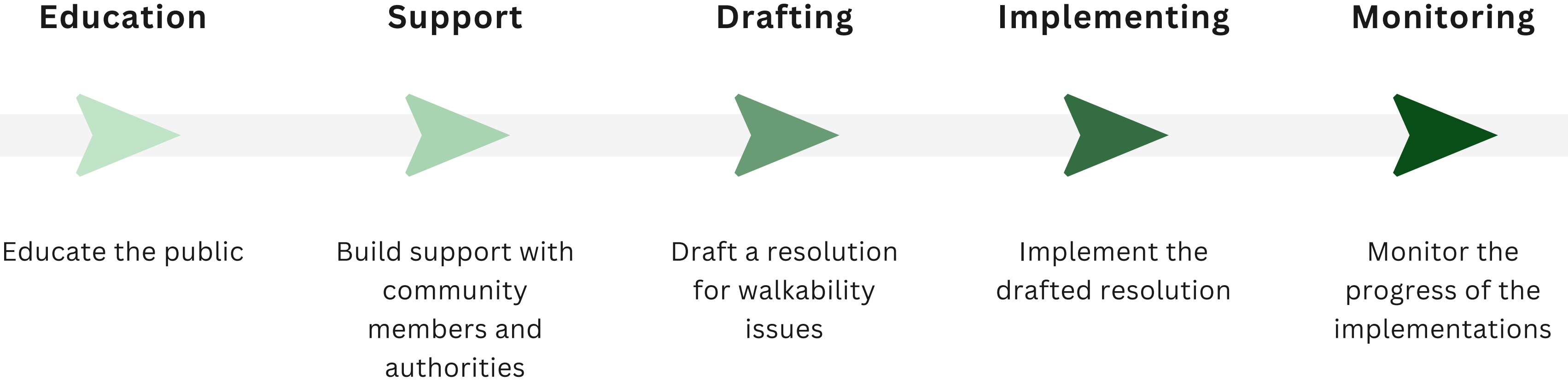
Encouraging the community to reduce their carbon footprint, conserve resources and adopt eco-friendly practices by promoting walkability

Serving as a valuable resource to obtain community input on sustainability issues and feedback on policy decisions

Conducting community assessments to identify areas that are less walk-friendly and prioritize improvements



Declaring a Climate Emergency





Achieving at least Honorable Mention for walk-friendly certification

Certification

- Start preparing information and resources for Community Assessment Tool Form

Green Team

- Establishing a Green Team, ideally for sustainability issues but also to help gathering and executing next steps for CAT form

Climate Emergency

- Emphasizing the urgency of reducing carbon emissions, which can encourage the implementation of pedestrian-friendly infrastructure and policies



Questions?

Presentation

3: What is Walk Friendly Certification

4: Benefits of Walkability

5: What Roseville Needs to Apply

6: Why We Want Roseville to Apply

7: What Roseville has already Done

8: Minneapolis and Walk Friendly Certification

9: Strategies to Achieve Certification

10: Next Steps for Roseville

11: Moving to Green-Step 3 Stars for Green Team

12: City of Roseville Green Team

13: Declaring a Climate Emergency

14: Conclusion

University of Minnesota
Humphrey School of Public Affairs

PA4790 Spring 2023
Course Syllabus
Science, Technology & Environmental Policy
Th 4:00-6:45pm, 530A Bruininks

DRAFT:
1/16/2023

This syllabus will be updated a few weeks into the semester as things firm up.

Instructor

Fred Rose
Adjunct Lecturer
Science, Technology and Environmental Policy
Humphrey School of Public Affairs
Office Hours by Appointment Calendar

Fred Rose is currently semi-retired and an adjunct instructor for the Humphrey School of Public Affairs and the Institute on the Environment. Fred was the co-founder of Acara and was the lead instructor for all Acara courses. He developed seven UMN courses that provide in-depth experiential learning on creating and implementing solutions that address global grand challenges. He also has developed a co-curricular process that supports students and former students engaged in impact ventures. In this role he has taught and mentored over 900 UMN students, hundreds more in courses and workshops at universities in ten countries and more than 40 pilot ventures. Prior to the U, he had a 27-year career with Honeywell in various engineering and strategy roles. This included extensive experience in India and China. He is also founder of the local non-profit High Tech Kids.

Course Philosophy

Global climate change poses perhaps the most significant environmental challenge of this generation. The response to the climate challenge spans grassroots movements to coordinated international policy. As policies to mitigate and adapt to climate change continue to take shape, what do decision makers, advocates, and analysts need to know to take effective action? This course will investigate climate change policy from a variety of disciplinary perspectives, emphasizing economic logic, ethical principles, and institutional feasibility. It will focus on the energy transition, particularly in MN, as a way to provide context and action to the course.

This course will explore existing and proposed approaches to mitigate and adapt to climate change through policies that cross scales of governance (from the local to the global) and that impact a wide range of sectors (energy, transportation, manufacturing, water, agriculture, buildings, etc.). Students will have the opportunity to develop deep knowledge of climate change with respect to the energy transition to an economy with fewer GHG emissions through a team final project. A key theme of the course will be how policy can be shaped in the face of a variety of competing interests to achieve commonly desired outcomes.

Learning Objectives

Policy is typically a graduate or professional school pursuit. As an undergraduate course, the objective here is to introduce the field to advanced undergraduates as either a further field of study or to further their understanding of policy in enhancement of knowledge of their own field. Students will gain a basic understanding of a more holistic world view and how to anchor that view to their major expertise. This topics class will focus on climate policy, especially as it relates to the energy transition to fewer carbon emissions.

Primary Learning Objectives

- Students will understand major institutions that shape science, technology, and environmental policy.
- Students will understand basic causes and solutions to greenhouse gas emissions.
- Students will understand and apply basic public policy theory and frameworks to select case study topics.
- Students will understand and apply policy implementation frameworks to select science or technology topics.
- Students will apply core concepts from readings and lectures to contemporary policy issues, even in cases where the scientific or technical dimensions may be unfamiliar.

Secondary Learning Objectives

- Students will synthesize knowledge from multiple sources.
- Students will develop a basic understanding of the concept of system thinking and stakeholders.
- Students will understand different paths to implementation and apply the appropriate path to their proposed intervention or solution.
- Students will discuss and identify key leadership traits as they create arguments for panels and debates.
- Students will defend in oral and written communications the various stages of select papers and positions..
- Students will understand cultural and societal implications of their proposed intervention.

- Students will work effectively in a team and with mentors.
- Students will create and deliver effective oral presentations.

Contribution to undergraduate student learning outcomes.

- Can locate and critically evaluate information
- Have mastered a body of knowledge and a mode of inquiry
- Can communicate effectively
- Apply the role of creativity, innovation, discovery, and expression across disciplines

Themes

The course will follow the following sequence of themes (each 2 weeks)

1. Climate Change and Emissions Baseline
2. Policy overview, Project Introductions
3. Inflation Reduction Act, Intro to policy brief
4. Net Zero Scenarios including MN
5. Electrify Everything scenarios
6. Obstacles - Policy and Personal (Mental Health)
7. Pull it together into an action plan
8. Final plan and presentation

In Addition, there is a parallel track of the “Accelerating Change” Framework which the instructor has developed over the course of GCC and Acara courses. This includes basic tools for changemakers including - Design Thinking, Theory of Change, Value Proposition, Communications and Funding.

Grading and Major Assignments

Final Project

The final project for this class will involve creating a set of policy recommendations, working with cities from the [MN Gold Leaf Pilot](#) or with the University of MN. These potential projects will be described in the first few weeks of class and students will rank their choices.

There are a number of things you will need to do:

- Determine who the appropriate agencies and contacts are for your issue. (Stakeholders). Interviews with possible stakeholders are encouraged.
- Describe the problem and its current context.

- Describe your proposed intervention(s) and associated theory of change and impact (positive and negative). Impact must include equity discussions.
- Describe alternatives
- Describe possible funding mechanisms.
- Include quantitative analysis which would include simulation results.

The final deliverable is a 5-10 page paper and a 10-12 minute presentation.

Simulations/Policy Papers

There will be a number of simulations and papers due. The Simulations will use the EN-ROADS simulator. Policy papers will on selected topics.

Grades

For this class final grades are based on final percentages (using the percentages and table below).

- A : 93.0 and higher
- A- : 90.0-92.99
- B+ : 87.0 - 89.99
- B : 83.0 - 86.99
- B- : 80.0 - 82.99
- C+ : 77.0 -79.99
- C : 73.0 - 76.99
- C- : 70.0 - 72.99
- D+ : 67.0 -69.99
- D : 63.0 - 66.99
- F : less than 63.0

Student Deliverables (Subject to Change)

- Individual
 - 20% - Reading assignments with Canvas discussions.
 - 25% - Interim position papers, presentations, etc.
 - 5% - Reflection Assignments
 - 5% - Participation in discussions and activities.
- Team-based
 - 10% - Interim Group Assignments
 - 35% - Final paper/presentation on policy recommendations

Book Chapters and sources

All available in the library or on the Canvas site.

Designing Climate Solutions by Hal Harvey

- Intro, Chapter 1 pp 1-33, Chapters 2, 3 - 34-68
- Finance - Ch 13 Carbon Pricing

All We Can Save - Anthology

- Calling In. By Xiye Bastida. Pp 3-7
- The Politics of Policy. By Maggie Thomas. Pp 85-90
- A Green New Deal for All of Us. By Rhiana Gunn-Wright pp 92-102
- How to Talk About Climate Change. By Katharine Hayhoe pp 105-111
- A Tale of Three Cities. By Jaimey K. Bavishi pp 157-164.
- Loving a Vanishing World. By Emily N. Johnston pp 256-265
- A Letter to Adults. By Alexandria Villasenor pp 323-327
- A Field Guide for Transformation. By Leah Cardamore Stokes pp 337-347

A Field Guide to Climate Anxiety - Sarah Ray

- Ch Intro 1, 2 pp 1-51
- Ch 3 pp 52-79
- Ch 4, 5 Hack the Story, Be Less Right and More in Relation pp 80-113

Electrify by Saul Griffith

- Ch 1-7. Pp 1-74
- Ch 8-17 pp 75-188

Short Circuiting Policy - Leah Stokes

- Chapters 1,2 and 6.

Extra.

Making Climate Policy Work

Danny Cullenward and David G. Victor

- Maybe the chapter on making markets work? Still working on the best read for something about finance.

Climate Action Planning - Boswell

- Only for a template maybe.

Online sources

[NET-ZERO AMERICA](#): Potential Pathways, Infrastructure, and Impacts. Website with 2050 netzero scenarios and data

[Climate Interactive](#) - C-Roads and EN-Roads. Both will be used.

[Project Drawdown](#)

Weekly Agenda for the course is in a separate document.

[Energy Policy Solutions](#): MN Emissions Simulator

[MN Climate Action Framework.](#)

University and School policies

For links to University of Minnesota and Humphrey School policies, please click the “U of M Policies” link on our course Canvas site, or see <https://z.umn.edu/PolicyStatements>. Policies include information on student conduct, scholastic dishonesty, sexual harassment, equal opportunity, disability accommodations, and more.

Theme	Week	Topic Track	Learning objective	Change Track	Class Activity	Possible Speaker	Assignments	Notes	
Climate Change and Emissions Baseline	1	Jan 19	What is Climate Change?	Class overview. Brief intro to Climate change is, what causes it, what are sources, what is being done. Energy transition Intro. Intro to UMN Sustainability.	Intro, World Cafe discussion, know yourself	Lecture. World Cafe discussion on our responsibilities.	Amanda Kohn - UMN Sustainability	Watch Project drawdown #2 and #3, Discuss. Read the Climate Simulation Background	
Climate Change and Emissions Baseline	2	Jan 26	Climate Change Policy. C-Roads Simulation	Understanding the different views, stakeholders.	COP role play (empathy). Review of Drawdown Videos.	C-ROADS climate simulator 90-100 minutes	Aaron Hanson - C-Roads	Read Design Climate Solutions Intro and Ch 1 pp 1-33. Reflections on Climate game.	
Policy Baseline	3	Feb 2	Overview of Designing Climate Solutions Policy (Include IRA).	Basic intro to climate policy. Intro to projects.		Lecture/Discussion of Climate Policy	Maybe a speaker for projects.	Read Ch 2&3, pp 33-68. Example of policy applied to reading. Rank project choice	
Policy Baseline	4	Feb 9	IRA Discussion, Project Discussion.	Summarize ways to address climate change	Stakeholder and context analysis	Project and Team Assignment. IRA overview		IRA Summary Reading.. IRA Assignment - paper. Create the teams for final transition project plan/presentation.	
IRA and Policy Brief	5	Feb 16	IRA Review	Understanding incentives and regulation approach of the IRA.	Writing for a non-technical audience	Discussion of Writing , Project intro		Policy Brief - IRA. Net-Zero America	
IRA and Policy Brief	6	Feb 23	Policy Writing	Currently in as a catchup week or speakers.		Review Briefs		Net-Zero America - Summary. EN-ROADS simulation of a scenario. Climate Anxiety Reading 1 (?)	
Net Zero Scenarios	7	Mar 2	Intro to Net Zero America (Princeton) report and scenarios	Understand paths to NetZero2050 (Princeton study).	Introduct Theory of Change and apply to Net Zero Scenarios	Present and discussion of Net Zero Scenarios. Introduction to EN Roads.		Introduction to EN Roads.	
Spring Break	8	Mar 9		NO CLASS					
Net Zero Scenarios	9	Mar 16	Deeper into Reports, students do EN-Roads	Understand paths to NetZero2050 in MN.	Theory of Change and Value Proposition applied to Net Zero	Present the Scenarios. Workshop time to improve them (TOC). Team Creation	Steve Kelley TBD	Read Electrify everything ch 1 - x. Read 1st half Field Guide to Climate Anxiety.	
Electrify Everything - E+R++ Scenario	10	Mar 23	Electrify everything scenario. What is it	Dive into the rationale and policy implications of "electrify" everything	to narrow scope.	Speaker. Discussion of Climate anxiety and Electrify (part 1 for both).	Abby Finis - TBD	2nd Reading of Electrify Everything.	
Electrify Everything - E+R++ Scenario	11	Mar 30	Electrify everything- Paying for it, policy.	Dive into the rationale and policy implications of "electrify" everything. What does it look like in MN	Reaching out to stakeholders?	Workshop with with Electrify Everything applied to project.		Short Circuiting Policy, Ch 1 & 2.	
Obstacles	12	Apr 6	Policy Obstacles, Mental Health	How policy can get sidetracked.	Resilience	Lecture,		Ch 4&5 of Climate Anxiety, All We can Save Reading. Initial group present	
Obstacles	13	Apr 13	Policy Obstacles, Mental Health	What action plans are, how to adapt	Systems view	Initial Project presentation, All we can save/Climate anxiety discussion			
Policy and Adaptation Planning	14	Apr 20	Prepare for final projects, Adaptation Planning	What action plans are, how to adapt	Systems view				
Pulling it together	15	Apr 27	Prepare for final simulation and projects.			Wrap up discussion, work time		Final Plan, report, reflections	
Finals		May 4	Final presentations on Zoom			Final Presentations	Guest reviewers		



Minnesota **GreenStep**

Gold Leaf Program

An expansion for the Minnesota GreenStep Cities and Tribal Nations programs to challenge, assist, and recognize local climate action.

September 2022

Table of Contents

Acknowledgements	iii
Executive Summary	1
Background.....	2
Context	3
Process	3
Goals	4
Interests	5
Differences from GreenStep “steps”	6
Rejected Frameworks	7
Selected Framework	10
Pilot Program.....	11
Considerations.....	12
Appendix A: Gold Leaf Actions.....	14
Climate Mitigation.....	14
Climate Planning.....	15
Climate Adaptation	17
Climate-Smart Community.....	18
Appendix B: GreenStep Cities Climate Action Mapping	19

Acknowledgements

Project Advisory Committee

Colby Abazs, Clean Energy Resource Teams
Becky Alexander, LHB Corp
Noelle Bakken, City of Roseville
Melissa Birch, Clean Energy Resource Teams
Andrew Boucher, City of Shakopee
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Mindy Granley, City of Duluth
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Executive Summary

In its [2020 Strategic Plan](#), the GreenStep Cities steering committee outlined several visions and goals for the future of the program, as recommended by GreenStep participant feedback. One high priority identified by the GreenStep partners and participants identified climate response. The GreenStep Cities program has one Best Practice specifically addressing Climate ([Best Practice 29, Climate Adaptation and Community Resilience](#)), along with many other program actions that address greenhouse gas reductions, adaptation, and community education [across the 29 best practices](#). However, there is a need to highlight and elevate specific actions to clearly define pathways for local governments to take climate action through the GreenStep program. These pathways should be relevant to climate change specifically in Minnesota rather than climate change as a broad topic. The Gold Leaf program identifies the pathways that are most applicable to Minnesota and its goals by cross-referencing actions with the State’s [Greenhouse Gas Emissions Inventory](#) and [Climate Action Framework](#).

GreenStep has expanded several times since its conception, adding to its program, for example, new Best Practices, additional steps, and even incorporating a pilot program for Tribal Nations to participate. Based on the interest of program participants and the visions shared by the state, we believe adding a climate action component to the existing GreenStep Cities program is the most appropriate step forward.

A climate action program through GreenStep will also help address the concerning climate trends in Minnesota. Temperatures are warming, especially during winter. Summers are becoming drier while precipitation events become more severe. Our natural environment is increasingly unreliable for migratory animals, birds, pollinators, and, indeed, us. Local governments are already seeing these impacts in their communities. Cities, tribal nations, and other governmental units are at the vanguard for climate action. However, there is still an unfilled niche or support for a climate action program specifically for local governments.

An advisory committee and other stakeholders worked to develop such a program. The program has taken the shape of a nature-themed “badge”, in which participants of the program would receive a “leaf” token of achievement for completing any of the selected [43 climate actions](#) under the categories of mitigation, planning, adaptation, and community. Once a participant receives a gold leaf, it can be displayed on a tree model or online image to showcase a community’s climate efforts. The climate action program differs from original GreenStep “Steps” in that these high-priority, high-impact actions are designed to be SMART (Figure 1).

This document describes the process of crafting a framework for this program and outlines the recommendations to begin a pilot program.



Figure 1: SMART actions are specific, measurable, attainable, relevant, and time-bound.

Background

The [GreenStep Cities program](#) (“GreenStep”) is a voluntary challenge, assistance, and recognition program that helps cities achieve their sustainability and quality of life goals. The development of the program began in 2007 when the Clean Energy Resource Teams (CERTs) held regional listening sessions around Minnesota to discuss the State’s [Next Generation Energy Act of 2007](#) and opportunities for community-based energy projects. The idea for a locally-focused sustainability program came from these listening sessions, a [report](#) was provided to the Minnesota Legislature, and the Minnesota Pollution Control Agency (MPCA), the Minnesota Department of Commerce, and CERTs were directed develop a voluntary program. In 2010, this initiative became the GreenStep Cities program, managed by a public-private partnership that includes State agencies, non-profit organizations, and educational institutions. In 2014, GreenStep expanded to pilot a program for [Tribal Nations](#).



Figure 2: The five steps of GreenStep Cities and Tribal Nations.

GreenStep offers a set of [29 Best Practices](#) across five categories: building and lighting, land use, transportation, environmental management, and resilient economic and community development. Each Best Practice includes four to eight actions that a community can take; each action can be completed at a 1, 2, or 3-star level depending on the scope and scale of the action taken.

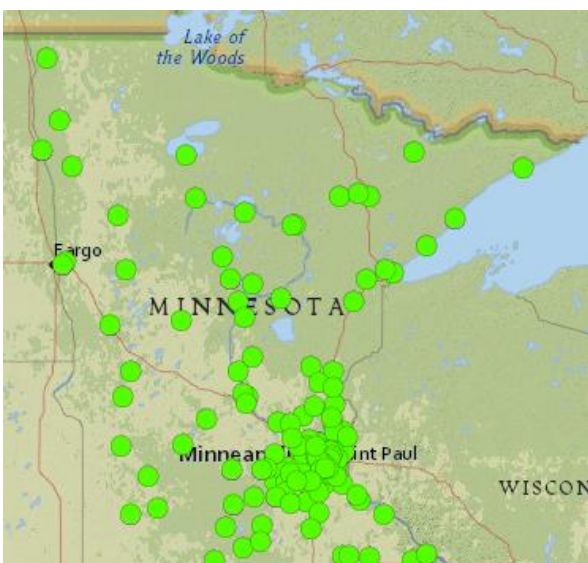


Figure 3: A map of Minnesota GreenStep communities.

Communities demonstrate progress in the program as they advance through five steps (Figure 2). To achieve Step 1, communities adopt a resolution to enter the program. Steps 2 and 3 allow communities to report and track actions they have already taken and additional actions they take while participating in the program. Steps 4 and 5 ask communities to enter various metrics and demonstrate progress each year, respectively.

At present, [143 cities and 4 pilot tribal nations](#) participate in the GreenStep programs. Over 52% of Minnesota’s population lives in a GreenStep city or tribal nation (Figure 3).

Context

Preparing for its [2020 Strategic Plan](#), the GreenStep Cities Steering Committee asked participants what they needed from GreenStep and its partners in order to continue reaching their sustainability and quality-of-life goals. One emergent need is for climate response through a more concentrated focus on mitigation, adaptation, resilience, and community education. To satisfy this need and continue to challenge, assist, and recognize communities, the GreenStep program must expand to provide the tools, resources, support, and motivation for communities interested in addressing climate change. GreenStep applied for a [Minnesota GreenCorps](#) member to help develop a program to meet these burgeoning needs. The GreenCorps member assisted in program development from September 2021 to August 2022.

One primary goal of creating GreenStep after the Next Generation Energy Act was to help local governments reduce greenhouse gas emissions. However, to make the program more accessible to all communities, the focus of GreenStep's language shifted from climate change to sustainability and quality-of-life. Public support has risen for the climate change movement in recent years. To reflect this change of attitude, GreenStep has the opportunity to build into its program a tool of support and recognition for communities addressing climate change.

At the time of this proposal, the state has released its [Climate Action Framework](#), an initiative under [Executive Order 19-37](#), to provide guidance on how the state can meet its Next Generation Energy Act goals and enhance the climate resilience of Minnesota's natural resources, working lands, and communities. While some actions listed in the framework are specific to state abilities, many can be achieved by supporting local governments in climate action (see [Appendix B](#)). GreenStep is a trusted program with existing program participants, partnerships, and connections, which provides a pathway and the resource for the state to work with local governments in tandem toward climate action. It is important to work specifically with cities because [approximately 75% of all carbon emissions come from cities \(Greenhouse Gas Protocol, 2021\)](#). This puts local governments in a prime position to take action toward reducing those emissions and increasing climate resilience.

Process

Project planning began in September 2021. Research topics included global and local climate change causes and effects, successful climate action programs on both national and international levels, Minnesota community interests and values, and more. Stakeholders were first engaged in December 2021.



Goals

One of the first steps during the project development phase was to identify goals to help guide the decision-making process.

- **Accessible and attainable for any community.** Factors such as size, number of city staff, or amount of financial or technical support should not act as barriers for cities to participate. The selected framework for this program should be able to accommodate whatever capacity a community is able to work within.
- **Participation is voluntary.** In alignment with GreenStep values, communities should join voluntarily. GreenStep has always been and will continue to be non-regulatory. There should be no pressure for communities to join if uninterested, and participants should not be made to feel that joining this program is the only way in which they can advance through GreenStep.
- **Challenges participants to improve.** GreenStep has always provided a means for communities to push themselves. It clearly defines goals, provides pathways to accomplish those goals, and lets communities choose which goals they're interested in accomplishing. Climate action through GreenStep should continue to challenge participants to meet their goals and create new ones that are manageable, ambitious, and realistic.
- **Assists participants with resources.** The resources that communities require to meet their climate action goals should not be a barrier. GreenStep should be able to assist communities with identifying and procuring the resources necessary to take action.
- **Leads to action that addresses climate change.** Action must be specific to climate change, rather than sustainability as a whole. While GreenStep values all efforts to increase sustainability and quality-of-life, this program will specifically emphasize and promote climate change action to reflect the importance of climate action.
- **Promotes transparent reporting of actions and outcomes.** Communities should be able to use this program to hold themselves accountable and report in a way that informs and inspires others. It should provide a resource with which a city can look back on its climate action journey. Through sharing, this program will also build momentum and become a resource for other cities looking to take action.
- **Re-engages Step 5 communities.** Upon reaching Step 5, communities have no program-provided incentive to continue to report actions. GreenStep only provides Step 5 communities formal recognition for reporting metrics. This climate program should reintegrate formal recognition and support for taking action.
- **Publicly recognizes participants.** According to feedback, public recognition is one of the biggest motivators for communities to participate in GreenStep. Adding a recognition component to this program would likely provide motivation as well.

Interests

GreenStep hosted a series of meetings in 2021-2022 to gauge interest from communities, partners, and technical assistance providers. These meetings consisted of both informational presentations and idea facilitation sessions. Represented at these meetings were state agencies, GreenCorps members, private businesses, sustainability nonprofit organizations, community leaders, and city staff. This working group came to be known as the GreenStep Climate Program Advisory Committee (“the advisory committee”) and met on average every three weeks. Common concerns and interests included:



- **Financial incentives.** Advisory committee members, especially from state agencies and nonprofit organizations, expressed that local governments would not be interested in completing high level actions without financial incentive, or would not be able to complete actions without financial support through grants.
- **Technical assistance.** Rather than financial assistance, many city staff and other city representatives desired technical assistance, reporting that even if they do have the finances to complete actions, they may not have the staff or training to do so.
- **Maintaining simplicity in GreenStep.** Some advisory committee members cautioned that complicating the GreenStep program further will repel potential participants.
- **Emphasis on action over planning.** Staff from state agencies and nonprofits continuously asserted that it is past the time for climate action planning efforts to address the effects of climate change (through policies, ordinances, reports, etc.), and planning efforts are not as effective as they were previously. Rather, actions need to be focused on measurable or observable results.
- **Community leaders and youths.** Advisory committee members identified as having a local leader to champion climate action in their community is a major determinant of the success a local government has in participating in climate action. When organized, another major proponent of climate action is dedicated students pressuring and encouraging their local governments to address climate change.
- **Capacity of smaller communities.** Often there was concern for how accessible this program and its actions would be for communities with less city staff, resources, or greater political barriers. These communities tend to be with lower populations and/or located in greater Minnesota (although cities of all sizes and location struggle with capacity). While developing this program, we endeavored to find a balance between only including actionable options and reducing requirements to meet all cities where they are at.
- **Language.** A goal of this project was to have actions that can be repeated in order to receive recertification status. GreenStep regional coordinators indicated that such language would be intimidating. This language was eliminated from outward presenting materials. Some advisory

committee members criticized some frameworks as not appropriately reflecting the urgency and gravity of climate change. We endeavored to develop a program that had a friendly, approachable presentation, but also didn't downplay the seriousness of climate change. We also tried not to use language that asserted that climate change is an imminent threat to cities or utilize "doom speech." We present climate change as a serious issue here; however, we recognize that not all communities have climate goals.

- **Bias toward climate mitigation.** Many advisory committee members pointed out that the early stages of program development showed a bias toward carbon emission reduction ("climate mitigation") over other forms of climate action such as building resilience and involving community members. While a primary goal of this program is carbon emission reduction, they encouraged the program to address other forms of climate action as well. Focusing on mitigation can prevent some communities from action when they don't have a supportive local government. However, presenting mitigation as a way to achieve multiple community benefits may increase participation in areas where current elected members have not committed to climate action.
- **Prioritizing resources.** City staff, especially from cities in greater Minnesota, reported that even if they currently have or were to receive financial or technical resources, they may not be able to prioritize climate action over other urgent matters. Daily work, repairs, and other more immediate needs must be met first before diverting resources toward climate action.
- **Open to all GreenStep communities.** The advisory committee did not believe that this program should only be open to Step 5 GreenStep communities. Regardless of where a community is at in their sustainability journey, it should be able to participate in this program.

Differences from GreenStep "steps"

One particular concern raised by the advisory committee was that this program would be too similar to the current GreenStep "steps" to be worth developing. If the similarities are too many, the program would be redundant and subsequently communities would not be interested in participating. We validate this concern and decided to specifically define the ways in which we sought to make this program differ from the GreenStep core program.



- **Prioritizes high-impact actions.** Any action that increases sustainability is good action, no matter how big or small that action may be. GreenStep recognizes sustainability actions of any size, but for this climate program we sought to increase the challenge of typical GreenStep actions. This was done to re-engage Step 5 communities, challenge communities that have more resources, and create the opportunity for meaningful climate action. To do this, we attempted to include specific, measurable, attainable, relevant, and time-bound language (or, SMART) that provide participants with the details need to take meaningful action.

- **Creates a “road map” from the 181 actions to narrow down a community’s focus.** With a menu of so many actions to choose from, each of which can be completed in many different ways, a community has freedom to progress through the GreenStep program in the way that is best suited to them. For a community interested in climate action, it may be difficult to parse through which actions are the most effective. This climate program helps participants prioritize efforts and highlights a path forward to climate action.
- **Focus on climate action, not just sustainability.** GreenStep focuses on sustainability, which may include facets of health benefits, economic prosperity, and general quality-of-life. While these may be co-benefits of climate action, this program will fulfill the need for supporting local governments interested in directly addressing climate change.

Rejected Frameworks

As the program continued to be developed, this feedback was kept in mind and applied to the greatest extent while still striving to reach the project goals. Based on feedback from the advisory committee, partners, CERTs regional coordinators, and the GreenStep Steering Committee, several framework possibilities were developed and consequently discarded. Criticism for earlier frameworks helped guide the decisions that led to the selected framework.

Framework 1: Greenhouse gas emissions actions

One of the most important resources we used in research for climate change in Minnesota is the [Greenhouse Gas Emissions Inventory](#), prepared as a joint effort between the MPCA and the Minnesota Department of Commerce. This report identifies the major sources of greenhouse gas emissions, along with the increases and decreases in emissions each of these sectors has experienced between the years 2005 and 2018 (Figure 4).

Our first framework draft was one in which we selected GreenStep actions that specifically target the sectors in which emissions are high, seeing little to no reductions since 2005, or have even experienced

The big picture

The positive progress Minnesota has seen so far has been concentrated in the electricity generation sector. Since 2005, all other sectors have seen only modest reductions or emission increases. Industrial, residential, and commercial have all increased by 15% or more and are heading in the wrong direction.

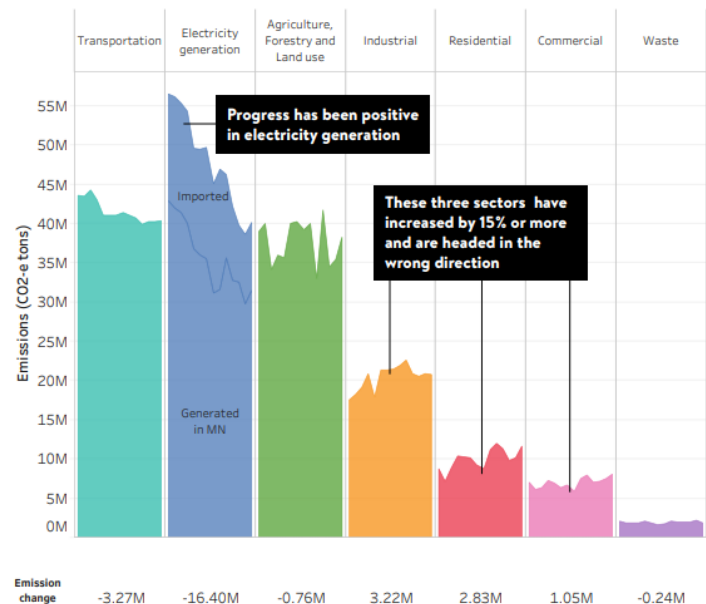


Figure 4: The 2021 [Greenhouse Gas Emissions Inventory: 2005 to 2018](#) is a biennial report to the Minnesota Legislature outlining greenhouse gas emissions sources and trends.

an increase in emissions. We also identified new actions featured in other initiatives such as [LEED for Cities and Communities](#) and the state’s [Climate Action Framework](#) draft that could also be included under this framework (See [Appendix B](#)).

A major downside of this framework is that it emphasizes climate change mitigation at the expense of other types of climate action. An emphasis on mitigation may inadvertently turn away potential participants that are more active in other categories of climate action (i.e. adaptation or education) or place a higher value on benefits such as financial savings through climate action.

Framework 2: Number of stars

Each GreenStep best practice action can be completed at one, two, or three stars, indicating the degree to which the action was completed, with one star being “good,” two stars “better,” and three stars “best” (Figure 5). One potential framework was to provide certification and recognition to GreenStep communities that either have the greatest number of stars, or that have the greatest number of actions completed at the three star level. This would provide a numerical, straightforward way of determining certification.

This framework was discarded for several reasons. It provides an unfair advantage to communities who have been involved with GreenStep longer. If the framework were changed to certifying communities that earn the most stars per year or timeframe, it would provide an unfair advantage to communities that have the capacity to take multiple actions at once, or to communities that report all actions at once, even if those actions were not taken that year.

Best Practice Action 1
[Back to best practice page](#)
Enter/update building information into the MN B3 Benchmarking database, and routinely enter monthly usage data for all city-owned buildings/infrastructure that consume energy/water.

Implementation Tools

Star-level Examples

★

Complete the Building Editor for each city-owned building/structure; identify the person responsible for routinely entering data; enter (at least once/90 days) current, consecutive monthly energy use data ongoing; also best to begin with 12 consecutive months of historical energy use data.

★★

Complete 1 Star criterion and enter 24 consecutive months of historical data; routinely validate and review data by having city staff/a city commission look at patterns/trends and inconsistencies; identify potential opportunities for energy savings; showcase your B3 public page/results on your city website.

★★★

Complete 1 and 2 Star criteria, plan for follow-up operations/maintenance actions in poorer performing buildings; routinely enter current and consecutive (monthly or quarterly as available) water use data ongoing; gather and track data for leased buildings (note that Step 4 Metric #1 asks for this).

Figure 5: An example of the star-level examples provided under Best Practice Action 1.1 in the GreenStep Cities program.

Framework 3: Climate narrative

Often, creativity in communities leads to actions that may produce results that go above and beyond any single GreenStep best practice action or may exemplify best practice actions in ways that other communities can gain inspiration from. Under this framework, communities would be able to write a narrative about a project they're doing to take climate action.

However, this niche for recognition is already filled by other initiatives. For example, the League of Minnesota Cities' (LMC) [Sustainable City Award](#) is eligible only for GreenStep Cities (Figure 6). It identifies unique or inspiring implementation of any of the 29 best practices. The award comes with special recognition and a \$1,000 cash prize. Unique projects are also more likely to gain recognition through media attention, making program recognition redundant. While sharing stories is highly recommended to program participants, this framework conflicts with our goal of a program that allows for recertification; it is unfair to set a standard for "above and beyond" with each certification period.



Figure 6: The 2022 Sustainable City Award from the League of Minnesota Cities was awarded to the City of Duluth for their Climate Action Work Plan.

From left to right: LMC Executive Director, David Unmacht, AmeriCorps VISTA Duluth Energy and Sustainability Assistant, Julia Forberg, Duluth Mayor, Emily Larson, Duluth Sustainability Officer, Mindy Granley, and LMC Board of Directors President, Ron Johnson. Photo Credit: League of Minnesota Cities

Framework 4: Climate planning actions

We collected a handful of actions that were focused specifically on addressing climate change. Some of these actions, such as developing a climate action plan, were pulled from existing GreenStep actions; other actions, such as declaring a climate emergency, were new, in coordination with current trends of local Minnesota governments.

While the intention of this framework was to increase accessibility to communities with less resources while still emphasizing climate action, feedback indicated that this framework was too heavy on planning and not as much "doing." There was also concern that this framework focuses too much on mitigation rather than preparation, adaptation, or economic benefits, meaning that it would be harder to secure political support in some communities.

Selected Framework

The advisory committee determined that a badge-based framework would best suit the needs of this program, where participants will receive badges based on actions they complete. The advisory committee also determined a tree-themed framework reflected the nature of this program's needs, complemented the GreenStep aesthetic of sustainability and goal setting, and made the program accessible and desirable to communities. To this end, we created leaf-themed badges (Figure 7) to award to communities based on the climate actions they completed.



Figure 7: A sample tree design that includes individual leaf badges (green are all badge options; the empty leaves would be gold and given as actions are awarded).

We presented three possible structures of this tree-themed badge format to the advisory committee. Each structure has some overarching similarities, namely that in order to receive a leaf, a participant must complete climate actions under that leaf's category. Actions that communities can take to address climate change have been organized by four different categories: mitigation, planning, adaptation, and community. Other categories have the potential to be added later.

Badge Structure 1

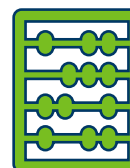
The first of these structures was one in which participants are required to complete a certain number of actions per certification period under a leaf category in order to receive that leaf. The number of actions required would reflect their GreenStep City or Tribal Nation category, which is determined by factors such as number of city buildings and staff.



Feedback indicated that this structure would not incentivize—and in some cases may even discourage—communities to join. Participants may feel as though there is no incentive to complete more actions in a given category if they've already completed enough to earn a leaf. There were also concerns about whether a certification period would make this program less accessible.

Badge Structure 2

The second structure developed was to assign a point value to each action. The point value would be determined by factors including impact, priority, cost, difficulty, and accessibility. Upon meeting a point threshold by completing enough actions, participants would receive a leaf.



Reception to this structure was mixed; quantitatively the advisory committee identified more cons, but the pros arguably had more weight from a qualitative standpoint. While praising its versatility, multiple committee members voiced concerns that this approach was too complicated. Additionally, calculating and assigning point values would be extremely challenging.

Badge 3: Selected Structure

Under the selected structure, actions were reworded to reflect goals that are predicted to have a higher impact on climate change. These actions would have a one-to-one ratio with leaves, where a community completes one action and receives one leaf for it. Many of the actions can be repeated. For example, if an action was “Install or support a community renewable energy project,” a city could achieve one leaf for adding a project in one year and another for a separate project a different year (Figure 8).



Figure 8: Draft Leaf example

Structure Preferences

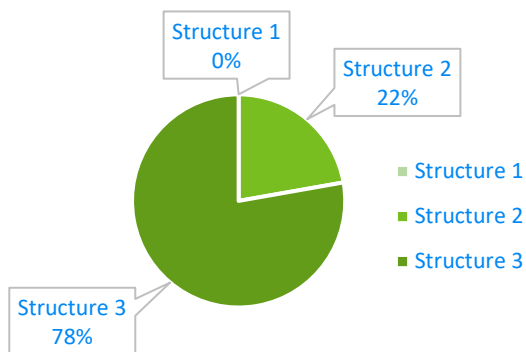


Figure 9: Advisory Committee preferences for each proposed badge structure.

Quantitatively, this was the structure that received the most positive feedback (Figure 9). More advantages were identified than disadvantages, and the advisory committee reported a clear preference of this structure than the others. The committee did bring up some questions of what this may look like aesthetically under this structure, depending upon the type of display used to showcase the awarded leaves. Complexity has been a common concern throughout this process, and this structure was praised for being simple.

Pilot Program

Launching a nine-month pilot program, followed by a two-month evaluation period with five to six participants is recommended to implement this new program. These participants should include (if interest is expressed):



- at least one Step 5 city
- at least one city at any Steps 2 or 3
- at least one tribal nation
- a consideration for participants across Minnesota
- a consideration for participant size and capacity

Pilot program participants should:

- Commit to implementing and reporting at least 2 NEW actions (see [Appendix A](#)) during the pilot period.
- Provide feedback on the program structure and support
- Serve as ambassadors of the official program launch

Upon the end of the program, participants should be asked questions to determine the program's successes and areas to be improved. Questions to ask participants may include:

- How has this program supported your community's climate action?
- Has this program provided meaningful incentive for participation?
- (For Step 5 communities) Did this program increase your city's involvement with GreenStep actions?
- (For Step 1-4 communities) How did this program affect your involvement with the main GreenStep program, if at all?
- Did you feel supported in your involvement in this program? Did you have extra support during this pilot (i.e. AmeriCorps members, temporary staff, etc.) and what difference do you think that made in your ability to participate in this program, if any?
- To what extent did participation in this program increase the number of specific actions taken and/or the speed at which they were implemented? Did this program lead you to take any actions that otherwise would not have taken place during this time period?

The GreenStep Cities steering committee should explore potential partnerships to increase the capacity for program management and ongoing evaluation, identify key technical assistance providers to support communities in their efforts, and consider the recognition aspects of the program during the pilot phase of the Gold Leaf program.

Considerations



While much of this proposal has determined a path forward, a few questions remain to be addressed during the pilot phase and continued development of this program.

- **Capacity:** The bandwidth of both GreenStep program and participant staff to take on the Gold Leaf program has yet to be evaluated. While we don't expect a significantly larger commitment required for this program than what GreenStep already necessitates from staff, a pilot program would be able to provide additional insight. The program can be adjusted if it is found to require too much staff time or other resources.
- **Timing:** With the selected framework, actions can be reported and formally recognized as they are completed, without any specific annual reporting period. Additionally, many actions can be repeated in multiple years to encourage growth overtime (see [Appendix A](#)). The pilot will explore how to provide the guidance and support for these repeatable actions.
- **Program sunset:** A suggestion was made to put an end date on the Gold Leaf program – for example, January 1, 2030 – to recognize the urgency associated with local climate action. All actions could be awarded with that timeframe in mind. In 2030, the program could be finished,

amended to address the impacts and needs of the time, or continued for another length of time.

- **Tribal Nations:** This program was developed to be inclusive of tribal nations, so that participants of GreenStep Tribal Nations can also take part in this program. However, while we reached out to GreenStep Tribal Nations contacts, we were unable to engage tribal nation representatives in program development. To best serve GreenStep Tribal Nations participants, tribal representatives should be invited to participate in the program pilot. GreenStep may explore the desire for a separate pilot program for tribal nations in the future.
- **Expanded Participation:** This program was developed for cities and tribal nations but every attempt was made to create a program that could be expanded or adapted in the future to include other participants, such as counties, schools, and regional development commissions.
- **Funding:** While no immediate funding needs have been identified to launch the Gold Leaf program, funding may be useful for hiring additional GreenStep staff capacity, updating the GreenStep website, developing award displays, or passing funds on to program participants to support their efforts.
- **Guidance:** Ample guidance materials and resources are already located under GreenStep best practice actions. However, it may be necessary to consider additional guidance that can more specifically support the Gold Leaf actions listed in [Appendix A](#), as well as explain the Gold Leaf program overall.

Appendix A: Gold Leaf Actions

Below is a list of proposed actions for this program, categorized by the way in which they address climate change. There are a total of 44 actions between four categories: [Climate Mitigation](#), [Climate Planning](#), [Climate Adaptation](#), and [Community Connectedness for Minnesota's changing climate](#).

Climate Mitigation

Gold Leaf Action	Associated GreenStep Best Practices	Annual Recertification Criteria*
CM1 – Efficient public building operations: For one city-owned/school building, complete 12 months of facilities operations utilizing the B3/SB 2030 Energy Efficient Operations Manual (B3 EEOM).	1.6	Per building
CM2 – Certified green building operations: Document the certification of a public or private building at gold-equivalent or better under a green building operations framework (such as the LEED O+M rating system).	1.6 , 2.4	Per certification
CM3- Private sector incentives: Show a private party has newly completed significant energy/sustainability improvements using city-provided incentives.	2.4 , 2.6 , 3.4	Per project
CM4 - Resilient city growth: Document a project that has newly developed an infill lot or redeveloped an existing but underutilized property using city-incentives or as the result of city policy.	5.5 , 7.4	Per project
CM5 - Public sustainable buildings: Document that a public building has been newly constructed or undergone major remodeling and meets/qualifies under the SB 2030 energy standard or a green building or energy framework.	1.5	Per building
CM6 - Public energy efficiency projects: Invest in a new and significant energy efficiency project through performance contracting or other funding in city-owned/school buildings.	1.3	Per project
CM7- Alternatives to car travel: Become a Bicycle Friendly or a Walk Friendly community by implementing green and living street principals.	11.2 , 11.3 , 12.1 , 12.6	Per certification
CM8 - Active living campaign: Conduct an active living campaign like Safe Routes to School, Age Friendly Communities, etc.	12.2	Per campaign

CM9 - Ridesharing: Develop a new challenge campaign, create a new park-and-ride lot, start a new rideboard, and/or incorporate payment for ride-shares and local transit.	12.4	Per project
CM10 - Telecommuter Forward: Be certified as a Telecommuter Forward! Community.	12.5	Per certification
CM11 - Municipal renewable energy purchasing: Purchase 100% clean energy used by city government via the municipal utility, green tags, community solar garden, or 3rd party agreements.	15.2	Per year
CM12 - Community renewable energy projects: Newly install or support the installation for community-owned or public sector/municipally-owned renewable energy technology—solar, wind, hydro, etc.	26.4 , 26.5	Per project

Climate Planning

Gold Leaf Action	Associated GreenStep Best Practices	Annual Recertification Criteria*
CP1 - Safe shelter: Designate a new safe shelter with a plan that arranges for adequate provisions and backup power sufficient to meet daily run-time requirements as a shelter for one week or longer during utility grid failure.	29.1	Per shelter & plan
CP2 - Community resilience hub: Create a plan for a new resilience hub that describes community services to be provided throughout the year, as well as specific services provided during disruption and into recovery after natural hazard events.	29.3	Per plan
CP3 - FEMA rating: Enroll in the FEMA Community Rating System and be recognized at a class rating of 6 through 1.	19.8	Per certification /recertification
CP4 - Climate/resilience plans: Adopt a new or newly updated climate adaptation/resilience plan that is used for the city's comprehensive planning, policy-making, and budgeting. Document how underserved communities were part of the planning effort.	29.2	Per plan/update
CP5 - Climate risk assessment: Conduct a new climate risk assessment or resilience project planning for local infrastructure (i.e. sewer, stormwater, city roads/bridges, water supply, wastewater, municipal powerlines, public facilities, etc.).	29.7	Per assessment/resilience project plan

CP6 - Municipal climate goals: Newly adopt or strengthen existing climate or energy goal(s) (i.e. renewable energy, GHG emissions, carbon-neutral, etc.) with a deadline of 2030 or sooner.	6.5	Per goal
CP7 - Climate action plan: Adopt a new or updated Climate Action Plan or be part of a regional Climate Action Plan effort (document participation). For Category C cities, participate in a regional Climate and/or Energy Action Plan.	6.5	Per plan/ update
CP8 - Climate priority resolution: Newly adopt or strengthen a city resolution declaring a climate emergency and prioritizing climate action.	6.5	Per resolution
CP9 - Climate action budget: At least 1% of current city annual budget is allocated to climate action.	24.2 , 29.2	Per year
CP10 - Climate staff: Have a new or rehire a paid staff position with climate action as a main responsibility.	24.1	Per new hire
CP11 - Sustainable building/renovation policy: Customize a model sustainable building/renovation policy that includes the SB 2030 energy standard and adopt the language to govern private new/renovation projects that: a) receive city financial support, b) require city regulatory approval (planned unit development, conditional use permit, rezoning, variance), or c) are city/school-owned projects; or Require that all buildings be certified/rated under an identified 3rd-party green building framework.	2.7 , 3.1 , 3.2	Per policy/ update
CP12 – Land use policy: Newly adopt or strengthen a policy limiting annexations or infrastructure extensions to encourage infill and redevelopment.	5.5	Per policy/update

Climate Adaptation

Gold Leaf Action	Associated GreenStep Best Practices	Annual Recertification Criteria*
CA1 - Urban heat relief: In an area of environmental justice concern or high heat vulnerability, newly complete a city project such as: cool pavements; shading structures for a park or transit corridor; cooling water features for heat relief in a park or playground; cool/green roof material; roadside vegetative cover including resilient species increased by at least 40%.	29.6	Per project
CA2 - Flood mitigation: Newly complete an improvement project of green and/or gray infrastructure strategically designed to reduce localized flooding in an area of environmental justice concern or high flood risk such as: fix specific intersections, underpasses, culverts, or other areas prone to flash flooding; resolve recent occurrences of combined sewer overflow; add meaningful system capacity for extreme rainfall events.	29.5	Per project
CA3 - Back-up energy system: Newly install islanding capability and storage for a clean energy system in a publicly accessible building to provide back-up power that can sustain function during extreme weather events.	29.8	Per system
CA4 – Private resilience projects: Document a newly installed residential/commercial/industrial/non-profit project flood or heat risk reduction best practice to increase resilience using city incentives.	17.5 , 29.4	Per project
CA5 – Resilient trees: Plant and maintain at least 2-3 climate resilient trees for each city tree lost.	16.3	Per year
CA6 - Building weather preparation: Newly modify/rebuild one city-owned building to improve flood resilience, prevent damage, and sustain function during extreme weather events.	29.5	Per building
CA7 - Property buy-out: Newly complete the buy-out of one or more properties at risk of flood damage through a city buyout program.	19.8	Per property
CA8 – Resilient public water systems: Newly implement a strategy to reduce climate change risk and increase resilience for city water or wastewater operations or a specific asset (such as a lift station, headwork, water intake/distribution/storage, booster stations/pump, treatment plant, etc.)	29.7	Per project

Community Connectedness for Minnesota's changing climate

Gold Leaf Action	Associated GreenStep Best Practices	Annual Recertification Criteria*
CC1- Combined Green Team: Have a green team with city and community member representation that meets regularly (at least 4 times every year) and address topics related to Minnesota's changing climate.	24.1	Per year
CC2 - Youth Involvement: Have at least two filled youth/student positions on a city environmental commission, green team, or other advisory body that addresses topics related to Minnesota's changing climate.	24.6	Per year
CC3 - Youth Collaboration: A school environmental club has an ongoing connection with a city commission or green team for involvement in topics related to Minnesota's changing climate.	24.6	Per year
CC4 - Student Internship: A city student internship includes issues related to Minnesota's changing climate in their work.	24.6	Per year
CC5 - Community Restoration: Host one or more events that engage community members in annual restoration or cleanup of public natural areas.	18.8	Per year
CC6 - Citizen Science: Create or participate in a Citizen Science program related to the environment and Minnesota's changing climate.	18.8	Per program
CC7 - Accessible Public Green Spaces: Newly document that at least 20% of total city land area is in protected green infrastructure, or that 90% or more of residents are within a 10-minute walk, or within one-half mile of, a park or other public green/blue space.	18.3	Per documentation
CC8 - Tree Steward Community: Participate in the Tree Steward Program.	16.6	Per year
CC9 - Local Purchasing: Require and document that 10% of city purchases to be made from local businesses with special consideration for minority, disability, and women-owned businesses.	15.3 , 25.7	Per year
CC10 - Local Food Buying: Conduct a campaign and/or provide incentives to promote the increased buying of local foods by schools, hospitals, nursing homes, and event centers. Report the use of organic, whole food, and plant-based options.	15.3 , 25.7 , 27.4	Per year
CC11 - Community Visioning: Conduct a Community Visioning process (i.e. MN Main Streets, D4CR, etc.) that engages community members	5.2 , 8.1 , 29.3	Per process

though a series of events that include discussion of Minnesota's changing climate and/or community resilience. Hold meetings in diverse and accessible locations and provide translators and interpreters, childcare, stipends, and/or meals for participants as needed.		
CC12 - Green Businesses and Jobs: Document the growth of new/emerging green businesses and green jobs through the targeted assistance and new workforce development actions.	25.1	Per year

* Consideration will be given on a case-by-case basis as actions are reported. The criteria listed here may be adjusted in accordance with the intent of the program.

Appendix B: GreenStep Cities Climate Action Mapping

The table below reviews the GreenStep Cities Best Practice Actions in relation to other programs that define and prioritize climate actions. See a more detailed list at <https://greenstep.pca.state.mn.us/media/681>.

GreenStep Best Practice Actions	Gold Leaf Climate Actions	MN Climate Action Framework	High-Impact Actions for Low Carbon Cities	USDN's High Impact Practices	UN's Sustainable Development Goals
BP 1 – Efficient Existing Public Buildings					
1.1					
1.2					
1.3					
1.4					
1.5					
1.6					
1.7					
BP 2 – Efficient Existing Private Buildings					
2.1					

2.2					
2.3					
2.4					
2.5					
2.6					
2.7					
BP 3 – New Green Buildings					
3.1					
3.2					
3.3					
3.4					
3.5					
BP 4 – Efficient Outdoor Lighting					
4.1					
4.2					
4.3					
4.4					
4.5					
4.6					
4.7					
4.8					
BP 5 – Building Redevelopment					
5.1					
5.2					
5.3					
5.4					

5.5					
BP 6 – Comprehensive Plans					
6.1					
6.2					
6.3					
6.4					
6.5					
BP 7 – Efficient City Growth					
7.1					
7.2					
7.3					
7.4					
7.5					
BP 8 – Mixed Uses					
8.1					
8.2					
8.3					
8.4					
8.5					
8.6					
8.7					
BP 9 – Efficient Highway- and Auto-Oriented Development					
9.1					
9.2					
9.3					
9.4					

BP 10 – Design for Natural Resource Conservation					
10.1					
10.2					
10.3					
10.4					
10.5					
10.6					
10.7					
BP 11 – Living & Complete Streets					
11.1					
11.2					
11.3					
11.4					
11.5					
11.6					
BP 12 – Mobility Options					
12.1					
12.2					
12.3					
12.4					
12.5					
12.6					
BP 13 – Efficient City Fleets					
13.1					
13.2					
13.3					

13.4					
13.5					
13.6					
BP 14 – Demand-Side Travel Planning					
14.1					
14.2					
14.3					
14.4					
BP 15 – Sustainable Purchasing					
15.1					
15.2					
15.3					
15.4					
15.5					
15.6					
15.7					
15.8					
BP 16 – Community Forests & Soils					
16.1					
16.2					
16.3					
16.4					
16.5					
16.6					
16.7					
BP 17 – Stormwater Management					

17.1					
17.2					
17.3					
17.4					
17.5					
17.6					
BP 18 – Parks & Trails					
18.1					
18.2					
18.3					
18.4					
18.5					
18.6					
18.7					
18.8					
BP 19 – Surface Water					
19.1					
19.2					
19.3					
19.4					
19.5					
19.6					
19.7					
19.8					
BP 20 – Efficient Water & Wastewater Facilities					
20.1					

20.2					
20.3					
20.4					
20.5					
20.6					
20.7					
BP 21 – Septic Systems					
21.1					
21.2					
21.3					
21.4					
21.5					
21.6					
21.7					
BP 22 – Sustainable Consumption & Waste					
22.1					
22.2					
22.3					
22.4					
22.5					
22.6					
22.7					
22.8					
BP 23 – Local Air Quality					
23.1					
23.2					

23.3					
23.5					
BP 24 – Benchmarks & Community Engagement					
24.1					
24.2					
24.3					
24.4					
24.5					
24.6					
24.7					
BP 25 – Green Business Development					
25.1					
25.2					
25.3					
25.4					
25.5					
25.6					
25.7					
BP 26 – Renewable Energy					
26.1					
26.2					
26.3					
26.4					
26.5					
26.6					
26.7					

BP 27 – Local Food					
27.1					
27.2					
27.3					
27.4					
BP 28 – Business Synergies & EcoDistricts					
28.2					
28.3					
28.4					
BP 29 – Climate Adaptation & Community Resilience					
29.1					
29.2					
29.3					
29.4					
29.5					
29.6					
29.7					
29.8					

Roseville Public Works, Environment and Transportation Commission Agenda Item

DATE: April 25, 2023

ITEM: 7.a.

ITEM DESCRIPTION: Speed Limits Update

Background

At the September and November 2022 PWETC meetings, staff presented information about speed limits on city streets. Since that time, staff has gathered more information in response to questions posed by the Council and Commission.

At this meeting, staff will briefly review information previously presented, touch on the questions posed, and propose next steps. Additionally, information will be shared about the MnDOT adopted Minnesota Statewide Speed Limit Vision and the newly released Guidelines for Determining Speed Limits on Municipal Roadways from the Local Road Research Board (LRRB). Staff asks the Commission to provide feedback on the information provided and give input on proposed next steps.

Recommendation

Receive presentation and provide feedback on the information and the proposed next steps related to potential changes to city roadway speed limits.

Attachments

1. Presentation
2. 2022 Roseville Traffic Stop Data
3. LRRB - Guidelines for Determining Speed Limits on Municipal Roadways

Speed Limit Update

Public Works Department



Public Works Environment and Transportation Commission

April 25, 2023

Speed Limit Update

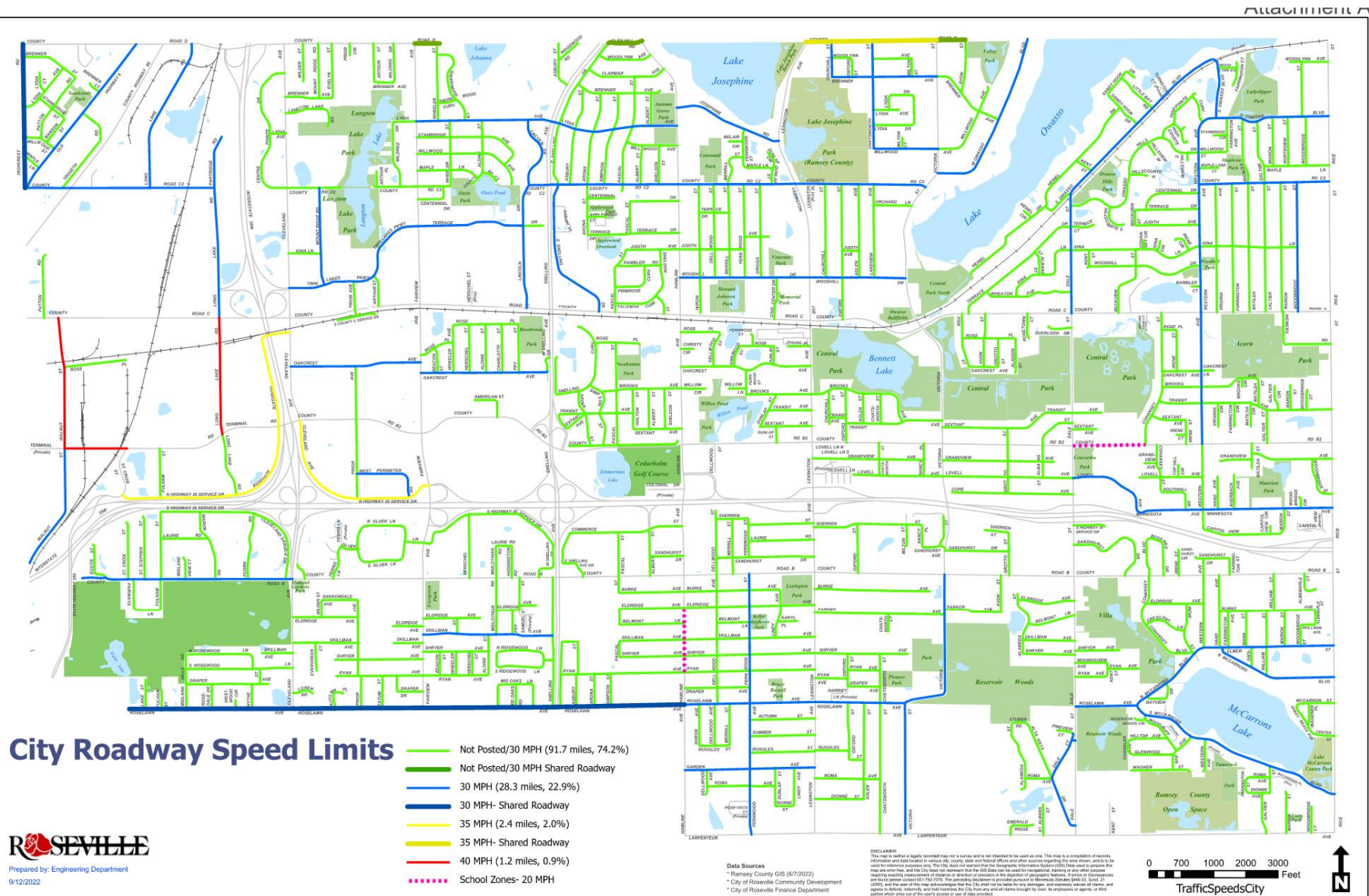
Agenda

- Background
- Update on Questions Asked
- New Local Research
- Next steps

Speed Limit Update

Background

- 2019 State Legislative Action
- 2022
 - July 11 Joint PWET/Council meeting
 - September 27 PWET Commission meeting
 - November 22 PWET Commission meeting



Speed Limit Update

Council and Commission Questions

- What are the benefits of lower speeds?
- What are costs of implementing a speed change?
- What have other cities done or learned?
- How are other cities experiencing compliance and enforcement?
- How does Roseville's crash data compare to others?
- What about other impacts of changes to speed limits?
- What are the public's thoughts?

Speed Limit Update

What are the benefits of lower speeds?

The likelihood of injury to pedestrians increases as driver speed increases.



13% Likelihood of fatality or severe injury

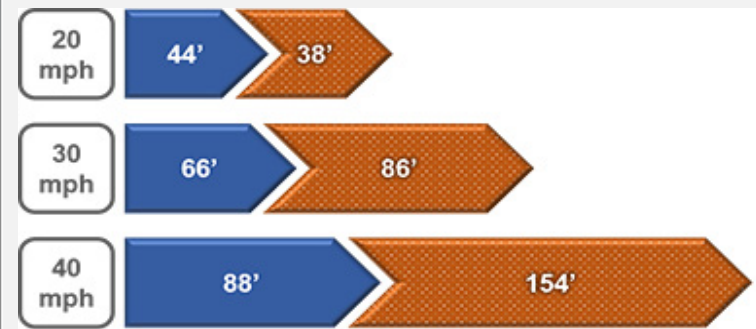


40% Likelihood of fatality or severe injury



73% Likelihood of fatality or severe injury

Source: MnDOT Statewide Speed Limit Vision Project



Perception/Reaction + Breaking Distance

Source: FHWA

Speed Limit Update

What are the costs of implementing a speed change?



Source: Seattle DOT



Source: Officer.com



Source: Ohio Education Association

Speed Limit Update

What have other cities done or learned?

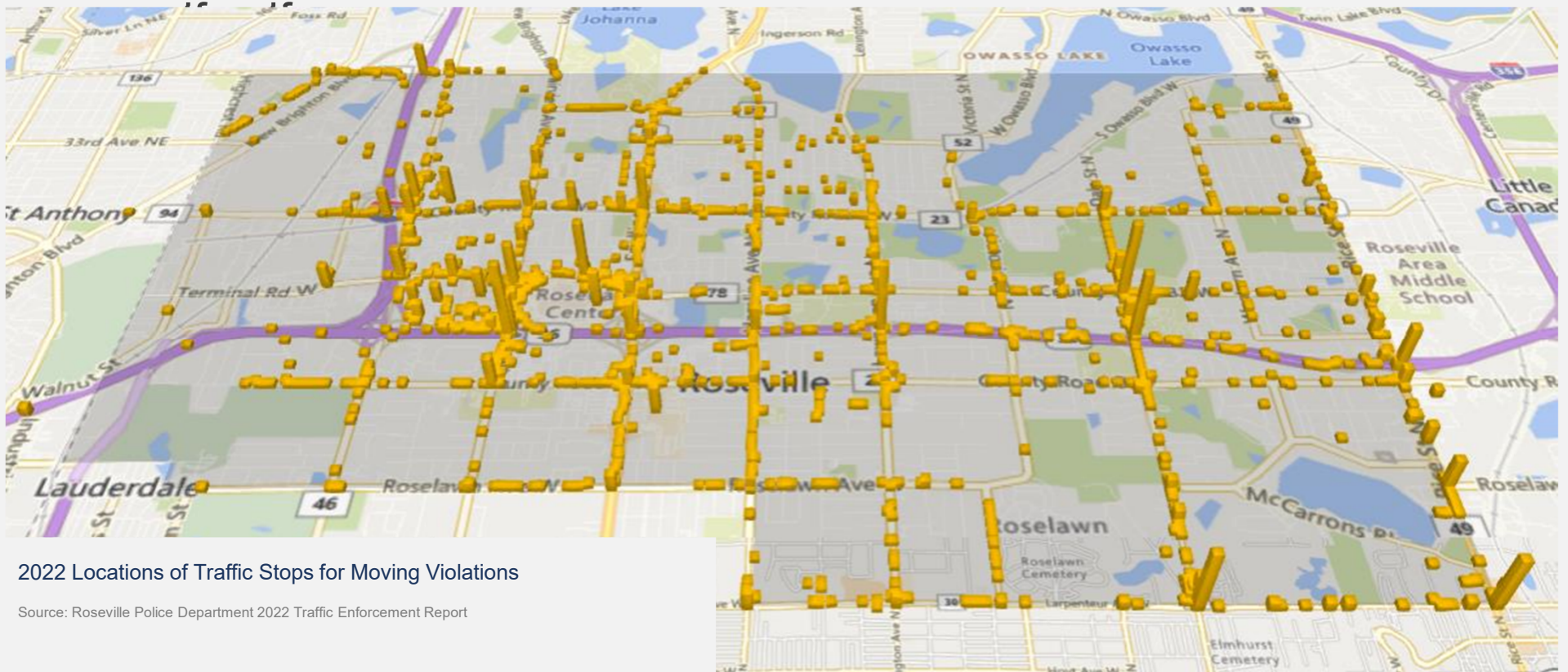


Source: State of Minnesota GIS



Speed Limit Update

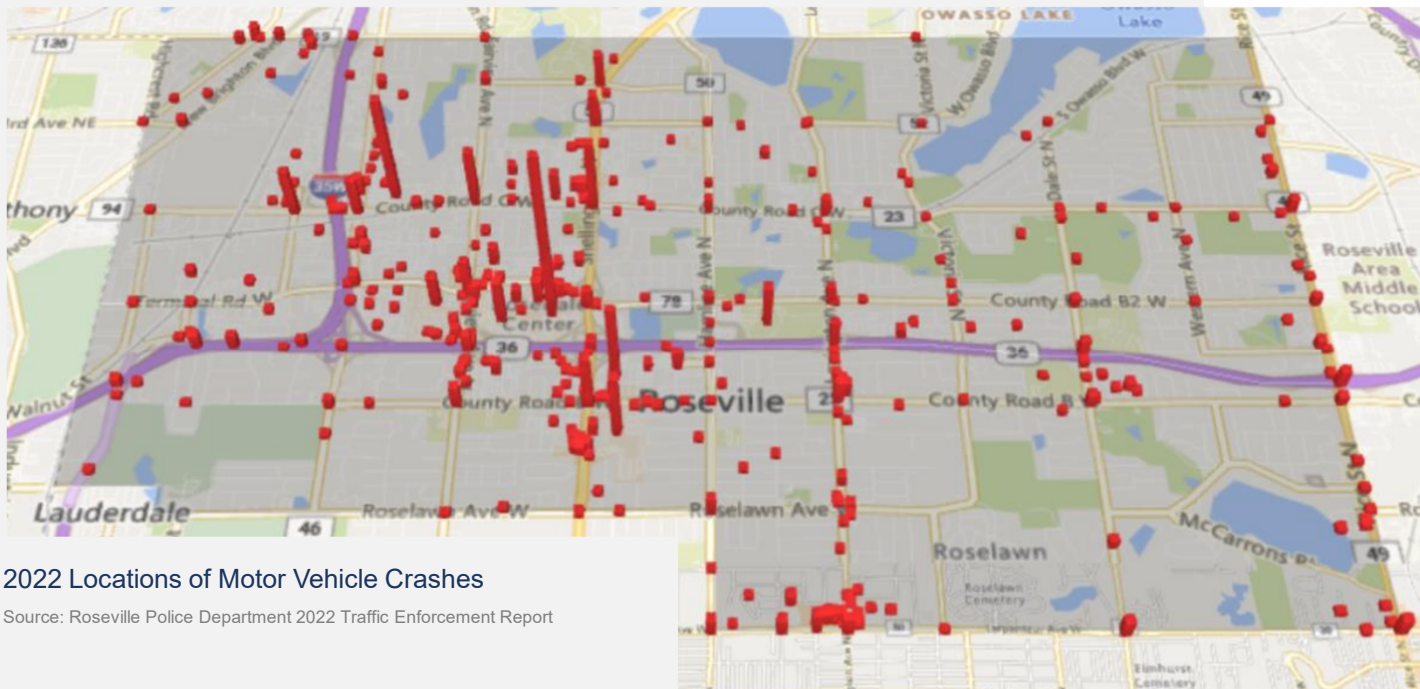
How are other cities experiencing compliance and enforcement?



ROSEVILLE

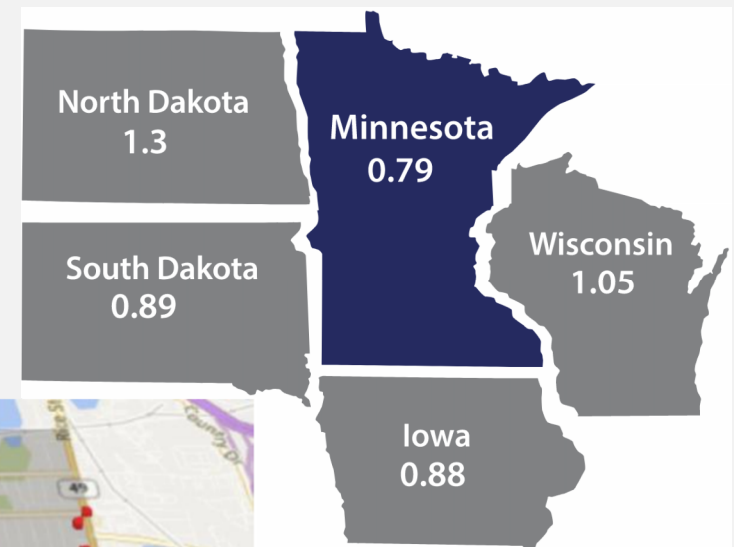
Speed Limit Update

How does Roseville's crash data compare to others?



2022 Locations of Motor Vehicle Crashes

Source: Roseville Police Department 2022 Traffic Enforcement Report



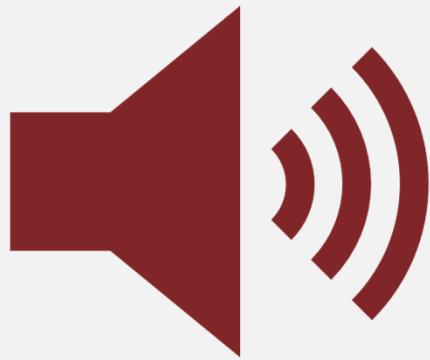
Pedestrian & Bicycle Fatal Crash Rate

Source: LRRB Guidelines for Determining Speed Limits on Municipal Roadways



Speed Limit Update

What about other impacts of changes to speed limits?



Speed Limit Update

What are the public's thoughts?



Source: Ohio Education Association



Source: sciline.org

Speed Limit Update

New Local Research

- [Minnesota Statewide Speed Limit Vision Project](#)
- [LRRB Guidelines for Determining Speed Limits on Municipal Roadways](#)

Speed Limit Update

New Local Research

- [Minnesota Statewide Speed Limit Vision Project](#)

 VISION STATEMENT Speeds limits are set with an emphasis on all users with key influences of safety, engineering, and surrounding land use.	Core Values Speed limits are: 1 Affected by community context, land use, and road design. 2 Governed by voluntary compliance through education and accepted social norms. 3 Established through consistent technical evaluation and applied equitably across all communities.
---	--

Source: MnDOT Statewide Speed Limit Vision Project

Speed Limit Update

New Local Research

- [LRRB Guidelines for Determining Speed Limits on Municipal Roadways](#)

“Changing the speed limit alone had no effect on driver behavior.”

“Changing driver behavior and reducing speeds will require added enforcement and changes to the road environment to adjust driver perception.”

Speed Limit Update

What we've done

Next Steps

- Continue to compile speed studies on local streets
- Compile more data on other cities' experiences
- Request Commission discuss with Council at Joint Meeting in July
- Seek Council direction before engaging public

THANK YOU

Public Works Department

2022 Traffic Enforcement Report

ROSEVILLE POLICE DEPARTMENT

Roseville Police Department
| 2660 CIVIC CENTER DR, ROSEVILLE, MN 55113

TABLE OF CONTENTS

Introduction.....	1
Quick Facts and Findings.....	1
Background.....	1
City Demographics.....	2
Overview	2
Type of Traffic Stop Initiated	2
Searches of Vehicles and Persons	3
Result of the Stop	3
Traffic Stops by Gender	4
Type of Traffic Stop Initiated	5
Searches of Vehicles and Persons	5
Result of the Stop	6
Traffic Stops by Race	7
Type of Traffic Stop Initiated	7
Searches of Vehicles and Persons	8
Result of the Stop	10
Annual Trends	13
General Annual Trends.....	13
Result of the Stop	15
Traffic Stops by Time of Day.....	17
Traffic Stops By Location	18
Traffic Priorities	19
Looking Forward	19
Appendix.....	20

Figure 1 - Reason Stop was Initiated	2
Figure 2 - Vehicle & Person Searches during Traffic Stops	3
Figure 3 - Citations & Warnings Issued by Type of Stop	4
Figure 4 - Traffic Stops by Gender of Driver	4
Figure 5 - Traffic Stops by Type of Stop & Gender of Driver	5
Figure 6 - Searches of Male Drivers	5
Figure 7 - Searches of Female Drivers	6
Figure 8 - Result of Stop by Type of Stop & Gender of Driver	6
Figure 9 - Traffic Stops by Race of Driver	7
Figure 10 - Traffic Stops by Type of Stop & Race of Driver	7
Figure 11 - Traffic Stops by Race of Driver & Search Type	8
Figure 12 - Traffic Stops by Race of Driver, Type of Stop, & Search Type	9
Figure 13 - Result of Stop by Race of Driver	10
Figure 14 - Traffic Stops by Race of Driver, Type of Stop, & Result of Stop	11
Figure 15 - Annual Trends: Number of Traffic Stops Initiated	13
Figure 16 - Annual Trends: Reason Traffic Stop was Initiated	13
Figure 17 - Annual Trends: Vehicle & Person Searches during Traffic Stops	14
Figure 18 - Annual Trends: Traffic stops by Gender of Driver	14
Figure 19 - Annual Trends: Traffic Stops by Race of Driver	15
Figure 20 - Annual Trends: Result of the Stop	15
Figure 21 - Annual Trends: Warnings & Citations Issued by Gender of Driver	16
Figure 22 - Annual Trends: Warnings & Citations Issued by Race of Driver	16
Figure 23 - Locations of Traffic Stops for Moving Violations	18
Figure 24 - Locations of Motor Vehicle Crashes	18
 Table 1 - Traffic Stops by Type of Stop & Race of Driver	 8
Table 2 - Traffic Stops by Race of Driver, Type of Stop, & Search Type	10
Table 3 - Traffic Stops by Race of Driver, Type of Stop, & Result of Stop	12
Table 4 - Traffic Stops by Time of Day & Day of the Week	17

ROSEVILLE POLICE DEPARTMENT

2022 Traffic Enforcement Report

March 23, 2023



INTRODUCTION

QUICK FACTS AND FINDINGS

In 2022, Roseville Police officers made 2,037 traffic stops. Below are some of the key findings of this report:

- In 2022, there was a 9.3% increase in the number of traffic stops conducted by officers compared to the previous year (n=2,037).
- Officers conducted more stops related to moving violations (e.g. excessive speed, semaphore violation, distracted driving) in 2022 than they did in 2021 (88.1% and 82.6%, respectively). This corresponded to a drop in stops initiated for vehicle violations (3.39% and 11.22%, respectively).
- Most traffic stops (90.92%) resulted in a warning for the driver.
- During traffic stops, a person was searched in 2.2% of the stops. A vehicle was searched in 2.0% of traffic stops.
- 55.67% of the drivers stopped were White, 25.53% of drivers were Black, 7.76% of drivers were Asian, 6.9% of the drivers were Latino, 3.93% of drivers did not fit in to one of the coded racial categories, and 0.25% were Native American.
- White drivers were searched during 1.3% of stops. Black drivers were searched during 3.3% of stops.
- 58.8% of drivers stopped were male, 41.1% were female, and 0.1% were non-binary. Male drivers were cited in 9.7% of the stops and females were cited in 8.2% of the traffic stops. Non-binary individuals were not cited. Males were searched at a slightly higher rate than females (3.4% to 1.2%, respectively). No non-binary individuals were searched.

BACKGROUND

On January 9, 2017, all Ramsey County agencies that contract dispatch services with Ramsey County Emergency Communication Center began voluntarily collecting data on every traffic stop. The goals of the countywide initiative are to increase transparency and provide more context to the limited data that were previously captured. Prior to 2017, the Roseville Police Department (RPD) only had access to data from traffic stops that resulted in a citation.

Minnesota does not require police officers to collect traffic stop data. Prior to 2017, minimal data were collected on most traffic stops across the state. The initiative's goal is to collect traffic data on every traffic stop and thereby, increase consistency in statistical analysis across agencies throughout Ramsey County.

Starting in January 2017, Roseville officers began to record the following data on every traffic stop:

- The reason for the traffic stop
- Perceived race of the driver
- Gender of the driver
- Whether the driver was searched
- Whether the vehicle was searched
- If the driver was warned or cited

As part of the data collection initiative, Roseville Police Department agreed to publish the data annually. This report summarizes various characteristics of the traffic stops Roseville officers conducted in 2022. For reports from other years, please visit the [Transparency & Data Sharing](#) page of the Roseville Police Department website.

CITY DEMOGRAPHICS

The 2020 Census showed the City of Roseville had a population of 36,254, with 27.8% of the population being persons of color.¹ Since 2000, the City of Roseville has undergone a number of noteworthy changes that have affected the demographics of the city. In addition to Roseville residents, it is estimated that approximately 36,000 people travel into the city daily to work and over 14 million visit Rosedale Center annually.² More details on Roseville's demographics can be found on the [City of Roseville's Economic Development webpage](#).

OVERVIEW

In 2022, Roseville officers conducted 2,037 traffic stops. For each stop, the location, date, and time of the stop are automatically recorded by the computer aided dispatch (CAD) system. Officers are responsible for recording the reason for the stop, the gender of the driver, the officer's perception of the driver's race, whether the person and/or vehicle was searched, and the final outcome of the stop (i.e. warning or citation issued). Officers record that data when clearing the call either by the in-car computer or over the radio to dispatch.

Regardless of the method of entry, the data is sent to and stored by Ramsey County. All departments reporting data have access to a portal where data can be queried and exported. After exporting the 2022 data, the few incident fields missing information were resolved by RPD personnel by cross-referencing the unique CAD case identifiers with reports stored in a departmental records management system (RMS).

TYPE OF TRAFFIC STOP INITIATED

Upon clearing a traffic stop, officers are required to document the initial reason for the stop. When a traffic stop falls into multiple categories, officers document the initial reason they initiated a traffic stop. The four categories are:

1. Moving Violation (e.g. speeding, running a red light, distracted driving, reckless driving)
2. Vehicle Violation (e.g. revoked license plate, expired tabs, burned out lights)
3. Investigate (e.g. warrants, investigative alert or attempt to locate on a specific vehicle, vehicle or occupants match suspect description, suspicious vehicle)
4. Citizen Complaint (e.g. citizen calls in a reckless driver)

In 2022, moving violations comprised 88.1% of stops, 3.4% of stops were for vehicle violations, and 8.3% of stops were for investigative reasons. There were only four stops resulting from a citizen complaint. (All tables used to create figures can be found in the Appendix, if not already included in the main document.)

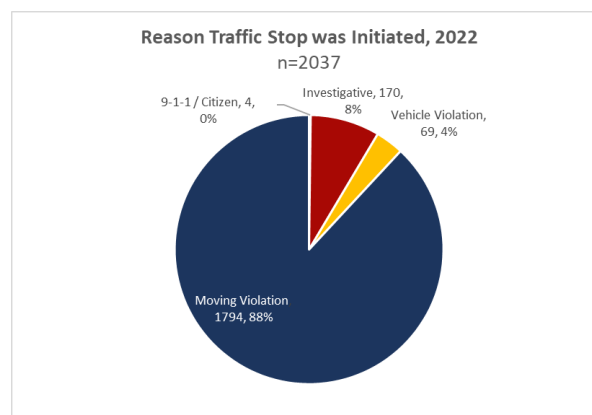


Figure 1 - Reason Stop was Initiated

¹ United States Census Bureau <https://data.census.gov/cedsci/profile?g=1600000US2755852>

² ESRI, 2017-07-03 <http://www.growroseville.com/roseville/site-selectors/community-profile/>; <https://rosedalecenter.com/about> 4/28/2022

SEARCHES OF VEHICLES AND PERSONS

Officers conduct searches in strict observance of the constitutional rights of persons being searched. All searches must comply with relevant federal and state laws governing the seizure of persons and property as well as [departmental policy](#). Generally, officers can legally search a vehicle or person without a warrant only for the following reasons:

- Contraband in plain view
- Medical emergency/life-saving needs
- When probable cause is established to believe there is evidence of a crime on a person or inside a vehicle
- As part of a protective sweep for weapons (must have reasonable suspicion based on specific facts that there may be a weapon inside the vehicle or on the person)
- A search incident leading to an arrest
- To conduct an inventory of the vehicle or person
- With the consent of the individual—or in the case of a vehicle, the driver and/or registered owner—when there is reasonable suspicion of criminal activity beyond the traffic violation

An officer may also conduct a “Terry Search” of a stopped person if the officer reasonably believes, based on specific and articulable facts, that the person may be armed and dangerous. A Terry Search is limited to a pat down of the person’s outer clothing for weapons.

In 2022, Roseville officers searched vehicles during 39 traffic stops (1.9%) and searched persons in 38 incidents (1.9%).

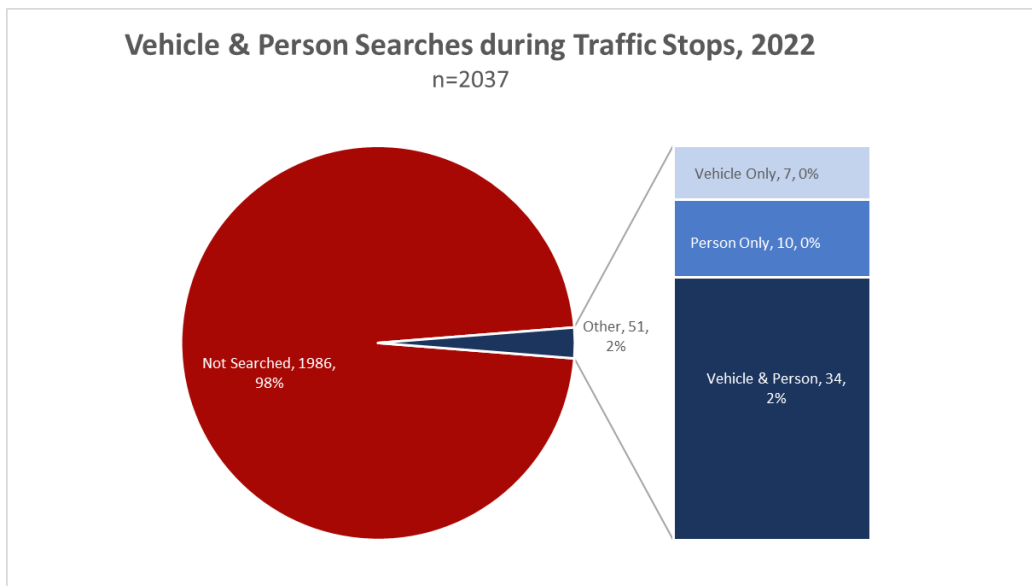


Figure 2 - Vehicle & Person Searches during Traffic Stops

RESULT OF THE STOP

Per Roseville Police Department policy and Minnesota state statutes ([Minn. Stat. § 169.985](#); [Minn. Stat. § 299D.08](#)), there are no ticket quotas for officers to meet and the number of citations issued by any officer is not used when evaluating officer performance. There are also no mandatory procedures requiring officers to issue tickets under certain circumstances; whether a traffic stop results in a citation or a warning—either written or verbal—is wholly at the discretion of the officer conducting the stop. It is the policy of the department that officers take appropriate enforcement action in a fair and impartial manner.

For tracking purposes, all traffic stops ended with a disposition of either “Warning” or “Citation.” Warnings are issued either verbally or in writing at the time of the stop. Most citations are written and issued to the subject at the time of the stop; however, some are issued via Formal Complaint after the fact. For example, if a person is detained on suspicion of driving under the influence and a blood or urine sample is collected, the individual would be booked, released, and then charged via Formal Complaint if the lab results come back positive. The data in this report include both immediate and delayed charges in the “Citation” disposition.

Most traffic stops (90.9%) resulted in a warning for the driver. The chart below shows the warning-citation ratio by stop type. Proportionally, the number of citations issued as a result of investigative stops was slightly higher than the number issued as a result of either vehicle violations or moving violations.

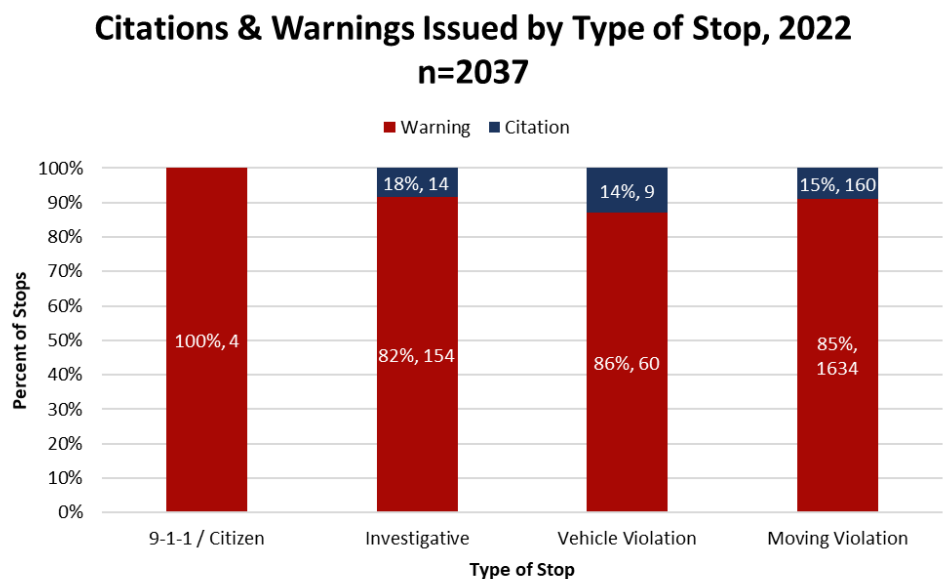


Figure 3 - Citations & Warnings Issued by Type of Stop

TRAFFIC STOPS BY GENDER

Until December 2020, Officers had only two options available to them to record the gender of the driver during a stop: male and female. In December, a third option was added: “Unknown.” In 2021, the third option was changed from “Unknown” to “Non-Binary.” Non-Binary can mean different things to different people. At its core, it is used to describe someone whose gender identity isn’t exclusively male or female.

In 2022, approximately three in every five drivers stopped were male (58.8%). Officers used the non-binary code three times.

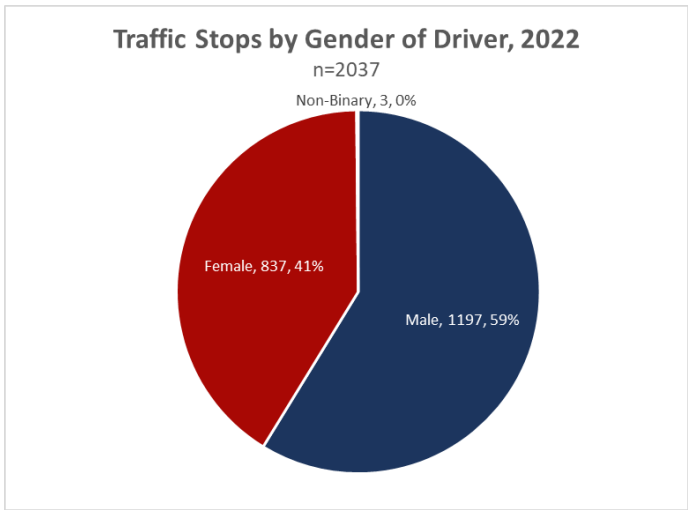


Figure 4 - Traffic Stops by Gender of Driver

TYPE OF TRAFFIC STOP INITIATED

When broken down by the reason for the stop, the proportion of males to females stopped varied from the overall ratio for both investigative and vehicle violation stops. Male drivers made up 72.4% of drivers stopped during investigative stops and 72.5% of drivers stopped during vehicle violation stops (as compared to 58.8% of all drivers stopped).

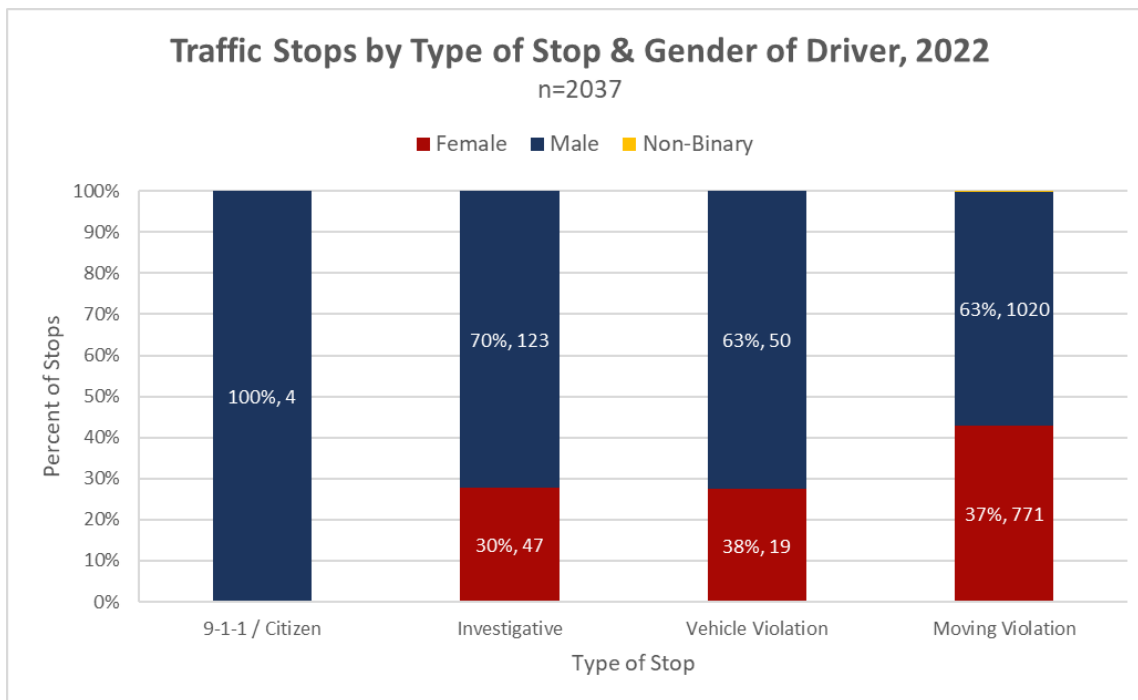


Figure 5 - Traffic Stops by Type of Stop & Gender of Driver

SEARCHES OF VEHICLES AND PERSONS

Males were searched at nearly triple the rate of females during traffic stops. Males were searched in 3.4% of cases and females were searched in 1.2% of cases. No non-binary driver was searched.

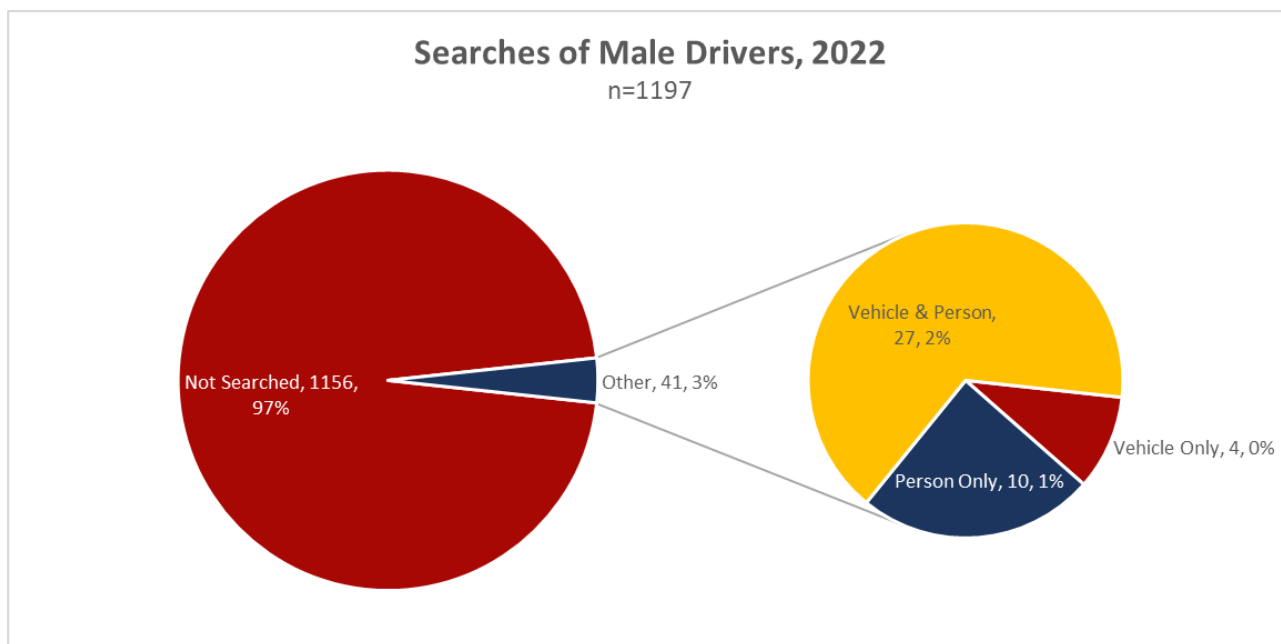


Figure 6 - Searches of Male Drivers

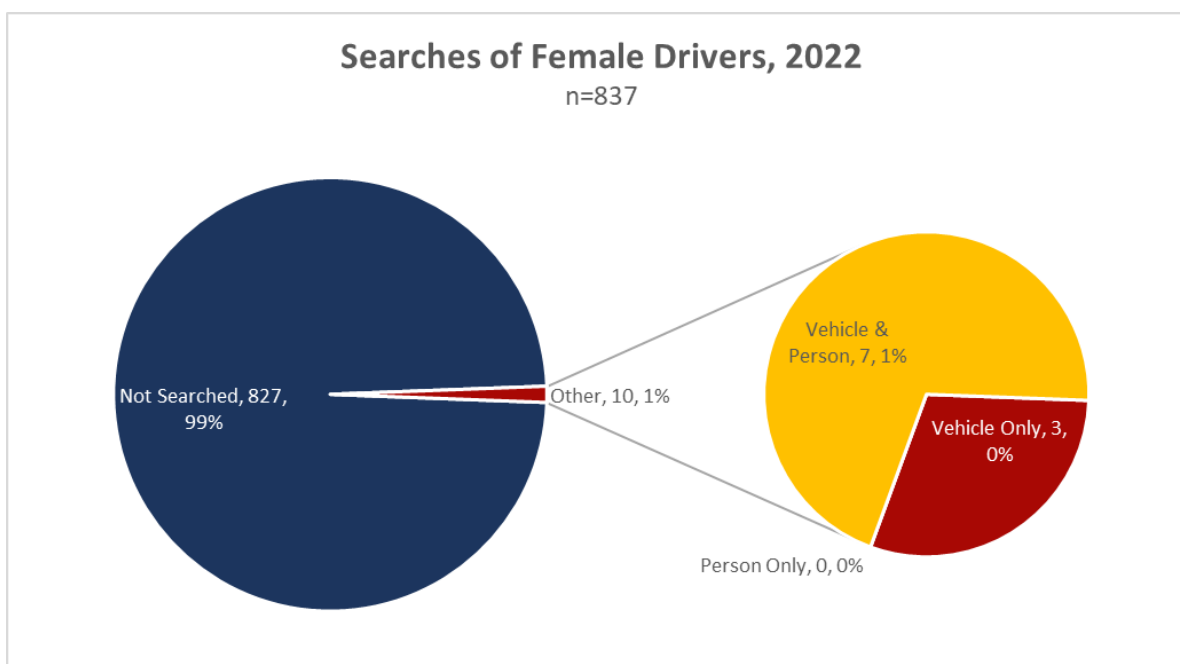


Figure 7 - Searches of Female Drivers

RESULT OF THE STOP

Male drivers were cited at a slightly higher rate than female drivers: 9.7% and 8.2%, respectively. When broken down by stop type, male drivers were cited at a higher rate than female as a result of investigative stops (11.4% to 4.3%) and moving violation stops (9.4% to 8.3%), but at a lower rate for vehicle violation stops (15.8% to 12.0%).

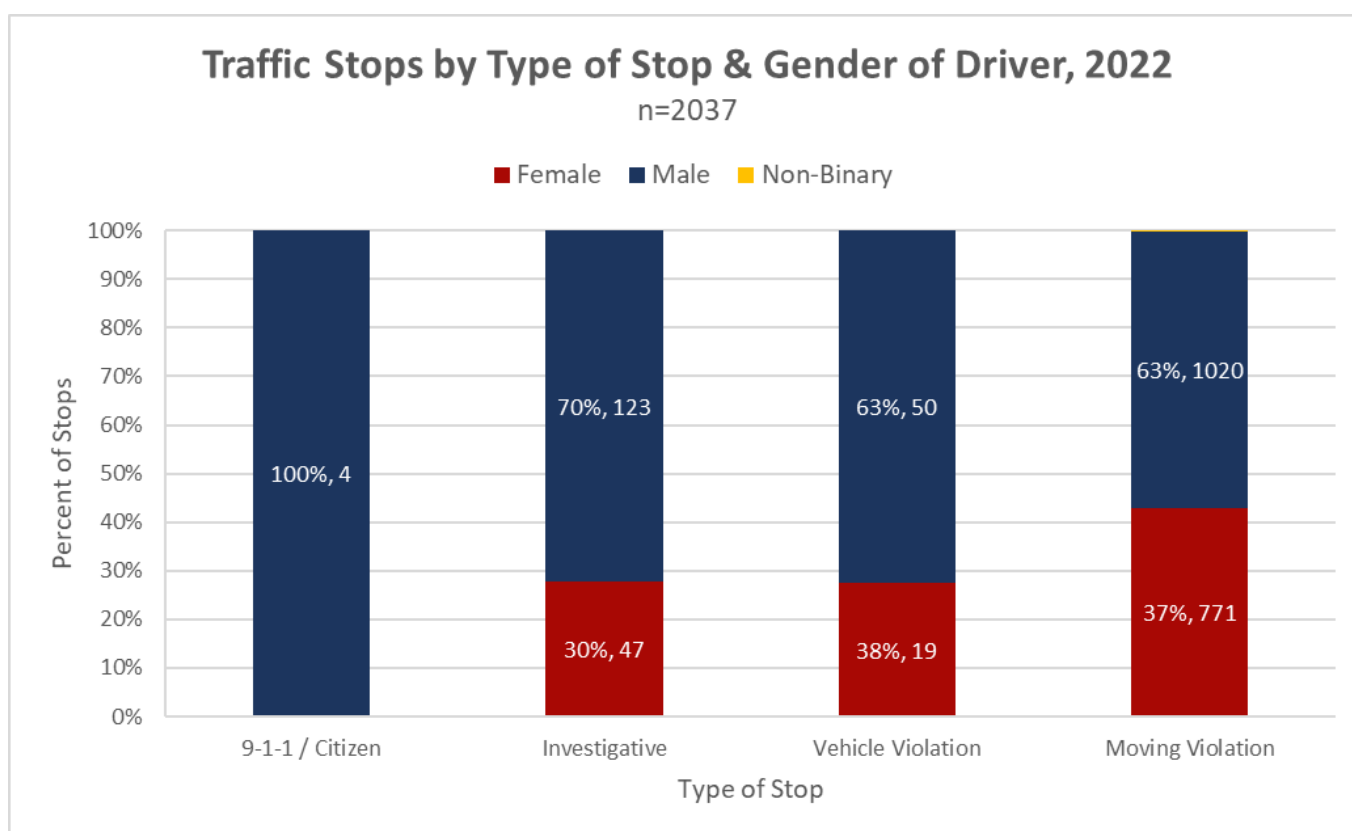


Figure 7 - Result of Stop by Type of Stop & Gender of Driver

TRAFFIC STOPS BY RACE

Officers record the perceived race of the driver during traffic stops. Options are limited to White, Black, Latino, Asian, Native American, and Other. In 2022, 55.7% of drivers stopped by officers were White whereas 44.3% were persons of color.

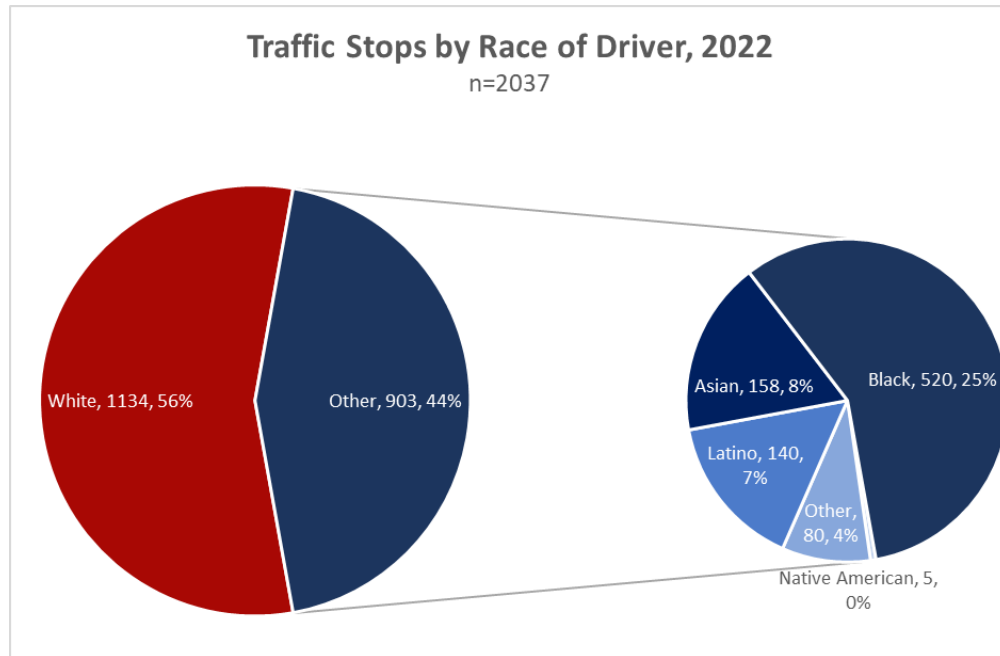


Figure 8 - Traffic Stops by Race of Driver

TYPE OF TRAFFIC STOP INITIATED

The chart and table below summarize traffic stop data by examining both the perceived race of the driver and the type of stop initiated. The four 9-1-1/Citizen Complaint initiated stops were drivers categorized as White (0.3%, 3) and Black (0.2%, 1) and are not labeled on the chart.

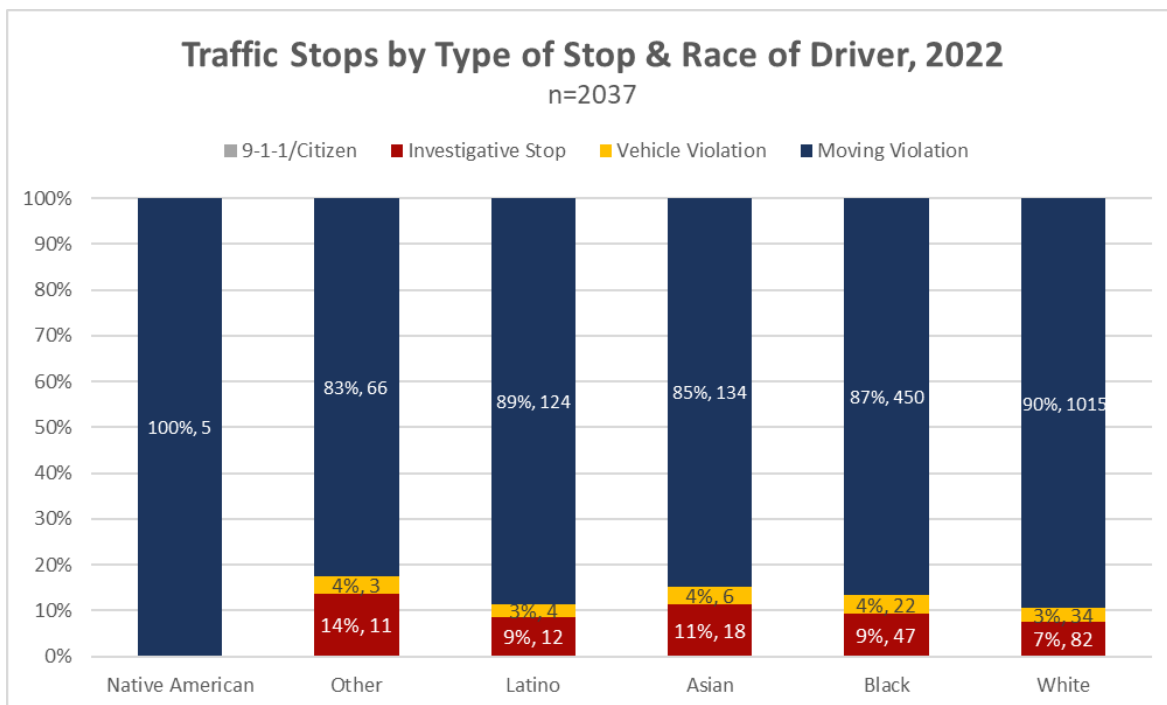


Figure 9 - Traffic Stops by Type of Stop & Race of Driver

Table 1 - Traffic Stops by Type of Stop & Race of Driver

	Native American		Other		Latino		Asian		Black		White		Grand Total	
	Count	Group%	Count	Group%	Count	Group%	Count	Group%	Count	Group%	Count	Group%	Count	%
Investigative	0	0.00%	11	13.75%	12	8.57%	18	11.39%	47	9.04%	82	7.23%	170	8.34%
Moving Violation	5	100.00%	66	82.50%	124	88.57%	134	84.81%	450	86.54%	1015	89.51%	1794	88.07%
Vehicle Violation	0	0.00%	3	3.75%	4	2.86%	6	3.80%	22	4.23%	34	3.00%	69	3.39%
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.19%	3	0.26%	4	0.20%
Grand Total	5	100.00%	80	100.00%	140	100.00%	158	100.00%	520	100.00%	1134	100.00%	2037	100.00%

SEARCHES OF VEHICLES AND PERSONS

The search rate of only one racial group exceeded 5.0% (Native American, 80.0%, n=5). Other drivers were searched at the second highest rate (5.0%), followed by Asian drivers (4.4%), Black drivers (3.3%), Latino drivers (2.9%), and White drivers (1.3%).

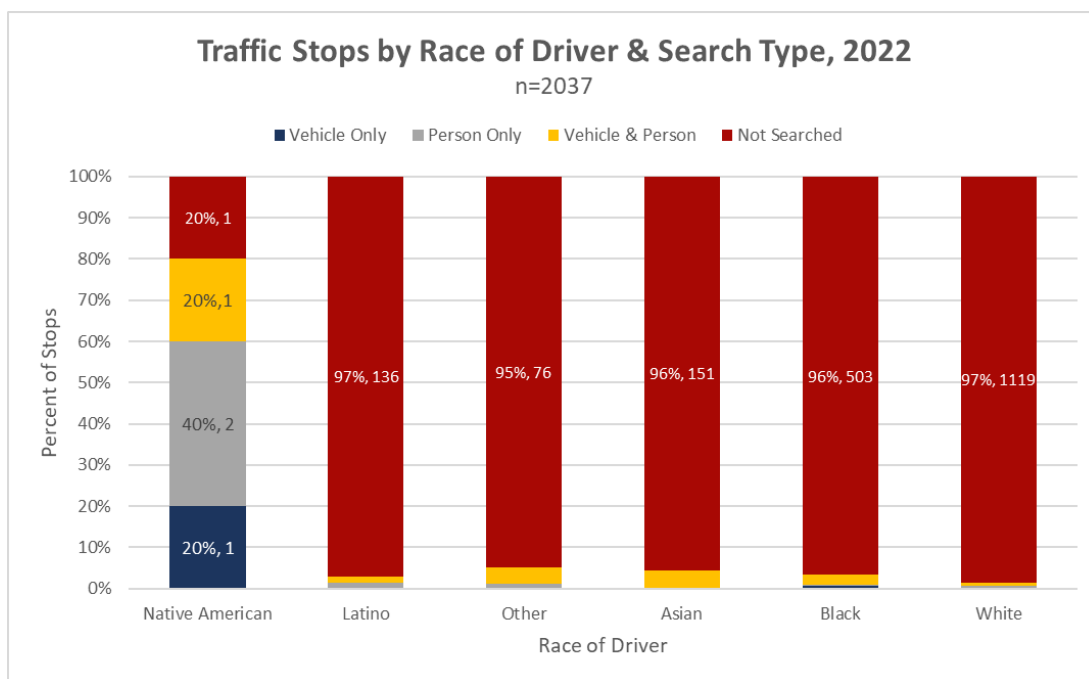


Figure 10 - Traffic Stops by Race of Driver & Search Type

The following chart and table display the same data as above, but add in another layer of analysis by further grouping searches by the reason a stop was initiated. The chart depicts the three levels of interest: Perceived race of the driver, type of stop initiated, and type of search conducted. With each layer, the data are broken down into more and more refined categories. Each frequency (i.e. the number of stops per search type per group) has been calculated as a percentage of the race grouping as well as a percentage of all 2022 traffic stops. Some data labels are excluded due to space constraints. Similarly, the table on page 12 lists the same data displayed in the chart on page 11. The chart again depicts the three levels of interest, with the result of the stop (i.e. warning or citation) instead of the type of search conducted.

Traffic Stops by Race of Driver, Type of Stop, & Search Type: 2022

N = 2037

Native American Other Latino Asian Black White

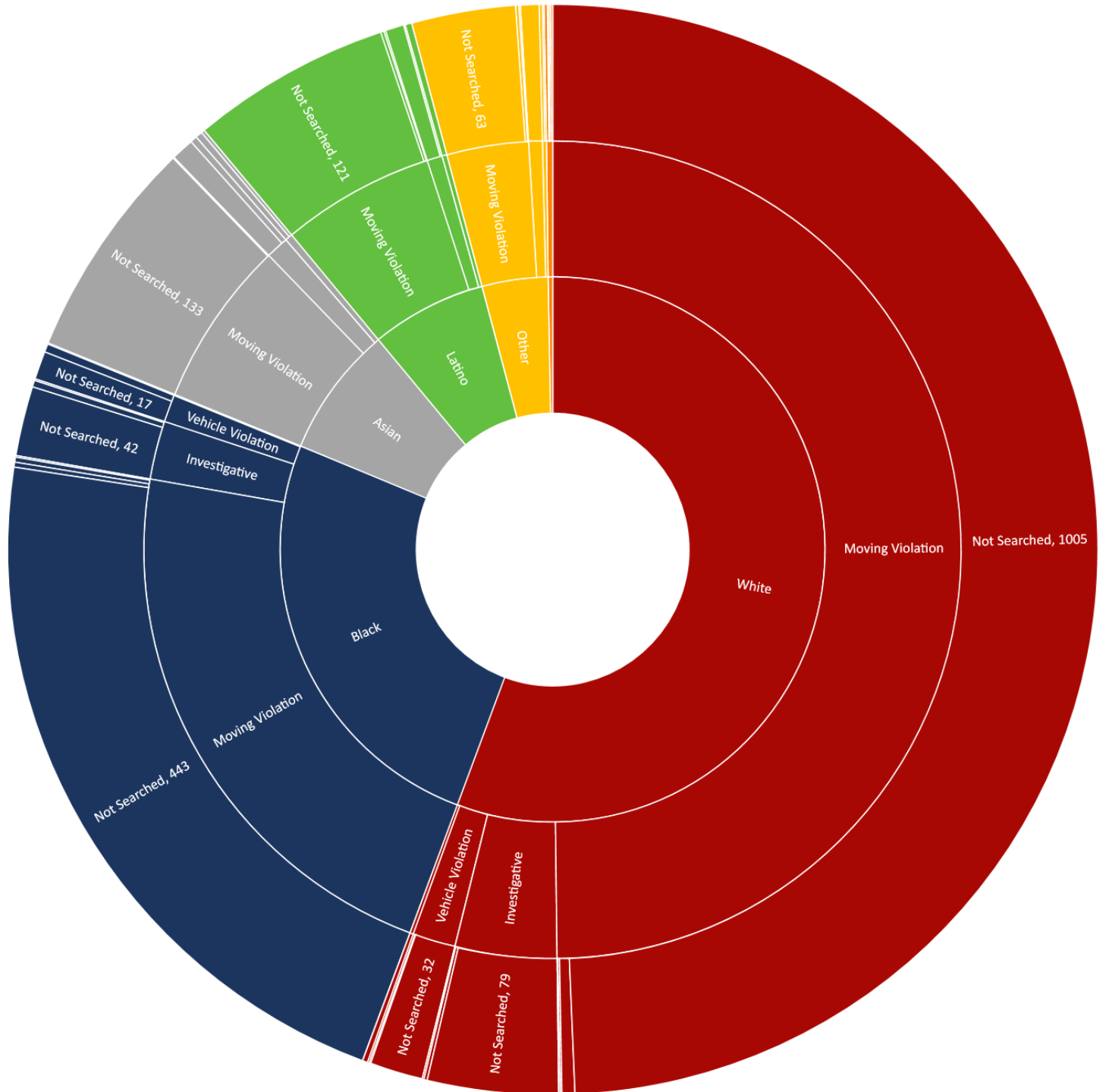


Figure 11 - Traffic Stops by Race of Driver, Type of Stop, & Search Type

Table 2 - Traffic Stops by Race of Driver, Type of Stop, & Search Type

Traffic Stops by Race of Driver, Type of Stop, & Search Type: 2022											
Race	Stop Type	Search	Count	%Group	%Total	Race	Stop Type	Search	Count	%Group	%Total
Asian	Investigative	Person Only	0	0.00%	0.00%	Native American	Investigative	Person Only	0	0.00%	0.00%
Asian	Investigative	Vehicle Only	0	0.00%	0.00%	Native American	Investigative	Vehicle Only	0	0.00%	0.00%
Asian	Investigative	Person & Vehicle	4	2.53%	0.20%	Native American	Investigative	Person & Vehicle	0	0.00%	0.00%
Asian	Investigative	Not Searched	14	8.86%	0.69%	Native American	Investigative	Not Searched	0	0.00%	0.00%
Asian	Vehicle Violation	Person Only	0	0.00%	0.00%	Native American	Vehicle Violation	Person Only	0	0.00%	0.00%
Asian	Vehicle Violation	Vehicle Only	0	0.00%	0.00%	Native American	Vehicle Violation	Vehicle Only	0	0.00%	0.00%
Asian	Vehicle Violation	Person & Vehicle	2	1.27%	0.10%	Native American	Vehicle Violation	Person & Vehicle	0	0.00%	0.00%
Asian	Vehicle Violation	Not Searched	4	2.53%	0.20%	Native American	Vehicle Violation	Not Searched	0	0.00%	0.00%
Asian	Moving Violation	Person Only	0	0.00%	0.00%	Native American	Moving Violation	Person Only	2	40.00%	0.10%
Asian	Moving Violation	Vehicle Only	0	0.00%	0.00%	Native American	Moving Violation	Vehicle Only	1	20.00%	0.05%
Asian	Moving Violation	Person & Vehicle	1	0.63%	0.05%	Native American	Moving Violation	Person & Vehicle	1	20.00%	0.05%
Asian	Moving Violation	Not Searched	133	84.18%	6.53%	Native American	Moving Violation	Not Searched	1	20.00%	0.05%
Black	9-1-1-/Citizen	Not Searched	1	0.19%	0.05%	Other	Investigative	Person Only	0	0.00%	0.00%
Black	Investigative	Person Only	0	0.00%	0.00%	Other	Investigative	Vehicle Only	0	0.00%	0.00%
Black	Investigative	Vehicle Only	1	0.19%	0.05%	Other	Investigative	Person & Vehicle	0	0.00%	0.00%
Black	Investigative	Person & Vehicle	4	0.77%	0.20%	Other	Investigative	Not Searched	11	13.75%	0.54%
Black	Investigative	Not Searched	42	8.08%	2.06%	Other	Vehicle Violation	Person Only	0	0.00%	0.00%
Black	Vehicle Violation	Person Only	0	0.00%	0.00%	Other	Vehicle Violation	Vehicle Only	0	0.00%	0.00%
Black	Vehicle Violation	Vehicle Only	0	0.00%	0.00%	Other	Vehicle Violation	Person & Vehicle	1	1.25%	0.05%
Black	Vehicle Violation	Person & Vehicle	5	0.96%	0.25%	Other	Vehicle Violation	Not Searched	2	2.50%	0.10%
Black	Vehicle Violation	Not Searched	17	3.27%	0.83%	Other	Moving Violation	Person Only	1	1.25%	0.05%
Black	Moving Violation	Person Only	1	0.19%	0.05%	Other	Moving Violation	Vehicle Only	0	0.00%	0.00%
Black	Moving Violation	Vehicle Only	3	0.58%	0.15%	Other	Moving Violation	Person & Vehicle	2	2.50%	0.10%
Black	Moving Violation	Person & Vehicle	3	0.58%	0.15%	Other	Moving Violation	Not Searched	63	78.75%	3.09%
Black	Moving Violation	Not Searched	443	85.19%	21.75%	Latino	Investigative	Person Only	1	0.71%	0.05%
White	9-1-1-/Citizen	Not Searched	3	0.26%	0.15%	Latino	Investigative	Vehicle Only	0	0.00%	0.00%
White	Investigative	Person Only	2	0.18%	0.10%	Latino	Investigative	Person & Vehicle	0	0.00%	0.00%
White	Investigative	Vehicle Only	0	0.00%	0.00%	Latino	Investigative	Not Searched	11	7.86%	0.54%
White	Investigative	Person & Vehicle	1	0.09%	0.05%	Latino	Vehicle Violation	Person Only	0	0.00%	0.00%
White	Investigative	Not Searched	79	6.97%	3.88%	Latino	Vehicle Violation	Vehicle Only	0	0.00%	0.00%
White	Vehicle Violation	Person Only	1	0.09%	0.05%	Latino	Vehicle Violation	Person & Vehicle	0	0.00%	0.00%
White	Vehicle Violation	Vehicle Only	1	0.09%	0.05%	Latino	Vehicle Violation	Not Searched	4	2.86%	0.20%
White	Vehicle Violation	Person & Vehicle	0	0.00%	0.00%	Latino	Moving Violation	Person Only	1	0.71%	0.05%
White	Vehicle Violation	Not Searched	32	2.82%	1.57%	Latino	Moving Violation	Vehicle Only	0	0.00%	0.00%
White	Moving Violation	Person Only	1	0.09%	0.05%	Latino	Moving Violation	Person & Vehicle	2	1.43%	0.10%
White	Moving Violation	Vehicle Only	1	0.09%	0.05%	Latino	Moving Violation	Not Searched	121	86.43%	5.94%
White	Moving Violation	Person & Vehicle	8	0.71%	0.39%						
White	Moving Violation	Not Searched	1005	88.62%	49.34%						

RESULT OF THE STOP

Drivers not matching any other group were cited at the lowest rate (3.8%, n=80), followed by Asian drivers (7.0%, n=158), Black drivers (9.0%, n=520), Latino drivers (9.3%, n=140), White drivers (9.6%, n=1134) and Native American drivers (40.0%, n=5).

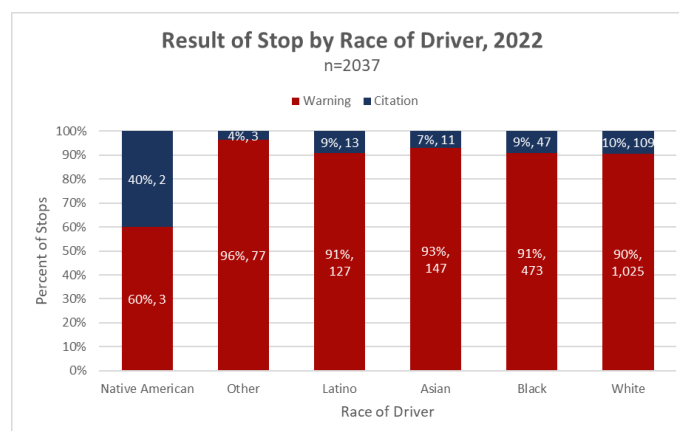


Figure 12 - Result of Stop by Race of Driver

Traffic Stops by Race of Driver, Type of Stop, & Result: 2022

n=2037

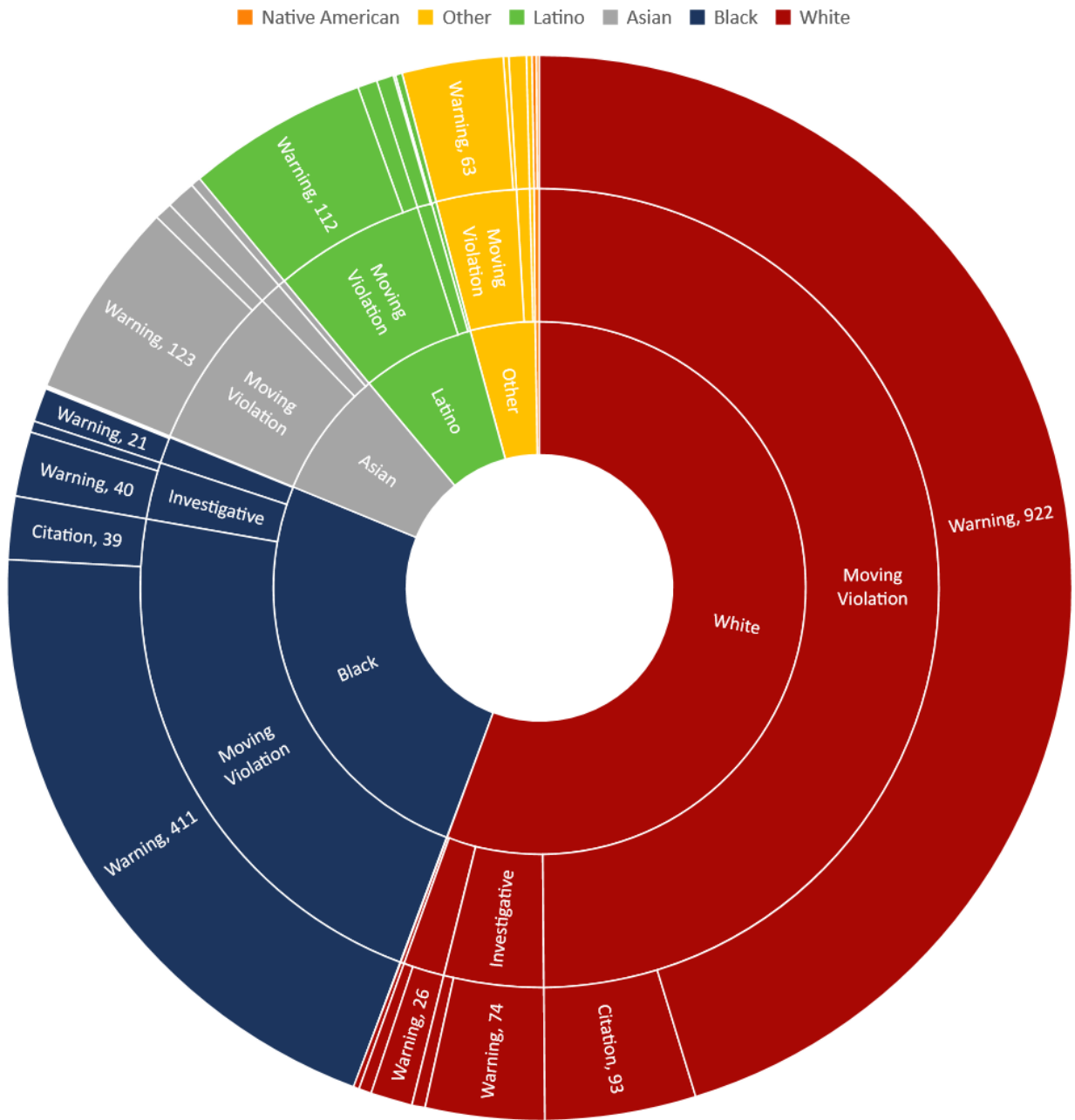


Figure 13 - Traffic Stops by Race of Driver, Type of Stop, & Result of Stop

Table 3 - Traffic Stops by Race of Driver, Type of Stop, & Result of Stop

Traffic Stops by Race of Driver, Type of Stop, & Result: 2022					
Race	Stop Type	Result	Count	%Group	%Total
Native American	Investigative	Citation	0	0.00%	0.00%
		Warning	0	0.00%	0.00%
	Vehicle Violation	Citation	0	0.00%	0.00%
		Warning	0	0.00%	0.00%
	Moving Violation	Citation	2	40.00%	0.10%
		Warning	3	60.00%	0.15%
Other	Investigative	Citation	0	0.00%	0.00%
		Warning	11	13.75%	0.54%
	Vehicle Violation	Citation	0	0.00%	0.00%
		Warning	3	3.75%	0.15%
	Moving Violation	Citation	3	3.75%	0.15%
		Warning	63	78.75%	3.09%
Latino	Investigative	Citation	1	0.71%	0.05%
		Warning	11	7.86%	0.54%
	Vehicle Violation	Citation	0	0.00%	0.00%
		Warning	4	2.86%	0.20%
	Moving Violation	Citation	12	8.57%	0.59%
		Warning	112	80.00%	5.50%
Asian	Investigative	Citation	0	0.00%	0.00%
		Warning	18	11.39%	0.88%
	Vehicle Violation	Citation	0	0.00%	0.00%
		Warning	6	3.80%	0.29%
	Moving Violation	Citation	11	6.96%	0.54%
		Warning	123	77.85%	6.04%
Black	9-1-1/Citizen	Warning	1	0.19%	0.05%
		Citation	7	1.35%	0.34%
	Investigative	Warning	40	7.69%	1.96%
		Citation	1	0.19%	0.05%
	Vehicle Violation	Warning	21	4.04%	1.03%
		Citation	39	7.50%	1.91%
White	Moving Violation	Warning	411	79.04%	20.18%
		Citation	3	0.26%	0.15%
	Investigative	Citation	8	0.71%	0.39%
		Warning	74	6.53%	3.63%
	Vehicle Violation	Citation	8	0.71%	0.39%
		Warning	26	2.29%	1.28%
White	Moving Violation	Citation	93	8.20%	4.57%
		Warning	922	81.31%	45.26%

ANNUAL TRENDS

The following sections summarize year-to-year traffic stop trends. The first section shows general trends in the number of stops conducted each year, the reason for initiating the stop, searches during stops, and driver demographics. The second section focuses on the outcome of the stop—whether the driver was warned or cited—and breaks down the outcome across gender of the driver and race of the driver. Due to the variance in the number of traffic stops per year, most data are presented as percentages rather than raw values. This allows for better comparison between years.

GENERAL ANNUAL TRENDS

The number of traffic stops conducted each year has varied considerably. Multiple factors affect the number of stops initiated including staffing levels, call loads, frequency, crime trends, available grant funding for traffic-related details, and the number of commuters passing through the city.

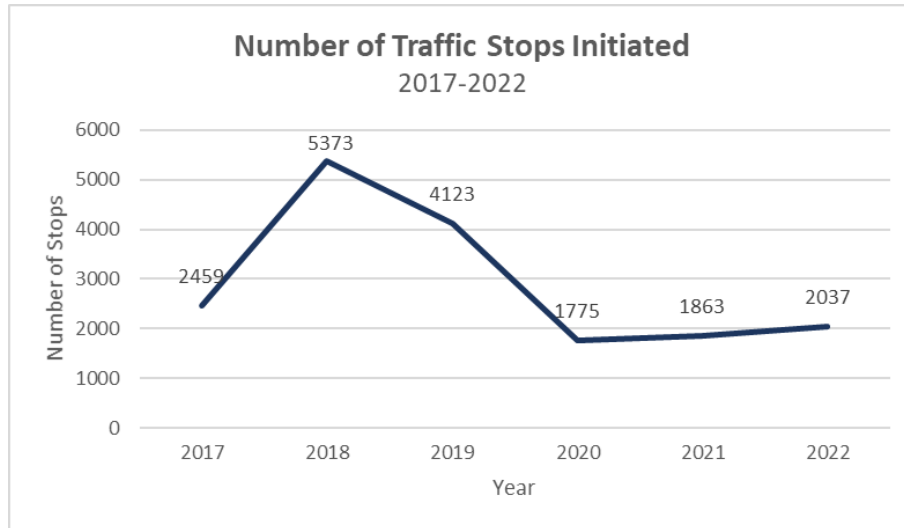


Figure 14 - Annual Trends: Number of Traffic Stops Initiated

From 2017 through 2020, the proportion of stops made for moving violations declined while the proportion of stops made for vehicle violations has increased. In 2021, the number of moving violation stops rebounded with a corresponding dip in vehicle violation stops; this trend continued for 2022

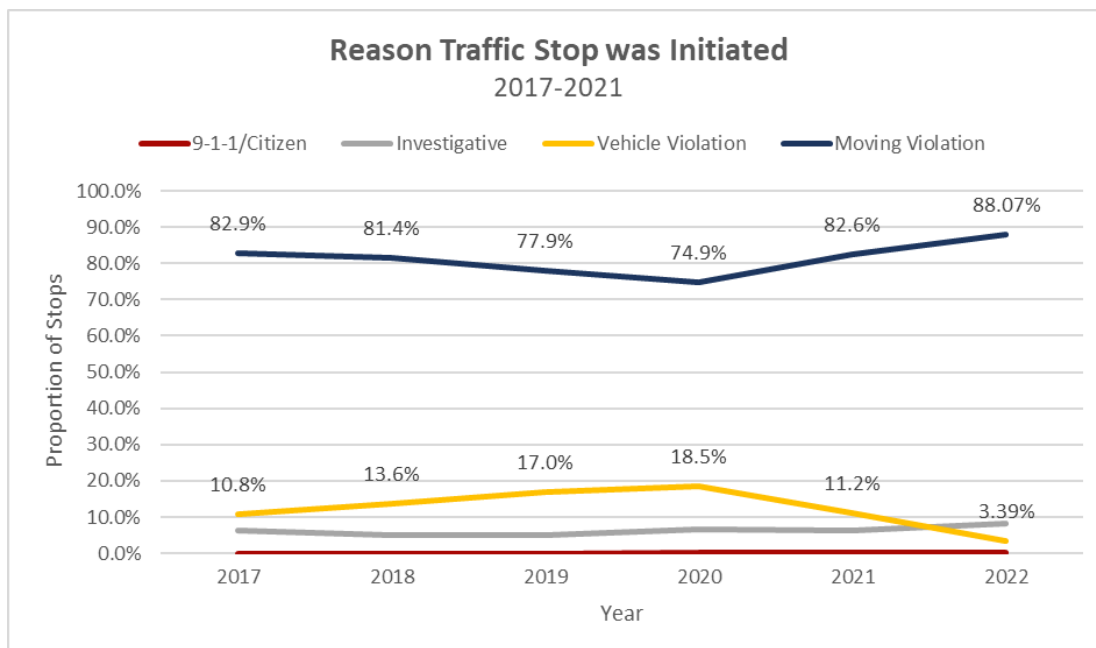


Figure 15 - Annual Trends: Reason Traffic Stop was Initiated

Search rates have remained constant since 2017. The vast majority of traffic stops do not include a search of either the vehicle or person.



Figure 16 - Annual Trends: Vehicle & Person Searches during Traffic Stops

Consistently, more drivers stopped are male. In December 2020, the “Unknown” category was instituted and transitioned to “Non-Binary” in February of 2021.

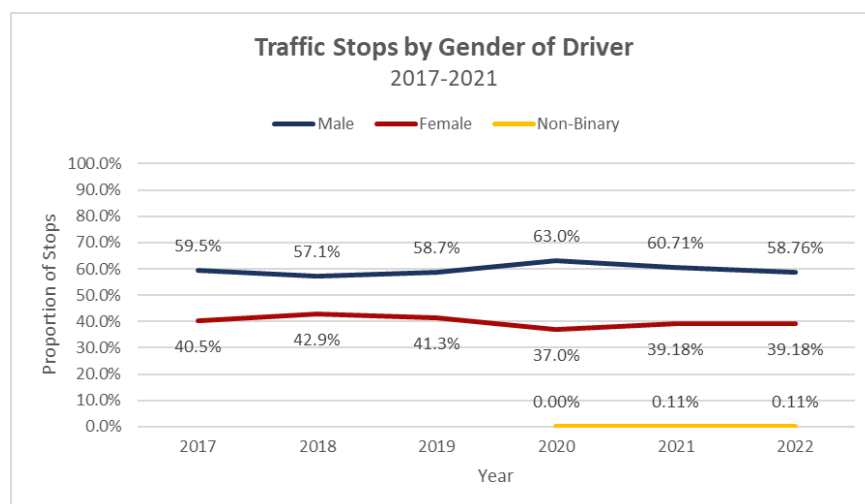


Figure 17 - Annual Trends: Traffic stops by Gender of Driver

As of 2022, the proportion of White, Asian, and drivers not fitting any other race category has increased. The proportion of Black and Native American drivers stopped has decreased over the same timeframe. Stops of Latino drivers have remained constant.

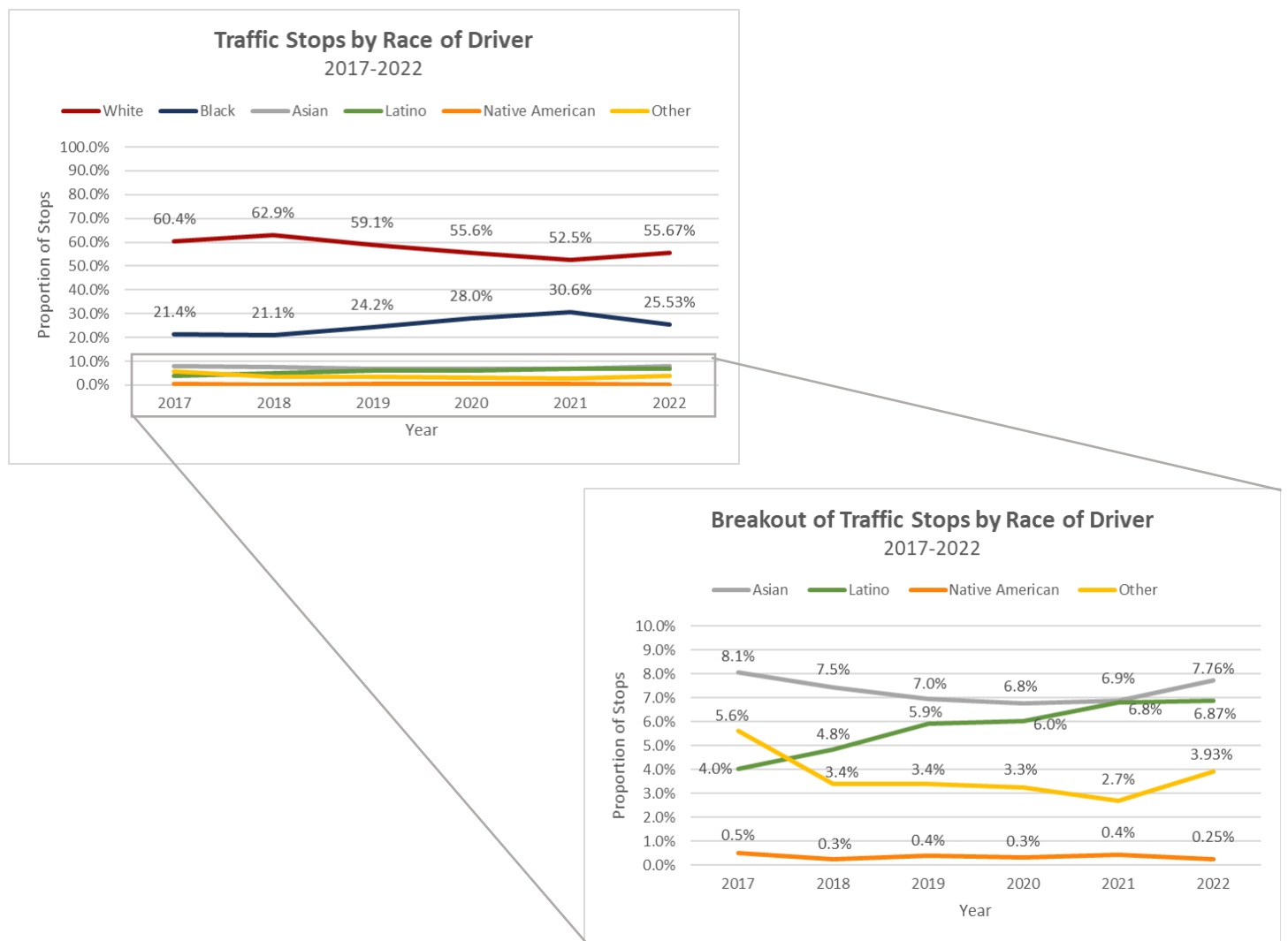


Figure 18 - Annual Trends: Traffic Stops by Race of Driver

RESULT OF THE STOP

Across all traffic stops, the proportion of citations issued as a result of the stop declined from 2017 to 2018 and has remained relatively constant since then. In 2022, the rates of warnings issued took a sharp increase with a subsequent drop in citations.

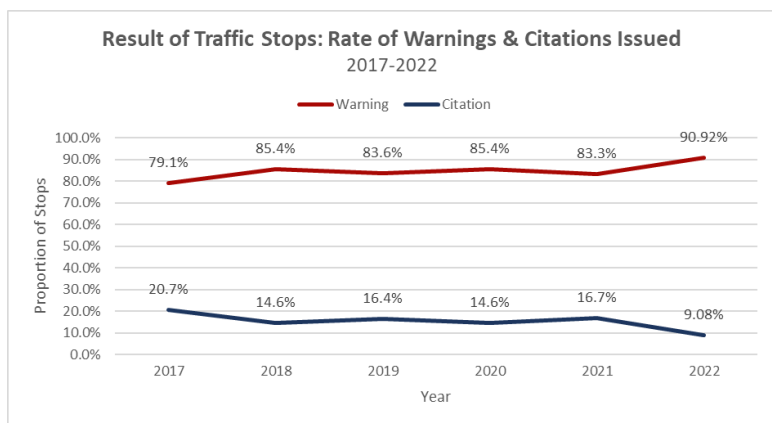


Figure 19 - Annual Trends: Result of the Stop

The following chart depicts the proportion, by year, of warnings and citations issued to male and female drivers. The lighter portion of each bar represents the proportion of warnings issued and the darker portion represents the proportion of citations issued in a given year. The data are clustered based on the gender of the driver. Because of the low number, the Unknown/Non-Binary category is excluded from this chart.

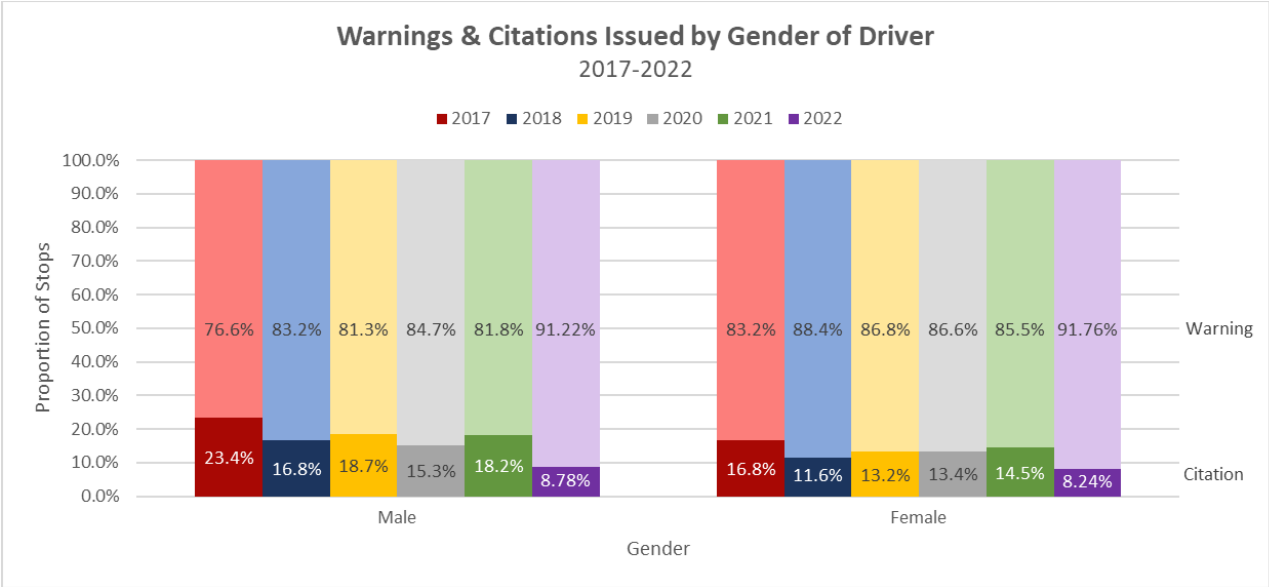


Figure 20 - Annual Trends: Warnings & Citations Issued by Gender of Driver

Similar to above, the below chart depicts the proportion, by year, of warnings and citations issued to drivers of each race. The lighter portion of each bar represents the proportion of warnings issued and the darker portion represents the proportion of citations issued in a given year. The data are clustered based on the race of the driver.

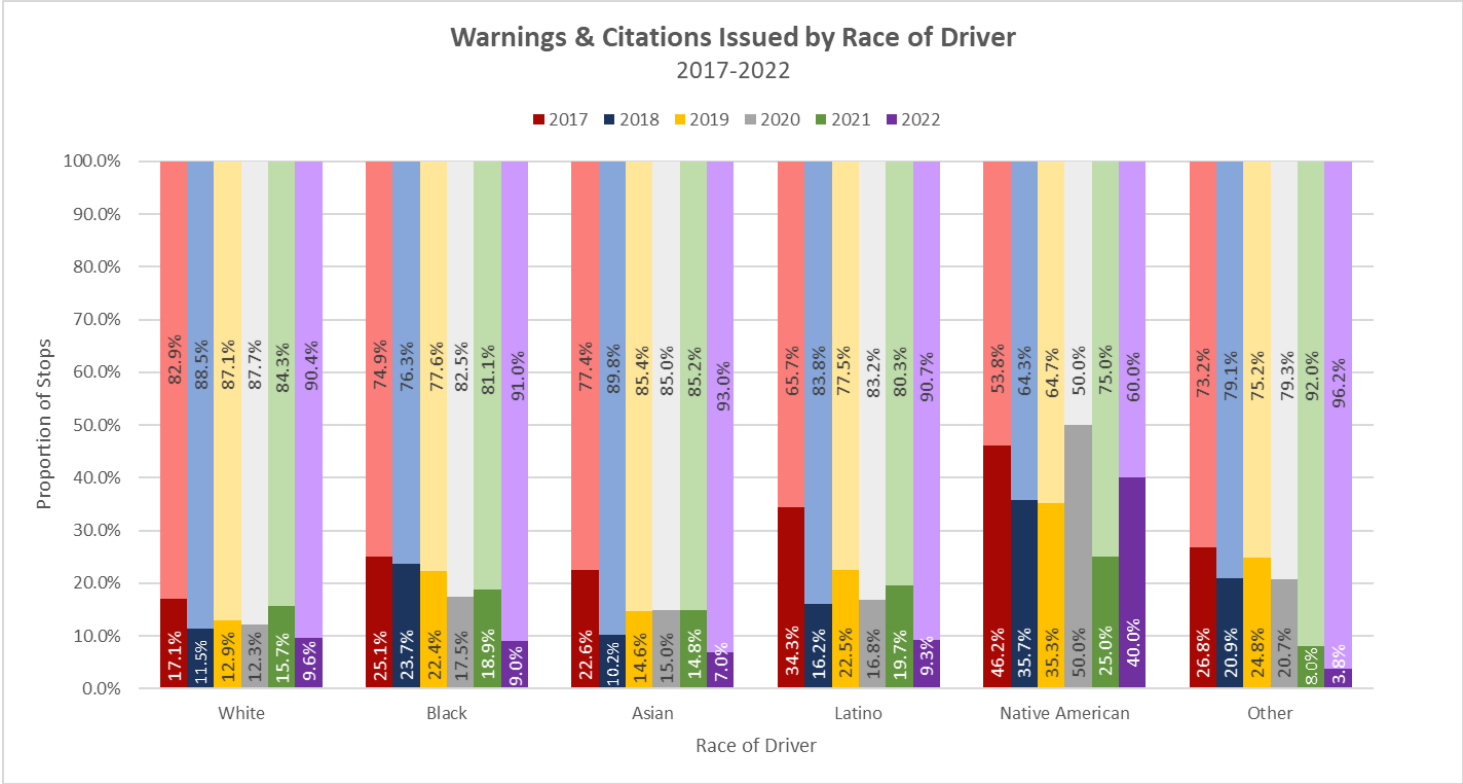


Figure 21 - Annual Trends: Warnings & Citations Issued by Race of Driver

TRAFFIC STOPS BY TIME OF DAY

The table below displays the distribution of traffic stops throughout the course of a day across a week. The darker the shading of a cell, the more traffic stops were conducted on that day and time.

Table 4 - Traffic Stops by Time of Day & Day of the Week

Time of Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
12:00-12:59 AM	6	10	6	9	3	11	10	55
1:00-1:59 AM	7	6	12	6	2	10	8	51
2:00-2:59 AM	10	8	4	5	4	5	3	39
3:00-3:59 AM	5	5	3	0	5	5	5	28
4:00-4:59 AM	0	3	4	1	0	2	3	13
5:00-5:59 AM	0	1	1	2	1	1	0	6
6:00-6:59 AM	5	4	3	0	0	1	1	14
7:00-7:59 AM	15	24	25	0	6	7	6	83
8:00-8:59 AM	14	27	22	11	5	12	12	103
9:00-9:59 AM	19	27	13	8	12	14	19	112
10:00-10:59 AM	3	12	30	17	20	20	8	110
11:00-11:59 AM	18	21	12	20	20	22	13	126
12:00-12:59 PM	18	27	13	11	22	7	10	108
1:00-1:59 PM	7	24	21	17	15	13	24	121
2:00-2:59 PM	10	19	31	15	19	13	12	119
3:00-3:59 PM	16	12	20	8	12	14	14	96
4:00-4:59 PM	15	17	13	10	19	11	10	95
5:00-5:59 PM	10	8	12	6	9	11	9	65
6:00-6:59 PM	9	6	12	9	28	12	10	86
7:00-7:59 PM	14	9	14	26	34	33	19	149
8:00-8:59 PM	9	15	8	22	40	21	20	135
9:00-9:59 PM	24	15	13	10	15	19	20	116
10:00-10:59 PM	15	18	15	13	20	11	17	109
11:00-11:59 PM	12	16	13	6	20	14	17	98
Total	261	334	320	232	331	289	270	2037

TRAFFIC STOPS BY LOCATION

The first map below displays the locations of traffic stops initiated by Roseville officers for moving violations in 2022. The higher the bar in a certain area, the greater the number of traffic stops conducted in that area. In some cases, the violation location may vary slightly from the location of the actual traffic stop. The second map shows the location of motor vehicle crashes in Roseville's jurisdiction during 2022. It does not include the crashes where State Patrol was the responding agency (i.e. Highway 280, I-35W, Highway 36).

Locations of Traffic Stops for Moving Violations, 2022

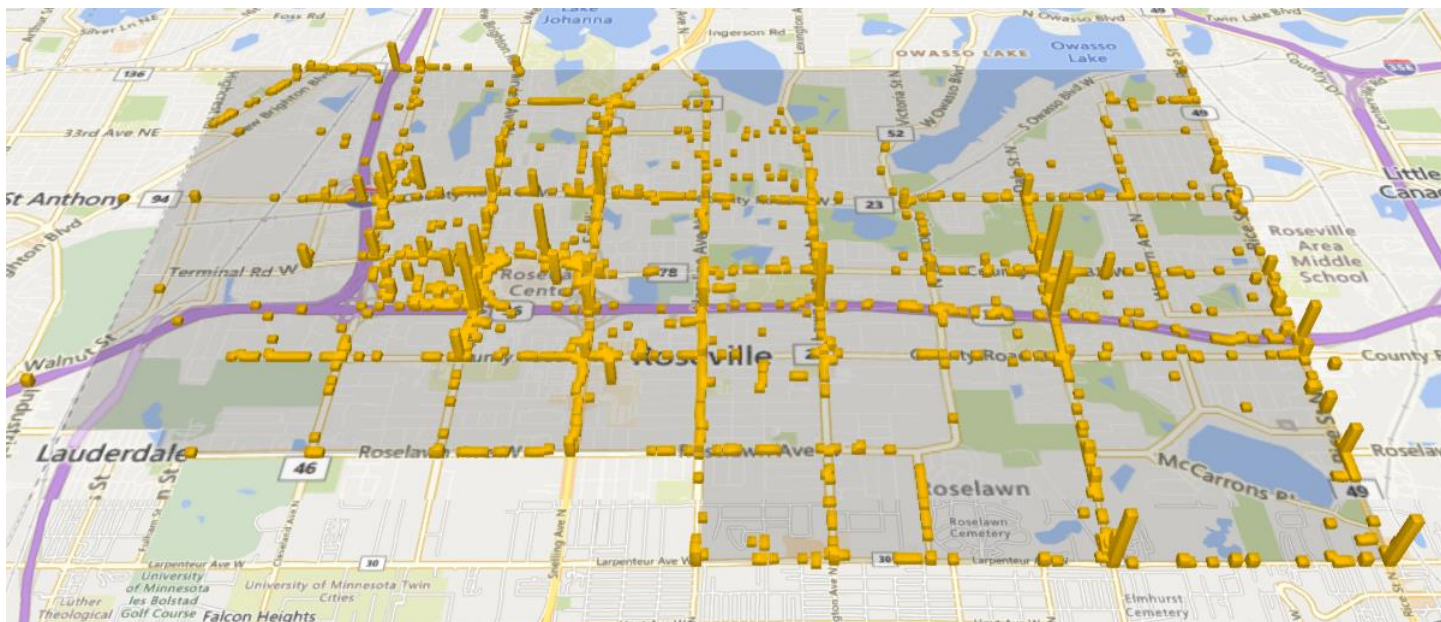


Figure 22 - Locations of Traffic Stops for Moving Violations

Locations of Motor Vehicle Crashes, 2022

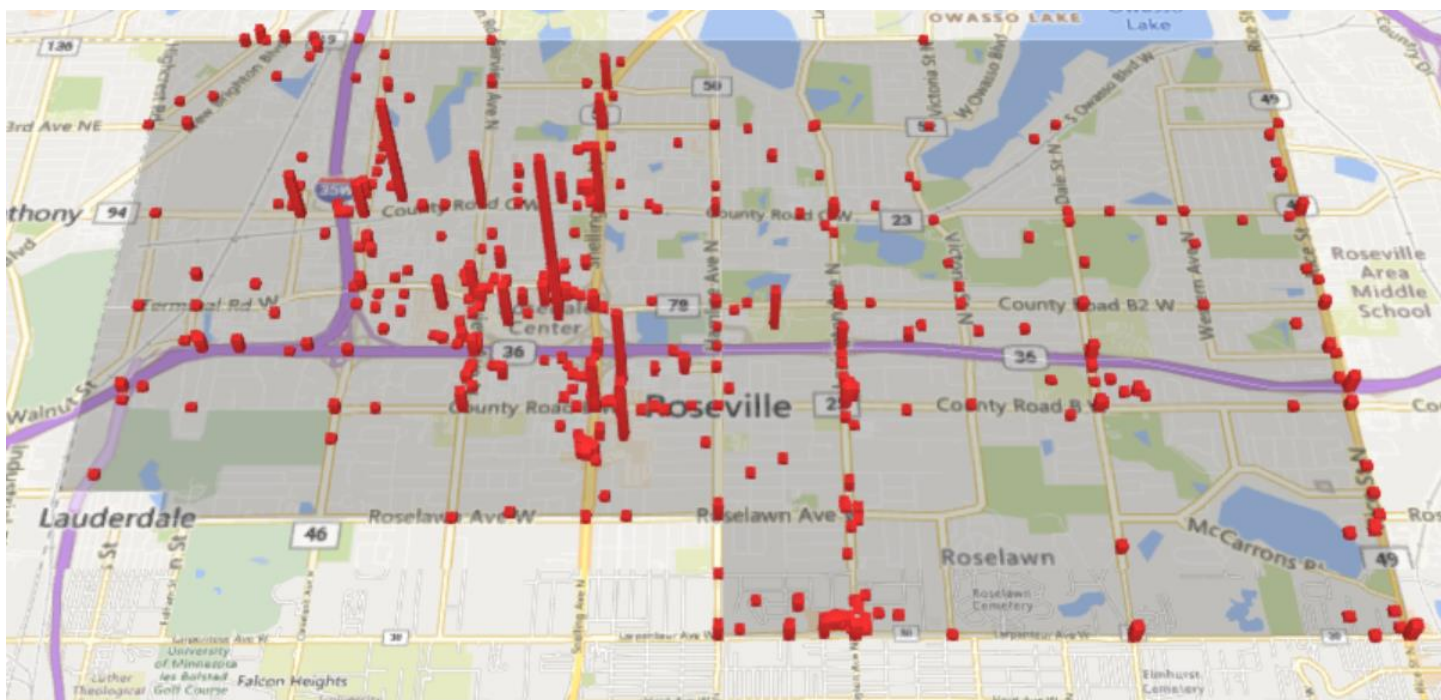


Figure 23 - Locations of Motor Vehicle Crashes

TRAFFIC PRIORITIES

One of the top priorities of the Roseville Police Department is to ensure traffic enforcement serves roadway safety by focusing on driving conduct that contributes to motor vehicle collisions. Moving violations that create a safety risk for other drivers, bicyclists, and pedestrians are also the most frequently voiced concerns of residents. Consistently, over 80% of traffic stops in Roseville have been for moving violations each year.

In 2021, the Roseville Police Department conducted a complete review of all department policies and procedures. We recognized that traffic enforcement based solely on equipment violations disproportionately impacts communities of color and undermines law enforcement's legitimacy. As a result, we [released an updated traffic policy](#) on August 1, 2021, better reflecting Roseville's values and commitment to racial equity. In creating our new policy, we relied on input from our Multicultural Advisory Committee and other diverse voices of our community. Under the new policy, absent other factors, the Roseville Police Department will not enforce equipment violations, expired registrations, or other non-moving violations that do not create a public safety concern or a dangerous condition.

Since 2017, [mobile speed boards](#) have been utilized to remind motorists of their speed in an effort to improve safety in Roseville neighborhoods. The department currently deploys five boards, rotating locations based on citizen input and officer observations. In 2022, speed boards were deployed fifty times across the city for a combined total of 1,188 deployment days.

On January 12, 2023 the Roseville Police Department launched a new program to reduce the number of vehicle violation stops. Instead of initiating a traffic stop when an officer notices a vehicle violation, the violation is documented and the department mails a letter to the driver notifying them of the violation and providing them with a waiver to amend it. In the first quarter of 2023, the department has sent out 547 letters. In addition to alerting owners of the violation, information is also provided on obtaining a Lights On voucher to fix the equipment violation or information on obtaining financial assistance to renew their tabs. The warning letter pilot program is possible through support from the Ramsey County Attorney's Office, Lights On, Diversion Solutions and the Saint Paul and Minnesota Foundation.

In 2023, the Roseville Police Department's traffic enforcement efforts will continue to focus on roadway safety, with an emphasis on curbing distracted driving, excessive speeding, street racing/exhibition driving, and impaired driving. We will continue our collaboration with the Ramsey County Traffic Safety Initiative, which is a grant funded initiative to improve safety on Minnesota's roadways.

LOOKING FORWARD

The Roseville Police Department has been committed to raising awareness about implicit bias in an on-going effort to provide fair and impartial service to the community. This priority is explicitly noted in multiple department policies. Both on paper and in practice, RPD strives to provide unbiased policing and enforce laws in an equitable manner.

One way the Roseville Police Department works to provide unbiased policing is through ongoing implicit bias training for all department staff. Minnesota statute [626.8469](#) which requires law enforcement agencies to provide in-service training in "recognizing and valuing community diversity and cultural differences to include implicit bias". Each year, all Roseville officers and staff are required to complete implicit bias and diversity training.

In the wake of George Floyd's death in Minneapolis, RPD formed the [Multicultural Advisory Committee](#) (MAC) in the summer of 2020. The goal of the committee is to bring diverse community representatives together to discuss community-policing concerns, strategize ways for RPD to best engage with the community, and share information about police practices and procedures. The MAC will also review traffic reports annually and provide perspective and feedback on reporting practices.

Traffic stop data continues to be helpful in having informed conversations with the Roseville community about racial disparities in the criminal justice system and providing a better understanding of how traffic laws are being enforced in Roseville and Ramsey County. The Roseville Police Department will continue to take a comprehensive look at the data annually to see what conclusions can be drawn from the information collected and use those conclusions to ensure we provide fair and impartial service to the community.

The Roseville Police Department welcomes [feedback](#) from citizens regarding the results of the traffic stop initiative, as well as any concerns or suggestions about how the police department can improve overall service to the community.

Note: Some percentages may not appear to add up to exactly 100.00% due to displayed rounding.

Reason Traffic Stop was Initiated

	2017		2018		2019		2020		2021		2022	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
9-1-1 / Citizen	0	0.00%	1	0.02%	1	0.02%	1	0.06%	1	0.05%	4	0.20%
Investigative	156	6.34%	269	5.01%	209	5.07%	117	6.59%	115	6.17%	170	8.35%
Vehicle Violation	265	10.78%	729	13.57%	702	17.03%	328	18.48%	209	11.22%	69	3.39%
Moving Violation	2038	82.88%	4374	81.41%	3211	77.88%	1329	74.87%	1538	82.56%	1794	88.07%
Grand Total	2459	100.00%	5373	100.00%	4123	100.00%	1775	100.00%	1863	100.00%	2037	100.00%

Vehicle & Person Searches during Traffic Stops

	2017									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Investigative	4	0.16%	3	0.12%	12	0.49%	137	5.57%	156	6.34%
Vehicle Violation	1	0.04%	0	0.00%	7	0.28%	257	10.45%	265	10.78%
Moving Violation	10	0.41%	3	0.12%	29	1.18%	1996	81.17%	2038	82.88%
Grand Total	15	0.61%	6	0.24%	48	1.95%	2390	97.19%	2459	100.00%

	2018									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	1	0.02%	1	0.02%
Investigative	9	0.17%	3	0.06%	26	0.48%	231	4.30%	269	5.01%
Vehicle Violation	8	0.15%	2	0.04%	13	0.24%	706	13.14%	729	13.57%
Moving Violation	17	0.32%	10	0.19%	54	1.01%	4293	79.90%	4374	81.41%
Grand Total	34	0.63%	15	0.28%	93	1.73%	5231	97.36%	5373	100.00%

	2019									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	1	0.02%	1	0.02%
Investigative	3	0.07%	8	0.19%	27	0.65%	171	4.15%	209	5.07%
Vehicle Violation	3	0.07%	13	0.32%	22	0.53%	664	16.10%	702	17.03%
Moving Violation	10	0.24%	30	0.73%	70	1.70%	3101	75.21%	3211	77.88%
Grand Total	16	0.39%	51	1.24%	119	2.89%	3937	95.49%	4123	100.00%

	2020									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	1	0.06%	1	0.06%
Investigative	1	0.06%	4	0.23%	9	0.51%	103	5.80%	117	6.59%
Vehicle Violation	0	0.00%	3	0.17%	10	0.56%	315	17.75%	328	18.48%
Moving Violation	6	0.34%	0	0.00%	27	1.52%	1296	73.01%	1329	74.87%
Grand Total	7	0.39%	7	0.39%	46	2.59%	1715	96.62%	1775	100.00%

	2021									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	1	0.05%	1	0.05%
Investigative	2	0.11%	3	0.16%	8	0.43%	102	5.48%	115	6017.00%
Vehicle Violation	3	0.16%	1	0.05%	5	0.27%	200	10.74%	209	11.22%
Moving Violation	2	0.11%	2	0.11%	19	1.02%	1515	81.32%	1538	82.56%
Grand Total	7	0.38%	6	0.32%	32	1.72%	1818	97.59%	1863	6110.83%

	2022									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	4	0.20%	4	0.20%
Investigative	1	0.05%	3	0.15%	9	0.44%	157	7.71%	170	8.35%
Vehicle Violation	1	0.05%	1	0.05%	8	0.39%	59	2.90%	69	3.39%
Moving Violation	5	0.25%	6	0.29%	17	0.83%	1766	86.70%	1794	88.07%
Grand Total	7	0.34%	10	0.49%	34	1.67%	1986	97.50%	2037	100.00%

Citations & Warnings Issued by Stop Type

	2017							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Investigative	109	4.43%	42	1.71%	5	0.20%	156	6.34%
Vehicle Violation	212	8.62%	52	2.11%	1	0.04%	265	10.78%
Moving Violation	1623	66.00%	414	16.84%	1	0.04%	2038	82.88%
Grand Total	1944	79.06%	508	20.66%	7	0.28%	2459	100.00%

	2018							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	1	0.02%	0	0.00%	0	0.00%	1	0.02%
Investigative	196	3.65%	73	1.36%	0	0.00%	269	5.01%
Vehicle Violation	636	11.84%	93	1.73%	0	0.00%	729	13.57%
Moving Violation	3757	69.92%	617	11.48%	0	0.00%	4374	81.41%
Grand Total	4590	85.43%	783	14.57%	0	0.00%	5373	100.00%

	2019							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	1	0.02%	0	0.00%	0	0.00%	1	0.02%
Investigative	158	3.83%	51	1.24%	0	0.00%	209	5.07%
Vehicle Violation	576	13.97%	126	3.06%	0	0.00%	702	17.03%
Moving Violation	2711	65.75%	500	12.13%	0	0.00%	3211	77.88%
Grand Total	3446	83.58%	677	16.42%	0	0.00%	4123	100.00%

	2020							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	1	0.06%	0	0.00%	0	0.00%	1	0.06%
Investigative	96	5.41%	21	1.18%	0	0.00%	117	6.59%
Vehicle Violation	283	15.94%	45	2.54%	0	0.00%	328	18.48%
Moving Violation	1136	64.00%	193	10.87%	0	0.00%	1329	74.87%
Grand Total	1516	85.41%	259	14.59%	0	0.00%	1775	100.00%

	2021							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	1	0.05%	0	0.00%	0	0.00%	1	0.05%
Investigative	94	5.05%	21	1.13%	0	0.00%	115	6.17%
Vehicle Violation	174	9.34%	35	1.88%	0	0.00%	209	11.22%
Moving Violation	1282	68.81%	256	13.74%	0	0.00%	1538	82.56%
Grand Total	1551	83.25%	312	16.75%	0	0.00%	1863	100.00%

	2022							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	4	0.20%	0	0.00%	0	0.00%	4	0.20%
Investigative	154	7.56%	16	0.79%	0	0.00%	170	8.35%
Vehicle Violation	60	2.95%	9	0.44%	0	0.00%	69	3.39%
Moving Violation	1634	80.22%	160	7.85%	0	0.00%	1794	88.07%
Grand Total	1852	90.92%	185	9.08%	0	0.00%	2037	100.00%

Traffic Stops by Gender of Driver

	2017		2018		2019		2020		2021		2022	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Male	1464	59.54%	3069	57.12%	2422	58.74%	1119	63.04%	1131	60.71%	1197	58.76%
Female	995	40.46%	2304	42.88%	1701	41.26%	656	36.96%	730	39.18%	837	41.09%
Unknown/Non-Binary							0	0.00%	2	0.11%	3	0.15%
Total	2459	100.00%	5373	100.00%	4123	100.00%	1775	100.00%	1863	100.00%	2037	100.00%

Traffic Stops by Type of Stop & Gender of Driver

	2017					
	Female		Male		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%
Investigative	56	2.28%	100	4.07%	156	6.34%
Vehicle Violation	106	4.31%	159	6.47%	265	10.78%
Moving Violation	833	33.88%	1205	49.00%	2038	82.88%
Grand Total	995	40.46%	1464	59.54%	2459	100.00%

	2018					
	Female		Male		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	1	0.02%	1	0.02%
Investigative	89	1.66%	180	3.35%	269	5.01%
Moving Violation	316	5.88%	413	7.69%	729	13.57%
Vehicle Violation	1899	35.34%	2475	46.06%	4374	81.41%
Grand Total	2304	42.88%	3069	57.12%	5373	100.00%

	2019					
	Female		Male		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	1	0.02%	1	0.02%
Investigative	58	1.41%	151	3.66%	209	5.07%
Moving Violation	289	7.01%	413	10.02%	702	17.03%
Vehicle Violation	1354	32.84%	1857	45.04%	3211	77.88%
Grand Total	1701	41.26%	2422	58.74%	4123	100.00%

	2020							
	Female		Male		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	1	0.06%	0	0.00%	1	0.06%
Investigative	35	1.97%	82	4.62%	0	0.00%	117	6.59%
Vehicle Violation	123	6.93%	205	11.55%	0	0.00%	328	18.48%
Moving Violation	498	28.06%	831	46.82%	0	0.00%	1329	74.87%
Grand Total	656	36.96%	1119	63.04%	0	0.00%	1775	100.00%

	2021							
	Female		Male		Non-Binary		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	1	0.05%	0	0.00%	0	0.00%	1	0.05%
Investigative	38	2.04%	75	4.03%	2	0.11%	115	6.17%
Vehicle Violation	71	3.81%	138	7.41%	0	0.00%	209	11.22%
Moving Violation	620	33.28%	918	49.28%	0	0.00%	1538	82.56%
Grand Total	730	39.18%	1131	60.71%	2	0.11%	1863	100.00%

	2022							
	Female		Male		Non-Binary		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	4	0.20%	0	0.00%	4	0.20%
Investigative	47	2.31%	123	6.04%	0	0.00%	170	8.35%
Vehicle Violation	19	0.93%	50	2.45%	0	0.00%	69	3.39%
Moving Violation	771	37.85%	1020	50.07%	3	0.15%	1794	88.07%
Grand Total	837	41.09%	1197	58.76%	3	0.15%	2037	100.00%

Vehicle & Person Searches by Gender of Driver

	2017					
	Female		Male		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Vehicle Only	5	0.20%	10	0.41%	15	0.61%
Person Only	1	0.04%	5	0.20%	6	0.24%
Vehicle & Person	15	0.61%	33	1.34%	48	1.95%
Not Searched	974	39.61%	1416	57.58%	2390	97.19%
Grand Total	995	40.46%	1464	59.54%	2459	100.00%

	2018					
	Female		Male		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Vehicle Only	16	0.30%	18	0.34%	34	0.63%
Person Only	2	0.04%	13	0.24%	15	0.28%
Vehicle & Person	16	0.30%	77	1.43%	93	1.73%
Not Searched	2270	42.25%	2961	55.11%	5231	97.36%
Grand Total	2304	42.88%	3069	57.12%	5373	100.00%

	2019					
	Female		Male		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Vehicle Only	10	0.24%	41	0.99%	51	1.24%
Person Only	5	0.12%	11	0.27%	16	0.39%
Vehicle & Person	34	0.82%	85	2.06%	119	2.89%
Not Searched	1652	40.07%	2285	55.42%	3937	95.49%
Grand Total	1701	41.26%	2422	58.74%	4123	100.00%

	2020							
	Female		Male		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Vehicle Only	2	0.11%	5	0.28%	0	0.00%	7	0.39%
Person Only	0	0.00%	7	0.39%	0	0.00%	7	0.39%
Vehicle & Person	5	0.28%	41	2.31%	0	0.00%	46	2.59%
Not Searched	649	36.56%	1066	60.06%	0	0.00%	1715	96.62%
Grand Total	656	36.96%	1119	63.04%	0	0.00%	1775	100.00%

	2021							
	Female		Male		Non-Binary		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Vehicle Only	2	0.11%	5	0.27%	0	0.00%	7	0.38%
Person Only	4	0.21%	2	0.11%	0	0.00%	6	0.32%
Vehicle & Person	5	0.27%	27	1.45%	0	0.00%	32	1.72%
Not Searched	719	38.59%	1097	58.88%	2	0.11%	1818	97.58%
Grand Total	730	39.18%	1131	60.71%	2	0.11%	1863	100.00%

	2022							
	Female		Male		Non-Binary		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Vehicle Only	3	0.15%	4	0.20%	0	0.00%	7	0.34%
Person Only	0	0.00%	10	0.49%	0	0.00%	10	0.49%
Vehicle & Person	7	0.34%	27	1.33%	0	0.00%	34	1.67%
Not Searched	827	40.60%	1156	56.75%	3	0.15%	1986	97.50%
Grand Total	837	41.09%	1197	58.76%	3	0.15%	2037	100.00%

Result of Stop by Type of Stop & Gender of Driver

	2017											
	Female				Male				Total			
	Warning		Citation		Warning		Citation		Warning		Citation	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Investigative	38	1.55%	17	0.69%	71	2.90%	25	1.02%	109	4.45%	42	1.71%
Vehicle Violation	88	3.59%	18	0.73%	124	5.06%	34	1.39%	212	8.65%	52	2.12%
Moving Violation	701	28.59%	132	5.38%	922	37.60%	282	11.50%	1623	66.19%	414	16.88%
Grand Total	827	33.73%	167	6.81%	1117	45.55%	341	13.91%	1944	79.28%	508	20.72%

	2018											
	Female				Male				Total			
	Warning		Citation		Warning		Citation		Warning		Citation	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	1	0.02%	0	0.00%	1	0.02%	0	0.00%
Investigative	65	1.21%	24	0.45%	131	2.44%	49	0.91%	196	3.65%	73	1.36%
Vehicle Violation	283	5.27%	33	0.61%	353	6.57%	60	1.12%	636	11.84%	93	1.73%
Moving Violation	1688	31.42%	211	3.93%	2069	38.51%	406	7.56%	3757	69.92%	617	11.48%
Grand Total	2036	37.89%	268	4.99%	2554	47.53%	515	9.58%	4590	85.43%	783	14.57%

	2019											
	Female				Male				Total			
	Warning		Citation		Warning		Citation		Warning		Citation	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	1	0.02%	0	0.00%	1	0.02%	0	0.00%
Investigative	42	1.02%	16	0.39%	116	2.81%	35	0.85%	158	3.83%	51	1.24%
Vehicle Violation	247	5.99%	42	1.02%	329	7.98%	84	2.04%	576	13.97%	126	3.06%
Moving Violation	1187	28.79%	167	4.05%	1524	36.96%	333	8.08%	2711	65.75%	500	12.13%
Grand Total	1476	35.80%	225	5.46%	1970	47.78%	452	10.96%	3446	83.58%	677	16.42%

(Note: n=2452. "Unknown" data excluded from table due to space constraints. Data are as follows: Female Investigative Stop, 1; Male Investigative Stop, 4; Male Vehicle Violation, 1; Male Moving Violation, 1.)

Result of Stop by Type of Stop & Gender of Driver (cont.)

	2020															
	Female				Male				Non-Binary				Total			
	Warning		Citation		Warning		Citation		Warning		Citation		Warning		Citation	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	1	0.06%	0	0.00%	0	0.00%	0	0.00%	1	0.06%	0	0.00%
Investigative	28	1.58%	7	0.39%	68	3.83%	14	0.79%	0	0.00%	0	0.00%	96	5.41%	21	1.18%
Vehicle Violation	106	5.97%	17	0.96%	177	9.97%	28	1.58%	0	0.00%	0	0.00%	283	15.94%	45	2.54%
Moving Violation	434	24.45%	64	3.61%	702	39.55%	129	7.27%	0	0.00%	0	0.00%	1136	64.00%	193	10.87%
Grand Total	568	32.00%	88	4.96%	948	53.41%	171	9.63%	0	0.00%	0	0.00%	1516	85.41%	259	14.59%

	2021															
	Female				Male				Non-Binary				Total			
	Warning		Citation		Warning		Citation		Warning		Citation		Warning		Citation	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	1	0.06%	0	0.00%	0	0.00%	0	0.00%	1	0.06%	0	0.00%
Investigative	28	1.58%	7	0.39%	68	3.83%	14	0.79%	0	0.00%	0	0.00%	96	5.41%	21	1.18%
Vehicle Violation	106	5.97%	17	0.96%	177	9.97%	28	1.58%	0	0.00%	0	0.00%	283	15.94%	45	2.54%
Moving Violation	434	24.45%	64	3.61%	702	39.55%	129	7.27%	0	0.00%	0	0.00%	1136	64.00%	193	10.87%
Grand Total	568	32.00%	88	4.96%	948	53.41%	171	9.63%	0	0.00%	0	0.00%	1516	85.41%	259	14.59%

	2022															
	Female				Male				Non-Binary				Total			
	Warning		Citation		Warning		Citation		Warning		Citation		Warning		Citation	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
9-1-1 / Citizen	0	0.00%	0	0.00%	4	0.20%	0	0.00%	0	0.00%	0	0.00%	4	0.20%	0	0.00%
Investigative	45	2.21%	2	0.10%	109	5.35%	2	0.10%	0	0.00%	0	0.00%	154	7.56%	4	0.20%
Vehicle Violation	16	0.79%	3	0.15%	44	2.16%	6	0.29%	0	0.00%	0	0.00%	60	2.95%	9	0.44%
Moving Violation	707	34.71%	64	3.14%	924	45.36%	96	4.71%	3	0.15%	0	0.00%	1634	80.22%	160	7.85%
Grand Total	768	37.70%	69	3.39%	1081	53.07%	104	5.11%	3	0.15%	0	0.00%	1852	90.92%	173	8.49%

Traffic Stops by Race of Driver

	2017		2018		2019		2020		2021		2022	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Native American	13	0.53%	14	0.26%	17	0.41%	6	0.34%	8	0.43%	5	0.25%
Other	138	5.61%	182	3.39%	141	3.42%	58	3.27%	50	2.68%	80	3.93%
Latino	99	4.03%	260	4.84%	244	5.92%	107	6.03%	127	6.82%	140	6.87%
Asian	199	8.09%	401	7.46%	287	6.96%	120	6.76%	128	6.87%	158	7.76%
Black	525	21.35%	1136	21.14%	999	24.23%	497	28.00%	571	30.65%	520	25.53%
White	1485	60.39%	3380	62.91%	2435	59.06%	987	55.61%	979	52.55%	1134	55.67%
Grand Total	2459	100.00%	5373	100.00%	4123	100.00%	1775	100.00%	1863	100.00%	2037	100.00%

Traffic Stop by Race of Driver & Search Type

	2017									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	0	0.00%	0	0.00%	0	0.00%	13	0.53%	13	0.53%
Latino	3	0.12%	1	0.04%	5	0.20%	90	3.66%	99	4.03%
Other	2	0.08%	0	0.00%	1	0.04%	135	5.49%	138	5.61%
Asian	1	0.04%	0	0.00%	6	0.24%	192	7.81%	199	8.09%
Black	7	0.28%	1	0.04%	16	0.65%	501	20.37%	525	21.35%
White	2	0.08%	4	0.16%	20	0.81%	1459	59.33%	1485	60.39%
Grand Total	15	0.61%	6	0.24%	48	1.95%	2390	97.19%	2459	100.00%

	2018									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	1	0.02%	0	0.00%	0	0.00%	13	0.24%	14	0.26%
Latino	2	0.04%	1	0.02%	1	0.02%	256	4.76%	260	4.84%
Other	0	0.00%	1	0.02%	1	0.02%	180	3.35%	182	3.39%
Asian	1	0.02%	2	0.04%	2	0.04%	396	7.37%	401	7.46%
Black	11	0.20%	5	0.09%	32	0.60%	1088	20.25%	1136	21.14%
White	19	0.35%	6	0.11%	57	1.06%	3298	61.38%	3380	62.91%
Grand Total	34	0.63%	15	0.28%	93	1.73%	5231	97.36%	5373	100.00%

	2019									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	0	0.00%	1	0.02%	3	0.07%	13	0.32%	17	0.41%
Latino	5	0.12%	1	0.02%	10	0.24%	228	5.53%	244	5.92%
Other	0	0.00%	0	0.00%	2	0.05%	139	3.37%	141	3.42%
Asian	4	0.10%	1	0.02%	10	0.24%	272	6.60%	287	6.96%
Black	22	0.53%	6	0.15%	46	1.12%	925	22.44%	999	24.23%
White	20	0.49%	7	0.17%	48	1.16%	2360	57.24%	2435	59.06%
Grand Total	51	1.24%	16	0.39%	119	2.89%	3937	95.49%	4123	100.00%

	2020									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	0	0.00%	0	0.00%	0	0.00%	6	0.34%	6	0.34%
Latino	1	0.06%	1	0.06%	3	0.17%	102	5.75%	107	6.03%
Other	0	0.00%	0	0.00%	0	0.00%	58	3.27%	58	3.27%
Asian	1	0.06%	1	0.06%	3	0.17%	115	6.48%	120	6.76%
Black	1	0.06%	1	0.06%	16	0.90%	479	26.99%	497	28.00%
White	4	0.23%	4	0.23%	24	1.35%	955	53.80%	987	55.61%
Grand Total	7	0.39%	7	0.39%	46	2.59%	1715	96.62%	1775	100.00%

	2021									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	0	0.00%	1	0.05%	0	0.00%	7	0.38%	8	0.43%
Latino	1	0.05%	0	0.00%	4	0.21%	122	6.55%	127	6.82%
Other	1	0.05%	0	0.00%	0	0.00%	49	2.63%	5	2.68%
Asian	0	0.00%	0	0.00%	1	0.05%	127	6.82%	128	6.87%
Black	1	0.05%	0	0.00%	14	0.75%	556	29.84%	571	30.65%
White	4	0.21%	5	0.27%	13	0.70%	957	51.37%	979	52.55%
Grand Total	7	0.36%	6	0.32%	32	1.71%	1818	97.59%	1818	100.00%

	2022									
	Vehicle Only		Person Only		Vehicle & Person		Not Searched		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	1	0.05%	2	0.10%	1	0.05%	1	0.05%	5	0.25%
Latino	0	0.00%	2	0.10%	2	0.10%	136	6.68%	140	6.87%
Other	0	0.00%	1	0.05%	3	0.15%	76	3.73%	80	3.93%
Asian	0	0.00%	0	0.00%	7	0.34%	151	7.41%	158	7.76%
Black	4	0.20%	1	0.05%	12	0.59%	503	24.69%	520	25.53%
White	2	0.10%	4	0.20%	9	0.44%	1119	54.93%	1134	55.67%
Grand Total	7	0.34%	10	0.49%	34	1.67%	1986	97.50%	2037	100.00%

Result of Stop by Race of Driver

	2017							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	7	0.28%	6	0.24%	0	0.00%	13	0.53%
Other	101	4.11%	37	1.50%	0	0.00%	138	5.61%
Latino	65	2.64%	34	1.38%	0	0.00%	99	4.03%
Asian	152	6.18%	45	1.83%	2	0.08%	199	8.09%
Black	391	15.90%	132	5.37%	2	0.08%	525	21.35%
White	1228	49.94%	254	10.33%	3	0.12%	1485	60.39%
Grand Total	1944	79.06%	508	20.66%	7	0.28%	2459	100.00%

	2018							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	9	0.17%	5	0.09%	0	0.00%	14	0.26%
Other	144	2.68%	38	0.71%	0	0.00%	182	3.39%
Latino	218	4.06%	42	0.78%	0	0.00%	260	4.84%
Asian	360	6.70%	41	0.76%	0	0.00%	401	7.46%
Black	867	16.14%	269	5.01%	0	0.00%	1136	21.14%
White	2992	55.69%	388	7.22%	0	0.00%	3380	62.91%
Grand Total	4590	85.43%	783	14.57%	0	0.00%	5373	100.00%

	2019							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	11	0.27%	6	0.15%	0	0.00%	17	0.41%
Other	106	2.57%	35	0.85%	0	0.00%	141	3.42%
Latino	189	4.58%	55	1.33%	0	0.00%	244	5.92%
Asian	245	5.94%	42	1.02%	0	0.00%	287	6.96%
Black	775	18.80%	224	5.43%	0	0.00%	999	24.23%
White	2120	51.42%	315	7.64%	0	0.00%	2435	59.06%
Grand Total	3446	83.58%	677	16.42%	0	0.00%	4123	100.00%

	2020							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	3	0.17%	3	0.17%	0	0.00%	6	0.34%
Other	46	2.59%	12	0.68%	0	0.00%	58	3.27%
Latino	89	5.01%	18	1.01%	0	0.00%	107	6.03%
Asian	102	5.75%	18	1.01%	0	0.00%	120	6.76%
Black	410	23.10%	87	4.90%	0	0.00%	497	28.00%
White	866	48.79%	121	6.82%	0	0.00%	987	55.61%
Grand Total	1516	85.41%	259	14.59%	0	0.00%	1775	100.00%

	2021							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	6	0.32%	2	0.11%	0	0.00%	8	0.43%
Other	46	2.47%	4	0.21%	0	0.00%	50	2.68%
Latino	102	5.48%	25	1.34%	0	0.00%	127	6.82%
Asian	109	5.85%	19	1.02%	0	0.00%	128	6.87%
Black	463	24.85%	108	5.80%	0	0.00%	571	30.65%
White	825	44.28%	154	8.27%	0	0.00%	979	52.55%
Grand Total	1551	83.25%	312	16.75%	0	0.00%	1863	100.00%

	2022							
	Warning		Citation		Unknown		Total	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Native American	3	0.15%	2	0.10%	0	0.00%	5	0.25%
Other	77	3.78%	3	0.15%	0	0.00%	80	3.93%
Latino	127	6.23%	13	0.64%	0	0.00%	140	6.87%
Asian	147	7.22%	11	0.54%	0	0.00%	158	7.76%
Black	473	23.22%	47	2.31%	0	0.00%	520	25.53%
White	1025	50.32%	109	5.35%	0	0.00%	1134	55.67%
Grand Total	1852	90.92%	185	9.08%	0	0.00%	2037	100.00%



Guidelines for Determining Speed Limits on Municipal Roadways

**Stonebrooke
Engineering**

Technical Report Documentation Page

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16. Abstract (Limit: 250 words) The issue of reducing speed limits to increase public safety is an emotional, political, and controversial topic that has been debated by safety advocates, engineers, politicians, transportation officials, and the public for many years. A recent statutory change has put a spotlight on the topic, necessitating a deeper look into how speed limits are established and the effectiveness that lowering speed limits has on reducing vehicle traveling speeds, as well as the impacts on pedestrian and bicycle traffic. This document examines the history of speed limits, the recent statutory change, and the consequence of the change to communities. In addition, it examines the effectiveness of speed limit changes and outlines a process for agencies to follow when deciding to make a change, and offers alternative strategies for pedestrian and bicycle safety.			
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Table of Contents

Introduction	2
History of Speed Limits	4
2019 Statute Change	5
What Does that Mean for Your City?	6
Effectiveness of a Speed Limit Change	8
What Tools are Available?	8
National Guidance	8
Other Studies and Research	8
Advocacy	9
What are Your Options?	10
I. Maintain Status Quo	10
II. Reduce Speed Limits	10
Process for Changing Speed Limit	11
III. Invest in Alternative Pedestrian Safety Strategies	15
Addressing Citizen Concerns	18
Summary & Recommendations	19
APPENDIX A: Full Language of the Statute	20
APPENDIX B: Case Studies: Category Speed Limit	25
APPENDIX C: Research Fact Sheets	27

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Reducing speed limits to increase public safety is an emotional, political, and controversial topic that has been debated by safety advocates, engineers, politicians, transportation officials, and the public for many years. A recent statutory change spotlighted the topic, requiring a deeper look into how speed limits are established and the effectiveness that lowering speed limits has on reducing vehicle traveling speeds, as well as the impacts on pedestrian and bicycle traffic.

This document examines the history of speed limits, the recent statutory change, and the consequence of the change to communities. In addition, it examines the effectiveness of speed limit changes, outlines a process for agencies to follow when deciding to make a change, and offers alternative strategies for pedestrian and bicycle safety.

History of Speed Limits

MN Statute 169.14 was enacted in YEAR X, establishing consistent statewide speed limits for alleys, streets in urban districts, local roads, expressways, and interstate highways. Previously, speed limits were set locally. When established locally, speed zones were not consistent from city to city, were widely ignored and were thought to have been influenced more by local desires to generate revenue than considerations for safety.

Statutory speed limits on most roadways include:

- 10 mph in alleys
- 30 mph on streets in urban districts (can be reduced to 25 mph if a speed zone is adopted and the roadway is properly signed)
- 55 mph on other roads
- 65 mph on expressways
- 65 mph on urban interstate highways
- 70 mph on rural interstate highways

However, If state or local authorities believe that the statutory limits would not be effective, the statute allowed for speed zones (non-statutory regulatory speed limits) to be established. Establishing a speed zone required that a speed study be conducted by MnDOT, and that the Commissioner of Transportation approved the change.

Speed studies were conducted in accordance with guidance provided in the Federal Manual on Uniform Traffic Control Devices (MUTCD - Minnesota adopted their own version of this document commonly referred to as MN MUTCD). The MN MUTCD defines the standards used by road managers to install and maintain traffic control devices on public streets, highways, bikeways, and private roads open to public travel in Minnesota. The intent of these standards is to create uniformity and consistency in all public transportation systems.

Establishing a speed zone involved completing an engineering and traffic investigation (speed study). Speeds limits are then set within 5 mph of the 85th percentile speed or within 10 mph of the pace mean speed. This process was chosen based on past research that indicated where the prevailing speeds are seven to eight mph over the 50th percentile speed (approximately the 85th percentile speed), overall crash rates are at a minimum. Use of the 85th percentile rule and the pace mean speed is consistent with conclusions of available transportation research as well as MnDOT and FHWA's Manual on Uniform Traffic Control Devices (MUTCD)

guidance. This approach has successfully resulted in a high level of consistency in the establishment of speed limits among roads that have similar characteristics as well as a high level of compliance by road users. This approach is believed to provide the overall safest conditions with fewer crashes by ensuring uniform vehicle operating speeds.

Recently changes have been proposed to the MUTCD that would reinforce the idea that other factors, in addition to the 85th-percentile speed, also have a role in setting speed limits including:

- Road type and condition
- Location and type of access points (intersections, entrances, pedestrian access, etc.)
- Sufficient length of roadway (1/4 mile minimum)
- Existing traffic control devices (signs, signals, etc.)
- Crash history, traffic volume, sight distances (curve, hill, etc.)
- Travel speed samples
- Test drive results speed study
- Road Users (such as pedestrian activity, bicycle activity)

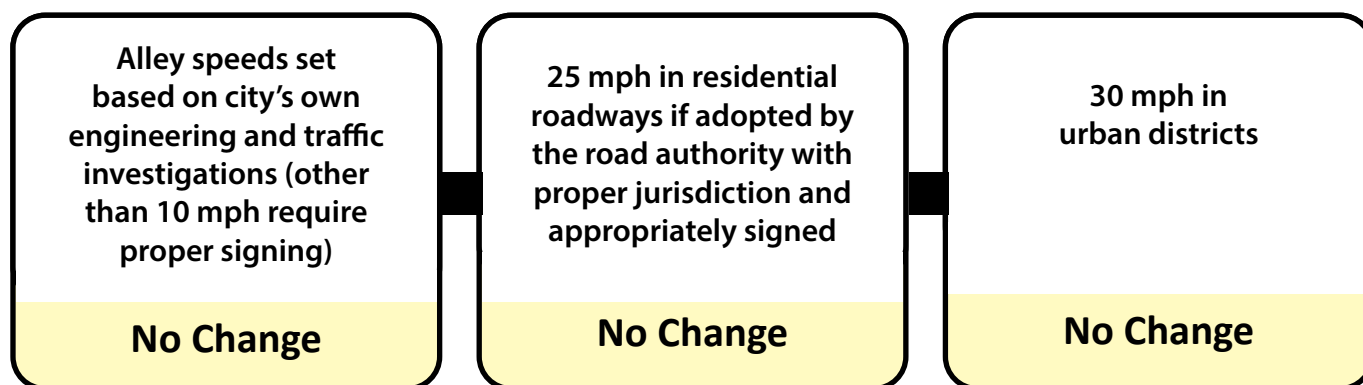
2019 Statute Change

Minnesota Statute Section 169.14, subd. 2 was updated August 1, 2019, by the Minnesota State Legislature. The change gave cities the authority to establish speed limits for streets under their jurisdiction without having MnDOT conduct a speed study, and without approval by the Commissioner of Transportation provided that:

- Speed limits are implemented in a consistent and understandable manner.
- The city erects appropriate signs to display the speed limit.
- The city develops procedures to set speed limits based on the city's safety, engineering, and traffic analysis considering national urban speed limit guidance and studies, local traffic crashes, and methods to effectively communicate the change to the public.

The change was the result of a request by the city of Minneapolis who wanted to have the ability to modify speeds on local roads to help improve pedestrian safety. A consistent legislative priority for the city was to either lower the statutory speed limit or give Minneapolis or cities of the first class the ability to set their own limits.

The state legislature agreed to allow the statute change as requested by Minneapolis, but also felt the authority should be granted to all Minnesota Communities.



What Does that Mean for Your City?

Prior to the change, the statutory speed limit in urban districts was 30 mph unless otherwise posted. A city also had the option to reduce a limit to 25 mph provided that the change was adopted by the local road authority and the roadway was properly signed. The revised statute maintains these limits and does not require any action by a community. The change simply affords communities the opportunity to change speed limits on roads under their jurisdiction. This authority is granted only to city streets and does not apply to town roads, county highways, or trunk highways located in the city.

Effectiveness of a Speed Limit Change

Nationally, FHWA has examined over 100 sites in 22 states and found no change in vehicle speeds due to a change in the speed limit. Similar studies¹ conducted by various cities in the US and Canada as well as studies by the Insurance Institute for Highway Safety have also found that changing the speed limit alone had no effect on driver behavior.

Some studies do however report the successful reduction of speeds when the speed limit change accompanies other mitigation strategies. For example, the city of Seattle examined 5 corridors² and reported a small reduction in both the 50th and 85th percentile speeds when the frequency of speed limit signs was increase from every 1-1.5 miles to one every ¼ mile.

Another study conducted on local streets in Woodbury, MN (Statutory limit 30mph) and River Falls, WI (Statutory 25 mph limit found similar 85th percentile speeds at these locations despite the difference in statutory limit. However, it did identify that the roadway width does affect travel speeds.

**IN 50% OF PEDESTRIAN
AND BICYCLE CRASHES
NO PARTICULAR ACTION
BY DRIVERS COULD
BE IDENTIFIED THAT
CONTRIBUTED TO
THE CRASH.**

Based on all available data, effectively lowering vehicle speeds requires a combination of physical, operational, and regulatory measures to be successful. Changing driver behavior and reducing speeds will require added enforcement and changes to the road environment to adjust driver perception.

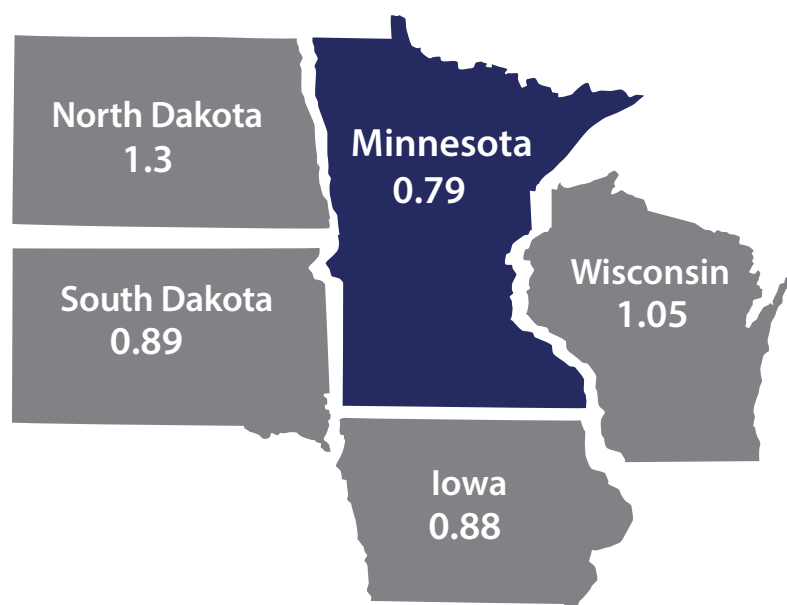
1 [Effects of Raising and Lowering Speed Limits on Selected Roadway Sections](#), FHWA, 1997

2 [Speed Limit Case Studies](#), SDOT, 2020

The most common actions that contribute to pedestrian and bicycle crashes include:

- Failure to yield - 11%
- Distracted Driver- 8%
- Careless/Reckless driving - 5%
- Failure to Obey Signal/Sign - 1%
- Speeding - 1%

Another notable data point is that the Minnesota pedestrian and bicycle fatal crash rate is lower than neighboring states, despite having higher statutory speed limits.



In fact, 92% of communities in Minnesota experienced 0-1 serious pedestrian and bicycle crashes in the ten-year period between 2011 and 2020.

- 69% of communities had zero serious or fatal crashes
- Law enforcement cited speed as a contributing factor in 4% of serious pedestrian and bicycle crashes
- A plurality of crashes occur on city streets (44%) and a majority of these occur on the Municipal State Aid (MSA) system
- 50% of crashes occur at intersection (42% highway and 62% MSA streets)

Of intersection crashes:

- 47% of intersection crashes occur at signals (61% for highways and 17% for city streets,
- 24% occur at stop signs (13% for highways and 44% for city streets)

Despite this data, public perception is that reducing speeds limits will save lives. This perception is supported by the fact that the survivability of a pedestrian crash increases dramatically with lower speeds. However, studies have shown that many speeders on the local system tend to be the residents that live in the area and travel the streets most often.

What Resources are Available?

The newly revised statute requires that the safety, engineering, and traffic analysis done when considering a speed limit change must consider national urban speed limit guidance and studies. Therefore, it is important to understand the difference between national guidance, research, and advocacy documents.

National Guidance

The Federal “Manual on Uniform Traffic Control Devices” (MUTCD) is the national standard for all traffic control devices installed on any street, highway, bikeway, or road open to public use. It also provides guidance on establishing speed limits. Minnesota agencies are statutorily bound to comply with MUTCD guidance.

The “Minnesota Manual on Uniform Traffic Control Devices” (MN MUTCD) was developed to establish standards and to provide a uniform policy for the use of traffic control devices in the State of Minnesota. The MN MUTCD correlates with and conforms closely to the current system as approved by the American Association of State Highway Officials (AASHTO) and the national Manual on Uniform Traffic Control Devices (MUTCD).

Other Studies and Research

Guidance for the Setting of Speed Limits (NCHRP 17-76) ¹

This study created two tools (one with macros and one without) that could better inform speed limits beyond the 85th percentile. These tools take factors such as urban vs rural, other roadway users, and roadway type into account.

Design Speed, Operating Speed and Posted Speed Practices, (NCHRP Report 504) ²

This report summarized previous research and data collected through mail surveys. The findings were that there needs to be guidance added for the relationship between the 85th percentile and the posted speed limit. Speed limits are generally set 4-6 mph less than the 85th percentile speed. This report also added the need to specify radius, grade, access density, median presence, on-street parking, pedestrian activity, and signal density when determining speed.

Effects of Raising and Lowering Speed Limits on Selected Roadway Sections (FHWA) ³

Although the changes in vehicle speeds were small, driver violations of the speed limits increased when the posted speed limits were lowered. Conversely, violations decreased with the speed limits were raised. This does not reflect a change in driver behavior, but rather, a change in how compliance is measured. No evidence to support crash experience changing with speed limit changes.

Speed Concepts: Informational Guide (FHWA) ⁴

Study found as speed increases, crash severity increases. There is not proper guidance on speed limit through the design phase. The 85th percentile may be higher than anticipated, especially on low or moderate speed roads. The design speed is NOT the maximum safe speed. Reducing the speeds without other changes is likely to result in a small reduction of operating speed. Posted speed limits should always be within 5 mph of the 85th percentile speed.

1 [Guidance for the Setting of Speed Limits](#), NCHRP, 2019

2 [Design Speed, Operating Speed, and Posted Speed Practices](#), NCHRP, 2003

3 [Effects of Raising and Lowering Speed Limits on Selected Roadway Sections](#), FHWA, 1997

4 [Speed Concepts: Informational Guide](#), FHWA, 2009

Methods and Practices for Setting Speed Limits (FHWA and Institute of Transportation Engineers)¹ Identifies four methods for establishing speed limits (Engineering approach, Expert System Approach, Optimization and Injury Minimization). This is the Safe Speed Approach. This report provides practitioners with guidance on how to set speed limits in their jurisdiction without making specific policy recommendations or suggestions. The Safe Speed Approach resulted in speed limits that were at the lower end of the range of speeds enacted by the practitioners.

ITE Speed Zoning Guidelines (Institute of Transportation Engineers Committee)²

Identifies factors such as geometric design, roadside development, shoulder and road surface characteristics, pedestrian and bicycle activity, speed limits on adjoining highway segments, accident experience or potential that should be considered as part of an engineering speed study. In no case should the speed limit be set below the 67th percentile of free-flowing vehicles. The speed limit should be set to the nearest 5 mph increment to the 85th percentile or the upper limit of the 10-mph pace. No speed zone should be established in a location where 85th percentile speed is within 3 mph of the statutory speed limit.

Reducing Speeding Related Crashes Involving Passenger Vehicles (National Transportation Safety Board)³

The NTSB focused on five measures of speeding: speed limits, data-driven approaches for enforcement, automated speed enforcement, intelligent speed adaptation, and national leadership. They state higher speeds are likely to lead to a higher number of, and more serious, crashes. The Safe System approach in determining other factors leading to safety issues needs to be considered. There is not strong evidence that the 85th percentile equates to the lowest crash involvement on all road types.

Managing Speed: Review of Current Practice for Setting and Enforcing Speed Limits (TRB report 254)⁴

Limiting speed is not the only thing that should be considered for increased safety. Cutting down on impaired driving and safety belt use have higher safety reduction. An increase in the age of the population also has a toll on safety. Congestion also increases driver frustration and encourages unsafe driving. Technology can help with the speed limit considerations. Technology can help the efficiency and effectiveness of enforcement.

Advocacy

The National Association of City Transportation Officials (NACTO)⁵ is “an advocacy group of major North American cities and transit agencies formed to “exchange transportation ideas, insights, and practices and cooperatively approach national transportation issues”. A NACTO working group recently developed recommendations for setting speed limits on urban streets with the intent of providing an alternative to federal guidance. The result of this effort was a 3-method approach that is outlined in the document “City Limits, Setting Safe Speed Limits on Urban Streets”.

In addition, the Minnesota Department of Transportation recently conducted a statewide Speed Limit Vision⁶ project. This effort has resulted in a collection of educational and informative data that can be useful for addressing speed related issues. The stated goal is to develop a unified vision related to speed limits that was supported by cities, counties, and special interest groups, as well as public safety and enforcement professionals. The visioning project is based on Minnesota Speed limit history, as well as local and national research. A Technical Advisory Group was formed that included state, county, and city transportation professionals, as well as transit users, pedestrians, bicyclists, public health, law enforcement, and mobility impaired users.

1 [Methods and Practices for Setting Speed Limits](#), FHWA, 2012

2 [ITE Speed Zoning Guidelines](#), ITE

3 [Reducing Speeding Related Crashes Involving Passenger Vehicles](#), NTSB, 2017

4 [Managing Speed: Review of Current Practice for Setting and Enforcing Speed Limits](#), TRB, 1998

5 [City Limits, Setting Safe Speed Limits on Urban Streets](#), NACTO, 2018

6 [A Minnesota Vision for Speed Limits](#), MnDOT, 2020

What are Your Options

The revised statute does not require any action. All statutory limits are still in place, the only significant change is the that cities now have the ability to set speed limits on local roads if they choose. As a city, there are three options, you can maintain status quo, reduce speed limits on local street, or invest in alternative safety strategies.

I. Maintain Status Quo

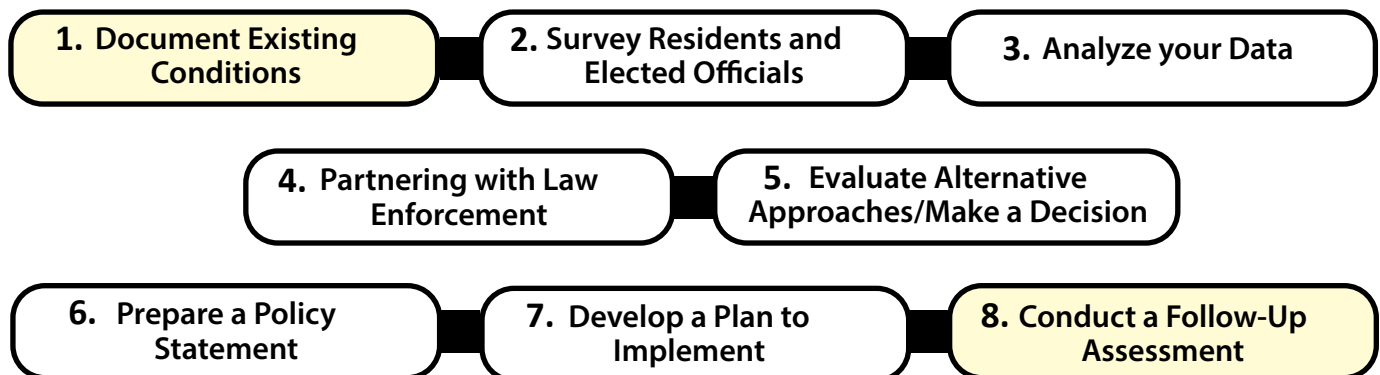
Keeping the status quo doesn't mean do nothing, it means identifying a problem and implementing a solution on a case-by-case basis using existing countermeasures currently being employed in the city.

This approach would maintain current statutory city speeds (i.e., 30 mph on local streets) but would not prohibit reduction of speeds on certain city streets if deemed appropriate based on engineering studies and judgement.

II. Reduce Speed Limits

When considering lowering urban speed limits following a best practices process is recommended. This process is based on a review of published research, discussions with public works professionals and law enforcement in Minnesota, analysis of data from both national and Minnesota data and consideration of risk management practices.

The best practices process includes the following steps:



Process for Changing Speed Limit

1. Document Existing Conditions

Thoroughly understand the existing speed, safety, and traffic characteristics on your system. The outcome of this effort will establish the facts about how your road system is operating and will help you determine if there are real problems that need addressing or only the perception of problems.

Establishing how your system is working is a key input to the subsequent effort to evaluate and ultimately select an approach to determine speed limits on your city's streets.

Collect speed data on a representative sample of roadways, covering the spectrum of roadways, including low volume residential streets, streets in central business areas, school zones, parks, urban collectors, and urban/suburban arterials. It is likely that these different types of roadways have different operating and safety characteristics, and it is important to be aware of these differences.

Document safety characteristics using MnCMAT including total numbers of crashes, the number of serious crashes and fatalities, locations of crashes and contributing factors. MnCMAT can provide both city wide overviews of crash data and specific information about corridors, individual intersections with documentation of numbers of crashes, types of crashes, crash severity and contributing factors.

2. Survey Residents and Elected Officials

Understand the concerns of city residents and elected officials regarding safety and vehicle speeds. Separate fact from perception and determine if most residents and elected officials feel a certain way or if there is only a vocal minority. Conversations with public works professionals around the state have found that there is not uniform support for changing urban speed limits. It is important to know where your residents and elected officials stand on this topic as you go through the evaluation of alternatives.

3. Analyze Your Data

Most city streets have a 30 mph limit based on the state statute covering urban areas. Collectors and minor arterials generally have higher speed zones that were determined by MnDOT. The traditional approach to analyzing speed data involves determining three performance measures:

- 50th percentile speed – the speed at which one-half of the drivers are travelling at or less
- 85th percentile speed – the speed at which 85 percent of the drivers are travelling at or less
- 10 mph Pace – the ten mph range that contains the greatest number of vehicles

Conduct an analysis of the speed data collected and determine the 50th and 85th percentile speeds and the 10 mph Pace. Identify the current prevailing speeds across the various classes of streets in your system.

Note: Conversations with public works professionals indicate that some cities are finding the 85th percentile speed on their residential streets was around 25 mph, which supported changing the speed limit on those streets as well as an expectation that there would be a high level of compliance. Other cities with different roadway characteristics are finding prevailing speeds that supported retaining the current 30 mph limit.

4. Partnering with Law Enforcement

It is well known by traffic professionals that that drivers will generally pick an operating speed based on their perception of the road environment. If a community decides to lower the speed limits on streets when drivers are comfortable traveling at higher speeds, merely announcing a new speed limit will not change their behavior.

Law enforcement can provide information about prevailing speeds and help identify of problem areas. It is also helpful to understand current levels of enforcement effort and whether they have the capacity to provide increased enforcement in support of lower speed limits. It is also important to understand if there are conditions attached to these efforts.

If you are considering lowering the speed limit on streets where prevailing speeds are higher, the best chance of changing operating speed without other changes to the roadway environment is through the application of high levels of enforcement. Therefore, it is important that law enforcement be on board with the decision.

5. Evaluate Alternative Approaches & Make a Decision

After evaluating your system there are two likely outcomes, retain the historic speed limits or adopt new lower speed limits across your city's system of streets.

If the data supports retaining the 30 mph limit but elected officials decide that lower limits are called for, a possible plan of action would include the following steps:

Conduct an informational session with the council and residents to share information.

Potential topics should include:

- A discussion of published research. Adopting a lower speed limit and changing the number on a sign has never (by itself) changed the operating speeds selected by drivers. Changing the road environment will be required and until that is achieved additional enforcement will need to be provided to have any chance of lowering speeds.
- Discussions with law enforcement – documenting what resources they would need to provide a higher level of speed enforcement and what other conditions they would place on the effort
- Establishment of a performance measure associated with the lowered speed limit, so that at some point it can be concluded that the lowered speed limit did or did not achieve the desired outcome.

Propose a temporary reduction in the speed limit (and an increased level of enforcement) for a specified period (six months to one year) combined with the collection of speed data to monitor the results.

The idea would be to secure an agreement with the council that at the end of the specified period of the test, if the performance measure is achieved the lower speed limit would be retained. However, if the performance measure for speed reduction is not achieved, the speed limit could revert to the statutory limit.

The case for lowering speed limits should be based on determining that current speed profiles on some parts of the system indicate that prevailing speeds are lower than the statutory limit and the opinion of residents and elected officials in fact support a change.

The suggested system-based speed limits are as follows:

- | | |
|---------------------------------------|--------|
| ▪ Local Residential Streets | 25 mph |
| ▪ Urban Collectors | 30 mph |
| ▪ Urban Minor Arterials | 35 mph |
| ▪ Multi-lane Suburban Minor Arterials | 40 mph |

6. Prepare a Policy Statement

The implementation of any new approach to managing speed along city streets creates an opportunity for claims of negligence and having a policy documenting your city's approach to managing speed limits is a proven, effective technique for improving operations and managing risk.

Specific benefits associated with policy development include:

- Guiding allocation of resources to cover initial and annual maintenance costs
- Providing direction to staff
- Establishing the procedures to be followed
- Setting priorities
- Supports establishing discretionary immunity

A typical policy for establishment of speed limits on city streets should include the following:

- Background, Purpose and Goal
- Which roadways are to be covered by the policy – all city streets, low volume streets, various roadway classifications – residential, collectors, minor arterials, etc.
- Document the approach/approaches selected for implementation – no change, new approach to all city streets, new approach to some city streets, combination of approaches, etc.
- How will changes be communicated to drivers – will speed limit signs be added to all roads or will notification of the changes be placed at entrances to the city?
- Document the impact of signing decisions on your sign maintenance budget.
- Document the level of coordination with law enforcement and any changes in enforcement practices.
- Document the effect of speed limit changes on future street design practices – design speed selection, street widths, etc.
- Commitments to deploy other infrastructure-based safety strategies, including expansion of sidewalks and trail systems, road diets, installation of curb extensions and median refuge islands, additions of rectangular rapid flash beacons and pedestrian hybrid beacon systems, and pedestrian enhancements at traffic signals (count-down timers and leading pedestrian interval).

7. Develop a Plan to Implement

The objective of the implementation plan is to successfully convey the message to both drivers and residents that speed limits in your city have changed. Even though most drivers on your city streets are residents, many are not. Therefore, it is important to communicate any change or variance from state statute in a variety of ways. Suggestions to communicate a planned or pending change include:

- As part of the publication of city council minutes and in your city's newsletter.
- Placing traffic signs (either permanent or temporary on Type III Barricades) on the major entrances to your city notifying drivers that there is a change in traffic control.
- Social media campaign
- Finally, installing new speed limit signs on all streets where there has been a change in the limit.

To provide uniformity between communities and minimize driver confusion it is important to effectively convey the speed limit to drivers. Conveying speed limit in a consistent and uniform manner that drivers are accustomed to will minimize driver confusion as well as enforcement issues.

While seemingly easy to implement the changing limits using a citywide approach opens several question and concerns regarding “appropriate” signing. Some communities are choosing to install Gateway signs at their jurisdictional boundaries.

The use of the gateway signing alone is likely to cause confusion if motorists enter the community on a non-jurisdictional road such as a state highway or county road where a gateway sign may not be allowed. Additionally, gateway signs are not something that motorists are accustomed to in Minnesota. As a result, a motorist traveling between jurisdictions, or transitioning between non signed local streets and other roadway motorists may not be aware when a speed limit has changed. Discussion with law enforcement officers has also identified a reluctance to write citations without a visible regulatory sign.

The citywide approach may provide consistent expectations across a city, however, to avoid confusion given that regulatory speeds are also still in effect, it is recommended that regulatory speed limit signs be installed at appropriate locations and intervals. At a minimum that regulatory signs should be placed anywhere a transition of speed occurs including at community boundaries, and when transitioning from major roads onto local streets.

8. Conduct a Follow-Up Assessment

To know if any changes in speed limits have been effective, a follow-up assessment is required. The best practice begins with documenting existing conditions and then conducting annual assessments each year following the change. Be aware that small changes, especially in vehicle speeds, may be statistically significant but they may not be practically significant.

The outcome of the assessment could prove that the changes in speed limits achieved the performance measures and the effort to match driver behavior with the lower speed limit was a success. On the other hand, if the outcome indicates that driver behavior was not changed two possible courses of action are suggested. First, continue the experiment with lower speed limits but add more features to modify the driver’s perception of the road environment – for example, median refuge islands and curb extensions – and increase enforcement efforts. Second, revert to the previous statutory limit.

I II Invest in Alternative Pedestrian and Bicycle Safety Strategies

If your city decides to take actions to improve pedestrian and bicycle safety, you will need to consider two important items – (1) WHERE to make improvements and (2) WHAT strategies to invest in. However, research into pedestrian and bicycle safety suggests that traditional thinking about WHERE and WHAT is unlikely to yield positive results.

WHERE to make Improvements:

Traditionally, safety analysts would review their road systems and then focus their safety investments on locations with large numbers of priority crash types (Road Departure, Right Angle, etc.) However, after Minnesota adopted serious crashes (those involving severe injuries and fatalities) as the State's safety performance measure, it was determined that this reactive approach of chasing after serious crashes around the system was not an effective strategy. Serious crashes were widely scattered and for the most part occurred at locations that did not have any prior serious crashes during the study period. It was concluded that the presence of one serious crash at a particular location was not a good predictor of a second serious crash. **It appears that safety analysts focused on serious crashes involving pedestrians and bicyclists face these same challenges:**

- Serious pedestrian and bicycle crashes are widely scattered among cities in Minnesota
- 588 (69%) of Minnesota's 856 cities had NO serious pedestrian and bicycle crashes during a ten-year study period (2011-2020).
- 228,000 (99%) of the approximately 230,000 locations in Minnesota's crash mapping tool had NO serious pedestrian and bicycle crashes during the ten-year study period.
- Only 6 (0.7%) cities (Brooklyn Center, Duluth, St. Cloud, Columbia Heights, St. Paul, and Minneapolis) had two or more locations with multiple serious pedestrian and bicycle crashes during the ten-year study period.
- Only ONE location in the entire State (University Avenue at Northtown Drive in Blaine) had TWO pedestrian and bicycle crashes that resulted in fatalities during the study period.

This information supports a conclusion that using a reactive approach based on prior serious crashes would not be effective in identifying high priority locations for safety investment. This information also supports the use of a proactive, systemic approach that is based on identifying the characteristics of the locations with serious pedestrian and bicycle crashes and then searching road systems for other locations with similar characteristics.

Previous safety studies have identified several roadway characteristics as being over-represented at the locations with serious pedestrian and bicycle crashes, including:

- Streets with a MSA designation: Streets on the MSA system account for 3% of statewide road mileage but 26% of serious pedestrian and bicycle crashes.
- Intersection Traffic Control: Along MSA streets, more than 60% of serious pedestrian and bicycle crashes occur at intersections and almost 50% of these are controlled by traffic signals.
- Transit Stops: In Minnesota cities, approximately 80% of locations with a serious pedestrian and bicycle crash had a transit stop.

All of this suggests that the determination of where to invest in safety improvements be based on a systemic review of a city's road system that is primarily focused on MSA streets and secondarily at signalized intersections with transit stops.

WHAT strategies to invest in:

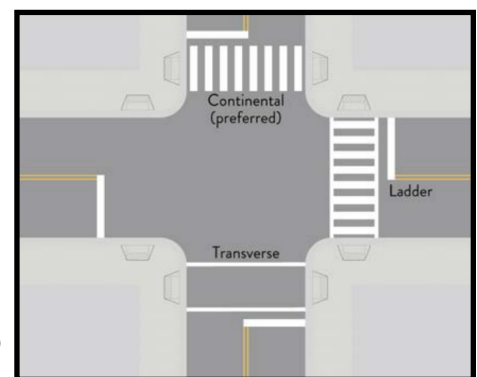
The process of evaluating the dozens of potential safety strategies to address pedestrian and bicycle safety is often complicated by perceptions held by residents and elected officials that are based on their intuition, but are often contrary to the facts. A way to deal with the challenge of addressing these perceptions is for city staff to be aware of facts documented by research regarding the effectiveness of pedestrian and bicycle strategies and where on the spectrum of proven not effective to proven effective does each strategy fall.

Examples of strategies proven not to be effective include:

- Marked Crosswalks: The addition of marked crosswalks alone, without more substantial roadway or traffic control treatments, has NOT been found to reduce pedestrian crash rates.
- Traffic Signals: Traffic signals are used to assign right of way to conflicting streams of traffic (vehicles, pedestrians and bicycles) at intersections. By themselves, traffic signals are not considered to be effective safety devices for vehicles, pedestrians or bicycles. Signalized intersections have the highest rate and severity of crashes among intersection traffic control devices and more than one-half of pedestrian and bicycle crashes in Minnesota occur at signalized intersections.
- Reduced Urban Speed Limits: There is no information in published research to support the notion that lowering urban speed limits either reduces actual operating speeds or serious crashes involving pedestrians and bicycles. MnDOT has conducted more than a dozen local studies and FHWA conducted a national study where speed limits were artificially lowered by changing the numbers on regulatory speed limit signs. In no case was driver behavior changed. Regarding the safety effect of lowering urban speed limits on serious pedestrian and bicycle crashes, it should be noted that each of the four states that border Minnesota have a 25 mph statutory urban speed limit but has a fatal pedestrian and bicycle crash rate that is 11% to 64% higher than Minnesota's.
- On-Road Bike Lanes: On-Road bike lanes have been deployed extensively around the country and in Minnesota but are not considered to be an effective safety strategy because research results are almost equally divided between locations where bike crashes increased versus locations where bike crashes decreased.

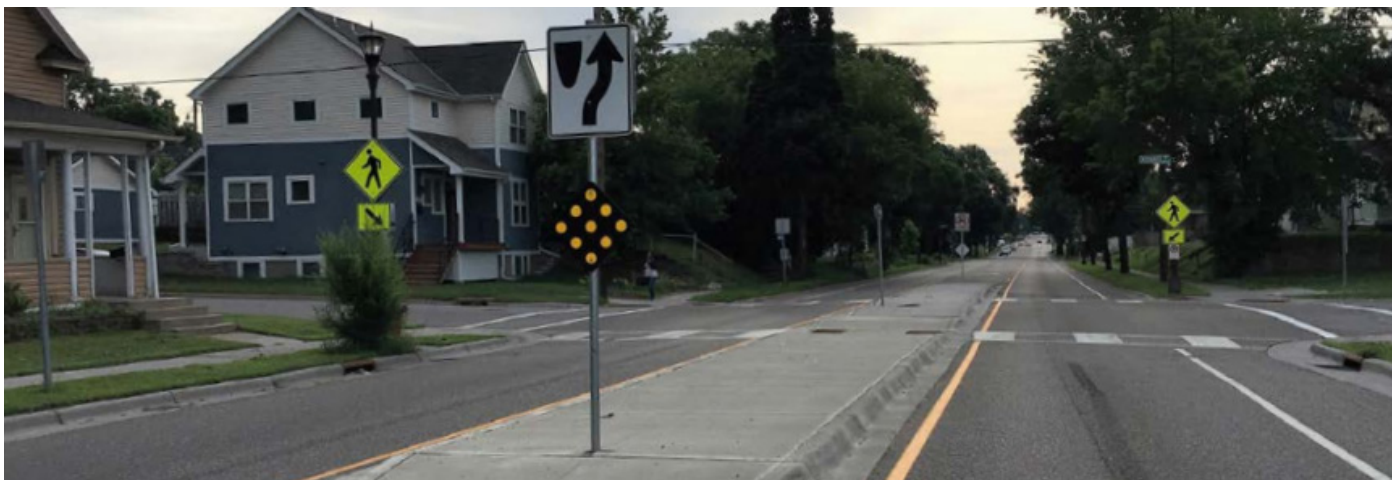
Examples of strategies proven effective include:

- Sidewalks: Constructing sidewalks have been found to decrease "Walking in Roadway" pedestrian crashes by 50%-90%.
- Median Crossing/Refuge Islands: Adding Median Crossing/Refuge Islands have been found to reduce pedestrian and bicycle crashes by 39%-46%. Curb extensions have been found to reduce pedestrian and bicycle crashes by 39%-46%.
- Crosswalk lighting: Adding Crosswalk lighting has been found to reduce pedestrian and bicycle crashes by 33%-44%.



Source: MnDOT

- Road Diets: “Road Diet” is a term used for the reallocation of roadway lanes and/or space to integrate features such as bike lanes or pedestrian refuge islands on existing roadways. A common roadway reconfiguration involves converting an undivided four-lane (two-way) road into a three-lane road made up of one through lane in each direction, a center two-way left turn lane and a shoulder/bike lane. Modifying roads from four lanes to two travel lanes with a left turn lane has been found to reduce vehicle crashes by 29%-46%. Safety effects on crashes involving pedestrians and bicyclists associated with Road Diets are still being documented but positive benefits have been noted including:
 - Typically lower speeds due to one travel lane in each direction and no passing,
 - The reduction to a single travel lane in each direction eliminates the possibility of a “multiple-threat” crash (where a driver in one lane stops to yield to a pedestrian but the driver in the adjacent lane continues at speed because the other vehicle blocks the line of sight to the pedestrian)
 - The reallocation of space creates an opportunity to construct median refuge islands at pedestrian crossing locations.
- Pedestrian Hybrid Beacon: A Pedestrian Hybrid Beacon system is a traffic control device that remains dark until a pushbutton is activated by a pedestrian, at which time the beacon flashes a sequence of amber warning followed by a red stop for vehicles. The system has been found to have a 97% compliance rate for vehicles stopping during the steady red beacon phase and a 69% reduction in vehicle-pedestrian crashes.
- Rapid Rectangular Flashing Beacon: A Rapid Rectangular Flashing Beacon is a dynamic warning device that is activated when a pedestrian pushes a button at the crosswalk. The system uses an irregular flash pattern similar to emergency flashers on police vehicles with a pulsing light source. Studies are still under way to document pedestrian and bicycle crash reductions but completed studies have found “yield to pedestrians” compliance rates ranging from 80% - 100% and these rates are four to five times higher than at standard beacons.
- Leading Pedestrian Interval: Use of a LPI extends the All-Red portion of the traffic signal cycle and provides the pedestrian walk indication 2 to 3 seconds ahead of the vehicle green, allowing pedestrians a head start and the ability to enter the crosswalk before right turning vehicles can turn into the crosswalk. Studies have found the LPI to reduce pedestrian crashes by up to 60%.
- Countdown Timers: Countdown timers replace the traditional Walk/Don’t Walk pedestrian indications and are flashing timers which provide the number of seconds remaining during the pedestrian phase. Studies have found that converting from standard pedestrian signals to countdown timers was associated with up to a 25% reduction in pedestrian crashes.



Addressing Citizen Concerns

Creating an open dialogue with citizens is an important step in understanding perceived and actual safety issues of the public. The “Addressing Citizen Requests for Traffic Safety Concerns” Local Road Research Board Report 2017RIC05 from 2017 identified steps for addressing citizen concerns for safety.

1. Problem Identification – Record their concern and ask questions regarding pertinent details to best understand their issue.
2. Evaluation – Arrange for a site inspection and collect necessary data. Identify if there is an issue and what steps can be made to mitigate. If there is no issue, communicate the appropriate reasoning.
3. Response / Follow-up – If the evaluation takes more than a month, periodically update the citizen. If the decision is to make a change, document this change and understand your agencies processes.

This report also examines things to make the public aware of surrounding speed and safety.

- Speed complaints are often the residents “perceived” safety concern rather than an “actual” safety concern. Collect data using a radar gun to determine if this is a perception or a reality.
- Speed humps/tables are larger issues involving more time and money to evaluate. They often do not affect speed between humps.
- A change in speed is not likely to affect the safety concern. If speed is the key issue, install a speed trailer to inform drivers of their speeds.
- Speed limits in neighborhoods are already likely at the state minimum based on law.
- Speed limit signs often advertise a given speed is acceptable even though it is desired that drivers drive slower.
- Roadway narrowing to reduce speeds can be effective, but expensive. On-street parking can be a lower-cost solution.
- Often the speed offenders are people that live in the neighborhood. Encourage citizens to talk to their neighbors to have the discussion.
- Other measures to help reduce speed include posting yard signs or figures mentioning to slow down, and also increasing compliance patrols with the police department.

Summary & Recommendation

When considering the effects of vehicle speeds on public safety, pedestrian and bicyclists' safety is always a primary concern. It is often difficult to pinpoint causes and identify the best countermeasures due to the rarity and randomness of these crashes. Minneapolis and St. Paul are the only communities in Minnesota that have enough serious pedestrian and bicycle crashes to obtain statistically reliable data to analyze the causes of crashes and potential mitigations. All other cities will need to rely on statewide summaries to indicate trends, causes and possible mitigation strategies.

This analysis of serious statewide pedestrian and bicycle crashes found that the Municipal State Aid, (MSA) system was more at risk than other city streets. The MSA system was found to have a serious pedestrian and bicycle crash density that is almost nine times higher than on other city streets. It is speculated that this higher risk is associated with typically wider streets, higher volumes and adjacent commercial development. This analysis also found that the almost half of serious pedestrian and bicycle crashes occurred at intersections, and almost half of these had traffic signal control. Police crash reports cited speed as a contributing factor in only four percent of serious pedestrian and bicycle crashes.

The 85th percentile speed continues to be a reasonable approximation of the prevailing speed selected by drivers on local streets based on their perception of the road environment. However, this approach has been criticized, especially by pedestrian safety advocates in urban area because it does not directly consider pedestrians and bicycles. That critique is correct, but most city streets have speed limits based on statute and not the analysis of prevailing speeds.

There is no evidence to suggest lowering speed limit will result in lower travel speeds. Reducing speed will require changes to the roadway environmental and/or increased enforcement. However, speeds on local roads in some communities already lower than statutory limits lending credibility to a reduction in speed limits.

Whenever possible local agencies should **implement proven alternative strategies and modify the roadway environment to reduce travel speeds**. Also, whenever possible speed limits should be reduced when documented travel speeds are less than the statutory limit.

Prior to implementing a citywide reduction in speed limits, public outreach and a robust public involvement campaign should be implemented. This step is crucial to separate fact from perception and determine if residents and elected officials understand the likelihood of achieving a reduction in travel speeds.

It is also important to determine if the community actually supports a change, or is there only a vocal minority. **If a change is made, partnering with law enforcement is essential**, while often challenging and unpopular a true reduction in speeds without modifications to the roadway environment will require increased enforcement. If a speed change is desired, it is recommended that the agency **install regulatory signs instead of gateway signing alone**. Regulatory signs should be installed whenever speed zones change, and at community boundaries.

The suggested system-based speed limits include:

- Local Residential Streets 25 mph
- Urban Collectors 30 mph
- Urban Minor Arterials 35 mph
- Multi-lane Suburban Minor Arterials 40 mph

Changing speeds limits is new to Minnesota, as there is insufficient data to support a conclusion as to whether or not it will improve pedestrian safety. It is strongly encouraged that communities track their results so additional future evaluations and recommendations can be performed.

APPENDIX A: Full Language of the Statute

Minnesota Statutes, Section 169.14

169.14 SPEED LIMITS, ZONES; RADAR.

Subdivision 1. Duty to drive with due care.

No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent under the conditions. Every driver is responsible for becoming and remaining aware of the actual and potential hazards then existing on the highway and must use due care in operating a vehicle. In every event speed shall be so restricted as may be necessary to avoid colliding with any person, vehicle or other conveyance on or entering the highway in compliance with legal requirements and the duty of all persons to use due care.

Subd. 1a. License revocation for extreme speed.

The driver's license of a person who violates any speed limit established in this section, by driving in excess of 100 miles per hour, is revoked for six months under section 171.17, or for a longer minimum period of time applicable under section 169A.53, 169A.54, or 171.174.

Subd. 2. Speed limits.

(a) Where no special hazard exists the following speeds shall be lawful, but any speeds in excess of such limits shall be prima facie evidence that the speed is not reasonable or prudent and that it is unlawful; except that the speed limit within any municipality shall be a maximum limit and any speed in excess thereof shall be unlawful:

- (1) 30 miles per hour in an urban district;
- (2) 65 miles per hour on noninterstate expressways, as defined in section 160.02, subdivision 18b, and noninterstate freeways, as defined in section 160.02, subdivision 19;
- (3) 55 miles per hour in locations other than those specified in this section;
- (4) 70 miles per hour on interstate highways outside the limits of any urbanized area with a population of greater than 50,000 as defined by order of the commissioner of transportation;
- (5) 65 miles per hour on interstate highways inside the limits of any urbanized area with a population of greater than 50,000 as defined by order of the commissioner of transportation;
- (6) ten miles per hour in alleys;
- (7) 25 miles per hour in residential roadways if adopted by the road authority having jurisdiction over the residential roadway; and
- (8) 35 miles per hour in a rural residential district if adopted by the road authority having jurisdiction over the rural residential district.

(b) A speed limit adopted under paragraph (a), clause (7), is not effective unless the road authority has erected signs designating the speed limit and indicating the beginning and end of the residential roadway on which the speed limit applies.

(c) A speed limit adopted under paragraph (a), clause (8), is not effective unless the road authority has erected signs designating the speed limit and indicating the beginning and end of the rural residential district for the roadway on which the speed limit applies.

(d) Notwithstanding section 609.0331 or 609.101 or other law to the contrary, a person who violates a speed limit established in this subdivision, or a speed limit designated on an appropriate sign under subdivision 4, 5, 5b, 5c, or 5e, by driving 20 miles per hour or more in excess of the applicable speed limit, is assessed an additional surcharge equal to the amount of the fine imposed for the speed violation, but not less than \$25.

Subd. 2a. Increased speed limit when passing.

Notwithstanding subdivision 2, the speed limit is increased by ten miles per hour over the posted speed limit when the driver:

- (1) is on a two-lane highway having one lane for each direction of travel;
- (2) is on a highway with a posted speed limit that is equal to or higher than 55 miles per hour;
- (3) is overtaking and passing another vehicle proceeding in the same direction of travel; and
- (4) meets the requirements in section 169.18.

Subd. 3. Reduced speed required.

(a) The driver of any vehicle shall, consistent with the requirements, drive at an appropriate reduced speed when approaching or passing an authorized emergency vehicle stopped with emergency lights flashing on any street or highway, when approaching and crossing an intersection or railway grade crossing, when approaching and going around a curve, when approaching a hill crest, when traveling upon any narrow or winding roadway, and when special hazards exist with respect to pedestrians or other traffic or by reason of weather or highway conditions.

(b) A person who fails to reduce speed appropriately when approaching or passing an authorized emergency vehicle stopped with emergency lights flashing on a street or highway shall be assessed an additional surcharge equal to the amount of the fine imposed for the speed violation, but not less than \$25.

Subd. 4. Establishment of zones by commissioner.

On determining upon the basis of an engineering and traffic investigation that any speed set forth in this section is greater or less than is reasonable or safe under the conditions found to exist on any trunk highway or upon any part thereof, the commissioner may erect appropriate signs designating a reasonable and safe speed limit thereat, which speed limit shall be effective when such signs are erected. Any speeds in excess of such limits shall be prima facie evidence that the speed is not reasonable or prudent and that it is unlawful; except that any speed limit within any municipality shall be a maximum limit and any speed in excess thereof shall be unlawful. On determining upon that basis that a part of the trunk highway system outside a municipality should be a zone of maximum speed limit, the commissioner may establish that part as such a zone by erecting appropriate signs showing the beginning and end of the zone, designating a reasonable and safe speed therefor, which may be different than the speed set forth in this section, and that it is a zone of maximum speed limit. The speed so designated by the commissioner within any such zone shall be a maximum speed limit, and speed in excess of such limit shall be unlawful. The commissioner may in the same manner from time to time alter the boundary of such a zone and the speed limit therein or eliminate such zone.

Subd. 4a.

[Repealed, 1997 c 143 s 20]

Subd. 5. Zoning within local area.

When local authorities believe that the existing speed limit upon any street or highway, or part thereof, within their respective jurisdictions and not a part of the trunk highway system is greater or less than is reasonable or safe under existing conditions, they may request the commissioner to authorize, upon the basis of an engineering and traffic investigation, the erection of appropriate signs designating what speed is reasonable and safe, and the commissioner may authorize the erection of appropriate signs designating a reasonable and safe speed limit thereat, which speed limit shall be effective when such signs are erected. Any speeds in excess of these speed limits shall be prima facie evidence that the speed is not reasonable or prudent and that it is unlawful; except that any speed limit within any municipality shall be a maximum limit and any speed in excess thereof shall be unlawful. Alteration of speed limits on streets and highways shall be made only upon authority of the commissioner except as provided by law.

Subd. 5a. Speed zoning in school zone; surcharge.

(a) Local authorities may establish a school speed limit within a school zone of a public or nonpublic school upon the basis of an engineering and traffic investigation as prescribed by the commissioner of transportation. The establishment of a school speed limit on any trunk highway shall be with the consent of the commissioner of transportation. Such school speed limits shall be in effect when children are present, going to or leaving school during opening or closing hours or during school recess periods. The school speed limit shall not be lower than 15 miles per hour and shall not be more than 30 miles per hour below the established speed limit on an affected street or highway.

(b) The school speed limit shall be effective upon the erection of appropriate signs designating the speed and indicating the beginning and end of the reduced speed zone. Any speed in excess of such posted school speed limit is unlawful. All such signs shall be erected by the local authorities on those streets and highways under their respective jurisdictions and by the commissioner of transportation on trunk highways.

(c) For the purpose of this subdivision, "school zone" means that section of a street or highway which abuts the grounds of a school where children have access to the street or highway from the school property or where an established

school crossing is located provided the school advance sign prescribed by the Manual on Uniform Traffic Control Devices adopted by the commissioner of transportation pursuant to section 169.06 is in place. All signs erected by local authorities to designate speed limits in school zones shall conform to the Manual on Uniform Traffic Control Devices.

(d) Notwithstanding section 609.0331 or 609.101 or other law to the contrary, a person who violates a speed limit established under this subdivision is assessed an additional surcharge equal to the amount of the fine imposed for the violation, but not less than \$25.

Subd. 5b.Segment in urban district.

When any segment of at least a quarter-mile in distance of any city street, municipal state-aid street, or town road on which a speed limit in excess of 30 miles per hour has been established pursuant to an engineering and traffic investigation by the commissioner meets the definition of "urban district" as defined in section 169.011, subdivision 90, the governing body of the city or town may by resolution declare the segment to be an urban district and may establish on the segment the speed limit for urban districts prescribed in subdivision 2. The speed limit so established shall be effective upon the erection of appropriate signs designating the speed and indicating the beginning and end of the segment on which the speed limit is established, and any speed in excess of such posted limits shall be unlawful. A copy of the resolution shall be transmitted to the commissioner at least ten days prior to the erection of the signs.

Subd. 5c.Speed zoning in alleyway.

Local authorities may regulate speed limits for alleyways as defined in section 169.011 based on their own engineering and traffic investigations. Alleyway speed limits established at other than ten miles per hour shall be effective when proper signs are posted.

Subd. 5d.Speed limit in work zone when workers present.

(a) Notwithstanding subdivision 2 and subject to subdivision 3, the speed limit on a road having an established speed limit of 50 miles per hour or greater is adjusted to 45 miles per hour in a work zone when (1) at least one lane or portion of a lane of traffic is closed in either direction, and (2) workers are present. A speed in excess of the adjusted speed limit is unlawful.

(b) Paragraph (a) does not apply to a segment of road in which:

(1) positive barriers are placed between workers and the traveled portion of the highway;

(2) the work zone is in place for less than 24 hours;

(3) a different speed limit for the work zone is determined by the road authority following an engineering and traffic investigation and based on accepted engineering practice; or

(4) a different speed limit for the work zone is established by the road authority under paragraph (c).

(c) The commissioner, on trunk highways and temporary trunk highways, and local authorities, on streets and highways under their jurisdiction, may authorize the use of reduced maximum speed limits in work zones when workers are present, without an engineering and traffic investigation required. The work zone speed limit must not reduce the speed limit on the affected street or highway by more than:

(1) 20 miles per hour on a street or highway having an established speed limit of 55 miles per hour or greater; and

(2) 15 miles per hour on a street or highway having an established speed limit of 50 miles per hour or less.

(d) A work zone speed limit under paragraph (c) is effective on erection of appropriate regulatory speed limit signs. The signs must be removed or covered when they are not required. A speed in excess of the posted work zone speed limit is unlawful.

(e) For any speed limit under this subdivision, a road authority shall erect signs identifying the speed limit and indicating the beginning and end of the speed limit zone.

Subd. 5e.Speed limit on park road.

The political subdivision with authority over a park may establish a speed limit on a road located within the park. A speed limit established under this subdivision on a trunk highway is effective only with the commissioner's approval. A speed limit established under this subdivision must be based on an engineering and traffic investigation prescribed by

the commissioner of transportation and must not be lower than 20 miles per hour, and no speed limit established under this subdivision may reduce existing speed limits by more than 15 miles per hour. A speed limit established under this subdivision is effective on the erection of appropriate signs designating the speed limit and indicating the beginning and end of the reduced speed zone. Any speed in excess of the posted speed is unlawful.

Subd. 5f.Speed limits on certain rural residential districts.

(a) A rural residential district existing and lawfully signed before August 1, 2009, continues to qualify as a rural residential district.

(b) A rural residential district existing and lawfully signed before August 1, 2009, is subject to the speed limit signed before August 1, 2009.

[See Note.]

Subd. 5g.St. Louis County Road 128.

Notwithstanding any provision to the contrary in this section, the speed limit on St. Louis County Road 128 in Eagles Nest Township between marked Trunk Highway 169 and County Road 989 is 40 miles per hour. The county engineer must erect appropriate signs displaying the 40 miles per hour speed limit.

Subd. 5h.Speed limits on city streets

A city may establish speed limits for city streets under the city's jurisdiction other than the limits provided in subdivision 2 without conducting an engineering and traffic investigation. This subdivision does not apply to town roads, county highways, or trunk highways in the city. A city that establishes speed limits pursuant to this section must implement speed limit changes in a consistent and understandable manner. The city must erect appropriate signs to display the speed limit. A city that uses the authority under this subdivision must develop procedures to set speed limits based on the city's safety, engineering, and traffic analysis. At a minimum, the safety, engineering, and traffic analysis must consider national urban speed limit guidance and studies, local traffic crashes, and methods to effectively communicate the change to the public.

Subd. 6.

[Repealed, Ex1971 c 27 s 49]

Subd. 6a.Work zone speed limit violations.

A person convicted of operating a motor vehicle in violation of a speed limit in a work zone, or any other provision of this section while in a work zone, shall be required to pay a fine of \$300. This fine is in addition to the surcharge under section 357.021, subdivision 6.

Subd. 7.Burden of proof.

The provisions of this chapter declaring speed limitation shall not be construed to relieve the plaintiff in any civil action from the burden of proving negligence on the part of the defendant as the proximate cause of an accident.

Subd. 8.Minimum speeds.

On determining upon the basis of an engineering and traffic investigation that a speed at least as great as, or in excess of, a specified and determined minimum is necessary to the reasonable and safe use of any trunk highway or portion thereof, the commissioner may erect appropriate signs specifying the minimum speed on such highway or portion thereof. The minimum speed shall be effective when such signs are erected. Any speeds less than the posted minimum speeds shall be prima facie evidence that the speed is not reasonable or prudent and that it is unlawful.

Subd. 9.Standards of evidence.

In any prosecution in which the rate of speed of a motor vehicle is relevant, evidence of the speed of a motor vehicle as indicated on the speedometer thereof shall be admissible on a showing that a vehicle is regularly used in traffic law enforcement and that the speedometer thereon is regularly and routinely tested for accuracy and a record of the

results of said tests kept on file by the agency having control of said vehicle. Evidence as to the speed indicated on said speedometer shall be prima facie evidence that the said vehicle was, at the time said reading was observed, traveling at the rate of speed so indicated; subject to correction by the amount of error, if any, shown to exist by the test made closest in time to the time of said reading.

Records of speedometer tests kept in the regular course of operations of any law enforcement agency shall be admissible without further foundation, as to the results of said tests. Such records shall be available to the defendant upon demand. Nothing herein shall be construed to preclude or interfere with the cross examination or impeachment of evidence of rate of speed as indicated by speedometer readings, pursuant to the Rules of Evidence.

Subd. 10. Radar; speed-measuring device; standards of evidence.

(a) In any prosecution in which the rate of speed of a motor vehicle is relevant, evidence of the speed as indicated on radar or other speed-measuring device is admissible in evidence, subject to the following conditions:

- (1) the officer operating the device has sufficient training to properly operate the equipment;
 - (2) the officer testifies as to the manner in which the device was set up and operated;
 - (3) the device was operated with minimal distortion or interference from outside sources; and
 - (4) the device was tested by an accurate and reliable external mechanism, method, or system at the time it was set up.
- (b) Records of tests made of such devices and kept in the regular course of operations of any law enforcement agency are admissible in evidence without further foundation as to the results of the tests. The records shall be available to a defendant upon demand. Nothing in this subdivision shall be construed to preclude or interfere with cross examination or impeachment of evidence of the rate of speed as indicated on the radar or speed-measuring device.

Subd. 11. Handheld traffic radar.

(a) Law enforcement agencies that use handheld radar units shall establish operating procedures to reduce the operator's exposure to microwave radiation.

(b) The procedures, at a minimum, must require:

- (1) that the operator turn the unit off when it is not in use;
- (2) if the unit has a standby mode, that the operator use this mode except when measuring a vehicle's speed;
- (3) that the operator not allow the antenna to rest against the operator's body while it is in operation; and
- (4) that the operator always point the antenna unit away from the operator and any other person in very close proximity to the unit.

Subd. 12. Radar jammer.

For purposes of this section, "radar jammer" means any instrument, device, or equipment designed or intended for use with a vehicle or otherwise to jam or interfere in any manner with a speed-measuring device operated by a peace officer. No person shall sell, offer for sale, use, or possess any radar jammer in this state.

History:

(2720-178) 1937 c 464 s 28; 1939 c 430 s 6; 1947 c 428 s 12,13; 1955 c 802 s 1,2; 1957 c 580 s 1; 1963 c 843 s 1-4; 1969 c 623 s 1; 1975 c 53 s 1; 1975 c 363 s 1,2; 1976 c 166 s 7; 1979 c 60 s 1; 1980 c 498 s 4; 1984 c 417 s 24,25; 1986 c 444; 1987 c 319 s 1; 1991 c 298 art 4 s 9; 1993 c 26 s 1; 1993 c 61 s 1; 1994 c 635 art 1 s 12; 1994 c 640 s 1; 1994 c 645 s 1; 1995 c 118 s 1; 1995 c 265 art 2 s 18; 1996 c 455 art 1 s 5,6; 1997 c 143 s 9-11; 1997 c 159 art 2 s 20,21; 1999 c 44 s 1; 2001 c 213 s 9; 1Sp2003 c 19 art 2 s 27; 1Sp2005 c 6 art 3 s 41,42; 2008 c 287 art 1 s 45; 2009 c 56 s 4,5; 2009 c 165 s 1; 2010 c 356 s 1; 2014 c 312 art 11 s 7,8; 1Sp2017 c 3 art 3 s 48; 1Sp2019 c 3 art 3 s 34,35

NOTE: Subdivision 5f, paragraph (b), as added by Laws 2009, chapter 56, section 5, expires when the speed limit signs erected before August 1, 2009, are replaced. Laws 2009, chapter 56, section 5, the effective date.

Official Publication of the State of Minnesota

Revisor of Statutes

APPENDIX B: Case Studies - Category Speed Limit

City of Minneapolis:

The City of Minneapolis utilized the category speed limit approach. Their minor roads under their jurisdiction are 20 mph for minor roads and 25 mph on their major roads. After the new Minnesota State Statute was passed, the City of Minneapolis passed an ordinance giving the city engineer the authority to set the speed limits. Minneapolis decided to change their speeds limit based on a technical analysis of existing data and other national and local reports. The city had a goal to make the city a safer place for the walking and biking community. Along with these goals, Minneapolis used the collected 50th percentile speeds as well. Once they decided on a speed limit of 20 mph on minor roadways and 25 mph on major roadways, the education process began. The city created an educational campaign to educate the community. They also teamed up with the City of St. Paul to do joint events in the community to educate the public on the new speed limit change. The city also changed the signs in the city and added gateway sign that the city worked with MnDOT to create. There is still some education left to be done and after a few years of these speed changes they hope to reevaluate to see how the speed limit change has impacted crash and speed data.

City of St. Paul

They City of St Paul conducted a technical evaluation to determine speed limits on city streets (see Saint Paul Speed Limit Evaluation, March 12, 2020). The effort included collaboration with the city of Minneapolis as well as other internal and external partners including the City Attorney's office, St Paul Police, City Planning and Economic Development, MnDOT, Ramsey County, Metro transit as well as various other Public Works Divisions. Based on their efforts the city established that Principal and Minor Arterial streets are major streets and speed limits will generally be set at 25 mph. However, they were also evaluated to determine if a higher limit is appropriated based on the "context and design". Collector Streets were also identified as major streets with and would generally be 25 mph. However, collector streets were also evaluated to determine if a lower limit was appropriate, again based on "context and design". Local Streets were considered to be minor streets and speed limits were set at 20 mph however they were also evaluated to determine if a higher speed limit was appropriate.

City of St. Louis Park:

The City of St. Louis Park also took the approach of implementing the category speed approach limits. When the Minnesota State Statute was changed the public and City Council pressured the engineering staff to make a change. One thing that St. Louis Park did that other cities did not, is when they went to pass the ordinance, they had their research and recommendation already done. Once the city passed the ordinance, the council recommend that the engineering staff evaluate in more detail some specific locations. They took an extremely data heavy approach for evaluation. The city evaluated their speed data and their crash data. The traffic study that they conducted evaluated the medium, average, and 85th percentile of all their streets and the they broke it down by low, medium and high traffic roads. The also looked at what they had set forth in their 2040 comprehensive plan national standards and the speed limit goal they have for the city. After evaluating all these criteria's they recommended speeds of 20 mph on local neighborhood streets, 25 mph on connecting streets, and 30 mph on select streets/segments. After speed change is fully implemented a traffic speed study will be conducted to evaluate the effects of the new speed change.

City of St. Anthony Village

St. Anthony Village adopted a city-wide speed limit of 25 mph on local streets. Bordering Minneapolis, city officials faced pressure from the public and elected officials to review their speed limits. It was decided that 20 mph (adopted by Minneapolis) was too slow so the city adopted a citywide 25 mph limit. The city changed and updated speed limit signs and added gateway signs to notifying drivers as they enter the city limit.

City of Falcon Heights

The City of Falcon Heights also adopted a city-wide speed limit. After analyzing past speed studies, the city concluded that they didn't have a speed issue. However, pressure from the council resulted in a speed limit change anyway. The engineering staff employed state statute Section 169.14, Subd. 2.7b., which allowed them to change their local streets to 25 mph without conducting an engineering study or establishing a process. The city installed regulatory speed limit signs at gateways and key entry points into the city. This approach was appealing to the city because it was an easy and inexpensive option.

City of Shoreview

The City of Shoreview has taken the approach of leaving their speed limits the same. Shoreview, unlike St. Paul and Minneapolis, were developed much more recently so they have implemented design and layouts that are reflected in the speed limit that is posted. The staff collected traffic speeds around the city and found that the 85th percentile was in the 22-28 mph range. On top of the design factors, the City of Shoreview has a good deal of speed and crash data that reinforces the decision to keep their local speed limit 30 mph. The council also looked at the 2 other options of setting a city-wide speed limits or a category approach. On the advice of the engineering staff the council decided not to change any of the local speed limits.

City of Edina

Edina adopted a city-wide speed limit of 25 mph on local streets. This initiative is part of a comprehensive strategy to address speeding and pedestrian safety. It will complement other efforts including minimizing roadway widths, constructing new multi-modal infrastructure and improving pedestrian crossings where warranted.

Seattle Department of Transportation: Speed Limit Case Studies

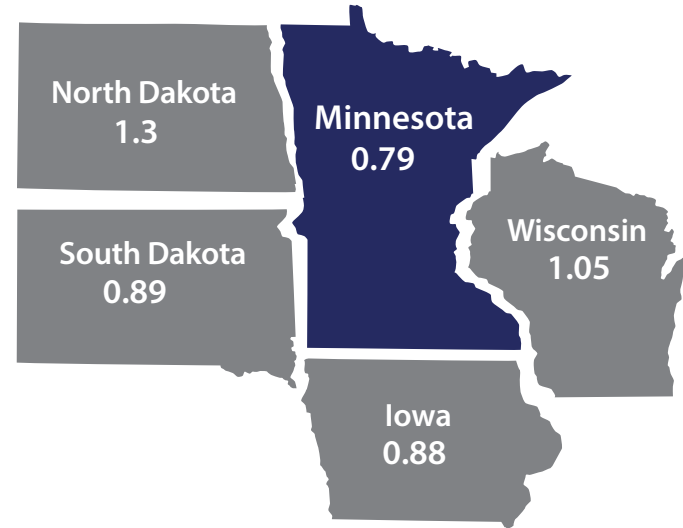
Article Summary: The Seattle Department of Transportation evaluated how placing speed limit signs closer together and changing the speed limit together effect speeds. The SDOT evaluated 5 locations throughout Seattle. Before the change the speed limit was set to 30 mph and signs were spaced out 1 to 1.5 miles apart. At the new locations the speed was changed to 20 mph spaced at ¼ mile intervals. The SDOT estimate that cost of the sign installation is about \$4,000 to \$5,000 per mile, this cost includes design, materials and labor. The results from the study showed that there was a significant reduction number of 40+ mph speeds. The next steps were to continue to implement the speed limit reduction and have new speeds limits done by May 2021.

APPENDIX C: RESEARCH FACT SHEETS

Fatal Ped-Bike Crash Rates Surrounding States 2021-2018

Highlights

- During the period **2010 through 2018**, Minnesota averaged **45** Fatal Ped + Bike crashed per year.
- Normalized for population, this results in Minnesota having a Fatal Ped + Bike crash rate of **0.79** Fatal Ped + Bike crashes per 100,000 population.
- The states that border Minnesota – North Dakota, South Dakota, Iowa and Wisconsin have Fatal Ped + Bike crash rates that range from **0.88 to 1.3/100,000** population.
- The Fatal Ped + Bike crash rates in the surrounding states are **11- 64%** higher than the rate in Minnesota.
- It's also important to note that every one of these surrounding states has a statutory urban speed limit (**25 mph**) that is lower than Minnesota's (**30 mph**).
- The fact that all the surrounding states have a lower urban speed limit and higher Ped + Bike fatality rates suggests that it is **NOT** reasonable to expect lowering urban speed limits in Minnesota to be effective reducing our Ped + Bike fatality rate.



Year	MN	Iowa	N. D.	S. D.	Wis.
2010	44	26	23	13	64
2011	44	30	11	8	67
2012	47	24	6	2	60
2013	39	24	1	7	48
2014	21	23	15	11	48
2015	52	32	8	7	73
2016	66	34	12	8	63
2017	44	30	6	10	68
2018	51	29	8	10	60
Total	408	252	90	76	551
Average	45	28	10	8	61
Population	5.7 M	3.2M	0.8M	0.9M	5.9M
Rate	0.79	0.88	1.3	0.89	1.05

1. Fatal Ped+Bike Crashes/100,000 Population

Serious Ped & Bike Crashes (2016-2020) in Minnesota – A Perspective

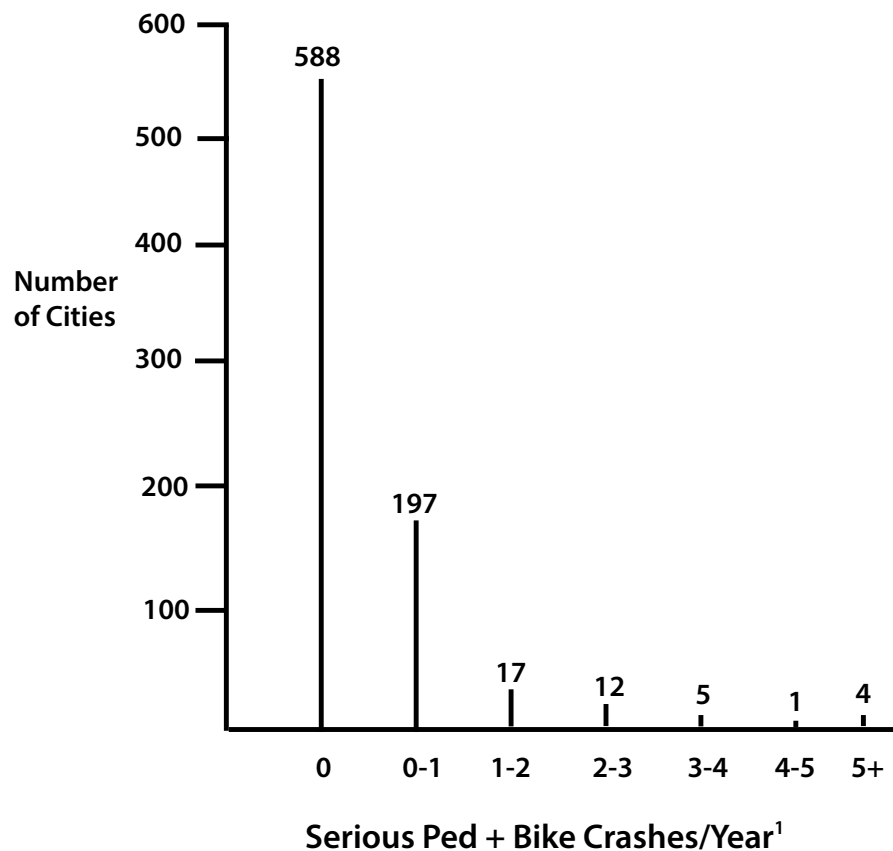
System	Fatal Crashes	Serious Crashes	Serious Speed Related	Serious Ped & Bike	Serious Speed Related Ped & Bike	Miles
State	816	2,641	647	255	17	
5 year Total	163	528	129	51	3	11,846
Annual Density	0.01	0.04	0.01	0.004	0.0003	
County	616	3,406	695	390	19	
5 year Total	123	681	139	78	4	44,958
Annual Density	0.003	0.02	0.003	0.002	0.00008	
City	228	2,298	482	765	30	
5 year Total	46	460	96	153	6	22,373
Annual Density	0.002	0.02	0.004	0.007	0.0003	
Total	1,763	8,966	2,014	1,466	70	
5 year Total	353	1,793	403	293	14	142,976
Annual Density	0.002	0.01	0.003	0.002	0.0001	

Highlights

- Minnesota's Strategic Highway Safety Plan (SHSP) has adopted serious crashes (Fatal + A Injury) as the State's Safety Performance measure.
- The SHSP documents the results of a data driven analysis of crashes and identifies crashes involving Pedestrians and Bicyclists in a comprehensive list of Safety Focus Areas since these crashes account for approximately **16%** of all serious crashes.
- More than **50%** of serious Ped + Bike crashes occur on city streets. However, it should be noted that these crashes are rare – the crash density is **0.007** Serious Ped + Bike crashes/miles/year.
- Speed related Ped + Bike crashes are even rarer – law enforcement cited speed as a contributing factor in only **4%** of Serious Ped + Bike crashes.
- Cities with a population over **5,000** typically have about **200** miles of city streets. With the crash densities noted in the table, typical cities can expect **1.4** serious Ped + Bike crashes per year and one serious speed related Ped + Bike crashes every **16** years.

Note: Crash numbers in the columns do not add up to the values shown in the bottom row – the few crashes along almost 64,000 miles of township roads were omitted in order to simplify the table.

Distribution of Serious (K+A) 2011-2020 Ped + Bike Crashes



Highlights

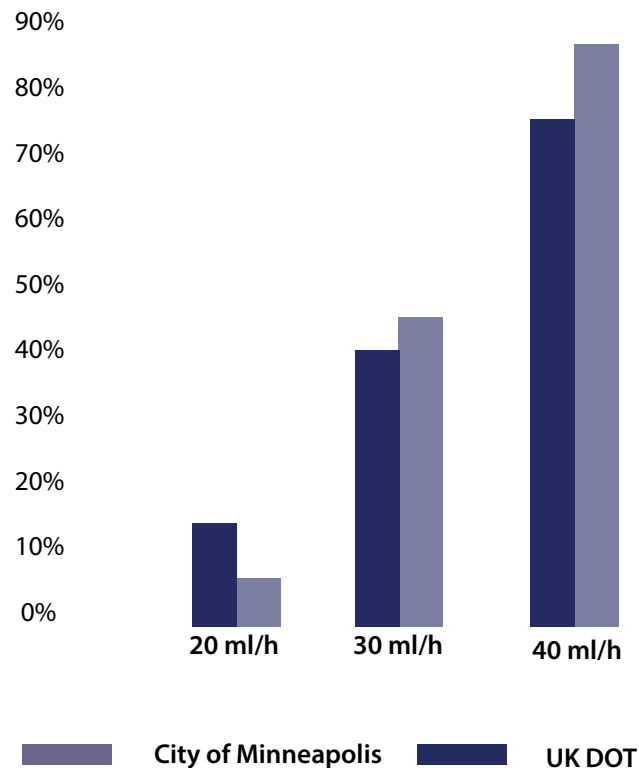
- During the 10-year period 2011 thru 2020 there were a total of 2,282 serious (fatal + serious injuries) crashes involving pedestrians and bikes.
- The 2,282 serious Ped + Bike crashes account for approximately 15% of all serious crashes during that 10-year period.
- The majority of all serious crashes occur on rural roads in greater Minnesota. However, practically all (99%) of serious Ped + Bike crashes occur in cities.
- Serious Ped + Bike crashes are not evenly distributed among Minnesota's 856 cities.
 - 588 cities (69%) had no serious Ped + Bike crashes.
 - 197 cities (23%) had an annual average between zero and one serious Ped + Bike crashes.
 - 67% of serious Ped + Bike crashes occurred in the Minneapolis – St. Paul Metro area.
 - 4 cities – Duluth, Rochester, St. Paul, and Minneapolis accounted for 40% of all serious Ped + Bike Crashes.
 - 2 Cities St. Paul (250) and Minneapolis (580) accounted for 36% of all serious Ped + Bike Crashes.

1. See Appendix. ____ for the city by city listing of serious Ped + Bike crashes.

Speed & Speed Limit Facts/Myths – Highlights

Fatalities Based on Speed of Vehicle

A pedestrian's chance of death if hit by a motor vehicle



MnDOT Speed Zoning Studies

Study Location	Before	After	Change +/- MPH	85% Before After	Change MPH
TH 65	Speed Limit 40	Speed Limit 30	-10	34 34	0
TH 65	Speed Limit 50	Speed Limit 40	-10	44 45	+1
Anoka CSAH 1	Speed Limit 45	Speed Limit 40	-5	48 50	+2
Anoka CSAH 24	Speed Limit 30	Speed Limit 45	+15	49 50	+1
Anoka CSAH 51	Speed Limit 40	Speed Limit 45	+5	45 46	+1
Hennepin CSAH 4	Speed Limit 50	Speed Limit 40	-10	52 51	-1
Noble Ave	Speed Limit 30	Speed Limit 35	+5	37 40	+3
62nd Ave N	Speed Limit 35	Speed Limit 30	-5	37 37	0
Miss. St.	Speed Limit 30	Speed Limit 35	+5	39 40	+1

- It appears that supporter of lowering urban speed limits in Minnesota justify their actions based on one fact and one myth.
- Research supports the notion that collisions with Peds and Bikes are usually less severe at lower impact speeds (see nearby bar chart).
- The key point is the speeds indicated in the chart **are** impact speeds (as determined by crash reconstruction) and **not** speed limits.
- The myth is that simply changing the numbers on a regulatory sign or adopting lower urban speed limits has ever resulted in a significant number of drivers reducing their operating speed.
- In fact, the research is absolutely consistent- not a single case is documented where lowering posted speed limits has successfully changed driver behavior.

Speed & Speed Limit Facts/Myths – Highlights

Insurance Institute for Highway Safety Speed Study - Boston Ma

Speed	Before 30 MPH Limit	After 25 MPH Limit	Change
50 th percentile	24.8	24.8	0
85 th percentile	31.0	31.0	0
+25 MPH	47.9%	46.9%	-2%
+30 MPH	18.2%	18.1%	-0.5%

The FHWA conducted a national study with over 100 sites in 22 states where speed limits were changed by 5 to 20 mph. The report concluded that differences in actual speeds were less than 2 mph and were NOT related to the amount the posted speed limit was changed.

Over the years, MnDOT has conducted a number of experiments in the Minneapolis-St. Paul Metro area. In each case, local governments requested changing the speed limit and, in each case, MnDOT agreed to a temporary change, to conduct periodic speed surveys and offered local agencies the opportunity to apply as much enforcement as they saw fit.

The results of the speed surveys (see table) show that 85% speeds were virtually unchanged, and it was concluded that merely changing the number on the regulatory signs did **NOT** change driver behavior.

Speed Profile on Local Streets Wisconsin Vs. Minnesota

Roadway Width	Average 85% percentile Speed (MPH)	
Feet	River Falls, WI	Woodbury, MN
30	32	32
32	33	32
36	31	34
40	34	34
42	34	36

Two studies were found, that document the effect of lower city wide urban speed limits.

- The Insurance Institute for Highway Safety documented the effect of Boston, MA. lowering their urban speed limit from 30 mph to 25 mph. The study (see nearby table) found that changing the speed limit had **NO** effect on driver behavior - the average speed (25 mph) and 85th percentile speed (31mph) did **NOT** change.
- A speed study was conducted on local streets in Woodbury, MN (statutory 30 mph limit) and River Falls, WI (statutory 25 mph limit). (See nearby table) The results indicate that average 85th percentile speeds are similar despite the different statutory speed limit.

Speed & Speed Limit Facts/Myths – Highlights

Characteristics of Serious (Fatal + Serious Injury) Ped+Bike Crashes

Serious Ped+Bike Crashes

	Total	TH.	Co.	MSA	Municipal
Total	2,389	419 18%	694 28%	613 26%	441 18%
At Intersection	1,235 52%	177 42%	358 52%	380 62%	230 52%
At Signal	591 47%	108 61%	209 58%	185 49%	39 17%
At Stopsign	300 24%	23 13%	69 19%	89 23%	101 44%
Fail to Yield	242 11%	24 6%	69 11%	77 14%	46 12%
Distracted	168 8%	37 9%	56 9%	39 7%	29 7%
Careless/ Reckless	120 5%	18 4%	33 5%	18 3%	32 8%
Fail to Obey Signal/Sign	10 1%	1 0.2%	1 0.2%	3 0.6%	4 1%
Speeding	29 1%	10 2%	4 0.6%	7 1%	4 1%
Mileage	141,957	11,678 8%	44,589 31%	3,734 3%	19,222 14%
Serious Crash Density	0.0018	0.0037	0.0016	0.017	0.002

In Minnesota all crashes involving fatalities and injuries are investigated by law enforcement officers and the results of their injuries are documented in crash reports that are submitted to the Department of Public Safety.

Information documented in crash reports include: location, date/time, level of injury for those involved, physical condition for those involved, roadway condition and characteristics, actions of drivers/peds/bikes and presence of traffic control devices.

During the ten-year period 2011 through 2020 there was a total of 2,491 serious (Fatal & Serious Injuries) Ped & Bike crashes of which 2,389 occurred on public streets/roads/highways. (The remaining crashes occurred off system - primarily in private parking lots).

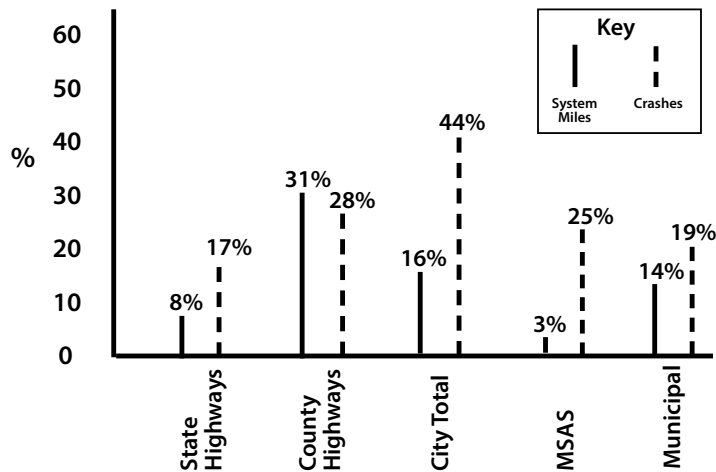
A review of Minnesota's crash records system revealed the following facts about characteristics and factors associated with serious Ped+Bike crashes.

- A plurality of Serious Ped+Bike Crashes occur on city streets (44%) and a majority of these occur on the Municipal State Aid (MSA) system.
- One-half of serious Ped+Bike crashes occur at intersections and the range is 42% along highways to 62% along the MSA system.
- Of the intersection related crashes, 47% are controlled by traffic signals (61% for highways and 17% for municipal streets) and 24% by STOP signs (13% for highways and 44% for municipal streets).

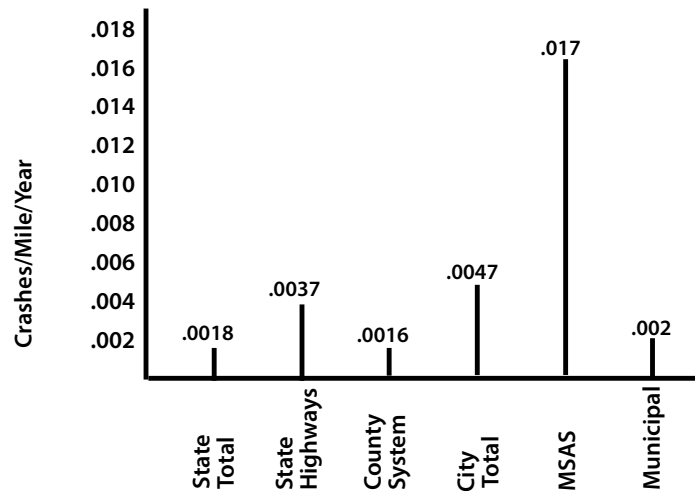
Source: MnDOT CMAT 2011-2020

Characteristics of Serious (Fatal + Serious Injury) Ped + Bike Crashes

Distribution of Serious Ped+Bike Crashes by System



Serious Ped+Bike Crash Density



HIGHLIGHTS

The investigations of the Serious Ped+Bike crashes reported that in more than one half of these crashes no particular action by the drivers involved could be identified that clearly contributed to the crash. For the remaining crashes, the most common actions by drivers that did contribute to Serious Ped+Bike crashes includes:

Failure to yield - 11% (6% on Highways to 14% on MSAS)

Distracted - 8% (7% on City streets to 9% on Country roads)

Careless/Reckless - 5% (3% on MSAS to *% on Muni-streets)

Failure to Obey Signal/Sign - 1% (0.2% on Highways to 1% on Muni-streets)

Speeding - 1% (0.6% on County roads to 2% on Highway)

Contributing factors were reviewed for Serious Ped+Bike crashes in Minneapolis and St. Paul because these two cities account for 36% of all Ped+Bike crashes and they are leading the initiative to lower urban speed limits. The results in Minneapolis and St. Paul closely match the statewide distribution - Fail to Yield and Distracted were the two most common driver behaviors. However, speeding was twice the statewide average - 2% in each city.

Serious Ped+Bike crashes are not evenly distributed across Minnesota's system of highways and streets. A plurality of Serious Ped+Bike crashes occur along city streets (44%) and more than one - half of these crashes occur along the MSA system.

To account for differences in mileage among the different roadway jurisdictions, crash density was computed (serious Ped+Bike crashes/mile/year). City streets have a higher crash density (0.0047) than State highways or county roads and the fraction of city streets on the MSAS have the highest crash density (0.017), which is more than 9 times the statewide total.

**Roseville Public Works, Environment and Transportation Commission
Agenda Item**

DATE: April 25, 2023

ITEM: 8.a.

ITEM DESCRIPTION: Pavement Management Update

Background

Each year, the City of Roseville monitors pavement on both roads and pathways within the city. The City uses the data collected to help determine what type of maintenance to perform and if large scale projects need to occur. Staff will give a presentation about overall pavement management in the city, which includes monitoring and inspection, funding, maintenance and CIP programing.

Recommendation

Receive a presentation and give input and feedback to staff.

Attachments

1. Presentation

Pavement Management

Public Works Department



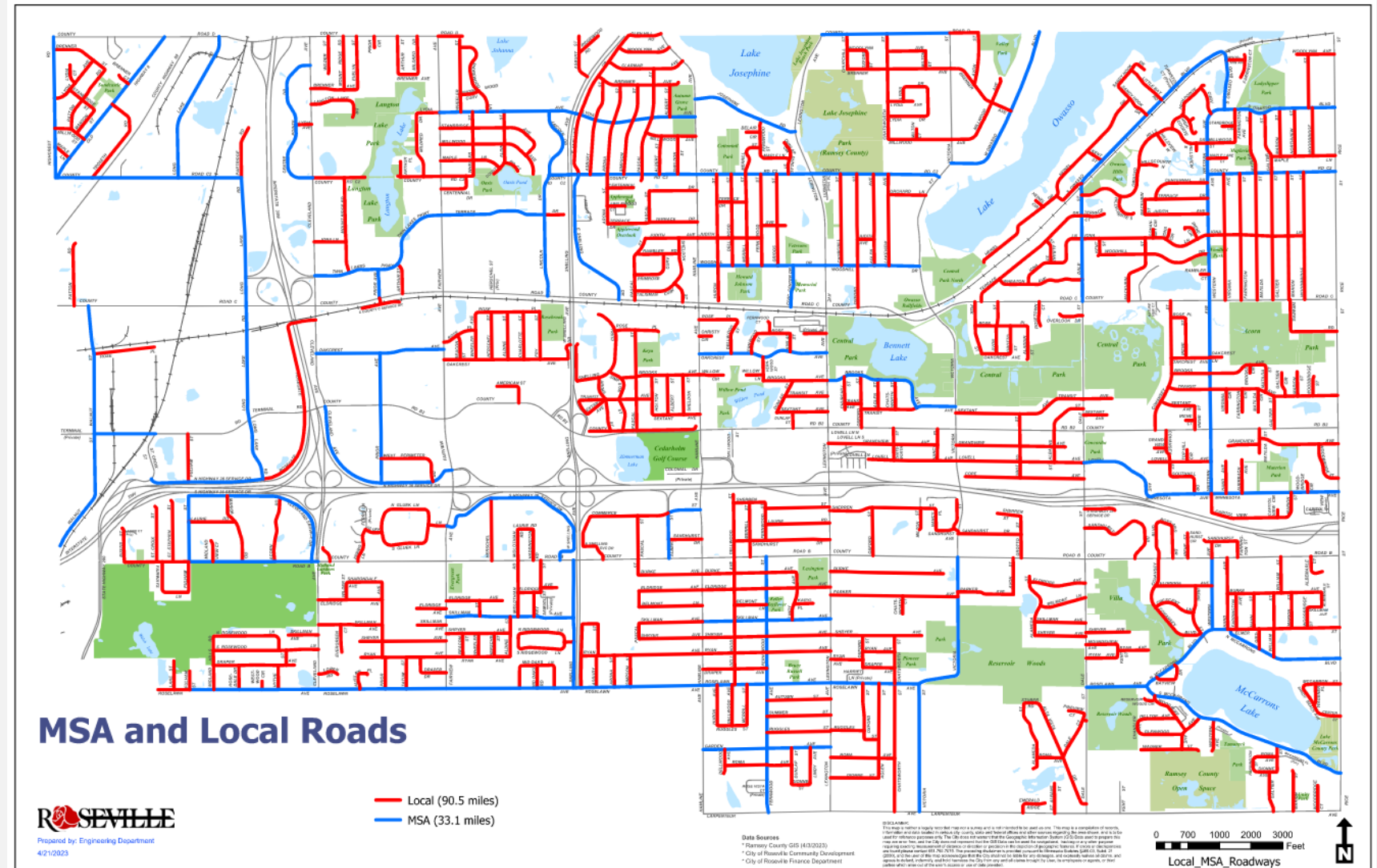
PWETC

April 25, 2023

Pavement Management

City Pavement System

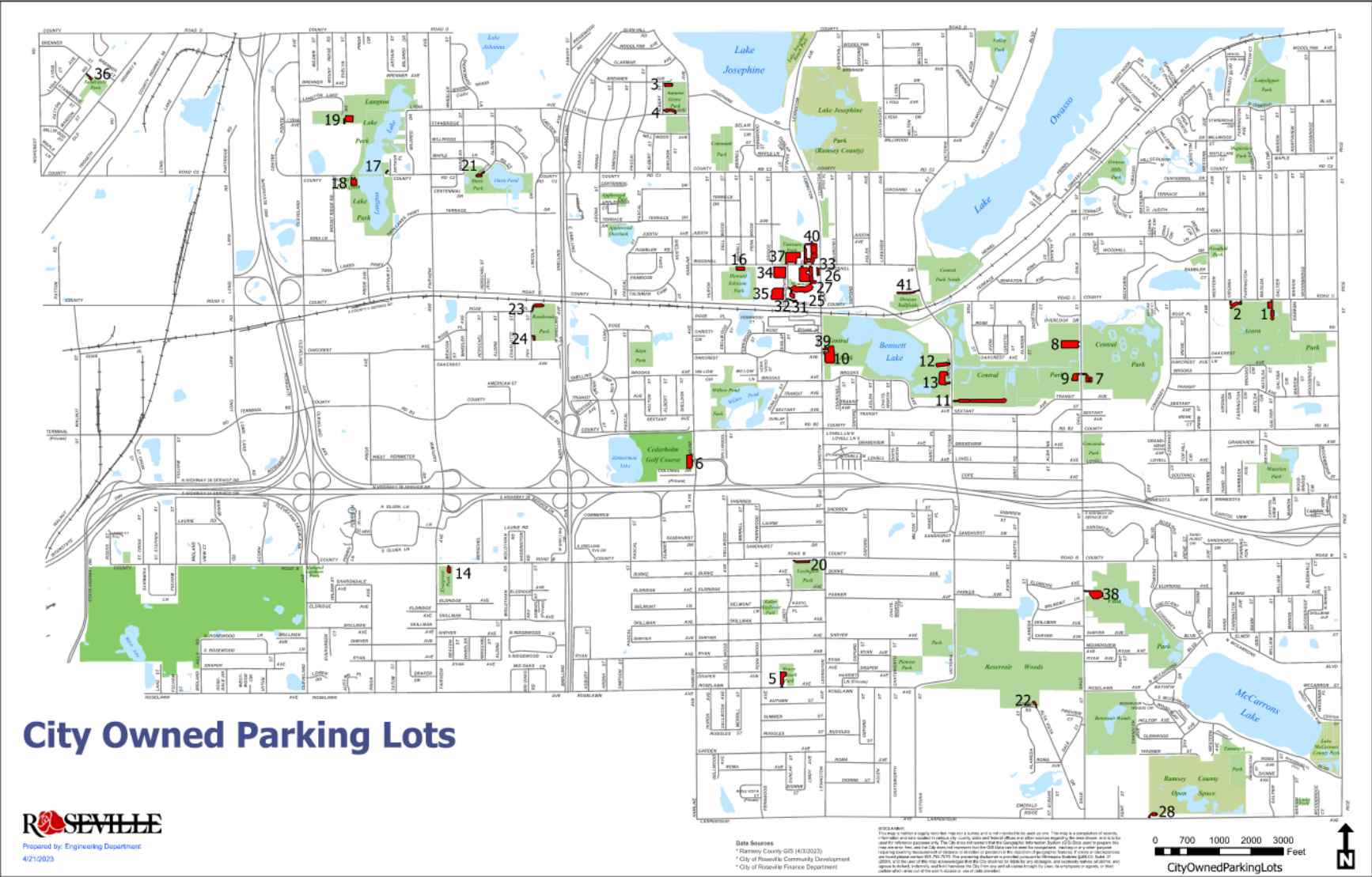
- 123.6 Miles of City Streets
 - 90.5 Local Roads
 - 33.1 MSA Roads
- 82.9 Miles of Pathways
 - 46.5 miles concrete sidewalk
 - 36.4 miles of bituminous pathway
- 38 Parking Lots
 - 900,839 SF



City Owned Parking Lots

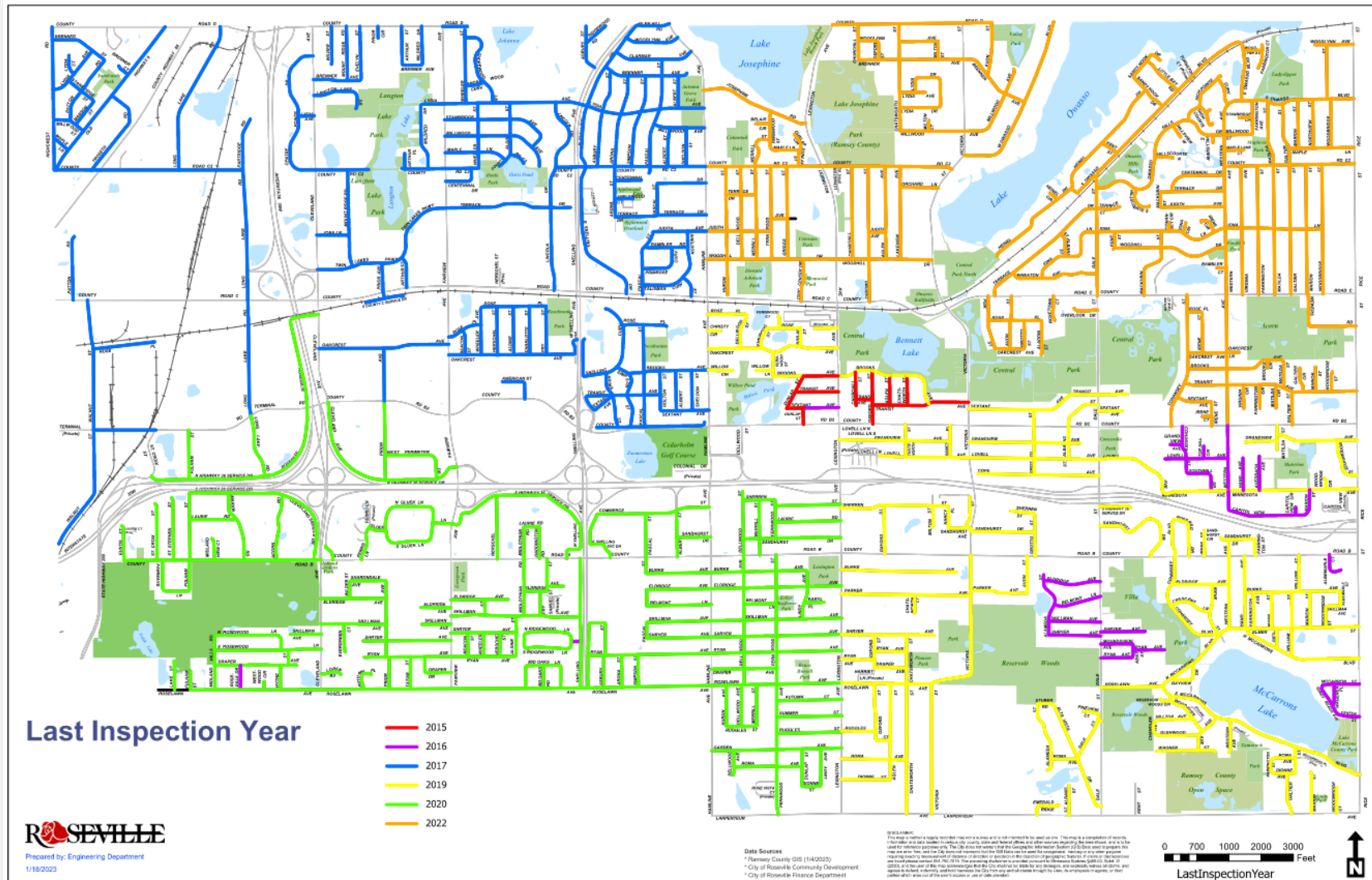
City Maintained Lots

- 38 Parking Lots
- 900,829 SF



Pavement Management

ICON



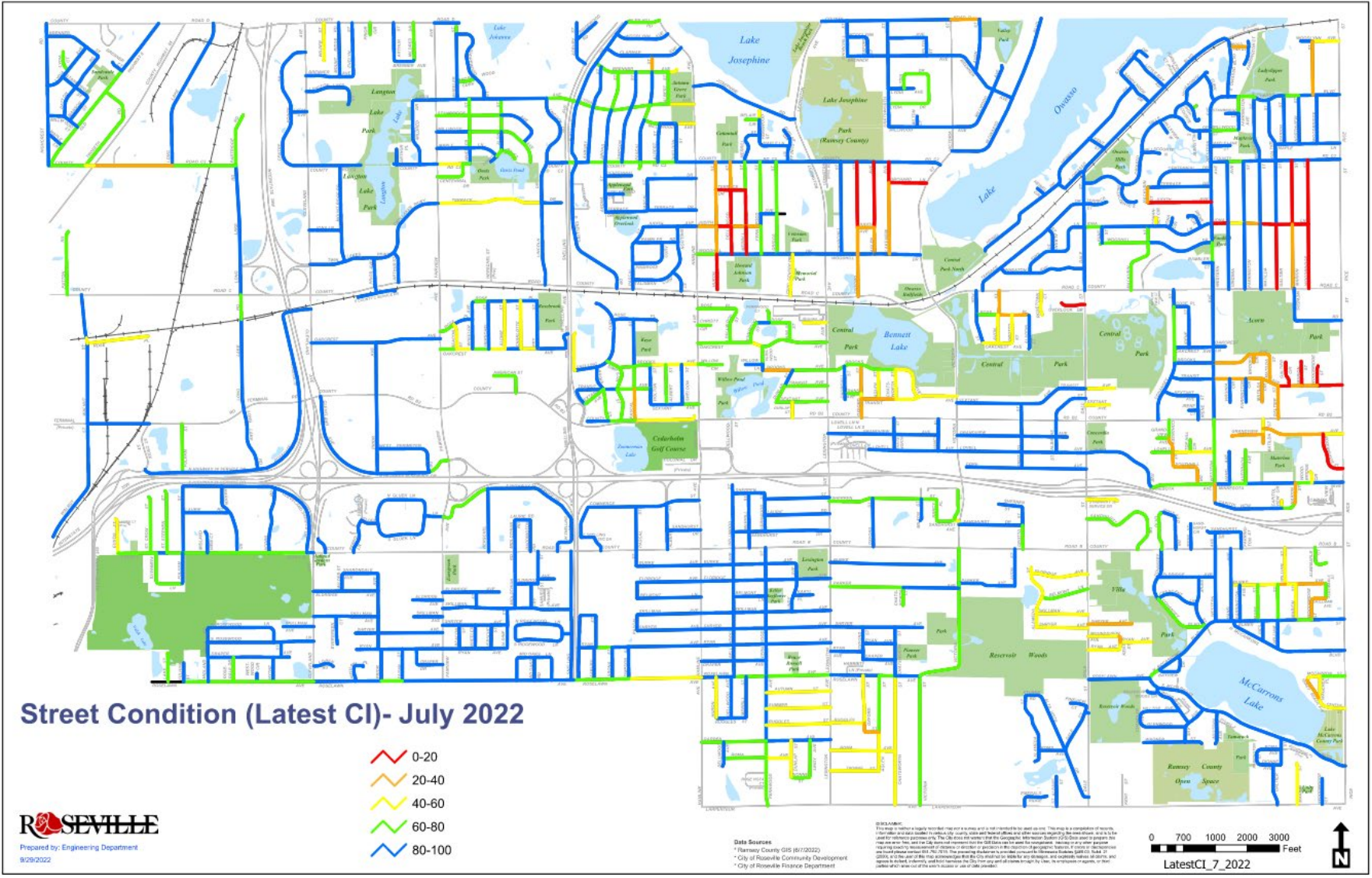
ICON Inspections

- Consultant rates 25% city annually
- Every 4 years we inspect all pathways
- Budget \$12,000 annually for inspections

Current Pavement Ratings

Pavement Ratings

- Scale of 0-100 (100 is new)

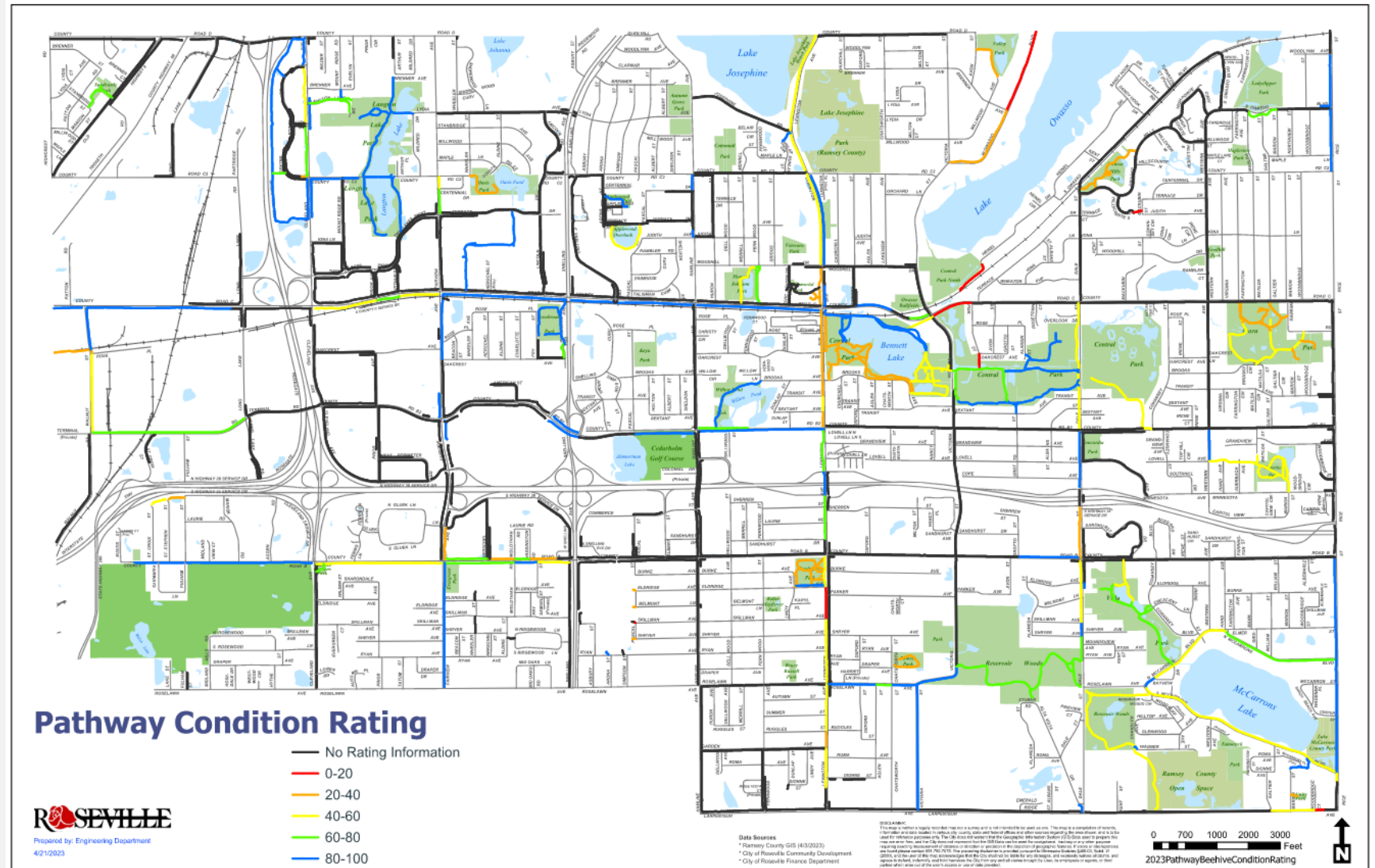


Pavement Management

Current Pathway Ratings

Pathway Ratings

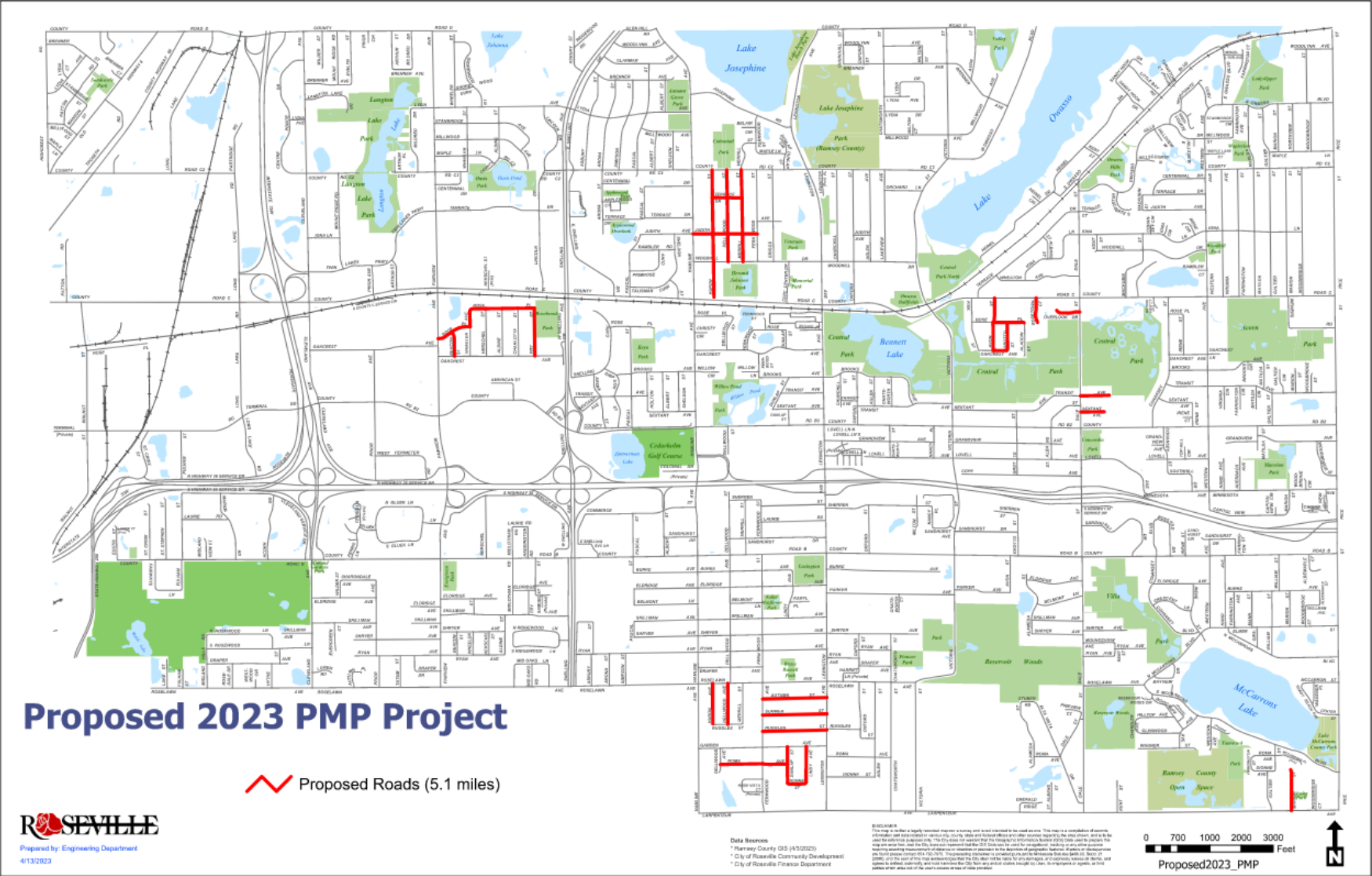
- Scale of 0-100 (100 is new)
- Rate every 4 year
- \$10,000 to do the entire system at once



Pavement Management

2023 Pavement Management Plan

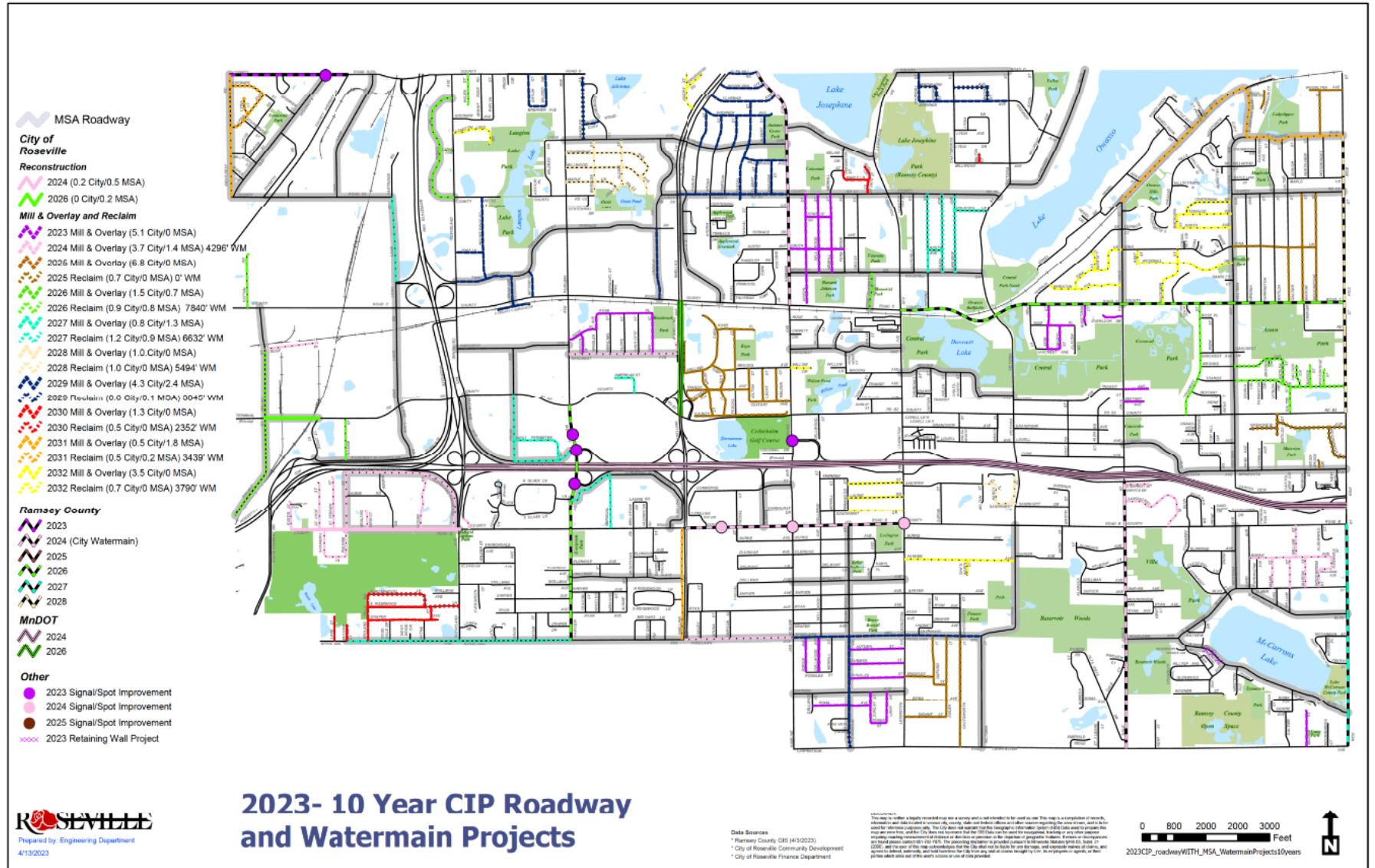
- 5.1 miles of local roads
- 0.0 mile of MSA



Pavement Management

10 Year CIP Pavement Management Plan

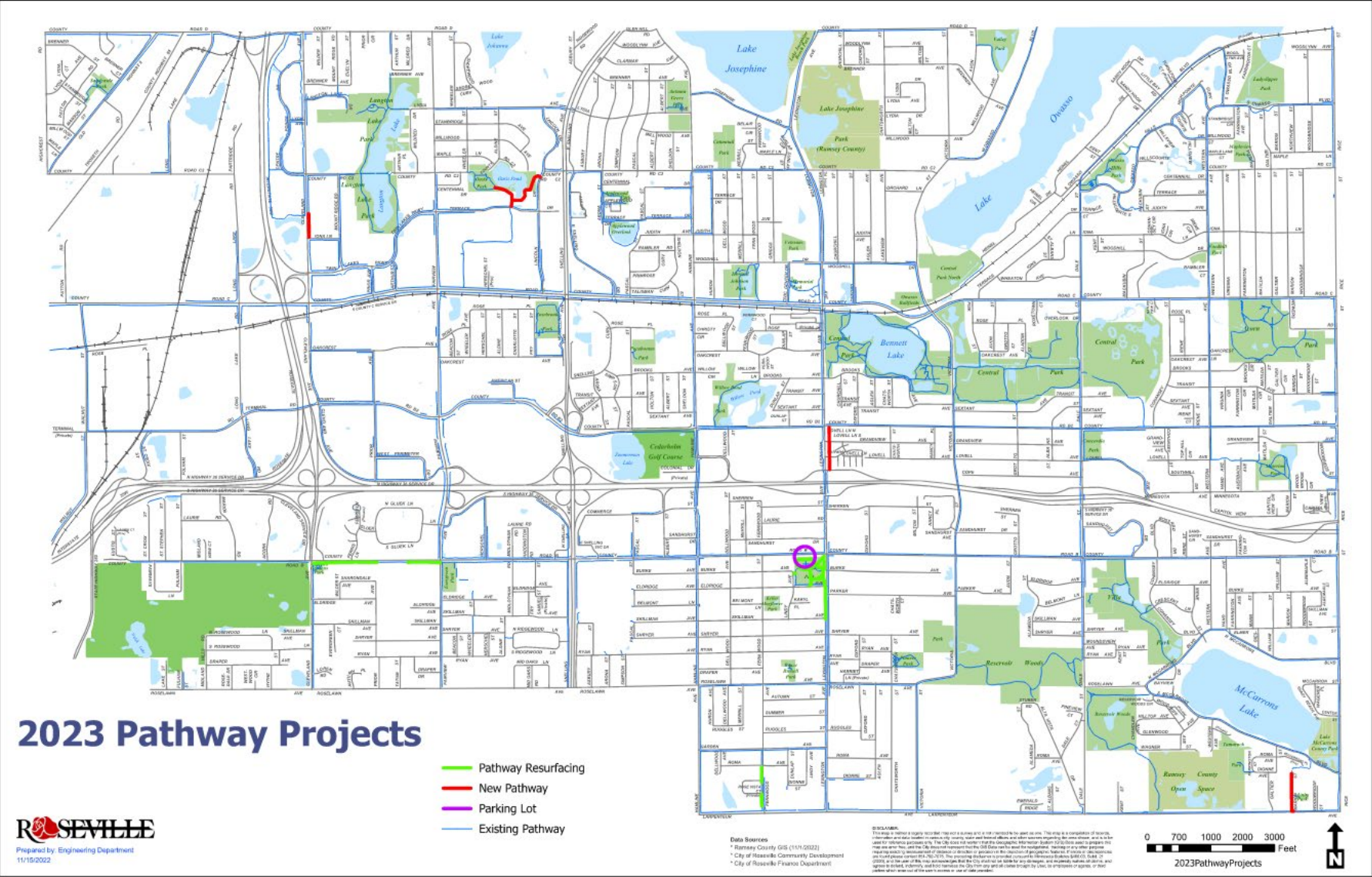
- Update annually on changing conditions
- Use ICON as a guide
- Get feedback from maintenance staff



Pavement Management

2023 Pathway Project Plan

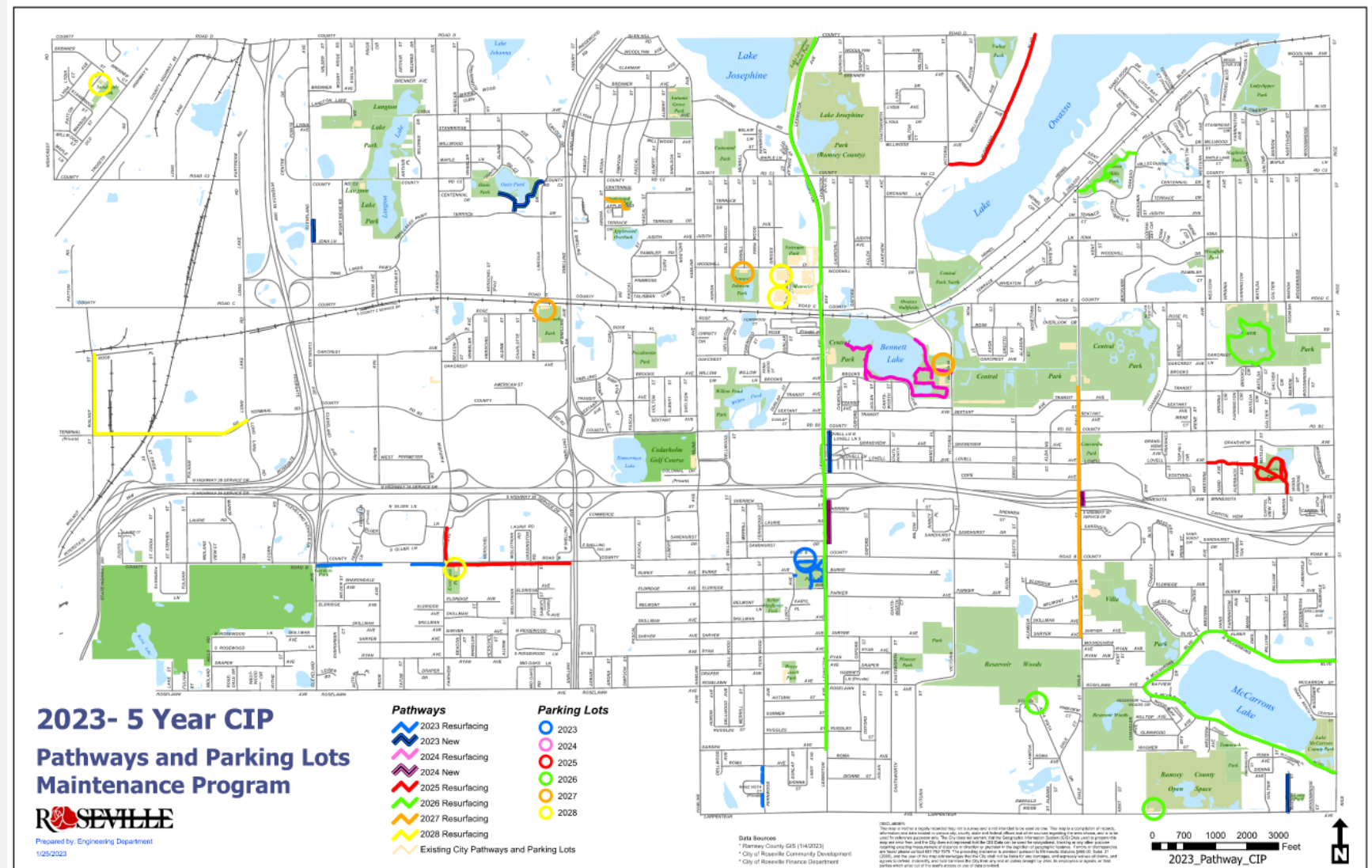
- 0.7 mile of new
- 1.6 miles of resurfacing



Pavement Management

5 Year Pathway/Parking Lot CIP

- Update annually on changing conditions
- Use ICON as a guide
- Get feedback from maintenance staff



Pavement Management

Maintenance - Sealcoats – No Longer Use

- Sealcoating – Installing a oil with a layer of rock on top of existing paving
- Goal
 - Add life into the pavement
 - Eliminate surface defects
- Historically seal coated roadways every 7-10 years.
- Quit seal coating in 2014 due to delamination (stripping of the top layer of asphalt)
 - Unknown causes but it reduced life of existing pavements
 - Some roads needed to be resurfaced 12-15 years instead of 20-25 years.



Pavement Management

Maintenance - Delamination Issues



Delamination Spray Patch Costs	
Project #	Total Cost
Dlam-10	\$3,500.00
Dlam-11	\$10,575.00
Dlam-12	\$12,900.00
Dlam-13	\$50,085.09
Dlam-14	\$62,887.13
Dlam-15	\$96,250.98
Dlam-16	\$97,093.28
Dlam-17	\$108,870.10
Dlam-18	\$51,895.85
Dlam-19	\$83,427.77
Dlam-20	\$32,664.74
Dlam-21	\$0.00
	\$610,149.94

Pavement Management

Maintenance - Delamination

City of Roseville

Reporting Dates All Dates

Project Cost Comparison Summary

Sorted by Project Number

Project Number / Name		Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Overhead Cost	Total Cost	Unit Costs	Completion Status/Active	
DLam-10	Spray Patch Pavement Delmaination -	\$915.57	\$111.00	\$0.00	\$0.00	\$0.00	\$1,026.57	\$0	Y	100% Y
DLam-11	Spray Patch Pavement Delmaination -	\$0.00	\$0.00	\$0.00	\$10,575.00	\$0.00	\$10,575.00	\$0	Y	100% Y
DLam-12	Spray Patch Pavement Delmaination -	\$0.00	\$0.00	\$0.00	\$12,900.00	\$0.00	\$12,900.00	\$0	Y	100% Y
DLam-13	Spray Patch Pavement Delamination -	\$24,542.29	\$12,651.80	\$0.00	\$12,891.00	\$0.00	\$50,085.09	\$0	Y	100% Y
DLam-14	Spray Patch Pavement Delamination -	\$29,855.33	\$21,661.00	\$11,370.80	\$0.00	\$0.00	\$62,887.13	\$0	Y	100% Y
DLam-15	Spray Patch Pavement Delamination -	\$46,329.39	\$36,801.25	\$13,120.34	\$0.00	\$0.00	\$96,250.98	\$0	Y	100% Y
DLam-16	Spray Patch Pavement Delamination -	\$47,066.75	\$37,663.00	\$12,363.53	\$0.00	\$0.00	\$97,093.28	\$0	Y	100% Y
DLam-17	Spray Patch Pavement Delamination -	\$54,350.10	\$40,535.00	\$13,985.00	\$0.00	\$0.00	\$108,870.10	\$0	Y	100% Y
DLam-18	Spray Patch Pavement Delamination -	\$23,393.28	\$17,876.50	\$10,626.07	\$0.00	\$0.00	\$51,895.85	\$0	Y	100% Y
DLam-19	Spray Patch Pavement Delamination -	\$40,173.97	\$28,979.00	\$14,274.80	\$0.00	\$0.00	\$83,427.77	\$0	Y	100% Y

Grand Total

\$266,626.68

\$75,740.54

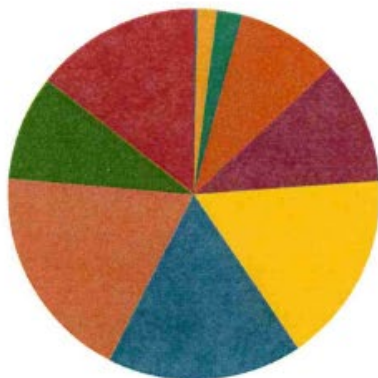
\$0.00

Projects: 10

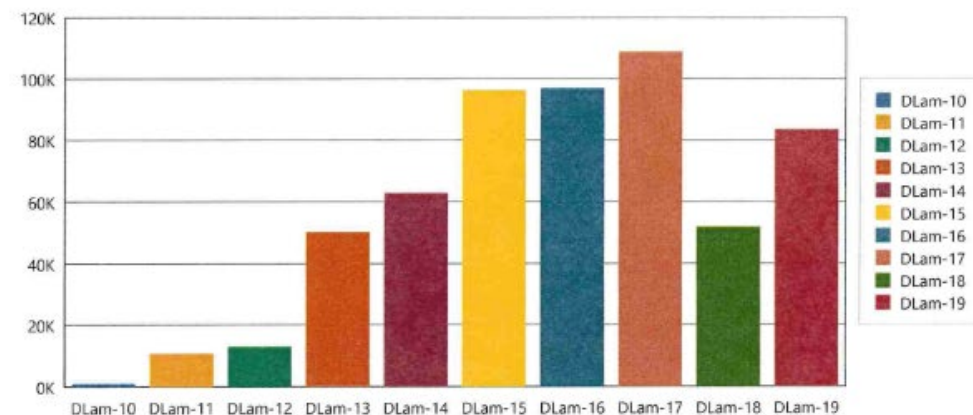
\$196,278.55

\$36,366.00

\$575,011.76



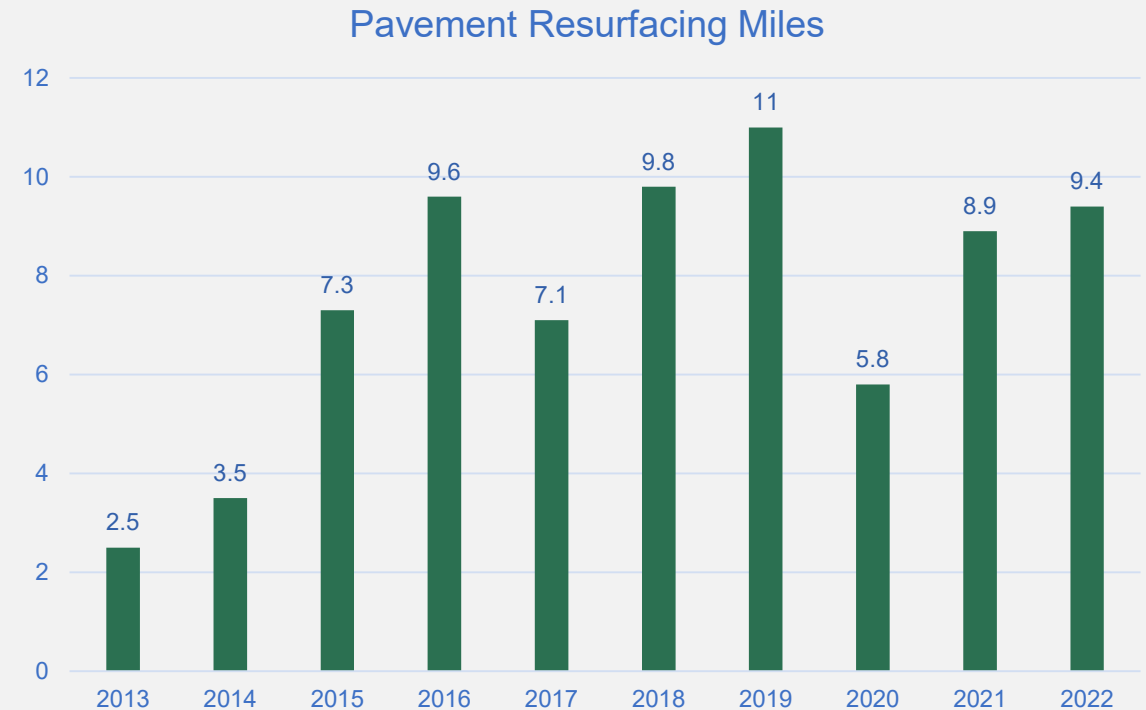
DLam-10	0.2%
DLam-11	1.8%
DLam-12	2.2%
DLam-13	8.7%
DLam-14	10.9%
DLam-15	16.7%
DLam-16	16.9%
DLam-17	18.9%
DLam-18	9.0%
DLam-19	14.5%
Total	100.0%



Pavement Management

Maintenance - Delamination

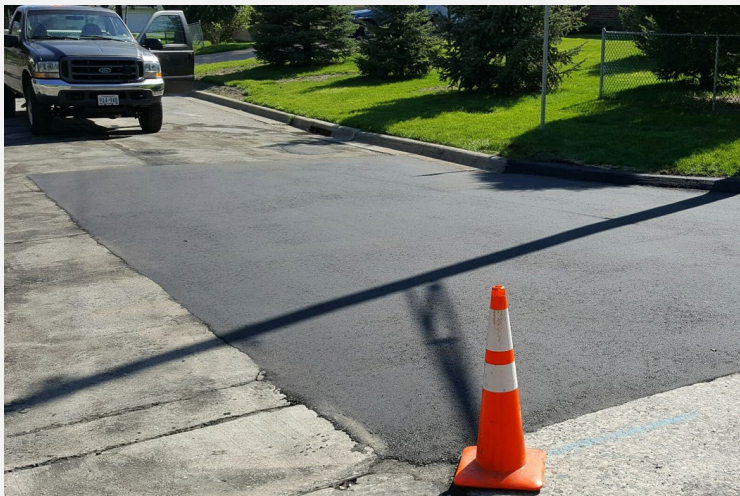
- Strategies to address delamination
 - Quit Sealcoating
 - Shifted seal coat funds to resurfacing
 - Increased street patching/spray patching
 - Prior to 2015 typically did 3-4 miles per year
 - Since 2015, averaged 8.5 miles per year



Pavement Management

Maintenance - Current

- Crack sealing
- Spray Patching
- Mill and Patch



Crack Sealing Summary

Year	Routed (LF)	Material used (lbs)
2019	58,888	22,050
2020	55,000	18,000
2021	70,398	27,720
2022	65,291	20,010

Total Asphalt Patching

Year	Total Cost
2013	
2014	\$40,456.49
2015	
2016	\$45,819.55
2017	\$55,524.48
2018	\$65,401.83
2019	\$77,889.62
2020	\$85,126.70
2021	\$68,724.28
2022	\$70,389.60
2023	\$3,491.73

Total Spray Patch Costs

Year	Total Cost
2014	
2015	
2016	
2017	\$18,780.32
2018	\$10,625.87
2019	\$13,344.42
2020	\$14,495.40
2021	
2022	\$12,156.69
2023	\$0.00

Pavement Management

Funding for Pavement Management - Annual

- Streets
 - Maintenance - \$146,500
 - Crack Seal \$25,500
 - Patching \$85,000
 - Misc \$36,000
 - CIP - \$1,550,000 – Local Roads
 - MSA Roads are additional funding
 - 2024 - \$775,000 into roadways
 - County Road B, west of Cleveland
- Parking Lot Pathway
 - CIP - \$200,000





Questions?

**Roseville Public Works, Environment and Transportation Commission
Agenda Item**

DATE: April 25, 2023

ITEM: 9.a.

ITEM DESCRIPTION: Future Agenda Items

Background

Recommendation

Set preliminary agenda items for the May 23, 2023 Public Works, Environment & Transportation Commission meeting.

Attachments

1. Future Agenda



Memo

To: Public Works Environmental and Transportation Commission Members

From: Jesse Freihammer, Public Works Director

Date: April 25, 2023

Re: Look Ahead Agenda Items/Next Meeting May 23, 2023

Suggested Items:

Looking Ahead:

- May 2023
 - Tour – Twin Lakes Parkway Area Improvements
- June 2023
 - MS4 Update
 - Sustainability Topic
 - Prep for Joint Council meeting in July
- Future Topics
 - Envision Roseville