

MIC Area Safety Action Plan

MIC and TAC

March 2024



Safe System Approach

Traditional approach =
Wait for serious crashes to
make changes

Systemic approach =
Identify risk factors,
proactively make changes



Safe System Approach

Principles

1. Death and Serious Injuries are Unacceptable
2. Humans Make Mistakes
3. Humans Are Vulnerable
4. Responsibility is Shared
5. Safety is Proactive
6. Redundancy is Crucial



MIC Safety Planning Work

Schedule: 2022 – 2024

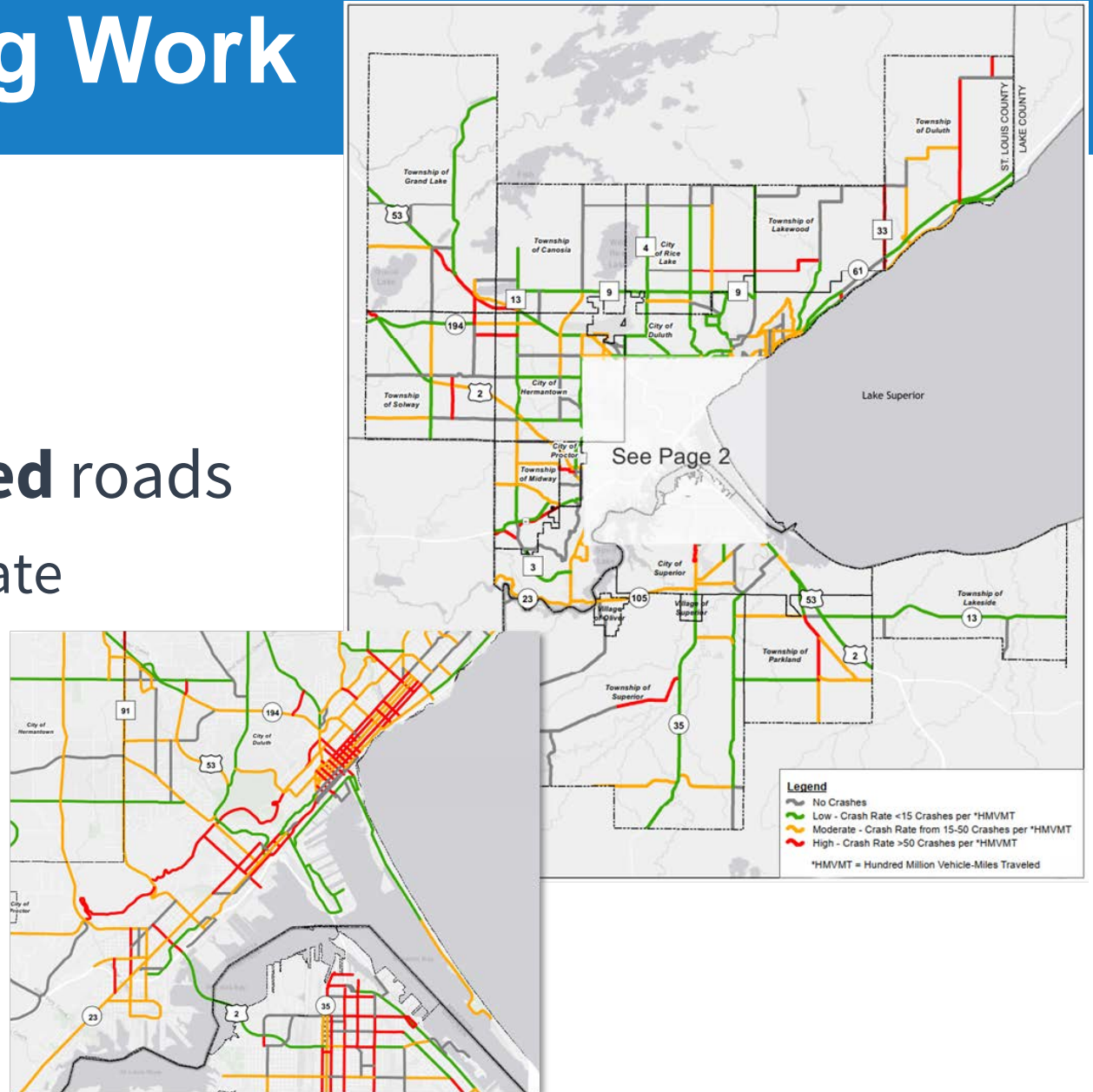
Objective: Prepare a multimodal safety analysis consistent with federal guidance

Who: Consultant (AECOM), MIC staff and advisory committee

MIC Safety Planning Work

Data Analysis – Step 1:


- Complete crash analysis for all **functionally-classified** roads
 - Low/Moderate/High Crash Rate




MIC Safety Planning Work

Data Analysis – Step 2:

- Identify **Safety Emphasis Areas** based on crash trends





Safety Emphasis Area 1: **AECOM**

Rural Two-Lane Undivided Roads
With Less Than 5,000 AADT
360 miles of roads within Study Area

MIC Safety Action Plan

Potential Risk Factors

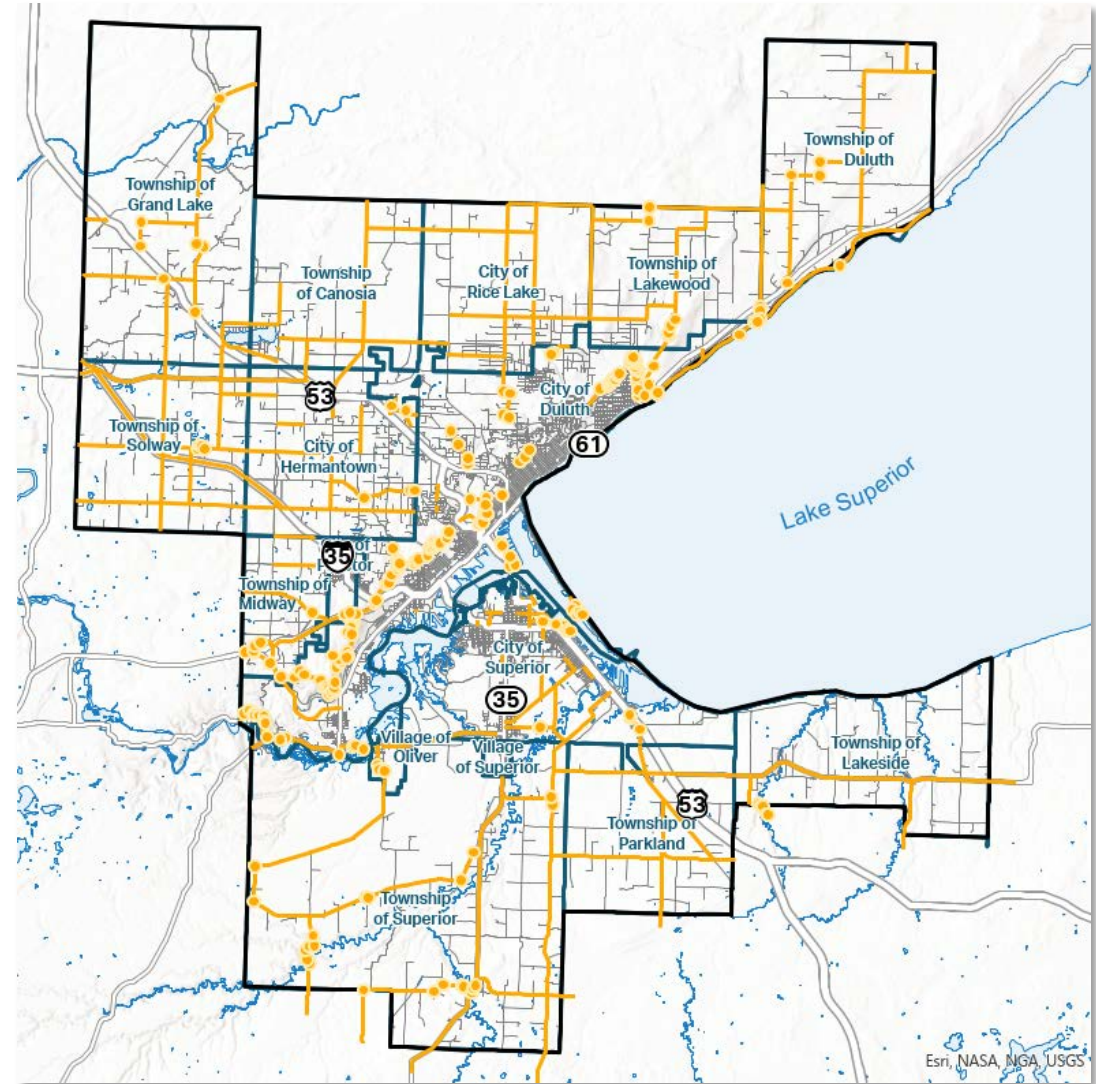
Risk Factor - Segments	At-Risk Criteria	Data Source	Anticipated Level of Effort	Include in Study?
Density of Lane Departure KAB Crashes	† >0.25 crashes per mile ★ >0.50 crashes per mile	Already Obtained	Low: AECOM to calculate crash rates by segment using only lane departure crashes, including head-on and sideswipe type crashes.	Yes
Curve Density	† >=1 curve/s per mile ★ >3 curves per mile	Stakeholders & AECOM	High: MnDOT and St. Louis County to provide existing data. Curve data will likely be collected in WI, likely by aerials/GIS, by AECOM.	Yes
Access Density (driveways, field entrances, unsignalized public streets)	† >5 & <12 ★ >11 & <18	AECOM	High: AECOM estimating on aerials. Distinguish between public vs. private.	Yes
Edge Risk Assessment & Shoulder/Surface Type (steep slopes, fixed objects in clear zone)	† No Paved Shoulder ★ No Paved shoulder & 1 Deficiency	AECOM	High: AECOM estimating on Aerials	Yes
Speed Limit	★ >=55 mph	Stakeholders	High: Stakeholders to provide speed limit data	Yes
Roadway Width (of thru travel lanes)	★ <24-feet	AECOM	High: AECOM estimating on Aerials	Yes
Presence of Edgeline and/or Centerline Rumble Strips	-	-	-	No Use as mitigation strategy
Presence of Edgeline and/or Centerline Pavement Markings	-	-	-	No Use as mitigation strategy
Risk Factor - Curves	Criteria	Data Source	Anticipated Level of Effort	Include in Study?
Occurrence of KAB Crashes on Curves	† >2 crashes per curve ★ >=5 crashes per curve	Stakeholders & AECOM	High: MnDOT and St. Louis County to provide existing data. Curve data will likely be collected in WI, likely by aerials/GIS, by AECOM. Calculate crash rates by curve.	Yes
Presence of Intersection on Curve or Visual Trap	† Visual Trap † Intersection on curve ★ Visual Trap & Int. on Curve	AECOM	Medium: AECOM estimating on aerials	Yes
Curve Radii	† 1,000-feet to 1,400-feet ★ 500-feet to 999-feet	AECOM	Very High: AECOM estimating on aerials/GIS	Yes
Horizontal Curve Speed Differential	† >5 mph ★ >10 mph	Stakeholders & AECOM	Very High: MnDOT and St. Louis County to provide existing data. Curve data will need to be collected in WI, likely by aerials/GIS. AECOM to estimate curve speed.	Yes
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***DISCLAIMER: Collecting Data from Aerials and Google streetview may result in inaccurate data

MIC Safety Planning Work

Safety Emphasis Area 1:

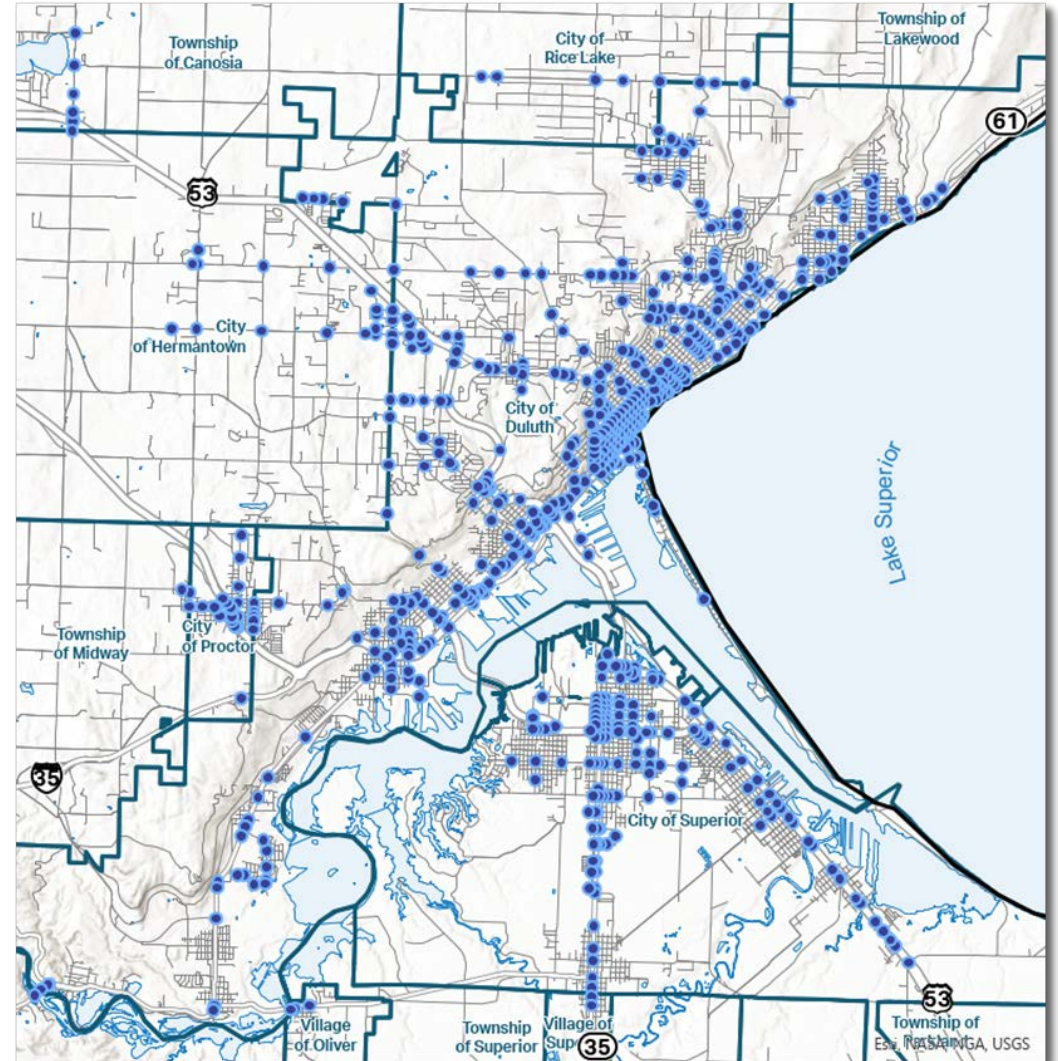
- Rural Two-Lane Undivided Roads (<5,000 AADT)
- 273 segments, 357 roadway miles
- 251 curves



MIC Safety Planning Work

Safety Emphasis Area 2:

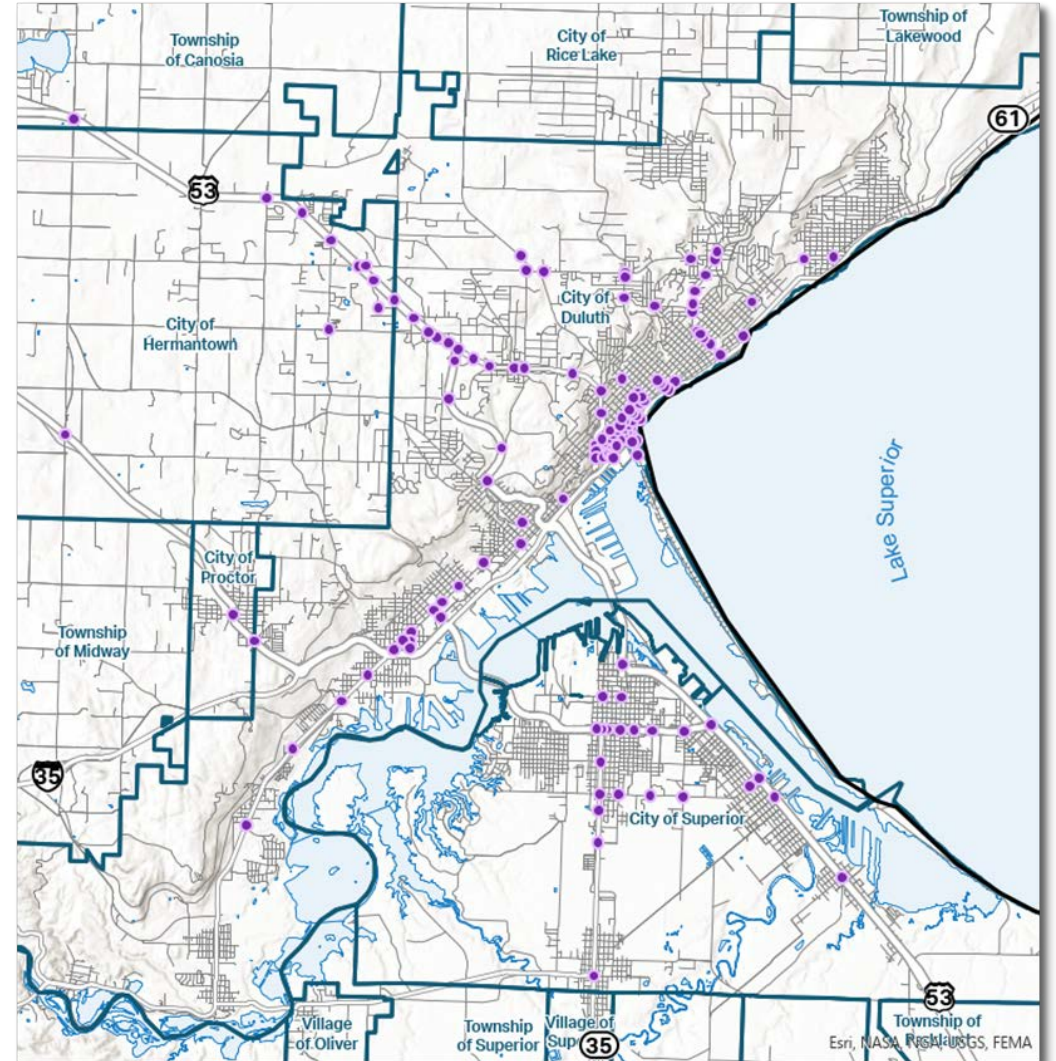
- Urban Intersections with Side-Road Stop Control
- 110 Intersections



MIC Safety Planning Work

Safety Emphasis Area 3:

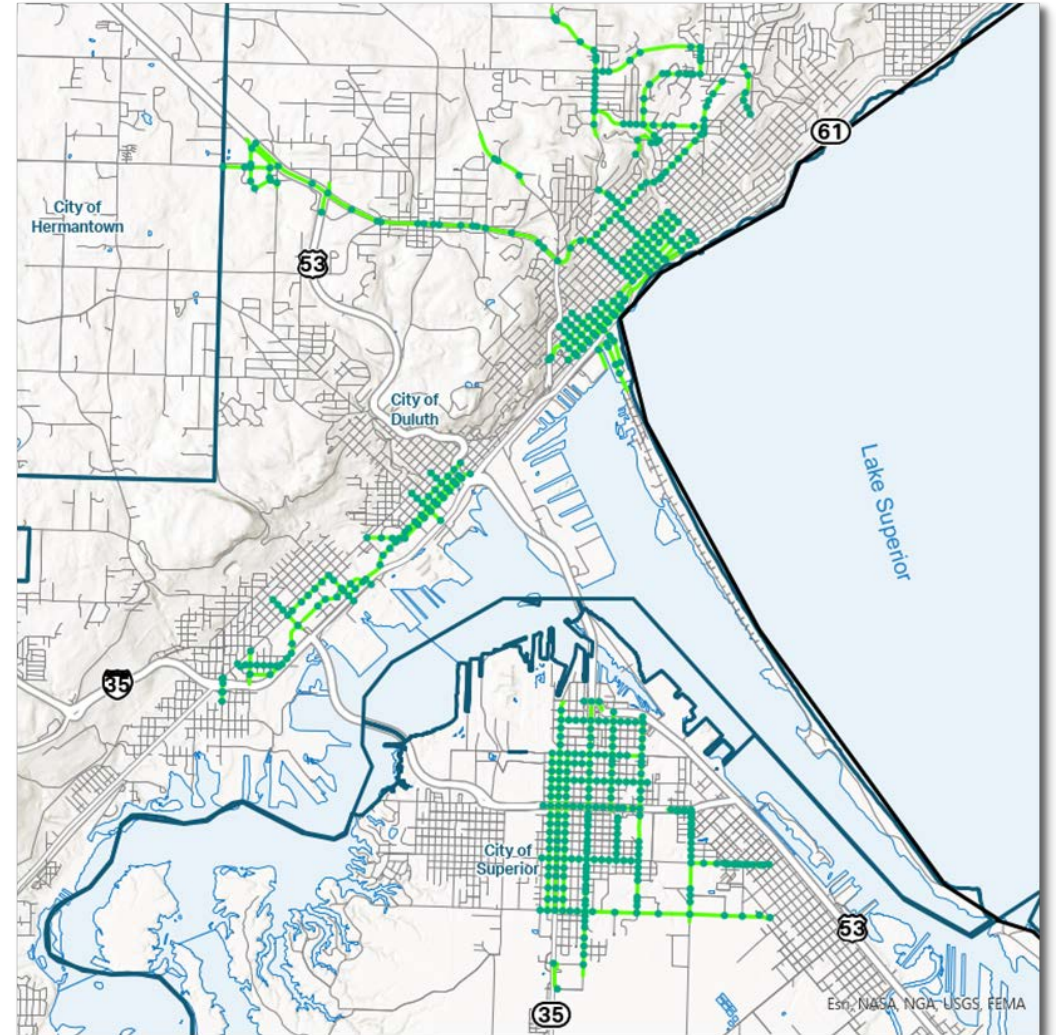
- Signalized Intersections on Multi-Lane Arterials
- 146 Intersections



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Safety Emphasis Area 4:

- Bicycle/Pedestrian Concerns at Urban Intersections
- 550 Intersections




MIC Safety Planning Work


Data Analysis – Step 2:

- Identify **Safety Emphasis Areas** based on crash trends

and

- Identify **Risk Factors** based on the context of each Safety Emphasis Area





Safety Emphasis Area 1: **AECOM**

Rural Two-Lane Undivided Roads
With Less Than 5,000 AADT
360 miles of roads within Study Area

Safety Emphasis Areas
MIC Safety Action Plan

Potential Risk Factors

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MIC Safety Planning Work

Next Steps – Safety Analysis

- Identify countermeasures
- Estimate costs
- Prioritize projects

Deliverable

- Final report detailing study methodology and results (Oct 2024)



The Systemic Safety Planning Process

Federal Safe Streets for All (SS4A) Grant Program

New Funding Mechanism (BIL)

- Established to support the Safe Systems approach
- \$5 billion to be appropriated over 5 years (2022-2026)

MIC SS4A Planning Grant Award *(FY2023 solicitation)*

- **\$250,000** – federal funds
 - \$62,500** – local match
 - \$312,500** – **Total Project Budget**
to produce a federally-compliant Safety Action Plan

MIC SS4A Grant Project

8 Required Elements – SS4A Safety Action Plan



Leadership and Goal Setting



Planning Structure



Safety Analysis



Engagement & Collaboration



Equity Considerations



Policy & Process Changes



Strategy & Project Selection



Progress & Transparency

MIC SS4A Grant Project

8 Required Elements – SS4A Safety Action Plan



Leadership and Goal Setting



Equity Considerations



Planning Structure



Policy & Process Changes



Safety Analysis



Strategy & Project Selection



Engagement & Collaboration



Progress & Transparency

- **MIC-funded work 2022-24 will satisfy these elements**

MIC SS4A Grant Project

Key Components – SS4A Safety Action Plan

1. Identify and Prioritize Needs

MIC - funded safety analysis work (2022-2024)



Two-part epoxy

MIC SS4A Grant Project

Key Components – SS4A Safety Action Plan

1. Identify and Prioritize Needs

MIC - funded safety analysis work (2022-2024)

2. Develop a Sustained Safety Culture

Federal SS4A-funded planning work (2025-2026)

- Influence how our community accepts and prioritizes transportation safety strategies



Two-part epoxy

MIC SS4A Grant Project

8 Required Elements – Safety Action Plan



Leadership & Goal Setting



Planning Structure



Safety Analysis



Engagement & Collaboration



Equity Considerations



Policy & Process Changes



Strategy & Project Selection



Progress & Transparency

- **The SS4A planning process will address these elements**

MIC SS4A Grant Project

Next Steps (*SS4A Advisory Committee*)

1. Revise the scope of work & reallocate the budget

- \$312,500 Total Project Budget
 - 3 elements all or mostly complete (safety analysis/project prioritization)
 - 5 elements remain (public engagement/policy/monitoring)
- Incorporate a Demonstration Project in revised scoping

2. Determine local match allocation (\$62,500)

- Jurisdictional contribution amounts -- how to divide

MIC Area Safety Action Plan

Questions? Comments?

Staff Contacts

Safety Analysis (MIC project)

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SS4A Plan (Federal project)

Rondi Watson
rwatson@ardc.org

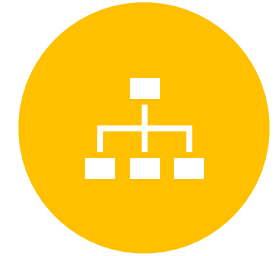
Developing an Ongoing Safety Culture



NEED TO CREATE AN ONGOING LEADERSHIP COMMITMENT AND GOAL SETTING



PARTNER JURISDICTIONS AND STAKEHOLDERS SHOULD BE ENGAGED



CHANGES IN POLICY AND/OR PROCESSES MAY BE APPROPRIATE



A MONITORING EFFORT SHOULD BE INCORPORATED

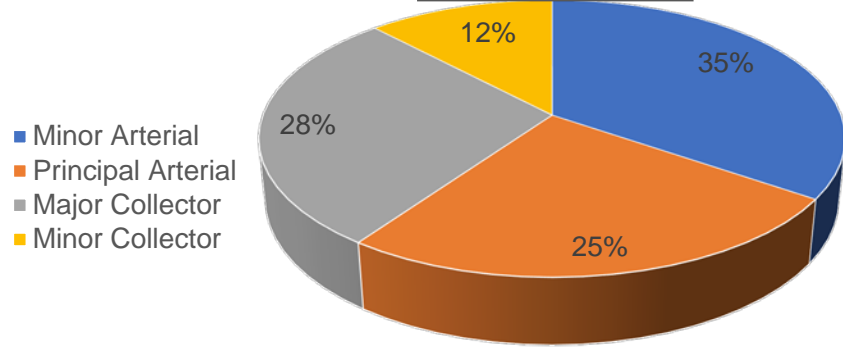


IMPLEMENTATION PROGRESS SHOULD BE MEASURED AND REPORTED

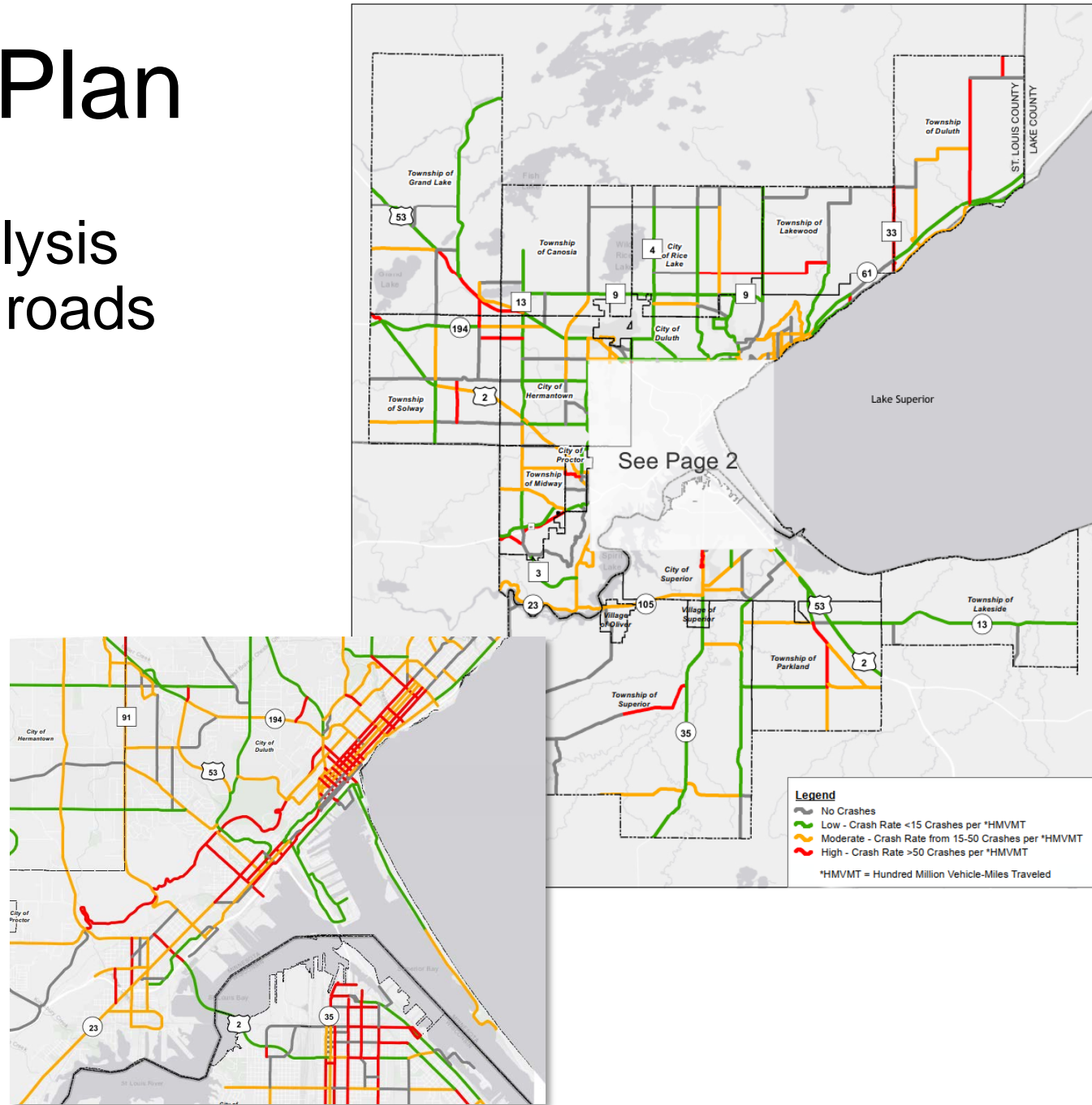
MIC Safety Action Plan

- Step 1: Complete crash analysis for all functionally-classified roads

KAB Crashes by Functional Classification



- Minor Arterial
- Principal Arterial
- Major Collector
- Minor Collector



Next Steps (continued)

- Develop action plan to address over representation categories: esp. low volume two lane roadways
- Evaluate intersection info to identify traffic controls that are associated with collisions and id corrective measures
- Evaluate segment collisions where no intersection is involved and identify corrective measures
- For ped/bike collisions, identify factors that could reduce the risk and program for implementation
- Identify funding opportunities and pursue them to fund project completion and plan implementation