

**Genesee County Metropolitan Planning Commission
Technical Advisory Committee (TAC)**

**Genesee County Administration Building
GCMPC Conference Room
1101 Beach Street, 2nd Floor
Flint, Michigan 48502**

**Thursday, June 6, 2019
1:30 P.M.**

A-G-E-N-D-A

- I. Call to Order
- II. Roll Call
- III. Minutes
 - ***A. Minutes of the May 2, 2019 Regular Meeting (attached)
- IV. Old Business
- V. New Business
 - ***A. FY 2017-2020 Transportation Improvement Program (TIP) Amendment #19 (handout)
 - B. MDOT Call for Highway Safety Improvement Safety Program (HSIP) projects, Highway Safety Improvement Program Streamlined Systemic Safety Program Projects, and Call for High Risk Rural Road (HRRR) projects (attached)
 - C. Draft FY 2020-2023 Transportation Improvement Program (TIP) Document and Air Quality Conformity Analysis (attached)
 - ***D. Congestion Management Process (CMP) for Genesee County (attached)
 - ***E. 2045 Long Range Transportation Plan Project Application (attached)
 - F. Genesee County Road Commission Projects Update (presentation)
- VI. Other Business
 - A. National Environmental Policy Act (NEPA) (discussion)

VII. Announcements

VIII. Adjournment

***** Action Item**

NEXT MEETING – July 11, 2019 at 1:30 P.M.

**TECHNICAL ADVISORY COMMITTEE MEETING
MINUTES
May 2, 2019**

The Technical Advisory Committee met at 1:30 p.m. on Thursday, May 2, 2019, in the Conference Room of the Genesee County Metropolitan Planning Commission (GCMPC), 1101 Beach Street, Room 223, Flint, Michigan.

I. **Call to Order** 

Vice-Chairperson Markland called the meeting to order at 1:30 p.m.

II. **Roll Call** 

Present: Alex Patsy, Andrea Schroeder, Brad Barrett, Chad Young, Derek Bradshaw, Don Mayle, Eric Johnston, Larry Green, Lynn Markland, Mark Adas, Michael Pifer, Robert Johnson, Shawnice Dorsey, Tim Elkins, and Trevor Block.

Absent/Excused: Aaron Dawson, Adam Zettel, Alex Patsy, Betty Wideman, Bob Slattery, Bonnie Mathis, Brian Saad, Chris Gehringer, Craig Williams, Curtis Armstrong, Dave Miller, David Dorr, Ed Benning, Emily Alexander, Eric Weiderhold, Fred Peivandi, Frederick Thorsby, Gary Stevens, Jay Reithel, Joseph Madore, Joseph Medici, Joseph Rizk, Karen Miller, Karyn Miller, Mark Emmendorfer, Mary Ann Price, Neil Rankin, Paul Fortino, Paul Zelenak, Sam Stiff, Scott Bennett, Steven Furh, Teresa Onica, Tom Svrcek, Vicki Fishell, and Wendy Jean-Buhrer.

Others Present: Lane Masoud, Jason Nordberg, Jacob Maurer, Zachary Sompels, and Debby Compton.

III. **Minutes** 

***A. **Minutes of the April 4, 2019 Regular Meeting**

Motion: Action: Approve, **moved by** Robert Johnson, **supported by** Andrea Schroeder, to approve the minutes of the April 4, 2019 regular meeting as presented.

Motion carried unanimously.

IV. **Old Business** 

A. **FY 2020-2023 Transportation Improvement Program (TIP) Development Update**

Jason Nordberg stated that staff held several Input Sessions during the week. Staff appreciates everyone for coming out and providing support and talking about the projects. Discussion ensued.

Brad Barrett thanked the staff for their support.

Derek Bradshaw stated that the Input Sessions were not as big of a turn-out as they usually are. People are submitting questions and comments via email as opposed to coming to the meetings.

Derek Bradshaw mentioned that NBC did a nice article on the roundabout in Grand Blanc.

***B. **FY 2020 Unified Work Program (UWP)** 

Jason Nordberg advised the committee that this outlines all the different activities that staff will be doing over the upcoming year. Staff did not receive any comments or ideas for UWP work items. Staff is finishing up the Long Range Transportation Plan. The new Transportation Improvement Program (TIP) will be in place, so staff will be moving forward with that. This year staff will be working on a roundabout study with a consultant.

Motion: Action: Approve, **moved by** Eric Johnston, **supported by** Michael Pifer, to recommend approval to the Metropolitan Alliance for the FY 2020 Unified Work Program.

Motion carried unanimously.

V. **New Business** 

***A. **FY 2017-2020 Transportation Improvement Program (TIP) Amendment #18**

Jacob Maurer stated that staff has a handout available as the amendment was revised after the agenda packet went out to the committee. This amendment changes two (2) projects and deletes eight (8) projects. This amendment meets the financial constraints of the TIP and will have no disproportionately high or adverse impacts to any of the identified Environmental Justice (EJ) populations in Genesee County. The projects that are being amended are eligible for the funding programmed, and they meet the intended state (including State TEDF Category C) and federal goals and objectives identified for the funding. Staff has reviewed these projects and has determined that they are exempt from Air Quality analysis. The Interagency Work Group (IAWG) will review the list of projects for this amendment to provide concurrence with staff's determination that these projects are exempt from Air Quality analysis. Staff is recommending endorsement of Amendment #18 to the FY 2017-2020 Transportation Improvement Program (TIP) to the Genesee County Metropolitan Alliance.

Motion: Action: Approve, **moved by** Robert Johnson, **supported by** Eric Johnston, to recommend endorsement to the Genesee County Metropolitan Alliance for the FY 2017-2020 Transportation Improvement Program (TIP) Amendment #18.

Motion carried unanimously.

B. **MDOT Projects Presentation** 

Trevor Block, Cost & Scheduling Engineer, Michigan Department of Transportation (MDOT), presented an MDOT 2019 to 2022 Projects Update PowerPoint presentation to the committee. Discussion ensued.

VI. **Other Business** 

***A. **Election of Officers**

Jason Nordberg stated that the Election Committee met after the last meeting in April to discuss the election of officers. Currently the officers rotate each year between the Small Cities/Villages Representative, Genesee County Road Commission, Large Cities and the Mass Transportation Authority with one being Chair, Vice-Chair, Secretary and one on a Bye. The Election Committee is proposing continuing the current rotation of officers for another year.

Motion: Action: Approve, **moved by** Brad Barrett, **supported by** Andrea Schroeder, to approve the recommendation of the Election Committee and continue the rotation of officers as presented.

- Chairperson, Small Cities/Villages, Lynn Markland
- Vice-Chairperson, Genesee County Road Commission, Eric Johnston
- Secretary, Large Cities, Bob Slattery
- Bye, Mass Transportation Authority, Ed Benning.

Motion carried unanimously.

VII. **Announcements** 

A. **Genesee County Recycle Day – Saturday, June 8th**

Derek Bradshaw announced the Visioning Summit that is being held on Tuesday, May 14th. This is a partnership project between the Flint & Genesee Chamber of Commerce, Genesee County and the City of Flint.

Derek Bradshaw reminded the committee about the Recycle Day free event taking place on Saturday, June 8th at the Fenton High School.

Derek Bradshaw stated that staff appreciates everyone for rotating the chair and vice-chair positions. That is not something a lot of Technical Advisory Committees do throughout the state. Mr. Bradshaw thanked the committee for their participation.

Jason Nordberg announced there will be a Transportation Listening Session following this meeting. The topic will be local funding on the roads. Staff appreciates everyone that can stick around for about an hour for this session.

VIII. **Adjournment** 

Vice-Chairperson Markland advised that the next TAC meeting will be held on June 6, 2019 at 1:30 p.m.

Vice-Chairperson Markland adjourned the meeting at 2:08 p.m.

Respectfully submitted,
Debby Compton, Secretary
Genesee County Metropolitan Planning Commission

DRAFT

MEMORANDUM

TO: Members of the Technical Advisory Committee

FROM: Zachary Sompels, Planner
Genesee County Metropolitan Planning Commission

DATE: June 6, 2019

SUBJECT: FY 2021 Call for Safety & High-Risk Rural Road (HRRR) Projects

The Michigan Department of Transportation (MDOT) has released multiple calls for projects - a Call for Highway Safety Improvement Safety Program (HSIP) projects, Highway Safety Improvement Program Streamlined Systemic Safety Program projects, and Call for High Risk Rural Road (HRRR) projects to all local road agencies for the 2021 fiscal year. Your organization should have received information detailing the qualifications for funding and the criteria by which applications will be judged. We have included copies of both letters for your reference. MDOT is requesting that project applications be submitted to their office by **Monday, August 5, 2019**.

In order to have time to review and endorse the applications we are asking that you submit a copy of your application (including the corresponding UD-10 forms) to our office by **Monday, July 29, 2019**. These may be emailed to me at ZSompels@co.genesee.mi.us. Applications will be ranked using the MDOT Time-of-Return Analysis, and a resolution prioritizing and endorsing the submitted projects will be sent to MDOT.

Since FY 2019, project locations that are identified in the Regional Traffic Safety Plan will be given higher priority during MDOT's review of project applications. A listing of segments and intersections identified as having a safety deficiency can be found attached with this letter. This list, the Regional Traffic Safety Plan, and other safety resources can also be found online at the following link: <http://www.gcmpc.org/safety/>

If you need any assistance with selecting safety projects or have questions about the application process, please contact me at (810) 766-6564 or ZSompels@co.genesee.mi.us.



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

GRETCHEN WHITMER
GOVERNOR

PAUL C. AJEGBA
DIRECTOR

May 6, 2019

Ms. Denise Donohue, Director
County Road Association of Michigan
417 Seymour, Suite 1
Lansing, Michigan 48933

Mr. John LaMacchia II, Legislative Associate
Michigan Municipal League
208 North Capitol Avenue, 1st Floor
Lansing, Michigan 48933-1354

Dear Ms. Donohue and Mr. LaMacchia:

Fiscal Year 2021 Federal Local Highway Safety Improvement Program Safety Program

The Michigan Department of Transportation (MDOT) is pleased to announce the solicitation of new applications for the fiscal year (FY) 2021 general Local Safety Program. The FY 2021 federal budget for this program is estimated at \$7,500,000. This amount may be subject to revisions. Unselected FY 2021 High Risk Rural Road (HRRR) projects will automatically be included in this Call. We are asking the County Road Association of Michigan and the Michigan Municipal League to distribute this notice to their member agencies.

Local Agencies may submit more than one project application for consideration. Federal safety funds shall not exceed \$600,000 per Highway Safety Improvement Program (HSIP) project or a maximum amount of \$2,000,000 per Local Agency (HSIP and HRRR combined) for the fiscal year. Selected projects are to be obligated in FY 2021.

Applications are to be electronically submitted or postmarked by Monday, August 5, 2019.

Refer to the enclosed Exhibits for information regarding eligibility and submitting candidate Safety Project Applications. An agency wishing to submit a systemic horizontal curve delineation, rumble strip, edge line pavement marking, signal backplates, or stop controlled intersection sign upgrade project is encouraged to use the HSIP Systemic Streamlined Application.

Our goal is to maintain a fiscally constrained program while maximizing the use of available federal funds. If you have any questions, please feel free to contact Pamela Blazo, Safety Programs Engineer, at (517) 335-2224 or at BlazoP@Michigan.gov.

Sincerely,

Tracie J. Leix
for Larry Doyle, Administrator
Development Services Division

Enclosures

cc: L. Doyle D. Morena, FHWA County Road Association Michigan Municipal League
T. Leix Rural Task Forces Region Engineers TSC Managers
MPO's

Exhibit 1 –Project Eligibility Requirements

1. Projects may be located in a rural or urban designated area.
2. All locally controlled public roadways, regardless of National Functional Classification, are eligible.
3. The applicant must be an Act 51 agency (County, City, Village). Townships will need to work with their County for submittal.
4. Project Examples
 - Corridor wide or systemic projects. [Systemic projects for shoulder and center line rumble strips, curve delineation, edgeline pavement markings, signal backplates, and stop-controlled intersection sign upgrades should be submitted using the separate HSIP Systemic Streamlined Application.]
 - High Friction Surface applications at spot locations
 - Elimination or installation of new guardrail
 - Slope flattening
 - Removal of fixed objects
 - Traffic and pedestrian signal optimization, installation, and upgrades
 - Access management
 - Intersection safety improvements (lighting, stopping sight distance, clear vision corners)
 - Horizontal and vertical curve modifications
 - Sight distance improvements
 - Bridge railing replacement or retrofit
 - Mid-block pedestrian crossings; improvements to school zones
 - Projects from a Local (Regional) Road Safety Plan priority emphasis area

This list is not all inclusive and other types of safety improvement projects can be submitted for consideration. The Safety Program Financial Goals allow for the submittal of systemic projects. Systemic safety projects involve the use of countermeasures that are widely implemented (corridor or area wide) based on similar roadway or intersection features that correlate with particular K/A crash types.

Exhibit 2 – Financial Goals

Project Type¹	Total Program
Projects with scopes that directly correct areas with a concentration of Types "A" and "K" crashes	\$5,000,000
Project locations corresponding to High Priority locations in the area's Regional (Local) Traffic Safety Plan (RTSP) ²	\$3,000,000
Safety Edge	\$500,000
Non-motorized facility/Pedestrian improvements	\$500,000
High Friction Surface	\$500,000
Road Safety Audits (RSA)	\$50,000
Guardrail Upgrades and Clear Zone Improvements ³	\$750,000
Safety Funds per MDOT Region	\$350,000

1. A selected project may count towards multiple financial goals.
2. Copies of the Regional (Local) Traffic Safety Plan for your area may be obtained by contacting your Regional Planning Agency or by contacting MDOT at blazop@michigan.gov or 517-335-2224.
3. The intent of the Guardrail financial goal is for projects installing guardrail when none currently exists, upgrading terminal endings, or removing existing guardrail by flattening slopes. It is not intended to be used for replacing existing damaged guardrail as this is considered a maintenance item.

Exhibit 3 – Funding Participation

- Construction will be funded at 80 percent federal funds and 20 percent local funds unless it meets one of the categories below. See the following page regarding funding percentages for Preliminary Engineering (if eligible).
 - If the project scope addresses a roadway feature related to a fatality (K) and/or an incapacitating (A) injury within the limits of proposed work, it will be funded at 90 percent federal funds and 10 percent local funds.
 - If it is an approved systemic project (that supports the State Strategic Highway Safety Plan), it will be funded at 90 percent federal funds and 10 percent local funds.

- Portion eligible for federal aid:
 - Project’s Construction Phase (‘A’ Phase.)
 - Preliminary Engineering, **ONLY** if criteria of Preliminary Engineering Section outlined below is met.

- Portion not eligible for federal aid:
 - Right-of-way costs.
 - Preliminary engineering, unless criteria of Preliminary Engineering Section outlined below is met.
 - Construction engineering.
 - Decorative items, not safety related in nature.

- Selected projects will be ‘Lump Summed’ at the lesser of the original estimate plus \$20,000, or the original estimate plus 20 percent. Projects may, at MDOT’s discretion, be funded by a “Pro-Rata” method.

- Projects will be let by MDOT or performed by Local Force Account, as approved by MDOT’s Local Agency Program (LAP) office: information found at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Force Account and Local Agency Reimbursement System (LARS) Information.

- All social, economic and environmental impacts within the project limits impacts must be mitigated before federal funds can be obligated. Project applications which are expected to have significant public controversy and/or require an environmental assessment will not be considered until these outstanding issues have been resolved.

- Local Agencies within Metropolitan Planning Organization (MPO) areas must coordinate with their MPO to ensure inclusion of their project in the area’s Transportation Improvement Program for the fiscal year for which the project was selected. LAP will supply a list of selected projects to the MDOT Planning group, but it is the local agency’s responsibility to ensure these projects are included in the State Transportation Improvement Program.

Preliminary Engineering (up to 10% of the estimated eligible construction costs)

Preliminary engineering for selected safety projects may be programmed for one or more of the following:

- Transparency (5 percent) location (funded at 90 percent federal funds/10 percent local funds)
 - Identified in the 2010 through 2015 Transparency (5%) Reports.
 - Proposed scope of work must address the noted location deficiencies.
 - Projects that are on the Transparency (5%) Report must be clearly identified and a copy of the 5% report included with the application.

- MDOT Local Safety Initiative (LSI) identified location (funded at 50 percent federal funds/50 percent local funds)
 - Proposed scope of work must address the noted location deficiencies reviewed and identified by the LSI Program.
 - A copy of the MDOT LSI written suggestion list must be included with application.

- Traffic Signal Optimization (funded at 80 percent federal funds/20 percent local funds)
 - Must complete a traffic signal optimization study to analyze the timing of signal controllers and implement the revised timings.
 - Signals should be studied to allow for a minimum of one second all red phase and the yellow change interval phase must be evaluated to meet current guidelines.
 - A maximum of \$5,000 total cost will be allowed per signal location for the analysis and adjustment of signal controllers.
 - Signal component upgrades are not permitted under this category.
 - The analysis/study portion of the project will be programmed under a 'PE' Phase with the physical adjustments of timing being programmed under an 'CON' Phase.

- Road Safety Audits (RSAs) (funded at 80 percent federal funds/20 percent local funds)
 - An RSA proposal may be submitted without an associated construction phase. It is anticipated that the construction phase would be submitted in the next call for projects.
 - A maximum of \$20,000 in total project costs will be set up for each RSA.
 - The RSA Final Report/findings must be submitted to the Safety Program Administrator for reimbursement.
 - It is anticipated that this work will be completed by a consultant or another agency other than the road owner.

Exhibit 4 – Design Requirements

- Proposed projects must meet current standards and warrants, current Americans with Disabilities Act and Buy America requirements.
- Designed in accordance, at a minimum, with MDOT's Local Agency Programs 3R Guidelines, or in accordance with 4R Guidelines, American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, or the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads Standards. Use of the Capital Preventative Maintenance guidelines and fixes will not be permitted.
- Traffic signal upgrade projects must install a box span configuration (unless justification is provided) and shall include the installation of signal back plates with reflectorized borders. These projects shall also include overhead mounted street name signs.
- High friction surface projects shall use or follow the intent/material requirements of the most current MDOT Special Provision.
- Corridor (or local agency-wide) permanent signing or pavement marking projects must be of a higher standard than the minimums required by the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) and/or standards. These type projects shall include additional signing improvements beyond upgrading sign reflectivity requirements; i.e., adding reflective sheeting to sign posts, larger signs, etc. Permanent pavement markings shall include improvements such as edgelines where not required by MMUTCD, being recessed or high quality 'durable' markings.
- Any new guardrail or guardrail endings installed must be compliant with the Manual for Assessing Safety Hardware 2016 (MASH-16).
- Culvert end treatments for any newly installed culverts must meet Table 5-1 of the MDOT Drainage Manual. Any new longitudinal culverts installed must have a minimum 1:6 slope from the top of the pipe to the roadway/driveway surface.

Exhibit 5 - Submitting Candidate Safety Project Applications (Electronic submittal is preferred)

Applications submitted electronically must be received no later than midnight on **Monday, August 5, 2019**.

- The Local Safety Program Call for Applications Funding Year 2021 Electronic Submittal Form can be found online at [MDOT LAP - Safety Program](#) in the Application Process section of the page Electronic submittals are limited to 15MB.

Applications sent hardcopy must be postmarked no later than **Monday, August 5, 2019**.

- Projects postmarked after Monday, August 5, 2019 may or may not be reviewed for selection, at MDOT's discretion.
- It is recommended that your application be submitted by certified mail or other traceable delivery service.

Applications are reviewed and selected by a committee. The six required submittal documents are listed below. All MDOT forms and spreadsheets mentioned can be found online at [MDOT LAP - Safety Program](#) in the Application Process section of the page.

1. Cover Letter
 - Provide a brief overview discussion as to the proposed project, crash pattern that has been experienced, and how the proposed scope of work will remedy the past crash history.
2. MDOT Form 1627
3. MDOT Time of Return (TOR) Analysis*
 - Only the MDOT TOR spreadsheet or HSM spreadsheet will be accepted*.
 - ◆ If submitting electronically, attach the excel file to your application.
 - ◆ For hardcopy applications, a copy of all pages that contain user-inputted data and results generated must be included in the application submittal.
 - Guardrail oriented projects and independent RSA submittals do not require a TOR analysis.
 - Common Crash Reduction Factors (CRF) are listed in the TOR Spreadsheet
 - ◆ Additional CRFs may be used. If submitting a TOR utilizing a CRF not listed on the TOR form, include a copy of the source used to obtain the CRF.
 - Highway Safety Manual Analysis*
 - ◆ A Highway Safety Analysis may replace or supplement the TOR Analysis. Local Agencies are encouraged to utilize the HSM for locations where little to no crash history exists, proposed systemic improvements, and locations where additional support of the TOR is desired.
 - ◆ Use the MDOT HSM spreadsheet located at [MDOT LAP - Safety Program](#) in the Application Process section of the page.
 - ◆ Attach a copy of the electronic HSM spreadsheet to your application.
 - ◆ If you use a Crash Modification Factor (CMF) not included in the spreadsheet as a dropdown, you must describe in your cover letter what the CMF is for and the source used to obtain it.

4. UD-10s
 - Include UD-10s for all crashes that are used to compile the TOR or Highway Safety Manual analysis/computation. Note: The HSM requires all crashes to be input, including animal crashes. UD-10s for animal crashes are NOT to be sent in with the application.
 - Use the most current 3 to 5 year period of available data (only crashes occurring in 2013 to present can be counted).
 - Include only those UD-10 crash reports that relate to the proposed scope of work, except include all UD-10 reports relating to Fatal (K) or Incapacitating (A) injury crashes within the project limits.
5. Detailed cost estimate or Michigan Engineers Resource Library (MERL) estimate.
6. Map showing project location(s).

Applications, to provide additional support, may (not required) also include:

- A copy of the Local (Regional) Road Safety Plan priority emphasis areas or priority projects list. Current plans may be obtained from your area Planning Organization.
- Crash analysis used to determine the proposed project's scope.
- Crash concentration maps in the proposed project's limits.
- MDOT LSI written suggestion list (required if requesting participation for Preliminary Engineering)
- Photos of existing project site conditions.
- Preliminary proposed plan view, cross-sections, and/or profiles.
- Ability to deliver a construction package for obligation within this fiscal year.
- Project coordination with other construction projects.
- Highway Safety Manual Analysis

Additional information available for application development:

- Visit www.michigan.gov/highwaysafety or link to it from the MDOT Local Agency Safety Program Website.
 - Traffic Crash Data maps per Region (Traffic Crash Data)
 - HSM Calibration Factors/Distribution Values (Safety Links, Traffic Standards and Typicals, Safety Programs, Highway Safety Manual)
 - Safety Guides (Safety Links, Traffic Standards and Typicals, Safety Programs, Safety Guides)
- Local (Regional) Road Safety Plan.

Please send all eligible projects and supporting information by **Monday, August 5, 2019** to the following:

Mrs. Pamela R. Blazo, P.E.
Safety Engineer, Local Agency Programs
Development Services Division
425 W. Ottawa Street, P.O. Box 30050
Lansing, Michigan 48909-7550



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
 LANSING

GRETCHEN WHITMER
 GOVERNOR

PAUL C. AJEGBA
 DIRECTOR

May 6, 2019

Ms. Denise Donohue, Director
 County Road Association of Michigan
 417 Seymour, Suite 1
 Lansing, Michigan 48933

Mr. John LaMacchia II, Legislative Associate
 Michigan Municipal League
 208 North Capitol Avenue, 1st Floor
 Lansing, Michigan 48933-1354

Dear Ms. Donohue and Mr. LaMacchia:

Fiscal Year 2021 Federal Local Highway Safety Improvement Program Streamlined Systemic Safety Program

The Michigan Department of Transportation (MDOT) is pleased to announce the solicitation of new applications for the fiscal year (FY) 2021 streamlined systemic safety program. The FY 2021 federal budget for this program is estimated at \$1,500,000. This amount may be subject to revisions. We are asking the County Road Association of Michigan and the Michigan Municipal League to distribute this notice to their member agencies.

Local Agencies may submit no more than three streamlined Highway Safety Improvement Program (HSIP) project applications for consideration including no more than two project applications for the same work type. Federal safety funds shall not exceed \$200,000 per streamlined HSIP project or a maximum amount of \$2,000,000 per Local Agency (HSIP and HRRR combined) for the fiscal year. Selected projects are to be obligated in FY 2021.

Refer to the enclosed Exhibits for information regarding eligibility and submitting candidate Streamlined Systemic Safety Project Applications. The only project types allowed through this streamlined systemic safety program are horizontal curve delineation, rumble strips, edge line pavement marking, signal backplates, or stop controlled intersection sign upgrades.

Applications are to be electronically submitted or postmarked by Monday, August 5, 2019.

Our goal is to maintain a fiscally constrained program while maximizing the use of available federal funds. If you have any questions, please feel free to contact Pamela Blazo, Safety Programs Engineer, at (517) 335-2224 or at BlazoP@Michigan.gov.

Sincerely,

Tracie J. Leix
 for Larry Doyle, Administrator
 Development Services Division

Enclosures

cc: L. Doyle	D. Morena, FHWA	County Road Association	Michigan Municipal League
T. Leix	Rural Task Forces	Region Engineers	TSC Managers
MPO's			

Exhibit 1 – Design Requirements

- Horizontal curve delineation projects
 - All horizontal curves signed shall meet the requirements shown in the table below **that has been modified** from Table 2C-5 of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) specifically for the selection of local agency safety projects submitted through this streamlined application.

Type of Horizontal Alignment Sign	Difference Between Speed Limit and Advisory Speed				
	5 mph	10 mph	15 mph	20 mph	25 mph or more
Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), and Combination Horizontal Alignment/Intersection (W1-10 series) (See MMUTCD Section 2C.07 to determine which sign to use)	Required	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Required	Required	Required	Required	Required
Chevrons (W1-8)	Recommended	Required	Required	Required	Required

Note: Required means that the sign and/or plaque shall be used, recommended means that the sign and/or plaque should be used. Yellow retroreflective sheeting must be added to the sign posts for all new installations.

- All horizontal curve signs must include reflective sheeting on the sign posts.
- The advisory speed shall be determined utilizing one of the methods listed in Section 2C.08 of the MMUTCD.

Table 2C-6. Typical Spacing of Chevron Alignment Signs on Horizontal Curves

Advisory Speed	Curve Radius	Sign Spacing
15 mph or less	Less than 200 feet	40 feet
20 to 30 mph	200 to 400 feet	80 feet
35 to 45 mph	401 to 700 feet	120 feet
50 to 60 mph	701 to 1,250 feet	160 feet
More than 60 mph	More than 1,250 feet	200 feet

Note: The relationship between the curve radius and the advisory speed shown in this table should not be used to determine the advisory speed.

- Edgeline pavement marking projects
 - Eligible roadways are those that have never had striped edgelines.
 - Local agencies may elect to use 4 inch or 6 inch edgelines.

- Rumble strip (corrugations) projects
 - Local agencies may install only centerline rumble strips, only shoulder rumble strips, or both centerline and shoulder rumble strips.
 - Centerline rumble strips are typically confined to rural areas with a posted speed limit of 55 mph however they may be installed on lower speed roadways with a history of lane departure crashes.
 - When installing shoulder rumble strips, it is recommended to maintain at least 4 feet of paved shoulder beyond the rumble strip for non-motorized users. Agencies should take into account all modes of users when installing shoulder rumble strips.
 - Shoulder rumble stripes are allowable in place of offset shoulder rumble strips.
 - Consideration should be given to the available lane width when installing both centerline and shoulder rumble strips.
 - Sinusoidal rumble strips are allowable.

- Signal Backplate projects
 - Backplates must contain a reflective border.
 - Backplates will be added to each direction of existing signal heads.
 - Signal upgrades other than the addition of backplates are not allowed through this streamlined application and need to be submitted through the general Call for Projects process.

- Stop Controlled Intersection Sign Upgrade projects
 - Projects must include dual Stop signs and dual Stop Ahead signs.
 - Stop Signs and Stop Ahead signs should be 36 inches in size.
 - Dual Stop signs must include red reflective post sheeting.
 - Dual Stop Ahead signs must include yellow reflective post sheeting.

Exhibit 2 – Funding Participation

- Construction will be funded at 90 percent federal funds and 10 percent local funds.
- Portion eligible for federal aid:
 - Project’s Construction Phase (‘A’ Phase.)
- Portion not eligible for federal aid:
 - Right-of-way costs
 - Preliminary engineering
 - Construction engineering
 - Decorative items, not safety related in nature
- Selected projects will be ‘Lump Summed’ at the lesser of the original estimate plus \$20,000, or the original estimate plus 20 percent. Projects may, at MDOT’s discretion, be funded by a “Pro-Rata” method.
- Projects will be let by MDOT or performed by Local Force Account, as approved by MDOT’s Local Agency Program (LAP) office: information found at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Force Account and Local Agency Reimbursement System (LARS) Information.
- All social, economic and environmental impacts within the project limits impacts must be mitigated before federal funds can be obligated. Project applications which are expected to have significant public controversy and/or require an environmental assessment will not be considered until these outstanding issues have been resolved.
- Local Agencies within Metropolitan Planning Organization (MPO) areas must coordinate with their MPO to ensure inclusion of their project in the area’s Transportation Improvement Program for the fiscal year for which the project was selected. LAP will supply a list of selected projects to the MDOT Planning group, but it is the local agency’s responsibility to ensure these projects are included in the State Transportation Improvement Program.

Exhibit 3 - Submitting Candidate Streamlined Systemic Safety Project Applications

Applications submitted electronically must be received no later than midnight on **Monday, August 5, 2019**.

- Fill out the Streamlined Systemic Safety Application found online at [MDOT LAP – Safety Program](#).
- Use the ‘Save As PDF’ button at the bottom of the spreadsheet to save a copy.
- Email the PDF copy, along with any supplemental location maps, to MDOT-DesignLAP@michigan.gov.
- Please note that electronic submittals are limited to 15MB.

Applications sent hardcopy must be postmarked no later than **Monday, August 5, 2019**.

- Projects postmarked after Monday, August 5, 2019 may or may not be reviewed for selection, at MDOT’s discretion.
- It is recommended that your application be submitted by certified mail or other traceable delivery service.
- If submitting a hardcopy application, please mail it to the following:

Mrs. Pamela R. Blazo, P.E.
Safety Engineer, Local Agency Programs
Development Services Division
425 W. Ottawa Street, P.O. Box 30050
Lansing, Michigan 48909-7550



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

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GOVERNOR

PAUL C. AJEGBA
DIRECTOR

May 6, 2019

Ms. Denise Donohue, Director
County Road Association of Michigan
417 Seymour Avenue, Suite 1
Lansing, Michigan 48933-1143

Mr. John LaMacchia II, Legislative Associate
Michigan Municipal League
208 North Capitol Avenue, 1st Floor
Lansing, Michigan 48933-1354

Dear Ms. Donohue and Mr. LaMacchia:

Fiscal Year 2021 Federal High Risk Rural Roads Program

The Michigan Department of Transportation (MDOT) is pleased to announce the solicitation of applications for the fiscal year (FY) 2021 High Risk Rural Road (HRRR) program. Federal funds for the HRRR program are apportioned from the Highway Safety Improvement Program (HSIP) and derived from the HRRR Special Rule under 23 USC 148(g)(1). The FY 2021 federal budget apportioned for this program is estimated to be \$6,000,000. This amount may be subject to revisions. We are asking the County Road Association of Michigan and the Michigan Municipal League to distribute this notice to their member agencies.

Local agencies are allowed to submit more than one project for consideration. Federal safety funds shall not exceed \$600,000 per HRRR project or a maximum amount of \$2,000,000 per Local Agency for the fiscal year (including any selected FY 2021 HSIP spot application projects and systemic application projects). Any non-selected projects submitted under this HRRR call for projects will be automatically rolled over to the general FY 2021 HSIP safety call for projects. Selected HRRR projects are to be obligated in FY 2021; the Local Agency will not be allowed to delay a selected HRRR to a different fiscal year.

Applications are to be electronically submitted or postmarked by Monday, August 5, 2019.

Refer to the enclosed Exhibits for information regarding eligibility and submitting candidate Safety Project Applications.

Our goal is to maintain a fiscally constrained program while maximizing the use of available federal funds. If you have any questions, please feel free to contact Pamela Blazo, Local Agency Programs Safety Engineer, at (517) 335-2224 or at BlazoP@Michigan.gov.

Sincerely,

Tracie Leix
for Larry Doyle, Administrator
Development Services Division

Enclosures

cc: L. Doyle D. Morena, FHWA County Road Association Michigan Municipal League
T. Leix Rural Task Forces Region Engineers TSC Managers
MPO's

Exhibit 1 – High Risk Rural Road definition and Project Eligibility Requirements

A HRRR is defined as; 1) any roadway functionally classified as rural major or minor collector or a rural local road that the crash rate for fatalities and incapacitating injuries exceeds the statewide average for those functional classes of roadway, or 2) any roadway functionally classified as rural major or minor collector or a rural local road that will likely have increases in traffic volumes that are likely to create a crash rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes of roadway.

MDOT has used the following data to determine the required statewide average crash rate:

74,455	Total centerline miles of roadway functionally classified as rural major or minor collector or rural local road.
6,624	Total number of fatalities or incapacitating injuries, located on roadways classified as described above, for the time period 2014-2018.
0.09	Statewide average frequency of such crashes per mile of such roadway over a 5 year time period.

Project Eligibility Requirements:

1. The roadway is functionally classified as **rural** major collector, rural minor collector or rural local road.
2. Within the most recent five year time period of available crash data, **at least one crash, resulting in fatalities (K) or incapacitating (A) injuries, has occurred within the proposed project limits. For projects longer than 11 miles in length, multiple such serious crashes have occurred such that there is at least one such crash for every 11 miles of roadway segment.** Proposed projects with higher crash concentrations of ‘K’ and/or ‘A’ crashes may receive a higher priority than other projects.
3. The proposed project must demonstrate a direct correlation to correct an area related to the fatal or incapacitating injury crashes. The proposed project limits must be relevant to the roadway features attributable to the crashes, and are subject to approval by MDOT.

Exhibit 2 – Funding Participation

- Construction will be funded at 90 percent federal funds and 10 percent local funds. See the next page regarding funding percentages for Preliminary Engineering (if eligible).
- Portion eligible for federal aid:
 - Project’s Construction Phase (‘A’ Phase.)
 - Preliminary Engineering, **ONLY** if criteria in Preliminary Engineering Section outlined below is met.
- Portion not eligible for federal aid:
 - Right-of-way costs.
 - Preliminary engineering, unless criteria in Preliminary Engineering Section outlined below is met.
 - Construction engineering.
 - Decorative items, not safety related in nature.
- Selected projects will be ‘Lump Summed’ at the lesser of the original estimate plus \$20,000, or the original estimate plus 20 percent. Projects may, at MDOT’s discretion, be funded by a “Pro-Rata” method.
- Projects will be let by MDOT or performed by Local Force Account, as approved by MDOT’s Local Agency Program (LAP) office: information can be found at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Force Account and Local Agency Reimbursement System (LARS) Information.
- All social, economic and environmental impacts within the project limits must be mitigated before federal funds can be obligated. Project applications which are expected to have significant public controversy and/or require an environmental assessment will not be considered until these outstanding issues have been resolved.
- Local Agencies within Metropolitan Planning Organization (MPO) areas must coordinate with their MPO to ensure inclusion of their project in the area’s Transportation Improvement Program for the fiscal year for which the project was selected. LAP will supply a list of selected projects to the MDOT Planning group, but it is the local agency’s responsibility to ensure these projects are included in the State Transportation Improvement Program.

Preliminary Engineering (up to 10% of the estimated eligible construction costs)

Preliminary engineering for selected safety projects may be programmed for one or more of the following:

- Transparency (5 percent) location (funded at 90 percent federal funds/10 percent local funds)
 - Identified in the 2009 through 2015 Transparency (5%) Reports.
 - Proposed scope of work must address the noted location deficiencies.
 - Projects that are on the Transparency (5%) Report must be clearly identified and a copy of the 5% report included with the application

- MDOT Local Safety Initiative (LSI) identified location (funded at 50 percent federal funds/50 percent local funds)
 - Proposed scope of work must address the noted location deficiencies reviewed and identified by the LSI Program.
 - Copy of MDOT LSI written suggestion list must be included with application.

- Traffic Signal Optimization
 - Funded at 80 percent federal funds/20 percent local funds.
 - Must complete and implement traffic signal optimization study to analyze and adjust timing of signal controllers.
 - Signals should be studied to allow for a minimum of one second all red phase, and the yellow change interval phase evaluated to meet current guidelines.
 - Maximum of \$5,000 total cost will be allowed per signal location for the analysis and adjustment of signal controllers.
 - Signal component upgrades are not permitted under this category.
 - It is anticipated that this work would be done via force account work by the local agency. Physical adjustments of timing will be programmed under an ‘CON’ Phase.

Exhibit 3 – Design Requirements

- Proposed projects must demonstrate a direct correlation to correct an area related to the fatal or incapacitating injury crashes. The proposed project limits must be relevant to the roadway features attributable to the crashes, and are subject to approval by MDOT.
- Meet current standards and warrants, current Americans with Disabilities Act and Buy America requirements.
- Designed in accordance with 3R, 4R, American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, or the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads Standards. Use of the Capital Preventative Maintenance guidelines and fixes will not be permitted.
- Traffic signal upgrade projects must install a box span configuration (unless justification is provided) and shall include the installation of signal back plates with reflectorized strips. These projects shall also include overhead mounted street name signs.
- High friction surface projects shall use or follow the intent/material requirements of the most current MDOT Special Provision.
- Corridor (or local agency-wide) permanent signing or pavement marking projects must be of a higher standard than the minimums required by the Michigan Manual of Uniform Traffic Control Devices and/or standards. These type of projects shall include additional signing improvements beyond upgrading sign reflectivity requirements; i.e., adding reflective sheeting to sign posts, larger signs, etc., and permanent pavement markings shall include improvements such as being recessed or high quality ‘durable’ markings.
- Any new guardrail or guardrail endings installed must be compliant with the Manual for Assessing Safety Hardware 2016 (MASH-16).
- Culvert end treatments for any newly installed culverts must meet Table 5-1 of the MDOT Drainage Manual. Any new longitudinal culverts installed must have a minimum 1:6 slope from the top of the pipe to the roadway/driveway surface.

Exhibit 4 - Submitting Candidate Safety Project Applications (Electronic method is preferred)

Applications submitted electronically must be received no later than **Monday, August 5, 2019** at midnight.

- The Local Safety Program Call for Applications Funding Year 2021 Electronic Submittal Form is located at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Safety Program ~ FY 2020 HRRR Call for Safety Electronic Submittal.
- Electronic submittals are limited to 15MB.

Applications sent hardcopy must be postmarked no later than **Monday, August 5, 2019**.

- Projects postmarked after Monday, August 5, 2019, at MDOT's discretion, may or may not be reviewed for selection.
- It is recommended that your application be submitted by certified mail or other traceable delivery service.

Applications are reviewed and selected by a committee. The six required submittal documents are listed below. All MDOT forms and spreadsheets mentioned can be found online at http://www.michigan.gov/mdot/0,4616,7-151-9625_25885_40552---,00.html in the Application Process section of the page.

1. Cover Letter
 - Provide a brief overview discussion as to the proposed project, crash pattern that has been experienced and how the proposed scope of work will remedy the past crash history.
2. MDOT Form 1627
3. MDOT Time of Return (TOR) Analysis*
 - Only the MDOT TOR spreadsheet or HSM spreadsheet will be accepted*.
 - ◆ If submitting electronically, attach the excel file to your application.
 - ◆ For hardcopy applications, a copy of all pages that contain user-inputted data or results generated must be included in the application submittal.
 - **ALL** projects submitted for the HRRR program require a TOR analysis.
 - Common Crash Reduction Factors (CRF) are listed in the TOR Spreadsheet
 - ◆ Additional CRFs may be used. If submitting a TOR utilizing a CRF not listed on the TOR form, include a copy of the source used to obtain the CRF.
4. UD-10s
 - Include UD-10s for all crashes that are used to compile the TOR or Highway Safety Manual (HSM) analysis/computation. Note: The HSM requires all crashes to be input, including animal crashes. UD-10s for animal crashes are NOT to be sent in with the application.
 - Use the most current 3 to 5 year period of available data (only crashes occurring in 2013 to present can be counted).
 - Include only those UD-10 crash reports that relate to the proposed scope of work,

except include all UD-10 reports relating to Fatal (K) or Incapacitating (A) injury crashes within the project limits.

5. Detailed cost estimate or Michigan Engineers Resource Library (MERL) estimate.
6. Map showing project location(s).

Applications, to provide additional support, may (not required) also include:

- Crash analysis used to determine the proposed project's scope.
- Crash concentration maps in the proposed project's limits.
- MDOT LSI written suggestion list (required if requesting participation for Preliminary Engineering)
- Photos of existing project site conditions.
- Preliminary proposed plan view, cross-sections, and/or profiles.
- Ability to deliver a construction package for obligation within this fiscal year.
- Project coordination with other construction projects.
- Highway Safety Manual Analysis*

*Highway Safety Manual Analysis

A Highway Safety Manual Analysis may replace or supplement the TOR Analysis.

FY 2021, HSM Analysis Requirements:

- Use the MDOT HSM spreadsheet located at http://www.michigan.gov/mdot/0,4616,7-151-9625_25885_40552---,00.html in the Application Process section of the page.
- An electronic copy of the analysis spreadsheet must be included with the application submittal.
- Calibration factors for use as part of HSM analyses have been compiled by MDOT and are included in the spreadsheet. Local Agencies performing hand calculations will need to refer to the www.michigan.gov/highwaysafety website for calibration factors and distribution values.
- For any questions an agency might have regarding the HSM Calibration factors, please contact Dean Kanitz, MDOT Traffic and Safety Unit, at 517-335-2855.

Additional information available for application development:

- Visit www.michigan.gov/highwaysafety or link to it from the MDOT Local Agency Safety Program Website.
 - Traffic Crash Data maps per Region (Traffic Crash Data)
 - HSM Calibration Factors/Distribution Values (Safety Links, Traffic Standards and Typicals, Safety Programs, Highway Safety Manual)
 - Safety Guides (Safety Links, Traffic Standards and Typicals, Safety Programs, Safety Guides)
- Local (Regional) Road Safety Plan. Current plans can be obtained from your area Planning Organization.

Please send all eligible projects and supporting information by **Monday, August 5, 2019**, to the following:

Mrs. Pamela R. Blazo, P.E.
Safety Engineer, Local Agency Programs
Development Services Division, B215
425 W. Ottawa Street, P.O. Box 30050
Lansing, Michigan 48909-7550

Project Application Examples

- Corridor wide shoulder and center line rumble strips, improved permanent signing (such as chevrons on curves or intersection signing), pavement markings (such as the addition of edge line markings), clear vision corners or reflectorized backplates
- High Friction Surface applications at spot locations
- Elimination, replacement or installation of guardrail/Removal of fixed objects
- Traffic and pedestrian signal optimization, installation, and upgrades
- Access management
- Intersection safety improvements (Lighting, Stopping Sight Distance, Clear Vision Corners)
- Horizontal and vertical curve modifications
- Sight distance and drainage improvements
- Bridge railing replacement or retrofit
- Mid-block pedestrian crossings; improvements to school zones

This list is not all inclusive and other types of safety improvement projects can be submitted for consideration.

MEMORANDUM

TO: Members of the Technical Advisory Committee

FROM: Sharon Gregory, Lead Planner
Genesee County Metropolitan Planning Commission

DATE: June 6, 2019

SUBJECT: **Draft FY 2020-2023 Transportation Improvement Program (TIP) and Draft Air Quality Conformity Analysis for the Flint MI Area**

The draft FY 2020-2023 Transportation Improvement Program (TIP) and Air Quality Conformity Analysis are currently out for public comment. The thirty-day public comment period began on Sunday, June 2, 2019 and runs until Tuesday, July 2, 2019. There will be a public hearing on July 2, 2019 at 5:30 p.m. in the Harris Auditorium on the third floor of the Genesee County Administration Building in Flint.

The draft FY 2020-2023 TIP and Air Quality Conformity Analysis are available for public review and comment on our website and in our office. Use the following link to view the draft TIP, draft Air Quality Conformity Analysis, list of projects, a public comment sheet, and our project map.

<http://gcmpc.org/draft-fy-2020-2023-transportation-improvement-program-tip-and-draft-air-quality-conformity-analysis-for-the-flint-mi-area/>

The draft TIP and Air Quality Conformity Analysis will also be available at the following locations for public review: Genesee County Road Commission, Flint Mass Transportation Authority (MTA), the Michigan Department of Transportation (MDOT)-Davison Transportation Service Center, and each Genesee County city, township and village office. Please call ahead to make sure the document is available for public review.

Please review the draft TIP and Air Quality Conformity Analysis and provide any comments to me during the month of June. Staff will be looking for your approval of the TIP and the Air Quality Conformity Analysis at the July TAC

meeting. If you have any questions regarding the draft FY 2020-2023 TIP or Air Quality Conformity Analysis, please feel free to contact me at sgregory@co.genesee.mi.us or (810) 766-6545.

MEMORANDUM

TO: Members of the Technical Advisory Committee

FROM: Jason Nordberg, Division Manager
Genesee County Metropolitan Planning Commission

DATE: June 6, 2019

SUBJECT: **Congestion Management Process (CMP) for Genesee County**

Staff met with the Transportation System Management (TSM) Committee on Thursday, May 23, 2019 to review a draft of the Congestion Management Process (CMP) 2014 Base Year and 2045 Horizon year CMP deficiencies. The deficiencies are a combination of level of service (Daily, AM Peak, and PM Peak) deficiencies from the travel demand model, high crash locations from the Michigan State Police (MSP) crash database, and incident and bottleneck data from the INRIX/NPMRDS (National Performance Management Research Data Set). The group reviewed the maps and provided recommendations for the identified deficiencies. Staff updated the maps based on the TSM recommendations and documented the process in the attached CMP. In the past the focus of the CMP was on Level of Service (LOS) derived from volume to capacity ratios. The updated CMP for the 2045 Long Range Transportation Plan (LRTP) adds safety and reliability data to help identify deficiencies that the travel demand model may not be able to identify with the traditional LOS analysis.

The Transportation System Management (TSM) committee is recommending that the Technical Advisory Committee (TAC) provide a recommendation of approval for the Congestion Management Process (CMP) for Genesee County, including the identified 2014 and 2045 CMP deficiencies, to the Genesee County Metropolitan Alliance.

Congestion Management Process

One of the main components of the 2045 Long Range Transportation Plan (LRTP) is an analysis of congested roadways in Genesee County and the Management Process to address these congested areas. The Congestion Management Process (CMP) is a guideline for the development of capacity improvement projects in Genesee County. Projects are carefully reviewed to determine their suitability for widening and only the most critical areas recommended by road and transit agencies are selected to become part of the list of capacity improvement projects. This careful selection of projects is primarily a result of the limited financial resources available to communities in Genesee County to address roadway congestion. The Congestion Management Process is a tool used by road and transit agencies to help determine what level of capacity improvement is most suitable for a corridor. The CMP uses data from the Genesee County Travel Demand Model, Michigan State Police Crash Data, and the INRIX/NPMRDS (National Performance Management Research Data Set) to identify CMP deficiencies and to analyze capacity improvement projects submitted for federal transportation funding consideration.

This document is divided into two sections:

- Identifying the Causes of Congestion
- Congestion Management Process

Identifying the Causes of Congestion

The Federal Highway Administration (FHWA) lists the following as the major sources of traffic congestion in the United States:

- **Bottlenecks:**
Locations where roadways narrow or regular traffic demands cause traffic to backup. Bottlenecks are the largest source of congestion at 40%.
- **Traffic incidents:**
Crashes, stalled vehicles, and debris on the road cause about 25% of congestion problems.
- **Work zones:**
Road maintenance activities like reconstruction and even filling potholes are necessary activities that account for about

10% of congestion problems. These activities may cause temporary changes to the physical roadway that may include a reduction in the number or width of travel lanes, lane "shifts," lane diversions, elimination of shoulders, and even temporary roadway closures.

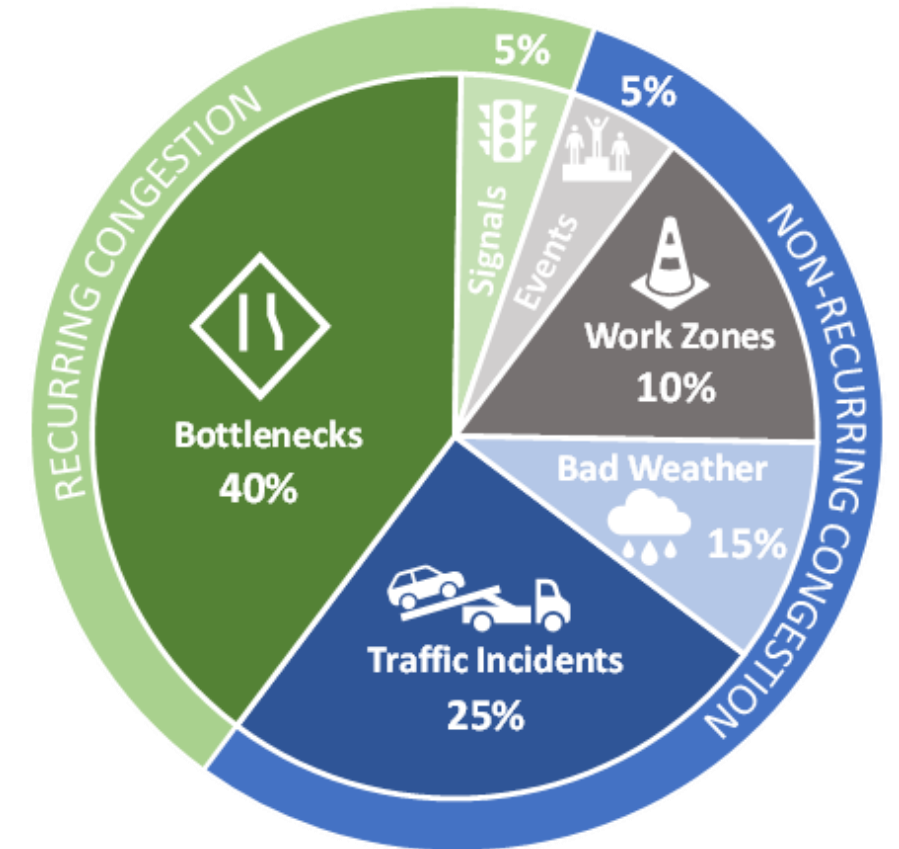
- **Bad weather:**
Environmental conditions can lead to changes in driver behavior that affect traffic flow. Bad weather is estimated to account for about 15% of congestion problems.
- **Poor traffic signal timing:**
Poorly timed traffic signals disrupt traffic flow and travel time reliability and are estimated to account for about 5% of congestion problems.
- **Special events:**
Special events occasionally cause "spikes" in traffic volumes and changes in traffic patterns. These irregularities cause congestion and delay in the vicinity of the event. Special events account for about 5% of congestion problems.

Is Congestion the Same Everywhere?

Highway congestion, very simply, is caused when traffic demand approaches or exceeds the available capacity of the highway system. Though this concept is easy to understand, congestion can vary significantly from day to day because traffic demand and available highway capacity are constantly changing. Traffic demands vary significantly by time of day, day of the week, and season of the year, and are also subject to significant fluctuations due to recreational travel, special events, and emergencies (e.g. evacuations). Available highway capacity, which is often viewed as being fixed, also varies constantly, being frequently reduced by incidents (e.g. crashes and disabled vehicles), work zones, adverse weather, and other causes.

To add even more complexity, the definition of highway congestion also varies significantly from time to time and place to place based on user expectations. An intersection that may seem very congested in a rural community may not even register as an annoyance in a large metropolitan area. A level of congestion that users accept during peak commute periods may be unacceptable if experienced on

Causes of Congestion in the U.S. (Estimated Percentage of Total Congestion)



Source: FHWA <https://ops.fhwa.dot.gov/publications/fhwahop14034/ch1.htm>

Sunday morning. Congestion is difficult to define precisely in a mathematical sense because of examples like these, however, is generally defined as the difference between the highway system performance that users expect and how the system actually performs.

Congestion can also be measured in a number of ways; level of service, speed, travel time, reliability, and delay are commonly used measures. People in a large metropolitan area may accept that a 20-mile freeway trip takes 40 minutes during the peak period, as long as this predicted travel time is reliable and is not 25 minutes one day and 2 hours the next. Reliability is particularly prevalent in the freight community with just-in-time supply chain delivery.

Highway Congestion

Recurring Congestion

Recurring Congestion occurs when traffic is greater than the roadway capacity and can include peak hour congestion. The urban travel demand model predicts future recurring congestion and transportation planners use this tool to develop recurring capacity deficiencies which are then analyzed for the best transportation capacity improvement projects to alleviate the congestion.

In this plan we focus on the types of recurring highway congestion caused by:

- Intersection delays, turning movements and signal timing issues
- Travel demand greater than general roadway capacity for either the entire 24-hour period (daily), or one of the peak periods (AM or PM) in both the current and future roadway systems.

Non-recurring Congestion

Road closures, construction detours, traffic crashes, weather conditions, special events and disabled vehicles are main causes of non-recurring congestion. Road closures and construction detours can be modeled for their effects on the transportation system and strategies to minimize the effects of road closures and construction detours are routinely developed on a project-by-project basis. The other types of non-recurring congestion (traffic crashes, weather conditions and disabled vehicles) are difficult to forecast and require different strategies than recurring congestion.

Some types of non-recurring congestion are accepted by the general public, such as the CRIM Festival of Races in downtown Flint. The CRIM draws 50,000 people on the fourth Saturday in August, and many streets are closed for the race. Travel throughout downtown Flint is by walking or bicycling only.

In this plan we focus on the types of non-recurring highway congestion caused by:

- Traffic crashes and incidents. State traffic crash data and federal travel incident data will be used to help identify current non-recurring issues on the existing system.

In central and southern Michigan, we also incur congestion in the summer months on our highway system as a large percentage of the population in this area travels to northern Michigan. This vacation/tourist traffic causes delay particularly on the weekends. This is not reflected in the travel demand model which only represents weekday traffic. However, this summer traffic is a persistent form of congestion for a certain period of the year.

Multi-Modal Congestion

The transportation system in Genesee County is multi-modal and includes transit, bicycling, and walking as well as freight transportation. The Genesee County Travel Demand Model includes a mode split with a full fixed route transit model as well as a trucking-freight model and bicycling and walking projected travel for the entire network. These multimodal elements that have been integrated into the transportation model help to better identify congestion.

Transit

Fixed-route transit service can cause delays to the transportation system when a bus makes frequent stops on a roadway that does not include at least four travel lanes or a bus lane. One local example of a project that included additional capacity for the roadway while improving quality transit service is the Miller Road reconstruction project in Flint Township's Business District. This project included the addition of a dedicated bus lane / turn lane for westbound travel and bus pull-outs with new bus shelters for eastbound travel. This project took the bus stops out of the travel lane and improved roadway safety and capacity for one of the largest volume local road segments in the county. In general, transit amenities should be considered where appropriate and the MTA should be consulted when projects are located on a fixed transit route. See the Transit section of the plan for further details about transit routes.

Bicycling and Walking

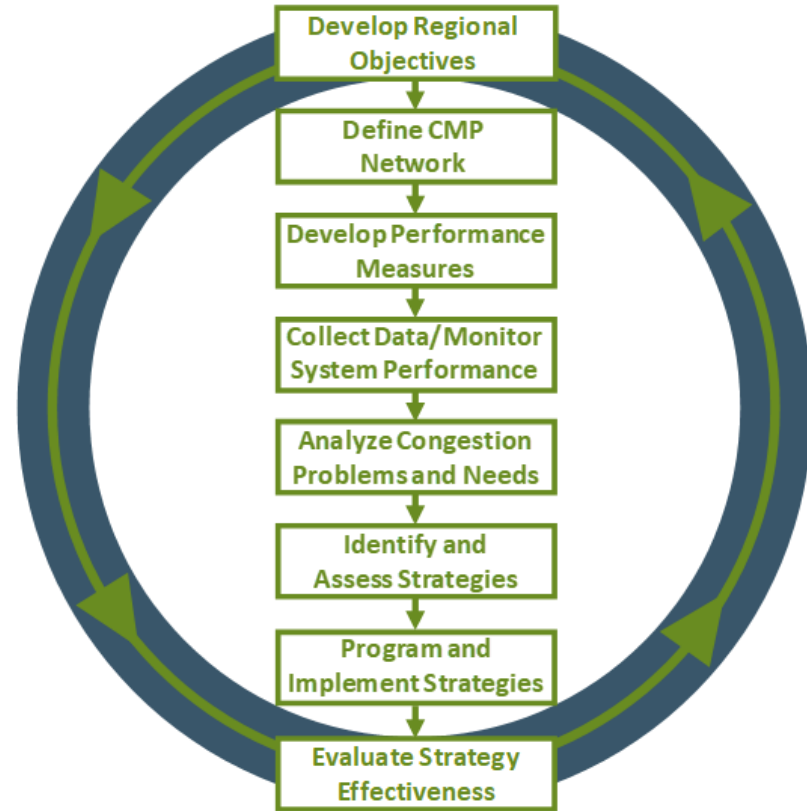
In areas where appropriate, the addition of bicycling and walking facilities such as non-motorized pathways, bike lanes and sidewalks can take traffic off congested roadways and move people onto alternative forms of transportation. This is one way in which traffic congestion can be alleviated. See the Non- Motorized section of the

plan for further details about these forms of travel in Genesee County.

Commercial Trucking/Freight

Our Urban Travel Demand Model includes a truck-freight model. Inadequate turning radii for trucks, loading and unloading delivery vehicles, and heavy commercial vehicle loads can contribute to congestion problems. Congestion can result in economic impacts on manufacturing facilities or other regional businesses when just-in-time deliveries are delayed. This may create significant losses in productivity. The Intermodal Freight Hub at Bishop International Airport can assist in moving commodities between modes such as rail freight and air cargo to reduce congestion on our roadway truck routes.

Genesee County Congestion Management Process



The Genesee County Congestion Management Process is used to identify issues/deficiencies related to congestion on the CMP network, and to help identify potential solutions/projects to address the identified issues. The following provides more detailed information for each step of the CMP as outlined in the chart above.

Develop Regional Objectives

The initial step in the CMP is developing regional objectives based on the regional transportation goals for managing congestion. These include:

- Aligning the CMP with the broader goals and objectives of the Long Range Transportation Plan which will result in more efficient and reliable operations, development of a safe and secure transportation system, increased accessibility, greater economic development, and higher quality of life;
- Monitor and evaluate transportation system performance on the federal aid system where monitoring data is available;
- Identify congestion deficiencies at corridor and bottleneck locations;

- Identify and evaluate alternative mitigation strategies at these congested locations;
- Promote use of the CMP with our planning partners; and
- Develop projects that include CMP mitigation strategies for inclusion into the Plan and TIP.

Define CMP Network

The Genesee County CMP Network is defined as the federal-aid road network in Genesee County. This network is used to evaluate congestion on a system-wide basis for the base year and horizon year of the Plan. Note that not all data sources provide data for the entire federal-aid network. Various CMP analysis will be limited to the portions of the CMP network in which data is available. At this time the INRIX/NPMRDS is only available for the National Highway System (NHS).

Develop Performance Measures

A system-wide daily Level of Service (LOS) is used as a performance measure for congestion in the CMP. The LOS is derived from volume to capacity ratios as illustrated in the following table. A grade of "A" through "F" is assigned to all federal-aid roadways in the CMP network. Roadways assigned a LOS "A" demonstrate free-flow traffic while LOS "F", being the worst rating, signifies a system failure where the roadway is completely shut down with congestion. A systemwide daily LOS is generated by the model as a representation of how the federal-aid CMP network is performing as a whole. The network will be managed to operate at a daily LOS "D" or better in the base and horizon year of the transportation model as a system-wide benchmark for the CMP and for maintaining system-wide reliability.

System reliability will also continue to be monitor as part of the CMP. The Transportation Performance Management (TPM) Travel Time Reliability Rule required states and Metropolitan Planning Organizations (MPO's) to establish targets for three system reliability performance measures as described below. System reliability is determined using vehicle probe data provided by the Federal Highway Administration. This vehicle speed data (INRIX/NPMRDS) is available to MPO's through the analytical software known as Regional Integrated Transportation Information System (RITIS). INRIX/NPMRDS and Michigan State Police crash data will be used as part of the CMP to help identify network deficiencies.

Volume to Capacity Severity Ranges	Volume to Capacity Ratio	Operating Conditions Severity	Level of Service (LOS)	
	Daily 0 to 0.84 Peak Period 0 to 0.62	Traffic at free to stable flow	A-C	STABLE FLOW
	Daily 0.85 to 0.99 Peak Period 0.63 to 0.82	High density of traffic, but stable flow (Approaching Congestion)	D	
	Daily 1.00 to 1.24 Peak Period 0.83 to 1.00	Unstable flow – Lower speed some stops	E	CONGESTED
	Daily over 1.25 Peak Hour Over 1.01	Forced or breakdown traffic flow – many stops	F	

System reliability performance measures:

1. Level of Travel Time Reliability of the Interstate: The percent of person-miles traveled on the interstate system that are reliable. Reliability does not necessarily mean congestion. If the difference between normal travel time and travel time during congested periods is greater than 50%, then the segment is unreliable.
2. Level of Travel Time Reliability of the Non-Interstate National Highway System (NHS): Percent of person-miles traveled on the Non-Interstate NHS that are reliable.
3. Freight Reliability Measure on the Interstate: The Truck Travel Time Reliability (TTTR) Index calculates the difference between the 95th percentile longer travel time and the 50th percentile normal travel time. A TTTR below 1.50 is considered reliable.

In October 2018, the Genesee County Metropolitan Alliance (GCMA) agreed to support the statewide targets. As of early 2019 Genesee County remained on track to meet the 2-year and 4-year targets, and our system is relatively reliable as shown in the charts on the following page.

Statewide Reliability Targets

Performance Measure	Baseline Condition (CY 2017)	2-Year Target	4-Year Target
Level of Travel Time Reliability of the Interstate	85.10%	>75.0%	>75.0%
Level of Travel Time Reliability of the Non-Interstate NHS	85.80%	N/A	>70.0%
Freight Reliability Measure on the Interstate	1.38	<1.75	<1.75

Genesee County Reliability Measures

Performance Measure	2018 Condition	1 st Quarter 2019 Condition
Level of Travel Time Reliability of the Interstate	100%	100%
Level of Travel Time Reliability of the Non-Interstate NHS	92%	92.7%

Collect Data/Monitor System Performance

Speed Data

A Speed Study Performance Program was implemented in 2008 on select high-volume, congested corridors in Genesee County to help evaluate roadway performance. Speed/travel time data is collected along the study corridors at peak times. Staff is evaluating various methods of collecting this data, such as conducting Google Maps travel time routing surveys, but is currently conducting field data collection. Data from this study is used to monitor roadway performance and to help assess the accuracy of outputs from the urban travel demand model during development.

Vehicle probe data, provided by the Federal Highway Administration, is used in the CMP to help evaluate system reliability on the National Highway System (NHS). This vehicle speed data, INRIX/NPMRDS data, is available to MPO's through the analytical software known as Regional Integrated Transportation Information System (RITIS). This

data will continue to be monitored as part of the CMP to evaluate system-wide reliability on the NHS and to assist in identifying deficiencies on the NHS network that an urban travel demand model LOS analysis may not be able to identify. Incident and bottleneck data from this dataset will be used to help identify CMP deficiencies.

Michigan State Police (MSP) Crash Data

A heat map of Genesee County crash data is used in the CMP to help identify intersections and roadway segments with a relatively high number of crashes. These high crash locations help to identify deficiencies on the network that an urban travel demand model LOS analysis may not be able to identify.

Urban Travel Demand Model Level of Service (LOS)

Traffic count data, socioeconomic projections, roadway attributes, and speed study data are used to develop, calibrate, and validate the Genesee County Urban Travel Demand model. The LOS on any given roadway in the CMP network is calculated through the use of the Genesee County Urban Travel Demand Model for 24-hour (Daily), AM Peak (6am to 9am), and PM Peak (3pm to 6pm) time periods. LOS grades of "A", "B", and "C" are considered congestion-free. A LOS grade of "D" is considered to be approaching congestion along a roadway. A roadway receiving a LOS grade of "E" or "F" is considered congested. Most of the efforts of the Genesee County CMP are aimed at relieving congested segments (LOS "E" or "F"), while some proactive efforts will be investigated to mitigate future congestion along those roadways approaching congestion (LOS "D"). Additionally, the model evaluates the system-wide LOS. The CMP Network will be managed to operate at a LOS "D" or better in the base and horizon year of the transportation model as a system-wide benchmark for the CMP and for maintaining system-wide reliability.

Analyze Congestion Problems and Needs

LOS deficiencies for 24-hour (Daily), AM Peak, and PM Peak time periods from the urban travel demand model are used as a starting point to analyze and identify congestion problems and needs in Genesee County. Areas are considered approaching congestion if they are at a level of service D, and over capacity if the level of service is E or F for any of the identified time periods. This analysis is conducted for both the base and horizon year of the plan.

Data from INRIX/NPMRDS (incident and bottleneck data) and crash data from the Michigan State Police are used to identify issues that may not typically be identified by a travel demand model LOS analysis. The deficiencies identified by the LOS analysis (Daily (24-hour), AM Peak, and PM Peak time periods), INRIX/NPMRDS, and MSP Crash Data are combined into a base year and horizon year deficiency maps. Note that INRIX/NPMRDS and MSP crash data are not projected to the horizon year so the same deficiencies identified from these sources for the base year are also identified for the horizon year for the purposes of the initial deficiency identification. The combined deficiency map was reviewed by transportation agencies for a real-world check for accuracy and to see if any additional deficiencies need to be identified. The base and horizon year deficiencies were approved by the Technical Advisory Committee (TAC) and the Genesee County Metropolitan Alliance (GCMA) for use in the Long Range Plan call for projects. The Identified CMP Deficiencies are provided in map in Appendix A. Staff also reviewed the MDOT 2017 Freeway Congestion and Reliability Report for the Bay Region (an excerpt is included in Appendix C) as an additional check for system reliability on the freeway system from the statewide perspective.

Identify and Assess Strategies

GCMA works collaboratively with its transportation planning partners to identify network deficiencies and to develop projects to address these deficiencies. The Genesee County CMP Toolbox includes 5 different strategy categories that could be used to manage congestion in the county. The structure of the CMP Toolbox has the strategies assembled for use in a top-down approach. This approach ensures that solutions that reduce or shift auto trips or improve roadway operations are evaluated before adding roadway capacity. Congestion Management solutions will include the implementation of Transportation System Management (TSM), Travel Demand Management (TDM), and Intelligent Transportation System (ITS) improvements. The CMP Toolbox provides a process for agencies to follow to make sure all alternative options for a capacity related project have been considered. Transportation agencies are required to include a completed CMP Checklist and Tool Box for each project submitted in response to the Long Range Plan call for projects. The CMP Checklist and Toolbox has been provided in Appendix B of this document.

Staff will conduct additional analysis of capacity related projects submitted for consideration for the Long Range Plan to further assess project alternatives. The selection of one particular strategy over another will be supported by both qualitative and quantitative data illustrating where one strategy is more effective than the other, and to what degree. Quantitative data is provided by the travel demand model. Alternative analysis such as a do-nothing scenario, signal timing scenario, center turn lane scenario, and agency selected scenario will be evaluated using quantitative data from the urban travel demand model. The use of qualitative data, such as nationally recognized statistics, will help to assess the potential impact a strategy has on the system in instances where modeling is not feasible and/or local data is not available.

Program and Implement Strategies

The CMP is used to assist in the identification of deficiencies and the identification of projects to address the deficiencies. Project applications for the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRTP) include criteria that supports the strategies of the CMP for capacity related projects.

Additionally, local agencies can expand the usefulness of the CMP by:

- Using analysis to identify areas with patterns of existing recurring congestion, emerging congestion, or frequent non-recurring congestion.
- Prioritizing locations for further study and partner engagement.
- Conducting further analysis/study on priority locations
- Strategizing identification with planning partners.

Evaluate Strategy Effectiveness

All elements of the Genesee County CMP, including strategy effectiveness, will be reviewed and updated periodically to reflect changes to the region's transportation goals and objectives and transportation systems. These updates will include, at a minimum, an analysis of the CMP network performance and an update of both the CMP road network and the urban travel demand network every four years, or when the Long Range Transportation Plan is updated.

Congestion Management Process Summary

The CMP provides an overview of congestion in Genesee County and its primary causes, establish objectives, defines the CMP Network and CMP process, describes how potential capacity related deficiencies are identified, and describes how solutions/projects that help mitigate potential deficiencies are identified, programmed, and implemented. The primary benchmark of the CMP is to manage the network to operate at a LOS "D" or better in the base and horizon year of the transportation model. Reliability is an important aspect of the CMP and is also a federal performance measure. Data from RITIS NPMRDS and crash data from the Michigan State Police have been added to the CMP to help determine network reliability and is used to identify issues that may not typically be identified by a travel demand model LOS analysis. The LRTP call for projects incorporates CMP principles in the application and requires the use of the CMP Checklist and Toolbox for capacity related projects.

While the primary focus of transportation in Genesee County is on the preservation of the transportation network, the CMP helps to identify projects that potentially will help improve system capacity, efficiency, and reliability. The CMP also helps local roads agencies to weigh alternatives for federally funded and local projects. GCMPC will continue to review best practices related to CMPs to keep the Genesee County CMP up to date with planning standard for the level of complexity needed to identify and address capacity related issues in Genesee County.

Appendix

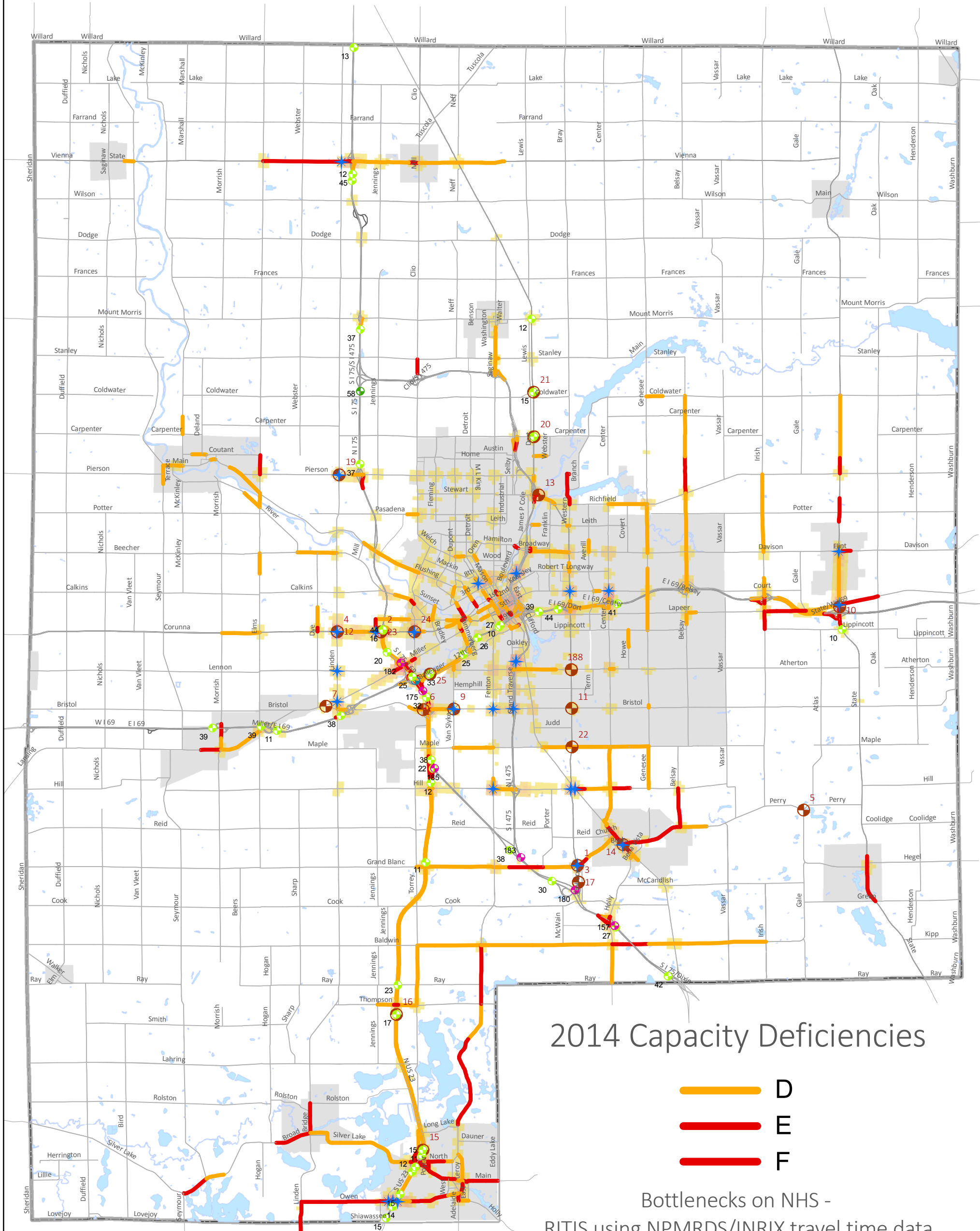
Appendix A:
Identified CMP Deficiencies

Appendix B:
The CMP Checklist and Toolbox

Appendix C:
Excerpt from the MDOT 2017 Freeway Congestion & Reliability Report for the Bay Region

Appendix A:
Identified CMP Deficiencies

2014 CMP Deficiencies



2014 Capacity Deficiencies

- D
- E
- F

Bottlenecks on NHS -
RITIS using NPMRDS/INRIX travel time data

Top 25 Locations

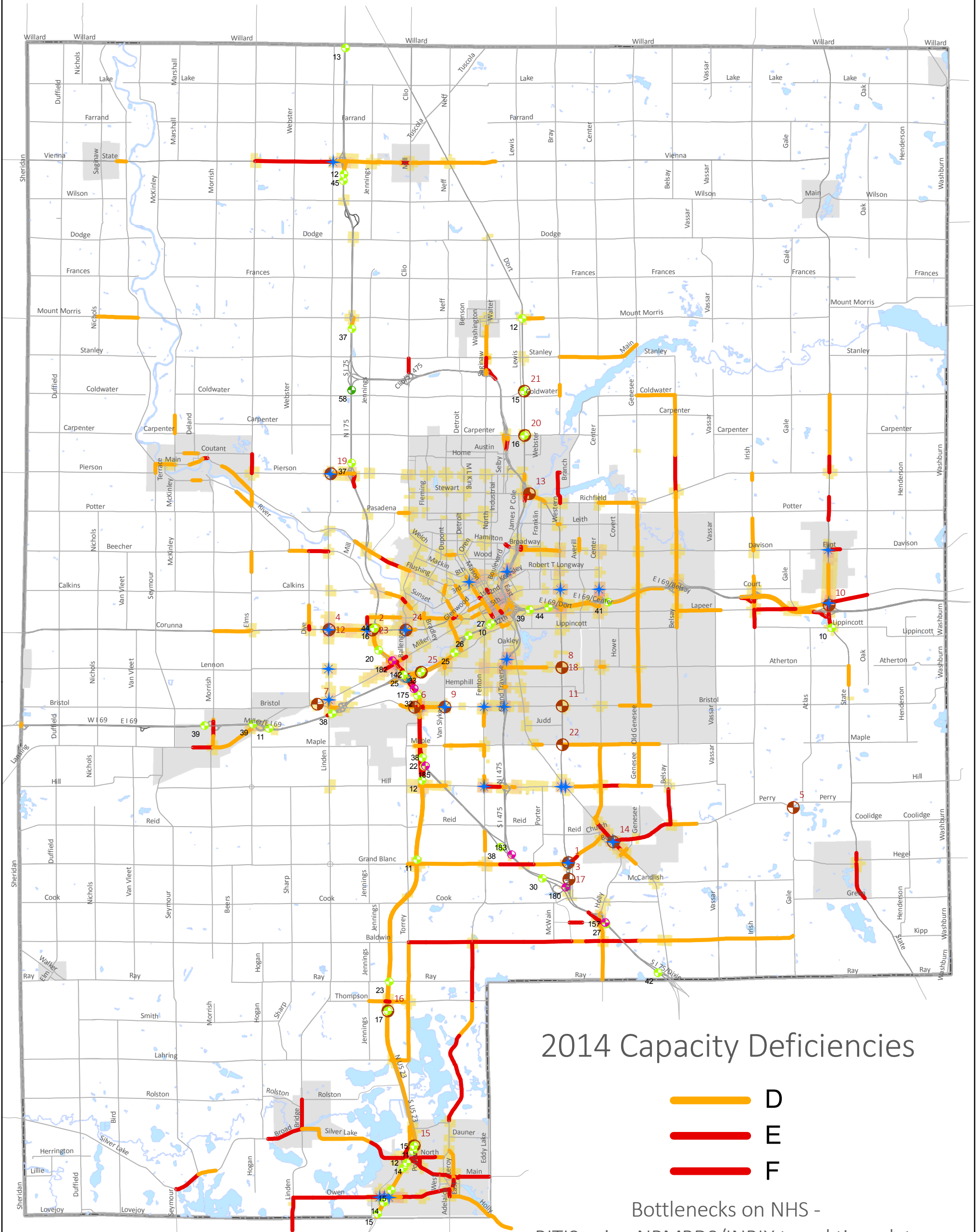
Top 25 Crash Intersections -
MSP data 2013 - 2017

Crash Density

Incidents on NHS -
RITIS using FHWA NPMRDS/INRIX and other datasets

- 10 - 50 (43)
- 58 - 100 (1)
- 142 - 150 (1)
- 157 - 185 (6)


2045 CMP Deficiencies




2014 Capacity Deficiencies

- D
- E
- F

Bottlenecks on NHS -
RITIS using NPMRDS/INRIX travel time data


 Top 25 Locations


 Top 25 Crash Intersections -
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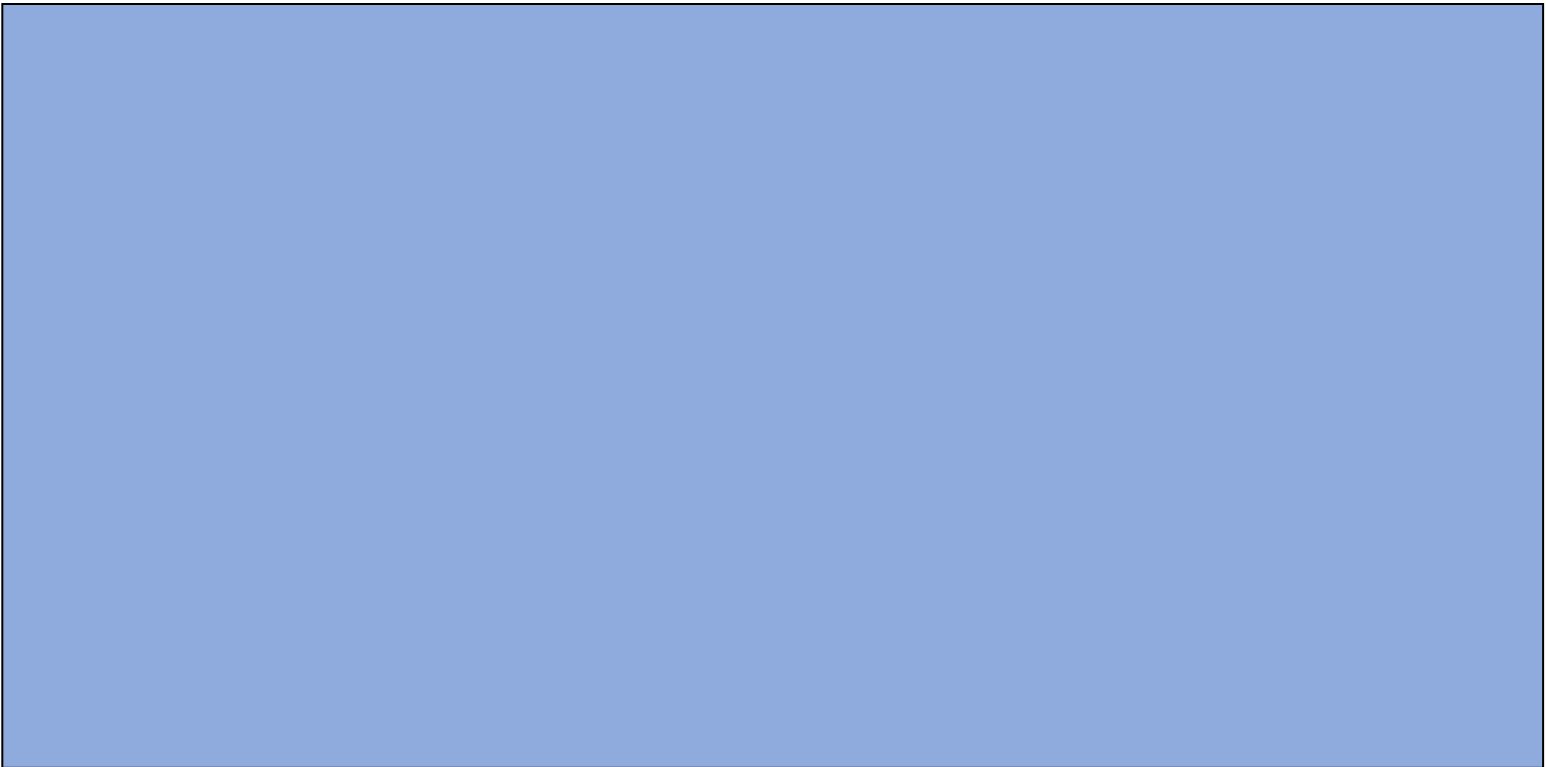
 58 - 100 (1)

 142 - 150 (1)

 157 - 185 (6)

Appendix B:
The CMP Checklist and Toolbox

CMP Checklist & Toolbox



Congestion Management Checklist

2045 Long Range Transportation Plan

AGENCY

Applicant Agency:

Contact Person:

PROJECT INFORMATION

Project Name:

Project Purpose:

Project Description:

Please provide the current and one historical traffic count from this corridor:

Current Data:
Year Count

Historical Data:
Year Count

*Note: Historical count must have been collected at least five years prior to current count

Proposed Project Year:

Is the corridor identified as a deficiency on the 2014 or 2045 CMP Deficiencies Map?

Yes No

What do you feel is the primary cause of congestion along this corridor?

CMP TOOLBOX STRATEGIES

To begin the strategy evaluation, a “toolbox” of congestion mitigation measures was assembled that includes a variety of strategies that could be used. Following an approach used by the New Jersey DOT, the strategy “toolbox” is arranged so that the measures on top take precedence over those on the bottom. The general categories for the “toolbox” are as follows:

GENESEE COUNTY CMP “TOOLBOX” STRATEGIES:

Strategy #1: Reduce Person Trips or Vehicle Miles Traveled (VMT)

Strategy #2: Shift Automobile Trips to Other Modes

Strategy #3: Shift Trips from SOV to HOV Auto/Van

Strategy #4: Improve Roadway Operations (signal timing, turning lanes, etc.)

Strategy #5: Adding Thru-Lane Capacity

1) Reduce Person Trips or Vehicle Miles Traveled

- Are land use policies in place to encourage the creation of sidewalks, bike paths, and/or transit facilities along the proposed corridor? Check all that apply.

Sidewalks Bike Paths Transit None

- Have major businesses along the corridor been informed about strategies to reduce traffic such as telecommuting, flextime scheduling, or a compressed work week?

Yes No

If “No” was checked for any of the #1 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

2) Shift Automobile Trips to Other Modes

- Are there available transit options along the proposed project corridor?

Yes No

- Are there sidewalks, bicycle lanes, or other non-motorized facilities currently in place along the proposed corridor? Check all that apply

Sidewalks Bike Paths Other Non-Motorized None

If “No” was checked for any of the #2 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

3) Shift Trips from Single Occupancy Vehicles to High Occupancy Vehicles

- Are there programs and facilities in place to encourage the use of High Occupancy Vehicles?

Yes No

- Is there the potential to offer transportation demand management solutions such as ridesharing, preferential parking, employer-provided shuttles, or additional car pool lots along the corridor?

Yes No

If “No” was checked for any of the #3 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

4) Improve Roadway Operations

- Have the traffic signals along the corridor been timed for optimal traffic flow?

Yes No

If yes, when?

- Is there the potential to improve traffic flow at intersections along the corridor through dedicated turn lanes and/or turning restrictions?

Yes No

- If so, which intersections?

- Have Intelligent Transportation Systems been implemented along the corridor to help address accidents and other non-recurring congestion?

Yes No

- Has access management been implemented along the corridor to help reduce conflict points and improve traffic flow?

Yes

No

If “No” was checked for any of the #4 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

5) Adding Thru-Lane Capacity

This is considered a “last resort” after all the other strategies have been considered.

Appendix C:

**Excerpt from the MDOT 2017 Freeway
Congestion & Reliability Report for the Bay
Region**

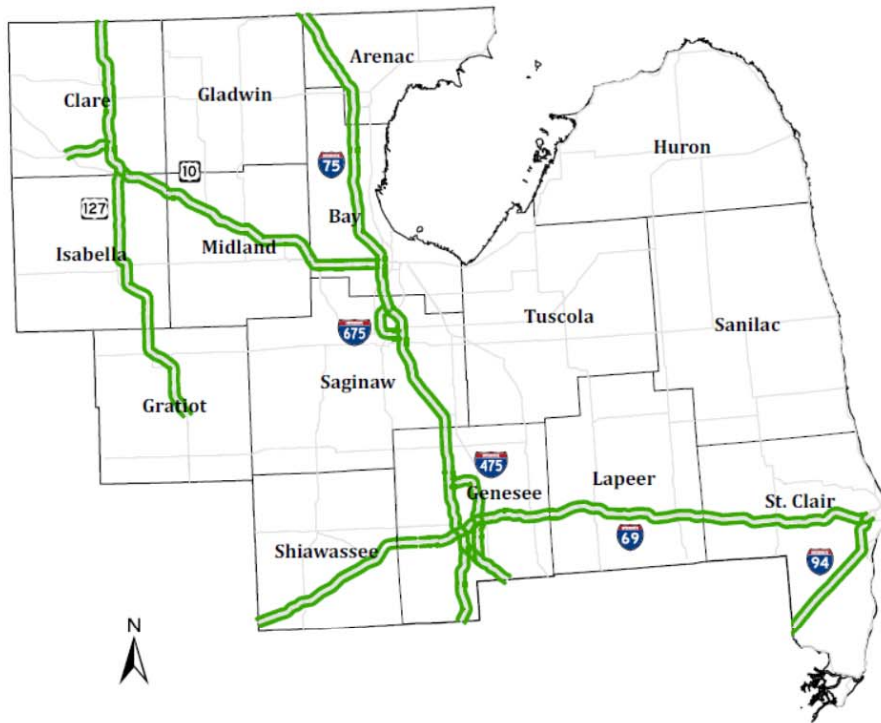


2017 Freeway Congestion & Reliability Report

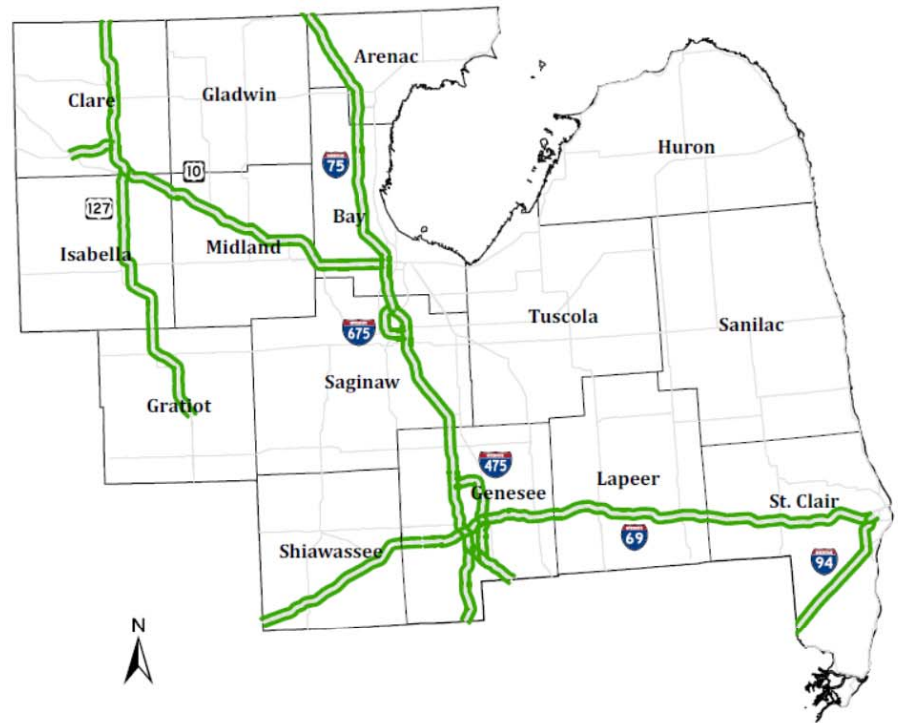
BAY REGION

EXCERPT COPIED FROM THE IDENTIFIED MDOT REPORT FOR USE IN THE GENESEE COUNTY CMP

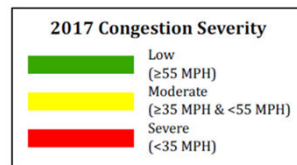
Congestion Severity



2017 Bay Region AM Peak Congestion Severity



2017 Bay Region PM Peak Congestion Severity



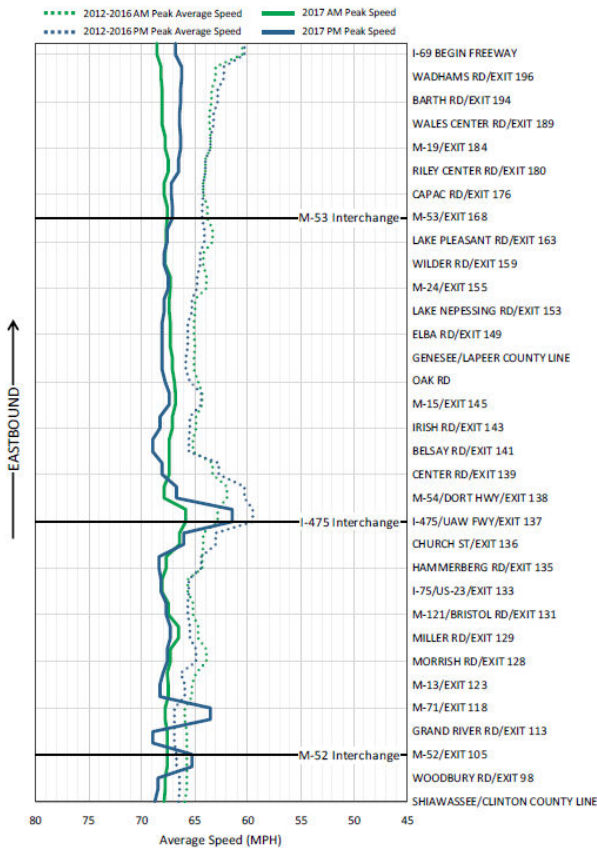


2017 Freeway Congestion & Reliability Report

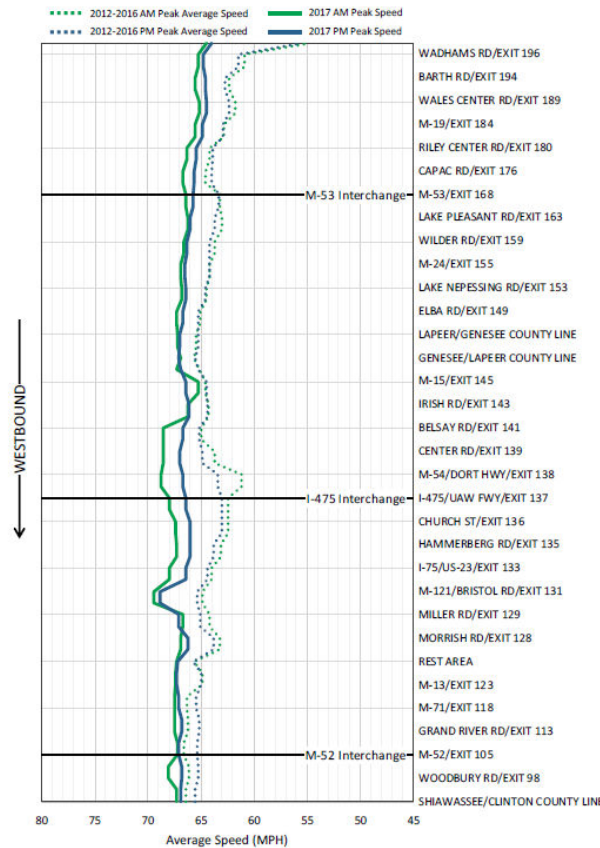
BAY REGION

EXCERPT COPIED FROM THE IDENTIFIED MDOT REPORT FOR USE IN THE GENESEE COUNTY CMP

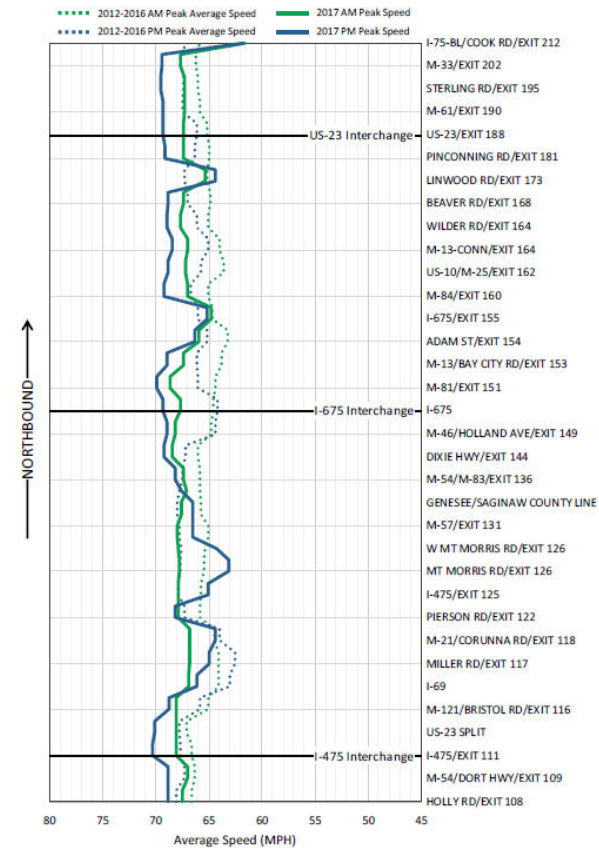
Average Speed



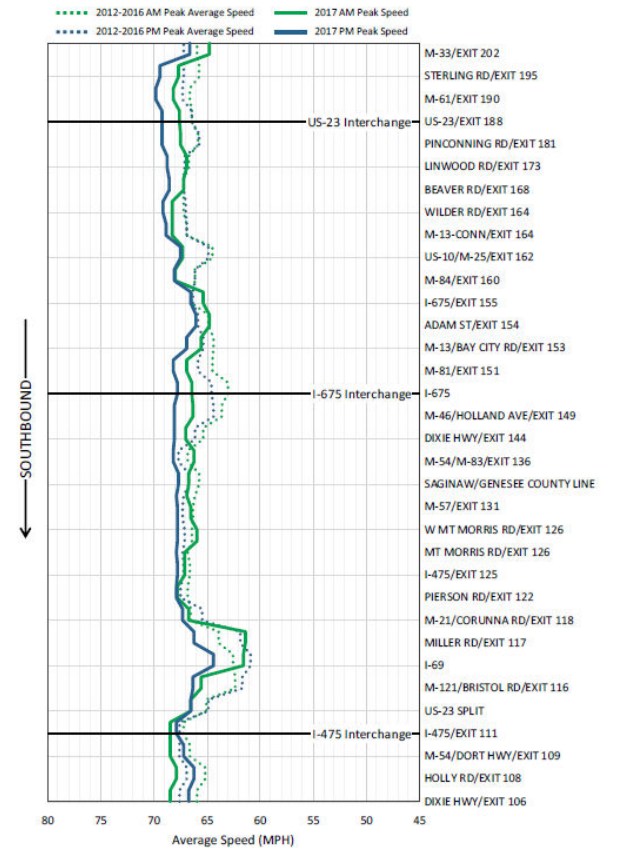
Bay Region I-69 Eastbound



Bay Region I-69 Westbound



Bay Region I-75 Northbound



Bay Region I-75 Southbound

MEMORANDUM

TO: Members of the Technical Advisory Committee

FROM: Jason Nordberg, Division Manager
Genesee County Metropolitan Planning Commission

DATE: June 6, 2019

SUBJECT: 2045 Long Range Transportation Plan Project Application

A draft of the 2045 Long Range Transportation Plan (LRTP) Project Application is attached. The LRTP application is for capacity related projects that address identified Congestion Management Process (CMP) deficiencies in the 2014 base year and 2045 horizon year of the LRTP. All capacity related projects must be identified in the LRTP in order to use federal funding. Additionally, all regionally significant capacity related projects must be identified in the LRTP regardless of funding source. Staff has been working with MDOT and the Transportation System Management (TSM) Committee on developing the CMP and identifying CMP deficiencies in preparation for a 2045 LRTP call for projects. The attached application is very similar to the 2040 LRTP application but has been updated to include points for safety and reliability deficiencies.

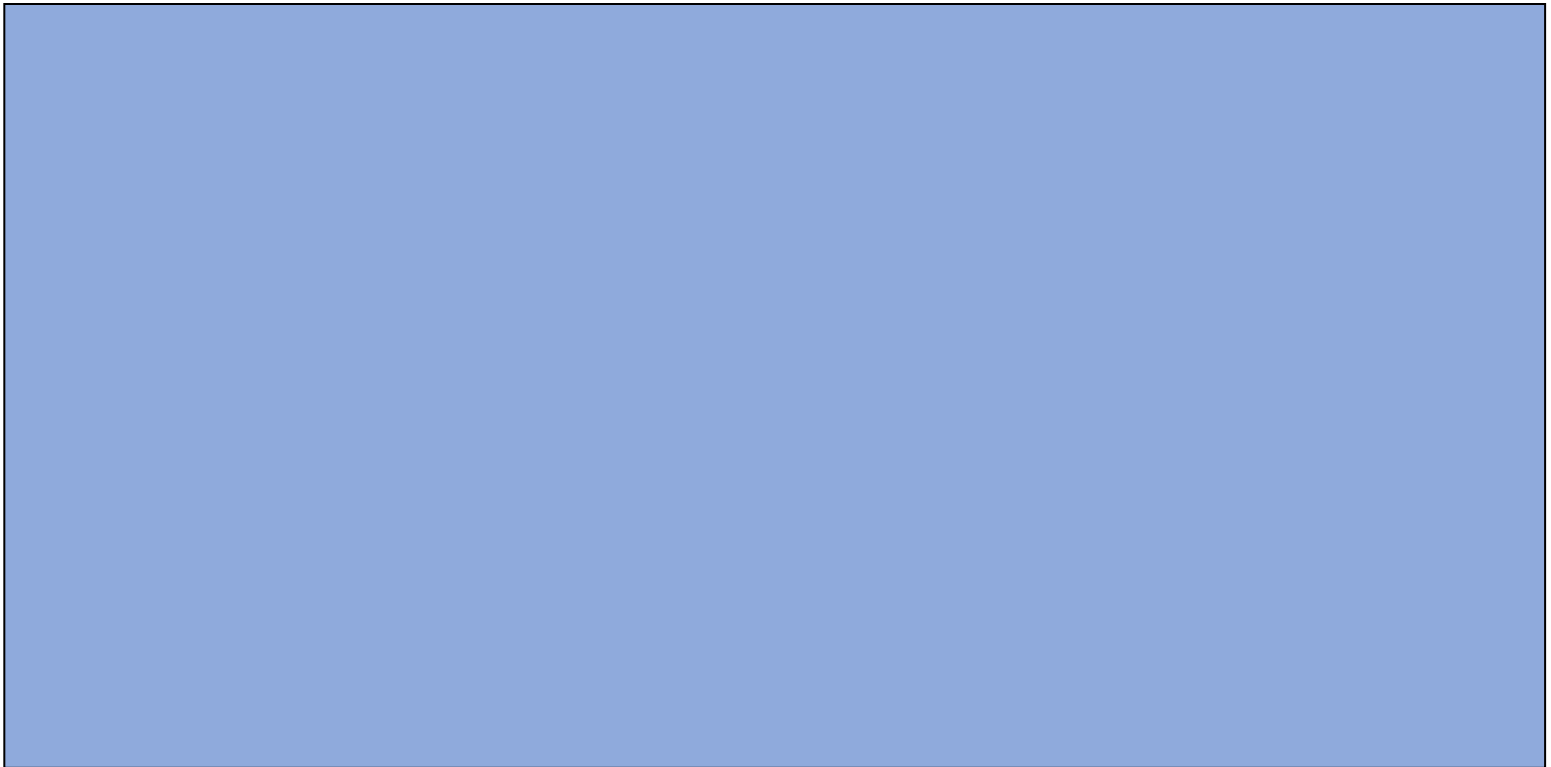
Staff is recommending that the Technical Advisory Committee (TAC) provide a recommendation of approval for the 2045 Long Range Transportation Plan Project Application to the Genesee County Metropolitan Alliance.

2045 Long Range Transportation Plan

Project Application

Applicant Agency: _____

Project: _____



Please complete and return the Congestion Management Process (CMP) Checklist, CMP Toolbox, and the Project Application.

Information for road corridors that have been identified as CMP deficiencies been included with this packet with the intent to help applicant agencies fill out the checklist and application without the assistance of an engineering consultant. The project costs provided should be estimates based on average project costs. Please feel free to contact Sharon Gregory of staff at (810) 257-3010 with any questions related to filling out the CMP Checklist and/or Project Application.

The CMP Checklist is a self-assessment of the current condition of the proposed corridor as it relates to congestion management and should be completed prior to filling out the project application. The checklist walks the applicant through the CMP toolbox to help determine the best option for improving the operation of the corridor.

The Project Application requests information on improvements proposed for the project corridor. A portion of the application is scored to help prioritize the submitted projects.

Congestion Management Checklist

2045 Long Range Transportation Plan

AGENCY

Applicant Agency:

Contact Person:

PROJECT INFORMATION

Project Name:

Project Purpose:

Project Description:

Please provide the current and one historical traffic count from this corridor:

Current Data:
Year Count

Historical Data:
Year Count

*Note: Historical count must have been collected at least five years prior to current count

Proposed Project Year:

Is the corridor identified as a deficiency on the 2014 or 2045 CMP Deficiencies Map?

Yes No

What do you feel is the primary cause of congestion along this corridor?

CMP TOOLBOX STRATEGIES

To begin the strategy evaluation, a “toolbox” of congestion mitigation measures was assembled that includes a variety of strategies that could be used. Following an approach used by the New Jersey DOT, the strategy “toolbox” is arranged so that the measures on top take precedence over those on the bottom. The general categories for the “toolbox” are as follows:

GENESEE COUNTY CMP “TOOLBOX” STRATEGIES:

Strategy #1: Reduce Person Trips or Vehicle Miles Traveled (VMT)

Strategy #2: Shift Automobile Trips to Other Modes

Strategy #3: Shift Trips from SOV to HOV Auto/Van

Strategy #4: Improve Roadway Operations (signal timing, turning lanes, etc.)

Strategy #5: Adding Thru-Lane Capacity

1) Reduce Person Trips or Vehicle Miles Traveled

- Are land use policies in place to encourage the creation of sidewalks, bike paths, and/or transit facilities along the proposed corridor? Check all that apply.

Sidewalks Bike Paths Transit None

- Have major businesses along the corridor been informed about strategies to reduce traffic such as telecommuting, flextime scheduling, or a compressed work week?

Yes No

If “No” was checked for any of the #1 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

2) Shift Automobile Trips to Other Modes

- Are there available transit options along the proposed project corridor?

Yes No

- Are there sidewalks, bicycle lanes, or other non-motorized facilities currently in place along the proposed corridor? Check all that apply

Sidewalks Bike Paths Other Non-Motorized None

If “No” was checked for any of the #2 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

3) Shift Trips from Single Occupancy Vehicles to High Occupancy Vehicles

- Are there programs and facilities in place to encourage the use of High Occupancy Vehicles?

Yes No

- Is there the potential to offer transportation demand management solutions such as ridesharing, preferential parking, employer-provided shuttles, or additional car pool lots along the corridor?

Yes No

If “No” was checked for any of the #3 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

4) Improve Roadway Operations

- Have the traffic signals along the corridor been timed for optimal traffic flow?

Yes No

If yes, when?

- Is there the potential to improve traffic flow at intersections along the corridor through dedicated turn lanes and/or turning restrictions?

Yes No

- If so, which intersections?

- Have Intelligent Transportation Systems been implemented along the corridor to help address accidents and other non-recurring congestion?

Yes No

- Has access management been implemented along the corridor to help reduce conflict points and improve traffic flow?

Yes

No

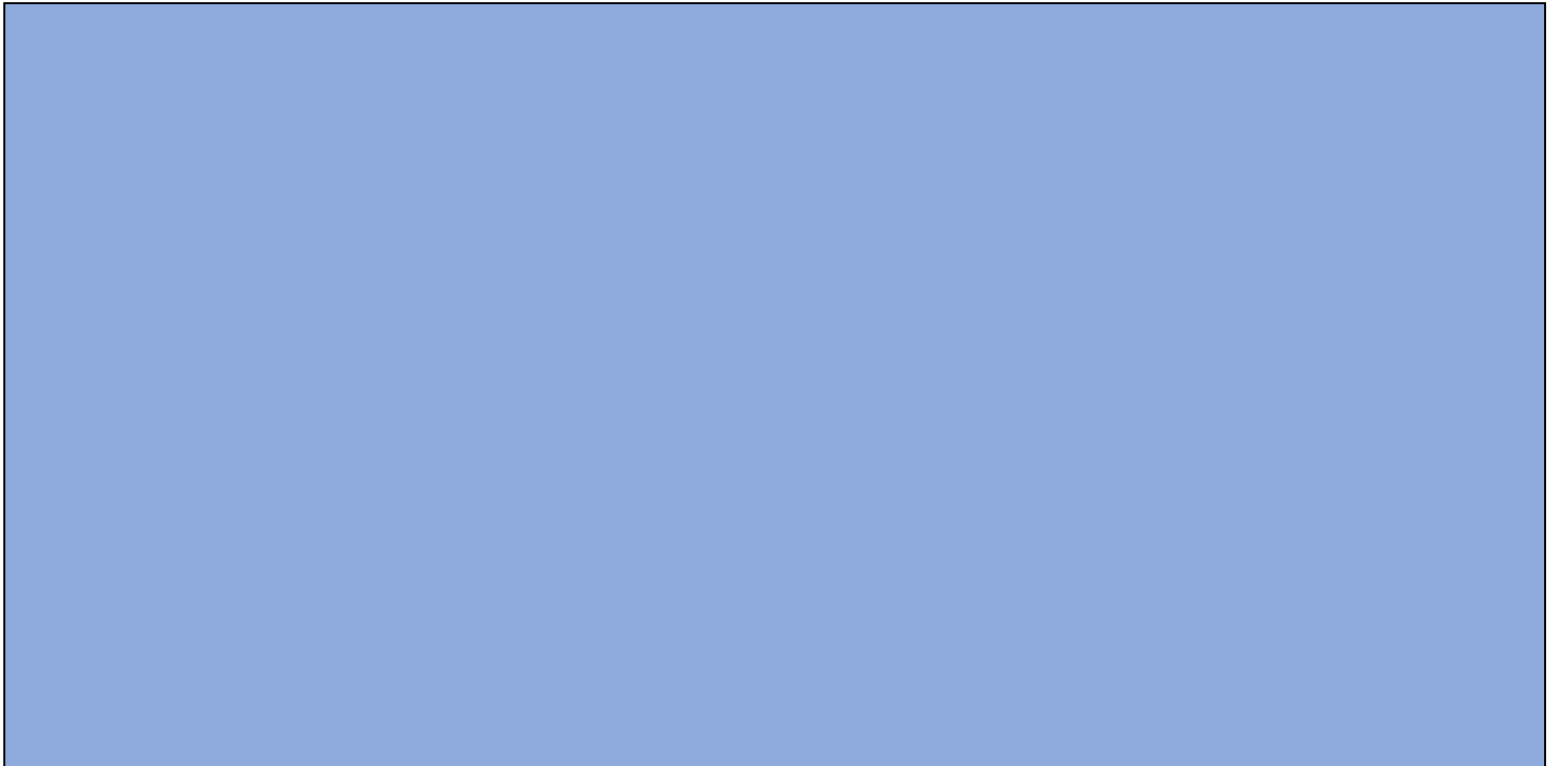
If “No” was checked for any of the #4 CMP Toolbox Strategies, please explain below why the particular option has not been used to decrease congestion and improve traffic flow along the corridor.

Comments:

5) Adding Thru-Lane Capacity

This is considered a “last resort” after all the other strategies have been considered.

Project Application



Please provide a list of any alternatives to the proposed improvement and a brief explanation as to their shortcomings. (Please refer to the Congestion Management Checklist and indicate which strategies from the toolbox have been tried.)

Please note that staff will also analyze various alternatives for the project using the transportation model once the application has been submitted.

The following sections of the application will be scored to aid in prioritizing projects. There is a total of **100 points** available and the amount of points for each section is identified. Please use the information provided with this application to help fill in the questions below.

Identified CMP Deficiency (45 points)

Projects can receive points for an identified Level of Service (LOS) deficiency for a Segment **or** Intersection, **or** can receive points for an identified Safety and Reliability Deficiency. Please use the information provided on the attached listing of CMP Deficiencies to fill in the information below.

Select the most applicable CMP scoring criteria for your project from one of the three choices below:	
Segment Capacity Information: LOS ____ Points ____	<u>Segment Points</u> Level of Service "D": 20 points Level of Service "E": 30 points Level of Service "F": 45 points
or	
Intersection Capacity Information: North and South Legs: LOS ____ Points ____ East and West Legs: LOS ____ Points ____	<u>Intersection Points Per Leg</u> Level of Service "A": 0 points Level of Service "B": 3 points Level of Service "C": 9 points Level of Service "D": 13 points Level of Service "E": 17 points Level of Service "F": 22.5 points
or	
Safety and Reliability Information: Qualification: _____ <i>Ex: Top 25 Crash Location</i> Points ____	<u>Safety and Reliability Points</u> Top 25 Crash Location: 30 points Top 25 Bottlenecks: 30 points High Crash Location: 20 points 10 or more Incidents: 20 points

Performance Principles—55 points are available under this section

2018 PASER Rating: _____

PASER Rating	Points
1-4	10
5-6	5
7-10	0

A. SAFETY (10 Points)

Points will be given to projects that will improve safety along a corridor as less accidents result in less congestion. Are there safety issues that are being addressed with this project? Please explain.

B. ACCESS MANAGEMENT (10 Points)

Points will be given to projects that employ access management techniques as the use of these techniques can help reduce traffic congestion, preserve the flow of traffic, improve traffic safety, prevent crashes and preserve existing road capacity. Does this project address access management? Please explain:

C. COMPLETE STREETS (10 Points)

Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Complete Streets policies encourage pedestrian trips helping to reduce congestion. Are there Complete Streets policies being integrated into the project? Please explain:

D. TRANSIT FACILITIES (10 Points Available)

Transit service helps to reduce the amount of vehicles on the road, helping to reduce congestion. Are there any transit elements such as access to non-motorized facilities, bus stops, and/or bus pull-outs planned as part of this project? Please explain:

E. AREAWIDE IMPACT - (5 Points)

Agency judgment shall be considered for (but is not limited to) certain important and significant criteria which do not fit any of the above categories but which should be included in establishing priorities. This criteria includes the following:

1. Is this project being proposed for a segment classified as an arterial? **Yes No**

2. Is the project located in an Environmental Justice (EJ) Zone? **Yes No**
If so, what are the effects of the project, both positive and negative, and how do you plan to mitigate the negative effects?

3. Please identify any capacity-related bridge improvements that will need to be made in conjunction with this project. Please include information on current bridge condition and capacity.

4. Regarding system reliability and congestion mitigation, points are available for projects that improve traffic flow and freight movement. Write a narrative that describes how your project can improve: travel time; congestion; freight movement; traffic signals; intersection accidents; and corridor timing.

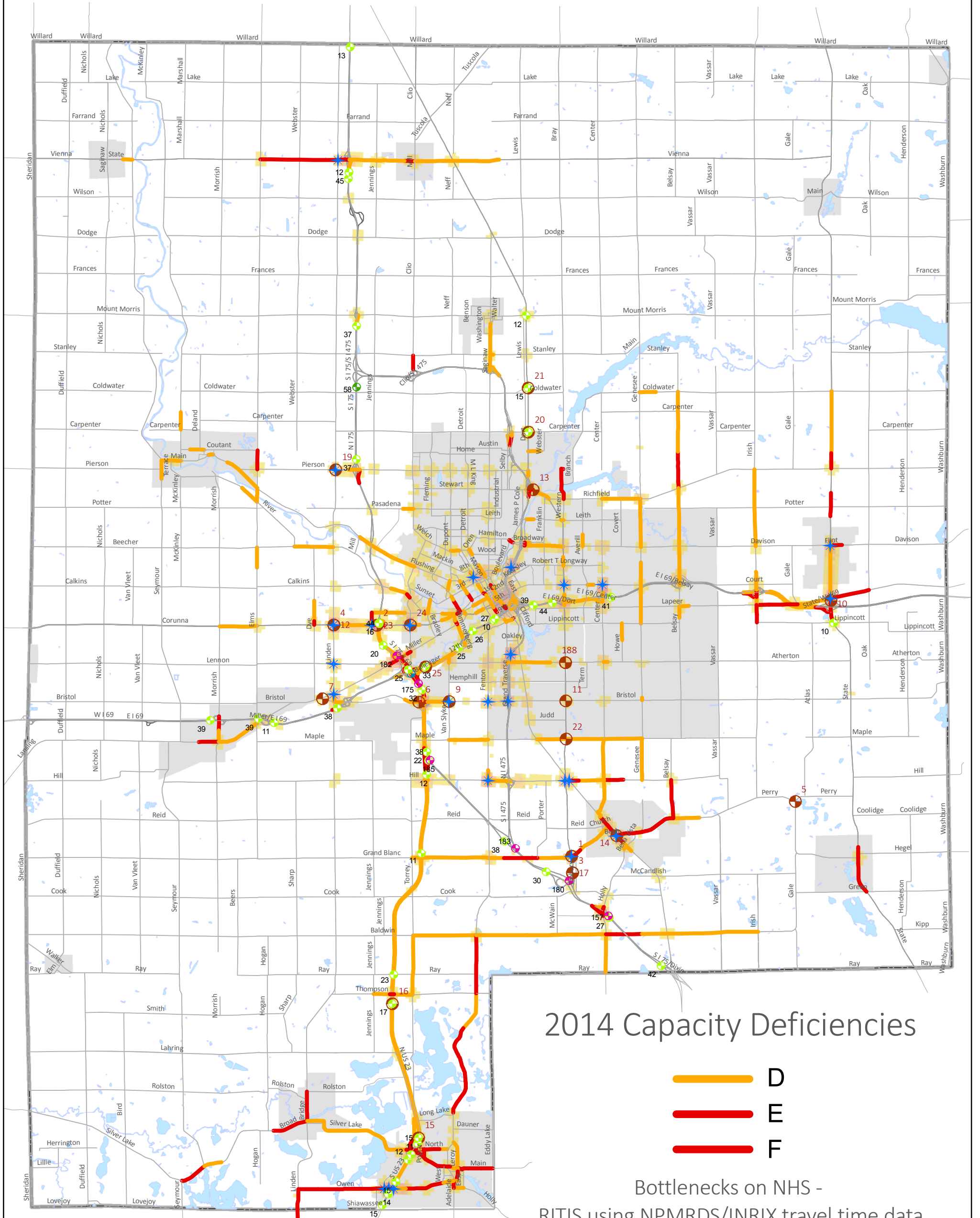
Performance Measures and Transportation Projects

A key feature of the Fixing America's Surface Transportation (FAST) Act is the establishment of a performance and outcome-based program, originally introduced through the Moving Ahead for Progress in the 21st Century (MAP-21) Act. The objective of a performance-based program is for states and MPOs to invest resources in projects that collectively will make progress toward the achievement of national goals. 23 CFR 490 outlines the seven areas in which performance goals are required. These seven areas include: Safety; Infrastructure Condition; Congestion Reduction; System Reliability; Freight Movement; Environmental Sustainability, and Reduced Project Delivery Delay. These performance area have been incorporated into this application where applicable so please keep in mind that projects should be able to address performance measures helping Genesee County and MDOT meet established targets.

Listing of Identified CMP Deficiencies

This will be created once the CMP Deficiencies Maps are approved.

2014 CMP Deficiencies



2014 Capacity Deficiencies

- D
- E
- F

Bottlenecks on NHS -
RITIS using NPMRDS/INRIX travel time data

Top 25 Locations

Top 25 Crash Intersections -
MSP data 2013 - 2017

Crash Density

Incidents on NHS -
RITIS using FHWA NPMRDS/INRIX and other datasets

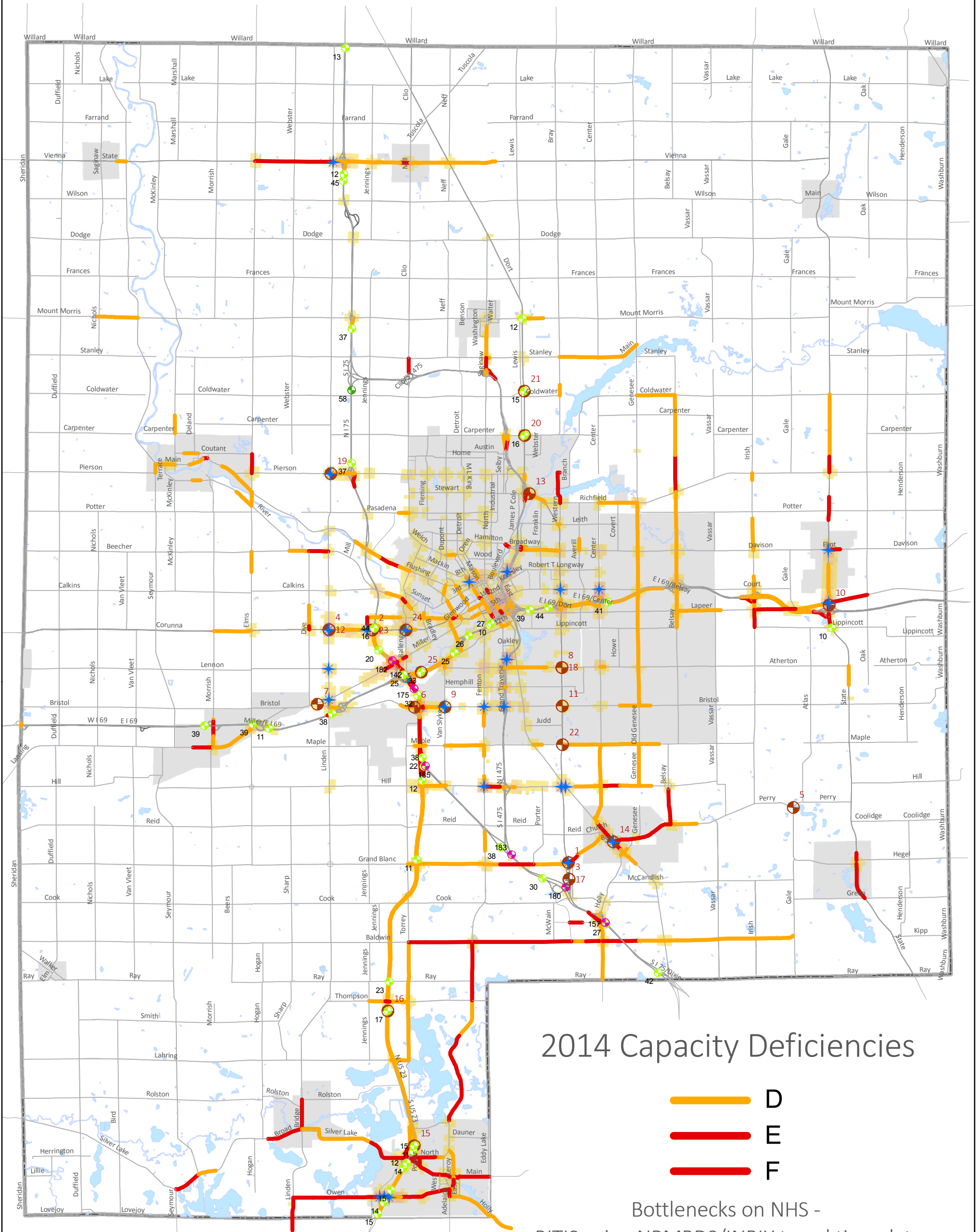
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142 - 150 (1)

157 - 185 (6)


2045 CMP Deficiencies




2014 Capacity Deficiencies

- D
- E
- F

Bottlenecks on NHS -
RITIS using NPMRDS/INRIX travel time data




 Top 25 Locations

 Top 25 Crash Intersections -
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