



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

RICK SNYDER
GOVERNOR

KIRK T. STEUDLE
DIRECTOR

May 4, 2017

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 2019 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) 2019 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 2019 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 project or a maximum amount of \$2,000,000 per Local Agency for the fiscal year, including any selected FY 2019 HSIP projects. Any non-selected projects submitted under this HRRR call for projects will be automatically rolled over to the general FY 2019 HSIP safety call for projects. Selected HRRR projects are to be obligated in FY 2019; 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 7, 2017.

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 Matthew W. DeLong, Administrator
Development Services Division

Enclosures

Ms. Denise Donohue and Mr. John LaMacchia II
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cc: Dave Morena, FHWA
Matt DeLong, MDOT
Pam Boyd, MDOT
Mark Harbison, MDOT
Pamela R. Blazo, MDOT
Steve Shaughnessy, MDOT
MDOT Region Engineers
MDOT Transportation Service Center Managers
MDOT Local Agency Program Listserv Members
Metropolitan Planning Organizations
Rural Task Forces

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.
6,316	Total number of fatalities or incapacitating injuries, located on roadways classified as described above, for the time period 2011 – 2015.
0.08	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 12 miles in length, multiple such serious crashes have occurred such that there is at least one such crash for every 12 miles of roadway segment.** Proposed projects with higher crash concentrations of ‘K’ and/or ‘A’ crashes may receive a higher priority than other projects.
 - a. Systemic pavement marking projects and horizontal curve delineation projects are exempt from the fatality (K) / incapacitating (A) injury requirements. See Exhibit 2 for more information.
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.
4. Financial Goals

Project Type	Total Program
Lane Departure related	\$3,000,000
-Systemic edgeline striping	\$1,000,000
-Horizontal curve delineation	\$400,000

Exhibit 2 – Systemic pavement markings and horizontal curve delineation projects

- Pavement Marking projects
 - The intent of the systemic pavement marking financial goal is to stripe white edgeline markings on roadways that do not currently have edgeline markings.
 - Eligible roadways are those that are classified as rural major collector, rural minor collector, and rural local.
 - Eligible roadways are those that are paved and uncurbed.
- Horizontal curve delineation projects
 - All horizontal curves signed shall meet the ‘recommended’ category per Table 2C-5 of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD). Local agencies are encouraged to meet the ‘optional’ category.

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 Section 2C.07 to determine which sign to use)	Recommended	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Recommended	Required	Required	Required	Required
Chevrons (W1-8) and/or One Direction Large Arrow (W1-6)	Optional	Recommended	Required	Required	Required
Exit Speed (W13-2) and Ramp Speed (W13-3) on exit ramp	Optional	Optional	Recommended	Required	Required

- All curves shall also include Chevron (W1-8) signs when installing a One Direction Large Arrow (W1-6) sign. Spacing of these signs shall conform to the Table 2C-6 of the MMUTCD.
- All Chevron (W1-8) and One Direction Large Arrow (W1-6) 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	60 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.

Exhibit 3 – 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 appropriated and 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 'A' Phase.

Exhibit 4 – Design Requirements

- The 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 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.

Exhibit 5 - Submitting Candidate Safety Project Applications

Applications submitted electronically must be received no later than **Monday, August 7, 2017** at midnight.

- The Local Safety Program Call for Applications Funding Year 2019 Electronic Submittal Form is located at www.michigan.gov/mdot ~ Doing Business ~ Local Agency Program ~ Safety Program ~ FY 2019 HRRR Call for Safety Electronic Submittal.
- Electronic submittals are limited to 15MB.

Applications sent hardcopy must be postmarked no later than **Monday, August 7, 2017**.

- Projects postmarked after Monday, August 7, 2017, 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 will be accepted*. A copy of the data input page and results page 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 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 2012 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 Analysis may replace or supplement the TOR Analysis.

FY 2019, 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 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 Typical, Safety Programs, Highway Safety Manual)
 - Safety Guides (Safety Links, Traffic Standards and Typical, 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 7, 2017**, 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.