# Exhibit 1 – Project Eligibility Requirements

General:

- The applicant must be an Act 51 agency (county, city, village) or a federally recognized tribe. Townships will need to work with their county for submittal. The application must include a letter of support from the agency with roadway jurisdiction if different from the application agency (example: City is the applicant, but the County Road Commission holds the roadway jurisdiction).
- All locally owned roadways open to the public are eligible for safety funding regardless of whether or not they are on the Fed-Aid network.
- The Safety Program allows 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 fatalities (K) or incapacitating (A) crash types.
- Any local agency that fails to obligate an awarded safety project in the assigned FY will be scored lower on subsequent safety project submittals for two years.
- Federal funds will be limited to a maximum of $1,500,000 per agency and will include any projects by non-Act 51 agencies within Act 51 agency jurisdiction.

HRRR Specific Requirements:

- The roadway must be functionally classified as **rural** per the area urban census boundary (AUCB). **If any portion of the roadway segment or intersection touches the urban boundary, the roadway is not eligible in the HRRR category.**
- The roadway must have a National Functional Classification of major collector, minor collector, or local road. Arterials and interstates are not eligible in the HRRR category.
- ACUB and functional classification can be found at View National Functional Class (NFC) Map.
- 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 of these serious crashes have occurred so 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.
- 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.

- There is no limit on the number of applications that may be submitted. Federal funds for selected projects will be limited to a maximum of $750,000 per project [(1)].

HSIP Specific Requirements:

- Projects may be located in a rural or urban designated area.
- All locally controlled public roadways, regardless of National Functional Classification, are eligible.
- There is no limit on the number of applications that may be submitted. Federal funds for selected projects will be limited to a maximum of $750,000 per project [(1)].

HSIP Streamlined Systemic Specific Requirements:

- Only the following project types may use the Streamlined Systemic Application (see Exhibit 4 for more guidance):
    - Horizontal curve delineation
    - Rumble strips
    - Edge line pavement markings
    - Signal backplates
    - Countdown pedestrian signals
    - Stop-controlled intersection sign upgrades
- Agencies may submit no more than three streamlined systemic applications total, including no more than two project applications for the same work type. Federal funds for selected projects will be limited to a maximum of $200,000 per project.
- Agencies interested in using the Fixed Price Variable Scope (FVPS) contracting method should contact Jackie Pethers at PethersJ1@Michigan.gov for additional details prior to submitting their application.

(1) *Federal funds are limited to $750,000 for safety projects unless specifically identified in the original application. Federal funds include HRRR, HSIP or any other federal funding source.*

## Exhibit 2 – Financial Goals

| **Project Type**[1] | **Total Program** |
|---|---|
| Projects with scopes that directly address areas with a concentration of Types "A" and "K" crashes | $15,000,000 |
| Vulnerable Road Users (VRU)[2] (Non-motorized facility/pedestrian improvements) | $3,000,000 |
| High Friction Surface Treatment | $500,000 |
| Road Safety Audits (RSA) | $50,000 |
| Vulnerable Road Users (VRU) Focused Road Safety Audits (RSA) | $50,000 |
| Guardrail Upgrades and Clear Zone Improvements[3] | $1,000,000 |
| Safety Funds per MDOT Region | $750,000 |

1. A selected project may count towards multiple financial goals.
2. Vulnerable Road Users are as described in ANSI D16.1-2007, 23 U.S.C. 148(a)(15) and 23 CFR 490.205
3. The intent of the Guardrail financial goal is for projects installing guardrail where 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.

Examples of VRU specific projects include:

- Road Diets: restriping only with no pavement overlays or reconstruction; with provisions to accommodate VRUs
- Pedestrian Refuge Islands
- Special Emphasis Pedestrian Crosswalk Markings as per PAVE-945 include use of high visibility markings
- Rectangular Rapid Flashing Beacon (RRFB): approval per the MDOT Crosswalk Guidance Document
- Pedestrian Hybrid Beacon (PHB): thresholds met per the MDOT Crosswalk Guidance Document
- Pedestrian Countdown Signals
- Gateway Treatment as per the MDOT R1-6 User Guide
- Shoulder Widening: documented VRU crashes/concerns
- Bulb Out/Curb Extensions
- Advanced Pedestrian/Mix Use Trail Pavement Markings and Warning Signs
- VRU Specific Road Safety Audit (RSA): emphasize VRU needs compared to traditional RSA
- Protected VRU Lane/Path: as documented in the local government's non-motorized plan
- Separated Sidewalk/Shared-Use Path: as documented in the local government's non-motorized plan and agreement in place for local government to own and maintain

## Exhibit 3 – Funding Participation

General:

- Portion eligible for federal aid:
    - Project's Construction Phase ("A" phase)
    - Preliminary Engineering, **ONLY** if criteria in the Preliminary Engineering section outlined below is met.
- Portion not eligible for federal aid:
    - Right-of-way costs
    - Preliminary engineering unless criteria in the 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%. Projects, at MDOT's discretion, may 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 Instructions for Construction of Federally Funded Local Agency projects by Non-Competitive Bid Contract (Force Account) (michigan.gov).
- All social, economic, and environmental impacts within the project limits impacts must be mitigated before federal funds can be obligated. Project applications that are expected to have significant public controversy and/or require an environmental assessment will not be considered until these outstanding issues have been resolved.
- MDOT will program the selected projects into JobNet for the area's Transportation Improvement Program (TIP) for the FY for which the project was selected. Local Agencies within Metropolitan Planning Organization (MPO) areas must coordinate with their MPO to ensure approval of their project in the TIP.
- Any separate and/or supplemental funds intended to be used for a proposed safety project must be identified in the application documents (i.e. narrative) and must be programmed with a separate job number, due to Highway Safety Improvement Program (HSIP) federal reporting requirements. **Federal funds (any template) is limited to $750,000 maximum for safety projects.**

HRRR specific:

- Construction will be funded at 90% federal funds and 10% local funds.
- See the section below regarding eligibility for Preliminary Engineering.
- Road Safety Audits (RSAs) are not eligible for HRRR funds.

HSIP specific:

- Construction will be funded at 90% federal funds and 10% local funds.
- See the section below regarding eligibility for Preliminary Engineering.

HSIP streamlined systemic specific:

- Construction will be funded at 90% federal funds and 10% local funds.
- Projects are not eligible for Preliminary Engineering funding.

Preliminary Engineering (PE):

Preliminary engineering for selected safety projects may be programmed if the following:

- MDOT Local Safety Initiative (LSI) identified location (funded at 50% federal funds/50% local funds)
    - Proposed scope of work must address the noted location deficiencies reviewed and identified by the LSI Program and align with the LSI suggestions.
    - **A copy of the MDOT LSI written suggestion list must be included with application.**
    - PE funded up to 10% of estimated eligible construction costs at the time of funding award.

Road Safety Audits (RSAs) (funded at 90% federal funds/10% local funds)

- An RSA proposal is submitted without an associated construction phase. It is hoped that the construction phase would be submitted in the next call for projects, however a previously funded RSA does not guarantee funding of the construction phase in a future year.
- A Vulnerable Road User (VRU) RSA shall be focused on non-motorized traffic. Examples include corridors with non-motorized traffic and crashes, corridors with the potential for crashes, school corridors with the potential for or crashes that have occurred. Focus shall be placed on locations where VRU crashes or reported near misses have occurred.
- A maximum of $25,000 in total project costs will be set up for each RSA.
- The RSA Final Report/findings must be submitted to the Local Agency Safety Program Engineer before the agency will be reimbursed.
- This work will be completed by a consultant or another agency other than the road owner.
- FHWA RSA information
- FHWA Pedestrian and Bicyclist Road Safety Audit Guide and Prompt List

## Exhibit 4 – Design Requirements

General:

- Proposed projects must meet current standards and warrants, current Americans with Disabilities Act, Buy America requirements and current AASHTO LRFD specifications.
- Designed in accordance with MDOT's Guidelines for Geometrics on Local Agency Projects, or in accordance with the current MDOT accepted version of AASHTO 7th Edition of "A Policy on Geometric Design of Highways and Streets." Other commonly used guidelines may be acceptable with prior MDOT approval.
- Designs must include all proposed work and locations identified in the safety application.
- **Shoulder Widening (for VRU).** Minimum 4 feet clear paved shoulder or 6 feet recommended with shoulder corrugations to provide an unofficial buffer area.
- **Traffic Signals.** Traffic signal projects must install a box span configuration (unless justification is provided) and signal back plates with reflectorized borders. These projects must also include overhead mounted street name signs. New traffic signals require a warrant analysis supporting the installation. Note that all applications involving work at an MDOT signal must include a local Transportation Service Center (TSC) concurrence letter. If the selected project contains an MDOT signal, all signal design work must be completed by an MDOT prequalified consultant. If painting of signal supports is included, the full cost of the painting will be the local agency's responsibility.
- **PHB/HAWK Signals.** Warrant/threshold analysis supporting the installation.
- **High Friction Surface Treatments.** High friction surface projects shall use or follow the intent/material requirements of the most current MDOT Special Provision.
- **Permanent Signing and Pavement Markings.** 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 must include signing improvements beyond upgrading sign reflectivity requirements (Example: adding reflective sheeting to sign posts, larger signs, etc.). Conversions to All Way stop-controlled intersections require a warrant analysis. Permanent pavement markings will include improvements such as edge lines where not required by MMUTCD, being recessed or high quality "durable" markings.
- **Guardrail.** Any new guardrail or guardrail endings installed must be compliant with the AASHTO Manual for Assessing Safety Hardware 2016 (MASH-16).
- **Culverts.** 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.

- **Safety Edge.** Projects involving shoulders that are newly constructed, resurfaced (1 ½" or greater) or widened without shoulder corrugations on roadways where the posted speed is 45 mph or greater must construct a Safety Edge per standard plan R-110 series. The Safety Edge may be omitted in developed rural areas where driveway density exceeds 30 access points within ½ mile. The Safety Edge may also be omitted in locations where the shoulder is terminated by valley gutter or curb and gutter.
- **Roundabouts.** An operational analysis (using projected volumes and design vehicle) shall have been completed to determine size, capacity and that it will operate acceptably. Identify ROW needs and submit Form 5323 and Section 106 for review early. Lighting should be included unless a valid and approved reason is provided.
  - Roundabout Guidelines and Design Aid resources.
- **Design Exception/Design Variance.** Use of Design Exceptions (DE) and Design Variances (DV) are highly discouraged and may not be approved. Projects are selected to address an existing or predicted crash issue. Design elements not meeting current standards compromise the integrity of the project. **Design elements that do not meet standard(s) must have been identified in the original safety application.**

HSIP Streamlined Systemic Specific Requirements:

- Horizontal curve delineation projects
  - All horizontal curves signed will meet the requirements shown in the table below **that have 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 retrofeflecitve sheeting must be added to the sign posts for all new installations. | | | | | |

- All horizontal curve signs must include reflective sheeting on the signposts.
- The advisory speed will 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.

- Edge line pavement marking projects
  - Eligible roadways are those that have never had striped edge lines.
  - Local agencies may elect to use 4-inch or 6-inch edge lines.
  - Wet reflective markings are highly encouraged.

- Rumble (or Mumble) 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 (rumble strips placed within the paint line) 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. Sinusoidal rumble strips are fully recessed and therefore any sinusoidal rumble strips placed under an existing pavement marking (centerline or edge line) require new pavement markings to be included in the estimate.

- 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.
  - A Structural Design Analysis is required and will be placed in the project folder to ensure the structure can safely support the proposed modifications, or if retrofitting, will be required.

- Countdown Pedestrian Signal projects
    - Signal upgrades other than the addition of countdown pedestrian signals, or the upgrade from standard pedestrian signals to countdown, are not allowed through this streamlined application and need to be submitted through the general Call for Projects process.
    - All countdown pedestrian signals must be LED.
    - Upgrades to sidewalk ramps, pushbuttons, controllers, or cabinets are not allowed through this streamlined application and need to be submitted as a HSIP general or HRRR project.
    - A Structural Design Analysis is not required if ONLY countdown pedestrian signals are added to existing strain poles or mast arms and the existing structure is in suitable condition for installing pedestrian signals, as approved by the Design Engineer.

- Stop Controlled Intersection Sign Upgrade projects
    - **Projects must include dual Stop signs and dual Stop Ahead signs.**
    - Target Arrow signs at tee-intersections are allowable.
    - Stop signs will be 36 inches in size.
    - Local agencies may elect to use 30-inch or 36-inch size Stop Ahead signs.
    - Dual Stop signs must include red reflective post sheeting.
    - Dual Stop Ahead signs must include yellow reflective post sheeting.

## Exhibit 5 - Submitting Candidate Safety Project Applications

(Electronic Submittal is Required)

General:

- Applications and supporting information must be submitted electronically no later than 11:59 pm on **May 1, 2025**. Use the *Local Safety Application Submittal Sheet* for all submitted projects.
    - The *Local Safety Application Submittal Sheet* can be found online at MDOT LAP Special Funding Program in the Application Process section of the page.
    - Electronic submittals are limited to 15MB. Contact PethersJ1@Michigan.gov for alternate electronic submittal options for applications larger than 15MB.
- Submit applications and supporting information by email to: MDOT-DesignLAP-Safety@michigan.gov.
- Applicants will receive an email acknowledging receipt of the application. Please retain this receipt as proof of submission date/time.

HSIP and HRRR Specific Requirements:

- Complete the *Local Safety Application Submittal Sheet*. Attach the following six required documents listed below. All MDOT forms and spreadsheets mentioned can be found online at MDOT LAP Special Funding Program in the *Application process* section of the page.
    1. Project Narrative
        - Provide a brief overview of the proposed project including the crash pattern that has been experienced, proposed safety project scope, and how the proposed scope of work will remedy the past crash history.
        - Other items that should be discussed include, but are not limited to:
            - Data driven methods utilized when choosing project location.
            - Local background knowledge of the location.
            - Numeric crash modification factors (CMF) used in a HSM analysis.
            - Anything that the applicant would like the scoring committee to know. Committee members review applications as submitted and do not conduct field visits.
    2. MDOT Form 1627
    3. Map showing project location(s)
    4. Detailed cost estimate or Michigan Engineers Resource Library (MERL) estimate.
        - A line item for contingency and/or inflation may be included if deemed

necessary, but it will in no way result in any modification of the grant amount or the responsibility of the local agency to cover any amount exceeding the grant amount.

- If a contingency and/or inflation amount is included in the estimate, this must is included in the TOR calculation.

5. Economic Benefit Cost Analysis
   - Must be completed using the **MDOT Time of Return (TOR) spreadsheet or the Highway Safety Manual (HSM) spreadsheet**. Agencies may choose to submit both and will be scored based on the version showing the best result. Current versions of both spreadsheets are located in the *Application process* section of the MDOT LAP Special Funding Program website.
   - Attach the excel version of the spreadsheet to the application.
   - Guardrail oriented projects and independent RSA submittals do not require an economic benefit cost analysis.
   - Common Crash Reduction Factors (CRF) are listed in the TOR spreadsheet and common Crash Modification Factors (CMF) are listed in the HSM spreadsheet.
     - Additional CRFs and/or CMFs may be used. If submitting a spreadsheet utilizing a CRF or CMF not listed in the spreadsheet, state the source utilized to obtain the factor and include a copy of the report. CRF/CMFs should have a 4- or 5-star quality rating.
   - 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.

6. UD-10s (crash reports)
   - Only include UD-10s for crashes that are used to compile the TOR. Include only those crashes that relate to the proposed scope of work.
   - The HSM requires all crashes to be input, including animal crashes, when entering Observed Crashes. UD-10s are NOT required to be included with the application.
     - If submitting UD-10s with a HSM analysis for additional support, clearly identify the UD-10 reports and separate them from any UD-10s used in the TOR analysis.
   - Use the most current 3- to 5-year period of available data (**only crashes occurring in 2019 to present can be counted**).

- To provide additional support, the following are highly recommended (but not required):
  - 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. Please highlight the relevant information.

- A copy of the Local Non-Motorized Plan to support VRU focused projects.
- Additional 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 including guardrail improvements.
- 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.
- A Highway Safety Manual Analysis.
- Summary of alternatives considered.
- Copy of a previous Road Safety Audit for the project location.
- Network screening reports.
- A list of any potential Design Variances/Exceptions **must be identified in the application.**
- Roundabout operational analysis.
- Traffic signal warrant analysis.
- PHB/HAWK warrant/threshold analysis.

HSIP Streamlined Systemic Specific Requirements:

- Complete the *HSIP Streamlined Systemic Application* found online at the *Application process* section of the website MDOT LAP Special Funding Program.
  - All macros must be enabled.
  - When filled out completely, the user will see 5 completed steps.
  - Use the "Save As PDF'" button at the bottom of the spreadsheet to save a copy.
- Attach the HSIP Streamlined Systemic Application PDF copy, along with any supplemental location maps, to the *Local Safety Application Submittal Sheet* and email to: MDOT-DesignLAP-Safety@michigan.gov.

Scoring Criteria:

Projects are selected based on available funding, reduction of crash risk, cost effectiveness and financial goals.

Applications are reviewed and scored by a committee made up of MDOT, FHWA and CRA/MML members.

- Scope of work – considerations may include how the project directly correlates to observed or predicted crashes; does the project address multiple safety risk factors; will the project mitigate K/A injury crashes; does the project focus on safety or improving asset condition; is there enough detail provided to understand what work will be done; is the estimate realistic; is proposed VRU improvements separated from vehicular traffic, etc.
- Thoughtful design – considerations may include if the project is data driven; was a RSA previously completed; is a warrant analysis included; were other alternatives

considered; is proposed project a next level safety improvement, etc.
- Economic cost benefit – based on adjusted TOR or HSM value
- ADT
- Bonus points – HSM analysis included, LSI previously completed, 2 years without a selected safety project
- Penalty points – previously delayed or cancelled projects, late application submittal, incorrect/incomplete application data

Resources:

Additional information for application development can be found at:

- The *Safety resource* section of the MDOT LAP Special Funding Program website.
- MDOT Traffic & Safety www.michigan.gov/highwaysafety website.
- Michigan Traffic Crash Facts website.
- Federal Highway Administration (FHWA) Proven Safety Countermeasures website.
- The Local (Regional) Road Safety Plan. Current plans can be obtained from your area Planning Organization.

Safe Systems Approach (SSA)

- A Safe System Approach (SSA) means a roadway design that emphasizes minimizing the risk of injury or fatality to road users and that takes into consideration the possibility and likelihood of human error; accommodates human injury tolerance by taking into consideration likely crash types, resulting impact forces, and the ability of the human body to withstand impact forces; and takes into consideration vulnerable road users. (23 U.S.C. 148(a)(9)).
- FHWA Safe Systems Approach website.

Vulnerable Road Users (VRU)

- A Vulnerable Road User is a non-motorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedal cyclist as defined in the ANSI D16.1-2007. (See 23 U.S.C. 148(a)(15) and 23 CFR 490.205). A vulnerable road user may include people walking, biking, or rolling.
    - Please note that a vulnerable road user includes a highway worker on foot in a work zone, given they are considered a pedestrian, but does not include a motorcyclist.
- Pedestrian Safety Guide and Countermeasure Selection System (pedbikesafe.org)
- Bicycle Safety Guide and Countermeasure Selection System (pedbikesafe.org)
- FHWA Proven Safety Countermeasures Filter Tool and Keyword Search