

**Small Urban Program
Federal Surface Transportation Block Grant Project Application**

If you need assistance, please contact Brandon Kovnat, SWMPC Transportation Planner
Email kovnatb@swmpc.org or call (269) 925-1137 x 1524

Applicant Information

Agency Name: _____

Contact Name: _____ Title: _____

Email Address: _____ Phone Number: _____

Engineer/Consultant: _____ Company: _____

Email Address: _____ Phone Number: _____

Project Description

Project Name/Road Name: _____

Project Limits (From/To): _____

Project Length (to the nearest hundredth of a mile): ____ miles

City, Village, or Township: _____

Additional location description if needed

Major Work Type: _____ **Preferred Year of Funding:** _____

Detailed Work Description (Include all work items as part of this project e.g. drain cleaning, curb and gutter replacement, guardrail, tree clearing, grading, culvert replacement, all types of ROW, ADA upgrades, etc.).

Describe any non-participating work if applicable

What is the need and purpose for this project (what issues are being addressed by the proposed work)

If you are submitting multiple applications, please rank your applications by priority. Rank: ____ of ____

Proposed Budget

| | Amount | Percent of Total |
|---|--------|------------------|
| Total Participating Construction Estimate | \$ | 100 % |
| STBG Requested | \$ | % |
| Local Match | \$ | % |
| | \$ | % |
| | \$ | % |

Are the other funding sources secured? Yes No *If no, provide details on when these funds will be secured*

Non-Participating Cost Estimate: \$_____

Total Project Estimate with Non-Participating: \$_____

Are you willing to contribute additional local match above the minimum 18.15% required: Yes No

Are you willing to use an Advance Construct (AC): Yes No

If so, what is the maximum Amount: \$_____

Estimated Project Schedule

| Activity | Date (Month/Year) |
|---|-------------------|
| NEPA/SHPPO Submitted | |
| Right-of-Way Certification Submitted | |
| Grade Inspection (GI) Completed | |
| Full Biddable Package Submitted to MDOT | |
| Project Letting | |
| Construction Start | |
| Project Completion | |

System Preservation

What is the most recent PASER rating (<https://www.mcgi.state.mi.us/tamcMap/>): _____

Do the project limits begin or end at a road with a PASER of 7 or higher: Yes No

Which MDOT guidelines will the project use:

What is the expected increase in Remaining Service Life (RSL): _____ Years

What is the current state of drainage on the road:

Regional Significance

What is the average annual daily traffic (AADT) volume for the limits of this project? _____ Vehicles/day

What is the National Functional Classification (NFC) of the road:

Safety

For the questions below use the five-year totals from 2019-2023 (<https://www.michigantrafficcrashfacts.org/>)

All Crashes

Total number of crashes: _____

Number of fatalities: _____

Number of Serious Injuries: _____

Pedestrian and Bicycle Crashes

Total number of crashes: _____

Number of fatalities: _____

Number of Serious Injuries: _____

List the safety countermeasures included in the project
Use the attached list of countermeasures and associated crash types

| Counter Measure | Crash Type Addressed | Does this address a fatal or serious injury crash |
|-----------------------------------|--------------------------------|---|
| <i>Improved pavement markings</i> | <i>Angle, Rear-End Crashes</i> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> |

Complete Streets

Are there existing pedestrian and/or bicycle facilities within the limits of the project? If so, please explain

Describe any improvements to pedestrian and/or bicycle facilities included with the project

Will the new/improved pedestrian and/or bicycle facilities connect to existing pedestrian/bicycle facility or one that is planned to be completed before 2029: Y/N Yes No

Does your agency have a policy for maintaining non-motorized transportation infrastructure, such as bike lanes and pedestrian pathways/sidewalks? Yes No

Accessibility and Equity

Is the project located in a Disadvantaged Community (DAC), as identified by the Climate and Environmental Justice Screening Tool (<https://screeningtool.geoplatform.gov/>): Yes No

Does this project remove a priority ADA barrier, as identified in an adopted ADA Transition Plan or similar plan? Yes No

Strategic Planning & Investment

The project crosses jurisdictional boundaries. Yes No

The project will coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.) Yes No

The Project is identified in a pavement asset management plan Yes No

There is an asset management plan covering utilities along the length of the project Yes No

The city/village/Township has adopted an asset management policy Yes No

The project supports goals or objectives from another planning document (ex. master plan or rec plan) Yes No

If the project supports goals or objectives in another planning document please identify the plan, specify the relevant goals or objectives, and describe how this project will help achieve them

Risk Assessment

Does right of way need to be acquired? Yes No Unknown

Does the project intersect with a railroad crossing? Yes No Unknown

Does the project require utility relocation? Yes No Unknown

Are the project limits within a defined FEMA floodplain? Yes No Unknown

Will there be trees removed within the project limits? Yes No Unknown

Is the project within 100 feet of a cemetery? Yes No Unknown

Are there historic elements withing 100 feet of the proposed work* Yes No Unknown

Describe approximately how many individual mature trees or acres of trees will be removed if applicable

* Historic elements include any of the following if they are 50 years old or older: **objects** (ex. Statues or monuments), **structures** (ex. bridges, stone curbs, or brick streets), intentional/designed landscapes, **buildings**, **Historic districts**, **intentional/designed landscapes**

SEGMENT CRASH REDUCTION FACTORS

| Proposed Improvement | % Reduction | Associated Crash Types |
|--|-------------|--|
| Geometric Safety Enhancements | | |
| Center Left-Turn Lane - Construct | 80% | Rear-End Left-Turn |
| | 50% | Head-On Left-Turn |
| | 20% | Head-On, Angle, Sideswipe* |
| | 15% | Non Left-Turn Rear-End, Other* |
| Right-Turn Lane - Construct | 65% | Rear-End Right-Turn |
| | 30% | Angle |
| | 15% | Rear-End |
| | 10% | Other* |
| Horizontal Curve Flattening | 30% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 1' each side) | 5% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 2' each side) | 10% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 3' each side) | 15% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 4' each side) | 20% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 5' each side) | 25% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 6' each side) | 30% | Lane Departure*** |
| Shoulders - Widen to Standard Width (add 7' each side) | 35% | Lane Departure*** |
| Vertical Curve Modification | 20% | All Applicable Crash Types +++ |
| Superelevation Correction | 20% | Lane Departure*** |
| General Segment Enhancements | | |
| Access Management - Improve | 15% | Drive-way Related Applicable Crashes |
| Centerline Rumble Strips - Install | 44% | K and A injury Applicable Crashes |
| | 46% | Single Vehicle Run off Road Left Crashes |
| | 43% | Sideswipe Same Crashes |
| | 55% | Sideswipe Opposite Crashes |
| | 35% | Wet Crashes |
| High Friction Surface Treatment - Install | 20% | All Other Applicable Crashes |
| Recessed Durable Pavement Markings | 5% | All Applicable Crashes |
| Road Diet (4-3 Lane Conversion) - Install | 50% | Suburban - All Applicable Crashes |
| | 30% | Urban - All Applicable Crashes |
| Shoulder Rumble Strips | 20% | Run-Off the Road Right Crashes |
| Signing/Delineation on Horizontal Curves (Including Recessed Durable Pavement Markings) - Install | 20% | Lane Departure*** |
| Install Edgelines - Where none currently exist | 15% | Lane Departure*** (CMF Clearing House ID 10243) |
| HMA Safety Edge Improvement | 13% | All non-intersection crashes |
| Roadside Enhancements | | |
| Fixed Objects From Clearzone (Trees, Culverts, Etc.) - Removal | 75% | Fixed-Object Applicable Crashes |
| Guardrail - Install | 55% | Lane Departure *** Fatalities and "A" Injury Crashes |
| | 7% | Lane Departure *** B/C/O Applicable Crashes |
| Slope Flattening | 15% | Fixed-Object, Overturn Applicable Crashes |
| Living Snow Fence | 20% | Crashes due to wintry surface conditions |
| Lighting - install on segment | 20% | Dark Unlighted Crashes |

INTERSECTION CRASH REDUCTION FACTORS

| Proposed Improvement | % Reduction | Associated Crash Types |
|--|-------------|--|
| Signal Timing / Hardware Enhancements | | |
| Install Reflectorized Backplates | 15% | All Applicable Crashes |
| Add All-Red Clearance Interval - <i>Add per ITE</i> | 20% | Head-On Left-Turn, Angle |
| Yellow-Change Interval - <i>Increase</i> | 10% | All Crash Types |
| Box Span Signal - <i>Upgrade from Stop Control</i> | 65% | Angle |
| | -25% | Rear-End (Increases Crashes) |
| | 20% | All Other Non Rear-End Crashes |
| Box Span Signal - <i>Upgrade from Diagonal Span</i> | 10% | All Applicable Crashes+ |
| Protected Left-Turn Signal Phase - <i>Add</i> | 30% | Left-Turn |
| Signal Head Size - <i>Increase to 12 "</i> | 10% | All Applicable Crashes + |
| Signal Optimization & Timing Updates | 10% | All Applicable Crashes + |
| Removing Night Flash from Signal Timing | 50% | Nighttime Flash mode Related Crashes |
| Intersection Geometric Enhancements | | |
| Center Left-Turn Lane - <i>Construct</i> | 80% | Rear-End Left-Turn |
| | 50% | Head-On Left-Turn |
| | 20% | Head-On, Angle, Other |
| | 15% | Non Left-Turn Rear-End |
| Intersection Improvements (Realignment, Sight-Distance Improvements, Radii Improvements, Etc.) | 30% | Angle |
| | 15% | Rear-End |
| | 10% | Head-On, Sideswipe, Pedestrian, Bicycle, Left-Turn Related |
| Offset Left-Turn Lane - <i>Construct</i> | 65% | Angle-Turn, Head-On Left-Turn |
| | 20% | Rear-End Left-Turn |
| Offset Right-Turn Lane - <i>Construct</i> | 65% | Angle-Turn |
| | 50% | Other Applicable Crashes |
| | 20% | Rear-End Right Turn |
| Right-Turn Lane - <i>Construct</i> | 65% | Rear-End Right-Turn |
| | 20% | Applicable Rear-End Crashes, Sideswipe Same Direction |
| Roundabout | 78% | Fatal and A-Injury Reduction |
| | 57% | Minor Crash Reduction |
| General Intersection Enhancements (Non-Signalized Intersections) | | |
| All-Way Stop Control - <i>New Installation</i> | 60% | All Applicable Crashes |
| Ground Mounted Flashing Beacons (Red)- <i>Install **</i> | 30% | All Crashes On Install Approach |
| Ground Mounted Flashing Beacons(Amber) - <i>Install **</i> | 20% | All Crashes On Install Approach |
| Signing - <i>Improve/Upgrade</i> | 30% | Angle, Rear-End Crashes |
| Pavement Markings - <i>Improve/Upgrade</i> | 30% | Angle, Rear-End Crashes |
| Reflective Sheeting on Sign Posts (<i>lollipops</i>) | 15% | All Applicable Crashes |

NON-MOTORIZED CRASH REDUCTION FACTORS

| Proposed Improvement | % Reduction | Associated Crash Types |
|---|-------------|--|
| Pedestrian / Bicycle Enhancements | | |
| Pedestrian Refuge Island - Install | 50% | Pedestrian Crashes (Review NCHRP Report 841) |
| Bump Out / Curb Extension - Remove Parking / Install | 30% | All Crashes |
| Bicycle Lanes - Intersections, Install per standards | 25% | Bicycle Crashes |
| Bicycle Lanes - Segments, Install per standards | 50% | Bicycle Crashes |
| Shared Use Path - Install | 33% | Bicycle and Pedestrian Related Crashes |
| Sidewalk for Pedestrians - Construct | 85% | Pedestrian Crashes |
| Intersection Lighting - install | 75% | Pedestrian Fatal - Dark Unlighted Crashes |
| | 40% | Pedestrian A-Injury - Dark Unlighted Crashes |
| | 30% | All Applicable Dark Unlighted Crashes |
| Pedestrian Hybrid Beacons (HAWK Signals) - Install | 55% | Pedestrian Crashes (CMF ID 9020) |
| Rectangular Rapid Flashing Beacons | 47% | Pedestrian Crashes |
| Ped. Countdown Signals - Install new Pedestrian signal | 30% | Pedestrian Crashes |
| Ped. Countdown Signals - Upgrade from existing Pedestrian signal | 25% | Pedestrian Crashes |

Notes:

- * "Other" includes other crash which might be mitigated by the addition of a right-turn lane in the judgment of the crash analyst
- ** applies to new installation or with removal of existing overhead flashing beacon
- *** "Lane departure" crashes include the following types: Fixed Object, Overturn, Sideswipe Opposite, Sideswipe Same and Head-On (Run off Road Right/Left Crashes)
- + All Applicable Crash - Rear End, Angle Crashes, Sideswipe Same. The Crashes should occur at The signal that is being upgraded. Does not include driveway and anima
- +++ All Applicable Crash Types - Lane Departure, Fixed Object, Angle Crashes, Sideswipe Opposite, Sideswipe Same. The crashes should occur on or near a vertical curve

REFERENCES:

The references listed below are the sources recognized by MDOT for obtaining crash reduction factors.

- 1) MDOT Safety Programs Unit - Crash Reduction Factors (As recommended by K. Kunde. P.E.); October, 1986
- 2) *Selection Process for Local High Safety Projects*, - Transportation Research Record 847: 1982
- 3) UKTRP - 85-6, University of Kentucky; March, 1985
- 4) *Desktop Reference for Crash Reduction Factor*, Federal Highway Administration. 2007
- 5) NCHRP Report 617: *Accident Modification Factors for Traffic Engineering and ITS Improvements*, TRB 2008
- 6) Crash Modification Factor Clearinghouse, <http://www.cmfclearinghouse.org/index.cfm>, 2009
- 7) Safety Edge - <https://www.fhwa.dot.gov/publications/research/safety/hsis/11025/11025.pdf>
- 8) Removing Night Flash - <https://www.fhwa.dot.gov/publications/research/safety/hsis/13069/index.cfm>
- 9) RRFBs - CMF Clearinghouse ID 9024