

## Bloomington/Monroe County Metropolitan Planning Organization Highway Safety Improvement Program Guidelines

### Overview of Procedures/Requirements

The Bloomington/Monroe County Metropolitan Planning Organization (BMCMPPO) is responsible for administering the local Highway Safety Improvement Program (HSIP) process within the urbanized area, including establishing project selection procedures, soliciting projects from LPAs, evaluating project applications, and awarding funding to projects. The Indiana Department of Transportation (INDOT) retains final authority regarding which projects are funded.

There are six general provisions guiding the Indiana HSIP program:<sup>1</sup>

- 1) *The candidate project shall demonstrate that it will address one of the infrastructure emphasis areas outlined in the Indiana Strategic Highway Safety Plan:*<sup>2</sup>
  - a. Emphasis Area 4: Improve motorcycle safety
  - b. Emphasis Area 5: Reduce large truck crashes
  - c. Emphasis Area 6: Reduce bicycle and pedestrian crashes
  - d. Emphasis Area 7: Reduce “High Risk” rural road crashes
  - e. Emphasis Area 8: Minimize the possibility and consequences of leaving the roadway
  - f. Emphasis Area 9: Improve safety at intersections
  - g. Emphasis Area 10: Reduce crashes at highway railroad crossings
- 2) *The candidate project must demonstrate a workable plan to address the identified safety problem.*
- 3) *The candidate project must demonstrate a financially sound design concept.* For site-specific projects, a benefit/cost ratio at or above 2.0 is the minimum standard for eligibility. Other low-cost, programmatic countermeasures may be better suited to a program-based benefit/cost analysis.
- 4) *All project documentation is subject to review and eligibility determination by the multi-agency Highway Safety Advisory Committee.* INDOT and FHWA retain the right to refuse federal safety funding for projects that can not document eligibility (justification of need) and cost effectiveness.
- 5) *Where new devices are installed, the owner agency agrees to fund all future maintenance.*
- 6) *Post-construction analysis is a requirement for all completed projects.* For site-specific projects, the normal standard is comparison of crash history for three continuous years before the start and end of project construction. Other programmatic improvements not based on crash history may have post-construction reporting periods of different length.

All phases of project implementation (Preliminary Engineering, Right-of-Way, Construction, and Construction Engineering/Inspection) are eligible under the HSIP program; however, HSIP funds may not be used as a component of a larger project. Local Public Agencies will be required to provide a local match in the amount of 10% of the project cost.

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<sup>1</sup> Indiana Department of Transportation. Local Highway Safety Improvement Program Project Selection Guidance. July 2009.

<sup>2</sup> Indiana Department of Transportation. Strategic Highway Safety Plan. September 2006

## **Project Selection**

There are two project categories for HSIP funding: low-cost programmatic improvements (e.g., sign replacement, backing plates on signal heads, pedestrian countdown signals, etc.), and high-cost site-specific improvements (e.g., roadway realignment/reconfiguration, new signals, etc.). In keeping with statewide and federal goals, low-cost strategies are preferred over high-cost strategies. High-cost projects, such as intersection reconstruction, would rapidly expend the funds and could tie up multiple years of funding. In addition, such projects would likely involve right-of-way acquisition, which would cause a significant lag in project implementation. Smaller projects can be implemented more quickly.

Project selection procedures differ for programmatic and site-specific projects. Generally, site-specific projects require a greater burden of proof on the applicant to demonstrate the cost-effectiveness of the proposed strategy. The specific project selection procedures are detailed below.

### **Low-Cost Programmatic Improvements**

The low-cost project types listed below are eligible for BMCMPPO HSIP funding. It is not necessary to demonstrate a particular cost/benefit ratio for these types of projects; however, LPAs should prioritize improvements based on the greatest anticipated safety benefit. The project application requires the LPA to discuss its prioritization method.

- 1) *Conduct replacement of outdated regulatory, warning and guide signs to meet Manual of Uniform Traffic Control Devices (MUTCD) retroreflectivity requirements.* The basis for this project type is to assist LPAs in meeting the federally mandated requirements to upgrade warning, regulatory, and guide signs to current standards of the MUTCD.<sup>3</sup> Regulatory and warning signs are eligible for replacement based on the following criteria:
  - a. Signs that are known to be in place longer than 10 years
  - b. Signs that do not have prismatic sheeting
  - c. Signs that are damaged to the extent that their nighttime retroreflectivity is inadequate.
  - d. Signs that fail to meet minimum retroreflectivity requirements
  - e. If the cost estimate exceeds available funding, replacement of signs will be prioritized on the basis that warning and stop signs are highest priority followed by other regulatory and guide signs.
- 2) *Upgrade traffic signals to a minimum of one signal head per travel lane.* The basis for this project type is a well established crash reduction factor associated with this countermeasure. Proposed locations can be prioritized based on crash history and traffic volume.
- 3) *Install black backing plates on all signal heads at a traffic signal.* The basis for this project type is a well established crash reduction factor associated with this countermeasure. Proposed locations should be prioritized based on crash history and traffic volume.
- 4) *Install pedestrian push button and countdown heads at traffic signals.* This countermeasure is described in INDOT Design Standards and is eligible at public road crosswalks. Prioritization of locations should be made according to crash history, pedestrian volume, traffic volume, and pedestrian conflicts.
- 5) *Install new pedestrian crosswalk warning signs, flashing beacons, special pavement markings and refuge areas.* Justification of locations should be according to a documented pedestrian plan that identifies corridors serving pedestrian traffic generators such as multimodal trails, schools, libraries, retail and Central Business District (CBD). Proposed locations should be prioritized based on traffic volume, and pedestrian conflicts.
- 6) *Make changes to signal timing to improve safety.* The basis for this project type is a well established crash reduction factor associated with this countermeasure. Proposed locations can be prioritized based on crash history and traffic volume.

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<sup>3</sup> [http://safety.fhwa.dot.gov/roadway\\_dept/night\\_visib/policy\\_guide/](http://safety.fhwa.dot.gov/roadway_dept/night_visib/policy_guide/)

- 7) *Install new lighting at intersections and at trail crossings.* The basis for this project type is a well established crash reduction factor associated with this countermeasure. Proposed locations should be prioritized based on crash history, traffic volume, and pedestrian conflicts.
- 8) *Install new guardrail end sections upgraded to current standards.* This activity is considered preventative maintenance under HSIP guidance that allows for the replacement of substandard guardrail end sections (such as buried ends) with current guardrail end sections contained in INDOT Standards and Specifications. In order to provide the proper transition to existing guardrail, not more than 100 feet of the existing guardrail may also be replaced at each end section. Proposed locations should be prioritized based on crash history and traffic volume.
- 9) *Install new guardrail at approved locations where none existed before.* New runs of guardrail may be placed according to INDOT Standards and Specifications where the need is determined, according to Chapter 49 of the INDOT Design Manual. Proposed locations should be prioritized based on crash history and traffic volume.
- 10) *Install new stop signs at railroad crossings that lack active warning devices.* The basis for this project type is a well established crash reduction factor associated with this countermeasure. The LPA may install new stop signs at any public road crossing of an active railroad line that currently lacks active warning devices such as railroad activated lights and gates. If existing stop signs are present but are in poor condition they may be replaced under the basis of item 1 above. Proposed locations should be prioritized based on crash history and traffic volume.

### **High-Cost Site-Specific Projects**

The selection process for high-cost projects entails a greater level of analysis than is required for low-cost projects. In particular, a benefit/cost ratio greater than 2.0 is required for all high-cost projects. Additionally, projects must be located at one of the top 50 crash locations in the County, or another location formally approved by the Policy Committee. Road Safety Audits (RSA) are also required for site-specific projects. The RSA report should define the safety issues and identify alternatives and recommended crash countermeasures.<sup>4</sup> The RSA team must consist of independent un-biased experts. The LPA application must include a formal written response to the findings of the RSA team.

The benefit/cost ratio is based on the relationship of the type and number of crashes to the specific countermeasures proposed. Therefore, the proposed treatment must be capable of reducing the types of crashes associated with the site. In order to facilitate benefit/cost analysis, the BMCMPPO will provide a benefit/cost spreadsheet to the Local Public Agencies (LPAs). To complete the worksheet, it will be necessary for the LPAs to consult the police reports for the crashes under consideration. At the request of the LPA, the BMCMPPO can provide a list of the crash record numbers for any particular location so that the crash reports can be more easily obtained. Relationships between crash type and countermeasures are detailed in FHWA's "Desktop Reference for Crash Reduction Factors."

In order to be eligible for HSIP funding, proposed high-cost project locations must be:

1. Within the BMCMPPO urbanized area; and
2. Exclusive of INDOT facilities, including intersections where a non-INDOT facility intersects or adjoins an INDOT facility; and
3. Identified in the list of the top 50 fatal/incapacitating injury crash locations, as included in the HSIP Call for Applications. LPAs may appeal to the Policy Committee to allow a project location that is not on the list of eligible project locations. Such appeals may be made concurrent to or prior to applying for HSIP funding. If the appeal is successful, the proposed location will be added to the list of eligible project locations.

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<sup>4</sup> Information regarding the RSA process can be found at: <http://safety.fhwa.dot.gov/rsa>

### **Project Application Requirements**

LPAs will be required to include the following materials in their applications:

- 1) A cover letter signed by the highest elected official of the local public agency that owns or maintains the public road(s) where the proposed infrastructure project will be constructed. The letter shall address all of the following:
  - a) Project intent, including the project location and type of work.
  - b) Explanation of how it was determined that this is one of the worst problems in the area.
  - c) Discussion of the relationship between the type and number of crashes and the treatments proposed.
  - d) Discussion of other treatments that were considered and why were they rejected.
- 2) A completed Benefit/Cost worksheet or, in the case of low-cost programmatic projects, discussion of the prioritization method used.
- 3) A map of the location(s) to be improved. For some programmatic projects involving multiple locations (e.g., sign replacement), a simple dot map is sufficient.
- 4) A data collection plan for pre/post treatment comparison (some low-cost programmatic improvements may not be amenable to evaluation). The data collection plan should clearly indicate the LPA's ability to evaluate the effectiveness of the project, using three years of pre-treatment data and three years of post-treatment data. The analysis should include a breakdown of the type and number of crashes in each of the six years, and the estimated benefits of the project, based on the number of crashes reduced in the three year post-treatment period. Standard crash cost estimates are incorporated into the Benefit/Cost worksheet. Crash data collection and analysis will be the responsibility of the LPA.
- 5) Preliminary cost estimates for each phase of the proposed project (e.g. PE, ROW, Construction, and Inspection Services).
- 6) A proposed timeline for completion of each phase.
- 7) *For site-specific projects only:*
  - a) *Road Safety Audit report, including RSA team member list, description of safety problems, and recommended crash countermeasures.*
  - b) *LPA response to RSA recommendations.*

### **HSIP Fund Distribution Process**

The process for allocating and distributing BMCMPPO HSIP funds shall be as follows:

1. The BMCMPPO issues a call for projects.
2. LPAs submit project applications with appropriate supporting materials.
3. BMCMPPO staff evaluates project applications and works with LPAs to refine their applications, if necessary.
4. LPAs present project applications to the Citizens Advisory Committee (CAC) and Technical Advisory Committee (TAC) for feedback. The CAC and TAC make recommendations as to whether the project should receive HSIP funding.
5. The Policy Committee recommends HSIP funding awards.
6. BMCMPPO submits funding recommendations to INDOT for evaluation by Highway Safety Advisory Council (HSAC).
7. HSAC makes a final determination regarding BMCMPPO HSIP funding.
8. Approved projects are added to the Transportation Improvement Program (TIP), following public notice requirements.

## ADOPTION RESOLUTION FY 2009-03

**RESOLUTION ADOPTING GUIDELINES FOR ADMINISTERING HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) GRANT FUNDS** as presented to the Policy Committee of the Bloomington/Monroe County Metropolitan Planning Organization (MPO) on September 12, 2008.

**WHEREAS**, the Bloomington/Monroe County Metropolitan Planning Organization (MPO) is the organization designated by the Governor of Indiana as the Metropolitan Planning Organization responsible for carrying out, with the State of Indiana, the provisions of 23 U.S.C. 134, and capable of meeting the requirements thereof for the Bloomington, Indiana urbanized area; and

**WHEREAS**, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) established the Highway Safety Improvement Program to provide a mechanism to improve the safety of the transportation network; and

**WHEREAS**, the Indiana Department of Transportation (INDOT) has determined that HSIP will be administered by MPOs in urbanized areas; and

**WHEREAS**, the Technical Advisory Committee recommended adoption of the draft guideline at their meeting on August 22, 2008 as did the Citizens Advisory Committee on August 27, 2008.

**NOW, THEREFORE, BE IT RESOLVED:**

- (1) That the Bloomington/Monroe County Metropolitan Planning Organization hereby adopts guidelines to administer a Highway Safety Improvement Program for the Bloomington urbanized area; and
- (2) That the adopted guidelines shall be forwarded to all relevant public officials and government agencies, and shall be available for public inspection during regular business hours at the City of Bloomington Planning Department, located in the Showers Center City Hall at 401 North Morton Street, Bloomington, Indiana.

PASSED AND ADOPTED by the Policy Committee by a vote of 8 - 0, upon this 12<sup>th</sup> day of September, 2008.

  
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Kent McDaniel  
Chair, Policy Committee  
Bloomington/Monroe County MPO

  
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Attest: Josh Desmond  
Director  
Bloomington/Monroe County MPO

**ADOPTION RESOLUTION FY 2010-12**

**RESOLUTION AMENDING THE HIGHWAY SAFETY IMPROVEMENT PROGRAM GUIDELINES** as presented to the Policy Committee of the Bloomington/Monroe County Metropolitan Planning Organization (BMCMPPO) on June 11, 2010.

**WHEREAS**, the Bloomington/Monroe County Metropolitan Planning Organization (BMCMPPO) is the organization designated by the Governor of Indiana as the Metropolitan Planning Organization responsible for carrying out, with the State of Indiana, the provisions of 23 U.S.C. 134, and capable of meeting the requirements thereof for the Bloomington, Indiana urbanized area; and

**WHEREAS**, the BMCMPPO adopted local guidelines on September 12, 2008 which detail how the BMCMPPO awards its allocation of Highway Safety Improvement Program (HSIP) funds; and

**WHEREAS**, the Indiana Department of Transportation adopted "Local Highway Safety Improvement Program Project Selection Guidance" on July 31, 2009; and

**WHEREAS**, discrepancies exist between the program guidelines developed by the BMCMPPO and those developed by the INDOT which should be rectified; and

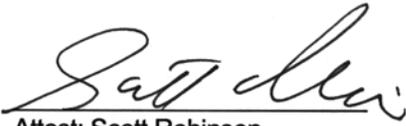
**WHEREAS**, the Citizens Advisory Committee and Technical Advisory Committee recommended approval of changes to the local HSIP guidelines at their meetings held on May 26, 2010.

**NOW, THEREFORE, BE IT RESOLVED:**

- (1) That the Bloomington/Monroe County Metropolitan Planning Organization hereby amends the BMCMPPO Highway Safety Improvement Program Guidelines to include the following substantive changes:
  - Projects must address one of the State's infrastructure emphasis areas;
  - Proposed site-specific project locations must undergo a road safety audit;
  - Proposed site-specific projects must demonstrate a benefit/cost ratio greater than 2.0;
  - Pre-approved, low-cost, programmatic countermeasures are now eligible projects;
  - Final project award decisions are made by the Indiana Highway Safety Advisory Committee; and
- (2) That the amended guidelines shall be forwarded to all relevant public officials and government agencies, and shall be available for public inspection during regular business hours at the City of Bloomington Planning Department, located in the Showers Center City Hall at 401 North Morton Street, Bloomington, Indiana.

PASSED AND ADOPTED by the Policy Committee by a vote of 12 - 0, upon this 11<sup>th</sup> day of June, 2010.

  
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Jack Baker  
Vice-Chair, Policy Committee  
Bloomington/Monroe County MPO

  
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Attest: Scott Robinson  
Long Range/Transportation Manager  
Bloomington/Monroe County MPO