

CHAPTER 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) GUIDELINES

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CHAPTER 9 - HIGHWAY SAFETY IMPROVEMENT PROGRAM

9.1 INTRODUCTION

The Highway Safety Improvement Program (HSIP), codified as Section 148 of Title 23, United States Code (23 U.S.C. §148) is one of the core federal-aid programs in the new federal surface transportation act, Fixing America's Surface Transportation Act (FAST), which was signed into law on December 4, 2015. The purpose of the HSIP program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal land.

This chapter contains general information for the HSIP program. For the announcement of calls for projects and their specific information, visit the local HSIP website <http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm>.

9.2 ELIGIBLE APPLICANTS

The applicant for HSIP funds is an agency that assumes responsibility and accountability for the use and expenditure of federal-aid highway funds. The applicant must be a city, a county, or a tribal government federally recognized within the State of California. Exceptions to this requirement will be reviewed by the Department of Transportation (Caltrans), Headquarters - Division of Local Assistance (HQ-DLA) on a case-by-case basis.

9.3 ELIGIBLE PROJECTS

HSIP funds are eligible for work on any public road or publicly owned bicycle or pedestrian pathway or trail, or on tribal lands for general use of tribal members, that improves the safety for its users. Within FAST, there are twenty eight project categories identified as eligible; as listed under 23 U.S.C. §148(a)(4)(B). No funding priority is assigned to the list.

The California Local HSIP program may place further restrictions on the eligibility of individual project categories to meet the most critical needs on California local roadways.

It is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. Projects shall not require the acquisition of significant rights of way (not more than 10% of the construction cost), nor should they require extensive environmental review and mitigation. Also, proposed projects such as horizontal and vertical curve realignments, shoulder widenings, etc., that are typically taking the longest time to deliver will need to show that an incremental approach of lower cost countermeasures have been installed and have not proved to be effective before these type of projects will be considered for funding.

For a project to be eligible for HSIP funding, a specific safety problem must be identified and the proposed countermeasure(s) must substantially address the condition. **All proposed projects must lead to and complete the construction of safety improvements.** The project must be consistent with [California's Strategic Highway Safety Plan \(SHSP\)](#).

Non-safety related construction items (such as: landscaping, highway beautification, preventative maintenance, etc.) may be included in an HSIP project but are considered incidental to the overall project and shall not exceed 10% of the project construction costs.

HSIP PROJECTS ON HIGH RISK RURAL ROADS (HR3)

High Risk Rural Road is defined as “any roadway functionally classified as a rural major or minor collector or a rural local road with significant safety risks.” 23 U.S.C. §148 includes special requirements pertaining to HR3 eligible projects:

23 U.S.C. §148(g)(1):

High-risk rural road safety.- If the fatality rate on rural roads in a State increases over the most recent 2-year period for which data are available, that State shall be required to obligate in the next fiscal year for projects on high risk rural roads an amount equal to at least 200 percent of the amount of funds the State received for fiscal year 2009 for high risk rural roads under subsection (f) of this section, as in effect on the day before the date of enactment of the MAP-21.

For this reason, HSIP projects on HR3 still need to be identified and tracked separately. See Section 9.7 for special project selection considerations for HR3 eligible projects.

9.4 FUNDING

The maximum federal HSIP reimbursement amount for a single HSIP project is \$10 million. All project expenses that exceed the maximum federal HSIP reimbursement amount will be the responsibility of the project sponsor and will not be eligible for reimbursement.

The minimum federal HSIP reimbursement amount for any single HSIP project is \$100,000. This minimum dollar amount has been established to ensure the efficiency and cost-effectiveness of the overall program and individual projects. Exceptions to this requirement will be reviewed and approved on a case-by-case basis.

Generally the maximum federal reimbursement ratio for an HSIP project is 90%. This ratio can be 100% if all countermeasures of the project are eligible for 100% federal reimbursement per Section 4.2 of the Local Roadway Safety Manual (LRSM). If a project uses multiple countermeasures which have different maximum federal reimbursement ratios, the lowest ratio applies.

The federal reimbursement ratio can be limited to a lower percentage for certain countermeasures, which is defined at each HSIP call for projects.

The maximum federal reimbursement ratios, if not 90%, will be provided in the approved project list of each HSIP call for projects.

The actual project reimbursement ratio will be established during project implementation when the “Authorization to Proceed” is approved by the FHWA.

Project costs eligible for federal HSIP reimbursement include:

- **Preliminary Engineering**
 - Environmental Studies (NEPA Clearance required)
 - Preparation of Plans, Specifications and Estimates (PS&E)
- **Right of Way** (must be less than 10% of Construction)
 - Engineering
 - Appraisal and Acquisition
 - Utility relocation
- **Construction**
 - Construction Engineering
 - Construction

Once a project is selected for funding, the federal HSIP amount shown in the approved project list is the maximum this project may have. Requests for additional federal HSIP funds that exceed the original federal HSIP amount will be granted only on a case by case bases. The total HSIP amount for any single HSIP project can never be more than the maximum federal HSIP reimbursement amount per project as defined in the call for projects in which the project has been selected for funding.

9.5 PROJECTS INVOLVING STATE HIGHWAYS

CALTRANS-INITIATED SAFETY PROJECTS

A Caltrans-initiated safety project on a state highway that involves local roads and requires financial participation by a local agency is eligible for funding. Typically, these types of projects involve new or upgraded traffic signals or a roundabout at an intersection. The cost sharing should be based on the ownership of the location, e.g. sharing the cost based on number of intersection legs owned by State (Caltrans) vs. the local agency. For other special financial arrangements, see Section 4B.104 (CA), Financing, of the [California Manual on Uniform Traffic Control Devices](#) (CA MUTCD).

A local agency may consult with the DLAE to identify any planned and/or programmed State Highway safety projects within the jurisdiction of the local agency. If Caltrans is developing a safety project that requires financial participation by a local agency, the local agency may consider submitting an HSIP application to compete for federal funding. Submittal of an application does not guarantee that the project will be approved for funding. The financial and project administration responsibilities of each agency shall be outlined in the Cooperative Agreement between Caltrans and the local agency.

LOCAL AGENCY-INITIATED SAFETY PROJECTS

A local agency may initiate a safety project that involves a state highway. However, due to the limited amount of local HSIP funding as compared to the statewide local safety needs, Local HSIP will only fund projects/improvements on the state highway system where the state highway acts as the “main street” for the local agency.

A local agency-initiated safety project that involves a state highway must include a written correspondence from Caltrans District Traffic Operations office in the application. This letter/email only intends to confirm that Caltrans is not initiating any project at this time within the project limits but supports the project and does not see issues with the proposed project that would prevent it from receiving an encroachment permit. If the project is likely to require financial participation by Caltrans, the applicant should include a formal letter of support and reasonable estimates of all cost sharing ratios, amounts, and funding schedule in the application.

For intersection improvements on state highways, an Intersection Control Evaluation (ICE) analysis and a cost sharing agreement with Caltrans are required. For more information regarding the ICE analysis, see Chapter 4C, Traffic Control Signal Needs Studies, of the [California Manual on Uniform Traffic Control Devices](#) (CA MUTCD).

9.6 CALLS FOR PROJECTS AND AGENCY APPLICATION

Normally HSIP calls for projects are made at an interval of one to two years. The timing and size of the call is determined by the program apportionments, HSIP FTIP capacity and the delivery of the existing HSIP projects. Specifics such as the due date, the call size, the

maximum federal funds an agency can receive, funding set-asides, the minimum Benefit/Cost Ratio (BCR) of an application to submit, etc. will be defined in the announcement of an HSIP call for projects. Please visit the local HSIP website <http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm> for specific information regarding calls for projects.

Prior to beginning the preparation of an HSIP application, agencies should ensure that they are in good standing with respect to the Safety Program Delivery Requirements and are eligible to receive new HSIP funding. For more details, see Section 9.9, Project Delivery, in these guidelines.

Agencies seeking HSIP funds are required to complete the HSIP Application Form in PDF format located on [the website](#). The application form and its instructions guide applicants through the process of entering the required data. Applicants must follow the instructions in preparing their electronic and hard-copy of the application. Failure to do so will result in their application being rejected.

9.7 APPLICATION REVIEW AND PROJECT SELECTION

After the application due date of an HSIP call for projects, HQ-DLA staff, the DLAE and the District HSIP Program Coordinator will first review all received applications for fatal flaws in the proposed projects. Applications that are determined to have fatal flaws will be rejected and dropped from consideration. “Fatal flaws” are defined in detail in the PDF application form and its instructions. Then the applications without fatal flaws will be further evaluated and prioritized based on the project selection criteria defined in the HSIP call for projects.

Approximately 3 to 4 months after the application due date, HQ-DLA will post the list of approved projects on the HSIP website. The DLAE will notify all applicants of the results.

PROJECT SELECTION CRITERIA

Generally the proposed projects are evaluated based on the Benefit/Cost (B/C) Ratios (BCRs). All applications without fatal flaws are prioritized in descending order, statewide, by the BCRs. Projects with the highest BCRs will be selected for funding.

For each HSIP call for projects, other project selection criteria not solely based on the project ranking by BCRs may be established:

- **Funding set-asides:**

From time to time it may be necessary to have set-asides for certain safety countermeasures or improvements when common roadway safety concerns are identified statewide. The BCR calculation may not be required for those projects that meet the criteria of the set-asides. Details of the set-asides, if any, will be defined when a new cycle of the HSIP call for projects is announced.

- **HR3 eligible projects:**

Due to the special rule pertaining to high risk rural road safety (see Section 9.3), it may be necessary to have a lower statewide BCR cutoff for HR3 eligible projects.

- **Maximum federal HSIP funding per agency per cycle:**

In each HSIP call for projects, a maximum federal HSIP funding that an agency can receive may be established. If an agency submits multiple applications with a combined federal funding request exceeding the established maximum, their applications with the lowest BCRs will not be included in the selection process until their overall request is at or below the maximum federal HSIP reimbursement amount for the call.

MINIMUM BCR OF THE APPLICATIONS

A minimum BCR may be established in each cycle of the HSIP call for projects. The project selection results from the previous HSIP cycles indicates that the cut-off BCR can be well above 1.0. By raising the minimum BCR to a number larger than 1.0, the local and state resources can be saved by minimizing the time spent on preparing and reviewing applications that will not be selected for funding. It will also encourage the local agencies to focus their efforts on locations/corridors with the greatest safety needs and countermeasures with lower costs.

9.8 PROJECT PROGRAMMING AND IMPLEMENTATION

Caltrans HQ-Division of Transportation Programming will send the list of approved projects to the Metropolitan Planning Organizations (MPOs). The MPOs will amend the Federal Transportation Improvement Program (FTIP) to include their projects. Caltrans, acting as the MPO for the rural Regional Transportation Planning Agencies, will amend the Federal Statewide Transportation Improvement Program (FSTIP) accordingly. Once the FTIP/FSTIP is amended, the DLAE will notify the local agencies that they may submit their request for authorization (E76).

Once programmed into the FTIP/FSTIP, projects must be processed and implemented in accordance with the federal-aid procedures contained in the [Local Assistance Procedures Manual \(LAPM\)](#) and the [DLA Safety Program Delivery Requirements](#). Agencies are strongly encouraged to review the LAPM and Delivery Requirements before submitting new applications and/or proceeding with new projects, even if they have completed federally funded projects in the past, as these documents evolve over time.

Once programmed into the FTIP/FSTIP, projects are implemented by phases (Preliminary Engineering, Right of Way, or Construction). For each phase, federal funds are considered obligated to the project when the FHWA approves the 'Request for Authorization' (see Chapter 3, Project Authorization, of the [LAPM](#)).

Agencies should not proceed with any phase of reimbursable work (Preliminary Engineering, Right of Way, or Construction) until the DLAE provides the local agency with the written "Authorization to Proceed" for each project phase.

All costs associated with any phase of work performed prior to receiving written "Authorization to Proceed" from the DLAE will not be eligible for reimbursement.

9.9 PROJECT DELIVERY

DELIVERY REQUIREMENTS

To meet FHWA's intent for HSIP federal funds being expended on safety projects that can be designed and constructed expeditiously and to ensure that all programmed projects are delivered in a timely manner, DLA has created delivery requirements for all ongoing federally funded HSIP projects.

The key delivery requirements for the local HSIP projects include two milestones and corresponding delivery deadlines:

1. Request for Authorization to Proceed with Preliminary Engineering (PE) within 9 months;
2. Request for Authorization to Proceed with Construction within 36 months (3 years).

The start date for the delivery requirements to apply is January 1st of the year following the release of the HSIP cycle in which the project is selected for federal funding.

If a project fails to meet the delivery requirements, the consequence includes:

1. The local agency (project sponsor) will not be eligible to submit new project applications in future HSIP calls for projects, until the delivery issue is resolved.
2. If the E-76 with Construction milestone is still not met within 5 years, the project will be removed from the HSIP Program. Expended federal funds on the early phases of the project are required to be paid back per federal regulations.

See the ‘Project Delivery Requirements for Local HSIP Projects’ document posted on [the Safety Program Delivery Status website](#) for further details. Agencies can also check current project milestone status under the “Project and Program Summaries” section on this web page.

USE EPSP TO EXPEDITE THE DELIVERY

Usually the FTIPs for local HSIP projects are developed in a way that older projects are programmed in the earlier years and the newer projects in the outer years of the current four-year FTIP cycle. However, the fact that a local HSIP project is not programmed in the current Federal Fiscal Year (FFY) should not hinder the local agency from requesting for authorizations in the current FFY when the local agency is ready to start the work for a project phase.

If an HSIP project is ready to move forward to the next phase and the project is not programmed in the current FFY, the local agency can and should use the Expedited Project Selection Procedures (EPSP) to advance the delivery of the project. Caltrans Districts and Headquarters will work with local agencies to ensure that the use of the EPSP and the authorization requests are approved as quickly as possible.

For more explanations regarding using the EPSP to expedite the delivery of local HSIP projects, please visit [the Safety Program Delivery Status website](#).

PROJECT INACTIVITY

In addition to the above delivery requirements specifically for local HSIP projects, there are rules against ‘inactive projects’ that apply to all federally funded projects. Inactive projects tie up limited federal funds from being used by other local agencies for their needs. Federal-aid projects become ‘inactive’ when there have been no expenditures for 12 months. HSIP projects that become ‘inactive’ can lose all federal funds that have been programmed, obligated, and expended. Go to [the DLA Inactive Projects website](#) for additional information.

9.10 DESIGN STANDARDS

Chapter 11, “Design Guidance”, of the [LAPM](#) describes statewide design standards, specifications, procedures, guides, and references that are acceptable in the geometric, drainage, and structural design of local assistance projects. The chapter also describes design exception approval procedures. These procedures shall be used for all HSIP projects on the local road system.

If a project contains a bikeway component, it shall be designed in accordance with the [Caltrans Highway Design Manual](#) and the [California Manual on Uniform Traffic Control Devices \(CA MUTCD\)](#). Exceptions to using these standards will be handled in accordance with the exception approval process described in the appropriate manual.

All projects must meet the requirements of the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. For more information on ADA compliance, please refer to Chapter 11, “Design Guidance,” of the [LAPM](#).

All projects must upgrade nonstandard safety features to the appropriate standard when those features are within the scope and work area of the project. Requests for exceptions to this requirement must follow all federal exception approval processes.

A local agency that proposes to install an experimental traffic control device on a public roadway shall follow the process prescribed in Section 1A.10 of the California MUTCD and coordinate with the [California Traffic Control Devices Committee \(CTCDC\)](#). Given that this can be a time-consuming process, DLA does not recommend pursuing experimental traffic control devices unless the local agency is close to obtaining the approval to use the experimental device or unless the local agency is willing to accept the risk that the project might fail to meet the delivery requirements and the agency would be prevented from applying for future HSIP funding until the project is complete.

All projects containing Intelligent Transportation System (ITS) components shall comply with federal ITS regulations. See Chapter 13, Intelligent Transportation Systems (ITS) Program, of [the Local Assistance Program Guidelines \(LAPG\)](#).

All projects containing proprietary items shall comply with related federal regulations. See Chapter 12.11, Materials and Equipment, of [the Local Assistance Procedures Manual \(LAPM\)](#).

9.11 PROGRAM EVALUATION

Title 23, United States Code §148(h) and Title 23, Code of Federal Regulation Part 924.13 require that the HSIP program be evaluated for its effectiveness in reducing the number of crashes, fatalities, and serious injuries on the nation’s roadways. Applicants that receive funding for a project may be asked to collect and submit data to Caltrans upon completion of the project. Positive safety benefits documented on constructed projects can help justify continued funding at or above current funding levels.

9.12 PROJECT PREFIXES AND FEDERAL PROGRAM CODES

HSIP projects that are not HR3 eligible:

The project prefix to be used is **HSIPL**. The HSIP program codes to be used are LS30, LS3E, LS3R, MS30 and MS3E (and additional HSIP codes as they come available).

HR3 eligible projects:

The project prefix to be used is **HRRRL**. HR3 program codes (LS20, LS2E and LS2R) should be used until all HR3 apportionments are used up. HSIP program codes (LS30, LS3E, LS3R, MS30 and MS3E) can be used when there are no HR3 apportionments available.

9.13 REFERENCES

1. Title 23, United States Code, Section 148
❖ <http://uscode.house.gov/>
2. Title 23, Code of Federal Regulations, Part 924
❖ <http://www.ecfr.gov/>
3. California Streets and Highways Code, Sections 2330-2334
❖ <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=02001-03000&file=2330-2334>
4. FHWA Highway Safety Improvement Program Manual
❖ <http://safety.fhwa.dot.gov/hsip/resources/fhwas09029/>
5. FHWA Local and Rural Road Safety Program
❖ http://safety.fhwa.dot.gov/local_rural/
6. FHWA Road Diets Informational Guide
❖ http://safety.fhwa.dot.gov/road_diets/info_guide/
7. FHWA Systemic Project Selection Tool
❖ <http://safety.fhwa.dot.gov/systemic/fhwas13019/>
8. California Manual on Uniform Traffic Control Devices (California MUTCD)
❖ <http://www.dot.ca.gov/hq/traffops/engineering/>
9. California Traffic Control Devices Committee (CTCDC)
❖ <http://www.dot.ca.gov/hq/traffops/engineering/ctcdc/index.htm>
10. Strategic Highway Safety Plan (SHSP)
❖ <http://www.dot.ca.gov/SHSP/>
11. Caltrans District Offices
❖ <http://www.dot.ca.gov/hq/LocalPrograms/dlae.htm>
12. Caltrans Highway Design Manual
❖ <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>
13. Caltrans Local Assistance Program Guidelines (LAPG)
❖ <http://www.dot.ca.gov/hq/LocalPrograms/lam/lapg.htm>
14. Caltrans Local Assistance Procedures Manual (LAPM)
❖ <http://www.dot.ca.gov/hq/LocalPrograms/lam/lapm.htm>
15. Local HSIP Website
❖ <http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm>
16. HSIP - List of approved projects
❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/prev_cycle_results.htm
17. HSIP – Application, Application Instruction, and related documents.
❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/apply_now.htm

18. Safety Program Delivery Requirements and Delivery Status
 - ❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/delivery_status.htm
19. UC Berkeley, SafeTREC Transportation Injury Mapping System (TIMS) website
 - ❖ <http://tims.berkeley.edu>
20. Local Programs – Disadvantaged Business Enterprise (DBE)
 - ❖ http://www.dot.ca.gov/hq/LocalPrograms/DBE_CRLC.html
21. Local Programs – Inactive Projects
 - ❖ <http://www.dot.ca.gov/hq/LocalPrograms/Inactiveprojects.htm>