
Office of Inspector General

Audit Report

**FHWA PROVIDES SUFFICIENT GUIDANCE AND
ASSISTANCE TO IMPLEMENT THE HIGHWAY
SAFETY IMPROVEMENT PROGRAM BUT COULD
DO MORE TO ASSESS PROGRAM RESULTS**

Federal Highway Administration

Report Number: MH-2013-055

Date Issued: March 26, 2013






Memorandum

U.S. Department of
Transportation

Office of the Secretary
of Transportation
Office of Inspector General

Subject: **ACTION:** FHWA Provides Sufficient Guidance
and Assistance To Implement the Highway Safety
Improvement Program but Could Do More To
Assess Program Results
Federal Highway Administration
Report Number MH-2013-055

Date: March 26, 2013

From: Joseph W. Comé 
Assistant Inspector General
for Highway and Transit Audits

Reply to
Attn. of: JA-40

To: Federal Highway Administrator

Reducing the number of fatalities and serious injuries on our Nation's highways continues to be a top safety priority for the Department of Transportation (DOT). The Federal Highway Administration's (FHWA) Highway Safety Improvement Program (HSIP) is the primary DOT program for reducing fatalities and serious injuries on roadways through infrastructure improvements, such as guard rails or rumble strips. HSIP has received approximately \$8.4 billion in funding from 2006 through 2011. The current surface transportation authorization, the Moving Ahead for Progress in the 21st Century Act (MAP-21),¹ continues HSIP and increases its funding to roughly \$2.4 billion per year for the next 2 years. Given the major contribution HSIP is intended to make to highway safety and the large funding levels involved, we initiated this audit to assess whether FHWA (1) provides sufficient guidance and assistance to enable the States to effectively implement the data-driven, performance-based approach called for in HSIP legislation and (2) evaluates HSIP results, which States report to FHWA annually, to determine the program's impact.

To conduct our audit, we reviewed laws, regulations, and guidance pertaining to HSIP and interviewed FHWA Office of Safety staff responsible for the program. We collected and evaluated the annual reports submitted by each of the 50 States and the District of Columbia in 2011 to determine how responsive States were to HSIP requirements and guidance. Based on this information, we interviewed

¹ The Moving Ahead for Progress in the 21st Century Act (MAP-21), Pub. L. No. 112-141 (2012).

FHWA Division and State transportation officials about program implementation from a statistically selected sample of nine of 51 States. We also reviewed different methods States used to identify the impact of HSIP-funded projects and those the FHWA Office of Safety used to evaluate the impact of HSIP nationally. We conducted our work between February 2012 and January 2013 in accordance with generally accepted Government auditing standards. Exhibit A provides more detail on our audit scope and methodology.

RESULTS IN BRIEF

FHWA provides sufficient guidance and technical assistance to the States to implement HSIP in accordance with current requirements that permit substantial State flexibility. As required by law, States used safety data to select HSIP projects and develop performance-based programs. Overall, our review of States' 2011 HSIP reports found that 98 percent of States met program requirements and 92 percent followed FHWA's program guidance on reporting. This guidance is widely available on the Agency's website and covers collection and use of highway safety data, development of Strategic Highway Safety Plans (SHSP),² and reporting. FHWA also provides technical assistance and training on program implementation through its Division Offices; webinars; and the Roadway Safety Peer-to-Peer Program, which connects State transportation agencies seeking best practices or technical assistance with experts in other States. As a result, States have the guidance and assistance needed to meet basic program requirements while retaining the flexibility to implement HSIP to address State-specific highway safety needs.

FHWA periodically evaluates HSIP results and other traffic safety information reported by the States, but conclusions from these evaluations are limited and FHWA does not have an effective way to regularly use program data to report HSIP results nationwide. This is largely because States provide varying types and quantities of data to FHWA in their annual HSIP reports, even though the States all met the current legal reporting requirements on what information to include. For example, some States report crash data for every location receiving HSIP funds while others report aggregated crash data for all locations. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)³ made these data reporting requirements less prescriptive in 2005 than the prior law,⁴ and they were not altered by MAP-21. Also, the effect of specific HSIP-funded infrastructure improvements is difficult to isolate from other

² Each State is required to develop a SHSP to identify highway safety performance goals and a project selection process.

³ The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59 (2005).

⁴ The Transportation Equity Act for the 21st Century (TEA-21), Pub. L. No. 105-178 (1998).

infrastructure and behavioral factors that also contribute to crashes, fatalities, and serious injuries with the modeling tools currently available. FHWA has efforts underway to address data inconsistencies, such as an optional online reporting tool launched in 2011 to standardize how annual HSIP reports are collected from the States. However, State officials have cited problems with using and accessing the tool. Moving forward, MAP-21 will eventually require more consistency in safety data collection outside of HSIP to assess progress toward new national safety goals and related performance measures. FHWA could use this data, in combination with information on HSIP projects and obligations, to improve evaluations of HSIP's national results.

We are making recommendations to further enhance FHWA's ability to (1) collect consistent, useful information with the online reporting tool and (2) more accurately assess HSIP's national impact.

BACKGROUND

States administer HSIP, with oversight from the FHWA Division Offices. Program rules and guidance are provided by the FHWA Office of Safety, which also coordinates technical assistance. Each State has developed a SHSP to describe a program of strategies to reduce or eliminate safety hazards. States annually submit HSIP reports to FHWA Division Offices, detailing their progress toward meeting safety goals and strategic areas, which are finally submitted to the FHWA Office of Safety. A variety of public roadway safety improvement projects are eligible for HSIP funding and may be federally funded at either 90 percent or 100 percent. For example, a State could use HSIP funds to reduce horizontal curve crashes by implementing warning signs, median barriers, or guard rails. FHWA also helps States focus on improved data collection, using data to identify problems, and analytical tools and processes to identify and prioritize safety projects.

SAFETEA-LU mandated that States improve the accuracy, completeness, uniformity, and accessibility of crash data needed to identify safety priorities for all public roads. States were required to develop performance goals (e.g., decrease impaired driving by 5 percent) and implement a crash data system but were no longer required to do project assessments for HSIP.⁵ The structure of HSIP was not significantly altered by MAP-21. FHWA guidance still includes best practices for project assessments—including how many years of data should be reviewed before and after an improvement is made to look for impacts on crashes, fatalities, and serious injuries.

⁵ Law pertaining to the Highway Safety Improvement Program is codified at 23 U.S.C. §148 (2005).

FHWA PROVIDES SUFFICIENT GUIDANCE AND ASSISTANCE TO THE STATES TO IMPLEMENT HSIP

The FHWA Office of Safety provides sufficient guidance and technical assistance to the States to implement HSIP in accordance with current requirements that permit substantial State flexibility. The effectiveness of this guidance and assistance is reflected by the high level of compliance with requirements that we found among annual reports prepared by the States.

FHWA Provides States with Substantial HSIP Guidance and Support To Implement HSIP

FHWA provides extensive written guidance on use of highway safety data, development of SHSPs, and reporting that is widely available on its website and routinely used by the States in key areas of HSIP implementation. Exhibit B provides more examples of FHWA's guidance. The guidance is oriented to meeting legal requirements and promoting best practices. For example, FHWA's HSIP reporting guidance describes required elements and suggests effective data reporting formats. The reporting guidance also suggests four sections the States should include in their annual reports: (1) HSIP program structure, (2) progress in implementing HSIP projects, (3) assessment of the effectiveness of the improvements, and (4) information on the High Risk Rural Roads program. This integrated approach to information about reporting, as well as other topics covered by FHWA's HSIP guidance, allows for an organized but accessible collection of centralized, written guidance that States may use.

FHWA provides technical assistance and best practices for implementing HSIP to the States through its Division Offices, the Roadway Safety Peer-to-Peer Program,⁶ and FHWA Office of Safety web-based training courses. State officials we interviewed used these resources and found them useful. Specifically, these officials reported that they routinely received assistance from Division Offices in interpreting requirements or FHWA guidance and also had positive experiences with the Peer-to-Peer Program as either providers or recipients of information about best practices. For example, one State developed a robust highway safety data trend analysis process, which it provided to several States through this program. The FHWA Office of Safety also shared technical assistance with the States by creating and posting a series of webinars on the program website.

⁶ The Roadway Safety Peer-to-Peer Program is a component of HSIP managed by the FHWA Office of Safety. The program is used to facilitate communication between States to share best practices, examine specific problems, or conduct peer reviews of State HSIPs.

States' Annual Reports Reflect Overall Compliance With FHWA's HSIP Requirements

The effectiveness of FHWA's guidance and assistance is reflected by States' high level of compliance with requirements. All annual reports that States and the District of Columbia submitted in 2011 met statutory requirements,⁷ and reports from 50 of 51 States⁸ (98 percent) met the more detailed requirements issued by the agency.⁹ Reports from 47 of 51 States¹⁰ (92 percent) were consistent with FHWA's reporting guidance.

Consistent with HSIP program requirements, the States were collecting required data on crashes, fatalities, and injuries and using it to select HSIP projects in a data-driven manner. All States reported highway safety trends, and 27 States provided additional information on project assessments that was not required. For example,

- Wisconsin provided a summary of the results of evaluations, which used the data-driven practices provided by FHWA guidance, for its HSIP projects completed in fiscal year 2008. Each project had a benefit-cost analysis within a defined period. Projects were broken down by project type, and the State used crash data from the before and after project periods to develop benefit-cost ratios. These evaluations were also aggregated by safety improvement type to help provide an overall summary of progress. All crashes in the before and after periods were categorized by crash severity, injury severity, and type of collision.
- Iowa conducted and provided FHWA with the results of a HSIP effectiveness assessment. The assessment provided crash data for projects that were evaluated based on 7 fiscal years (2001 to 2007) for sites modified by 43 HSIP projects. The State compared injury and crash data for these specific locations 3 to 5 years before and after the HSIP project was completed. Information on road type, improvement type, fatalities, serious injuries, minor injuries, possible/unknown injuries, and property damage was also provided, and the State used this information with project cost information to calculate benefit cost ratios.

⁷ 23 U.S.C. §148 (2005).

⁸ Wyoming did not meet a CFR requirement to include information on the High Risk Rural Road Program in its annual HSIP report.

⁹ 23 C.F.R. Part 924.

¹⁰ Maine, Oregon, Texas, and Wyoming did not follow all elements of FHWA's guidance for annual reports.

FHWA CONDUCTS LIMITED EVALUATIONS OF STATE REPORTED HSIP DATA TO REPORT ON THE PROGRAM'S IMPACT

FHWA uses information provided by the States in their annual reports to periodically evaluate aspects of HSIP, but the results are limited and FHWA does not regularly report on the program's national impact. This is largely because the information FHWA receives in States' annual HSIP reports varies from State to State even though it meets program requirements. In addition, it is difficult to isolate the effect of specific HSIP-funded projects on improving traffic safety. FHWA has efforts underway to address data inconsistencies, which will be important given broader requirements beyond HSIP in the new highway reauthorization, MAP-21.

FHWA's Evaluations of HSIP Are Limited Due to Inconsistent Data from the States and the Difficulty of Isolating HSIP's Safety Impact

The information FHWA receives in the annual HSIP reports meets program requirements, but each State varies in the type and amount of data it includes. Specifically, the States vary in their crash and safety data collected, performance metrics, and methods used for project selection, evaluation of results, and data analysis. With inconsistent information, FHWA periodically uses States' annual reports to identify best practices and challenges, such as States using more robust data analysis methods. However, FHWA does not regularly compile and report HSIP data such as number, type, and cost of projects that could be used to show the national results of the program to stakeholders, Congress, or the public. For example, in fiscal year 2011, States obligated \$1.5 billion to 4,402 projects through HSIP, but FHWA does not report State-specific information on project categories or costs.¹¹ Without such information, FHWA cannot conduct multi-year, national comparisons of project types, spending levels, and program results.

Fatality and serious injury data provide an example of inconsistent data collection and reporting among the States from the 2011 annual HSIP reports. Among the annual reports we reviewed, some States reported fatality and serious injury data for every HSIP-funded project, while other States provided aggregate data¹²—limiting FHWA's ability to compile results, make comparisons, and assess State-wide or highway system-wide improvements. Much of the inconsistencies in reported data stem from the less detailed reporting requirements under SAFETEA-

¹¹ Among 11 States that reported this information, intersection safety, pavement improvement, and barrier installations were among the most common project types.

¹² For example, some States reported fatality and serious injury data for every HSIP-funded project, from 2006 to 2010, while other States provided aggregate data for assessing State-wide or system-wide improvements.

LU, which were retained in MAP-21, and a related Agency rule.¹³ States have great discretion in implementing HSIP, particularly as to how or even if the State evaluates projects and its HSIP program.

For example, prior to SAFETEA-LU, assessments of HSIP-funded projects were required, but after the SAFETEA-LU changes were implemented in 2009 by FHWA through a 2008 rule, they were made optional. After the 2008 rule, one State began conducting fewer project assessments and no longer reports before and after assessments of its HSIP projects. By 2011, only 27 States included optional information for individual assessments or comparison of costs and benefits for HSIP-funded projects. However, even among the reports that included project assessment information there was inconsistency in the number of projects assessed or in the duration of the before or after period used to conduct the assessments. For example, before and after periods ranged from 2.5 months to 5 years even though FHWA guidance recommends—but does not require—a minimum of 3 years of crash data for these types of project assessments.

Inconsistent types and amounts of data across various time periods cannot be used to make useful comparisons of HSIP implementation among States or across the years. For example, one State official stated that analyzing HSIP results is possible only if States are reporting back on the same data years and performance measures. He also observed it would be difficult to normalize data among rural and urban States, but that comparison of improvement types across functional classes of roads could allow for measurement of aggregate program impact. FHWA officials also observed that the inconsistent data and the limited modeling tools available make it difficult to isolate the effect of specific HSIP-funded infrastructure improvements from other infrastructure and behavioral factors that also contribute to crashes, fatalities, and serious injuries. For example, a crash could be caused by multiple factors such as a poorly designed intersection, a driver who is texting, and a wet road surface.

FHWA has tried alternative methods of evaluating HSIP results nationwide but remains limited to using annual data reported by the States for periodically identifying problems or best practices. For example, FHWA compared obligation rates from 2006 through 2009 to 3-year averages of fatality rates among the States from 2000 through 2008 but found no correlation. FHWA also calculated a 14:1 return on investment for HSIP and reported this in agency budget documents, but the calculation relies on several major assumptions (e.g., the effectiveness of a project does not change over time) and is based on data from a small number of States. Accordingly, this calculation is not necessarily a reliable indicator of the program's national impact.

¹³ “Highway Safety Improvement Program, Final Rule.” *Federal Register* Vol. 73. No. 248 (December 24, 2008) p.78959.

FHWA Has Efforts Underway To Address Data Consistency but Can Improve Its Online Reporting Tool

FHWA deployed its online reporting tool and associated training in 2011 that could lead to more consistency in the types and amount of HSIP data that States annually report. Use of this tool is not required, but 16 States¹⁴ used the tool in 2011 to submit HSIP reports, and FHWA stated 27 States used the tool in 2012. Based on our review, all but one of the reports generated with the online reporting tool met requirements and followed guidance. However, FHWA can do more to enhance this tool as we found the reports it generated were sometimes difficult to read with missing information, poor formatting, and error messages.

While the online tool prompts users with identical requests for project evaluation data, there are still inconsistencies in what States report. For example, in 2011 one State provided data for nine projects while another provided data for only one project. Also, when States provide data through the online reporting tool, the information is often uploaded in a format (i.e., Adobe PDF) that does not allow the data to be easily compiled or manipulated to conduct analysis. These shortcomings obscured the information States were attempting to communicate about their implementation of HSIP.

Officials in six States we interviewed noted the positive impact of the online tool's consistent reporting template, but they also noted problems that could discourage States from abandoning their existing, individualized report processes in favor of using the tool. One problem State officials noted is that the tool is not easy to use. The tool generated truncated answers to questions that did not flow from one to the next and did not print in a readable format. Officials from two States we interviewed were also concerned that the tool requires sharing of personal information by staff (e.g., photo identification, home address) to set up access, which could lead to issues regarding privacy and security of personally identifiable information. Another significant criticism of the tool among State officials was that the online reporting tool does not facilitate dissemination of State HSIP data. One State could not upload data it wanted to include in its annual report that was not technically required and did not find that changes to the tool's data fields and codes were explained by FHWA in updated guidance or other communications. Another found that answers provided in the pull-down menus for some of the fields did not fit the information State officials wanted to report, so staff had to choose the response that was the closest to the State's answer, but not necessarily correct. Unless FHWA modifies the online reporting tool to address some of these concerns, it may not be widely used.

¹⁴ Sixteen States submitted their reports using the online reporting tool in 2011, but 2 additional States submitted their reports both online and in hard copy. Our office received only the hard copies of these reports.

Another FHWA effort to improve data consistency is use of its Model Inventory of Roadway Elements (MIRE).¹⁵ MIRE defines the critical inventory and traffic data elements needed to analyze safety data using SafetyAnalyst or similar programs. In August 2011, FHWA issued HSIP guidance on which MIREs (fundamental data elements) should be collected and reported for HSIP. Use of these 38 fundamental data elements was not required, but FHWA identified them as ways to help States collect more consistent and useful highway safety data (i.e., data on crashes, roadways, and traffic). Among the States we interviewed, 1 State collected data for significantly more fundamental data elements—31 of the 38 elements—to identify excess crashes on its roads than the other States. FHWA requires States to collect data on 16 of the elements on all Federal-aid highways for the Highway Performance Monitoring System.¹⁶ Using a uniform set of fundamental data elements allows comparison of crashes throughout the United States.

FHWA Has an Opportunity To Leverage MAP-21 Data Improvements To Regularly Assess HSIP

MAP-21 requires DOT to establish performance measures that cut across several programs, including those focused on safety. HSIP is the primary FHWA program that will contribute to the new MAP-21 safety goal to reduce fatalities and serious injuries.¹⁷ Under MAP-21, DOT is required to define specific performance measures and monitor States' progress toward achieving their targets for these measures. MAP-21 also requires States to identify performance targets, collect and analyze data, and report progress toward meeting targets as part of the agency-wide performance management effort. Preliminary work toward meeting these requirements is underway. FHWA's four related performance measures are the number of fatalities, number of serious injuries, fatalities per vehicle miles traveled, and serious injuries per vehicle mile traveled. FHWA officials stated that they will work closely with the National Highway Traffic Safety Administration to define these performance measures. States will set their own targets for these four measures, and FHWA is responsible for monitoring States' progress.

¹⁵ In 2007, FHWA released a report listing roadway inventory and traffic elements critical to safety management. There are now over 200 elements on this comprehensive list which are divided among 3 broad categories: roadway segments, roadway alignment, and roadway junctions. These elements include those needed for SafetyAnalyst—a set of software tools from AASHTO used by State and local highway agencies to identify safety improvement needs and analyze results.

¹⁶ The Highway Performance Monitoring System is a nationwide inventory system that includes data for all of the Nation's public road mileage as annually certified by the States. The data reflect the extent, condition, performance, use, and operating characteristics of the Nation's highways.

¹⁷ MAP-21 established seven national goals: safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. The law requires DOT to establish, with input from States and local agencies, performance measures for these goals through a rule within 18 months.

HSIP will play an important role in reporting State progress toward meeting the targets set for these performance measures. Monitoring States' progress toward FHWA's four safety measures—and potentially reporting on progress at a national level—will require collection and assessment of consistent safety data that the Agency currently lacks. Therefore, FHWA faces the challenge of continuing to assess and enhance its ongoing efforts to improve HSIP data consistency as they will be important to helping it ensure States meet MAP-21 performance targets. MAP-21 sets penalties for not meeting safety targets, underscoring the importance of making improvements to States' existing data. If a State does not make significant progress toward targets for reducing fatalities or serious injuries within a certain period, then that State must dedicate a specific amount of funding to safety-related projects, based on its HSIP funding for the prior year, and prepare an annual implementation plan.

Performance measures defined through the MAP-21 process could provide a common metric to assess HSIP results, though their development is only in the early stages. Currently, in their HSIP annual reports, States are required only to describe how improvements contribute to safety goals identified individually by each State. MAP-21 requires DOT to set performance measures for a national safety goal set by Congress. For example, in 2011 most States reported either the number of fatalities or number of fatal crashes on the general highway system and chose between providing multi-year trend data or a multi-year average ending with the most recent year of available data. FHWA officials stated they expect to have the opportunity to ensure that States have a common basis for the four national safety performance goals because MAP-21 requires DOT to consult with State transportation departments, metropolitan planning organizations, and other stakeholders to establish performance measures and standards. This requirement may also lead to more consistency among the individual performance targets set by the States, which could be an important step in facilitating FHWA's evaluation and reporting of nationwide HSIP results. FHWA has an opportunity to leverage data improvements it makes to meet MAP-21 to better assess and report the impact of HSIP. FHWA could use existing financial and performance data on HSIP projects, combined with consistent and complete data on performance targets and fatalities and serious injuries throughout the United States, to eventually develop a more complete picture of HSIP's impact on traffic safety.

CONCLUSION

HSIP has received significant funding increases and is FHWA's primary means of addressing the Department's national safety goal with infrastructure improvements. The data-driven nature of the program is consistent with the broader performance management provisions of MAP-21 that require FHWA to evaluate State progress toward meeting performance targets on reducing fatalities and injuries. As a result, FHWA has an opportunity to enhance its use of the data

that States provide in their annual HSIP reports with new information being developed on MAP-21 performance targets. In doing so, FHWA can strengthen its efforts to evaluate the impact of billions in Federal funding directed specifically toward reducing fatalities and serious injuries through safety-focused HSIP infrastructure improvements.

RECOMMENDATIONS

We recommend that the Federal Highway Administrator:

1. Develop a plan with milestones to increase the use of the online reporting tool, improve the tool's usability, and the readability of the resulting reports.
2. Develop and implement a plan to annually compile and report data, such as number, type, and cost of HSIP projects to compare HSIP's national impact across years.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided FHWA with our draft report on January 31, 2013. We received technical comments from the Agency on February 13, 2013, and a formal response on March 22, 2013. FHWA's complete response is included as an appendix to this report. FHWA concurred with both of our recommendations and provided us with its plan and milestones, which fully addresses recommendation 1. FHWA also provided its plan to annually compile and report data on HSIP's national outcomes in response to recommendation 2 and stated that it is currently implementing that plan. Before closing this recommendation, we request that FHWA provide us with a copy of its report within 10 days after its release.

ACTIONS REQUIRED

FHWA's completed and planned actions for both recommendations are responsive, and we consider recommendation 1 closed. We consider recommendation 2 resolved but open pending receipt of FHWA's report as described above. We appreciate the courtesies and cooperation of FHWA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-5630 or Wendy Harris, Program Director, at (202) 366-2794.

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cc: DOT Audit Liaison, M-1
FHWA Audit Liaison, HAIM-13
NHTSA Audit Liaison, NPO-310

EXHIBIT A. SCOPE AND METHODOLOGY

We conducted our work between February 2012 and January 2013 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To assess the level of assistance FHWA provides to States in implementing HSIP, we collected and evaluated the policies, procedures, tools and guidance FHWA provided to States for execution of the HSIP. We paid particular attention to guidance FHWA provided on the quality, consistency, and use of crash data to identify performance goals and select HSIP-funded projects. We analyzed pre- and post-SAFETEA-LU HSIP requirements and associated agency rules to identify differences and the current extent of FHWA authority.

To review States' implementation of HSIP under FHWA's guidance, we used a consistent methodology to analyze the annual reports each of the States and the District of Columbia submitted in 2011. This analysis focused on how closely the reports follow program requirements and FHWA's guidance. We also examined the data States reported on their projects, highway safety indicators, and project assessments to identify any variation and use of best practices. We interviewed and gathered documentation from FHWA officials responsible for implementing the HSIP to determine how the information provided annually by the States is used to evaluate the impact of the program. We also gathered financial reports from FHWA and used them to identify current funding levels and obligation rates.

To verify whether FHWA provided comprehensive guidance and adequate technical assistance to the States to effectively implement the HSIP, we interviewed State officials and FHWA Division officials from a statistically selected sample of 9 of 51 States. As part of these interviews, we gathered information on the guidance and tools State officials used when selecting, implementing, and evaluating HSIP projects (e.g., the Online Reporting Tool, the Peer to Peer Program, or the Self Assessment Tool). We also asked about any gaps or weaknesses in FHWA's program support noted by the States or Divisions.

To identify methods States use to evaluate the impact of specific HSIP-funded projects, we reviewed the project assessment information reported in the 2011 annual reports of the 27 States that conduct project assessments. We also consulted with experts inside OIG to identify existing statistical methods and/or best practices for quantifying impact in environments where crash causation results from multiple factors and the type of data these methods require.

EXHIBIT B. EXAMPLES OF FHWA GUIDANCE

Program Implementation
HSIP Funds 10 Percent Flexibility Implementation Guidance (December 2006)
Highway Safety Improvement Program Manual (January 2010)
HSIP Assessment Toolbox Manual (August 2010)
Self Assessment Tool Manual (August 2011)
HSIP Project Eligibility (August 2011)
HSIP MAP-21 Interim Eligibility Guidance (September 2012)
Data
Safety Analyst Software Tools Guidance (July 2010)
Safety Performance Function Development Guidance
Crash Data Improvement Program Guide (April 2010)
Model Inventory of Roadway Elements Guidance and Manual (October 2010)
Guidance for Roadway Safety Data to Support HSIP (June 2011)
Guidance Memorandum on Fundamental Roadway and Traffic Data Elements to Improve HSIP (August 2011)
Reporting
Highway Safety Improvement Program Reporting Guidance (May 2009)
Online Reporting Tool Webinar and Outline
Planning
Strategic Highway Safety Plans: A Champion's Guide to Saving Lives (April 2006)
Developing Future Stewardship/Oversight Agreements Memorandum (July 2006)
Peer-to-Peer Exchange
Peer-to-Peer Program Guidelines
Peer-to-Peer Program Technical Assistance including peer referrals and facilitated peer exchanges
Training
Topic-specific FHWA Courses including HSIP Program Overview, New Approaches to Highway Safety Analysis, SHSP Development

EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT

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APPENDIX. AGENCY COMMENTS



U.S. Department
of Transportation

**Federal Highway
Administration**

Memorandum

Subject: **INFORMATION:** Federal Highway
Administration (FHWA) Response to
Office of Inspector General (OIG)
Draft Report on FHWA's Highway
Safety Improvement Program (HSIP)

Date: March 22, 2013

From: Victor M. Mendez
Administrator

In Reply Refer To:
HCFM-1

To: Calvin L. Scovel III
Inspector General (J-1)

The FHWA's effective leadership of the HSIP is demonstrated through OIG's finding that 98 percent of States complied with annual program requirements. The FHWA provides clear and informative guidance regarding highway safety data use, strategic highway safety planning and development, and safety data reporting, and will continue this practice through the implementation of the Moving Ahead for Progress in the 21st Century Act (MAP-21). This guidance helps States meet statutory requirements, promotes shared best practices across States, and encourages States to continuously improve safety programs. The FHWA appreciates OIG's acknowledgement of the effectiveness of this guidance and the assistance provided by the Agency as reflected by the positive feedback State officials offered regarding the broad range of services provided by the HSIP.

The FHWA is using all means available to further improve highway safety, and HSIP provides important tools to accomplish this goal. Reducing fatalities and serious injuries on the Nation's roadways is a complex multi-faceted challenge further complicated by the analytical difficulties in attributing declining fatalities to any individual program. We will continue to make the best possible

use of available data and coordinate with other Agencies in DOT to ensure that HSIP activities complement and support the Department's other highway safety programs as we work toward the common objective of reducing fatalities and injuries. The FHWA also provides a broad range of technical assistance including Web-based training courses, topic based webcasts, and the Roadway Safety Peer-to-Peer (P2P) Program. The P2P Program assists State agencies in the development and implementation of effective strategies to tackle a wide range of specific issues from pedestrian safety to high risk rural roads.

The FHWA is continually improving the HSIP and agrees with the OIG draft HSIP report recommendations. As discussed with OIG, the Office of Safety was in the early stages of conducting a program review when OIG began its independent audit. The information from OIG's analysis will be a valuable resource for FHWA's Office of Safety in conducting its ongoing internal program review to evaluate the performance of the HSIP.

OIG Recommendations and FHWA Responses

Recommendation 1: Develop a plan with milestones to increase the use of the online reporting tool, improve the tool's usability, and the readability of the resulting reports.

FHWA Response: Concur. The FHWA has developed a formal plan and established milestones to improve the readability of reports produced from the HSIP online reporting tool and to improve the overall use and usability of the tool itself. This plan, which FHWA began implementing in November 2012, includes strategies for user outreach, such as training and tool marketing, and strategies for identifying ways to improve the tool. In addition, the plan includes an implementation schedule as well as metrics to track progress in meeting established milestones. We request that OIG close this recommendation upon receipt of this response.

Recommendation 2: Develop and implement a plan to annually compile and report data, such as number, type, and cost of HSIP projects to compare HSIP's national impact across years.

FHWA Response: Concur. The FHWA has developed, and began implementing in November 2012, a plan to compile and report HSIP program data such as number, type, and cost of projects and compare these outputs nationally across years. The annual report will be based on information provided through States' annual HSIP reports as well as other supplementary information. The first annual report will summarize baseline information and subsequent annual reports will compare program outputs across years. We

request that OIG close this recommendation upon receipt of this response.

The FHWA appreciates the opportunity to respond to the draft report. If you have any questions or comments regarding this response, please contact Elizabeth Alicandri, Director of Office of Safety Programs, Office of Safety, at 202-366-6409.