Highway Safety Improvement Program

-and-

Safety Performance Management Measures Final Rules Webinar

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A Message From

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Today's Agenda

- 1. Relationship between Rules
- Overview of FAST Act changes related to Rules
- 3. Overview of the Highway Safety Improvement Program Final Rule
- 4. Overview of the Safety Performance Management Measures Final Rule
- 5. Wrap-up







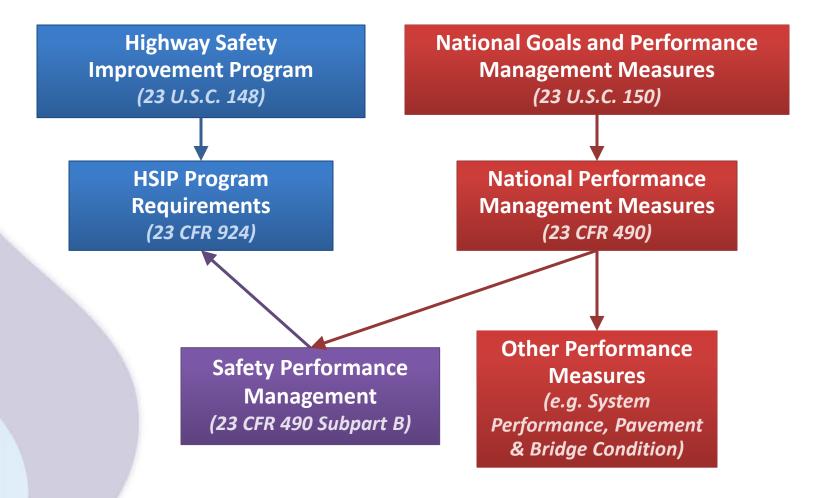
Two Final Rules, Different but Related

- Highway Safety Improvement Program (HSIP)
 - Revises existing regulation (23 CFR 924)
- Safety Performance Measures
 - Establishes new regulation (23 CFR 490) to implement MAP-21 Performance Management Requirements
 - Defines safety performance management requirements





Relationship between Final Rules









FAST Act

- HSIP
 - Revised list of eligible highway safety improvement projects
 - Provided States the ability to not collect MIRE FDE on unpaved roads if certain conditions are met.
- Safety Performance Management
 - Clarified significant progress assessment requirements







Highway Safety Improvement Program

Overview of Final Rule

Docket #: FHWA-2013-0019







HSIP Background

- Core Federal-aid program
 - Purpose: achieve a significant reduction in fatalities and serious injuries on all public roads
 - \$2.5 billion annual apportionment
 - » Railway-Highway Crossing Program (RHCP) set-aside
- Last rulemaking update took effect:

✓ January 23, 2009







Why is FHWA making this change?

- Provide consistency with MAP-21 and the FAST Act
- Implement actions required by the Secretary in MAP-21
- Clarify existing program requirements





Overview of Existing 23 CFR Part 924

§ 924.1 Purpose

§ 924.3 Definitions

§ 924.5 Policy

§ 924.7 Program Structure

§ 924.9 Planning

§ 924.11 Implementation

§ 924.13 Evaluation

§ 924.15 Reporting





Legislative Changes and Requirements for HSIP

- Items Removed (no longer exist under MAP-21)
 - Transparency Report
 - High Risk Rural Roads set-aside and reporting requirements
 - 10% flexibility provision for States to use safety funding per 23 U.S.C. 148(e)
- Items Added
 - State Strategic Highway Safety Plan update requirements
 - Subset of model inventory of roadway elements
 - HSIP reporting content and schedule







State Strategic Highway Safety Plan Update Requirements (924.9 Planning)

- SHSP update cycle: No later than 5 years from the previously approved version
 - Consistent with current practice in most states
 - Reflects current guidance



HSIP Reporting Content and Schedule (924.15 Reporting)

- Content
 - Consistent with existing guidance
 - Document and describe progress made to achieve annual safety performance targets
- Schedule
 - Submit annually
 - Due by ✓ August 31
- Submit via online reporting tool
- FHWA posts HSIP reports to Office of Safety Website:
 - http://safety.fhwa.dot.gov/hsip/reports/







MIRE Fundamental Data Elements (924.17 MIRE Fundamental Data Elements)

- Required to comply with section 1112 of MAP-21
 - Establish a subset of the model inventory elements that are useful for the inventory of roadway safety; and
 - Ensure that States adopt and use the subset to improve data collection
- Model Inventory of Roadway Elements (MIRE)
 Fundamental Data Elements FDE (FDE)
 - Needed to conduct enhanced safety analysis
 - Potential to support other safety and infrastructure programs
 - All public roads







MIRE Fundamental Data Elements (924.17 MIRE Fundamental Data Elements)

- Three Tables based on functional classification and surface type
 - Non-Local Paved Roads (37 elements)
 - » Roadway Segments
 - » Intersections
 - » Interchanges/Ramps
 - Local Paved Roads (9 elements)
 - » Roadway Segments
 - Unpaved Roads (5 elements)
 - » Roadway Segments







MIRE FDE for Roadway Segments

- Segment Identifier (1,2,3)
- Route Number (1,*)
- Route/street Name (1,*)
- Federal Aid/Route Type (1,*)
- Rural/Urban Designation (1,2*)
- Surface Type (1,2,3,*)
- Begin Point Seg. Descriptor (1,2,3,*)
- End Point Seg.t Descriptor (1,2,3,*)
- Segment Length (1,*)
- Direction of Inventory (1)
- Functional Class (1,2,3*)

- Median Type (1)
- Access Control (1,*)
- One/Two-Way Operations (1,*)
- Number of through lanes (1,2*)
- AADT (1,2,*)
- AADT Year (1,*)
- Type of Governmental Ownership (1,2,3,*)

LEGEND

- 1 Non-local paved roads
- 2 Local paved roads
- 3 Unpaved roads
- * HPMS full extent elements







MIRE FDE for Intersections (Non-local paved roads only)

- Unique Junction Identifier
- Location Identifier for Road 1 Crossing Point
- Location Identifier for Road 2 Crossing Point
- Intersection/Junction Geometry
- Intersection/Junction Traffic Control
- AADT [for each Intersection Road]
- AADT Year [for each Intersecting Road]
- Unique Approach Identifier







MIRE FDE for Interchanges/Ramps (Non-local paved roads only)

- Unique Interchange Identifier
- Location Identifier for Roadway at Beginning Ramp Terminal
- Location Identifier for Roadway at Ending Ramp Terminal
- Ramp Length
- Roadway Type at Beginning Ramp Terminal
- Roadway Type at Ending Ramp Terminal

- Interchange Type
- Ramp AADT*
- Year of Ramp AADT*
- Functional Class*
- Type of Governmental Ownership*

LEGEND

* - HPMS full extent elements







MIRE FDE Implementation Dates

- July 1, 2017 Incorporate specific quantifiable and measurable anticipated improvements that prioritizes the collection of MIRE FDE into the Traffic Records Strategic Plan
- September 30, 2026 Access to a complete collection of MIRE FDE on all public roads



Use of HSIP Funds (924.5 Policy)

- HSIP funds shall be used for projects that are consistent with the SHSP
- Use funding for projects with greatest potential to reduce a State's fatalities and serious injuries
- Projects are limited to those on the inclusions list in 23 U.S.C. 148(a)(4)(B)



What Does the Regulation Say?







Regulation Structure

§ 924.1 Purpose

§ 924.3 Definitions

§ 924.5 Policy

§ 924.7 Program Structure

§ 924.9 Planning

§ 924.11 Implementation

§ 924.13 Evaluation

§ 924.15 Reporting

§ 924.17 MIRE Fundamental Data Elements









Section 924.1 Purpose

The purpose of this regulation is to prescribe requirements for the development, implementation, and evaluation of a highway safety improvement program (HSIP) in each State



Section 924.3 Definitions

- Hazard index formula
- Highway
- Highway Safety ImprovementProgram
- Highway safety improvement project
- MIRE fundamental data elements*
- Public railway-highway crossing
- Public road

- Reporting year*
- Railway-highway crossing protective devices
- Roadway safety audit
- Safety data
- Safety stakeholder
- Spot safety improvement*
- Strategic highway safety plan
- Systemic safety improvement*

LEGEND

* – New definitions







Section 924.5 Policy – Paragraph (a)

 Each State shall develop, implement, and evaluate on an annual basis a HSIP that has the objective to significantly reduce fatalities and serious injuries resulting from crashes on all public roads.



Section 924.5 Policy – Paragraph (b)

- HSIP funds shall be used for highway safety improvement projects that are consistent with the State's SHSP.
- HSIP funds should be used to maximize opportunities to advance highway safety improvement projects that have the greatest potential to reduce the State's roadway fatalities and serious injuries.





Section 924.5 Policy – Paragraph (c)

 Safety improvements that are part of a broader Federal-aid project should be funded from the same source as the broader project.



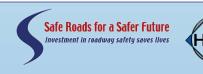
Section 924.7 Program Structure – Paragraph (a)

- Lists the main components of HSIP
 - Strategic Highway Safety Plan;
 - Railway-Highway Crossing Program; and
 - Program of highway safety improvement projects



Section 924.7 Program Structure - Paragraph (b)

- Specifies a separate process for planning, implementation, and evaluation of the HSIP components listed in section 924.7(a).
- Clarifies cooperation with FHWA Division Administrator and consultation with other safety stakeholders



Section 924.9 Planning – Paragraph (a)

Reflects sequence of actions in HSIP planning process

- 1) Collecting and maintaining safety data
- 2) Advancing data collection and analysis capabilities
- Updating the SHSP
- 4) Analyzing safety data
 - a) Program of highway safety improvement projects
 - b) Railway-Highway Crossings program
- 5) Conducting engineering studies
- 6) Establishing implementation priorities







Section 924.9 Planning – Paragraphs (b) and (c)

- b) Describes financing options for the HSIP planning process
- c) Describes planning requirements for HSIP projects





Section 924.11 Implementation

- The HSIP shall be implemented in accordance with the Planning requirements.
- MIRE Fundamental Data Elements:
 - Incorporate specific quantifiable and measurable anticipated improvements for the collection of MIRE fundamental data elements into the Traffic Records Strategic Plan by July 1, 2017
 - Have access to a complete collection of MIRE FDE on all public roads by ✓ September 30, 2026
- Requires SHSP include or be accompanied by actions that address how the SHSP emphasis area strategies will be implemented
- Railway-Highway Crossings Program Special Rule







Section 924.13 Evaluation

a) HSIP evaluation process

- 1) Analyze and assess results of program of projects to improve safety outcomes and meet targets
- Evaluate SHSP

b) Use evaluation results

- 1) To update safety data used in planning process
- 2) For setting priorities
- 3) For assessing overall effectiveness of HSIP
- 4) For reporting







Section 924.15 Reporting

Two Annual Reports – both submitted via FHWA's online reporting tool

- HSIP report
 - Structure of HSIP
 - Process in implementing highway safety improvement projects
 - 3) Progress in achieving safety performance targets *NEW*
 - 4) Effectiveness of highway safety improvement projects
 - 5) Section 508 compliant
- Railway-highway crossing improvements report







Section 924.17 MIRE Fundamental Data Elements

- Three Tables based on functional classification and surface type
 - Non-Local Paved Roads (37 elements)
 - » Roadway segments
 - » Intersections
 - » Interchanges/ramps)
 - Local Paved Roads (9 elements)
 - » Roadway segments
 - Unpaved Roads (5 elements)
 - » Roadway Segments







QUESTIONS?



Safe Roads for a Safer Future Investment in roadway safety saves lives



Safety Performance Management Measures

Overview of Final Rule

Docket #: FHWA-2013-0020







Legislative Requirements (23 USC 150 and 23 USC 134, 135)

- To carry out the HSIP, the Secretary to promulgate rulemaking to establish measures for serious injuries and fatalities by number and rate per VMT
- Urbanized and rural targets optional
- MPO targets required
- Report progress







Legislative Requirements (23 USC 148)

- Requires determination of whether or not a State has met or made significant progress toward meeting its performance targets
- Identifies consequences







The Regulation (23 CFR Part 490)

Subpart A:

§ 490.101 Definitions

§ 490.111 Incorporation by Reference







The Regulation (23 CFR Part 490)

Subpart B:

1/		
§	490.201	Purpose
§	490.203	Applicability
§	490.205	Definitions
§	490.207	National Performance Management Measures for the Highway Safety Improvement Program
§	490.209	Establishment of Performance Targets
§	490.211	Determining Whether a State Department of Transportation Has Met or Made Significant Progress Toward Meeting Performance Targets
§	490.213	Reporting of Targets for the Highway Safety Improvement Program







Purpose - § 490.201

- Establish performance measures for the purpose of carrying out the HSIP and for State DOTs to use in assessing:
 - Serious injuries and fatalities per vehicle miles traveled (VMT)
 - Number of serious injuries and fatalities

Applicability – § 490.203

Measures applicable to all public roads







Definitions – § 490.205

- 5-year rolling average
- Annual Report File (ARF)
- Fatality Analysis
 Reporting System (FARS)
- Final FARS
- KABCO
- Number of Fatalities
- Number of Nonmotorized Fatalities

- Number of Nonmotorized Serious Injuries
- Number of Serious Injuries
- Public Road
- Rate of Fatalities
- Rate of Serious Injuries
- Serious Injuries







National Performance Management Measures for the HSIP – § 490.207

- 5 Performance Measures
 - Number of Fatalities
 - Rate of Fatalities per 100 million VMT
 - Number of Serious Injuries
 - Rate of Serious Injuries per 100 million VMT
 - Number of Non-motorized Fatalities and Non-motorized Serious Injuries
- 5-Year Rolling Averages







Measure Components - § 490.207(b)(1) and (2)

Fatalities

- Number: Total number of persons suffering fatal injuries in a motor vehicle traffic crash during a calendar year
- Rate: Ratio of total number of fatalities to the number of vehicle miles traveled (VMT) (expressed in 100 million VMT) in a calendar year



Measure Components - § 490.207(b)(3) and (4)

Serious Injuries

- Number: Total number of persons suffering at least one serious injury
- Rate: Ratio of total number of serious injuries to the number of vehicle miles traveled (VMT) (expressed in 100 million VMT) in a calendar year
- For first 36 months injuries classified as "A" on the KABCO scale through use of NHTSA conversion tables
- Within 36 months use MMUCC, 4th edition "Suspected Serious Injury (A)"







Measure Components – § 490.207(b)(5)

- Non-motorized Fatalities and Non-motorized Serious Injuries
 - Combined Total
 - Crash must involve a motor vehicle





Establishment of Performance Targets - § 490.209

- States establish annual targets in the HSIP report
 - Beginning in August 2017 HSIP report for calendar year 2018
 - Target for each measure (5-year rolling average)
 - Targets based on calendar year
 - Applicable to all public roads regardless of functional classification or ownership
 - No change to target once submitted in the HSIP report
- Targets must be identical to NHTSA HSP targets for common measures:
 - Number of fatalities
 - Rate of fatalities
 - Number of serious injuries

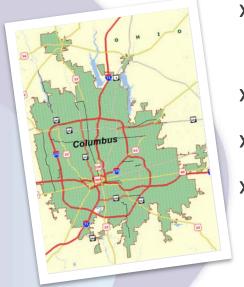






Establishment of Performance Targets – § 490.209

- States report serious injury data in HSIP report
 » 5 years of data
- Urbanized/Non-urbanized Area Targets



- » States can establish any number of urbanized area targets and a single non-urbanized area target
- » Must report the urbanized area boundaries
- » Must evaluate and report progress for each target
- » Not included in assessment of target achievement





MPO Targets - § 490.209

- MPOs establish targets 180 days after State
 - Target for each measure required
- Two options to establish targets
 - MPOs can agree to support the State DOT target; OR
 - MPOs can establish a numerical target specific to the MPO planning area
 - For each of the five performance measures, can make a different choice to establish a quantifiable target or agree to support the State's targets
- Multi-state MPOs
 - Establish one target for the entire metropolitan planning area;
 OR
 - Agree to support the SDOT targets for each State







MPO Targets - § 490.209

- Targets applicable to all public roads in the MPO
- Report the VMT estimate used for rate targets and the methodology used to develop the estimate
- MPO targets are reported to State DOT and must be available to FHWA, if requested



Target Coordination

- States and MPOs must coordinate on target establishment
 - Annual targets should logically support LRTP and SHSP goals
 - Planning Final Rule will describe how and encourage greater coordination between MPOs and State on target setting
- State DOTs and SHSOs should coordinate on targets for common performance measures

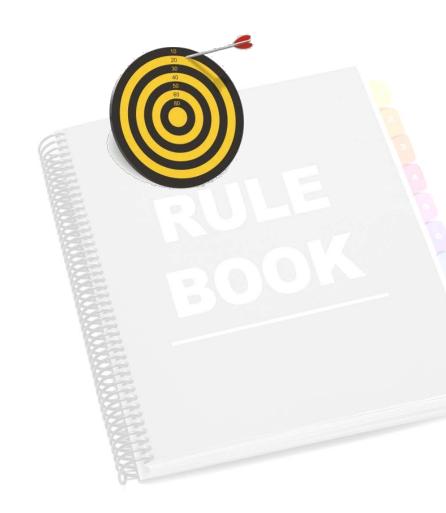






Determining Whether a State DOT Has Met or Made Significant Progress Toward Meeting Performance Targets – § 490.211

- 4 out of 5 targets must be
 - Met, or
 - Better than performance for prior to target establishme
- Reduced Data Time Lag ar Evaluation
 - Significant progress determ year earlier than proposed
 - End of CY following target y
 - FARS ARF may be used if Fi available









Determining Whether a State DOT Has Met or Made Significant Progress Toward Meeting Performance Targets – § 490.211

Performance Target	Data source(s) used to make determination			
Number of Fatalities	Final FARS (FARS ARF may be used if Final FARS is not available)			
Rate of Fatalities	Final FARS (FARS ARF may be used if Final FARS is not available) and HPMS data			
Number of Serious Injuries	State reported data			
Rate of Serious Injuries	State reported data and HPMS data			
Number of Non- motorized Fatalities and Serious Injuries	Final FARS (FARS ARF may be used if Final FARS is not available), State reported data			







Determining Whether a State DOT Has Met or Made Significant Progress Toward Meeting Performance Targets – § 490.211

- Optional targets will not be evaluated
- Requirements if State did not meet or make significant progress toward meeting targets
 - Use obligation authority equal to the HSIP apportionment for the prior year only for highway safety improvement projects, and
 - Submit a HSIP Implementation Plan





Evaluating MPO Target Achievement

- MPOs held accountable through the Statewide and Metropolitan Planning process:
 - Metropolitan Transportation Plan (MTP) including a system performance report component
 - Transportation Improvement Program (TIP) including the Federal Planning Finding
 - MPO certification process for Transportation Management Areas (TMAs)
 - HSIP Implementation Plan (if required)





Reporting Targets for the HSIP - § 490.213

- States report targets to FHWA
- MPOs report targets to State
 - Include methodology and VMT estimate for quantifiable targets
- MPOs report in the System Performance Report (23 CFR 450)





April, 2016Final Rule is effective.

July 1, 2017

SHSO reports 2018 targets to NHTSA in HSP.

August 31, 2017

State DOT reports 2018 targets to FHWA in HSIP Annual Report.

February 27, 2018

MPO reports 2018 targets to State DOT.

2016 2017 2018

2017

State DOTs, SHSOs, MPOs, and others coordinate on selection of targets for 2018











December, 2019
HPMS, FARS and
FARS ARF data
finalized and used
to assess
achievement of
2018 targets.

October 1, 2020

If State did not meet or make significant progress toward meeting its targets, (a) obligation authority from FY2017 spent on safety projects in FY 2021 and (b) submit HSIP Implementation Plan.



2019 2020 2021

March, 2020 States notified of determination for 2018 targets.









Process Example







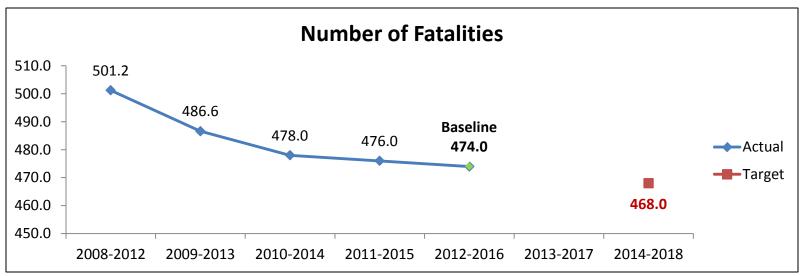
Process Example – CY 2018 Targets

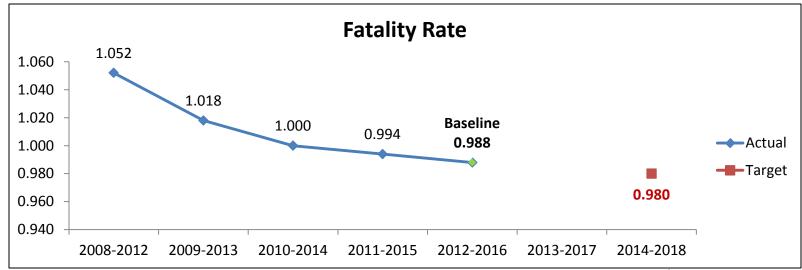
- CY 2018 targets established in 2017
- State DOT and State Highway Safety Office consultation and agreement on targets for common measures
- State DOT and MPOs coordinate to maximum extent practicable
- NHTSA Highway Safety Plan targets due July 2017
- HSIP targets due August 2017
- MPO targets due to State DOT by February 2018





Process Example – Target Selection











Process Example – Target Selection

Reported in August 2017 HSIP report

State Targets Established for CY2018				
Number of Fatalities	468.0			
Rate of Fatalities per 100 million VMT	0.980			
Number of Serious Injuries	2,160.0			
Rate of Serious Injuries per 100 million VMT	4.572			
Number of Non-motorized Fatalities and Non- motorized Serious Injuries	110.0			





Process Example – Measure Calculation (Number)

Year	2014	2015	2016	2017	2018
Number of Fatalities	471	468	493	468	462*

*From FARS ARF, if Final FARS is not available

 Add the number of fatalities for the most recent 5 consecutive calendar years ending in the year for which the targets are established:

Divide by five and round to the nearest tenth decimal place:







Process Example – Measure Calculation (Rate)

Year	2014	2015	2016	2017	2018
Fatality Rate per 100 million VMT	0.99	0.97	1.02	0.99	0.98*
rounded to the hundredths decimal place		0.57		0.55	

*Based on FARS ARF, if Final FARS is not available

 Add the fatality rate, rounded to the hundredths decimal place, for the most recent 5 consecutive calendar years ending in the year for which the targets are established:

$$0.99 + 0.97 + 1.02 + 0.99 + 0.98 = 4.95$$

Divide by 5 and round to the nearest thousandths decimal place:







Process Example – Target Assessment

	5-ye	ear Rolling Avera	ages		Better	Met or Made Significant Progress
Performance Measure	2012 – 2016 Baseline Performance	2014-2018 Target	2014-2018 Actual Performance	Target Achieved?	than baseline?	
Number of Fatalities	474.0	468.0	472.4	No	Yes	
Fatality Rate	0.988	0.980	0.990	No	No	
Number of Serious Injuries	2,310.4	2,160.0	2,185.6	No	Yes	Yes
Serious Injury Rate	4.822	4.572	4.584	No	Yes	
Number of Non- motorized Fatalities and Serious Injuries	113.2	110.0	109.4	Yes	N/A	







Wrap-up

Recap of HSIP & Safety PM Dates

✓ August 31, 2016

Submit annual HSIP and RHCP via online reporting tool

• ✓ July 1, 2017

Incorporate specific, quantifiable and measureable anticipated improvements for the collection of MIRE FDE into the State Traffic Records Strategic Plan

• ✓ August 1, 2017

Update the SHSP to be consistent with MAP-21 requirements

• ✓ August 31, 2017

State submits CY 2018 targets in HSIP Annual Report For common measures, identical to targets in HSP submitted in July 2017





Recap of HSIP & Safety PM Dates

✓ February 27, 2018

MPOs establish targets

✓ December 2019

Data available to assess 2018 target achievement

• ✓ March 2020

FHWA notifies States of determination whether State met or made significant progress toward meeting targets

✓ October 1, 2020

For States that did not meet or make significant progress toward meeting targets: obligation authority limitation, HSIP Implementation Plan due

✓ September 30, 2026

Collect and use the MIRE FDE to improve safety on all public roads





Forthcoming HSIP and Safety PM Guidance

- Concurrent
 - Update HSIP MAP-21 Interim Eligibility Guidance
 » Consistency with FAST Act
 - Update SHSP MAP-21 Interim Guidance
 - Update State Safety Data Systems Guidance
 - New HSIP Implementation Guidance
 - Target Setting Resources
 - Guidance to Support Local Computation of VMT
 - KABCO Conversion Tables







Forthcoming HSIP and Safety PM Guidance

- Coming soon
 - Update HSIP MAP-21 Reporting Guidance
 - » Consistency with Safety Performance Measures Final Rule
 - Update RHCP MAP-21 Reporting Guidance
 - » Minor clarifications
 - ANSI D16.1-2007 Pedestrian and Bicycle Conversion Tables
 - HSIP Implementation Plan Guidance







What Should I Do Now?

- Download and become familiar with the new HSIP and Safety PM rules
- New rules effective: April 14, 2016
 - HSIP (FHWA-2013-0019)
 http://www.regulations.gov/#!docketDetail;D=FHWA-2013-0019
 - Safety PM (FHWA-2013-0020)
 http://www.regulations.gov/#!docketDetail;D=FHWA-2013-0020
- Ask questions if you have them





What Should I Do Now?

- Review your HSIP processes and update as needed
- Develop a strategy for collecting MIRE FDE, as necessary, to comply with the final rule
- Review your fatality and serious injury data, including non-motorized data, and understand historical trends
- Review safety targets set for the Highway Safety Plan
- Develop a strategy for coordinating on target setting







For more information

- Highway Safety Improvement Program http://safety.fhwa.dot.gov/hsip/
- Safety Performance Management <u>http://safety.fhwa.dot.gov/hsip/tpm/</u>
- FHWA Transportation Performance Management http://www.fhwa.dot.gov/TPM/





Contact Info

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QUESTIONS?



Safe Roads for a Safer Future
Investment in roadway safety saves lives

