TEXAS

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2017 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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Disclaimer

Protection of Data from Discovery Admission into Evidence

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

In the 2017 State fiscal year, Texas programmed 688 highway safety improvement projects at a cost of $250,844,922 and let to contract 724 projects at a cost of $189,736,433. Those projects addressed the following types of work:

*Barriers

*Curve Improvements

*Grade Separations

*Intersection Improvements

*Off-System Improvements

*Rumble Strips

*Widening

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

Program Structure

Program Administration

Describe the general structure of the HSIP in the State.

The HSIP is administered by the Texas Department of Transportation, Traffic Operations Division (TRF). Each year, TRF issues a statewide program call for highway safety projects to all 25 TxDOT districts. Projects funded in the HSIP will be limited to improvements that address the serious crash types identified in the most current Strategic Highway Safety Plan (SHSP).

These projects may range from spot-safety improvements and upgrading of existing conditions to new roadway construction. Typically, highway safety projects are small in scope, low in cost, and can be let to contract within 3 years.

When a call for projects has been issued, TRF provides each district with crash data that identifies potential project locations that can be used to develop project proposals. District personnel works with area offices, local governments and MPO's to determine the appropriate countermeasures and submits all project proposals to TRF.

All eligible proposed highway safety projects are subjected to a benefit/cost analysis. The formula used for this purpose is the Safety Improvement Index (SII).

In its most basic form, the SII is the ratio of the cost of preventable crashes that have occurred at a location to the cost of constructing the proposed improvement. The SII incorporates adjustments to provide additional benefit for:

- Locations experiencing increasing traffic over the project life
- Improvements that will reduce maintenance cost
- Project expected to have long service lives over which construction costs can be amortized.

Projects will be put into priority order based on the results of its benefit/cost analysis and placed in the HSIP according to priority and appropriated federal funding.

Approximately, 20 to 30% of eligible project proposals are funded each program year.

Where is HSIP staff located within the State DOT?

Operations

Enter additional comments here to clarify your response for this question or add supporting information.

HSIP staff is located in the Traffic Engineering section of the Traffic Operations Division.

How are HSIP funds allocated in a State?

Central Office via Statewide Competitive Application Process

Enter additional comments here to clarify your response for this question or add supporting information.

Describe how local and tribal roads are addressed as part of HSIP.

Local roads and tribal roads are evaluated and ranked along with on-system proposals using the same rules, guidelines, and requirements.

Identify which internal partners (e.g., State departments of transportation (DOTs) Bureaus, Divisions) are involved with HSIP planning.

Traffic Engineering/Safety
Design
Planning
Operations
Districts/Regions

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with internal partners.

1. TRF (Traffic Engineering/Safety) - Using the most current Strategic Highway Safety Plan (SHSP), the program safety emphasis areas are identified.

2. TRF (Traffic Engineering/Safety) - Identifies potential project locations that qualify for improvements in the identified program emphasis area using the three most current years of crash data.

3. District (Design/Operations) - Evaluates each identified location to determine if the project is feasible and to verify that appropriate countermeasures addressing the location's safety needs have not already been implemented or scheduled for construction.

4. District (Design/Operations) - Works with area offices and local governments to gather additional location information and to identify any potential locations that may have been excluded due to incomplete or inaccurate crash and roadway data.

5. District (Design/Operations) - For projects determined to be feasible, conducts a field evaluation to determine the appropriate countermeasures and develop a detailed estimate.

6. District (Design/Operations) - Completes and submits projects containing requested data to the Texas Department of Transportation (TxDOT) Traffic Operations Division (TRF) along with necessary backup data (typical sections, layouts, detailed estimates, etc.) in response to the program call.

7. TRF (Traffic Engineering/Safety) - Analyzes the proposed highway safety projects for HSIP eligibility, data accuracy, and conformance to design standards.

8. TRF (Traffic Engineering/Safety) - Analyzes each eligible project's Safety Improvement Index (SII), then puts the projects into priority order based on the results.

9. TRF (Traffic Engineering/Safety) - Places projects in the HSIP according to priority and appropriated federal funding, then sends listing of highway safety projects selected for funding in the HSIP to the districts.

10. District (Planning) - Sets projects up in the Design/Construction Information System (DCIS) in the assigned work program and may include qualifying projects in the Transportation Improvement Program (TIP) as appropriate.

11. District (Design/Operations) - Notifies TRF of an overrun of a HSIP projects authorized funds prior to Plans, Specifications and Estimate (PS&E) submittal.

12. District (Design/Operations) - Submits PS&E for HSIP projects to TRF in accordance with standard PS&E submission schedule.

13. TRF (Traffic Engineering/Safety) - Handles overruns of project authorized funds at the divisional PS&E review stage in accordance with the current TxDOT policy.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Local Government Agency

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with external partners.

TxDOT district offices will notify local municipalities within their district when a call for project proposals has been issued. The district will evaluate and consider the eligibility and viability of safety projects suggested by the local municipality. If the project proposal meets the requirements of the HSIP and is considered competitive by the district, it will be submitted to TRF for funding consideration.

District personnel also work with the local MPOs to identify problem locations and to achieve buy-in for the future projects.

Have any program administration practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of HSIP Administration on which the State would like to elaborate?

No

Program Methodology

Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?

Yes

To upload a copy of the State processes, attach files below.

File Name:
hsi.pdf

Select the programs that are administered under the HSIP.

HSIP (no subprograms)

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	HSIP (no subprograms)
Date of Program Methodology:	2/27/2015

What is the justification for this program? [Check all that apply]

2017 Texas Highway Safety Improvement Program

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Funding set-aside

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
Fatal and serious injury crashes only	Volume	

What project identification methodology was used for this program? [Check all that apply]

Crash frequency

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

Describe the methodology used to identify local road projects as part of this program.

How are projects under this program advanced for implementation?

Competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Ranking based on B/C : 1
Available funding : 2

Enter additional comments here to clarify your response for this question or add supporting information.

What percentage of HSIP funds address systemic improvements?

HSIP funds are used to address which of the following systemic improvements? Please check all that apply.

Enter additional comments here to clarify your response for this question or add supporting information.

What process is used to identify potential countermeasures? [Check all that apply]

Engineering Study

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State HSIP consider connected vehicles and ITS technologies?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State use the Highway Safety Manual to support HSIP efforts?

Yes

Please describe how the State uses the HSM to support HSIP efforts.

TxDOT implemented Highway Safety Manual (HSM) methods and tools to perform network screening, diagnosis, and countermeasure selection for the Highway Safety Improvement Program (HSIP). With regard to network screening, TxDOT applied the sliding window method to calculate seven HSM performance measures: crash frequency, crash rate, critical rate, excess predicted average crash frequency using method of moments, excess predicted average crash frequency using Safety Performance Functions, probability of specific crash types exceeding threshold proportion, and excess proportion of specific crash types.

Further, TxDOT developed Crash Analysis and Visualization (CAVS) data to enhance the process of selecting safety projects to submit for HSIP funding consideration. Crash data and crash attributes for all Fatal (K) and Incapacitating Injury (A) crashes statewide were compiled into a spreadsheet. Each HSIP work code was analyzed for each crash to determine whether that crash could be prevented by the type of work. All of the K and A crashes were then mapped in Google Earth. The maps can be filtered to only show crashes that apply to a particular type of work. For example, all crashes that could be prevented with the addition of rumble strips can be mapped to help identify the best place to install the rumble strips. Master plans can also be added to the CAVS data. The master plans include the limits of completed projects, programmed projects and identified projects. The master plans along with the applicable crashes for each work type were displayed on a single map that identifies the projects with the highest potential benefit-cost ratio.

TxDOT Districts used the network screening process to select candidate HSIP projects.

Have any program methodology practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of the HSIP methodology on which the State would like to elaborate?

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

Enter additional comments here to clarify your response for this question or add supporting information.

Enter the programmed and obligated funding for each applicable funding category.

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$250,844,922	$189,736,433	75.64%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$0	$0	0%
Totals	$250,844,922	$189,736,433	75.64%

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding is programmed to local (non-state owned and operated) or tribal safety projects?

$6,438,433

How much funding is obligated to local or tribal safety projects?

$6,206,940

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding is programmed to non-infrastructure safety projects?

2017 Texas Highway Safety Improvement Program

$0

How much funding is obligated to non-infrastructure safety projects?

$0

Enter additional comments here to clarify your response for this question or add supporting information.

How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?

$18,346,170

How much funding was transferred out of the HSIP to other core program areas during the reporting period under 23 U.S.C. 126?

$0

Enter additional comments here to clarify your response for this question or add supporting information.

Discuss impediments to obligating HSIP funds and plans to overcome this challenge in the future.

We do not have any impediments to obligating our HSIP funds at this time. Our Administration is supportive of the program and provides us with appropriate obligation authority.

Does the State want to elaborate on any other aspects of it's progress in implementing HSIP projects?

No

General Listing of Projects

List the projects obligated using HSIP funds for the reporting period.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(877)HESG	Roadway	Rumble strips - center	13.52	Miles	$92423	$92423	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,861	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(878)HESG	Roadway	Rumble strips - center	11.941	Miles	$81737	$81737	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,998	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(138)HES & STP 1702(139)HES	Roadway	Rumble strips - center	9.328	Miles	$33058	$33058	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	1,203	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(144)HES	Roadway	Rumble strips - center	21.358	Miles	$67106	$67106	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	1,203	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(140)HES	Roadway	Rumble strips - center	7.4	Miles	$31833	$31833	HSIP (23 U.S.C. 148)	Rural Major Collector	2,345	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(141)HES	Roadway	Rumble strips - center	11.428	Miles	$43023	$43023	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,860	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(142)HES & STP 1702(143)HES	Roadway	Rumble strips - center	24.246	Miles	$98268	$98268	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	858	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(003)HES	Roadway	Rumble strips - center	8.951	Miles	$7862	$7862	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	2,414	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(126)HESG & STP 2017(127)HESG	Roadway	Rumble strips - center	11.48	Miles	$42143	$42143	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,571	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(131)HESG	Roadway	Rumble strips - center	15.598	Miles	$77472	$77472	HSIP (23 U.S.C. 148)	Rural Major Collector	1,569	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(736)HESG	Roadway	Rumble strips - center	14	Miles	$48211	$48211	HSIP (23 U.S.C. 148)	Rural Major Collector	653	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(681)HES	Intersection traffic control	Pavement markings - miscellaneous/other/unspecified	1	Intersections	$355908	$355908	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	32,625	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at

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														intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(634)HES	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	1	Intersections	$181056	$181056	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	20,362	55	State Highway Agency	Spot	Intersections	Add more turn bays and acceleration lanes on high speed rural roads.
STP 1702(502)HES	Shoulder treatments	Widen shoulder - paved or other	4.094	Miles	$1139171	$1139171	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	8,453	75	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2017(331)HES	Pedestrians and bicyclists	Pedestrian bridge	1.172	Miles	$2331043	$2331043	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	69,873	70	State Highway Agency	Spot	Pedestrians	Create connected pedestrian networks and remove barriers to pedestrian travel (Pedestrian over/under passes, crossings to overcome physical barriers).
STP 2017(912)HES	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	17.9	Miles	$790287	$790287	HSIP (23 U.S.C. 148)	Rural Major Collector	1,498	55	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2017(998)HES	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	6.257	Miles	$342395	$493138	HSIP (23 U.S.C. 148)	Rural Minor Arterial	16,783	55	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2017(569)HES & STP 2017(570)HES	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	18.218	Miles	$3585893	$3585893	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	2,378	60	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 1702(009)HES & STP 1702(010)HES	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	20.544	Miles	$1383923	$1383923	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	5,656	70	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of

													RELATIONSHIP TO SHSP	
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														the road during road departures.
STP 2017(760)HES	Roadway	Pavement surface - high friction surface	0.23	Miles	$65138	$65138	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	9,004	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(835)HES	Roadway	Pavement surface - high friction surface	0.5	Miles	$68905	$68905	HSIP (23 U.S.C. 148)	Rural Major Collector	8,860	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(329)HES	Roadway	Pavement surface - high friction surface	0.246	Miles	$105919	$105919	HSIP (23 U.S.C. 148)	Rural Major Collector	1,258	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(326)HES	Roadway	Pavement surface - high friction surface	0.322	Miles	$38860	$38860	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,260	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased

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														use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(327)HES & STP 1702(328)HES	Roadway	Pavement surface - high friction surface	0.646	Miles	$198683	$198683	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	14,963	65	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(281)HES	Roadway	Pavement surface - high friction surface	2.098	Miles	$192825	$192825	HSIP (23 U.S.C. 148)	Rural Major Collector	1,395	45	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(283)HES	Roadway	Pavement surface - high friction surface	1.577	Miles	$132609	$132609	HSIP (23 U.S.C. 148)	Rural Major Collector	1,072	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(282)HES	Roadway	Pavement surface - high friction surface	0.327	Miles	$61556	$61556	HSIP (23 U.S.C. 148)	Rural Major Collector	3,717	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(597)HES	Roadway	Pavement surface - high friction surface	3.106	Miles	$90078	$90078	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	7,095	50	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(598)HES	Roadway	Pavement surface - high friction surface	0.6	Miles	$25519	$25519	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	1,220	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(844)HES	Roadway	Pavement surface - high friction surface	0.539	Miles	$93181	$93181	HSIP (23 U.S.C. 148)	Rural Major Collector	146	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated

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														curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(284)HES	Roadway	Pavement surface - high friction surface	1.502	Miles	$151000	$151000	HSIP (23 U.S.C. 148)	Rural Major Collector	1,789	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(952)HES	Roadside	Barrier - other	14.757	Miles	$328760	$328760	HSIP (23 U.S.C. 148)	Rural Major Collector	776	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(311)HES	Roadside	Barrier - other	11.343	Miles	$89307	$89307	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	12,829	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(650)HES	Roadside	Barrier - other	5.899	Miles	$1495558	$1495558	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	28,198	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(482)HES	Roadside	Barrier - other	9.508	Miles	$299158	$299158	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	17,144	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(257)HES	Roadside	Barrier - other	11.68	Miles	$138675	$138675	HSIP (23 U.S.C. 148)	Rural Minor Arterial	13,597	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														poles, and protect culverts or remediate risks by other means.
STP 1702(457)HES	Roadside	Barrier - other	12.877	Miles	$736585	$736585	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	160,238	65	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(458)HES	Roadside	Barrier - other	12.27	Miles	$459804	$459804	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	185,112	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(455)HES	Roadside	Barrier - other	5.08	Miles	$750909	$750909	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	188,733	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(456)HES	Roadside	Barrier - other	13.376	Miles	$1051673	$1051673	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	135,459	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(384)HES	Roadside	Barrier - other	7.088	Miles	$211720	$211720	HSIP (23 U.S.C. 148)	Rural Major Collector	3,291	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(381)HES	Roadside	Barrier - other	13.874	Miles	$962050	$962050	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	4,478	65	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(382)HES & STP 1702(383)HES	Roadside	Barrier - other	13.463	Miles	$1229770	$1229770	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	35,133	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														protect culverts or remediate risks by other means.
STP 2017(046)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	10.114	Miles	$641382	$641382	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,849	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(646)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	14.83	Miles	$1069002	$1069002	HSIP (23 U.S.C. 148)	Rural Major Collector	878	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(601)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	5.516	Miles	$745534	$745534	HSIP (23 U.S.C. 148)	Rural Major Collector	125	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(602)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	9.167	Miles	$651104	$651104	HSIP (23 U.S.C. 148)	Rural Major Collector	904	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(493)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.922	Miles	$1002148	$1002148	HSIP (23 U.S.C. 148)	Rural Major Collector	779	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(738)HES	Shoulder treatments	Widen shoulder - paved or other	3.717	Miles	$2616562	$2616562	HSIP (23 U.S.C. 148)	Rural Major Collector	12,500	45	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2017(445)HES	Roadside	Barrier - other	9.65	Miles	$1203835	$1203835	HSIP (23 U.S.C. 148)	Rural Major Collector	1,372	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														risks by other means.
STP 2017(457)HES	Roadside	Barrier - other	9.092	Miles	$1678694	$1678694	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	2,417	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(551)HES	Roadside	Barrier - other	12.506	Miles	$1204213	$1204213	HSIP (23 U.S.C. 148)	Rural Major Collector	1,096	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(093)HES	Alignment	Horizontal curve realignment	0.227	Miles	$413250	$1056313	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,517	50	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(127)HES	Alignment	Horizontal curve realignment	1	Miles	$554791	$554791	HSIP (23 U.S.C. 148)	Rural Major Collector	844	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1602(261)HES	Roadside	Barrier - other	4.832	Miles	$3158509	$3158509	HSIP (23 U.S.C. 148)	Urban Local Road or Street	121,226	60	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers.
STP 2017(498)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$144135	$144135	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	9,046	50	State Highway Agency	Spot	Intersections	Enhance advanced

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(721)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$299649	$299649	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	2,726	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(335)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$175801	$175801	HSIP (23 U.S.C. 148)	Rural Minor Arterial	9,585	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(334)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$196986	$196986	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	10,100	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(507)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$204949	$204949	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	8,387	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(393)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$155732	$155732	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	24,585	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(394)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$133463	$133463	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	24,585	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing,

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														flashing beacons or transverse rumble strips.
STP 1702(395)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$128990	$128990	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	6,132	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(397)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$183780	$183780	HSIP (23 U.S.C. 148)	Rural Minor Collector	9,042	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(396)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$186369	$186369	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	13,692	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(104)HES & STP 1702(105)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$81649	$81649	HSIP (23 U.S.C. 148)	Urban Major Collector	15,252	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(096)HES & STP 1702(097)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$177338	$177338	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	21,562	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(358)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$203564	$203564	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,939	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(359)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$248000	$280591	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	204,812	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(357)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$244294	$244294	HSIP (23 U.S.C. 148)	Urban Minor Arterial	121,278	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(360)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$269134	$269134	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	188,733	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(361)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$286414	$286414	HSIP (23 U.S.C. 148)	Urban Minor Arterial	204,812	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(333)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$193650	$193650	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	13,779	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(914)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$199984	$199984	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	19,298	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(916)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$190450	$190450	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	19,535	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(919)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$209000	$233652	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	22,711	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(917)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$203000	$205790	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	15,142	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(574)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$324373	$324373	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	14,376	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(969)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$337135	$337135	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	36,368	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(497)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$213735	$213735	HSIP (23 U.S.C. 148)	Urban Minor Arterial	28,530	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(136)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$532293	$532293	HSIP (23 U.S.C. 148)	Urban Minor Arterial	10,341	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or transverse rumble strips.
STP 1702(324)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$45321	$45321	HSIP (23 U.S.C. 148)	Rural Major Collector	21,839	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(315)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$21872	$21872	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	21,645	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(310)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$80478	$107359	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	19,265	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(311)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$35188	$35188	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	22,958	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(320)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$68089	$68089	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	25,290	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(316)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$33152	$33152	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	8,679	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(312)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$26987	$26987	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	19,265	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(551)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$346421	$346421	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	119,425	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(550)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$416854	$416854	HSIP (23 U.S.C. 148)	Rural Major Collector	47,922	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(491)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$223068	$223068	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	63,955	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(509)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$260695	$367212	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	25,974	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(485)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$379212	$379212	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	48,022	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(481)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$190117	$190117	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	20,031	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(642)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$255255	$255255	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	9,465	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(499)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$128595	$128595	HSIP (23 U.S.C. 148)	Urban Minor Arterial	15,305	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(521)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$65630	$65630	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	46,773	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(522)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$83821	$83821	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	46,773	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(505)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$51355	$51355	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	60,028	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(723)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$229260	$229260	HSIP (23 U.S.C. 148)	Urban Minor Arterial	10,955	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 1702(707)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4140	$4140	HSIP (23 U.S.C. 148)	Urban Minor Arterial	4,293	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(708)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4380	$4380	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	37,252	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(724)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$169111	$169111	HSIP (23 U.S.C. 148)	Rural Major Collector	6,663	30	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(709)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4340	$4340	HSIP (23 U.S.C. 148)	Urban Minor Arterial	16,798	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(725)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$270637	$270637	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	39,320	45	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(726)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$231539	$231539	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	26,646	35	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(710)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4455	$4455	HSIP (23 U.S.C. 148)	Rural Major Collector	11,029	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(727)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$205323	$205323	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	6,767	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(711)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4355	$4355	HSIP (23 U.S.C. 148)	Urban Minor Arterial	10,571	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(712)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4750	$4750	HSIP (23 U.S.C. 148)	Urban Minor Arterial	33,715	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(713)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4485	$4485	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,921	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702714)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4465	$4465	HSIP (23 U.S.C. 148)	Urban Minor Arterial	16,104	45	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(728)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$210205	$210205	HSIP (23 U.S.C. 148)	Urban Minor Arterial	13,704	35	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(729)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$152092	$152092	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,823	35	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(715)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$3790	$3790	HSIP (23 U.S.C. 148)	Urban Minor Arterial	10,430	35	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(716)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4950	$4950	HSIP (23 U.S.C. 148)	Urban Minor Arterial	33,267	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(717)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4715	$4715	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,165	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(718)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4485	$4485	HSIP (23 U.S.C. 148)	Urban Minor Arterial	21,045	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(719)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4975	$4975	HSIP (23 U.S.C. 148)	Urban Minor Arterial	18,292	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 1702(720)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$4475	$4475	HSIP (23 U.S.C. 148)	Urban Minor Arterial	6,561	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(721)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$5620	$5620	HSIP (23 U.S.C. 148)	Urban Minor Arterial	13,393	40	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(537)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$124235	$124235	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	7,254	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(532)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$203688	$203688	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	16,855	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(533)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$179612	$179612	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	11,528	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(541)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$164716	$164716	HSIP (23 U.S.C. 148)	Rural Minor Arterial	12,771	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(510)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$273788	$273788	HSIP (23 U.S.C. 148)	Urban Minor Arterial	21,623	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(527)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$425232	$425232	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	20,323	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(319)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$172556	$172556	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	10,225	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(320)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$134301	$134301	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	12,596	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(308)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$124710	$124710	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	176,455	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(654)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$46546	$46546	HSIP (23 U.S.C. 148)	Urban Major Collector	105,418	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(728)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$177777	$177777	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	32,615	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(700)HES, STP 1702(701)HES & STP 1702(702)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$57067	$57067	HSIP (23 U.S.C. 148)	Rural Minor Arterial	16,509	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(703)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$22286	$22286	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	23,363	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(699)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$36893	$36893	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,234	45	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(697)HES & STP 1702(698)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$69489	$69489	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	56,107	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(292)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$204386	$204386	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	17,686	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(323)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$88399	$88399	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	21,804	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 1702(313)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$40736	$40736	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	25,926	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(319)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$56143	$56143	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	8,793	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(512)HES	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	1	Intersections	$314980	$314980	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	25,413	45	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 2017(234)HES	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	1	Intersections	$131990	$131990	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	2,809	40	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 2017(233)HES	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	1	Intersections	$249230	$249230	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	13,417	40	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1702(704)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1	Miles	$18554	$18554	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	52,485	45	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(631)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	0.848	Miles	$265591	$265591	HSIP (23 U.S.C. 148)	Urban Minor Arterial	15,966	55	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 2017(632)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1.504	Miles	$165028	$165028	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	11,697	30	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1702(337)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	4.104	Miles	$287845	$287845	HSIP (23 U.S.C. 148)	Urban Major Collector	49,867	65	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1702(338)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1.061	Miles	$208601	$208601	HSIP (23 U.S.C. 148)	Urban Major Collector	61,331	75	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1702(705)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1	Miles	$4220	$4220	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	52,485	45	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1702(706)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1	Miles	$4960	$4960	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	52,485	45	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 2017(290)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$117529	$117529	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	6,009	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(529)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$34182	$34182	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	8,168	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(043)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$217051	$217051	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	41,676	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(720)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$154636	$154636	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	11,585	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(260)HES & STP 1602(406)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	15.641	Miles	$4085542	$4085542	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	160,718	60	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1602(456)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1.59	Miles	$299288	$299288	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	26,188	30	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1602(468)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1.616	Miles	$337320	$337320	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	24,813	30	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														yellow, all-red phase).
STP 1602(453)HES, STP 1602(454)HES & STP 1602(455)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	2.157	Miles	$291295	$532028	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	70,146	70	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1602(452)HES & STP 1602(465)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1.725	Miles	$336710	$336710	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	18,778	30	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 1602(445)HES	Intersection traffic control	Modify traffic signal timing - signal coordination	1.673	Miles	$280953	$280953	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	33,902	30	State Highway Agency	Spot	Intersections	Implement engineering solutions to reduce red-light running, such as changes in signal timing (i.e. longer yellow, all-red phase).
STP 2017(505)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$145519	$145519	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	9,303	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(506)HES	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$173967	$173967	HSIP (23 U.S.C. 148)	Urban Minor Arterial	8,547	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(368)HES	Alignment	Horizontal and vertical alignment	3.496	Miles	$26801915	$75522594	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	21,310	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(815)HES	Roadway	Superelevation / cross slope	0.5	Miles	$156958	$156958	HSIP (23 U.S.C. 148)	Rural Major Collector	566	60	State Highway Agency	Spot	Roadway Departure	Use 30 degree slope or safety wedge for pavement edges to facilitate returning to the roadway.
STP 2017(814)HES	Roadway	Superelevation / cross slope	2.1	Miles	$301388	$301388	HSIP (23 U.S.C. 148)	Rural Major Collector	677	55	State Highway Agency	Spot	Roadway Departure	Use 30 degree slope or safety wedge for pavement edges to facilitate returning to the roadway.
STP 2017(484)HES	Roadway	Superelevation / cross slope	4.187	Miles	$538649	$538649	HSIP (23 U.S.C. 148)	Rural Major Collector	902	60	State Highway Agency	Spot	Roadway Departure	Use 30 degree slope or safety wedge for pavement edges to facilitate returning to the roadway.
STP 2017(464)HES	Roadway	Superelevation / cross slope	0.206	Miles	$267726	$372720	HSIP (23 U.S.C. 148)	Rural Major Collector	9,700	40	State Highway Agency	Spot	Roadway Departure	Use 30 degree slope or safety wedge for pavement edges to facilitate returning to the roadway.
STP 2017(849)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	1	Miles	$28148	$28148	HSIP (23 U.S.C. 148)	Rural Major Collector	652	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(850)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.383	Miles	$28148	$28148	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,535	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(766)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.8	Miles	$5673	$5673	HSIP (23 U.S.C. 148)	Rural Major Collector	543	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(852)HES	Roadway	Pavement surface - high friction surface	0.3	Miles	$68080	$68080	HSIP (23 U.S.C. 148)	Rural Major Collector	15,188	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(153)HES	Roadway	Pavement surface - high friction surface	1.361	Miles	$122889	$122889	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,167	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(838)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.677	Miles	$66196	$66196	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	9,550	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(330)HES	Roadway	Pavement surface - high friction surface	0.14	Miles	$170766	$170766	HSIP (23 U.S.C. 148)	Rural Major Collector	1,051	45	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(847)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.7	Miles	$30998	$30998	HSIP (23 U.S.C. 148)	Rural Major Collector	1,088	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(846)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	1.4	Miles	$59606	$59606	HSIP (23 U.S.C. 148)	Rural Major Collector	1,006	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(278)HES	Roadway	Pavement surface - high friction surface	7.573	Miles	$247162	$247162	HSIP (23 U.S.C. 148)	Rural Major Collector	406	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(280)HES	Roadway	Pavement surface - high friction surface	1.11	Miles	$54646	$54646	HSIP (23 U.S.C. 148)	Rural Major Collector	1,395	45	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(279)HES	Roadway	Pavement surface - high friction surface	0.431	Miles	$163689	$163689	HSIP (23 U.S.C. 148)	Rural Major Collector	7,514	45	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(277)HES	Roadway	Pavement surface - high friction surface	0.302	Miles	$129412	$163482	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,595	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(841)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	2.8	Miles	$23500	$23500	HSIP (23 U.S.C. 148)	Rural Major Collector	927	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(839)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	5.879	Miles	$79500	$79500	HSIP (23 U.S.C. 148)	Rural Major Collector	435	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(675)HESG	Intersection traffic control	Intersection signing - add enhanced advance warning (double-up and/or oversize)	1	Intersections	$55517	$55517	HSIP (23 U.S.C. 148)	Rural Major Collector	1,034	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips.
STP 2017(843)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.4	Miles	$29967	$29967	HSIP (23 U.S.C. 148)	Rural Minor Collector	90	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(553)HES & STP 2017(554)HES	Roadway	Pavement surface - high friction surface	0.401	Miles	$210759	$210759	HSIP (23 U.S.C. 148)	Rural Major Collector	2,963	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(149)HESG	Intersection traffic control	Intersection flashers - add advance intersection warning sign-mounted	1	Intersections	$56226	$56226	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,288	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(552)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.165	Miles	$11598	$11598	HSIP (23 U.S.C. 148)	Rural Minor Collector	656	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(834)HES	Roadway	Pavement surface - high friction surface	0.4	Miles	$54452	$54452	HSIP (23 U.S.C. 148)	Rural Major Collector	5,494	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(836)HES	Roadway	Pavement surface - high friction surface	0.2	Miles	$60885	$60885	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	12,814	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(837)HES	Roadway	Pavement surface - high friction surface	0.18	Miles	$45784	$45784	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	12,814	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(845)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	2.369	Miles	$42916	$42916	HSIP (23 U.S.C. 148)	Rural Major Collector	60	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(851)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	1.161	Miles	$31230	$31230	HSIP (23 U.S.C. 148)	Rural Minor Collector	82	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(854)HES	Roadway	Rumble strips - edge or shoulder	2.079	Miles	$55634	$55634	HSIP (23 U.S.C. 148)	Rural Major Collector	460	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(848)HES	Roadway	Rumble strips - edge or shoulder	0.8	Miles	$37011	$37011	HSIP (23 U.S.C. 148)	Rural Major Collector	616	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(853)HES	Roadway	Rumble strips - edge or shoulder	0.869	Miles	$27557	$27557	HSIP (23 U.S.C. 148)	Rural Major Collector	616	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(940)HES	Roadway	Roadway widening - add lane(s) along segment	0.994	Miles	$949000	$963063	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,549	75	State Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.
STP 2017(918)HES	Roadway	Roadway widening - add lane(s) along segment	1	Miles	$602955	$602955	HSIP (23 U.S.C. 148)	Rural Minor Arterial	19,298	45	City of Municipal Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.
STP 2017(024)HES	Roadway	Roadway widening - add lane(s) along segment	2.493	Miles	$570813	$570813	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	8,851	55	State Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.
STP 1702(741)HES	Roadway	Roadway widening - add lane(s) along segment	1.5	Miles	$461134	$461134	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	8,006	55	State Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.
STP 1702(129)HES	Roadway	Roadway widening - add lane(s) along segment	0.511	Miles	$189750	$278277	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	6,406	60	State Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.
STP 1702(036)HES	Roadway	Roadway widening - add lane(s) along segment	0.974	Miles	$1330100	$1856165	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	40,997	55	State Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(549)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$57337	$57337	HSIP (23 U.S.C. 148)	Rural Minor Collector	7,936	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(64)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$83369	$83369	HSIP (23 U.S.C. 148)	Urban Major Collector	651	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(859)HES	Intersection traffic control	Intersection flashers - add stop sign-mounted	1	Intersections	$23600	$23600	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,441	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(080)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$83985	$83985	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	6,264	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(370)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$74997	$171970	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	1,865	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(139)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$64990	$64990	HSIP (23 U.S.C. 148)	Urban Minor Arterial	667	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(088)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$158409	$158409	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	110,089	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(321)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$27882	$27882	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	2,000	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(317)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$107964	$107964	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	14,915	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(318)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$30181	$30181	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,817	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(692)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17453	$17453	HSIP (23 U.S.C. 148)	Rural Major Collector	5,915	30	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(693)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17515	$17515	HSIP (23 U.S.C. 148)	Urban Minor Arterial	7,150	30	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(694)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18699	$18699	HSIP (23 U.S.C. 148)	Rural Major Collector	8,050	30	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 2017(695)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16928	$16928	HSIP (23 U.S.C. 148)	Urban Minor Arterial	21,827	30	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(653)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$61220	$89631	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,807	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(659)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$130339	$130339	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	24,137	80	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(858)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$224055	$224055	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,239	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(144)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$110722	$110722	HSIP (23 U.S.C. 148)	Rural Minor Arterial	699	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(863)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$61336	$61336	HSIP (23 U.S.C. 148)	Rural Major Collector	6,973	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(861)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$56592	$56592	HSIP (23 U.S.C. 148)	Rural Major Collector	750	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(860)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$59422	$59422	HSIP (23 U.S.C. 148)	Rural Major Collector	1,663	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(145)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$107210	$107210	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,560	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(545)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$53302	$53302	HSIP (23 U.S.C. 148)	Rural Major Collector	916	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(147)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$160577	$160577	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,862	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(544)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$49247	$49247	HSIP (23 U.S.C. 148)	Rural Major Collector	1,811	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(540)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$57139	$57139	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,154	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(534)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$55745	$55745	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	4,375	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(530)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$76378	$76378	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,780	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2016(869)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$392461	$392461	HSIP (23 U.S.C. 148)	Rural Major Collector	2,764	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(657)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17143	$17143	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,048	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(658)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18609	$18609	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,048	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(665)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$25293	$25293	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,048	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 2017(727)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$109223	$109223	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	16,674	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(666)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$15466	$15466	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	27,721	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(667)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$15879	$15879	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	27,721	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(668)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16735	$16735	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	24,848	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(659)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$33665	$33665	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	5,414	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(669)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18623	$18623	HSIP (23 U.S.C. 148)	Rural Major Collector	1,755	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(655)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16713	$16713	HSIP (23 U.S.C. 148)	Urban Minor Arterial	24,104	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(653)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16989	$16989	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	11,360	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(654)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18002	$18002	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	8,248	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(664)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17842	$17842	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	17,962	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(671)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18031	$18031	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	13,489	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(672)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17628	$17628	HSIP (23 U.S.C. 148)	Rural Major Collector	8,248	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(674)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$20312	$20312	HSIP (23 U.S.C. 148)	Rural Major Collector	3,809	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(675)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$20364	$20364	HSIP (23 U.S.C. 148)	Rural Major Collector	3,809	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(676)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17961	$17961	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	27,433	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(678)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17159	$17159	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	21,216	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(685)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18959	$18959	HSIP (23 U.S.C. 148)	Urban Minor Arterial	7,107	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(682)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18261	$18261	HSIP (23 U.S.C. 148)	Rural Major Collector	7,107	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(683)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18113	$18113	HSIP (23 U.S.C. 148)	Rural Major Collector	7,107	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 2017(684)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$20011	$20011	HSIP (23 U.S.C. 148)	Rural Major Collector	5,171	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(687)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16783	$16783	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	23,620	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(686)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$20159	$20159	HSIP (23 U.S.C. 148)	Rural Major Collector	336	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(673)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17876	$17876	HSIP (23 U.S.C. 148)	Urban Minor Arterial	13,604	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(689)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17773	$17773	HSIP (23 U.S.C. 148)	Urban Minor Arterial	14,072	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(691)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17808	$17808	HSIP (23 U.S.C. 148)	Urban Minor Arterial	6,017	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(690)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16751	$16751	HSIP (23 U.S.C. 148)	Urban Minor Arterial	31,828	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(662)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17011	$17011	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	25,461	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(660)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$18139	$18139	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	23,507	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(670)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17086	$17086	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	29,248	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(679)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16343	$16343	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	44,549	40	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(680)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$17555	$17555	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	25,463	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(681)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16538	$16538	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	25,463	35	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(651)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$48249	$48249	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,251	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(652)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$20769	$20769	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	22,295	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(661)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$19527	$19527	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	5,900	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(663)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$16811	$16811	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	15,849	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(535)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$42492	$42492	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	7,050	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(309)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$63589	$63589	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,793	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or tranverse rumble strips
STP 1702(660)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$57304	$57304	HSIP (23 U.S.C. 148)	Rural Major Collector	1,043	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(663)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$55880	$55880	HSIP (23 U.S.C. 148)	Rural Major Collector	189	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(658)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$52151	$52151	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,903	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(662)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$53193	$53193	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,500	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(661)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$53566	$53566	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	9,331	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(656)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$59196	$59196	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	34,289	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(657)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$54360	$54360	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	129,228	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(655)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$58430	$58430	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	14,305	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(111)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$44900	$44900	HSIP (23 U.S.C. 148)	Rural Minor Collector	756	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1702(322)HES	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$28688	$28688	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	2,000	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 2017(862)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.214	Miles	$138237	$138237	HSIP (23 U.S.C. 148)	Rural Major Collector	523	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(159)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.2	Miles	$172889	$172889	HSIP (23 U.S.C. 148)	Urban Major Collector	10,819	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(842)HES	Roadway	Pavement surface - high friction surface	0.929	Miles	$905072	$905072	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,495	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(036)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	9.216	Miles	$496196	$496196	HSIP (23 U.S.C. 148)	Rural Major Collector	4,245	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(671)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	10.651	Miles	$285194	$285194	HSIP (23 U.S.C. 148)	Rural Major Collector	980	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 102(672)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.597	Miles	$95544	$95544	HSIP (23 U.S.C. 148)	Rural Minor Collector	101	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(673)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.705	Miles	$140454	$140454	HSIP (23 U.S.C. 148)	Rural Major Collector	321	70	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(674)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	8.972	Miles	$140154	$140154	HSIP (23 U.S.C. 148)	Rural Minor Collector	84	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(670)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	9.952	Miles	$474874	$474874	HSIP (23 U.S.C. 148)	Rural Minor Collector	51	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(280)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.186	Miles	$63647	$63647	HSIP (23 U.S.C. 148)	Urban Major Collector	5,639	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(187)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.244	Miles	$82469	$82469	HSIP (23 U.S.C. 148)	Urban Major Collector	3,605	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(253)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.442	Miles	$70673	$70673	HSIP (23 U.S.C. 148)	Urban Major Collector	3,811	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(254)HES	Roadway signs and traffic control	Curve-related warning signs and flashers	0.187	Miles	$56622	$56622	HSIP (23 U.S.C. 148)	Urban Major Collector	3,454	55	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(951)HES	Roadside	Barrier - other	8.123	Miles	$962512	$962512	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	14,805	80	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers.
STP 1702(483)HES	Roadside	Barrier - other	2	Miles	$330601	$330601	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	8,125	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers.
STP 1602(446)HES	Roadside	Barrier - other	3	Miles	$421488	$421488	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	27,691	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers.
STP 1702(665)HES	Roadside	Barrier - other	5.481	Miles	$639622	$639622	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	13,339	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(600)HES	Roadside	Barrier - other	4.711	Miles	$678174	$678174	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	23,915	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(599)HES	Roadside	Barrier - other	6.833	Miles	$986494	$986494	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	24,021	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(499)HESG	Roadside	Barrier - other	13	Miles	$957145	$957145	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	15,526	80	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(401)HES	Roadside	Barrier - other	2.5	Miles	$1167403	$1167403	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	18,122	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(482)HES	Roadside	Barrier - other	3.442	Miles	$413040	$413040	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,840	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(481)HES	Roadside	Barrier - other	4.86	Miles	$541434	$541434	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	23,237	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(480)HES	Roadside	Barrier - other	2.448	Miles	$291142	$291142	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	7,586	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(479)HES	Roadside	Barrier - other	3.54	Miles	$406848	$406848	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	14,287	75	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(666)HES	Roadside	Barrier - other	8.148	Miles	$697360	$697360	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	33,362	70	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 2017(037)HES	Roadside	Barrier - other	4.926	Miles	$979020	$979020	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	28,114	60	State Highway Agency	Spot	Lane Departure	Install more concrete and cable median barriers
STP 1702(549)HESG	Intersection traffic control	Intersection traffic control - other	1	Intersections	$101525	$101525	HSIP (23 U.S.C. 148)	Rural Minor Collector	8,610	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(577)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$201000	$298023	HSIP (23 U.S.C. 148)	Urban Local Road or Street	31,645	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(089)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$137817	$137817	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	19,097	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(090)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$145189	$145189	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,765	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(314)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$154641	$154641	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	9,387	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(465)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$178150	$179200	HSIP (23 U.S.C. 148)	Rural Major Collector	5,161	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(581)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$341114	$341114	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	16,848	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(042)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$188897	$188897	HSIP (23 U.S.C. 148)	Urban Minor Arterial	10,370	35	City of Municipal Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(235)HESG	Intersection traffic control	Intersection traffic control - other	1	Intersections	$138873	$138873	HSIP (23 U.S.C. 148)	Rural Minor Arterial	18,721	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(651)HESG	Intersection traffic control	Intersection traffic control - other	1	Intersections	$218495	$218495	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	176,455	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(891)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$164000	$164000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	13,084	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														or transverse rumble strips.
STP 1702(023)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$562624	$562624	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	3,189	30	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(092)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$113056	$113056	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,821	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(091)HES	Intersection traffic control	Intersection traffic control - other	1	Intersections	$162466	$162466	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,185	45	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or tranverse rumble strips
STP 1602(245)HES	Roadway delineation	Roadway delineation - other	0.001	Miles	$16803	$16803	HSIP (23 U.S.C. 148)	Rural Local Road or Street	31,294	45	County Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 2017(895)HES	Roadway delineation	Roadway delineation - other	0.001	Miles	$132962	$132962	HSIP (23 U.S.C. 148)	Rural Local Road or Street	7,208	45	County Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														dhigh friction surface treatment.
STP 2017(146)HESG	Intersection traffic control	Intersection flashers - add overhead (continuous)	1	Intersections	$58316	$58316	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,650	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(548)HES	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	1	Intersections	$148614	$148614	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	32,148	70	State Highway Agency	Spot	Intersections	Add more turn bays and acceleration lanes on high speed rural roads.
STP 2017(549)HES	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	1	Intersections	$137911	$137911	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	32,078	70	State Highway Agency	Spot	Intersections	Add more turn bays and acceleration lanes on high speed rural roads.
STP 2017(607)HES	Roadway	Rumble strips - center	1.325	Miles	$4426	$4426	HSIP (23 U.S.C. 148)	Rural Major Collector	10,650	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(621)HES	Roadway	Rumble strips - center	1.109	Miles	$3986	$3986	HSIP (23 U.S.C. 148)	Rural Minor Arterial	689	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(624)HES	Roadway	Rumble strips - center	1.648	Miles	$2042	$2042	HSIP (23 U.S.C. 148)	Rural Major Collector	21,310	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(611)HES	Roadway	Rumble strips - center	3.991	Miles	$11319	$11319	HSIP (23 U.S.C. 148)	Rural Major Collector	1,327	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(807)HES	Roadway	Rumble strips - center	3.16	Miles	$8062	$8062	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,686	40	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(802)HES & STP 2017(805)HES	Roadway	Rumble strips - center	10.251	Miles	$21453	$21453	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,026	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(617)HES	Roadway	Rumble strips - center	14.345	Miles	$27264	$27264	HSIP (23 U.S.C. 148)	Rural Minor Collector	522	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(618)HES	Roadway	Rumble strips - center	9.39	Miles	$20907	$20907	HSIP (23 U.S.C. 148)	Rural Major Collector	2,668	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(809)HES	Roadway	Rumble strips - center	9.367	Miles	$23664	$23664	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,596	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(616)HES	Roadway	Rumble strips - center	25.062	Miles	$104199	$104199	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,344	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(619)HES	Roadway	Rumble strips - center	6.123	Miles	$19099	$19099	HSIP (23 U.S.C. 148)	Rural Major Collector	5,253	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(623)HES	Roadway	Rumble strips - center	5.349	Miles	$14909	$14909	HSIP (23 U.S.C. 148)	Rural Major Collector	881	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(810)HES	Roadway	Rumble strips - center	4.259	Miles	$7030	$7030	HSIP (23 U.S.C. 148)	Rural Major Collector	2,081	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(610)HES	Roadway	Rumble strips - center	3.941	Miles	$10195	$10195	HSIP (23 U.S.C. 148)	Rural Major Collector	632	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(806)HES	Roadway	Rumble strips - center	4.06	Miles	$9197	$9197	HSIP (23 U.S.C. 148)	Rural Major Collector	709	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(811)HES	Roadway	Rumble strips - center	4.159	Miles	$7193	$7193	HSIP (23 U.S.C. 148)	Rural Major Collector	2,081	45	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(620)HES	Roadway	Rumble strips - center	4.299	Miles	$8201	$8201	HSIP (23 U.S.C. 148)	Rural Major Collector	331	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(622)HES	Roadway	Rumble strips - center	2.338	Miles	$7830	$7830	HSIP (23 U.S.C. 148)	Rural Major Collector	3,171	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(612)HES	Roadway	Rumble strips - center	4.245	Miles	$14085	$14085	HSIP (23 U.S.C. 148)	Rural Major Collector	188	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(613)HES	Roadway	Rumble strips - center	7.852	Miles	$20067	$20067	HSIP (23 U.S.C. 148)	Rural Major Collector	3,034	45	State Highway Agency	Spot	Lane Departure	Increase the installation of

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														centerline rumble strips.
STP 2017(625)HES	Roadway	Rumble strips - center	3.41	Miles	$4963	$4963	HSIP (23 U.S.C. 148)	Rural Minor Collector	299	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(813)HES	Roadway	Rumble strips - center	1.997	Miles	$5573	$5573	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,722	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(609)HES	Roadway	Rumble strips - center	3.183	Miles	$4756	$4756	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,826	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(614)HES	Roadway	Rumble strips - center	5.854	Miles	$13750	$13750	HSIP (23 U.S.C. 148)	Rural Major Collector	1,916	50	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(608)HES	Roadway	Rumble strips - center	7.4	Miles	$42862	$42862	HSIP (23 U.S.C. 148)	Rural Major Collector	1,538	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(808)HES	Roadway	Rumble strips - center	8.844	Miles	$35026	$35026	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,006	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(055)HESG	Roadway	Rumble strips - center	8.735	Miles	$19646	$19646	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,527	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(048)HESG & STP 1702(049)HESG	Roadway	Rumble strips - center	10.92	Miles	$58654	$58654	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	9,562	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(132)HESG, STP 2017(133)HESG & STP 2017(130)HESG	Roadway	Rumble strips - center	34.004	Miles	$131204	$131204	HSIP (23 U.S.C. 148)	Rural Major Collector	233	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(129)HESG	Roadway	Rumble strips - center	12.575	Miles	$48389	$48389	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,105	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(128)HESG	Roadway	Rumble strips - center	12.786	Miles	$56104	$56104	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,668	35	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(119)HES	Roadway	Rumble strips - center	14.045	Miles	$72542	$72542	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	2,437	60	State Highway Agency	Spot	Lane Departure	Increase the installation of

													RELATIONSHIP TO SHSP	
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	EMPHASIS AREA	STRATEGY
								Freeways and Expressways						centerline rumble strips.
STP 1702(102)HES	Roadway	Rumble strips - center	12.538	Miles	$73182	$73182	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,550	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(015)HES	Roadway	Rumble strips - center	5.214	Miles	$37288	$37288	HSIP (23 U.S.C. 148)	Urban Major Collector	19,103	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(013)HES	Roadway	Rumble strips - center	13.337	Miles	$116272	$116272	HSIP (23 U.S.C. 148)	Rural Major Collector	1,904	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(600)HES	Roadway	Rumble strips - center	5.516	Miles	$53000	$78710	HSIP (23 U.S.C. 148)	Rural Major Collector	125	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(012)HES	Roadway	Rumble strips - center	6.158	Miles	$32503	$32503	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	9,926	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(165)HES, STP 2017(166)HES & STP 2017(167)HES	Roadway	Rumble strips - center	17.066	Miles	$41366	$41366	HSIP (23 U.S.C. 148)	Rural Major Collector	3,416	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(014)HES	Roadway	Rumble strips - center	1.423	Miles	$9618	$9618	HSIP (23 U.S.C. 148)	Rural Major Collector	5,845	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(620)HESG	Roadway	Rumble strips - center	11.24	Miles	$22639	$22639	HSIP (23 U.S.C. 148)	Rural Minor Arterial	747	75	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(362)HESG	Roadway	Rumble strips - edge or shoulder	14.548	Miles	$46799	$46799	HSIP (23 U.S.C. 148)	Rural Major Collector	594	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(365)HESG	Roadway	Rumble strips - edge or shoulder	10.323	Miles	$43271	$43271	HSIP (23 U.S.C. 148)	Rural Major Collector	1,867	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(366)HESG	Roadway	Rumble strips - edge or shoulder	11.347	Miles	$41783	$41783	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,044	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(175)HES	Roadway	Rumble strips - edge or shoulder	12.579	Miles	$28994	$28994	HSIP (23 U.S.C. 148)	Rural Major Collector	7,457	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														and centerline rumble strips.
STP 1702(368)HESG	Roadway	Rumble strips - edge or shoulder	5.654	Miles	$26959	$26959	HSIP (23 U.S.C. 148)	Rural Major Collector	1,458	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(098)HES	Roadway	Rumble strips - edge or shoulder	12.63	Miles	$59049	$59049	HSIP (23 U.S.C. 148)	Urban Minor Arterial	3,655	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(108)HES	Roadway	Rumble strips - edge or shoulder	15.683	Miles	$90126	$90126	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,621	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(100)HES	Roadway	Rumble strips - edge or shoulder	13.039	Miles	$89908	$89908	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	6,523	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(101)HES	Roadway	Rumble strips - edge or shoulder	5.953	Miles	$46619	$46619	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	22,285	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(099)HES	Roadway	Rumble strips - edge or shoulder	9.67	Miles	$47687	$47687	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,274	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(113)HES	Roadway	Rumble strips - edge or shoulder	10.131	Miles	$56812	$56812	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,321	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(170)HES & STP 2017(171)HES	Roadway	Rumble strips - edge or shoulder	10.353	Miles	$9834	$9834	HSIP (23 U.S.C. 148)	Rural Major Collector	4,438	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(169)HES	Roadway	Rumble strips - edge or shoulder	3.742	Miles	$3485	$3485	HSIP (23 U.S.C. 148)	Rural Major Collector	4,855	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(164)HES	Roadway	Rumble strips - edge or shoulder	4.896	Miles	$3648	$3648	HSIP (23 U.S.C. 148)	Rural Minor Arterial	10,451	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(615)HES	Roadway	Rumble strips - edge or shoulder	5.499	Miles	$17745	$17745	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	7,371	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(047)HESG	Roadway	Rumble strips - edge or shoulder	9.6	Miles	$27315	$27315	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	4,643	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(056)HESG & STP 1702(057)HESG	Roadway	Rumble strips - edge or shoulder	17.36	Miles	$54243	$54243	HSIP (23 U.S.C. 148)	Urban Minor Arterial	6,940	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(053)HESG & STP 1702(054)HESG	Roadway	Rumble strips - edge or shoulder	6.153	Miles	$18718	$18718	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,059	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(018)HESG, STP 1702(050)HESG, STP 1702(051)HESG & STP 1702(052)HESG	Roadway	Rumble strips - edge or shoulder	33.735	Miles	$78470	$78470	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	3,636	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(735)HESG	Roadway	Rumble strips - edge or shoulder	9.534	Miles	$44153	$44153	HSIP (23 U.S.C. 148)	Urban Major Collector	1,444	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(733)HESG	Roadway	Rumble strips - edge or shoulder	7.697	Miles	$37355	$37355	HSIP (23 U.S.C. 148)	Urban Minor Arterial	5,040	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(602)HESG	Roadway	Rumble strips - edge or shoulder	12.393	Miles	$95286	$95286	HSIP (23 U.S.C. 148)	Rural Major Collector	2,554	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(603)HESG	Roadway	Rumble strips - edge or shoulder	11.727	Miles	$42849	$42849	HSIP (23 U.S.C. 148)	Rural Major Collector	2,641	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(755)HESG	Roadway	Rumble strips - edge or shoulder	17.669	Miles	$64477	$64477	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,409	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(615)HESG	Roadway	Rumble strips - edge or shoulder	22.324	Miles	$81418	$81418	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,960	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(613)HESG	Roadway	Rumble strips - edge or shoulder	24.34	Miles	$88755	$88755	HSIP (23 U.S.C. 148)	Rural Minor Arterial	871	30	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(614)HESG & STP 1702(616)HESG	Roadway	Rumble strips - edge or shoulder	29.169	Miles	$107593	$107593	HSIP (23 U.S.C. 148)	Rural Minor Arterial	647	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(617)HESG	Roadway	Rumble strips - edge or shoulder	18.026	Miles	$65777	$65777	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,798	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(610)HESG	Roadway	Rumble strips - edge or shoulder	25.168	Miles	$91771	$91771	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,752	35	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(611)HESG	Roadway	Rumble strips - edge or shoulder	13.87	Miles	$50652	$50652	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,543	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(602)HESG	Roadway	Rumble strips - edge or shoulder	5.423	Miles	$19909	$19909	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,456	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(609)HESG	Roadway	Rumble strips - edge or shoulder	11.712	Miles	$42796	$42796	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,252	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(095)HES	Roadway	Rumble strips - edge or shoulder	11.849	Miles	$60273	$60273	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	5,402	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(103)HES	Roadway	Rumble strips - edge or shoulder	11.76	Miles	$61644	$61644	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,519	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(106)HES	Roadway	Rumble strips - edge or shoulder	11.771	Miles	$67120	$67120	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	3,264	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(109)HES	Roadway	Rumble strips - edge or shoulder	13.415	Miles	$79947	$79947	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,002	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(121)HES	Roadway	Rumble strips - edge or shoulder	4.279	Miles	$26334	$26334	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	22,086	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(692)HESG	Roadway	Rumble strips - edge or shoulder	13.638	Miles	$149826	$149826	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	3,613	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(693)HES	Roadway	Rumble strips - edge or shoulder	25.136	Miles	$293231	$293231	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	3,686	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(790)HES	Roadway	Rumble strips - edge or shoulder	9.453	Miles	$123938	$123938	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	3,695	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(172)HES	Roadway	Rumble strips - edge or shoulder	3.147	Miles	$9294	$9294	HSIP (23 U.S.C. 148)	Rural Major Collector	2,633	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														and centerline rumble strips.
STP 1702(612)HESG	Roadway	Rumble strips - edge or shoulder	20.405	Miles	$74434	$74434	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,501	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(754)HESG	Roadway	Rumble strips - edge or shoulder	10.017	Miles	$36629	$36629	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,092	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(606)HESG	Roadway	Rumble strips - edge or shoulder	5.605	Miles	$20570	$20570	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,393	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(604)HESG	Roadway	Rumble strips - edge or shoulder	15.542	Miles	$56737	$56737	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,627	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(953)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	14.572	Miles	$1416535	$1416535	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	2,376	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(915)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$41204	$41204	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	17,271	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(472)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$78553	$78553	HSIP (23 U.S.C. 148)	Rural Major Collector	4,976	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(150)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$61506	$61506	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	4,611	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(528)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$69360	$69360	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,042	60	State Highway Agency	Spot	Intersections	Enhance advanced

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(536)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$62117	$62117	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,545	60	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(722)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$145450	$145450	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,067	55	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(538)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$62687	$62687	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	2,135	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(539)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$52138	$52138	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	9,299	50	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1602(531)HES	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	$75544	$75544	HSIP (23 U.S.C. 148)	Rural Major Collector	393	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(508)HESG	Shoulder treatments	Widen shoulder - paved or other	1.411	Miles	$474176	$474176	HSIP (23 U.S.C. 148)	Rural Major Collector	1,289	45	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of

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														the road during road departures.
STP 2017(518)HESG	Roadway	Rumble strips - center	12.175	Miles	$51387	$81223	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,809	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(521)HESG	Roadway	Rumble strips - center	11.983	Miles	$64032	$89045	HSIP (23 U.S.C. 148)	Rural Major Collector	3,162	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(523)HESG	Roadway	Rumble strips - center	9.384	Miles	$58753	$73120	HSIP (23 U.S.C. 148)	Rural Major Collector	1,099	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(713)HESG	Roadway	Rumble strips - center	5.648	Miles	$39303	$49218	HSIP (23 U.S.C. 148)	Rural Major Collector	216	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(718)HESG	Roadway	Rumble strips - center	4.26	Miles	$22814	$22814	HSIP (23 U.S.C. 148)	Rural Major Collector	1,437	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(343)HESG	Roadway	Rumble strips - center	9.563	Miles	$46588	$46588	HSIP (23 U.S.C. 148)	Rural Major Collector	1,156	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(705)HESG	Roadway	Rumble strips - center	5.353	Miles	$30581	$30581	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,103	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(061)HESG & STP 1702(070)HESG	Roadway	Rumble strips - center	15.043	Miles	$39537	$39537	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,103	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(071)HESG	Roadway	Rumble strips - center	9.612	Miles	$11422	$11422	HSIP (23 U.S.C. 148)	Rural Major Collector	897	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(074)HESG & STP 1702(081)HESG	Roadway	Rumble strips - center	19.813	Miles	$67936	$67936	HSIP (23 U.S.C. 148)	Rural Major Collector	4,754	50	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(066)HESG	Roadway	Rumble strips - center	17.033	Miles	$58652	$58652	HSIP (23 U.S.C. 148)	Rural Minor Collector	7,437	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(269)HESG	Roadway	Rumble strips - center	5.644	Miles	$33254	$33254	HSIP (23 U.S.C. 148)	Rural Major Collector	2,482	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.

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STP 1702(270)HESG	Roadway	Rumble strips - center	7.722	Miles	$45926	$45926	HSIP (23 U.S.C. 148)	Rural Major Collector	1,383	50	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(276)HESG	Roadway	Rumble strips - center	7.515	Miles	$42972	$42972	HSIP (23 U.S.C. 148)	Rural Major Collector	1,890	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(297)HESG	Roadway	Rumble strips - center	5.115	Miles	$27156	$27156	HSIP (23 U.S.C. 148)	Rural Major Collector	2,455	35	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1702(295)HESG	Roadway	Rumble strips - center	6.025	Miles	$34563	$34563	HSIP (23 U.S.C. 148)	Rural Major Collector	520	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(524)HESG	Roadway	Rumble strips - center	5.03	Miles	$24203	$35530	HSIP (23 U.S.C. 148)	Rural Major Collector	1,069	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(525)HESG & STP 2017(526)HESG	Roadway	Rumble strips - center	10.643	Miles	$63561	$83211	HSIP (23 U.S.C. 148)	Rural Major Collector	597	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(520)HESG	Roadway	Rumble strips - center	7.361	Miles	$39647	$55237	HSIP (23 U.S.C. 148)	Rural Major Collector	2,783	45	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(530)HESG & STP 2017(531)HESG	Roadway	Rumble strips - center	16.393	Miles	$90405	$124128	HSIP (23 U.S.C. 148)	Rural Major Collector	1,576	60	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(532)HESG	Roadway	Rumble strips - center	6.669	Miles	$31628	$47154	HSIP (23 U.S.C. 148)	Rural Major Collector	1,111	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(517)HESG	Roadway	Rumble strips - center	6.744	Miles	$46757	$46757	HSIP (23 U.S.C. 148)	Rural Major Collector	4,908	70	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(519)HESG	Roadway	Rumble strips - center	9.501	Miles	$49347	$69822	HSIP (23 U.S.C. 148)	Rural Major Collector	1,695	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(529)HESG	Roadway	Rumble strips - center	1.657	Miles	$7143	$11352	HSIP (23 U.S.C. 148)	Rural Major Collector	664	65	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 2017(543)HESG, STP	Roadway	Rumble strips - center	14.508	Miles	$90085	$90085	HSIP (23 U.S.C. 148)	Rural Major Collector	526	55	State Highway Agency	Spot	Lane Departure	Increase the installation of

													RELATIONSHIP TO SHSP	
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2017(544)HESG & STP 2017(545)HESG														centerline rumble strips.
STP 2017(064)HESG	Roadway	Rumble strips - edge or shoulder	4.693	Miles	$69010	$69010	HSIP (23 U.S.C. 148)	Rural Major Collector	331	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(063)HESG	Roadway	Rumble strips - edge or shoulder	3.629	Miles	$49903	$49903	HSIP (23 U.S.C. 148)	Rural Major Collector	395	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(372)HESG	Roadway	Rumble strips - edge or shoulder	7.545	Miles	$48757	$48757	HSIP (23 U.S.C. 148)	Rural Major Collector	555	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(378)HESG	Roadway	Rumble strips - edge or shoulder	9.346	Miles	$57793	$57793	HSIP (23 U.S.C. 148)	Rural Major Collector	1,423	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(374)HESG	Roadway	Rumble strips - edge or shoulder	5.019	Miles	$31420	$31420	HSIP (23 U.S.C. 148)	Rural Major Collector	1,011	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(373)HESG	Roadway	Rumble strips - edge or shoulder	5.528	Miles	$37833	$37833	HSIP (23 U.S.C. 148)	Rural Major Collector	709	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(336)HESG, STP 2017(337)HESG & STP 2017(340)HESG	Roadway	Rumble strips - edge or shoulder	14.487	Miles	$130612	$130612	HSIP (23 U.S.C. 148)	Rural Major Collector	900	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(339)HESG	Roadway	Rumble strips - edge or shoulder	5.457	Miles	$79027	$79027	HSIP (23 U.S.C. 148)	Rural Major Collector	681	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(070)HESG	Roadway	Rumble strips - edge or shoulder	8.195	Miles	$85632	$85632	HSIP (23 U.S.C. 148)	Rural Major Collector	1,411	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(342)HESG	Roadway	Rumble strips - edge or shoulder	8.269	Miles	$106236	$106236	HSIP (23 U.S.C. 148)	Rural Major Collector	1,558	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(071)HESG	Roadway	Rumble strips - edge or shoulder	6.548	Miles	$87614	$87614	HSIP (23 U.S.C. 148)	Rural Major Collector	211	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(708)HESG	Roadway	Rumble strips - edge or shoulder	4.572	Miles	$33313	$37506	HSIP (23 U.S.C. 148)	Rural Major Collector	242	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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														and centerline rumble strips.
STP 2017(076)HESG	Roadway	Rumble strips - edge or shoulder	19.093	Miles	$208394	$208394	HSIP (23 U.S.C. 148)	Rural Major Collector	759	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(075)HESG & STP 2017(077)HESG	Roadway	Rumble strips - edge or shoulder	16.068	Miles	$160626	$160626	HSIP (23 U.S.C. 148)	Rural Major Collector	565	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(055)HESG & STP 2017(056)HESG	Roadway	Rumble strips - edge or shoulder	9.577	Miles	$126242	$126242	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,574	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(710)HESG	Roadway	Rumble strips - edge or shoulder	6.253	Miles	$60721	$60721	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,637	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(709)HESG	Roadway	Rumble strips - edge or shoulder	6.437	Miles	$59562	$78072	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,335	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(053)HESG	Roadway	Rumble strips - edge or shoulder	7.708	Miles	$104675	$104675	HSIP (23 U.S.C. 148)	Rural Major Collector	2,291	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(645)HES	Roadway	Rumble strips - edge or shoulder	11.13	Miles	$113040	$113040	HSIP (23 U.S.C. 148)	Rural Major Collector	878	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(078)HESG	Roadway	Rumble strips - edge or shoulder	6.167	Miles	$62741	$62741	HSIP (23 U.S.C. 148)	Rural Major Collector	431	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(865)HES	Roadway	Rumble strips - edge or shoulder	10.024	Miles	$35545	$35545	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	3,882	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(869)HES	Roadway	Rumble strips - edge or shoulder	17.174	Miles	$60839	$60839	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	5,404	40	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(866)HES	Roadway	Rumble strips - edge or shoulder	15.15	Miles	$53678	$53678	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	11,081	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(867)HES	Roadway	Rumble strips - edge or shoulder	10.354	Miles	$36713	$36713	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	3,461	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(868)HES	Roadway	Rumble strips - edge or shoulder	15.305	Miles	$54227	$54227	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	3,421	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(252)HESG	Roadway	Rumble strips - edge or shoulder	6.085	Miles	$35525	$35525	HSIP (23 U.S.C. 148)	Rural Major Collector	784	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(281)HESG	Roadway	Rumble strips - edge or shoulder	7.176	Miles	$38656	$38656	HSIP (23 U.S.C. 148)	Rural Minor Collector	63	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(316)HES	Roadway	Rumble strips - edge or shoulder	6.881	Miles	$57363	$57363	HSIP (23 U.S.C. 148)	Rural Major Collector	268	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(288)HESG	Roadway	Rumble strips - edge or shoulder	4.518	Miles	$27492	$27492	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,179	35	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(289)HESG	Roadway	Rumble strips - edge or shoulder	7.831	Miles	$45405	$45405	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,766	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(298)HESG	Roadway	Rumble strips - edge or shoulder	14.859	Miles	$79313	$79313	HSIP (23 U.S.C. 148)	Rural Major Collector	1,091	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(287)HESG	Roadway	Rumble strips - edge or shoulder	10.916	Miles	$62497	$62497	HSIP (23 U.S.C. 148)	Rural Minor Arterial	586	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(294)HESG	Roadway	Rumble strips - edge or shoulder	6.706	Miles	$33179	$33179	HSIP (23 U.S.C. 148)	Rural Major Collector	1,217	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(300)HESG	Roadway	Rumble strips - edge or shoulder	7.289	Miles	$40354	$40354	HSIP (23 U.S.C. 148)	Rural Major Collector	863	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(299)HESG	Roadway	Rumble strips - edge or shoulder	5.25	Miles	$28332	$28332	HSIP (23 U.S.C. 148)	Rural Major Collector	743	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(302)HESG	Roadway	Rumble strips - edge or shoulder	8.667	Miles	$44306	$44306	HSIP (23 U.S.C. 148)	Rural Major Collector	2,311	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(284)HESG	Roadway	Rumble strips - edge or shoulder	6.98	Miles	$39953	$39953	HSIP (23 U.S.C. 148)	Rural Major Collector	674	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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														and centerline rumble strips.
STP 1702(350)HES	Roadway	Rumble strips - edge or shoulder	4.79	Miles	$26324	$26324	HSIP (23 U.S.C. 148)	Rural Minor Collector	878	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(257)HESG	Roadway	Rumble strips - edge or shoulder	4.43	Miles	$28316	$28316	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,939	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(261)HESG	Roadway	Rumble strips - edge or shoulder	14.646	Miles	$79072	$79072	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,701	40	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(267)HESG	Roadway	Rumble strips - edge or shoulder	9.598	Miles	$58021	$58021	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,099	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(272)HESG	Roadway	Rumble strips - edge or shoulder	17.232	Miles	$107286	$107286	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,483	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(168)HES	Roadway	Rumble strips - edge or shoulder	5.433	Miles	$33336	$33336	HSIP (23 U.S.C. 148)	Rural Major Collector	4,673	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(546)HESG	Roadway	Rumble strips - edge or shoulder	9.586	Miles	$102398	$102398	HSIP (23 U.S.C. 148)	Rural Major Collector	955	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(719)HESG	Roadway	Rumble strips - edge or shoulder	4.297	Miles	$32597	$32597	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,140	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(706)HESG	Roadway	Rumble strips - edge or shoulder	5.363	Miles	$57564	$57564	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	4,099	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(039)HES	Roadway	Rumble strips - edge or shoulder	15.188	Miles	$311698	$311698	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	46,368	45	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(198)HESG	Roadway	Rumble strips - edge or shoulder	12.122	Miles	$88210	$88210	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	6,062	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(221)HESG & STP 1702(222)HESG	Roadway	Rumble strips - edge or shoulder	26.424	Miles	$192539	$192539	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	21,366	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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STP 1702(370)HESG & STP 1702(371)HESG	Roadway	Rumble strips - edge or shoulder	12.984	Miles	$80960	$80960	HSIP (23 U.S.C. 148)	Rural Major Collector	576	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(724)HESG	Roadway	Rumble strips - edge or shoulder	3.386	Miles	$65669	$65669	HSIP (23 U.S.C. 148)	Rural Major Collector	336	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(065)HESG	Roadway	Rumble strips - edge or shoulder	5.102	Miles	$105600	$105600	HSIP (23 U.S.C. 148)	Rural Major Collector	2,299	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(067)HESG & STP 2017(068)HESG	Roadway	Rumble strips - edge or shoulder	10.801	Miles	$143297	$143297	HSIP (23 U.S.C. 148)	Rural Major Collector	2,722	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(069)HESG	Roadway	Rumble strips - edge or shoulder	2.092	Miles	$32855	$32855	HSIP (23 U.S.C. 148)	Rural Major Collector	819	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(715)HESG	Roadway	Rumble strips - edge or shoulder	3.449	Miles	$32280	$32280	HSIP (23 U.S.C. 148)	Rural Major Collector	1,348	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(712)HESG	Roadway	Rumble strips - edge or shoulder	7.013	Miles	$111832	$111832	HSIP (23 U.S.C. 148)	Rural Major Collector	720	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(059)HESG	Roadway	Rumble strips - edge or shoulder	4.571	Miles	$61017	$61017	HSIP (23 U.S.C. 148)	Rural Major Collector	632	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(058)HESG	Roadway	Rumble strips - edge or shoulder	8.013	Miles	$143763	$143763	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,099	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(060)HESG	Roadway	Rumble strips - edge or shoulder	6.698	Miles	$124218	$124218	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,849	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(022)HES	Roadway	Rumble strips - edge or shoulder	8.301	Miles	$85482	$85482	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,742	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(072)HESG & STP 1702(073)HESG	Roadway	Rumble strips - edge or shoulder	16.306	Miles	$98467	$98467	HSIP (23 U.S.C. 148)	Rural Major Collector	462	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(065)HESG	Roadway	Rumble strips - edge or shoulder	16.614	Miles	$78502	$78502	HSIP (23 U.S.C. 148)	Rural Minor Collector	958	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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														and centerline rumble strips.
STP 1702(067)HESG, STP 1702(068)HESG & STP 1702(082)HESG	Roadway	Rumble strips - edge or shoulder	20.503	Miles	$125285	$125285	HSIP (23 U.S.C. 148)	Rural Major Collector	1,193	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(058)HESG, STP 1702(059)HESG & STP 1702(060)HESG	Roadway	Rumble strips - edge or shoulder	25.702	Miles	$155707	$155707	HSIP (23 U.S.C. 148)	Rural Major Collector	643	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(075)HESG	Roadway	Rumble strips - edge or shoulder	13.952	Miles	$86684	$86684	HSIP (23 U.S.C. 148)	Rural Major Collector	373	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(076)HESG	Roadway	Rumble strips - edge or shoulder	15.947	Miles	$102024	$102024	HSIP (23 U.S.C. 148)	Rural Major Collector	740	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(077)HESG	Roadway	Rumble strips - edge or shoulder	7.889	Miles	$43931	$43931	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	1,185	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(078)HESG	Roadway	Rumble strips - edge or shoulder	4.85	Miles	$33634	$33634	HSIP (23 U.S.C. 148)	Rural Major Collector	609	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(080)HESG	Roadway	Rumble strips - edge or shoulder	10.733	Miles	$35002	$35002	HSIP (23 U.S.C. 148)	Rural Major Collector	1,045	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(079)HESG	Roadway	Rumble strips - edge or shoulder	14.402	Miles	$95681	$95681	HSIP (23 U.S.C. 148)	Rural Major Collector	2,253	30	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(069)HESG	Roadway	Rumble strips - edge or shoulder	16.266	Miles	$99359	$99359	HSIP (23 U.S.C. 148)	Rural Major Collector	304	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(864)HES	Roadway	Rumble strips - edge or shoulder	5.343	Miles	$44995	$44995	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,646	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(251)HESG	Roadway	Rumble strips - edge or shoulder	4.575	Miles	$31864	$31864	HSIP (23 U.S.C. 148)	Rural Major Collector	96	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(268)HESG	Roadway	Rumble strips - edge or shoulder	5.598	Miles	$42469	$42469	HSIP (23 U.S.C. 148)	Rural Major Collector	1,033	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(290)HESG	Roadway	Rumble strips - edge or shoulder	11.149	Miles	$79723	$79723	HSIP (23 U.S.C. 148)	Rural Major Collector	265	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(279)HESG	Roadway	Rumble strips - edge or shoulder	10.069	Miles	$72917	$72917	HSIP (23 U.S.C. 148)	Rural Major Collector	1,035	40	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(282)HESG	Roadway	Rumble strips - edge or shoulder	13.225	Miles	$90578	$90578	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,082	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(291)HESG	Roadway	Rumble strips - edge or shoulder	11.146	Miles	$77170	$77170	HSIP (23 U.S.C. 148)	Rural Minor Collector	411	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(278)HESG	Roadway	Rumble strips - edge or shoulder	5.907	Miles	$41033	$41033	HSIP (23 U.S.C. 148)	Rural Major Collector	771	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(293)HESG	Roadway	Rumble strips - edge or shoulder	18.045	Miles	$123792	$123792	HSIP (23 U.S.C. 148)	Rural Major Collector	1,774	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(296)HESG	Roadway	Rumble strips - edge or shoulder	9.271	Miles	$75152	$75152	HSIP (23 U.S.C. 148)	Rural Major Collector	1,114	35	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(301)HESG	Roadway	Rumble strips - edge or shoulder	7.957	Miles	$54385	$54385	HSIP (23 U.S.C. 148)	Rural Major Collector	2,416	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(351)HES	Roadway	Rumble strips - edge or shoulder	1.751	Miles	$11449	$11449	HSIP (23 U.S.C. 148)	Rural Major Collector	891	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(264)HESG	Roadway	Rumble strips - edge or shoulder	11.36	Miles	$82186	$82186	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,799	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(275)HESG	Roadway	Rumble strips - edge or shoulder	10.514	Miles	$80840	$80840	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,936	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(249)HESG	Roadway	Rumble strips - edge or shoulder	8.9	Miles	$105839	$105839	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,622	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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														and centerline rumble strips.
STP 1702(255)HESG	Roadway	Rumble strips - edge or shoulder	15.741	Miles	$134412	$134412	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	2,794	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(256)HESG	Roadway	Rumble strips - edge or shoulder	16.814	Miles	$119802	$119802	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,069	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(258)HESG	Roadway	Rumble strips - edge or shoulder	19.015	Miles	$144693	$144693	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,939	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(259)HESG	Roadway	Rumble strips - edge or shoulder	5.793	Miles	$53517	$53517	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,979	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(260)HESG	Roadway	Rumble strips - edge or shoulder	15.898	Miles	$119339	$119339	HSIP (23 U.S.C. 148)	Rural Major Collector	2,294	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(250)HESG	Roadway	Rumble strips - edge or shoulder	7.966	Miles	$63738	$63738	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,336	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(262)HESG	Roadway	Rumble strips - edge or shoulder	6.857	Miles	$44781	$44781	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,187	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(263)HESG	Roadway	Rumble strips - edge or shoulder	14.973	Miles	$102786	$102786	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,892	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(271)HESG	Roadway	Rumble strips - edge or shoulder	9.838	Miles	$74624	$74624	HSIP (23 U.S.C. 148)	Rural Major Collector	763	35	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(283)HESG	Roadway	Rumble strips - edge or shoulder	12.423	Miles	$79915	$79915	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	4,104	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(266)HESG	Roadway	Rumble strips - edge or shoulder	9.196	Miles	$61717	$61717	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,607	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(497)HESG	Roadway	Rumble strips - edge or shoulder	13.574	Miles	$52778	$52778	HSIP (23 U.S.C. 148)	Rural Major Collector	5,035	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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STP 1702(227)HESG, STP 1702(228)HESG, STP 1702(229)HESG & STP 1702(230)HESG	Roadway	Rumble strips - edge or shoulder	43.903	Miles	$245919	$245919	HSIP (23 U.S.C. 148)	Rural Major Collector	1,332	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(226)HESG	Roadway	Rumble strips - edge or shoulder	13.634	Miles	$83132	$83132	HSIP (23 U.S.C. 148)	Rural Major Collector	4,363	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(202)HESG	Roadway	Rumble strips - edge or shoulder	23.033	Miles	$108653	$108653	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,192	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(205)HESG	Roadway	Rumble strips - edge or shoulder	7.953	Miles	$43762	$43762	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	5,498	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(206)HESG	Roadway	Rumble strips - edge or shoulder	13.759	Miles	$80713	$80713	HSIP (23 U.S.C. 148)	Rural Major Collector	3,776	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(203)HESG & STP 1702(204)HESG	Roadway	Rumble strips - edge or shoulder	13.18	Miles	$104529	$104529	HSIP (23 U.S.C. 148)	Rural Minor Arterial	12,217	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(199)HESG, STP 1702(200)HESG, STP 1702(201)HESG & STP 1702(094)HESG	Roadway	Rumble strips - edge or shoulder	31.816	Miles	$164016	$164016	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,724	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(215)HESG & STP 1702(216)HESG	Roadway	Rumble strips - edge or shoulder	27.519	Miles	$144590	$144590	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,311	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(217)HESG, STP 1702(218)HESG, STP 1702(219)HESG & STP 1702(220)HESG	Roadway	Rumble strips - edge or shoulder	49.233	Miles	$267833	$267833	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	6,838	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(223)HESG, STP 1702(224)HESG & STP 1702(225)HESG	Roadway	Rumble strips - edge or shoulder	52.874	Miles	$329273	$329273	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	4,381	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(233)HESG & STP 1702(234)HESG	Roadway	Rumble strips - edge or shoulder	19.914	Miles	$152406	$152406	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	8,528	30	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(367)HESG	Roadway	Rumble strips - edge or shoulder	4.377	Miles	$20971	$20971	HSIP (23 U.S.C. 148)	Rural Major Collector	5,750	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(169)HES	Roadway	Rumble strips - edge or shoulder	10.601	Miles	$59270	$59270	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,062	35	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(168)HES	Roadway	Rumble strips - edge or shoulder	15.876	Miles	$117666	$117666	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	2,002	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(157)HES	Roadway	Rumble strips - edge or shoulder	15.685	Miles	$59280	$59280	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	4,771	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(170)HES	Roadway	Rumble strips - edge or shoulder	10.769	Miles	$94654	$94654	HSIP (23 U.S.C. 148)	Rural Minor Arterial	513	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(171)HES	Roadway	Rumble strips - edge or shoulder	8.795	Miles	$66860	$66860	HSIP (23 U.S.C. 148)	Rural Minor Arterial	608	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(698)HES	Roadway	Rumble strips - edge or shoulder	14.904	Miles	$131757	$131757	HSIP (23 U.S.C. 148)	Urban Major Collector	183	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(699)HES	Roadway	Rumble strips - edge or shoulder	7.35	Miles	$63192	$63192	HSIP (23 U.S.C. 148)	Urban Major Collector	747	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(696)HES	Roadway	Rumble strips - edge or shoulder	7.562	Miles	$47881	$47881	HSIP (23 U.S.C. 148)	Urban Major Collector	1,755	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(962)HES	Shoulder treatments	Widen shoulder - paved or other	0.7	Miles	$328092	$328092	HSIP (23 U.S.C. 148)	Urban Minor Arterial	1,621	45	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 1602(264)HES	Shoulder treatments	Widen shoulder - paved or other	11.249	Miles	$2371728	$4558633	HSIP (23 U.S.C. 148)	Rural Major Collector	2,621	70	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of

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														the road during road departures.
STP 1702(510)HES	Shoulder treatments	Widen shoulder - paved or other	1.43	Miles	$499477	$499477	HSIP (23 U.S.C. 148)	Rural Minor Collector	523	45	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 1702(742)HES	Shoulder treatments	Widen shoulder - paved or other	4.295	Miles	$995832	$995832	HSIP (23 U.S.C. 148)	Rural Major Collector	909	55	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 1702(751)HES	Shoulder treatments	Widen shoulder - paved or other	1.405	Miles	$362780	$614717	HSIP (23 U.S.C. 148)	Rural Major Collector	721	55	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2017(723)HESG	Shoulder treatments	Widen shoulder - paved or other	3.386	Miles	$617987	$617987	HSIP (23 U.S.C. 148)	Rural Major Collector	336	55	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 1702(460)HES	Shoulder treatments	Widen shoulder - paved or other	1.231	Miles	$1562281	$1562281	HSIP (23 U.S.C. 148)	Rural Major Collector	1,262	60	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2017(697)HES	Roadway	Rumble strips - center	4.634	Miles	$23662	$23662	HSIP (23 U.S.C. 148)	Rural Major Collector	641	55	State Highway Agency	Spot	Lane Departure	Increase the installation of centerline rumble strips.
STP 1602(542)HES	Roadway	Rumble strips - edge or shoulder	3.157	Miles	$39784	$39784	HSIP (23 U.S.C. 148)	Rural Major Collector	433	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(572)HES	Intersection geometry	Intersection geometrics - realignment to align offset cross streets	1	Intersections	$286003	$286003	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	21,250	55	State Highway Agency	Spot	Intersections	Add more turn bays and acceleration lanes on high speed rural roads.
STP 2017(578)HES	Lighting	Continuous roadway lighting	2.3	Miles	$788294	$788294	HSIP (23 U.S.C. 148)	Urban Local Road or Street	14,500	40	City of Municipal Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes.

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														Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(59)HES	Lighting	Continuous roadway lighting	2.379	Miles	$1197726	$1197726	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	24,529	45	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(495)HES	Lighting	Continuous roadway lighting	0.501	Miles	$84484	$84484	HSIP (23 U.S.C. 148)	Urban Minor Arterial	2,488	65	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 1702(398)HES	Lighting	Continuous roadway lighting	3.536	Miles	$451751	$451751	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	30,408	75	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 1702(399)HES	Lighting	Continuous roadway lighting	4.812	Miles	$188774	$188774	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	38,509	75	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples:

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														Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 1702(695)HESG	Lighting	Continuous roadway lighting	15.201	Miles	$689736	$689736	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	28,852	75	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(575)HES	Lighting	Continuous roadway lighting	2.493	Miles	$58000	$58000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	8,851	55	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(579)HES	Lighting	Continuous roadway lighting	6.172	Miles	$1171126	$1171126	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	26,601	65	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(580)HES	Lighting	Continuous roadway lighting	4.526	Miles	$848135	$848135	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	26,601	65	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use

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														screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(239)HES	Lighting	Continuous roadway lighting	11.696	Miles	$1189798	$1189798	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	28,014	75	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(240)HES	Lighting	Continuous roadway lighting	17.431	Miles	$651960	$651960	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	22,372	75	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 1702(652)HES	Lighting	Continuous roadway lighting	0.4	Miles	$198150	$198150	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	179,327	60	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(656)HES	Lighting	Continuous roadway lighting	0.442	Miles	$140510	$140510	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	19,048	35	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(677)HES	Lighting	Continuous roadway lighting	0.681	Miles	$86575	$86575	HSIP (23 U.S.C. 148)	Rural Major Collector	4,350	45	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(492)HES	Lighting	Continuous roadway lighting	2.116	Miles	$459135	$459135	HSIP (23 U.S.C. 148)	Rural Minor Arterial	13,597	55	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(576)HES	Lighting	Continuous roadway lighting	1.395	Miles	$50000	$50000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	15,560	55	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 1702(462)HES & STP 1702(463)HES	Lighting	Continuous roadway lighting	1.444	Miles	$241382	$241382	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	6,817	70	State Highway Agency	Spot	Roadway Departure	Identify locations subject to nighttime crashes. Examples: Develop and use screening and systemic crash

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														analysis tools to identify locations; provide additional roadway delineation; and provide roadway lighting.
STP 2017(496)HES	Lighting	Intersection lighting	1	Intersections	$22476	$22476	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,059	65	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(502)HES	Lighting	Intersection lighting	1	Intersections	$16980	$16980	HSIP (23 U.S.C. 148)	Rural Major Collector	2,273	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(486)HES	Lighting	Intersection lighting	1	Intersections	$81585	$81585	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,201	75	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 2017(489)HES	Lighting	Intersection lighting	1	Intersections	$16433	$16433	HSIP (23 U.S.C. 148)	Rural Major Collector	713	70	State Highway Agency	Spot	Intersections	Enhance advanced warning at intersections through the use of signing, flashing beacons or transverse rumble strips.
STP 1702(123)HES	Alignment	Horizontal curve realignment	2.362	Miles	$1424859	$3439171	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	15,743	75	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(120)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	2.193	Miles	$231547	$231547	HSIP (23 U.S.C. 148)	Rural Major Collector	568	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(122)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	4.305	Miles	$337101	$337101	HSIP (23 U.S.C. 148)	Rural Major Collector	1,270	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(315)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	6.882	Miles	$806533	$1156132	HSIP (23 U.S.C. 148)	Rural Major Collector	471	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(045)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.023	Miles	$280370	$280370	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,074	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(828)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	2.664	Miles	$157894	$157894	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,427	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(188)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	9.813	Miles	$1142147	$1142147	HSIP (23 U.S.C. 148)	Rural Major Collector	1,543	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(189)HES & STP 2017(190)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	14.596	Miles	$1036231	$1532913	HSIP (23 U.S.C. 148)	Rural Major Collector	1,543	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(745)HES & STP 1702(746)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	10.52	Miles	$930195	$930195	HSIP (23 U.S.C. 148)	Rural Major Collector	60,836	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1602(643)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.2	Miles	$741030	$741030	HSIP (23 U.S.C. 148)	Rural Major Collector	5,885	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(975)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	5.125	Miles	$136464	$136464	HSIP (23 U.S.C. 148)	Rural Major Collector	999	65	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2016(804)HES & STP 2016(805)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	21.519	Miles	$864757	$864757	HSIP (23 U.S.C. 148)	Rural Major Collector	3,390	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(487)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	13.026	Miles	$906901	$976128	HSIP (23 U.S.C. 148)	Rural Major Collector	3,722	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(471)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.096	Miles	$353795	$353795	HSIP (23 U.S.C. 148)	Rural Major Collector	228	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(947)HES & STP 2017(948)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	13.74	Miles	$986625	$986625	HSIP (23 U.S.C. 148)	Rural Major Collector	3,128	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(950)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	6.644	Miles	$455922	$455922	HSIP (23 U.S.C. 148)	Rural Major Collector	987	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(636)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	11.15	Miles	$662754	$662754	HSIP (23 U.S.C. 148)	Rural Major Collector	334	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(637)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.743	Miles	$420714	$420714	HSIP (23 U.S.C. 148)	Rural Major Collector	364	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(307)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	8.457	Miles	$1187849	$1187849	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,305	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(308)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	16.816	Miles	$1793916	$1793916	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,069	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(500)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	6.706	Miles	$926139	$926139	HSIP (23 U.S.C. 148)	Rural Major Collector	1,217	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(501)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.246	Miles	$659340	$659340	HSIP (23 U.S.C. 148)	Rural Major Collector	462	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(312)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	4.252	Miles	$406718	$406718	HSIP (23 U.S.C. 148)	Rural Major Collector	385	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(313)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	2.214	Miles	$132445	$132445	HSIP (23 U.S.C. 148)	Rural Minor Collector	164	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(310)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	6.447	Miles	$601675	$601675	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,930	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(638)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.724	Miles	$492938	$492938	HSIP (23 U.S.C. 148)	Rural Major Collector	130	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(034)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Miles	$52133	$167509	HSIP (23 U.S.C. 148)	Rural Major Collector	2,304	70	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(738)HESG	Roadside	Removal of roadside objects (trees, poles, etc.)	0.191	Miles	$281936	$281936	HSIP (23 U.S.C. 148)	Rural Major Collector	188,701	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(035)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	1.1	Miles	$79966	$79966	HSIP (23 U.S.C. 148)	Rural Major Collector	876	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(032)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	0.2	Miles	$133435	$133435	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,272	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(033)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	0.2	Miles	$14113	$14113	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,272	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(486)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	7.616	Miles	$971697	$971697	HSIP (23 U.S.C. 148)	Rural Major Collector	3,015	65	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(256)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	12.546	Miles	$137445	$137445	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	13,160	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(626)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	5	Miles	$368813	$368813	HSIP (23 U.S.C. 148)	Rural Minor Collector	523	45	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(637)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	8.124	Miles	$933784	$933784	HSIP (23 U.S.C. 148)	Rural Major Collector	5,618	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(643)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	10.916	Miles	$775621	$775621	HSIP (23 U.S.C. 148)	Rural Minor Collector	586	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 1702(031)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	13.1	Miles	$4891189	$4891189	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,311	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(739), (740), (741), (742), (743), (744), (745)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	39.084	Miles	$1777391	$1777391	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,543	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(360)HES & STP 2017(361)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	5.213	Miles	$794891	$794891	HSIP (23 U.S.C. 148)	Rural Major Collector	880	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(363)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	4.831	Miles	$1037127	$1037127	HSIP (23 U.S.C. 148)	Rural Major Collector	682	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(362)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	8.153	Miles	$473019	$473019	HSIP (23 U.S.C. 148)	Rural Major Collector	1,155	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(359)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	5.03	Miles	$794338	$794338	HSIP (23 U.S.C. 148)	Rural Major Collector	1,069	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(358)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	9.501	Miles	$1177276	$1177276	HSIP (23 U.S.C. 148)	Rural Major Collector	1,695	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(485)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	4.187	Miles	$176271	$176271	HSIP (23 U.S.C. 148)	Rural Major Collector	1,275	60	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(701)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	4.7	Miles	$793103	$793103	HSIP (23 U.S.C. 148)	Urban Minor Arterial	4,173	45	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(725)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	3.383	Miles	$214254	$214254	HSIP (23 U.S.C. 148)	Rural Major Collector	336	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(027)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	14.386	Miles	$794219	$794219	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	5,905	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(028)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	21.279	Miles	$526478	$526478	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	22,650	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(029)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	16.724	Miles	$319544	$319544	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	5,023	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 1702(511)HES	Shoulder treatments	Widen shoulder - paved or other	2.5	Miles	$760298	$1224577	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,558	60	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2016(992)HES	Shoulder treatments	Widen shoulder - paved or other	1.553	Miles	$633019	$1991914	HSIP (23 U.S.C. 148)	Rural Major Collector	500	55	State Highway Agency	Spot	Roadway Departure	Increase the use of paved

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														shoulders on FM roads to increase the forgivness of the road during road departures.
STP 2016(993)HES	Shoulder treatments	Widen shoulder - paved or other	1.5	Miles	$1007337	$1883297	HSIP (23 U.S.C. 148)	Rural Major Collector	757	45	State Highway Agency	Spot	Roadway Departure	Increase the use of paved shoulders on FM roads to increase the forgivness of the road during road departures.
STP 1702(504)HES & STP 1702(505)HES	Roadway	Pavement surface - high friction surface	7.155	Miles	$1011480	$1011480	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,026	65	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(114)HES	Roadway	Pavement surface - high friction surface	6.561	Miles	$1375866	$1375866	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,635	60	State Highway Agency	Spot	Roadway Departure	Provide progressive levels of treatment for curves based on crash experience. Treatments might include increased use of chevron signs, use of speed activated curve warnings and LED curve displays, an dhigh friction surface treatment.
STP 1702(634)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	21.587	Miles	$220427	$220427	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	8,460	75	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate risks by other means.
STP 2017(765)HES	Roadside	Removal of roadside objects (trees, poles, etc.)	10.042	Miles	$96999	$96999	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	7,238	55	State Highway Agency	Spot	Roadway Departure	Continue to remove trees, relocate utility poles, and protect culverts or remediate

													RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														risks by other means.
STP 2017(943)HESG	Roadway	Rumble strips - edge or shoulder	14.202	Miles	$65110	$65110	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,243	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(517)HESG	Roadway	Rumble strips - edge or shoulder	11.422	Miles	$92050	$92050	HSIP (23 U.S.C. 148)	Urban Major Collector	47,608	45	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(211)HESG	Roadway	Rumble strips - edge or shoulder	7.964	Miles	$28764	$28764	HSIP (23 U.S.C. 148)	Rural Major Collector	990	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(212)HESG	Roadway	Rumble strips - edge or shoulder	10.66	Miles	$38500	$38500	HSIP (23 U.S.C. 148)	Rural Major Collector	2,392	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(209)HESG	Roadway	Rumble strips - edge or shoulder	8.693	Miles	$31331	$31331	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	2,247	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(213)HESG	Roadway	Rumble strips - edge or shoulder	16.241	Miles	$58913	$58913	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	4,855	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(210)HESG	Roadway	Rumble strips - edge or shoulder	10.493	Miles	$37897	$37897	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,242	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(376)HESG	Roadway	Rumble strips - edge or shoulder	6.358	Miles	$23202	$23202	HSIP (23 U.S.C. 148)	Rural Major Collector	786	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(377)HESG, STP 1702(388)HESG & STP 1702(369)HESG	Roadway	Rumble strips - edge or shoulder	9.357	Miles	$33278	$33278	HSIP (23 U.S.C. 148)	Rural Minor Collector	88	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(375)HESG	Roadway	Rumble strips - edge or shoulder	5.677	Miles	$20821	$20821	HSIP (23 U.S.C. 148)	Rural Major Collector	1,109	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(090)HESG	Roadway	Rumble strips - edge or shoulder	2.591	Miles	$18879	$18879	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,604	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(944)HESG	Roadway	Rumble strips - edge or shoulder	14.842	Miles	$79603	$79603	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,260	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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														and centerline rumble strips.
STP 2017(945)HESG & STP 2017(942)HESG	Roadway	Rumble strips - edge or shoulder	15.36	Miles	$69514	$69514	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,083	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(638)HES	Roadway	Rumble strips - edge or shoulder	4.49	Miles	$45123	$45123	HSIP (23 U.S.C. 148)	Urban Major Collector	3,989	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(214)HESG	Roadway	Rumble strips - edge or shoulder	11.716	Miles	$56687	$56687	HSIP (23 U.S.C. 148)	Rural Major Collector	1,455	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(207)HESG	Roadway	Rumble strips - edge or shoulder	19.274	Miles	$87993	$87993	HSIP (23 U.S.C. 148)	Rural Major Collector	1,650	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(743)HESG	Roadway	Rumble strips - edge or shoulder	4.4	Miles	$66972	$66972	HSIP (23 U.S.C. 148)	Rural Major Collector	909	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(062)HESG	Roadway	Rumble strips - edge or shoulder	3.517	Miles	$48376	$48376	HSIP (23 U.S.C. 148)	Rural Major Collector	2,614	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(716)HESG	Roadway	Rumble strips - edge or shoulder	11.796	Miles	$135196	$135196	HSIP (23 U.S.C. 148)	Rural Major Collector	211	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(704)HESG	Roadway	Rumble strips - edge or shoulder	5.931	Miles	$102941	$102941	HSIP (23 U.S.C. 148)	Rural Major Collector	45,056	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(054)HESG	Roadway	Rumble strips - edge or shoulder	3.917	Miles	$65896	$65896	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,943	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(707)HESG	Roadway	Rumble strips - edge or shoulder	5.39	Miles	$73858	$73858	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,383	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(057)HESG	Roadway	Rumble strips - edge or shoulder	7.735	Miles	$128695	$128695	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,861	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(061)HESG	Roadway	Rumble strips - edge or shoulder	9.364	Miles	$163171	$163171	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,404	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
STP 2017(078)HESG	Roadway	Rumble strips - edge or shoulder	10.641	Miles	$160963	$160963	HSIP (23 U.S.C. 148)	Rural Major Collector	892	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(073)HESG	Roadway	Rumble strips - edge or shoulder	13.3	Miles	$216285	$216285	HSIP (23 U.S.C. 148)	Rural Major Collector	2,683	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(074)HESG	Roadway	Rumble strips - edge or shoulder	8.597	Miles	$140713	$140713	HSIP (23 U.S.C. 148)	Rural Major Collector	2,703	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(066)HESG	Roadway	Rumble strips - edge or shoulder	18.724	Miles	$321360	$321360	HSIP (23 U.S.C. 148)	Rural Major Collector	1,319	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(711)HESG	Roadway	Rumble strips - edge or shoulder	8.559	Miles	$103250	$103250	HSIP (23 U.S.C. 148)	Rural Major Collector	458	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(341)HESG	Roadway	Rumble strips - edge or shoulder	8.219	Miles	$87477	$87477	HSIP (23 U.S.C. 148)	Rural Minor Collector	388	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(338)HESG	Roadway	Rumble strips - edge or shoulder	10.625	Miles	$123370	$123370	HSIP (23 U.S.C. 148)	Rural Major Collector	734	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(344)HESG	Roadway	Rumble strips - edge or shoulder	4.088	Miles	$48905	$48905	HSIP (23 U.S.C. 148)	Rural Major Collector	1,448	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(717)HESG	Roadway	Rumble strips - edge or shoulder	8.1	Miles	$102893	$102893	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,090	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(703)HESG	Roadway	Rumble strips - edge or shoulder	8.002	Miles	$118615	$118615	HSIP (23 U.S.C. 148)	Rural Major Collector	7,621	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(714)HESG	Roadway	Rumble strips - edge or shoulder	10.404	Miles	$145640	$145640	HSIP (23 U.S.C. 148)	Rural Major Collector	496	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(534)HESG	Roadway	Rumble strips - edge or shoulder	8.323	Miles	$37268	$37268	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,227	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(544)HESG	Roadway	Rumble strips - edge or shoulder	11.359	Miles	$68036	$68036	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,221	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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														and centerline rumble strips.
STP 1702(539)HESG	Roadway	Rumble strips - edge or shoulder	13.051	Miles	$80875	$80875	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,335	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(527)HESG	Roadway	Rumble strips - edge or shoulder	17.918	Miles	$105955	$105955	HSIP (23 U.S.C. 148)	Rural Minor Collector	268	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(529)HESG	Roadway	Rumble strips - edge or shoulder	12.149	Miles	$72449	$72449	HSIP (23 U.S.C. 148)	Rural Major Collector	1,615	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(526)HESG	Roadway	Rumble strips - edge or shoulder	17.228	Miles	$105326	$105326	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,429	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(532)HESG	Roadway	Rumble strips - edge or shoulder	14.312	Miles	$168215	$168215	HSIP (23 U.S.C. 148)	Rural Major Collector	1,302	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(523)HESG	Roadway	Rumble strips - edge or shoulder	26.881	Miles	$162540	$162540	HSIP (23 U.S.C. 148)	Rural Minor Arterial	425	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(535)HESG	Roadway	Rumble strips - edge or shoulder	15.069	Miles	$93814	$93814	HSIP (23 U.S.C. 148)	Rural Major Collector	445	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(531)HESG	Roadway	Rumble strips - edge or shoulder	11.627	Miles	$68584	$68584	HSIP (23 U.S.C. 148)	Rural Major Collector	1,449	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(536)HESG	Roadway	Rumble strips - edge or shoulder	8.572	Miles	$59487	$59487	HSIP (23 U.S.C. 148)	Rural Major Collector	249	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(533)HESG	Roadway	Rumble strips - edge or shoulder	20.56	Miles	$123693	$123693	HSIP (23 U.S.C. 148)	Rural Minor Arterial	746	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(538)HESG	Roadway	Rumble strips - edge or shoulder	18.518	Miles	$104727	$104727	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,355	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(528)HESG	Roadway	Rumble strips - edge or shoulder	6.298	Miles	$22420	$22420	HSIP (23 U.S.C. 148)	Rural Minor Collector	70	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.

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STP 1702(543)HESG	Roadway	Rumble strips - edge or shoulder	15.886	Miles	$108247	$108247	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,197	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(542)HESG	Roadway	Rumble strips - edge or shoulder	11.227	Miles	$74365	$74365	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,335	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(541)HESG	Roadway	Rumble strips - edge or shoulder	7.235	Miles	$34390	$34390	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,196	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(537)HESG	Roadway	Rumble strips - edge or shoulder	13.986	Miles	$160336	$160336	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other Freeways and Expressways	1,963	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(545)HESG	Roadway	Rumble strips - edge or shoulder	9.682	Miles	$58304	$58304	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,125	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(525)HESG	Roadway	Rumble strips - edge or shoulder	17.507	Miles	$109428	$109428	HSIP (23 U.S.C. 148)	Rural Minor Collector	493	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(530)HESG	Roadway	Rumble strips - edge or shoulder	16.248	Miles	$90586	$90586	HSIP (23 U.S.C. 148)	Rural Major Collector	966	50	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(522)HESG	Roadway	Rumble strips - edge or shoulder	13.958	Miles	$80069	$80069	HSIP (23 U.S.C. 148)	Rural Minor Collector	4,367	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(540)HESG	Roadway	Rumble strips - edge or shoulder	5.263	Miles	$30082	$30082	HSIP (23 U.S.C. 148)	Rural Major Collector	8,896	55	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(524)HESG	Roadway	Rumble strips - edge or shoulder	8.137	Miles	$50217	$50217	HSIP (23 U.S.C. 148)	Rural Major Collector	4,685	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(803)HES	Roadway	Rumble strips - edge or shoulder	2.745	Miles	$3321	$3321	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,731	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(804)HES	Roadway	Rumble strips - edge or shoulder	4.628	Miles	$4315	$4315	HSIP (23 U.S.C. 148)	Rural Minor Arterial	22,592	65	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(812)HES	Roadway	Rumble strips - edge or shoulder	3.434	Miles	$10149	$10149	HSIP (23 U.S.C. 148)	Urban Minor Arterial	5,606	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder

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PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
														and centerline rumble strips.
STP 2017(732)HESG	Roadway	Rumble strips - edge or shoulder	9.3	Miles	$62544	$62544	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,420	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(734)HESG	Roadway	Rumble strips - edge or shoulder	6.869	Miles	$44978	$44978	HSIP (23 U.S.C. 148)	Rural Major Collector	7,308	70	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(516)HESG	Roadway	Rumble strips - edge or shoulder	6.375	Miles	$9979	$9979	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,208	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(618)HESG	Roadway	Rumble strips - edge or shoulder	14.099	Miles	$23128	$23128	HSIP (23 U.S.C. 148)	Rural Minor Arterial	5,893	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(619)HESG	Roadway	Rumble strips - edge or shoulder	12.299	Miles	$20175	$20175	HSIP (23 U.S.C. 148)	Rural Major Collector	1,815	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(605)HESG & STP 1702(607)HESG	Roadway	Rumble strips - edge or shoulder	21.37	Miles	$35056	$35056	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,656	75	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 2017(072)HESG	Roadway	Rumble strips - edge or shoulder	7.702	Miles	$208904	$208904	HSIP (23 U.S.C. 148)	Rural Major Collector	6,132	60	State Highway Agency	Spot	Roadway Departure	Continue to install shoulder and centerline rumble strips.
STP 1702(547)HES	Roadway	Roadway widening - add lane(s) along segment	0.458	Miles	$647148	$1003924	HSIP (23 U.S.C. 148)	Rural Minor Arterial	905	55	State Highway Agency	Spot	Lane Departure	Widen roadways to increase control and recovery areas.
STP 2017(148)HES	Roadway signs and traffic control	Roadway signs and traffic control - other	162.882	Miles	$64760	$64760	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	18,978	75	State Highway Agency	Spot	Lane Departure	Address wrong way entrance onto freeways by seeking novel lineation treatments and by takin advantage of freeway monitoring technology to detect wrong way drivers.

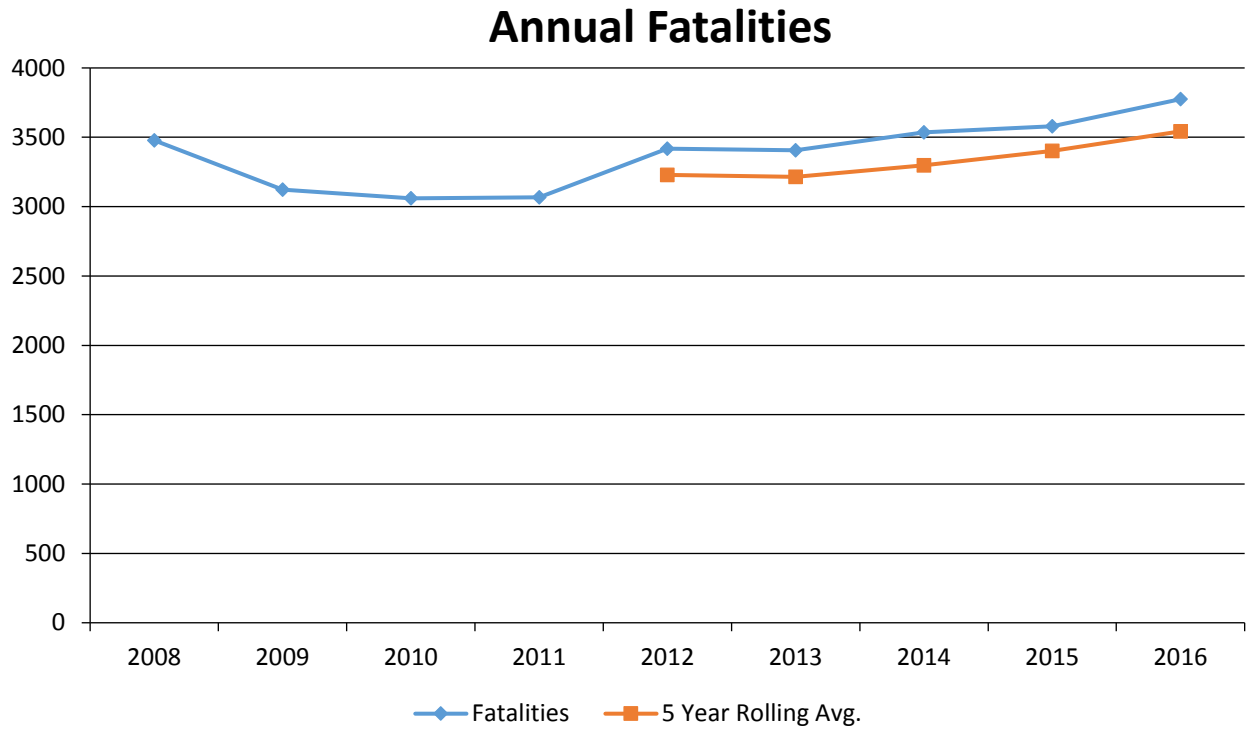
Enter additional comments here to clarify your response for this question or add supporting information.

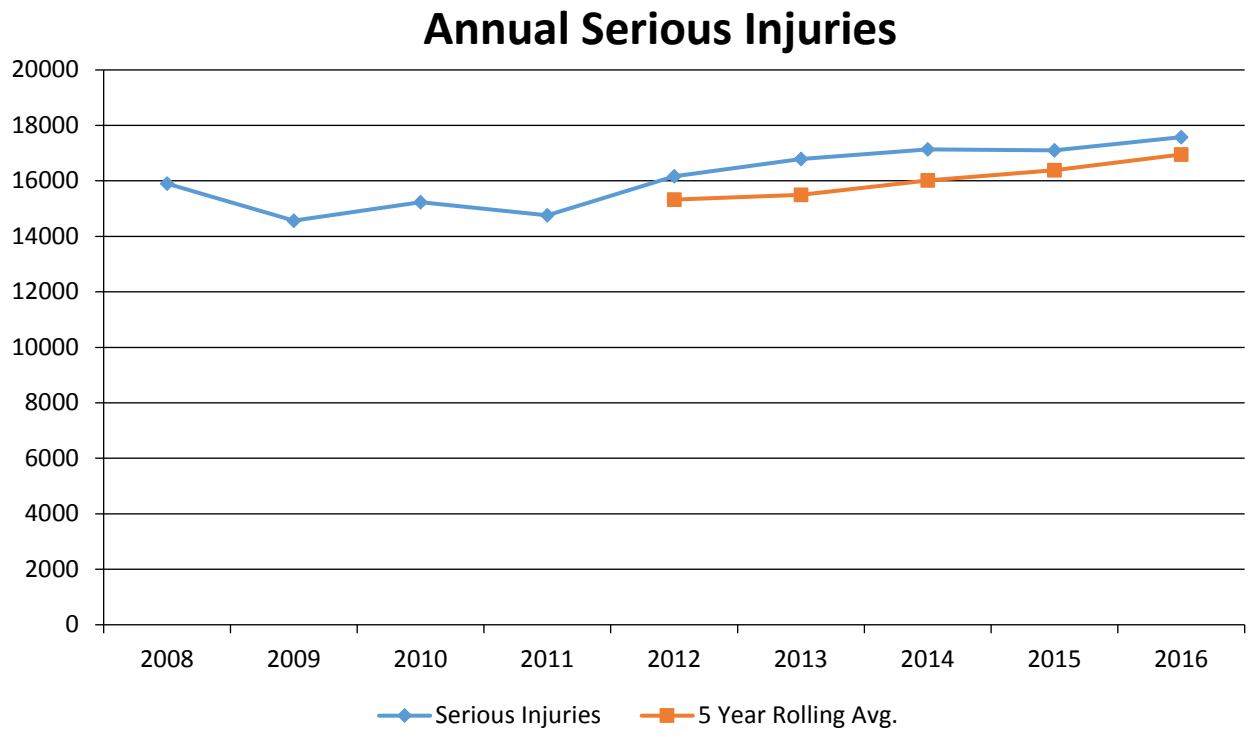
Safety Performance

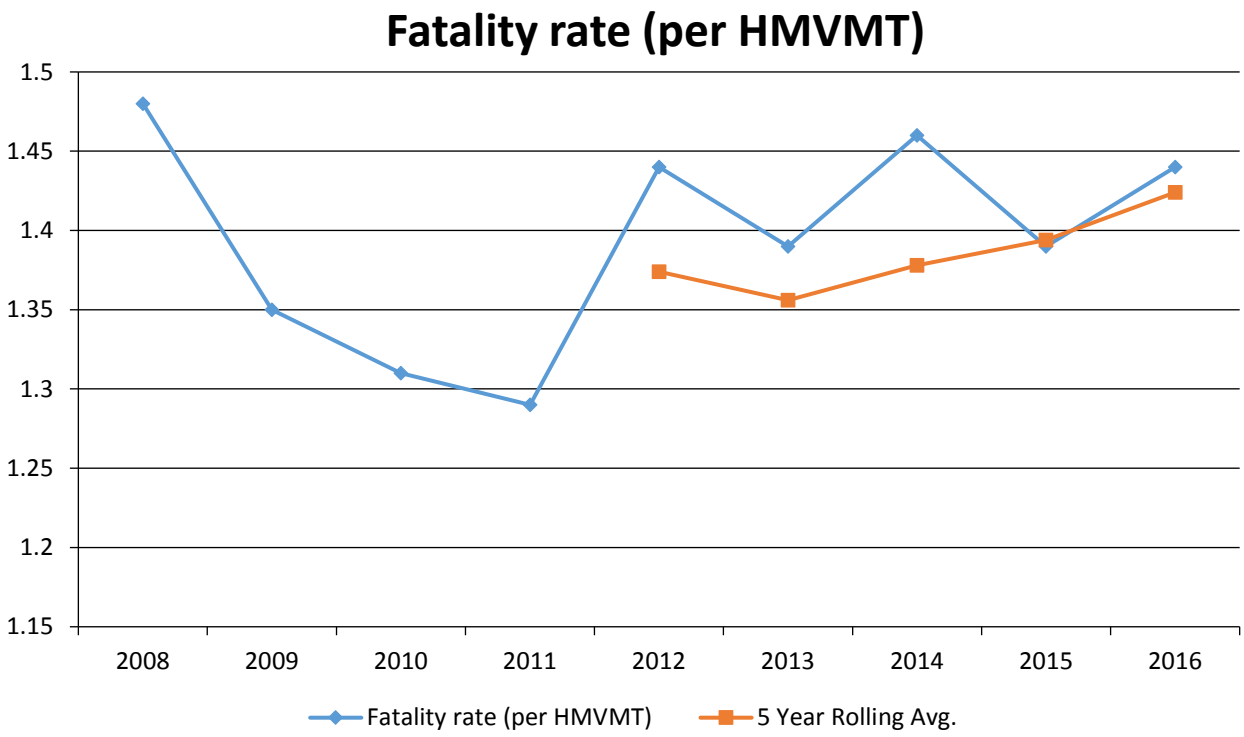
General Highway Safety Trends

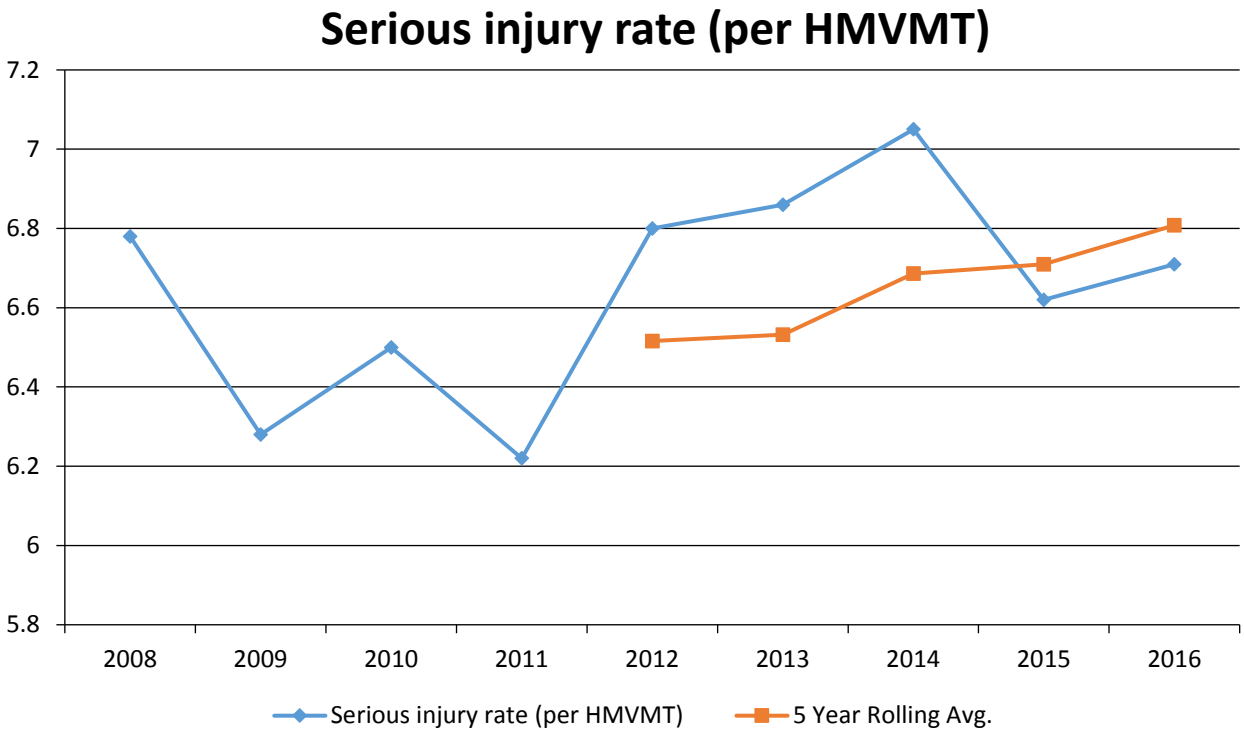
Present data showing the general highway safety trends in the State for the past five years.

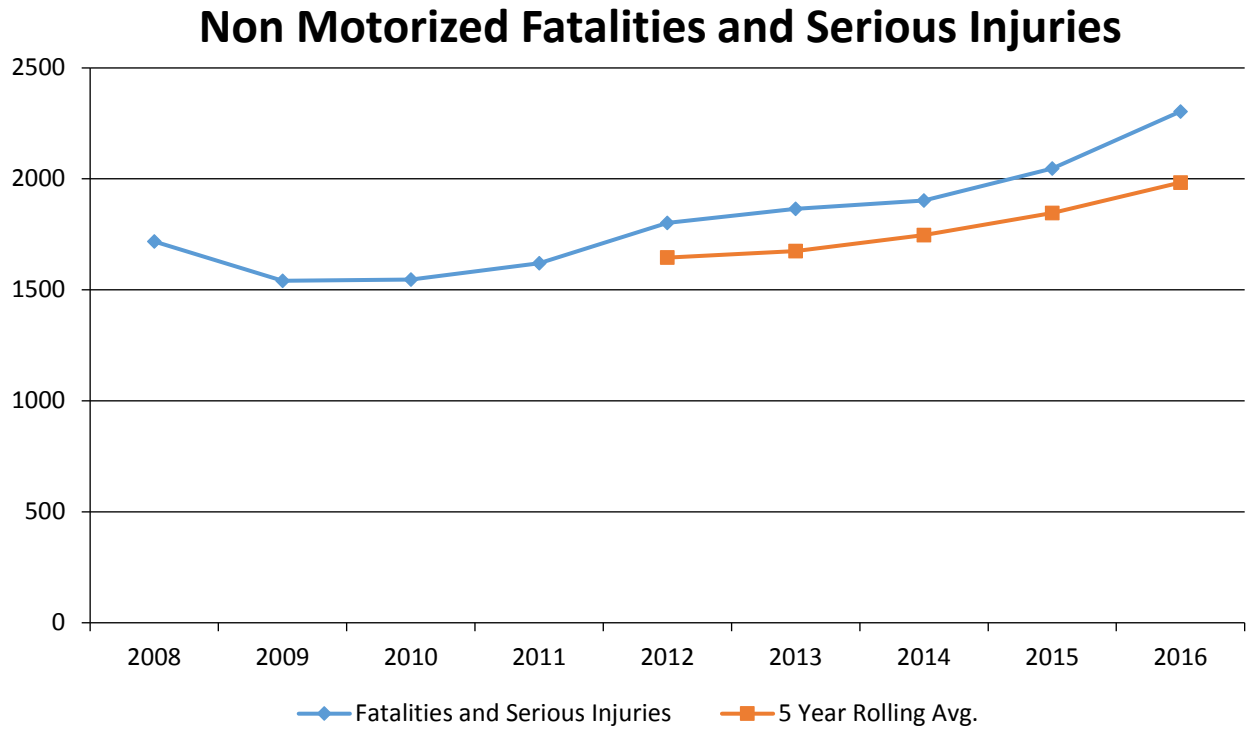
PERFORMANCE MEASURES	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fatalities	3,479	3,122	3,060	3,068	3,417	3,407	3,536	3,579	3,775
Serious Injuries	15,899	14,568	15,233	14,761	16,170	16,785	17,133	17,096	17,578
Fatality rate (per HMVMT)	1.480	1.350	1.310	1.290	1.440	1.390	1.460	1.390	1.440
Serious injury rate (per HMVMT)	6.780	6.280	6.500	6.220	6.800	6.860	7.050	6.620	6.710
Number non-motorized fatalities	491	405	400	472	544	542	538	611	744
Number of non-motorized serious injuries	1,227	1,136	1,147	1,148	1,257	1,323	1,364	1,436	1,560


Annual Fatalities
4000
3500
3000
2500
2000
1500
1000
500
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
2008
2009
2010
2011
2012
2013
2014
2015
2016
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
7.2
7
6.8
6.6
6.4
6.2
6
5.8
2008
2009
2010
2011
2012
2013
2014
2015
2016
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Enter additional comments here to clarify your response for this question or add supporting information.

Describe fatality data source.

State Motor Vehicle Crash Database

Enter additional comments here to clarify your response for this question or add supporting information.

FARS data is used to present the fatality data for drivers and pedestrians over the age of 65 (Applicability of Special Rules) and required performance measures. For all other questions that require fatality data, the state motor vehicle crash database is used.

To the maximum extent possible, present this data by functional classification and ownership.

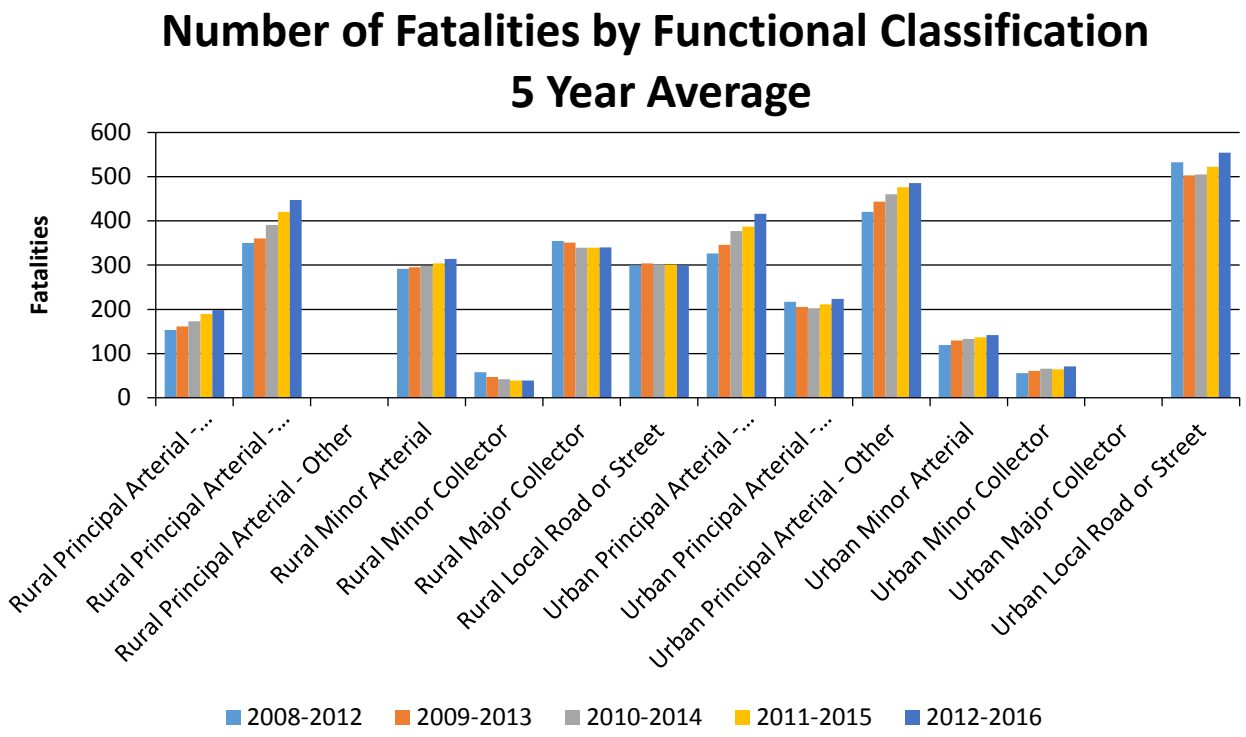
Year 2016

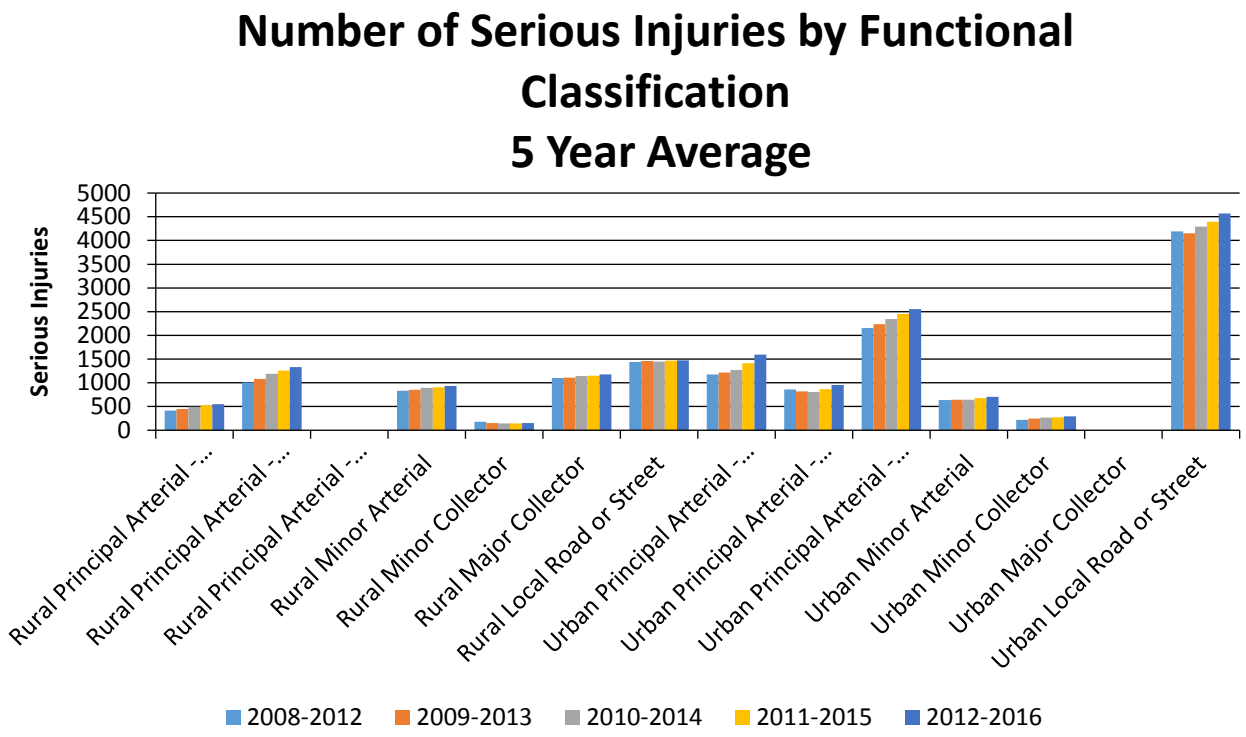
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Interstate	198.4	551	1.19	3.32
Rural Principal Arterial - Other Freeways and Expressways	447	1,329	2.06	6.11

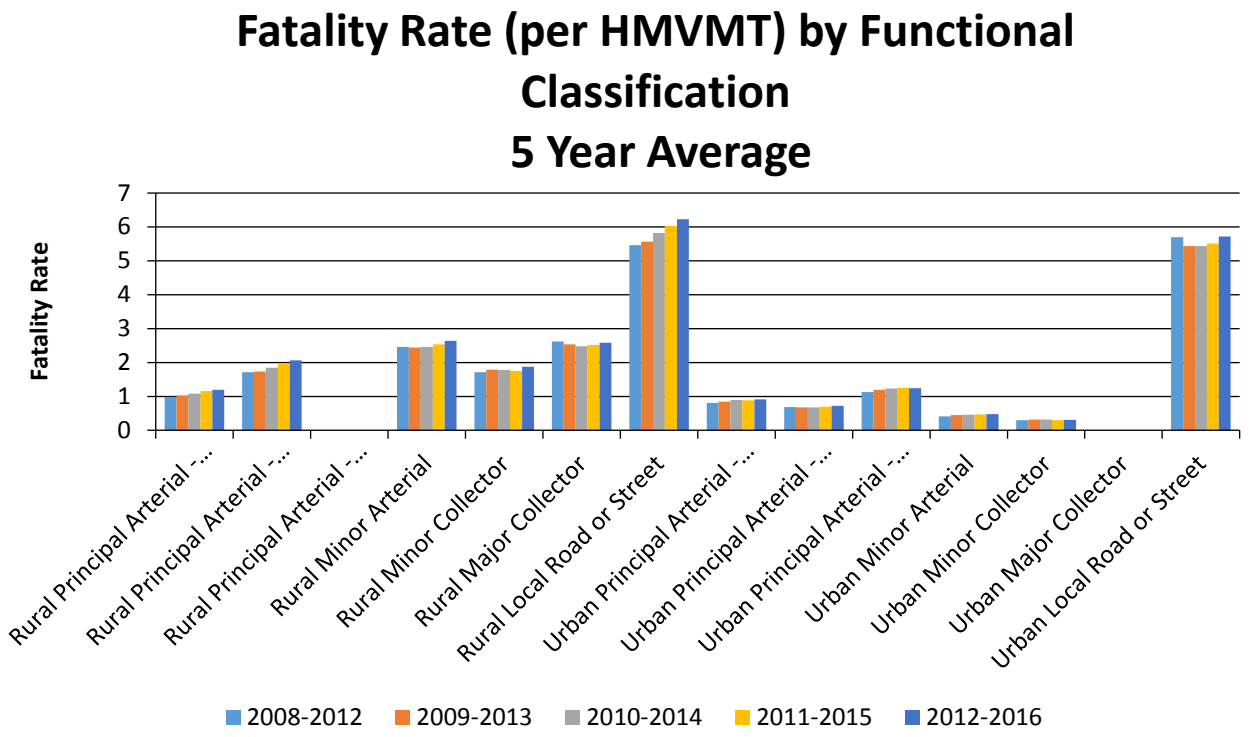
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Other	0	0	0	0
Rural Minor Arterial	313.8	931.6	2.64	7.83
Rural Minor Collector	39	148.6	1.87	7.06
Rural Major Collector	340.4	1,174.8	2.58	8.94
Rural Local Road or Street	299.4	1,474.6	6.23	30.84
Urban Principal Arterial - Interstate	416.4	1,593.2	0.91	3.47
Urban Principal Arterial - Other Freeways and Expressways	223.8	950.6	0.72	3.06
Urban Principal Arterial - Other	485.8	2,550.2	1.24	6.53
Urban Minor Arterial	141.6	707.6	0.48	2.4
Urban Minor Collector	70.6	295	0.31	1.26
Urban Major Collector	0	0	0	0
Urban Local Road or Street	554.4	4,568.4	5.72	47.25

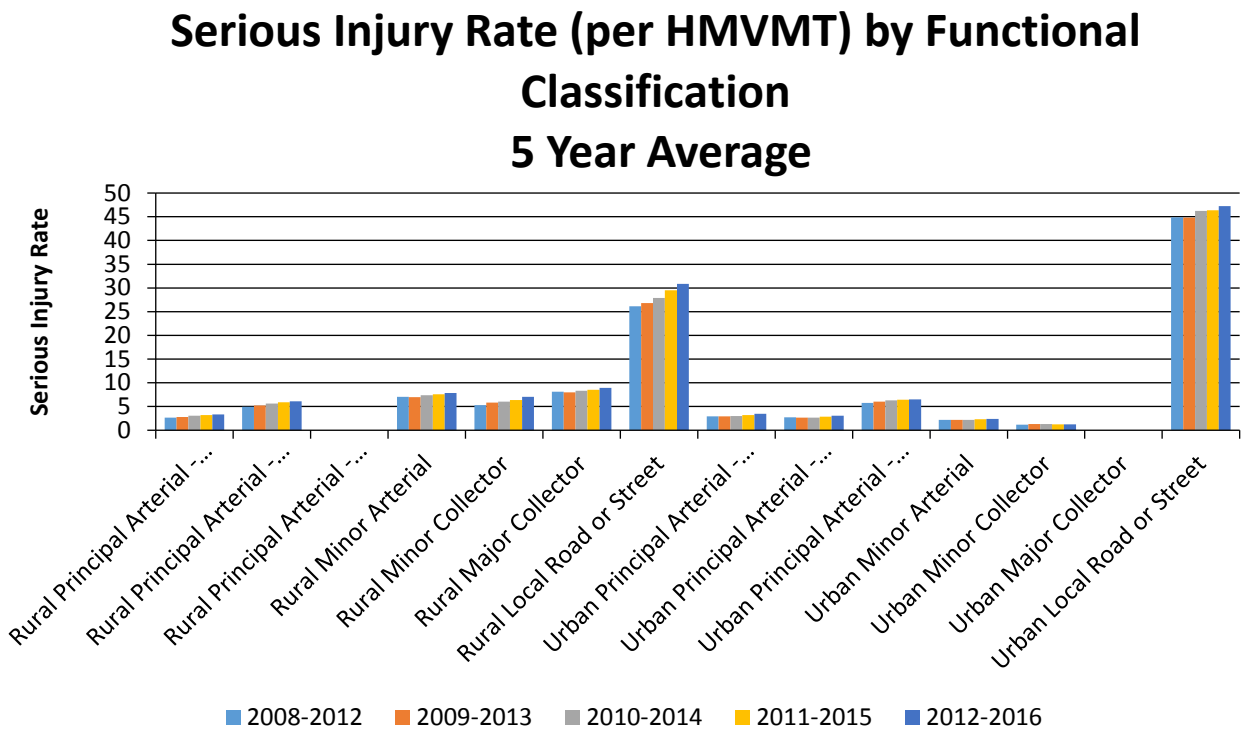
Year 2015

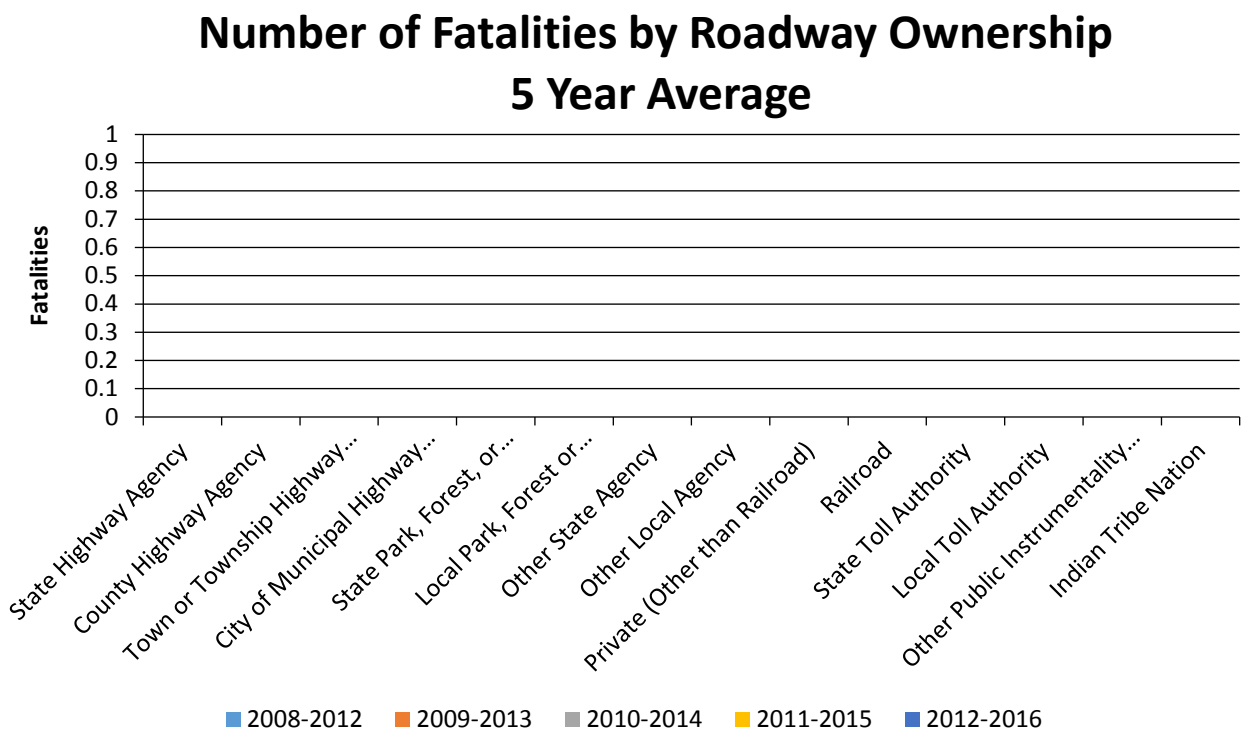
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	0	0	0	0
County Highway Agency	0	0	0	0
Town or Township Highway Agency	0	0	0	0
City of Municipal Highway Agency	0	0	0	0
State Park, Forest, or Reservation Agency	0	0	0	0
Local Park, Forest or Reservation Agency	0	0	0	0
Other State Agency	0	0	0	0
Other Local Agency	0	0	0	0
Private (Other than Railroad)	0	0	0	0
Railroad	0	0	0	0
State Toll Authority	0	0	0	0
Local Toll Authority	0	0	0	0
Other Public Instrumentality (e.g. Airport, School, University)	0	0	0	0
Indian Tribe Nation	0	0	0	0

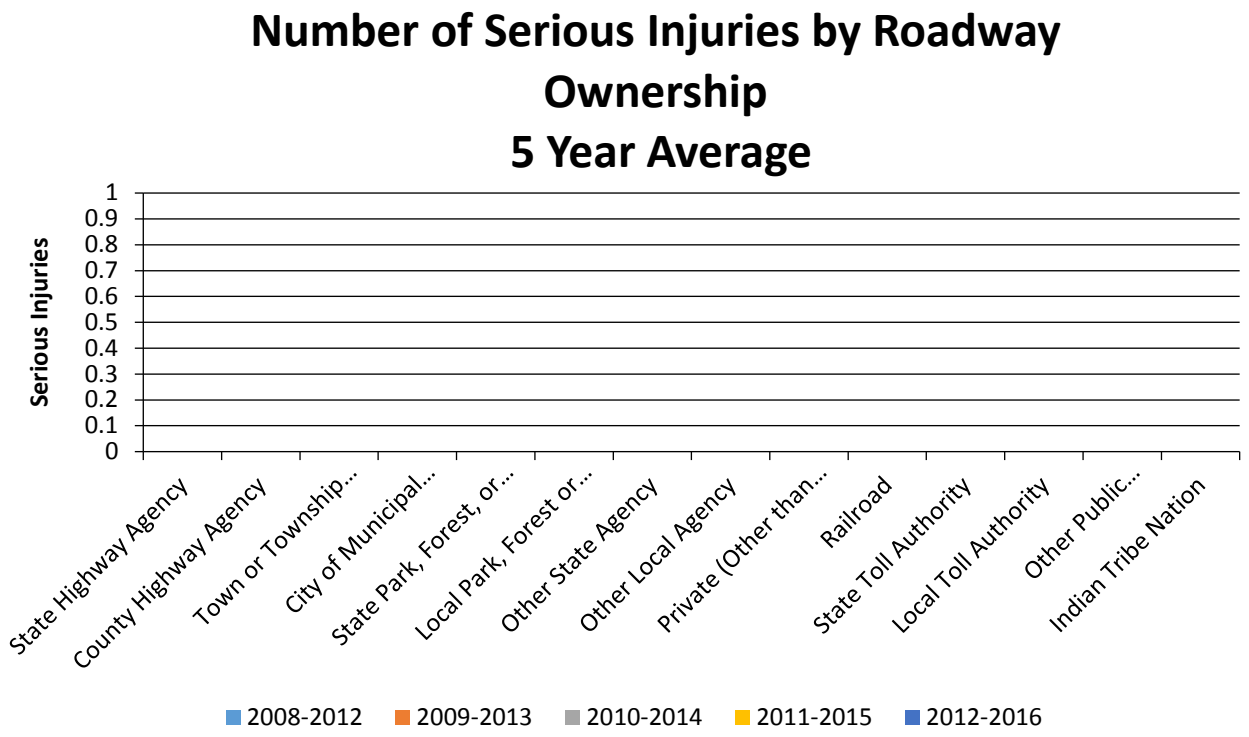

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
600
500
400
300
200
100
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016

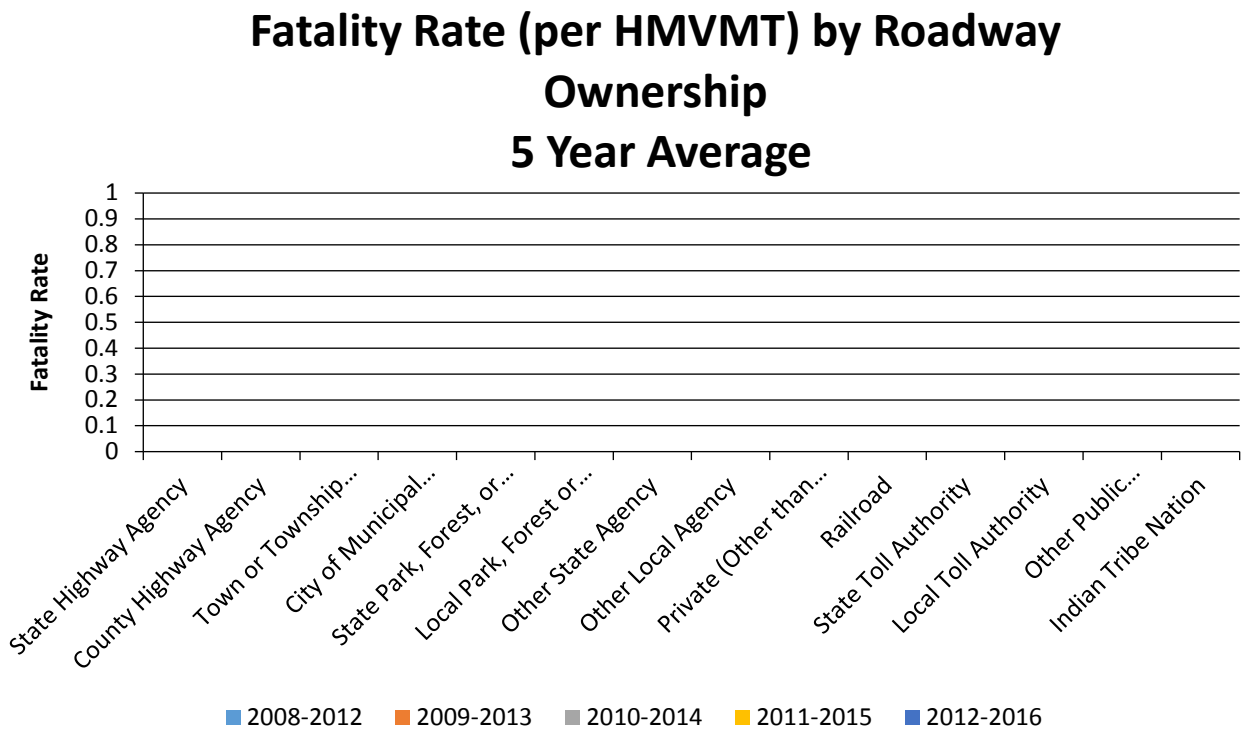

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016

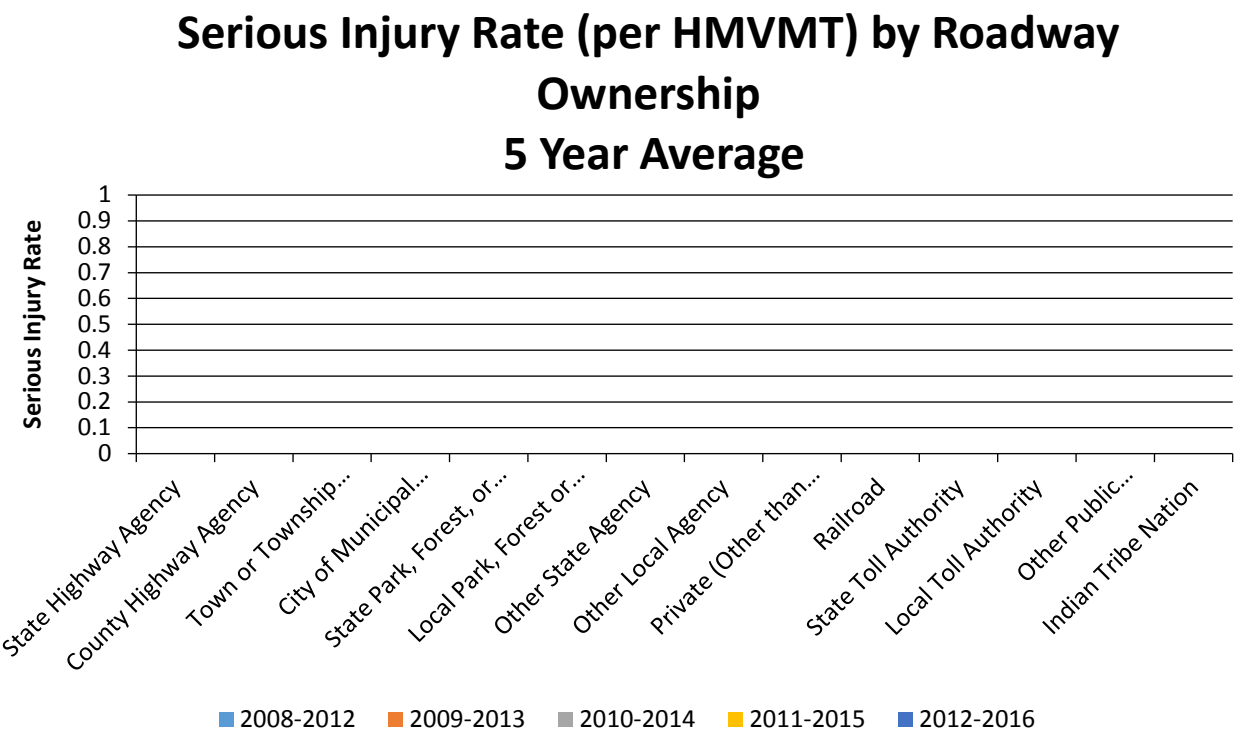

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
7
6
5
4
3
2
1
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Serious Injury Rate (per HMVMT) by Functional Classification
5 Year Average
Serious Injury Rate
50
45
40
35
30
25
20
15
10
5
0
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Principal Arterial -...
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Principal Arterial -...
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
State Highway Agency
County Highway Agency
Town or Township Highway...
City of Municipal Highway...
State Park, Forest, or...
Local Park, Forest or...
Other State Agency
Other Local Agency
Private (Other than Railroad)
Railroad
State Toll Authority
Local Toll Authority
Other Public Instrumentality...
Indian Tribe Nation
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries by Roadway Ownership
5 Year Average
Serious Injuries
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
State Highway Agency
County Highway Agency
Town or Township...
City of Municipal...
State Park, Forest, or...
Local Park, Forest or...
Other State Agency
Other Local Agency
Private (Other than...
Railroad
State Toll Authority
Local Toll Authority
Other Public...
Indian Tribe Nation
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Fatality Rate (per HMVMT) by Roadway Ownership
5 Year Average
Fatality Rate
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
State Highway Agency
County Highway Agency
Town or Township...
City of Municipal...
State Park, Forest, or...
Local Park, Forest or...
Other State Agency
Other Local Agency
Private (Other than...
Railroad
State Toll Authority
Local Toll Authority
Other Public...
Indian Tribe Nation
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016



Enter additional comments here to clarify your response for this question or add supporting information.

We calculate Rural Principal Arterial - Other Freeways and Expressways & Rural Principal Arterial - Other as one using Rural Principal Arterial.

We calculate Urban Minor Collector and Urban Major Collector as one using Urban Collector.

We do not collect Roadway Ownership.

Are there any other aspects of the general highway safety trends on which the State would like to elaborate?

No

Safety Performance Targets

Safety Performance Targets

Calendar Year 2018 Targets *

Number of Fatalities 3703.8

Describe the basis for established target, including how it supports SHSP goals.

The 2018 Target expressed as a 5-year average would be as follows: Year (Target or Actual Data) Source 2014(3,536)FARS 2015(3,516)ARF 2016(3,775)CRIS 2017(3,801)Target 2018(3,891)Target 2018 Target expressed as 5-year average= 3,703.8

Number of Serious Injuries 17565.4

Describe the basis for established target, including how it supports SHSP goals.

The 2018 Target expressed as a 5-year average would be as follows: Year(Target or Actual Data) Source 2014(17,133)CRIS 2015(17,096)CRIS 2016(17,578)CRIS 2017(17,890)Target 2018(18,130)Target 2018 Target expressed as 5-year average = 17,565.4

Fatality Rate 1.432

Describe the basis for established target, including how it supports SHSP goals.

The 2018 Target expressed as a 5-year average would be as follows: Year (Target or Actual Data) Source 2014(1.45)FARS 2015(1.36)ARF 2016(1.44)CRIS 2017(1.45)Target 2018(1.46)Target 2018 Target expressed as 5-year average = 1.432

Serious Injury Rate 6.740

Describe the basis for established target, including how it supports SHSP goals.

The 2018 Target expressed as a 5-year average would be as follows: Year (Target or Actual Data) Source 2014(7.05)CRIS 2015(6.62)CRIS 2016(6.71)CRIS 2017(6.68)Target 2018(6.64)Target 2018 Target expressed as 5-year average = 6.740

Total Number of Non-Motorized Fatalities and Serious Injuries 2150.6

Describe the basis for established target, including how it supports SHSP goals.

The 2018 Target expressed as a 5-year average would be as follows: Year (Target or Actual Data) Source 2014(1,893)FARS-CRIS 2015(2,023)FARS-CRIS 2016(2,304)CRIS 2017(2,224)Target 2018(2,309)Target 2018 Target expressed as 5-year average = 2150.6

Enter additional comments here to clarify your response for this question or add supporting information.

TxDOT used a linear trend analysis to establish target(s), and analyzed the linear trend analysis of different data sets including three to five years of raw data as well as the moving averages for those data sets. While utilizing the linear trend analysis projections, the slope is determined to be a positive factor or negative factor.

The targets are consistent with the methodology used to establish Strategic Highway Safety Plan (SHSP) targets, and therefore the targets are identical to the Highway Safety Plan (HSP) targets. The SHSP uses a data-driven, multi-year collaborative process to establish safety targets. The consensus of the SHSP stakeholder and executive teams is to utilize a methodology of establishing targets that would result in a 2% reduction from the original trend line projection in 2022. The proposed reduction of 2% by 2022, which only applies to positive slope projection trends, would be achieved by reducing each intermediate year by the following reduction percentages:

Year (Reduction)
2017 (0.0%)
2018 (0.4%)
2019 (0.8%)
2020 (1.2%)
2021 (1.6%)
2022 (2.0%)

When the slope analysis projects a negative slope, the target set will mirror the projection determined by the slope.

Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.

TxDOT is not only responsible for preparing, maintaining, and striving to reach goals of the Highway Safety Improvement Program, but also the Strategic Highway Safety Plan (SHSP), and the Highway Safety Plan (HSP). The SHSP process is maintained through Texas A&M University's Texas Transportation Institute (TTI).

TxDOT remains in contact and coordinates with TTI and other partners and stakeholders to update the SHSP and work toward targets identified in the SHSP. When targets are set in the SHSP (especially the Five Core Measures: Fatalities, Fatality Rate, Serious Injuries, Serious Injuries Rate, And Non-Motorized Fatalities & Serious Injuries) the HSIP targets are also set using the same methodology in effort to maintain consistency across the respective plans.

As a result, the three coordinated plans have synced methodologies and strive to ensure a common vision and direction. Charts containing data for the 5 Core Measures are synced with those contained in the SHSP.

In addition, both the Traffic Safety Section and the Engineering Section, both of the TxDOT Traffic Operations Division, have collaborated on coordinating the generation of the SHSP and the HSP. Meetings, exchange of ideas, coordination of projects, data analysis, and a constant flow of communication ensures that these projects work together towards common targets and objectives.

The SHSP update process was guided by an Executive Committee (EC) and a Stakeholder Group (SG) representing a diverse assembly of road safety agencies, organizations, advocates, and experts. After these teams determined priorities based on data and discussion, seven Emphasis Area Teams were formed to develop the content. The development process was supported by the Management Team, which included representatives from TxDOT, FHWA, and a TTI support group.

The EC consisted of representatives of TxDOT, FHWA, the National Highway Traffic Safety Administration (NHTSA), metropolitan planning organizations (MPOs), cities that have adopted Vision Zero, state and local law enforcement agencies, transit agencies, trucking and railroad agencies and organizations, the Texas

Department of Motor Vehicles, the Texas Department of Public Safety, county transportation officials, bicycle and pedestrian advocates, the Texas Department of State Health Services, the judiciary, the Texas Alcohol Beverage Commission,

Does the State want to report additional optional targets?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Applicability of Special Rules

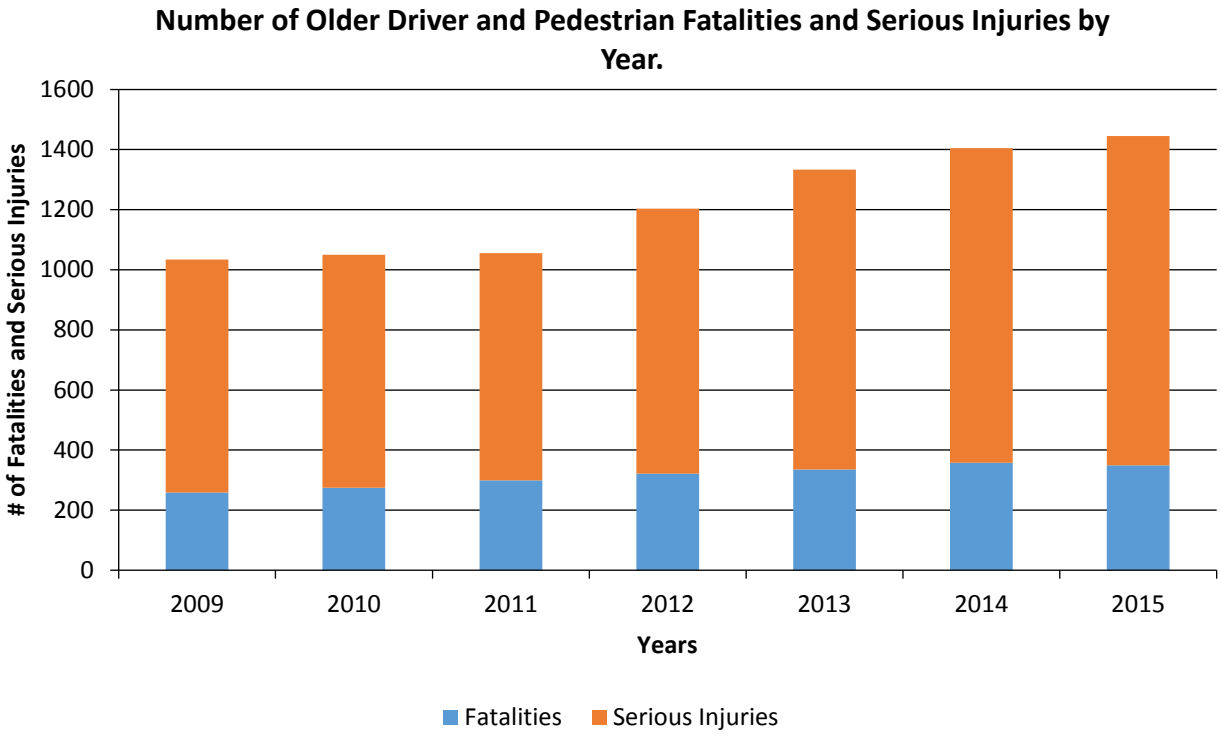
Does the HRRR special rule apply to the State for this reporting period?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Provide the number of older driver and pedestrian fatalities and serious injuries for the past seven years.

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015
Number of Older Driver and Pedestrian Fatalities	259	275	299	321	335	358	349
Number of Older Driver and Pedestrian Serious Injuries	775	775	756	882	998	1,047	1,096



Enter additional comments here to clarify your response for this question or add supporting information.

We used the 2010 serious injury number for our 2009 number since our 2009 data is no longer available.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries

Enter additional comments here to clarify your response for this question or add supporting information.

Based on the measures of effectiveness selected previously, describe the results of the State's program level evaluations.

A program level evaluation was not conducted over this reporting period, however, we've monitored our projected trend line for fatalities statewide and determined that the overall 2016 fatalities are below the projected trend line.

What other indicators of success does the State use to demonstrate effectiveness and success of the Highway Safety Improvement Program?

miles improved by HSIP

Enter additional comments here to clarify your response for this question or add supporting information.

Are there any significant programmatic changes that have occurred since the last reporting period?

No

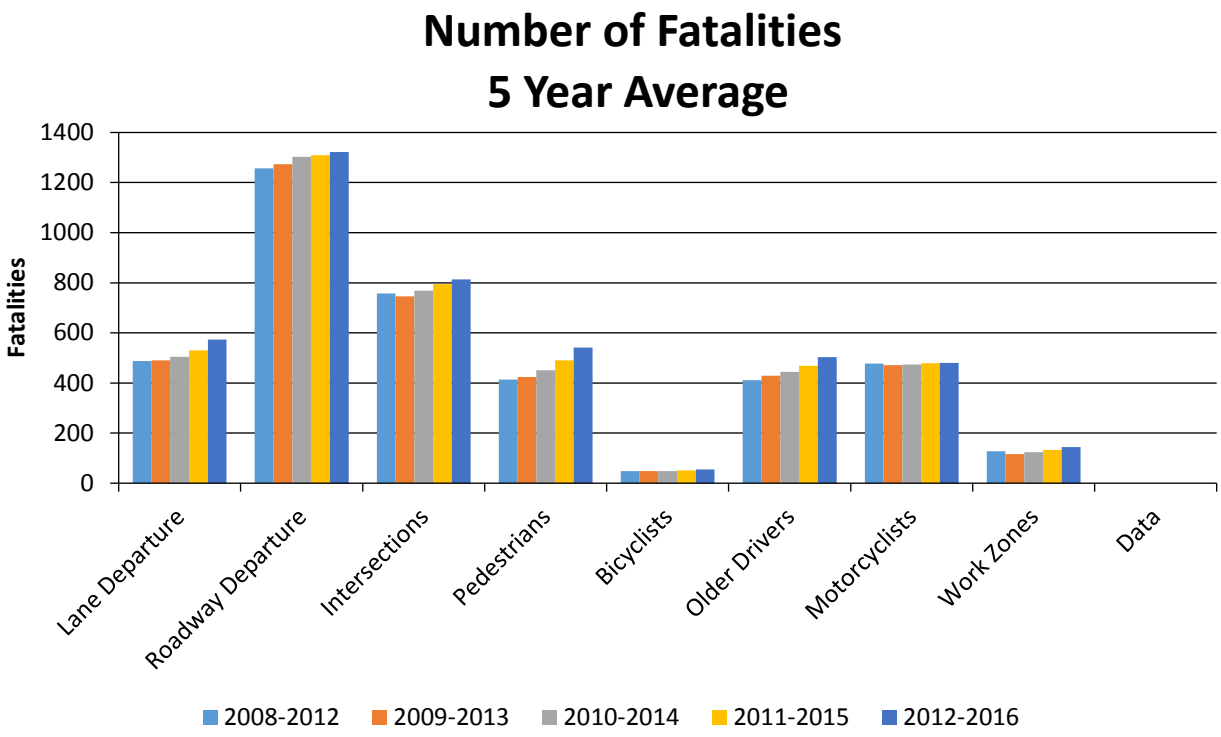
Effectiveness of Groupings or Similar Types of Improvements

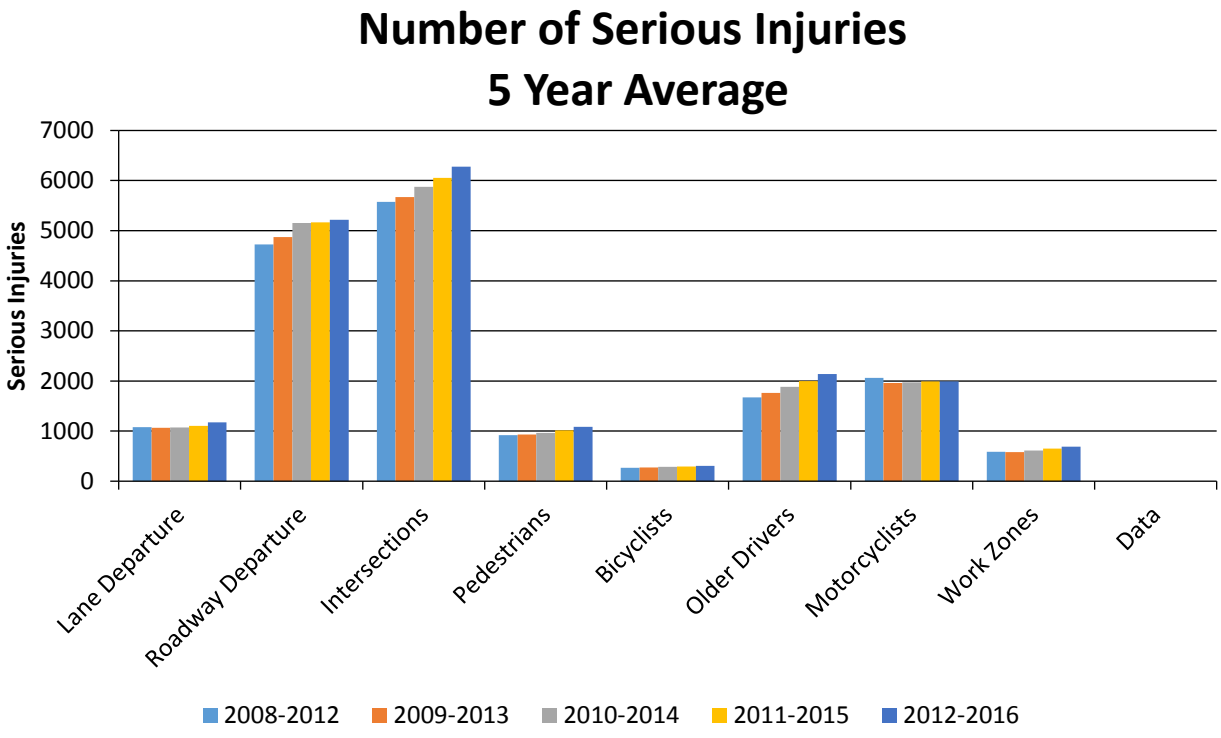
Present and describe trends in SHSP emphasis area performance measures.

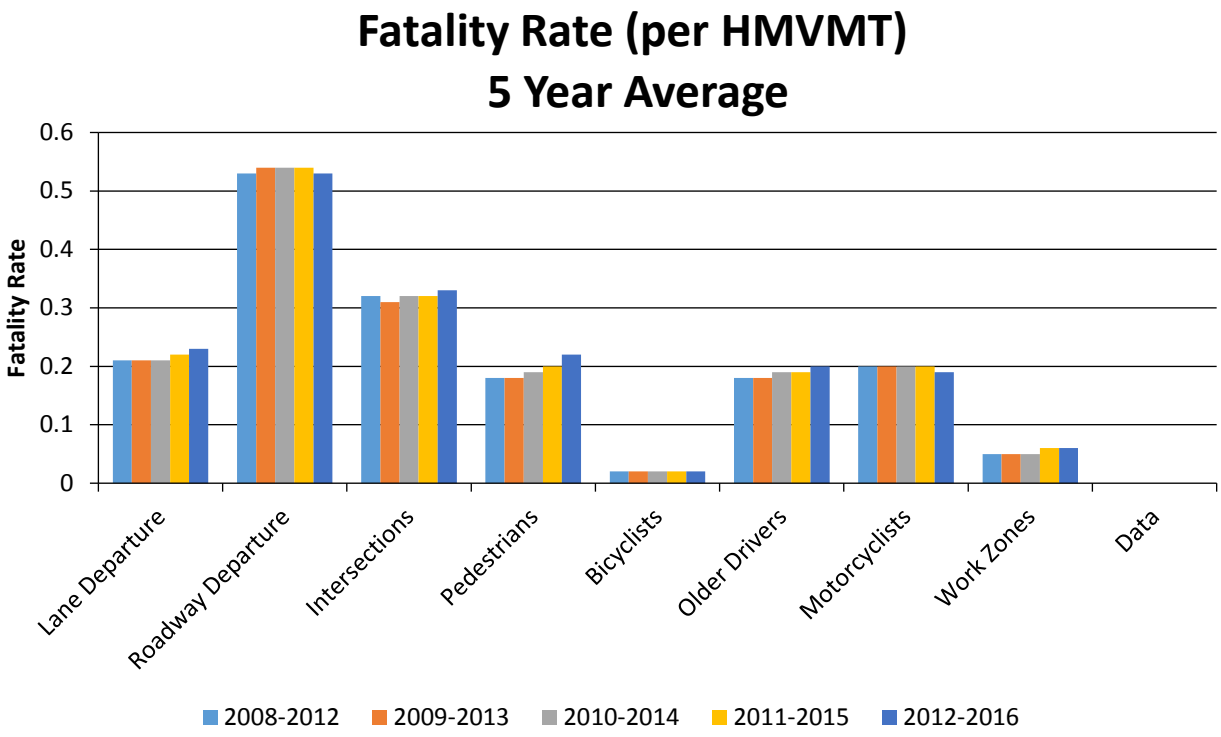
Year 2016

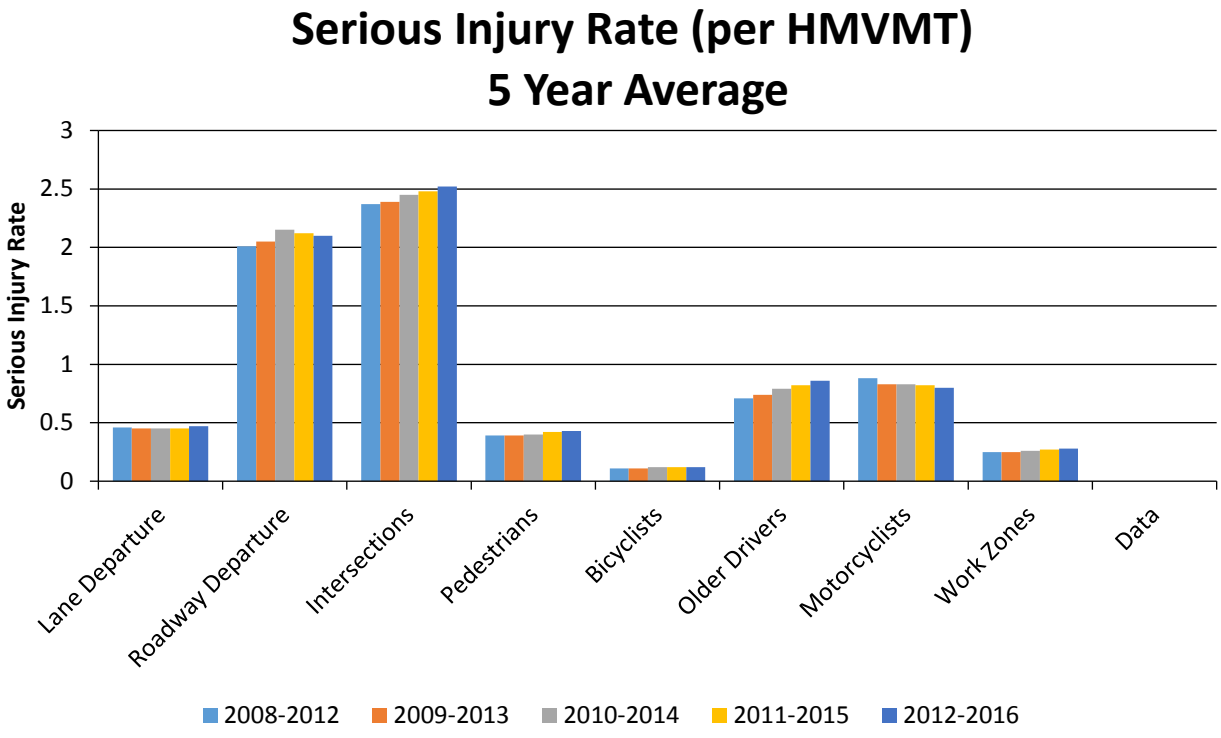
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Lane Departure	Head on	572.8	1,174.2	0.23	0.47	0	0	0
Roadway Departure	Run-off-road	1,322	5,216.8	0.53	2.1	0	0	0
Intersections	Intersections	813.2	6,278.8	0.33	2.52	0	0	0
Pedestrians	Vehicle/pedestrian	541.6	1,083.2	0.22	0.43	0	0	0

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Bicyclists	Vehicle/bicycle	54.2	304.8	0.02	0.12	0	0	0
Older Drivers	Crashes involving drivers & pedestrians 65 years and older	503	2,137.2	0.2	0.86	0	0	0
Motorcyclists	Crashes involving mortorcyclist	480	1,990	0.19	0.8	0	0	0
Work Zones	Work zone related crashes	144.8	689.6	0.06	0.28	0	0	0
Data		0	0	0	0	0	0	0


Number of Fatalities
5 Year Average
Fatalities
1400
1200
1000
800
600
400
200
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016


Number of Serious Injuries
5 Year Average
Serious Injuries
7000
6000
5000
4000
3000
2000
1000
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
2008-2012
2009-2013
2010-2014
2011-2015
2012-2016





Enter additional comments here to clarify your response for this question or add supporting information.

Older Driver data represents the number of people killed and seriously injured in a crash involving an older driver, not just the older driver.

2017 Texas Highway Safety Improvement Program
Older Drivers are defined as Age 65 and over.

Has the State completed any countermeasure effectiveness evaluations during the reporting period?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Project Effectiveness

Provide the following information for previously implemented projects that the State evaluated this reporting period.

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL INJURY BEFORE	ALL INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
N/A														

Enter additional comments here to clarify your response for this question or add supporting information.

Are there any other aspects of the overall HSIP effectiveness on which the State would like to elaborate?

No

Compliance Assessment

What date was the State's current SHSP approved by the Governor or designated State representative?

07/26/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2022

When does the State anticipate completing it's next SHSP update?

2022

Enter additional comments here to clarify your response for this question or add supporting information.

Provide the current status (percent complete) of MIRE fundamental data elements collection efforts using the table below.

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	0	0					0	0	0	0
Route Number (8)	100	100								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100	100								
Rural/Urban Designation (20)	100	100					100	100		
Surface Type (23)	100	100					0	0		
Begin Point Segment Descriptor (10)	0	0					0	0	0	0
End Point Segment Descriptor (11)	0	0					0	0	0	0
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								
Functional Class (19)	100	100					100	100	100	100
Median Type (54)	100	100								

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					100	100		
Average Annual Daily Traffic (79)	100	100					100	100		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					100	100	100	100
INTERSECTION										
Unique Junction Identifier (120)			0	0						
Location Identifier for Road 1 Crossing Point (122)			0	0						
Location Identifier for Road 2 Crossing Point (123)			0	0						
Intersection/Junction Geometry (126)			0	0						
Intersection/Junction Traffic Control (131)			0	0						
AADT for Each Intersecting Road (79)			0	0						
AADT Year (80)			0	0						
Unique Approach Identifier (139)			0	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					0	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					0	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					0	0				
Ramp Length (187)					0	0				
Roadway Type at Beginning of Ramp Terminal (195)					0	0				

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Roadway Type at End Ramp Terminal (199)					0	0				
Interchange Type (182)					0	0				
Ramp AADT (191)					0	0				
Year of Ramp AADT (192)					0	0				
Functional Class (19)					0	0				
Type of Governmental Ownership (4)					0	0				
Totals (Average Percent Complete):	**83.33**	**83.33**	**0.00**	**0.00**	**0.00**	**0.00**	**55.56**	**55.56**	**40.00**	**40.00**

Enter additional comments here to clarify your response for this question or add supporting information.

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

MIRE Fundamental Data Element 9/30/2026 Implementation Plan

Executive Summary

One of the major challenges facing transportation agencies, is collecting, storing and maintaining road data in a manner that is consistent, accurate and timely. This plan has been developed, so that the Texas Department of Transportation (TxDOT) can incorporate the fundamental roadway elements outlined in the Model Inventory Roadway Elements (MIRE) guideline, into the Texas state data systems. The overall goal is to capture timely accurate and complete data that can be lined with crash data and other relevant data sources, for safety analysis. Improvements in the Texas state data systems will further our goals in reducing the number of fatalities and increase the safety for the traveling public within Texas. TxDOT currently coordinates with local entities and will continue to do, in order to successfully implement this plan. TxDOT anticipates that the roadway elements currently not collected by TxDOT will take between one to nine years to enable technology and perform the collection efforts. TxDOT anticipates that this will cost the department no more than $4,000,000.

Background

The Federal Highway Administration (FHWA) recently issued guidance related to State safety data systems under the Highway Safety Improvement Program (HSIP). The purpose of the HSIP program is to achieve a significant reduction in fatalities and serious injuries on all public roads by focusing on a data-driven, strategic approach to improving highway safety [23 U.S.C. 148 (b) (2)]. To support the intended safety analyses within a state's HSIP program, each DOT's safety data system should include a subset of "Model Inventory of Roadway Elements (MIRE)". While the full set of MIRE elements is discussed within FHWA's MIRE document, [1] only a specific subset of "Fundamental Data Elements (FDEs)" are required to be incorporated within a state DOT's safety data system and primarily reflect roadway inventory and traffic volume related data. Moreover, these data elements have been identified and are intended to represent a minimum data set that is needed to run a Highway Safety Manual safety prediction functions. Federal guidance state that states "shall have access to the FDEs on all public roads by September 30, 2026.

MIRE FDEs

Per the Model Inventory of Roadway Elements, version 1.0, [2] MIRE FDEs are "critical to making sound decisions about the design and operation of roadways." Accurate and detailed roadway data will enable tools to enable analysis of safety data which will enable states to make sound decisions for design and operation on Texas roadways. MIRE FEDs specific to the following three hierarchical roadway categories, with each category requiring fewer FDE than the previous one listed:

- Paved roads, functionally classified above local,
- Paved roads, functionally classified as local, and
- Unpaved roads (regardless of functional classification

In addition, MIRE FDEs have also been defined for ramps, interchanges, and intersections. For the purposes of this plan, ramps are considered to be a type of roadway.

Status of Required MIRE FDEs within TxDOT

The Data Management Section within the Transportation Planning and Programming division is the Office of Primary Responsibility (OPR) for the Texas Roadway Inventory data. In August of 2015, TxDOT's Roadway Inventory data was migrated into a single, spatially-based system called the Geospatial Roadway Inventory Database (GRID). This GRID system currently contains 314,000 centerline miles of certified public roadway and approximately 3,100 miles of ramps for both state and local roadways. However, due to the fact that most limited access freeways are paralleled frontage roads, TxDOT has two special categories of ramps, "simple" ramps and "grade separated connectors". There are approximately 2,170 miles of ramps and approximately 930 miles of grade-separated connectors (GSCs).

Currently, members of TPP's Data Management staff, in cooperation with TxDOT's 25 districts, are the primary maintainers of this roadway inventory data. In the fall of 2016, the Traffic Operation division has been also added to the group of data maintainers, primarily to maintain speed limit data, not currently a required MIRE FDE. TxDOT project planners can also access the roadway data in 'read-only' mode to identify and obtain locational referencing information for programming projects. Historically, the Data Management has made this data available to both internal and external entities through a number of means, including an ArcGIS online portal and year-end downloadable data.

The roadway data is also shared with other systems used in safety analysis, such as the Crash Records Information System (CRIS). CRIS updates the roadway data on an annual basis, so that crashes can be located using TxDOT's roadway data and analyzed. Crash location data is analyzed and reviewed by TxDOT staff as well as shared with locals, such as metropolitan planning organizations and city engineering groups. TxDOT provides several methods for local governments and the public to access crash data.

There are two extract files currently offered, one is specifically for the public, and excludes all personally identifiable information. The second is a standard extract, intended for governmental entities and includes all crash data. Many local agencies use this extract file to populate ARCGIS, to enable a visualization of problematic areas involving crashes with fatalities and serious injuries. TxDOT also allows local governmental entities direct access to CRIS

Microstrategy, which is TxDOT's Business Intelligence Tool used to report crash data, so that they can customize the data retrieved from the system to perform specific analysis. Within TxDOT CRIS Microstrategy is used to identify and prioritize Highway Safety Improvement Plan (HSIP) projects. The specific HSIP codes are updated within CRIS for each program call and used as part of the project score, to assess which projects provide the highest cost benefit.

TxDOT's Roadway Inventory data is continuously updated based upon a variety of different sources of information. For on-system (i.e., those roads under the control and jurisdiction of TxDOT), Data Management staff review all roadway projects that are let to construction to determine if the activities within the project would cause an update to any of the attributes in the Roadway Inventory file. Examples of types of projects that would change the inventory include new construction, widening, and bridge replacements. For off-system roadways (example city streets and county roads), TxDOT has regularly canvassed all cities and counties throughout the state on a two-year cycle.

To ensure quality control, the new GRID system contains two important features. First, all updates are performed within the context of a "job", and each job can be assigned to one user and reviewed by another. Secondly, GRID contains over 100 data validation business rules to ensure that consistent and congruous data is entered for all roadway attributes.

In a large part, TxDOT has many of the FHWA required MIRE FDEs in its Highway Performance Monitoring System (HPMS). However, any element not already required and included in HPMS does not exist within TxDOT's Roadway Inventory system. Data Management staff is responsible for maintaining 'non-field' data, such as functional classification, which is not 'collected' per se, while 'field' data, such as Surface Type, is typically 'collected' by TxDOT's district staff. In addition to actual collection by the TxDOT districts or derived data, TxDOT is also obtaining an increased amount of this field data using aerial imagery.

All traffic data is collected, through a variety of technologies, by TxDOT's Transportation Planning and Programming Division, Traffic Analysis section. Depending upon the category of roadway to which a roadway segment belongs, traffic counts are taken either annually or every five years.

TxDOT's Plan to Collect Missing MIRE FDEs

For all MIRE FDEs that are currently part of TxDOT's Roadway Inventory system, TxDOT's Data Management section, in partnership with the Traffic Analysis section, within its Transportation Planning and Programming (TPP) division will continue its current data 'collection' practices. For TxDOT owned roadways, TxDOT has maintained an inventory of its state network for nearly a century.

On a continual basis, TPP reviews all let projects and updates the Roadway Inventory based upon how each roadway construction project affects the items in the Roadway Inventory. In the early 2000s, TxDOT conducted a GPS-based roadway inventory data collection, and since that time TxDOT has canvassed each county every other year to identify new or improved county roads. With the advent of FHWA's All-road (ARNOLD) initiative, TxDOT developed its first ever spatially based inventory of all city streets, regardless of functional classification. TxDOT gathered data from cities, Councils of Governments, E-911 districts, and Metropolitan Planning Organization. However, due the novelty of this inventory, local city street data has yet to be subject to a formal, regular update process. TxDOT envisions having its city street update program mirror its county road inventory program (with half the state being updated each year). In fact, TPP has developed an online 'crowd sourcing' application to assist with this effort. TxDOT will also explore other options such as Open Street Map to assist in its roadway inventory program.

As you will see in table 2 below, interchange and intersection related MIRE FDEs need to be defined and collected. We anticipate that we can utilize existing roadway elements to programmatically identify an intersection. Once identified, we can programmatically connect the spatial layers, which can be validated by District personnel. The model used for this approach is a recent study performed to identify signalized intersections in one district. Crash data was used to first identify intersection related crashes. From there, the geospatial data was programmatically used to connect nodes in order to identify intersections. Once located, the team validated the type of traffic control at the intersection with the assistance of District personnel. A similar approach could be utilized in collecting intersection and interchange related data; specifically first using the attributes and/or crash data that is currently available, perform analysis to identify intersections, programmatically derive intersection layers and lastly, visually verifying the data's accuracy with visual inspection.

TxDOT anticipates the development of internal data for ramps will be prioritized first (1-3 years), while the generation of the various descriptor and other 'derivable' MIRE FDEs will be prioritized second (4-6 or 7-9 years). Both of these data types will require Data Management to work closely with TxDOT's Information Management Division (IMD) to make the necessary revisions to the GRID system in a timely manner. In the case of the AADT for ramps, TxDOT Administration approval is needed for Texas to complete this effort. In summary, all of the MIRE FDEs currently not captured by TxDOT can be collected and/or programmatically derived.

Please note that the MIRE FDEs that currently do not exist, the vast majority of which are not in need of data collection but data generation. TxDOT's current plan for generating these data items are as follows:

Coordination with other Agencies

Currently TxDOT coordinates with a variety of local entities including counties, cities, and Metropolitan Planning Organizations (MPOs) for its Roadway Inventory program. As mentioned earlier, counties and cities have been regularly contacted for information about new roadways. In addition, TxDOT has begun to explore the possibility of gathering traffic count data from other data sources. TxDOT has also coordinated with various federal agencies to generate its own detailed 'official' mileage of federal roads in Texas. We will continue to build upon this coordination with local and other governmental agencies.

Prioritization Criteria for MIRE FDE Data Collection

For roadways and ramps, the priority will be to round out the data for ramps, to develop the procedures by which segment/ramp descriptors and location identifiers are derived, and to continue our efforts in ensuring that the road network contained within our Roadway Inventory system is as complete and up-to-date as possible.

An important task in these efforts will be to successfully integrate an intersection/interchange inventory within our new GRID system. Currently, TxDOT's roadway network is not topologically connected.

Schedule for Data Collection

The general schedule for the completion of the important "gaps" in our system includes the following:

- Short-Term (1-3 years): Develop ramp data and edit GIS line work to ensure the roadway network is topologically correct.
- Medium-Term (4-6 years): Conduct GRID software enhancement project to incorporate intersection/interchange inventory.
- Long-Term (7-9 years): Develop algorithms to generate intersections and derive descriptors and location identifiers such that all MIRE FDEs are fully incorporated into our Roadway Inventory system.

For all of these activities, the priority will be to develop data for on-system routes first, working down the functional classification hierarchy from Interstates to locals. The rationale for this approach is that while on-system roadways constitute only a quarter of the state's roadway miles, they carry nearly three quarters of the state's vehicle miles of travel. Similarly, all intersection and interchange data development will be firsts focused on the connections between on-system roadways, followed by connections between on-system and off-system roadways, and then by off-system to off-system connections.

Estimated Cost for Data Collection

TxDOT estimates that enabling the core data systems (GRID and CRIS) with the missing MIRE FDEs to cost between $3,000,000 and $4,000,000 to implement. TxDOT's GRID system, the primary data element collection system, will require planning which includes establishing field definitions and functional requirement documentation. Once the fields are planned, the database will be structured to house the new data elements.

Once the database is structured and tested, collection efforts can begin. If fields need to be programmatically derived and technical specifications have been confirmed, development can begin.

Once the database is enabled, field data is collected, the system will need to be maintained and updated, as part of on-going maintenance. We anticipate this to be the largest effort and to cost between $2,000,000 and $2,500,000.

CRIS will also have to plan for incorporating the additional MIRE FDEs, so that safety analysis can be performed on crash data. For this effort, much like with GRID, the database must be configured to accommodate the new data fields, along with the various applications that utilize TxDOT's roadway data must be enhanced to display this information for safety analysis. Currently, CRIS updates its roadway data on an annual basis. CRIS has several applications which utilize the roadway data, such as CRIS MAP, Query and Microstrategy. Each application must be enhanced to display and/or utilize the new roadway data elements and requires unit, user acceptance and regression testing. CRIS is dependent upon GRID for its roadway data. As such, GRID and CRIS would coordinate updates to ensure that the fields added to GRID would be able to be added to CRIS. Once implemented, CRIS will also need ongoing maintenance and support for these additional fields. We anticipate the cost to update CRIS to be between $1,000,000 to $1,500,000.

Assumptions

Several assumptions have been made as part of this planning process and are as follows:

- Most if not all of the field data can be collected and/or programmatically derived in a parallel effort.
- State resources (subject matter experts, technical resources and executive support) and funding will be prioritized and made available for this effort.
- TxDOT District personnel will be able to assist in the manual collection efforts.
- Local governmental entities will be able and willing to assist in this process.
- GRID technical resources will be able to perform needed system enhancements.

- CRIS technical resources will be able to perform needed system enhancements.

Provide the suspected serious injury identifier, definition and attributes used by the State for both the crash report form and the crash database using the table below. Please also indicate whether or not these elements are compliant with the MMUCC 4th edition criteria for data element P5. Injury Status, suspected serious injury.

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Report Form	Incapacitating Injury	No	N/A	No	N/A	No
Crash Report Form Instruction Manual	Incapacitating Injury	No	Incapacitating Injury is any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.	No	Includes: Severe lacerations, broken or distorted limbs, skull or chest injuries, abdominal injuries, unconscious at or when taken from the crash scene, unable to leave crash scene without assistance. Excludes: Momentary unconsciousness.	No
Crash Database	Incapacitating Injury	No	N/A	No	N/A	No
Crash Database Data Dictionary	Incapacitating Injury	No	Incapacitating Injury is any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.	No	Includes: Severe lacerations, broken or distorted limbs, skull or chest injuries, abdominal injuries, unconscious at or when taken from the crash scene, unable to leave crash scene without assistance. Excludes: Momentary unconsciousness.	No

Please describe the actions the State is taking to become compliant by April 15, 2019.
The update process is currently taking place and will be completed in 2018.

Enter additional comments here to clarify your response for this question or add supporting information.

Did the State conduct an HSIP program assessment during the reporting period?
No

When does the State plan to complete it’s next HSIP program assessment.

2018

Enter additional comments here to clarify your response for this question or add supporting information.

Optional Attachments

Program Structure:

hsi.pdf

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

Glossary

5 year rolling average	means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).
Emphasis area	means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.
Highway safety improvement project	means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.
HMVMT	means hundred million vehicle miles traveled.
Non-infrastructure projects	are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.
Older driver special rule	applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.
Performance measure	means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.
Programmed funds	mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.
Roadway Functional Classification	means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.
Strategic Highway Safety Plan (SHSP)	means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.
Systematic	refers to an approach where an agency deploys countermeasures at all locations across a system.
Systemic safety improvement	means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.
Transfer	means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.