



KENTUCKY

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

Kentucky's HSIP funds are administered from the Division of Traffic Operations in KYTC's Central Office. Each Highway District has an HSIP Coordinator that works closely with Central Office and District Personnel to conduct a Road Safety Audit (RSA) on potential improvement locations. The RSA teams are multi-disciplinary and represent the following highway functions; planning, highway design, traffic operations, maintenance, and construction. The Cabinet also requests that members from local Area Development Districts (ADDs) participate in the process. Highway Districts are encouraged to submit candidate projects after completing all established guidelines for funding consideration. Funding levels to date have been sufficient to implement projects submitted that meet the eligibility guidelines for the program.

The program methodology used by the Transportation Cabinet during the time period of this report was generally the same as in the previous years. With completion of the document titled, "Kentucky Roadway Departure Safety Implementation Plan" in July 2010, there has been significant reliance on the recommended approach to supplement the traditional process directed to high-crash locations with systemic application of low-cost, cost-effective countermeasures. More specifically, the systemic approach could be characterized as the reverse of the traditional approach in that low-cost, effective countermeasures are first identified and then the crash database is queried to prioritize highway sections that have targeted crashes at or above a crash threshold that would insure cost-effective deployment of these countermeasures.

The HSIP supports Kentucky's Strategic Highway Safety Plan (SHSP) and its vision of Toward Zero Deaths. The mission of the SHSP is, "to reduce Kentucky's highway fatalities and injuries." In conformance with program guidelines, the HSIP seeks to adhere to the SHSP through a data-driven approach for funding safety improvements.

Effectiveness evaluations were performed and benefit/costs were calculated, with results presented for the following three types of systemic improvements:

CABLE MEDIAN BARRIERS

Wilcoxon Signed-Rank Test for "before and after shift in proportions of cross-median or impacted object in median crashes" - significant reduction at 99% confidence level.

Empirical Bayes analysis of "before and after cross-median crashes" was not performed on cable median barrier crashes because the necessary safety performance function was not available.

Benefit/Cost analysis results using observed crashes; 13.58:1 based on Comprehensive Cost of motor vehicle collisions (National Safety Council).

RUMBLE STRIPS

Wilcoxon Signed-Rank Test for "before and after shift in proportions of lane departure crashes" - not a significant reduction at 95% confidence level.

Empirical Bayes analysis of "before and after lane departure crashes" results indicated the change in crashes (effect of the treatment) was significant at the 95% confidence level.

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Benefit/Cost analysis results using expected crashes from empirical Bayes analysis; 28.79:1 based on Comprehensive Cost of motor vehicle collisions (National Safety Council).

HIGH-FRICTION SURFACE TREATMENTS

Wilcoxon Signed-Rank Test for “before and after shift in proportions of wet-weather lane departure crashes” - significant reduction at 99% confidence level.

Empirical Bayes analysis of “before and after wet-weather lane departure crashes” results indicated the change in crashes (effect of the treatment) was significant at the 95% confidence level.

Benefit/Cost analysis results using expected crashes from empirical Bayes analysis; 3.34:1 based on Comprehensive Cost of motor vehicle collisions (National Safety Council).

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.

Kentucky's HSIP funds are administered from the Division of Traffic Operations in KYTC's Central Office. Projects are prioritized and selected through network screening utilizing crash analysis performed by KTC and/or risk assessment utilizing Road Safety Audits (RSAs) performed by District Personnel. Each Highway District has an HSIP Coordinator that works closely with Central Office and District Personnel. Project Development is achieved either in conjunction with in-house staff at the District level or by HSIP consultants. Implementation of projects occurs through the Construction division via lettings. Evaluation is performed through partnership with KTC.

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.

How are HSIP funds allocated in a State?

SHSP Emphasis Area Data

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

The Governor's Office of Highway Safety is responsible for the development of the SHSP. Efforts have been made to use data-driven analysis to identify appropriate emphasis areas to affect highway safety. The "Roadway Departure" and "Intersections" emphasis areas are the primary focus for HSIP infrastructure-related projects.

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

The Safety Circuit Rider program continues to function as the primary means of identifying and implementing projects on local roads through the HSIP. The focus of this program is to provide technical assistance to

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improve safety on local roads and streets. While the free technical advice offered by the Safety Circuit Rider is available to every community across the Commonwealth, the program selects 6 counties with high crash rates on an annual cycle for focused training concerning low-cost safety improvements. The 2017 selected counties are Anderson, Clark, Crittenden, Greenup, Perry, and Russell. Typical improvements in these counties were clearing and correcting water runoff and drainage, repairing shoulder drop off and width, removing fixed objects such as trees and stumps, and clearing vegetation around signs and intersections. Additionally, each county is provided with funds for signing. Aside from these targeted counties, the Safety Circuit Rider Program develops one day training courses designed to provide communities with practical and effective ways to mainstream safety into their day-to-day activities and project development process. These courses are offered free at selected areas throughout Kentucky.

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

Traffic Engineering/Safety
Design
Planning
Maintenance
Operations
Districts/Regions
Governors Highway Safety Office

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

Describe coordination with internal partners.

Kentucky's HSIP funds are administered from the Division of Traffic Operations in KYTC's Central Office. The Planning and Project Development process additionally involves collaboration with all internal partners in the Planning, Design, Traffic Operations, and Maintenance as warranted by subject matter. The Implementation process is performed in collaboration with the Construction Division. Open communication is maintained with all internal partners to develop collaborative solutions on all HSIP endeavors. As component of open communication, each Highway District has a HSIP Coordinator who works closely with the Central Office and other Highway District personnel to conduct Road Safety Audits (RSAs) of potential improvement locations. The RSA teams are multidisciplinary and represent the assorted internal partner groups.

HSIP projects are selected and prioritized based on their correlation with Kentucky's Strategic Highway Safety Plan. There are presently 11 emphasis areas within the SHSP and efforts are made to implement projects consistent with the goals and objectives of the SHSP.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Local Technical Assistance Program
FHWA
Other-Kentucky Transportation Center

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

Describe coordination with external partners.

The Kentucky Transportation Center (KTC) is housed within the University of Kentucky and assists in the performance of data analytics operations for KYTC HSIP.

FHWA representatives work with the HSIP to collaboratively develop the HSIP Investment Plan.

Metropolitan Planning Organizations (MPOs) provide feedback during project identification where applicable and provide the Public Involvement Process (PIP) where applicable.

The University of Kentucky Local Technical Assistance Program (LTAP) assists in administering the Safety Circuit Rider Program, as well as performing the safety analysis for prioritizing the 6 targeted counties subject to the Safety Circuit Rider Program as well as the subsequent RSAs.

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:

[HSIP FAST Planning FINAL.pdf](#)

Select the programs that are administered under the HSIP.

Median Barrier

Intersection

Skid Hazard

Roadway Departure

2017 Kentucky Highway Safety Improvement Program
Low-Cost Spot Improvements
Sign Replacement And Improvement
Shoulder Improvement

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

Program: Intersection

Date of Program Methodology: 3/27/2017

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

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
All crashes	Traffic	
Fatal and serious injury crashes only	Volume	Functional classification

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

Excess expected crash frequency using SPFs

Excess expected crash frequency with the EB adjustment

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

No

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

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

How are projects under this program advanced for implementation?

Other-Prioritized list

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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

Available funding : 2

Ranking based on net benefit : 1

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

Program: Low-Cost Spot Improvements

Date of Program Methodology: 3/27/2017

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

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
Other-Potential	Other-Potential	Other-Potential

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

Other-Potential

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.

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How are projects under this program advanced for implementation?

selection committee

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

Available funding : 1

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

Program: Median Barrier

Date of Program Methodology: 3/27/2017

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

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
All crashes		Median width
Fatal and serious injury crashes only	Volume	Functional classification
		Roadside features

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

Excess expected crash frequency using SPFs

Excess expected crash frequency with the EB adjustment

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

No

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

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Yes

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

How are projects under this program advanced for implementation?

selection committee

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

Available funding : 2

Ranking based on net benefit : 1

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

Program: Roadway Departure

Date of Program Methodology: 3/27/2017

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

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
All crashes		
Fatal and serious injury crashes only	Volume	Functional classification

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

Excess expected crash frequency using SPFs

Excess expected crash frequency with the EB adjustment

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

No

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?

Other-Prioritized list

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

Available funding : 2

Ranking based on net benefit : 1

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

Program: Shoulder Improvement

Date of Program Methodology: 3/27/2017

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

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

Roadside features

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

Other-Systematic Improvement

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

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?

selection committee

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

Available funding : 1

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

History - This is a new initiative for HSIP. This initiative will be used to establish or widen shoulders on KYTC maintained roadways.

Methodology and Implementation

- Identify potential project candidates utilizing HIS and resurfacing prioritization analysis or Roadway Departure Emphasis list
- Evaluate candidates for feasibility of rumble strip installation (ideally implementation of both Centerline and Edgeline/Shoulder rumble strips)
- Deliver projects by District annually
- Obtain an improved shoulder that may consist of:
 - Trenching unimproved shoulder and installing no more than 4" of DGA, 4" Asphalt Based, and 1.5" of Asphalt Surface to establish up to a 2' paved shoulder
 - Adding embankment material to establish shoulder and/or improve slope
 - Extending minor drainage structures to incorporate shoulder widening

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Program: Sign Replacement And Improvement

Date of Program Methodology: 3/27/2017

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

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

All crashes

Volume

Horizontal curvature
Functional classification

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

Crash frequency

Probability of specific crash types

Excess proportions of specific crash types

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?

Other-Prioritized list

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

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Available funding : 2

Ranking based on net benefit : 1

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

Program: Skid Hazard

Date of Program Methodology: 3/27/2017

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

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
All crashes		Horizontal curvature
Fatal and serious injury crashes only	Volume	Functional classification

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

Excess expected crash frequency using SPFs

Excess expected crash frequency with the EB adjustment

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

No

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?

Other-Prioritized list based on EB

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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

Available funding : 2

Ranking based on net benefit : 1

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

What percentage of HSIP funds address systemic improvements?

50

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

Cable Median Barriers
Install/Improve Signing
Upgrade Guard Rails
Clear Zone Improvements
Horizontal curve signs

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
Road Safety Assessment
Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
Stakeholder input

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?

Yes

Describe how the State HSIP considers connected vehicles and ITS technologies.

The KYTC HSIP is preliminarily exploring the potential benefits of connected vehicles and ITS technologies in regards to the goals of the SHSP.

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.

KYTC HSIP has worked with the Kentucky Transportation Center to improve the data analytics process utilizing the procedures and information found in the HSM. Specifically, KTC incorporates network screening techniques from Section B of the HSM and develops Safety Performance Functions (SPFs) to identify locations most likely to see a safety benefit. In addition, HSM Part C methods are used for evaluation and benefit-cost analysis of safety improvements.

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?

Yes

Describe other aspects of the HSIP methodology on which the State would like to elaborate.

In 2016, Kentucky's HSIP continued developing projects that deployed both systemic and reactive countermeasures throughout most emphasis areas. Examples include:

Cable Median Barrier - Kentucky is systemically deploying Cable Median Barrier on all sections of Interstate that are currently void of median barrier. From year to year, the sections are selected based on annual data analysis of the interstate and parkway systems.

Roadway Departure Corridor - Corridors are selected across the state based on annual data analysis of two-lane, high-speed (50+ mph) rural roads. Reactive countermeasures, such as curve re-alignment, super-elevation improvements, and/or High Friction Surface Treatment are employed at high-crash curves along the corridors. Systemic improvements such as shouldering, signing, and improvements to create a consistent roadside are employed along the entire corridor.

Horizontal Alignment Signing - Crash data is utilized to determine curved sections of roadway with a high number of dry-weather crashes. Routes with one or more such sections, in a single county, are then evaluated for horizontal alignment signing both to target the specified curved sections as well along the entirety of the route through the selected county.

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)	\$40,500,000	\$36,549,463	90.25%
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	\$40,500,000	\$36,549,463	90.25%

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?

\$207,000

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

\$207,000

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

The obligation for local safety projects (Safety Circuit Rider) occurs on a biennial basis.

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

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\$500,000

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

\$500,000

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

These funds account for outreach to local road agencies, including technical assistance and training.

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

\$0

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

\$26,614,768

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

Transfers occurred from the following funds:

\$1,000,000 from ZS30 to Z240 (STP)

\$17,560,306 from ZS30 to Z001 (NHPP)

\$6,834,605 from MS3E to M0E1 (NHPP)

\$1,219,857 from MS3E to M01E (NHPP)

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

Prior to MAP-21, the HSIP allotment Kentucky received was approximately \$22 million. With its enactment in Oct. 2012, MAP-21 nearly doubled Kentucky's HSIP allotment to approximately \$38 million. After the increase in funding, Kentucky struggled to produce a program of projects that expended the approximate \$38 million in HSIP allotment, and as a result a surplus of HSIP funds developed. To combat this, the HSIP staff utilized Kentucky's Strategic Highway Safety Plan to create a HSIP Investment Plan to guide transportation safety obligations and spending. The plan includes a set of initiatives with guidelines on general project selection methodology and countermeasure implementation. HSIP staff also developed and continually updates a project level status report with anticipated project funding needs to determine the best approach to program and invest the current fiscal year HSIP allotment as well as the surplus of unobligated funds from previous fiscal years. Kentucky has also established on-call contracts with 4 consulting firms to expedite the design and development of current, and future, HSIP projects to help expend the additional HSIP allotment.

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Through the implementation of the HSIP Investment Plan the program has met with significant success correcting these impediments and the HSIP has progressed toward full annual obligation of HSIP funds over the reporting period.

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

No

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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
ACCESS MANAGEMENT AND OFFSET TURN LANES ON US 25 FROM KY 4 (NEW CIRCLE RD) TO CS 3853 (SHRINERS LN).	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	1	Intersections	\$15000	\$15000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	28,374	45	State Highway Agency	Spot	Intersections	
CABLE MEDIAN BARRIER INSTALLATION ON I 64 FROM MP 148.665 TO MP 158.965 IN CARTER COUNTY. (2016BOP)	Roadside	Barrier - cable	10.3	Miles	\$20000	\$20000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	13,706	70	State Highway Agency	Spot	Roadway Departure	
CABLE MEDIAN BARRIER INSTALLATION ON I 64 FROM MP 148.665 TO MP 158.965 IN CARTER COUNTY. (2016BOP)	Roadside	Barrier - cable	10.3	Miles	\$1958950	\$1958950	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	13,706	70	State Highway Agency	Spot	Roadway Departure	
CABLE MEDIAN BARRIER INSTALLATION ON I-64 FROM MP 137.231 TO MP 148.665 IN ROWAN COUNTY. (2016BOP)	Roadside	Barrier - cable	11.434	Miles	\$20000	\$20000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	21,435	70	State Highway Agency	Spot	Roadway Departure	
CABLE MEDIAN BARRIER INSTALLATION ON I-64 FROM MP 137.231 TO MP 148.665 IN ROWAN COUNTY. (2016BOP)	Roadside	Barrier - cable	11.434	Miles	\$2262228	\$2262228	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	21,435	70	State Highway Agency	Spot	Roadway Departure	
CORRECT DROP OFFS, IMPROVE DITCHING, REMOVE TREES IN CLEAR ZONE AND INSTALL HFS FROM MP 1.7 TO MP 2.25 ON KY 1829 IN KENTON COUNTY.	Roadside	Removal of roadside objects (trees, poles, etc.)	0.55	Miles	\$100000	\$100000	HSIP (23 U.S.C. 148)	Urban Major Collector	5,053	45	State Highway Agency	Spot	Roadway Departure	
CORRECT SUPERELEVATION IN CURVES, REMOVE TREES IN CLEAR ZONE, DITCHING/SHOULDERING, AND EXTEND CULVERT (MP 8.06) ON KY 17 FROM KY 467 TO KY 491. (2014BOP)	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Miles	\$263507	\$263507	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,618	55	State Highway Agency	Spot	Roadway Departure	
CURVE REALIGNMENT ON KY 638 FROM 0.063 MI WEST OF BALES CREEK RD (MP 10.1) TO 0.054 MI EAST OF JARVE HOLLOW RD (MP 10.4).	Alignment	Horizontal curve realignment	0.3000000000000001	Curves	\$8322	\$8322	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,536	55	State Highway Agency	Spot	Roadway Departure	
CURVE REVISION ON KY 979 FROM KY 122 (MP	Alignment	Horizontal curve realignment	0.25	Miles	\$150000	\$150000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,139	55	State Highway Agency	Spot	Roadway Departure	

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													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
0.00) TO CR 1184 (MP 0.25). (2012BOP)														
DATA COLLECTION TO FACILITATE IMPROVING THE RAILROAD CROSSING INVENTORY.	Non-infrastructure	Data/traffic records	1	Numbers	\$100000	\$100000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Data	
EXTEND TURN LANES AND ADD ACCELERATION LANE ON KY 80 BETWEEN MP 6.00 AND MP 10.00.	Roadway	Roadway widening - add lane(s) along segment	4	Miles	\$275933	\$275933	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	11,735	55	State Highway Agency	Spot	Intersections	
EXTEND TURN LANES AND ADD ACCELERATION LANE ON KY 80 BETWEEN MP 6.00 AND MP 10.00.	Roadway	Roadway widening - add lane(s) along segment	4	Miles	\$270000	\$270000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	11,735	55	State Highway Agency	Spot	Intersections	
GUARDRAIL END TREATMENT UPGRADES ON US 31E FROM MP 0.00 TO MP 6.7 IN BARREN COUNTY.	Roadside	Barrier end treatments (crash cushions, terminals)	6.7	Miles	\$900000	\$900000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,571	55	State Highway Agency	Spot	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN CAMPBELL, KENTON AND HARRISON COUNTIES.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$153653	\$153653	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN CAMPBELL, KENTON AND HARRISON COUNTIES.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$264000	\$264000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 3.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$540000	\$540000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 4.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$407147	\$407147	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 4.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$465000	\$465000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 7. (2016BOP)	Roadway signs and traffic control	Curve-related warning signs and flashers			\$687429	\$687429	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 7. (2016BOP)	Roadway signs and traffic control	Curve-related warning signs and flashers			\$800000	\$800000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 8.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$666195	\$666195	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 8.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$441790	\$441790	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN JEFFERSON, HENRY, OLDHAM, AND SPENCER COUNTIES IN DISTRICT 5.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$300000	\$300000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN JEFFERSON, HENRY, OLDHAM, AND SPENCER COUNTIES IN DISTRICT 5.	Roadway signs and traffic control	Curve-related warning signs and flashers			\$297299	\$297299	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
IMPLEMENTATION OF THE FY 2018 STATEWIDE PLANNING PROGRAM.	Non-infrastructure	Transportation safety planning	1	Numbers	\$500000	\$500000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Data	
INSTALL GUARDRAIL ALONG GLASS MILL ROAD (KY 1268) FROM 0.176 MILES NORTH OF LONE OAK LANE (MP 10.665) TO 0.123 MILES SOUTH OF FIG LANE (MP 10.775).	Roadside	Barrier- metal	0.110000000000001	Miles	\$6090	\$6090	HSIP (23 U.S.C. 148)	Rural Major Collector	823	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG GLASS MILL ROAD (KY 1268) FROM 0.176 MILES NORTH OF LONE OAK LANE (MP 10.665) TO 0.123 MILES SOUTH OF FIG LANE (MP 10.775).	Roadside	Barrier- metal	0.110000000000001	Miles	\$18150	\$18150	HSIP (23 U.S.C. 148)	Rural Major Collector	823	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 10 FROM 0.150 MILE EAST OF OLD LOCK AND DAM ROAD (MP 7.165) TO 0.062 MILE EAST OFBULL FORK ROAD (MP 7.577).	Roadside	Barrier- metal	0.412	Miles	\$17080	\$17080	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,106	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 10 FROM 0.150 MILE EAST OF OLD LOCK AND DAM ROAD (MP 7.165) TO 0.062 MILE EAST OFBULL FORK ROAD (MP 7.577).	Roadside	Barrier- metal	0.412	Miles	\$60500	\$60500	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,106	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 11 FROM 0.071 MILES NORTH OF KY 3363 (MP 0.510) TO 0.582 MILES SOUTH OF BARNETT ROAD (MP 0.582).	Roadside	Barrier- metal	0.072	Miles	\$15400	\$15400	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,964	55	State Highway Agency	Spot	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
INSTALL GUARDRAIL ALONG KY 11 FROM 0.071 MILES NORTH OF KY 3363 (MP 0.510) TO 0.582 MILES SOUTH OF BARNETT ROAD (MP 0.582).	Roadside	Barrier- metal	0.072	Miles	\$4168	\$4168	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,964	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 1439 FROM 4.333 MILES NORTH OF THE PIKE CUUNTY LINE (MP 4.333) TO 0.037 MILES NORTH OF MIDDLE FORK ROAD (MP 4.849)	Roadside	Barrier- metal	0.516	Miles	\$7565	\$7565	HSIP (23 U.S.C. 148)	Rural Local Road or Street	484	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 165 FROM 0.293 MILE NORTH OF MOUNT TABOR ROAD (MP 4.314) TO 0.001 MILE NORTH OF DEER LICK ROAD (MP 4.751).	Roadside	Barrier- metal	0.437	Miles	\$9084	\$9084	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,422	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 165 FROM 0.293 MILE NORTH OF MOUNT TABOR ROAD (MP 4.314) TO 0.001 MILE NORTH OF DEER LICK ROAD (MP 4.751).	Roadside	Barrier- metal	0.437	Miles	\$82500	\$82500	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,422	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 1714 FROM 0.392 MILE NORTH OF DAVIS BRANCH ROAD (MP 8.927) TO BUCKS BRANCH ROAD (MP 9.692).	Roadside	Barrier- metal	8.535	Miles	\$82500	\$82500	HSIP (23 U.S.C. 148)	Rural Local Road or Street	214	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 1714 FROM 0.392 MILE NORTH OF DAVIS BRANCH ROAD (MP 8.927) TO BUCKS BRANCH ROAD (MP 9.692).	Roadside	Barrier- metal	8.535	Miles	\$20416	\$20416	HSIP (23 U.S.C. 148)	Rural Local Road or Street	214	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 2030 FROM 0.170 MILE EAST OF GRANT AKERS CEMETERY ROAD (MP 6.000) TO 0.360 MILE WEST OF COUNTRY OAKS ROAD (MP 7.530).	Roadside	Barrier- metal	1.53	Miles	\$24321	\$24321	HSIP (23 U.S.C. 148)	Rural Major Collector	1,435	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 2030 FROM 0.170 MILE EAST OF GRANT AKERS CEMETERY ROAD (MP 6.000) TO 0.360 MILE	Roadside	Barrier- metal	1.53	Miles	\$165000	\$165000	HSIP (23 U.S.C. 148)	Rural Major Collector	1,435	55	State Highway Agency	Spot	Roadway Departure	

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													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
WEST OF COUNTRY OAKS ROAD (MP 7.530).														
INSTALL GUARDRAIL ALONG KY 292 FROM 0.151 MILE NORTH OF MELVAN ROAD (MP 18.973) TO 0.279 MILE NORTH OF WHITE ROAD (MP 19.469).	Roadside	Barrier- metal	0.496000000000002	Miles	\$77000	\$77000	HSIP (23 U.S.C. 148)	Rural Major Collector	2,570	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 292 FROM 0.151 MILE NORTH OF MELVAN ROAD (MP 18.973) TO 0.279 MILE NORTH OF WHITE ROAD (MP 19.469).	Roadside	Barrier- metal	0.496000000000002	Miles	\$19811	\$19811	HSIP (23 U.S.C. 148)	Rural Major Collector	2,570	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 3318 FROM 0.094 MILE NORTH OF THOMAS CEMETERY ROAD (MP 1.198) TO 0.003 MILE SOUTH OF BEARSKIN HOLLOW ROAD MP (4.233).	Roadside	Barrier- metal	3.035	Miles	\$149000	\$149000	HSIP (23 U.S.C. 148)	Rural Local Road or Street	219	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 3391 FROM 79 FEET SOUTH OF MEMORY LANE (MP 3.203) TO 1161 FEET NORTH OF MEMORY LANE (MP 3.438).	Roadside	Barrier- metal	0.235	Miles	\$34100	\$34100	HSIP (23 U.S.C. 148)	Rural Major Collector	1,278	55	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 567 FROM 0.566 MILES EAST OF SIMPSON BROTHERS DRIVE (MP 1.815) TO 0.090 MILES WEST OF MIDDLE CREEK ROAD (MP 1.867).	Roadside	Barrier- metal	0.052	Miles	\$15000	\$15000	HSIP (23 U.S.C. 148)	Rural Major Collector	2,994	45	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG KY 567 FROM 0.566 MILES EAST OF SIMPSON BROTHERS DRIVE (MP 1.815) TO 0.090 MILES WEST OF MIDDLE CREEK ROAD (MP 1.867).	Roadside	Barrier- metal	0.052	Miles	\$2400	\$2400	HSIP (23 U.S.C. 148)	Rural Major Collector	2,994	45	State Highway Agency	Spot	Roadway Departure	
INSTALL GUARDRAIL ALONG US 60 FROM 700 FEET WEST OF NORTH STEPS ROAD (MP 4.980), EXTENDING EAST TO 175 FEET WEST OF MANDY AVENUE (MP 6.429)	Roadside	Barrier- metal	1.539	Miles	\$13155	\$13155	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,149	55	State Highway Agency	Spot	Roadway Departure	
INSTALL HIGH FRICTION SURFACE ON I-65 MAINLINE THROUGH "HOSPITAL CURVE" AND	Roadway	Pavement surface - high friction surface	1	Curves	\$335000	\$335000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Interstate	84,001	50	State Highway Agency	Spot	Roadway Departure	

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													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
INSTALL LINEAR DELINEATION PANELS ON CENTER AND OUTSIDE BARRIER WALLS.														
INSTALL HIGH FRICTION SURFACE ON KY 8 THROUGH "DUGANS CURVE" FROM MP 14.689 TO MP 14.988 IN LEWIS COUNTY.	Roadway	Pavement surface - high friction surface	1	Curves	\$43000	\$43000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,932	55	State Highway Agency	Spot	Roadway Departure	
INSTALL INTERSECTION CONFLICT WARNING SYSTEM AT THE INTERSECTION OF US 431 AND KY 85 EAST OF ISLAND.	Intersection traffic control	Intersection signing - add enhanced advance warning (double-up and/or oversize)	1	Intersections	\$99000	\$99000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,622	55	State Highway Agency	Spot	Intersections	
INSTALL INTERSECTION CONFLICT WARNING SYSTEM AT THE INTERSECTION OF US 431 AND KY 85 EAST OF ISLAND.	Intersection traffic control	Intersection signing - add enhanced advance warning (double-up and/or oversize)	1	Intersections	\$0	\$0	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,622	55	State Highway Agency	Spot	Intersections	
INSTALL LEFT TURN LANE ON HR 9006 FROM 0.03 MI EAST OF KY 6261 EXTENDING EASTWARD TO 0.010 MI WEST OF KY 472.	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Lanes	\$143550	\$143550	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	12,019	55	State Highway Agency	Spot	Intersections	
INSTALL OFFSET RIGHT TURN LANES AT THE INTERSECTION OF US 127 AT KY 90 AND KY 734.	Intersection geometry	Auxiliary lanes - modify right-turn lane offset	1	Lanes	\$335000	\$335000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	1,079	55	State Highway Agency	Spot	Intersections	
INSTALL RIGHT TURN LANE TO NORTH LAUREL HIGH SCHOOL ON HR 9006 FROM 0.03 MI EAST OF KY 6261 TO 0.25 MI WEST OF KY 638.	Intersection geometry	Auxiliary lanes - add right-turn lane	1	Lanes	\$14492	\$14492	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	12,019	55	State Highway Agency	Spot	Intersections	
INSTALLATION OF A CABLE MEDIAN BARRIER ON I-64 FROM THE TYGRATS CREEK BRIDGE (MP 161.00) TO 0.7 MILE WEST OF THE CARTER/BOYD COUNTY LINE (MP 180.10).	Roadside	Barrier - cable	19.1	Miles	\$979320	\$979320	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	13,219	70	State Highway Agency	Spot	Roadway Departure	
INSTALLATION OF HFS ON THE EASTBOUND LANES OF KY 9000 (MOUNTAIN PARKWAY) FROM MP 35.2 TO MP 35.8 IN POWELL COUNTY.	Roadway	Pavement surface - high friction surface	1	Curves	\$157708	\$157708	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,711	70	State Highway Agency	Spot	Roadway Departure	
INSTALLATION OF HFS ON THE EASTBOUND LANES OF KY 9000	Roadway	Pavement surface - high friction surface	1	Curves	\$217000	\$217000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,711	70	State Highway Agency	Spot	Roadway Departure	

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													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
(MOUNTAIN PARKWAY) FROM MP 35.2 TO MP 35.8 IN POWELL COUNTY.														
INSTALLATION OF HIGH FRICTION SURFACE ON NB US 41 FROM MP 20.090 TO MP 20.290. (2016BOP)	Roadway	Pavement surface - high friction surface	1	Curves	\$27920	\$27920	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	41,107	55	State Highway Agency	Spot	Roadway Departure	
INSTALLATION OF HIGH FRICTION SURFACE ON NB US 41 FROM MP 20.090 TO MP 20.290. (2016BOP)	Roadway	Pavement surface - high friction surface	1	Curves	\$140000	\$140000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	41,107	55	State Highway Agency	Spot	Roadway Departure	
INSTALLATION OF TRAFFIC SHEET SIGNS ON KY 3366 IN BOYLE COUNTY.	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	1	Locations	\$30000	\$30000	HSIP (23 U.S.C. 148)	Urban Major Collector	641	45	State Highway Agency	Spot	Roadway Departure	
INTERSECTION AND SIGHT DISTANCE IMPROVEMENTS ON KY 772 AT KY 985 INTERSECTION (MP 4.8 - 4.9). (2014BOP)	Intersection geometry	Intersection geometry - other	1	Intersections	\$6000	\$6000	HSIP (23 U.S.C. 148)	Rural Major Collector	270	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENT PROJECT AT US 42 AND RICE PIKE/HICKS PIKE. US 42 MP 8.4 TO 8.6. TOLL CREDITS. (2012BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$600000	\$600000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	9,187	45	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 11 (MP 14.791-15.191) AND AIRPORT RD/WHITE AVE IN POWELL COUNTY, KY. (2016BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$25000	\$25000	HSIP (23 U.S.C. 148)	Rural Minor Collector	4,764	45	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 11 (MP 14.791-15.191) AND AIRPORT RD/WHITE AVE IN POWELL COUNTY, KY. (2016BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$15000	\$15000	HSIP (23 U.S.C. 148)	Rural Minor Collector	4,764	45	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 15 (MP 11.75-11.95) AND KY 451C IN PERRY COUNTY, KY.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$173000	\$173000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	15,389	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 15 (MP 11.75-11.95) AND KY 451C IN PERRY COUNTY, KY.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$52000	\$52000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	15,389	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 15 (MP 8.976-9.376) AND KY	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$255000	\$255000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,183	55	State Highway Agency	Spot	Intersections	

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													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
1110/FISH POND LOOP IN BREATHITT COUNTY, KY. (2016BOP)														
INTERSECTION IMPROVEMENTS AT KY 15 (MP 8.976-9.376) AND KY 1110/FISH POND LOOP IN BREATHITT COUNTY, KY. (2016BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$10000	\$10000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,183	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 15 AND KY 11 IN POWELL COUNTY LOCATED IN DISTRICT 10. (2014BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$25000	\$25000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,120	35	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 15 AND KY 11 IN POWELL COUNTY LOCATED IN DISTRICT 10. (2014BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$15000	\$15000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,505	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 361 (MP 6.50) AND DECKARD SCHOOL ROAD (CR-1073) IN HARDIN COUNTY, KY.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$349190	\$349190	HSIP (23 U.S.C. 148)	Rural Minor Arterial	12,746	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 451 AND ELM/LIBERTY STREET IN PERRY COUNTY LOCATED IN DISTRICT 10.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$158489	\$158489	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,356	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 451 AND ELM/LIBERTY STREET IN PERRY COUNTY LOCATED IN DISTRICT 10.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$105000	\$105000	HSIP (23 U.S.C. 148)	Urban Major Collector	9,026	35	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 52 (MP 6.548-6.948) AND KY 499/SHADY LANE IN ESTILL COUNTY, KY. (2016BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$110000	\$110000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	9,314	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 52 (MP 6.548-6.948) AND KY 499/SHADY LANE IN ESTILL COUNTY, KY. (2016BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$5000	\$5000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	9,314	55	State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT KY 80 AND JUSTICE DRIVE (CR 1863) INTERSECTION AT HAZARD, KENTUCKY IN	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$304309	\$304309	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	12,038	55	State Highway Agency	Spot	Intersections	

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													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
PERRY COUNTY. (2012BOP)														
INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN DAVIESS, HENDERSON, AND MCLEAN COUNTIES LOCATED IN DISTRICT 2. (2014BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified			\$99000	\$99000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN DAVIESS, HENDERSON, AND MCLEAN COUNTIES LOCATED IN DISTRICT 2. (2014BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified			\$79876	\$79876	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN HARDIN, NELSON, AND TAYLOR COUNTIES LOCATED IN DISTRICT 4. (2014BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified			\$223850	\$223850	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified			\$513907	\$513907	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified			\$125000	\$125000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified			\$524000	\$524000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Spot	Intersections	
LOWER EXISTING CURVE GRADE TO INCREASE INTERSECTION SIGHT DISTANCE ON US 25W FROM 0.05 MI SOUTH OF SPRUCE CREEK RD EXTENDING NORTH TO 0.05 MI NORTH OF SPRUCE CREEK RD. (2014BOP)	Intersection geometry	Intersection geometry - other	1	Intersections	\$20000	\$20000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,107	55	State Highway Agency	Spot	Intersections	
MINOR SHOULDER WIDENING FROM THE PENDLETON/BRACKEN COUNTY LINE (MP 0.00)	Shoulder treatments	Widen shoulder - paved or other	4.387	Miles	\$502781	\$502781	HSIP (23 U.S.C. 148)	Rural Minor Collector	363	55	State Highway Agency	Spot	Roadway Departure	

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													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
TO KY 10 (MP 4.387) IN BRACKEN COUNTY.														
MINOR SHOULDER WIDENING FROM THE PENDLETON/BRACKEN COUNTY LINE (MP 0.00) TO KY 10 (MP 4.387) IN BRACKEN COUNTY.	Shoulder treatments	Widen shoulder - paved or other	4.387	Miles	\$475365	\$475365	HSIP (23 U.S.C. 148)	Rural Minor Collector	363	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 1 FROM MP 12.8 TO MP 14.1 IN LAWRENCE COUNTY.	Shoulder treatments	Widen shoulder - paved or other	1.3	Miles	\$202382	\$202382	HSIP (23 U.S.C. 148)	Rural Minor Collector	436	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 1 FROM MP 12.8 TO MP 14.1 IN LAWRENCE COUNTY.	Shoulder treatments	Widen shoulder - paved or other	1.3	Miles	\$235413	\$235413	HSIP (23 U.S.C. 148)	Rural Minor Collector	436	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 1 FROM THE LAWRENCE/CARTER COUNTY LINE TO 0.077 MI NORTH OF DAVY RUN RD IN CARTER COUNTY.	Shoulder treatments	Widen shoulder - paved or other	5.7	Miles	\$530000	\$530000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,746	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 1 FROM THE LAWRENCE/CARTER COUNTY LINE TO 0.077 MI NORTH OF DAVY RUN RD IN CARTER COUNTY.	Shoulder treatments	Widen shoulder - paved or other	5.7	Miles	\$598925	\$598925	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,746	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 189 FROM CHRISTIAN/MUHLENBURG COUNTY LINE (MP 0.00) TO KY 175 (MP 5.38) IN MUHLENBURG COUNTY.	Shoulder treatments	Widen shoulder - paved or other	5.38	Miles	\$500000	\$500000	HSIP (23 U.S.C. 148)	Rural Minor Collector	506	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 189 FROM CHRISTIAN/MUHLENBURG COUNTY LINE (MP 0.00) TO KY 175 (MP 5.38) IN MUHLENBURG COUNTY.	Shoulder treatments	Widen shoulder - paved or other	5.38	Miles	\$860379	\$860379	HSIP (23 U.S.C. 148)	Rural Minor Collector	506	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 299 FROM KY 121 (MP 3.103) TO THE CALLOWAY/MARSHALL COUNTY LINE (MP 10.665) IN CALLOWAY COUNTY.	Shoulder treatments	Widen shoulder - paved or other	7.562	Miles	\$519500	\$519500	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,586	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 299 FROM KY 121 (MP 3.103) TO THE CALLOWAY/MARSHALL	Shoulder treatments	Widen shoulder - paved or other	7.562	Miles	\$591399	\$591399	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,586	55	State Highway Agency	Spot	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
COUNTY LINE (MP 10.665) IN CALLOWAY COUNTY.														
MINOR SHOULDER WIDENING ON KY 32 FROM MP 14.63 TO MP 16.92 IN LAWRENCE COUNTY.	Shoulder treatments	Widen shoulder - paved or other	2.29	Miles	\$305932	\$305932	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,005	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 32 FROM MP 14.63 TO MP 16.92 IN LAWRENCE COUNTY.	Shoulder treatments	Widen shoulder - paved or other	2.29	Miles	\$354369	\$354369	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,005	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 379 FROM KY 55 (MP 10.876) TO US 127 (MP 20.348) IN RUSSELL COUNTY.	Shoulder treatments	Widen shoulder - paved or other	9.472	Miles	\$1143511	\$1143511	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,121	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 379 FROM KY 55 (MP 10.876) TO US 127 (MP 20.348) IN RUSSELL COUNTY.	Shoulder treatments	Widen shoulder - paved or other	9.472	Miles	\$586000	\$586000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,121	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 399 FROM KY 587 (MP 2.159) TO 0.073 MI N OF BARGER LANE (MP 4.959) IN LEE COUNTY.	Shoulder treatments	Widen shoulder - paved or other	2.8	Miles	\$515000	\$515000	HSIP (23 U.S.C. 148)	Rural Minor Collector	515	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 399 FROM KY 587 (MP 2.159) TO 0.073 MI N OF BARGER LANE (MP 4.959) IN LEE COUNTY.	Shoulder treatments	Widen shoulder - paved or other	2.8	Miles	\$634844	\$634844	HSIP (23 U.S.C. 148)	Rural Minor Collector	515	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 49 FROM MP 4.520 TO MP 9.442 IN NELSON COUNTY.	Shoulder treatments	Widen shoulder - paved or other	4.922	Miles	\$691000	\$691000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,611	45	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 49 FROM MP 4.520 TO MP 9.442 IN NELSON COUNTY.	Shoulder treatments	Widen shoulder - paved or other	4.922	Miles	\$571017	\$571017	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,611	45	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 92 FROM MP 10.46 TO MP 16.615 IN WHITLEY COUNTY.	Shoulder treatments	Widen shoulder - paved or other	6.155	Miles	\$1020346	\$1020346	HSIP (23 U.S.C. 148)	Urban Minor Arterial	3,847	35	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON KY 92 FROM MP 10.46 TO MP 16.615 IN WHITLEY COUNTY.	Shoulder treatments	Widen shoulder - paved or other	6.155	Miles	\$760943	\$760943	HSIP (23 U.S.C. 148)	Urban Minor Arterial	3,847	35	State Highway Agency	Spot	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
MINOR SHOULDER WIDENING ON US 25 FROM MP 5.976 TO MP 12.027 IN MADISON COUNTY.	Shoulder treatments	Widen shoulder - paved or other	6.051	Miles	\$570071	\$570071	HSIP (23 U.S.C. 148)	Urban Minor Arterial	8,800	55	State Highway Agency	Spot	Roadway Departure	
MINOR SHOULDER WIDENING ON US 25 FROM MP 5.976 TO MP 12.027 IN MADISON COUNTY.	Shoulder treatments	Widen shoulder - paved or other	6.051	Miles	\$570000	\$570000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	8,800	55	State Highway Agency	Spot	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 10 IN CAMPBELL COUNTY. 2012BOP	Roadside	Roadside - other	9.18	Miles	\$379493	\$379493	HSIP (23 U.S.C. 148)	Urban Major Collector	1,777	45	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 10 IN CAMPBELL COUNTY. 2012BOP	Roadside	Roadside - other	9.18	Miles	\$1470000	\$1470000	HSIP (23 U.S.C. 148)	Urban Major Collector	1,777	45	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 100 FROM LOGAN-SIMPSON CO. LINE TO ALLEN ROAD (MP 8.375) IN SIMPSON COUNTY, KY. (2014BOP)	Roadside	Roadside - other	8.375	Miles	\$370000	\$370000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,204	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 100 FROM LOGAN-SIMPSON CO. LINE TO ALLEN ROAD (MP 8.375) IN SIMPSON COUNTY, KY. (2014BOP)	Roadside	Roadside - other	8.375	Miles	\$260000	\$260000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,204	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1057 BEGINNING AT MP 0.824 AND ENDING AT MP 4.976 IN POWELL COUNTY. (2016BOP)	Roadside	Roadside - other	4.152	Miles	\$60000	\$60000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,191	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1057 BEGINNING AT MP 0.824 AND ENDING AT MP 4.976 IN POWELL COUNTY. (2016BOP)	Roadside	Roadside - other	4.152	Miles	\$105000	\$105000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,191	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM KY 15 (MP 20.971) TO THE POWELL-MONTGOMERY CO. LINE (MP 25.039) IN POWELL COUNTY, KY. (2014BOP)	Roadside	Roadside - other	4.068	Miles	\$1745000	\$1745000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,120	35	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM KY 15	Roadside	Roadside - other	4.068	Miles	\$1786059	\$1786059	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,505	55	State Highway Agency	Systemic	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
(MP 20.971) TO THE POWELL-MONTGOMERY CO. LINE (MP 25.039) IN POWELL COUNTY, KY. (2014BOP)														
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 112 BEGINNING AT MP 1.925 AND ENDING AT MP 9.372 IN HOPKINS COUNTY. (2016BOP)	Roadside	Roadside - other	7.447	Miles	\$250000	\$250000	HSIP (23 U.S.C. 148)	Rural Major Collector	1,263	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1304 FROM US 25E TO KY 11. (2014BOP)	Roadside	Roadside - other	6.11	Miles	\$1701000	\$1701000	HSIP (23 U.S.C. 148)	Urban Major Collector	1,850	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1304 FROM US 25E TO KY 11. (2014BOP)	Roadside	Roadside - other	6.11	Miles	\$2023962	\$2023962	HSIP (23 U.S.C. 148)	Urban Major Collector	1,850	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1600 FROM KY 220 (MP 3.315) TO KY 920 (MP 8.528) AT THE MEADE COUNTY LINE. (2014BOP)	Roadside	Roadside - other	5.213	Miles	\$1505701	\$1505701	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,280	35	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 194 BEGINNING AT MP 22.000 AND ENDING AT MP 29.210 IN PIKE COUNTY. (2016BOP)	Roadside	Roadside - other	7.21	Miles	\$125000	\$125000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,710	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1954 FROM KY 348 TO 0.085 MI SOUTH OF KY 3075. (2014BOP)	Roadside	Roadside - other	3.04	Miles	\$60000	\$60000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,350	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1954 FROM KY 348 TO 0.085 MI SOUTH OF KY 3075. (2014BOP)	Roadside	Roadside - other	3.04	Miles	\$425000	\$425000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,350	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 2 BEGINNING AT MP 13.203 AND ENDING AT MP 17.190 IN GREENUP COUNTY. (2016BOP)	Roadside	Roadside - other	3.987	Miles	\$250000	\$250000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,790	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 2189 FROM US 31W EAST OF PARK CITY (MP 0.000), SOUTH TO US 68 WEST OF GLASGOW (MP 6.010).	Roadside	Roadside - other	6.01	Miles	\$145000	\$145000	HSIP (23 U.S.C. 148)	Rural Major Collector	1,156	55	State Highway Agency	Systemic	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 280 FROM KY 94 EAST OF MURRAY (MP 0.000), SOUTHEAST TO KY 1536 (MP 9.209).	Roadside	Roadside - other	9.209	Miles	\$54500	\$54500	HSIP (23 U.S.C. 148)	Rural Major Collector	2,274	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 32 FROM 0.106 MI E OF US 60 (MP 8.545) TO VETERANS LN (CR-1009) AT (MP 13.645) IN ROWAN COUNTY. (2016BOP)	Roadside	Roadside - other	5.1	Miles	\$10000	\$10000	HSIP (23 U.S.C. 148)	Urban Major Collector	5,142	45	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 3294.	Roadside	Roadside - other	5.4	Miles	\$20700	\$20700	HSIP (23 U.S.C. 148)	Urban Major Collector	2,179	35	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 33 BEGINNING AT MP 3.017 AND ENDING AT MP 11.686 IN WOODFORD COUNTY. (2016BOP)	Roadside	Roadside - other	8.669	Miles	\$175000	\$175000	HSIP (23 U.S.C. 148)	Rural Minor Collector	633	35	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 39 BEGINNING AT MP 3.535 AND ENDING AT MP 12.809 IN PULASKI COUNTY. (2016BOP)	Roadside	Roadside - other	9.274	Miles	\$250000	\$250000	HSIP (23 U.S.C. 148)	Urban Major Collector	4,579	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 480 FROM KY 1442 (MP 3.292) EXTENDING EAST TO THE NELSON CO. LINE (MP 11.723) IN BULLITT COUNTY, KY. (2014BOP)	Roadside	Roadside - other	8.431	Miles	\$1747169	\$1747169	HSIP (23 U.S.C. 148)	Urban Major Collector	7,917	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 480 FROM KY 1442 (MP 3.292) EXTENDING EAST TO THE NELSON CO. LINE (MP 11.723) IN BULLITT COUNTY, KY. (2014BOP)	Roadside	Roadside - other	8.431	Miles	\$1660000	\$1660000	HSIP (23 U.S.C. 148)	Urban Major Collector	7,917	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 53 BEGINNING AT MP 10.040 AND ENDING AT MP 19.609 IN SHELBY COUNTY. (2016BOP)	Roadside	Roadside - other	9.569	Miles	\$100000	\$100000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,063	45	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 54 FROM THE DAVIESS/OHIO COUNTY LINE TO KY 69. (2014BOP)	Roadside	Roadside - other	6.018	Miles	\$1381352	\$1381352	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,950	55	State Highway Agency	Systemic	Roadway Departure	

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													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
PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 54 FROM THE DAVIESS/OHIO COUNTY LINE TO KY 69. (2014BOP)	Roadside	Roadside - other	6.018	Miles	\$1000000	\$1000000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,950	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 25 BEGINNING AT MP 15.987 AND ENDING AT MP 22.490 IN GRANT COUNTY. (2016BOP)	Roadside	Roadside - other	6.503	Miles	\$250000	\$250000	HSIP (23 U.S.C. 148)	Rural Minor Collector	5,629	25	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 25W BEGINNING AT MP 16.380 AND ENDING AT MP 24.861 IN WHITLEY COUNTY. (2016BOP)	Roadside	Roadside - other	8.481	Miles	\$75000	\$75000	HSIP (23 U.S.C. 148)	Rural Minor Collector	5,079	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM KY 873 (MP 8.128) TO WADE HACKER RD (CR-1183) AT (MP 14.049) IN CLAY COUNTY. (2016BOP)	Roadside	Roadside - other	5.921	Miles	\$1779756	\$1779756	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,163	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM KY 873 (MP 8.128) TO WADE HACKER RD (CR-1183) AT (MP 14.049) IN CLAY COUNTY. (2016BOP)	Roadside	Roadside - other	5.921	Miles	\$1450000	\$1450000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,163	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 460 FROM FRANKLIN-SCOTT CO. LINE EXTENDING EAST TO (MP 6.830) 0.063 MI EAST OF CANE RUN RD IN SCOTT COUNTY, KY. (2014BOP)	Roadside	Roadside - other	6.83	Miles	\$1863183	\$1863183	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,077	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 460 FROM FRANKLIN-SCOTT CO. LINE EXTENDING EAST TO (MP 6.830) 0.063 MI EAST OF CANE RUN RD IN SCOTT COUNTY, KY. (2014BOP)	Roadside	Roadside - other	6.83	Miles	\$1645000	\$1645000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,077	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 BEGINNING AT MP 25.659 AND ENDING AT MP 30.239 IN GRAYSON COUNTY. (2016BOP)	Roadside	Roadside - other	4.58	Miles	\$100000	\$100000	HSIP (23 U.S.C. 148)	Urban Major Collector	2,778	45	State Highway Agency	Systemic	Roadway Departure	

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													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
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 FROM KY 1858 (MP 20.141) TO CS 4021 (MP 27.006). (2016BOP)	Roadside	Roadside - other	6.865	Miles	\$265000	\$265000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,734	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 FROM KY 1858 (MP 20.141) TO CS 4021 (MP 27.006). (2016BOP)	Roadside	Roadside - other	6.865	Miles	\$30000	\$30000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,734	55	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 641 BEGINNING AT MP 0.498 AND ENDING AT MP 3.556 IN CALLOWAY COUNTY. (2016BOP)	Roadside	Roadside - other	3.058	Miles	\$250000	\$250000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	5,946	35	State Highway Agency	Systemic	Roadway Departure	
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 68 BEGINNING AT MP 20.889 AND ENDING AT MP 27.284 IN WARREN COUNTY. (2016BOP)	Roadside	Roadside - other	6.395	Miles	\$125000	\$125000	HSIP (23 U.S.C. 148)	Rural Minor Collector	5,684	55	State Highway Agency	Systemic	Roadway Departure	
PURCHASE FLORESCENT YELLOW SIGN SHEETING FOR HORIZONTAL ALIGNMENT WARNING SIGNS.	Roadway signs and traffic control	Sign sheeting - upgrade or replacement			\$500000	\$500000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Roadway Departure	
REALIGN THE INTERSECTION OF KY 76 AND KY 80 (MP 7.0-7.7) IN RUSSELL COUNTY LOCATED IN DISTRICT 8.	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	\$20000	\$20000	HSIP (23 U.S.C. 148)	Rural Major Collector	512	55	State Highway Agency	Spot	Intersections	
RECONSTRUCT THE INTERSECTION OF KY 473 AT MOSSTOWN RD FROM 'Y' TO 'T' INTERSECTION IN BALLARD COUNTY.	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	\$40000	\$40000	HSIP (23 U.S.C. 148)	Rural Major Collector	153	55	State Highway Agency	Spot	Intersections	
RECONSTRUCT THE INTERSECTION OF US 62 AT KY 175 FROM 'Y' TO 'T' INTERSECTION AND PROVIDE INTERSECTION SIGHT DISTANCE IN MUHLENBERG COUNTY.	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	\$50000	\$50000	HSIP (23 U.S.C. 148)	Rural Minor Collector	2,107	55	State Highway Agency	Spot	Intersections	
REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON US 119 FROM US 25E TO THE BELL/HARLAN COUNTY LINE. (2014BOP)	Roadside	Barrier end treatments (crash cushions, terminals)	15.88	Miles	\$608618	\$608618	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	8,023	55	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON US 119 FROM US 25E TO THE	Roadside	Barrier end treatments (crash cushions, terminals)	15.88	Miles	\$83000	\$83000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	8,023	55	State Highway Agency	Spot	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
BELL/HARLAN COUNTY LINE. (2014BOP)														
REPLACE TURNDOWN AND OTHER TARGETED END TREATMENTS AT VARIOUS LOCATIONS ON KY 52 IN BREATHITT, ESTILL, AND LEE COUNTIES, AND KY 82 IN POWELL COUNTY.	Roadside	Barrier end treatments (crash cushions, terminals)	9.674	Miles	\$397355	\$397355	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,056	55	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN AND OTHER TARGETED END TREATMENTS AT VARIOUS LOCATIONS ON KY 52 IN BREATHITT, ESTILL, AND LEE COUNTIES, AND KY 82 IN POWELL COUNTY.	Roadside	Barrier end treatments (crash cushions, terminals)	9.674	Miles	\$432000	\$432000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,056	55	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN END TREATMENTS AND UPGRADE GUARDRAIL ALONG INNER LOOP OF NEW CIRCLE ROAD FROM NICHOLASVILLE ROAD TO NORTH EAST OF RICHMOND ROAD.	Roadside	Barrier end treatments (crash cushions, terminals)	4.35	Miles	\$78983	\$78983	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	60,700	45	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN END TREATMENTS AND UPGRADE GUARDRAIL ALONG INNER LOOP OF NEW CIRCLE ROAD FROM NICHOLASVILLE ROAD TO NORTH EAST OF RICHMOND ROAD.	Roadside	Barrier end treatments (crash cushions, terminals)	4.35	Miles	\$619300	\$619300	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	60,700	45	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN END TREATMENTS AND UPGRADE GUARDRAIL ALONG OUTER LOOP OF NEW CIRCLE ROAD FROM VERSAILLES ROAD TO HARRODSBURG ROAD.	Roadside	Barrier end treatments (crash cushions, terminals)	2.4	Miles	\$57493	\$57493	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	58,326	55	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN END TREATMENTS AND UPGRADE GUARDRAIL ALONG OUTER LOOP OF NEW CIRCLE ROAD FROM VERSAILLES ROAD TO HARRODSBURG ROAD.	Roadside	Barrier end treatments (crash cushions, terminals)	2.4	Miles	\$674300	\$674300	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	58,326	55	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN END TREATMENTS ON KY 4 IN THE CARDINAL DIRECTION FROM US 27 TO 0.618 MILES SOUTH OF US 60.	Roadside	Barrier end treatments (crash cushions, terminals)	3.99	Miles	\$585384	\$585384	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other Freeways and Expressways	46,550	55	State Highway Agency	Spot	Roadway Departure	
REPLACE TURNDOWN END TREATMENTS ON KY	Roadside	Barrier end treatments (crash cushions, terminals)	4.39	Miles	\$953303	\$953303	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	60,700	45	State Highway Agency	Spot	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
4 IN THE NON-CARDINAL DIRECTION FROM US 25 TO US 27.								Freeways and Expressways						
REPLACE TURNDOWN END TREATMENTS ON US 127 FROM KY 501 (MP 6.266) TO KY 70 (MP 13.844).	Roadside	Barrier end treatments (crash cushions, terminals)	7.578	Miles	\$10000	\$10000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,330	55	State Highway Agency	Spot	Roadway Departure	
RESHAPE AND SURFACE SHOULDERS, CORRECT DRAINAGE AND INSTALL GUARDRAIL ALONG KY 70 FROM DOE CREEK ROAD (MP 18.531) EXTENDING EAST TO KY 198 (MP 21.422).	Shoulder treatments	Shoulder treatments - other	2.891	Miles	\$600000	\$600000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,318	55	State Highway Agency	Spot	Roadway Departure	
RESHAPE AND SURFACE SHOULDERS, CORRECT DRAINAGE AND INSTALL GUARDRAIL ALONG KY 70 FROM DOE CREEK ROAD (MP 18.531) EXTENDING EAST TO KY 198 (MP 21.422).	Shoulder treatments	Shoulder treatments - other	2.891	Miles	\$85657	\$85657	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,318	55	State Highway Agency	Spot	Roadway Departure	
RESTORE EMBANKMENT, REPLACE DRAINAGE STRUCTURES, RESHAPE DITCHES, REMOVE AND REPLACE GUARDRAIL, RESHAPE BACK-SLOPE AT ONE SITE ON KY 1455 FROM KY 32 (MP 0.00) EXTENDING NORTH TO US 68 (MP 2.365).	Roadside	Drainage improvements	2.365	Miles	\$570000	\$570000	HSIP (23 U.S.C. 148)	Rural Minor Collector	863	55	State Highway Agency	Spot	Roadway Departure	
RESTORE EMBANKMENT, REPLACE DRAINAGE STRUCTURES, RESHAPE DITCHES, REMOVE AND REPLACE GUARDRAIL, RESHAPE BACK-SLOPE AT ONE SITE ON KY 1455 FROM KY 32 (MP 0.00) EXTENDING NORTH TO US 68 (MP 2.365).	Roadside	Drainage improvements	2.365	Miles	\$268962	\$268962	HSIP (23 U.S.C. 148)	Rural Minor Collector	863	55	State Highway Agency	Spot	Roadway Departure	
ROADSIDE SAFETY IMPROVEMENTS ALONG US 60 FROM JUST S OF BIG RIVERS RD (KY 3092) (MP 7.75), EXTENDING SE TO (MP 8.55).	Roadside	Roadside - other	0.8000000000000001	Miles	\$60000	\$60000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,903	55	State Highway Agency	Systemic	Roadway Departure	
SAFETY IMPROVEMENTS AT THE INTERSECTION OF KY 155 (TAYLORSVILLE RD) AND KY 1747 (HURSTBOURNE PKWY) IN JEFFERSON COUNTY. (2014BOP)	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	\$126000	\$126000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	34,868	45	State Highway Agency	Systemic	Intersections	

2017 Kentucky Highway Safety Improvement Program

													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
SAFETY IMPROVEMENTS: ELIMINATE VERTICAL HEADWALLS AND TYPE 7 END TREATMENTS ON KY 36 FROM MAIN ST (MP 1.004) TO LOCUST RD (MP 5.441). (2012BOP)	Roadside	Barrier end treatments (crash cushions, terminals)	4.437	Miles	\$980113	\$980113	HSIP (23 U.S.C. 148)	Rural Minor Collector	737	35	State Highway Agency	Systemic	Roadway Departure	
SHOULDER TRENCHING ON KY 3094 FROM US 25 TO KY 490.	Shoulder treatments	Shoulder treatments - other	1.2	Miles	\$534000	\$534000	HSIP (23 U.S.C. 148)	Urban Major Collector	796	35	State Highway Agency	Spot	Roadway Departure	
SHOULDER TRENCHING ON KY 3094 FROM US 25 TO KY 490.	Shoulder treatments	Shoulder treatments - other	1.2	Miles	\$431951	\$431951	HSIP (23 U.S.C. 148)	Urban Major Collector	796	35	State Highway Agency	Spot	Roadway Departure	
SHOULDER TRENCHING ON KY 3094 FROM US 25 TO KY 490.	Shoulder treatments	Shoulder treatments - other	1.2	Miles	\$380046	\$380046	HSIP (23 U.S.C. 148)	Urban Major Collector	796	35	State Highway Agency	Spot	Roadway Departure	
SHOULDERING AND DRAINAGE STRUCTURES ON KY 36 FROM MP 8.00 TO MP 11.847 IN BATH COUNTY.	Roadside	Drainage improvements	3.847	Miles	\$506500	\$506500	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,165	55	State Highway Agency	Spot	Roadway Departure	
SIGNAL REBUILD AT KY 296 AND KY 2386 IN WHITLEY COUNTY.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$142047	\$142047	HSIP (23 U.S.C. 148)	Urban Major Collector	3,147	25	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT KY 296 AND KY 2386 IN WHITLEY COUNTY.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$100000	\$100000	HSIP (23 U.S.C. 148)	Urban Major Collector	3,147	25	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT KY 44 @ KY 55 IN SPENCER COUNTY AND AT US 60 @ TIN PIN LANE IN JEFFERSON COUNTY, KY.	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	\$280000	\$280000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	10,889	35	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT KY 55X AND REED STREET.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$100000	\$100000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	11,477	25	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT KY 55X AND REED STREET.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$221755	\$221755	HSIP (23 U.S.C. 148)	Rural Minor Arterial	11,477	25	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT MAIN STREET (US 68) AND WEST COLUMBIA AVENUE (KY 417) IN GREENSBURG	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$100000	\$100000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,907	35	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT MAIN STREET (US 68) AND WEST COLUMBIA AVENUE (KY 417) IN GREENSBURG	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$10152	\$10152	HSIP (23 U.S.C. 148)	Rural Minor Arterial	7,907	35	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT US 127 AND KY 70/KY 70X.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$216466	\$216466	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,485	40	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT US 127 AND KY 70/KY 70X.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$100000	\$100000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,485	40	State Highway Agency	Spot	Intersections	

2017 Kentucky Highway Safety Improvement Program

													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
SIGNAL REBUILD AT US 25 AND SOUTH LAUREL HIGH SCHOOL.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$100000	\$100000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	20,391	45	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT US 60 AND KY 261 SOUTH OF HARDINSBURG.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$100000	\$100000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,653	55	State Highway Agency	Spot	Intersections	
SIGNAL REBUILD AT US 60 AND KY 261 SOUTH OF HARDINSBURG.	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$12397	\$12397	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,700	55	State Highway Agency	Spot	Intersections	
STATEWIDE INTERSECTION SIGNAL REBUILDS.	Intersection traffic control	Modify traffic signal - modernization/replacement			\$30000	\$30000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Intersections	
STATEWIDE PAVEMENT MARKER CONTRACTS.	Roadway delineation	Raised pavement markers			\$2683625	\$2683625	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Lane Departure	
STATEWIDE PAVEMENT MARKER CONTRACTS.	Roadway delineation	Raised pavement markers			\$3036000	\$3036000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Lane Departure	
STATEWIDE REPLACEMENT OF RAISED PAVEMENT MARKERS ON VARIOUS ROUTES IN DISTRICTS 4, 6, 7 ,9, 10 AND 11. (2014BOP)	Roadway delineation	Raised pavement markers			\$31000	\$31000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Lane Departure	
STRIPING ON VARIOUS ROUTES IN DISTRICT 3.	Roadway delineation	Longitudinal pavement markings - new			\$500000	\$500000	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Lane Departure	
STRIPING ON VARIOUS ROUTES IN DISTRICT 3.	Roadway delineation	Longitudinal pavement markings - new			\$547800	\$547800	HSIP (23 U.S.C. 148)		0		State Highway Agency	Systemic	Lane Departure	
TRAFFIC SIGNAL REBUILDS AT THE INTERSECTIONS OF KY 94 AND KY 1660 IN CALLOWAY COUNTY, AND US 45 AND KY 1276 IN GRAVES COUNTY. (2014BOP)	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	\$50000	\$50000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	4,678	55	State Highway Agency	Spot	Intersections	
TRENCH AND PAVE SHOULDERS ON DIXIE HIGHWAY (US 31W) FROM THE HARDIN COUNTY LINE (MP 0.00) TO 500 FEET NORTH OF STONEGATE MANOR DRIVE (MP 6.669).	Shoulder treatments	Pave existing shoulders	6.669	Miles	\$465000	\$465000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	14,800	35	State Highway Agency	Spot	Roadway Departure	
TRENCH SHOULDERS ON KY 55, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE LEFT TURN LANE ONTO KY 1061 IN TAYLOR COUNTY. (2016BOP)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$104030	\$104030	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,786	55	State Highway Agency	Spot	Roadway Departure	

2017 Kentucky Highway Safety Improvement Program

													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
TRENCH SHOULDERS ON KY 55, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE LEFT TURN LANE ONTO KY 1061 IN TAYLOR COUNTY. (2016BOP)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$156100	\$156100	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,786	55	State Highway Agency	Spot	Roadway Departure	
TRENCH SHOULDERS ON KY 55, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE LEFT TURN LANE ONTO KY 1061 IN TAYLOR COUNTY. (2016BOP)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$167186	\$167186	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	7,786	55	State Highway Agency	Spot	Roadway Departure	
TRENCH SHOULDERS ON US 68, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE A LEFT TURN LANE ONTO HIDDEN MEADOWS DRIVE IN TAYLOR COUNTY. (2016BOP)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$101776	\$101776	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,640	55	State Highway Agency	Spot	Roadway Departure	
TRENCH SHOULDERS ON US 68, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE A LEFT TURN LANE ONTO HIDDEN MEADOWS DRIVE IN TAYLOR COUNTY. (2016BOP)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$96200	\$96200	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,640	55	State Highway Agency	Spot	Roadway Departure	
TRENCH, RESTORE AND PAVE SHOULDERS AND INSTALL GUARDRAIL ALONG KY 70 FROM KY 109 (MP 7.096) TO ILLINIS CENTRAL RAILROAD CROSSING SOUTHWEST OF MADISONVILLE (MP 16.170).	Shoulder treatments	Pave existing shoulders	9.074	Miles	\$550000	\$550000	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,709	55	State Highway Agency	Spot	Roadway Departure	
TRENCH, RESTORE AND PAVE SHOULDERS AND INSTALL GUARDRAIL ALONG KY 70 FROM KY 109 (MP 7.096) TO ILLINIS CENTRAL RAILROAD CROSSING SOUTHWEST OF MADISONVILLE (MP 16.170).	Shoulder treatments	Pave existing shoulders	9.074	Miles	\$98112	\$98112	HSIP (23 U.S.C. 148)	Rural Minor Collector	1,709	55	State Highway Agency	Spot	Roadway Departure	
WIDEN ASPHALT SHOULDERS ON KY 3349 IN PERRY COUNTY. (2016BOP)	Shoulder treatments	Widen shoulder - paved or other	2.39	Miles	\$500000	\$500000	HSIP (23 U.S.C. 148)	Rural Local Road or Street	1,032	55	State Highway Agency	Spot	Roadway Departure	

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

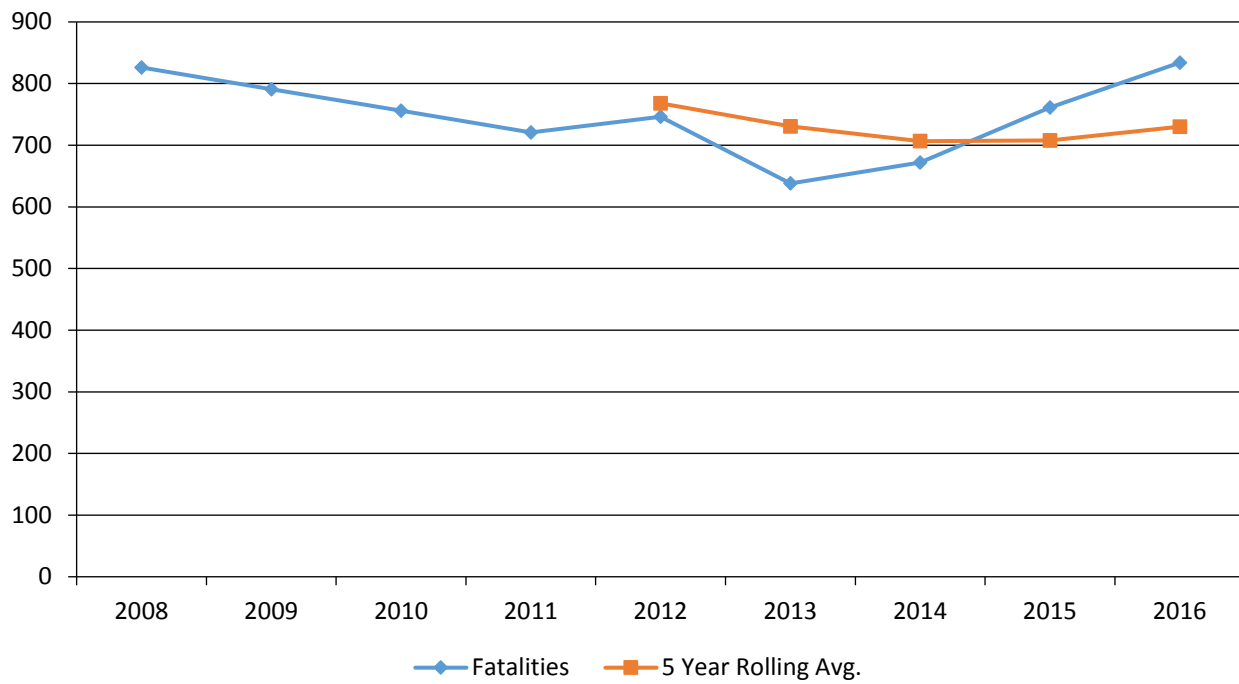
Safety Performance

General Highway Safety Trends

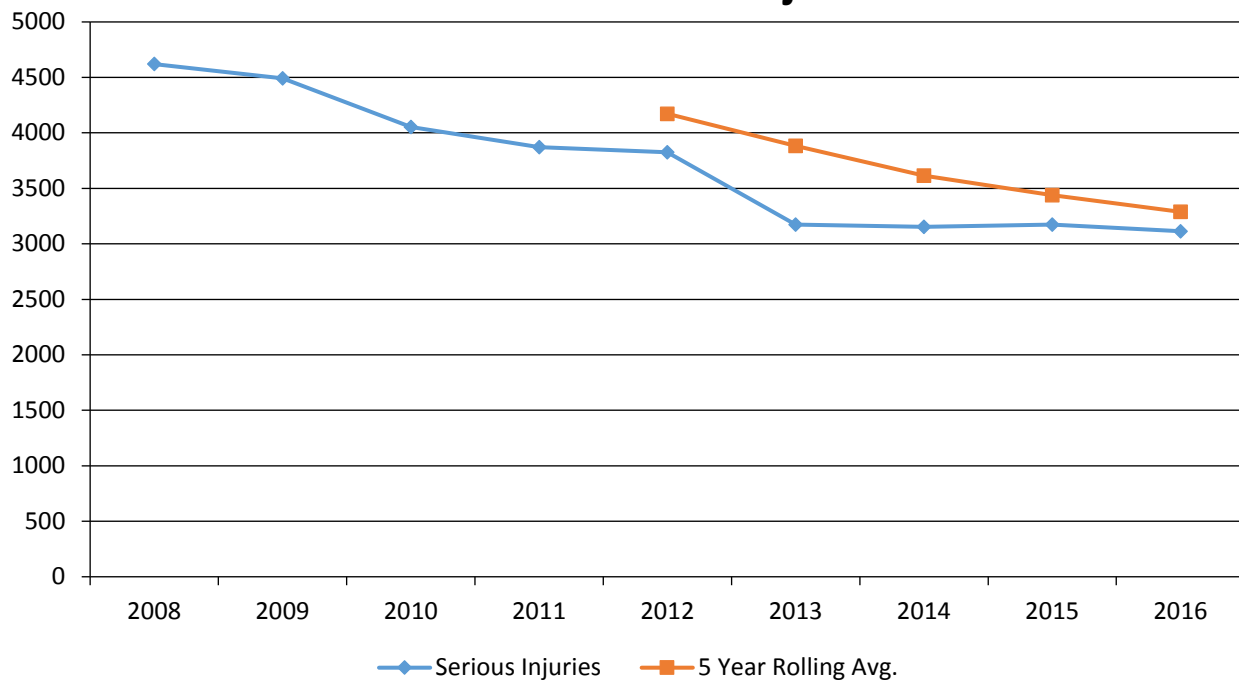
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fatalities	826	791	756	721	746	638	672	761	834
Serious Injuries	4,620	4,491	4,053	3,873	3,825	3,175	3,154	3,175	3,114
Fatality rate (per HMVMT)	1.750	1.670	1.570	1.500	1.580	1.360	1.400	1.560	1.700
Serious injury rate (per HMVMT)	9.790	9.510	8.430	8.040	8.100	6.750	6.570	6.510	6.330
Number non-motorized fatalities	72	44	67	54	60	58	62	78	94
Number of non-motorized serious injuries	216	223	204	202	206	189	207	193	201

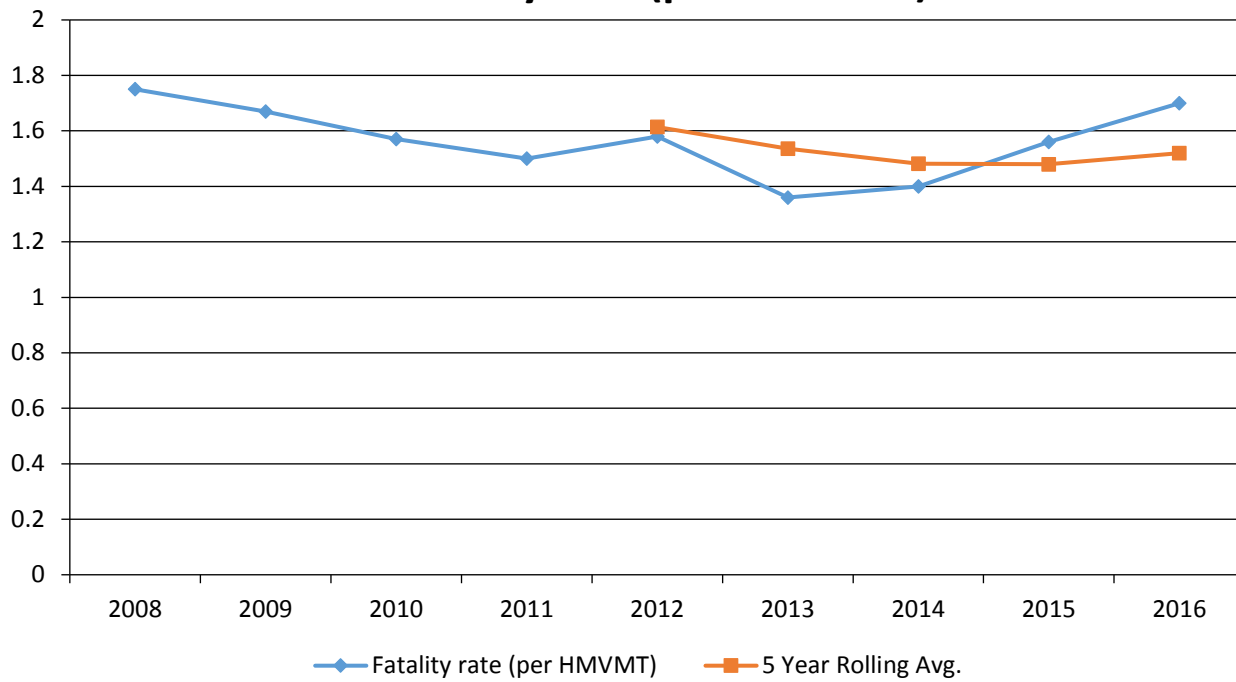
Annual Fatalities



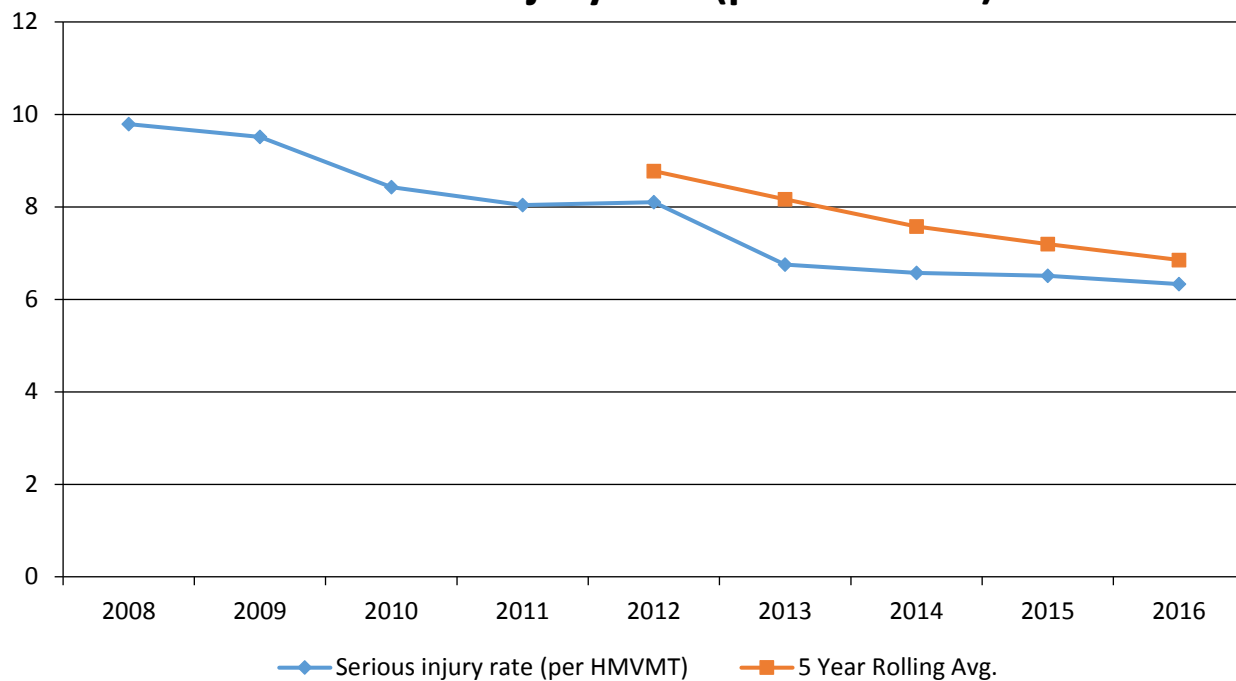
Annual Serious Injuries



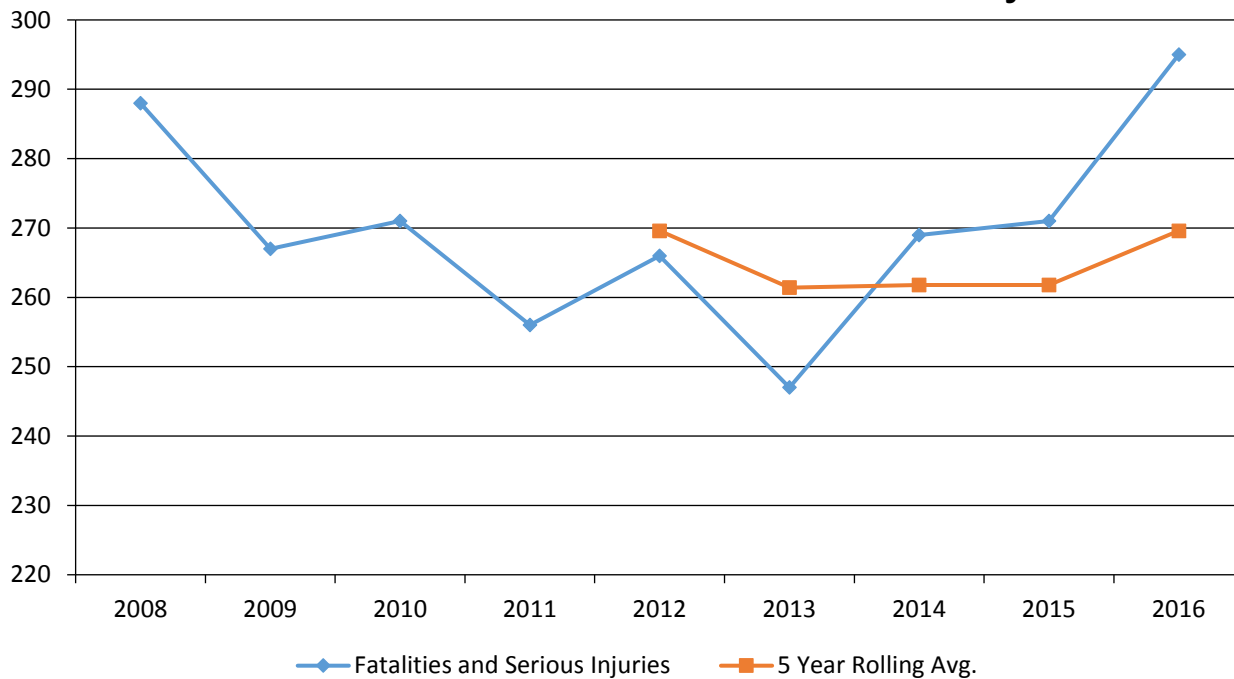
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



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

Describe fatality data source.

FARS

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

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	44.4	113.4	0.6	1.54
Rural Principal Arterial - Other Freeways and Expressways				
Rural Principal Arterial - Other	78.4	192.8	1.46	3.59
Rural Minor Arterial	80	261	2.26	7.36

2017 Kentucky Highway Safety Improvement Program

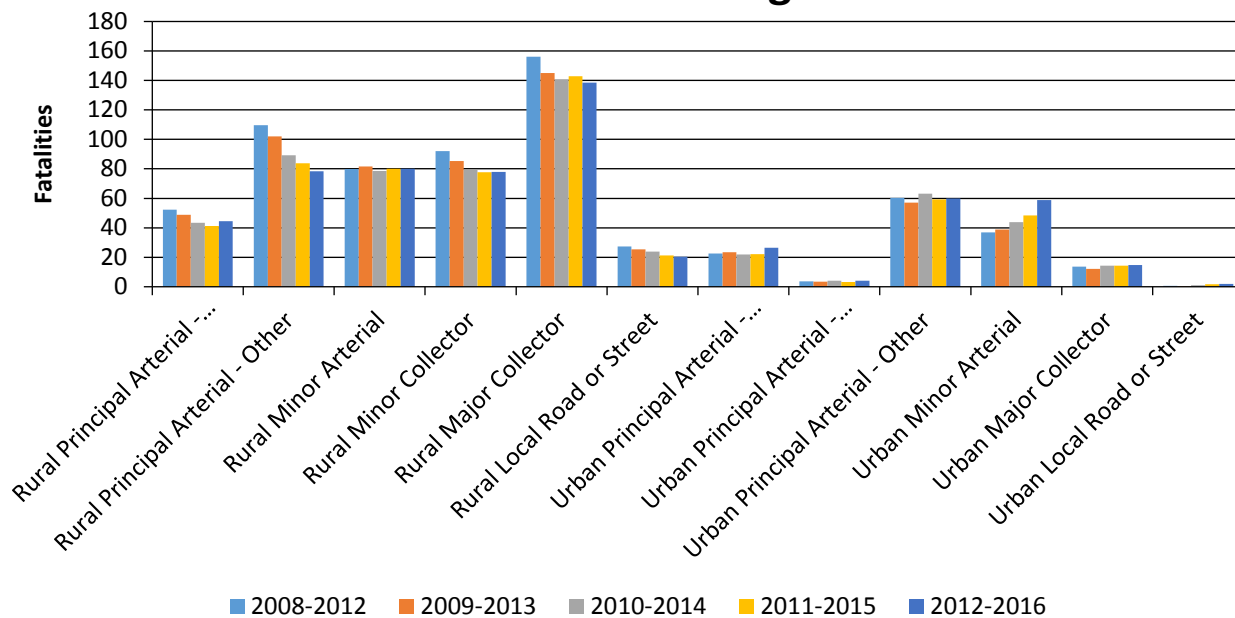
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Collector	78	269	3.56	12.22
Rural Major Collector	138.6	418.8	3.45	10.37
Rural Local Road or Street	20.4	67.2	3.36	11.04
Urban Principal Arterial - Interstate	26.4	172.6	0.47	2.99
Urban Principal Arterial - Other Freeways and Expressways	4	17	0.49	2.1
Urban Principal Arterial - Other	59.8	378.4	1.4	9.04
Urban Minor Arterial	58.8	434.4	1.18	8.72
Urban Minor Collector				
Urban Major Collector	14.8	78.4	0.89	4.72
Urban Local Road or Street	2	8.6	1.91	8.49

2017 Kentucky Highway Safety Improvement Program

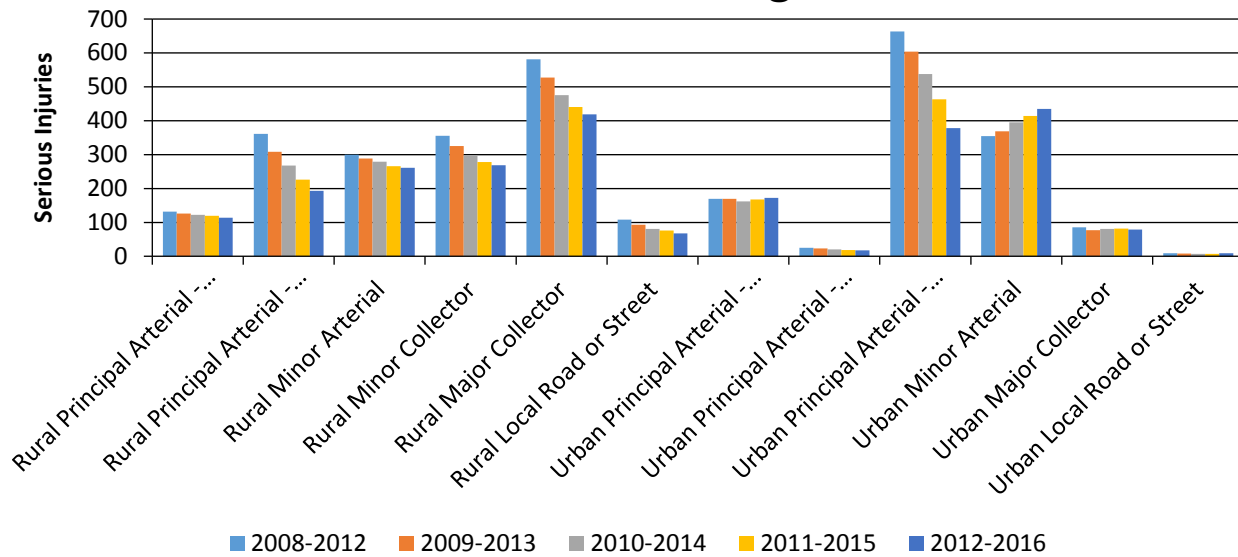
Year 2016

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	634.8	2,499.4	1.32	5.21
County Highway Agency	52.6	227.4		
Town or Township Highway Agency				
City of Municipal Highway Agency	37.4	399.4		
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)	5.4	15		
Indian Tribe Nation				

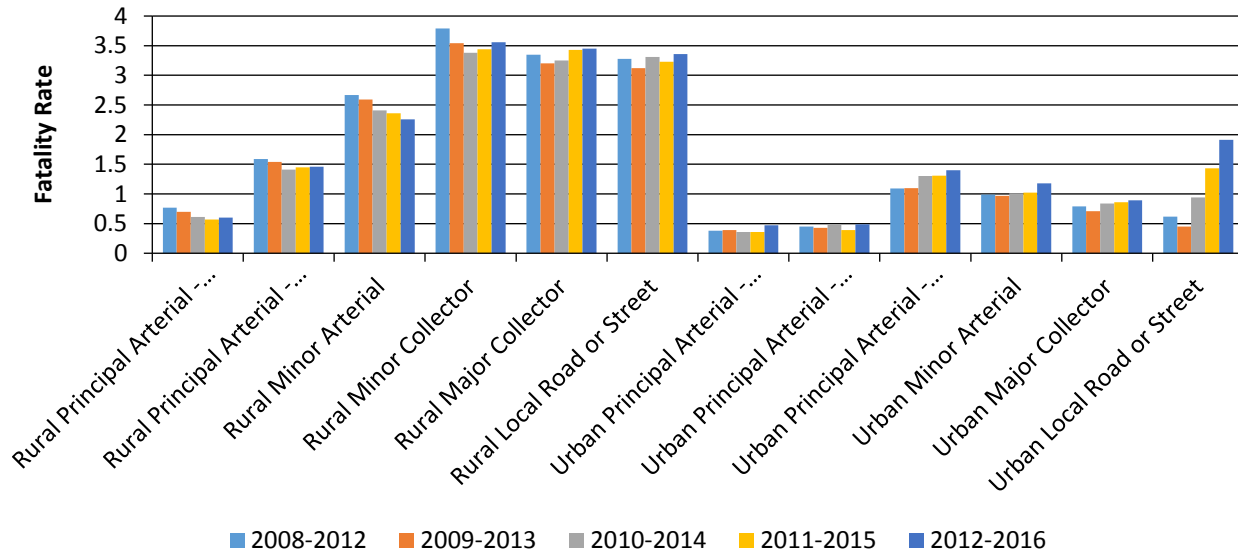
Number of Fatalities by Functional Classification 5 Year Average



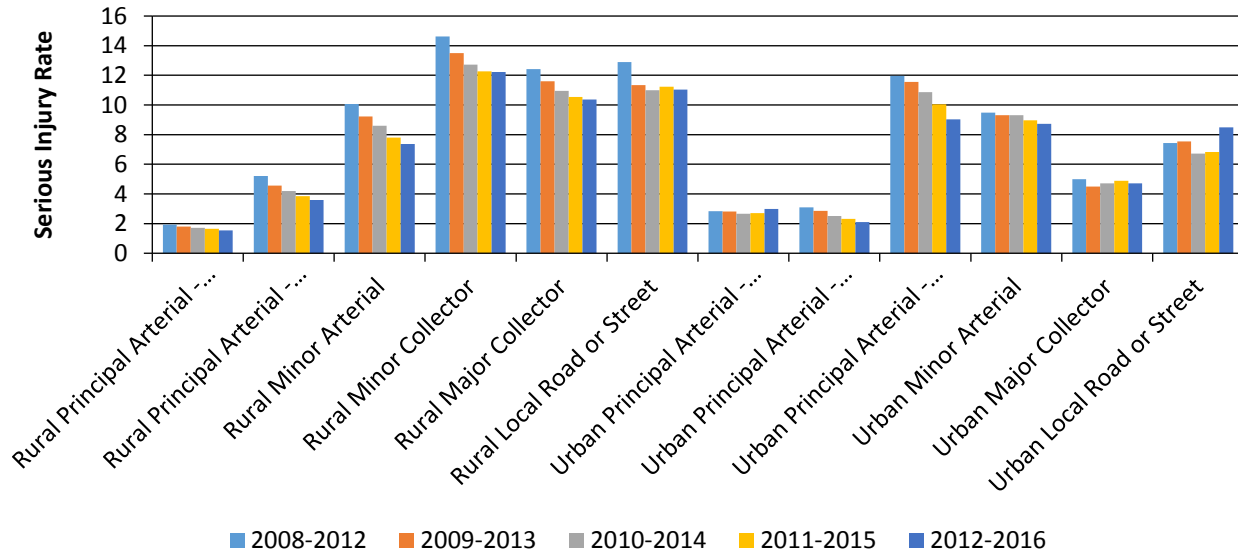
Number of Serious Injuries by Functional Classification 5 Year Average



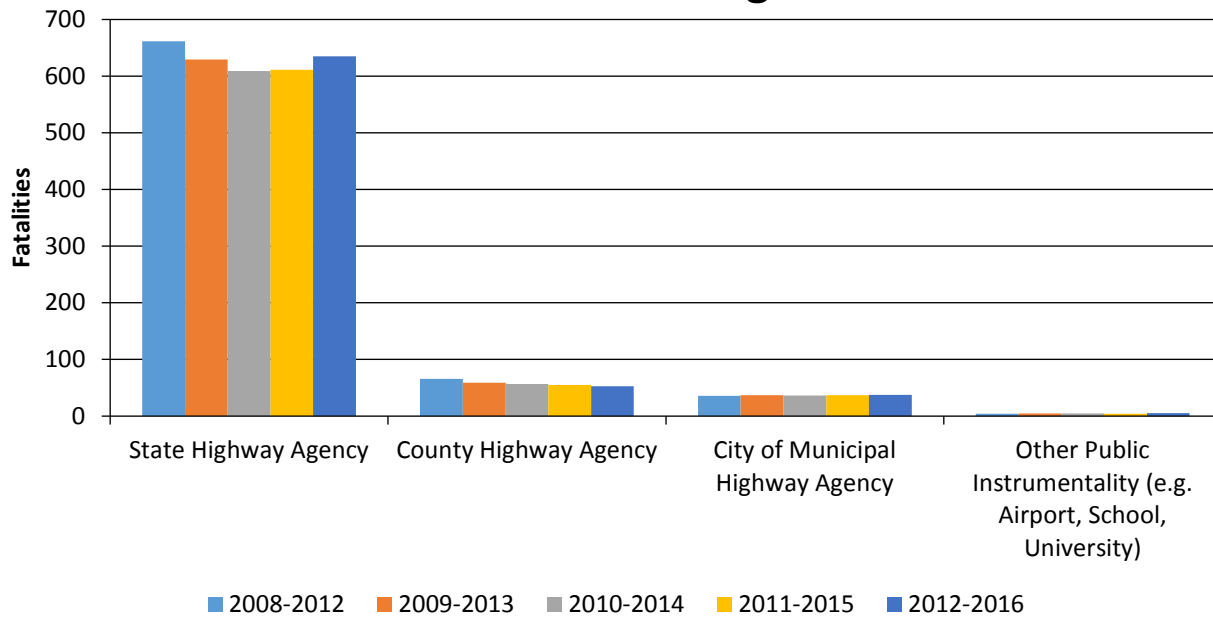
Fatality Rate (per HMTVMT) by Functional Classification 5 Year Average



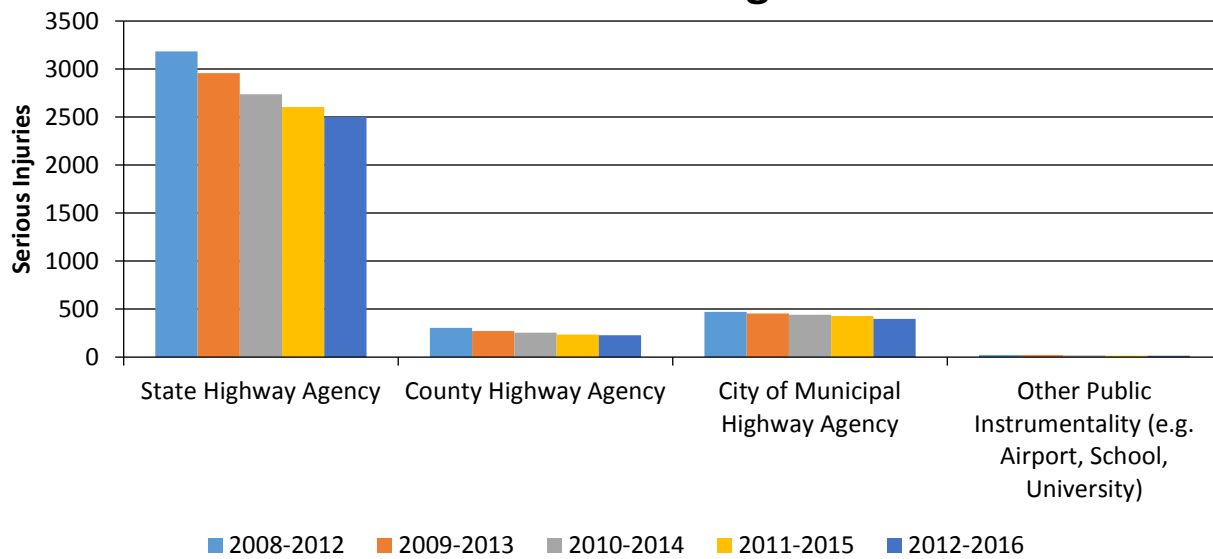
Serious Injury Rate (per HMVMT) by Functional Classification 5 Year Average



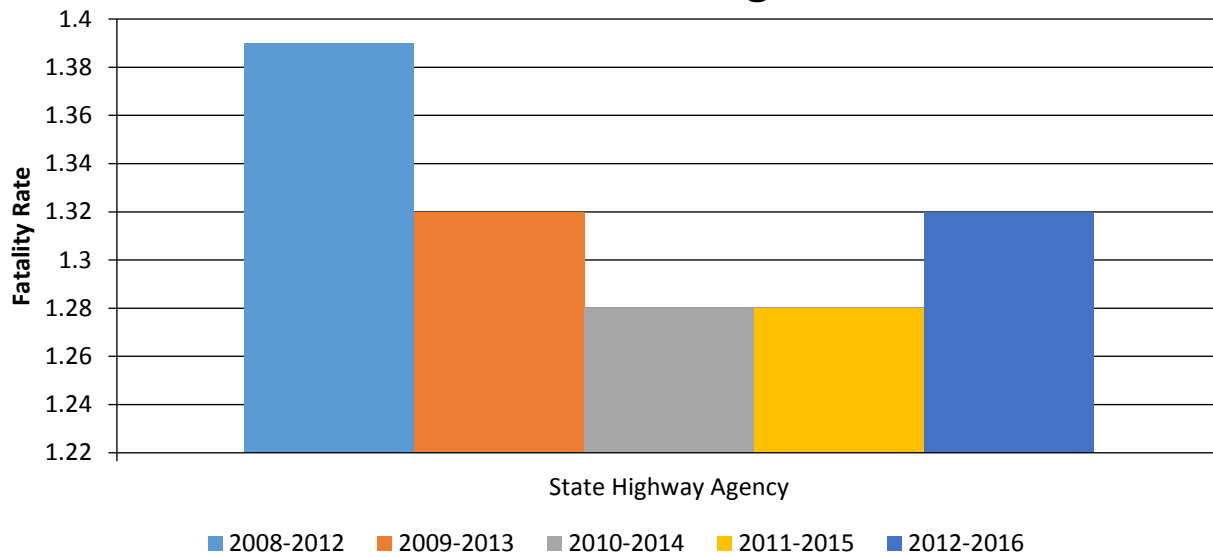
Number of Fatalities by Roadway Ownership 5 Year Average



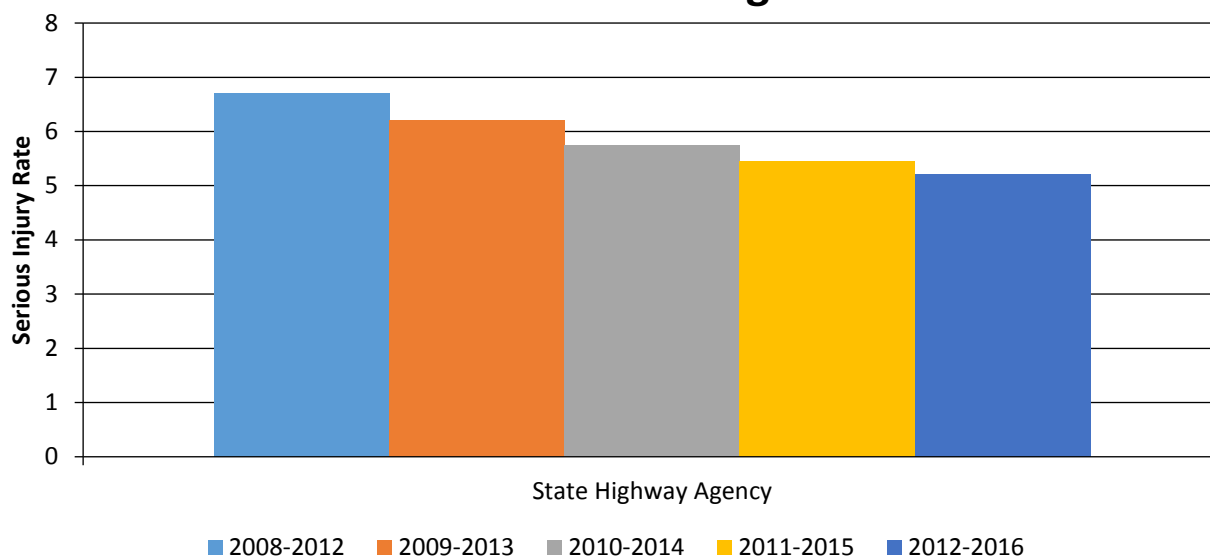
Number of Serious Injuries by Roadway Ownership 5 Year Average



Fatality Rate (per HMVMT) by Roadway Ownership 5 Year Average



Serious Injury Rate (per HMVMT) by Roadway Ownership 5 Year Average



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

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 730.0

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

The Kentucky Transportation Cabinet has set the target goal of 730 fatalities (5-year moving average) for fiscal year 2018. Similar to the national trend, the number of fatalities on Kentucky's public roads has been increasing the past four years, after a historically low number of fatalities in 2013. This is possibly due to factors such as increased VMT and economic growth. Despite these upward trends, KYTC remains

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committed to the reduction of serious injuries and fatalities throughout the Commonwealth. This target represents a reduction in total fatalities in calendar years 2017 and 2018 as compared to calendar years 2015 and 2016. This goal is shared with the SHSP and reiterates KYTC's commitment to the shared vision of Toward Zero Deaths.

Number of Serious Injuries 2800.0

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

The Kentucky Transportation Cabinet has set the target goal of 2,800 serious injuries (5-year moving average) for fiscal year 2018. KYTC remains committed to the continued reduction of serious injuries and fatalities throughout the Commonwealth. This target represents a reduction in total serious injuries in calendar years 2017 and 2018 as compared to calendar years 2015 and 2016. This goal is shared with the SHSP and reiterates KYTC's commitment to the shared vision of Toward Zero Deaths.

Fatality Rate 1.500

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

The Kentucky Transportation Cabinet has set the target goal of a 1.50 fatality rate (5-year moving average) for fiscal year 2018. KYTC remains committed to the reduction of serious injuries and fatalities throughout the Commonwealth. This target represents a reduction in the fatality rate in calendar years 2017 and 2018 as compared to calendar years 2015 and 2016. This goal is shared with the SHSP and reiterates KYTC's commitment to the shared vision of Toward Zero Deaths.

Serious Injury Rate 5.760

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

The Kentucky Transportation Cabinet has set the target goal of a 5.76 serious injury rate for fiscal year 2018. KYTC remains committed to the reduction of serious injuries and fatalities throughout the Commonwealth. This target represents a reduction in the serious injury rate in calendar years 2017 and 2018 as compared to calendar years 2015 and 2016. This goal reiterates KYTC's commitment to the shared vision of Toward Zero Deaths.

**Total Number of Non-Motorized
Fatalities and Serious Injuries** 293.0

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

The Kentucky Transportation Cabinet has set the target goal of 293 non-motorized fatalities and serious injuries for fiscal year 2018. KYTC remains committed to the reduction of serious injuries and fatalities throughout the Commonwealth. This target represents a reduction in total Non-Motorized fatalities and serious injuries in calendar years 2017 and 2018 as compared to calendar years 2015 and 2016. This goal reiterates KYTC's commitment to the shared vision of Toward Zero Deaths.

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

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

Safety Performance targets are established by the Kentucky Transportation Cabinet through the development of the Highway Safety Plan.

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

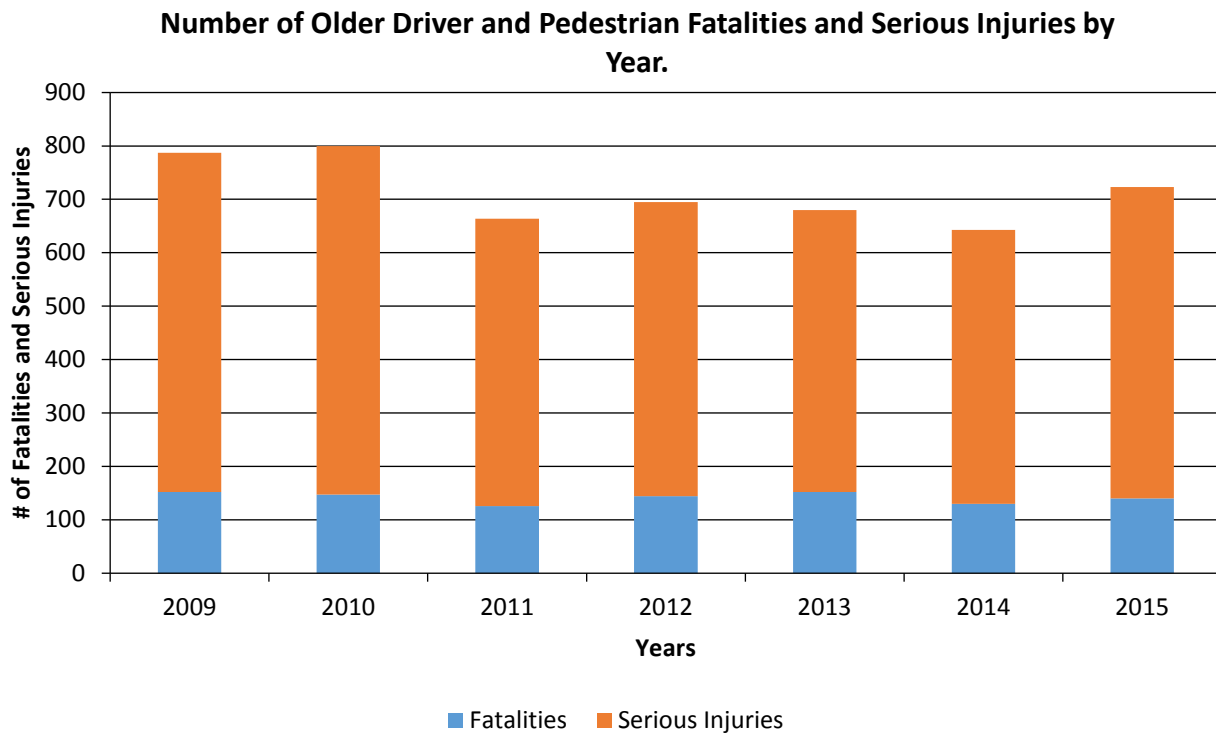
Does the HRRR special rule apply to the State for this reporting period?

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	152	147	126	144	152	130	140
Number of Older Driver and Pedestrian Serious Injuries	635	653	538	551	528	513	583



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

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Other-Initiative Basis

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

Due to the extent of utilization of the HSM by KYTC's HSIP, procedures for program-wide effectiveness assessment do not currently exist. Effectiveness is determined at the initiative level, utilizing such methodology as benefit/cost ratios.

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

As previously stated, effectiveness is not currently determined at the program-wide level. Effectiveness at the initiative level is determined through benefit/cost ratios were applicable as seen below in the entry entitled **Countermeasure Effectiveness Evaluations** and in the **Executive Summary**. Current and previous benefit/cost analysis has shown positive return on investment for the initiatives analyzed.

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

Policy change
Increased awareness of safety and data-driven process

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

Policy changes include the implementation of Rumble Strips and Durable Pavement Edge (Safety Edge), as well as the implementation of a Performance Based Flexible Solutions initiative within Project Development.

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

No

Effectiveness of Groupings or Similar Types of Improvements

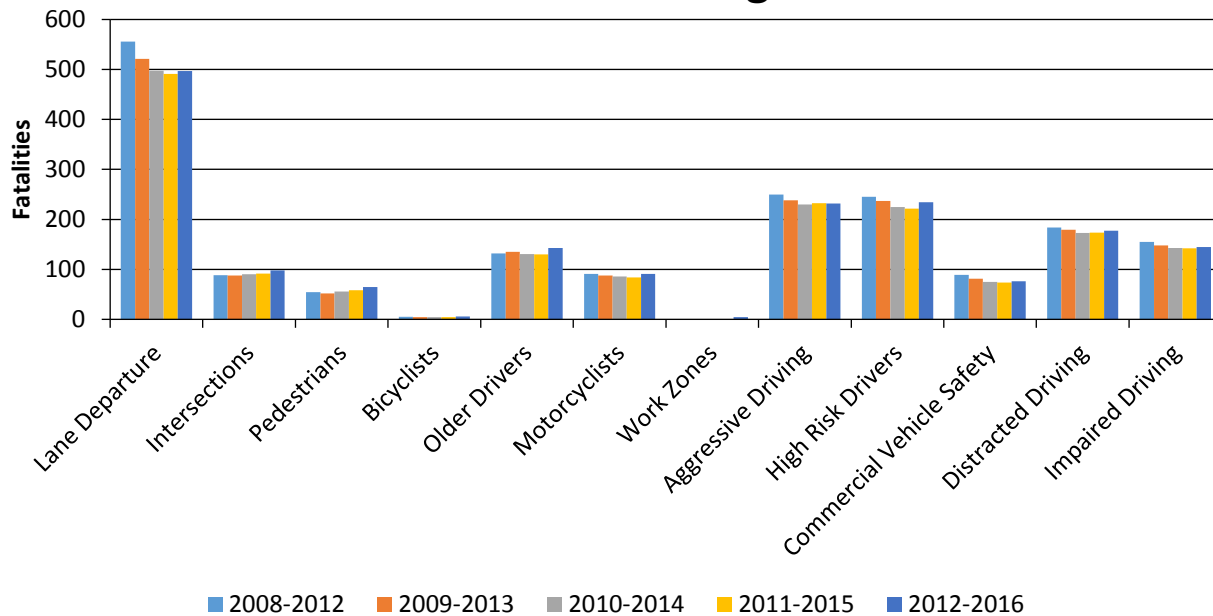
Present and describe trends in SHSP emphasis area performance measures.

Year 2016

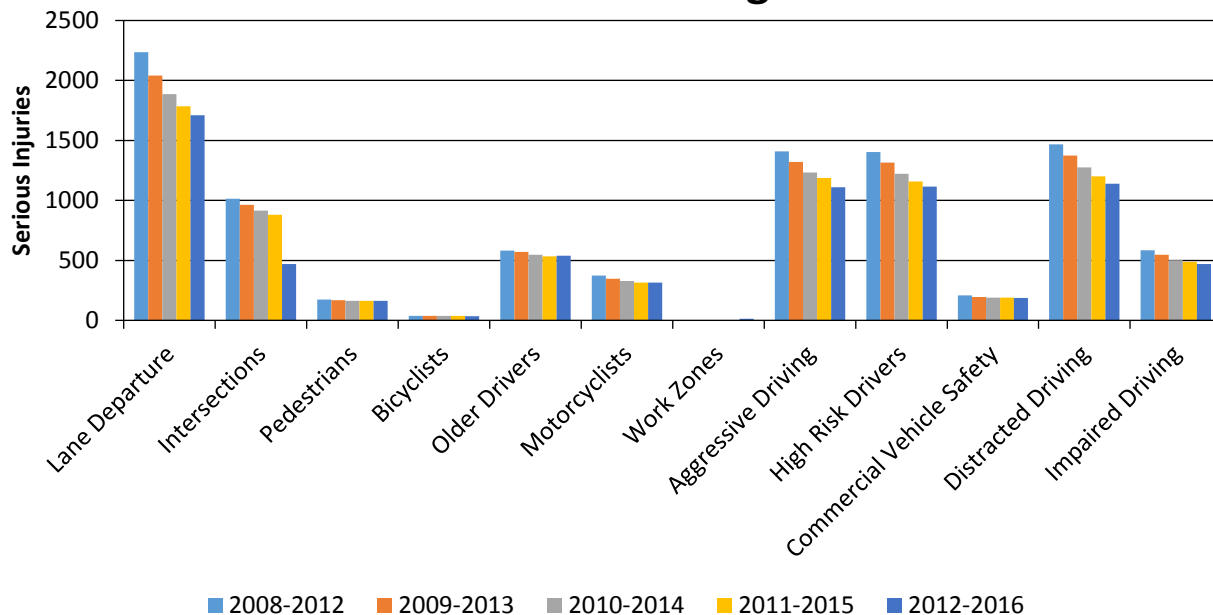
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SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Lane Departure	Lane Departure	496.8	1,710.8	1.03	3.56			
Intersections	Intersections	97.8	470.4	0.2	0.98			
Pedestrians	Vehicle/pedestrian	64.8	163.6	0.13	0.34			
Bicyclists	Vehicle/bicycle	5.6	35.6	0.01	0.07			
Older Drivers	Older Driver Involved	142.8	537.6	0.3	1.12			
Motorcyclists	Motorcycle Involved	90.6	313.6	0.19	0.65			
Work Zones	Work Zone Involved	4.6	12.2	0.01	0.03			
Aggressive Driving	Aggressive Human Factors	231.8	1,109.4	0.48	2.31			
High Risk Drivers	Young & Old Driver Involved	234.2	1,115.2	0.49	2.32			
Commercial Vehicle Safety	Truck-related	76	185.6	0.16	0.39			
Distracted Driving	Distraction Related	177.2	1,139.6	0.37	2.38			
Impaired Driving	Alcohol or Drug Related	145	470.4	0.3	0.98			

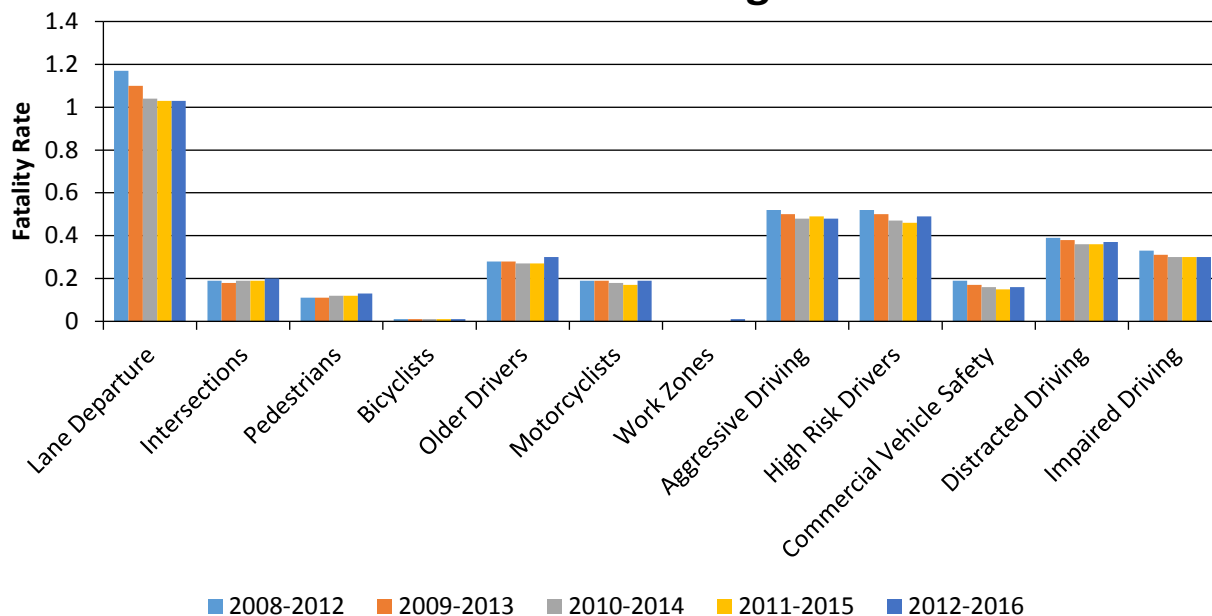
Number of Fatalities 5 Year Average



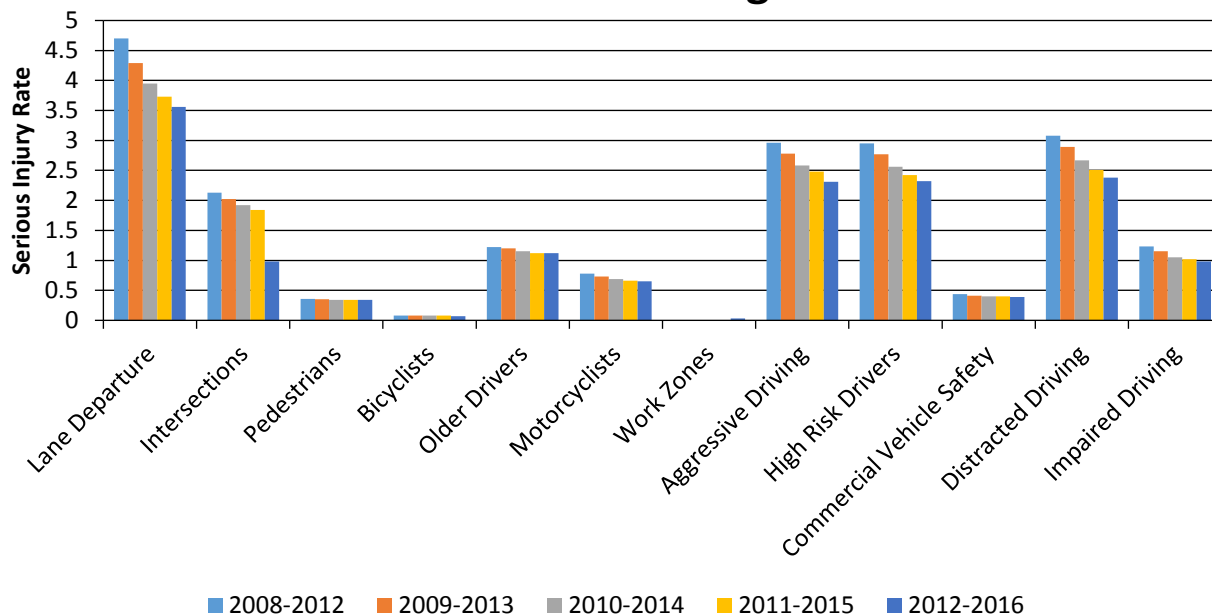
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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

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

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Yes

Please provide the following summary information for each countermeasure effectiveness evaluation.

CounterMeasures:	Cable Median Barriers
Description:	The Wilcoxon Signed-Rank test was used to determine the significance of the reduction in cross median crashes. A simple before/after analysis was used to calculate a benefit/cost ratio for the countermeasure.
Target Crash Type:	Cross median
Number of Installations:	
Number of Installations:	
Miles Treated:	63.375
Years Before:	5
Years After:	5
Methodology:	Simple before/after Wilcoxon Signed-Rank Test for “before and after shift in proportions of cross-median or impacted object in median crashes” - significant reduction at 99% confidence level.
Results:	Empirical Bayes analysis of “before and after cross-median crashes” was not performed on cable median barrier crashes because the necessary safety performance function was not available. Benefit/Cost analysis results using observed crashes; 13.58:1 based on Comprehensive Cost of motor vehicle collisions (National Safety Council).
File Name:	Hyperlink
CounterMeasures:	Rumble Strips
Description:	The Wilcoxon Signed-Rank test was used to assess the significance of the reduction of lane departure crashes. Before/after empirical Bayes analysis was used to estimate number of crashes reduced which allowed for the calculation of a benefit/cost ratio for the countermeasure.
Target Crash Type:	Other (define)

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Number of Installations:

Number of Installations:

Miles Treated: 190.307

Years Before: 5

Years After: 5

Methodology:

Before/after using empirical Bayes or Full Bayes

Wilcoxon Signed-Rank Test for “before and after shift in proportions of lane departure crashes” - not a significant reduction at 95% confidence level.

Results:

Empirical Bayes analysis of “before and after lane departure crashes” results indicated the change in crashes (effect of the treatment) was significant at the 95% confidence level.

Benefit/Cost analysis results using expected crashes from empirical Bayes analysis; 28.79:1 based on Comprehensive Cost of motor vehicle collisions (National Safety Council).

File Name: [Hyperlink](#)

CounterMeasures:

High-Friction Surface Treatments

The Wilcoxon Signed-Rank test was used to assess the significance of the reduction of wet, lane departure crashes. Before/after empirical Bayes analysis was used to estimate number of crashes reduced which allowed for the calculation of a benefit/cost ratio for the countermeasure.

Description:

Target Crash Type:

Other (define)

Number of Installations:

29

Number of Installations:

29

Miles Treated:

Years Before: 5

Years After: 5

Methodology:

Before/after using empirical Bayes or Full Bayes

Wilcoxon Signed-Rank Test for “before and after shift in proportions of wet-weather lane departure

Results:

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crashes” - significant reduction at 99% confidence level.

Empirical Bayes analysis of “before and after wet-weather lane departure crashes” results indicated the change in crashes (effect of the treatment) was significant at the 95% confidence level.

Benefit/Cost analysis results using expected crashes from empirical Bayes analysis; 3.34:1 based on Comprehensive Cost of motor vehicle collisions (National Safety Council).

File Name: Hyperlink

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)
-														

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?

Yes

Describe any other aspects of HSIP effectiveness on which the State would like to elaborate.

The KYTC HSIP originally housed Rumble Strips as an initiative that, through the efforts of HSIP personnel and KYTC leadership, has since become a common business practice. Additionally, the HSIP succeeded in introducing Durable Pavement Edge (Safety Edge) as a common business practice.

Compliance Assessment

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

07/31/2015

What are the years being covered by the current SHSP?

From: 2015 To: 2019

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

2019

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.

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 SEGMENT										
Segment Identifier (12)	100	100					100	100	100	100
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					100	100		
Begin Point Segment Descriptor (10)	100	100					100	100	100	100
End Point Segment Descriptor (11)	100	100					100	100	100	100
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								

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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	0		
Average Annual Daily Traffic (79)	100	100					100	1		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					100	100	100	100
INTERSECTION										
Unique Junction Identifier (120)			100	100						
Location Identifier for Road 1 Crossing Point (122)			100	100						
Location Identifier for Road 2 Crossing Point (123)			100	100						
Intersection/Junction Geometry (126)			100	100						
Intersection/Junction Traffic Control (131)			100	100						
AADT for Each Intersecting Road (79)			81	81						
AADT Year (80)			13	8						
Unique Approach Identifier (139)			100	100						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	100				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
Ramp Length (187)					100	100				
Roadway Type at Beginning of Ramp Terminal (195)					100	100				

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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)					100	100				
Interchange Type (182)					100	100				
Ramp AADT (191)					85	100				
Year of Ramp AADT (192)					85	100				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	100.00	100.00	86.75	86.13	97.27	100.00	100.00	77.89	100.00	100.00

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.

Ramp AADT items are being collected on a cycle and will be at 100% well before September 30, 2026.

Efforts are currently under way to acquire remaining MIRE fundamental elements on local public roads; below is a link to the current ADT estimation efforts underway in partnership with KTC.

http://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1039&context=ce_etds

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	Suspected Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	INCAPACITATING	No	N/A	No	N/A	No
Crash Database	Suspected Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Database Data Dictionary	INCAPACITATING	No	N/A	No	N/A	No

Please describe the actions the State is taking to become compliant by April 15, 2019.

The crash report form and the crash database are currently compliant and our TRCC will ensure that the crash report form instruction manual and crash database data dictionary will be updated to meet MMUCC compliance.

Did the State conduct an HSIP program assessment during the reporting period?

Yes

Describe the purpose and outcomes of the State’s HSIP program assessment.

During the reporting period, FHWA KY Division performed a process review of the Localized Risk Mitigation Projects (LRMP) initiative for the purpose of the following:

1. Determine if LRMPs are prioritized and selected in a manner consistent with Central Office HSIP-developed projects.
2. Determine if LRMPs have a similar benefit cost ratio to Central Office HSIP-developed projects.
3. Determine whether LRMP projects are developed and procured in a timely manner.
4. Determine how the LRMP process can be altered to be more effective.

The review determined the following:

This process review showcased many successful practices of the KYTC LRMP process as well as documented several areas where improvement is possible. The LRMP process allows each District the opportunity to identify and develop its own safety projects. This process allows each District to be intimately involved in the HSIP. LRMPs have been prioritized and evaluated differently since the program started. These projects should be evaluated and prioritized in similar fashion to the rest of the HSIP. This would allow the LRMP program to be compared with other HSIP programs. KYTC should also consider a guideline that specifies that LRMP projects should be developed and procured in a timely manner. Currently, nearly 20% of approved LRMPs have not advanced to be advertised for construction.

Action Plan

1. FHWA will work with KYTC to make a more formalized process for the LRMP program that includes appropriate project evaluation and prioritization as well as project development requirements to make the LRMP process match the implementation of the rest of the HSIP.
2. FHWA will encourage the State Highway Engineer’s Office to coordinate with the CO HSIP team concerning the LRMP program including possible discussions concerning individual project submissions as well as other important aspects of the program.

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Optional Attachments

Program Structure:

[HSIP FAST Planning FINAL.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.