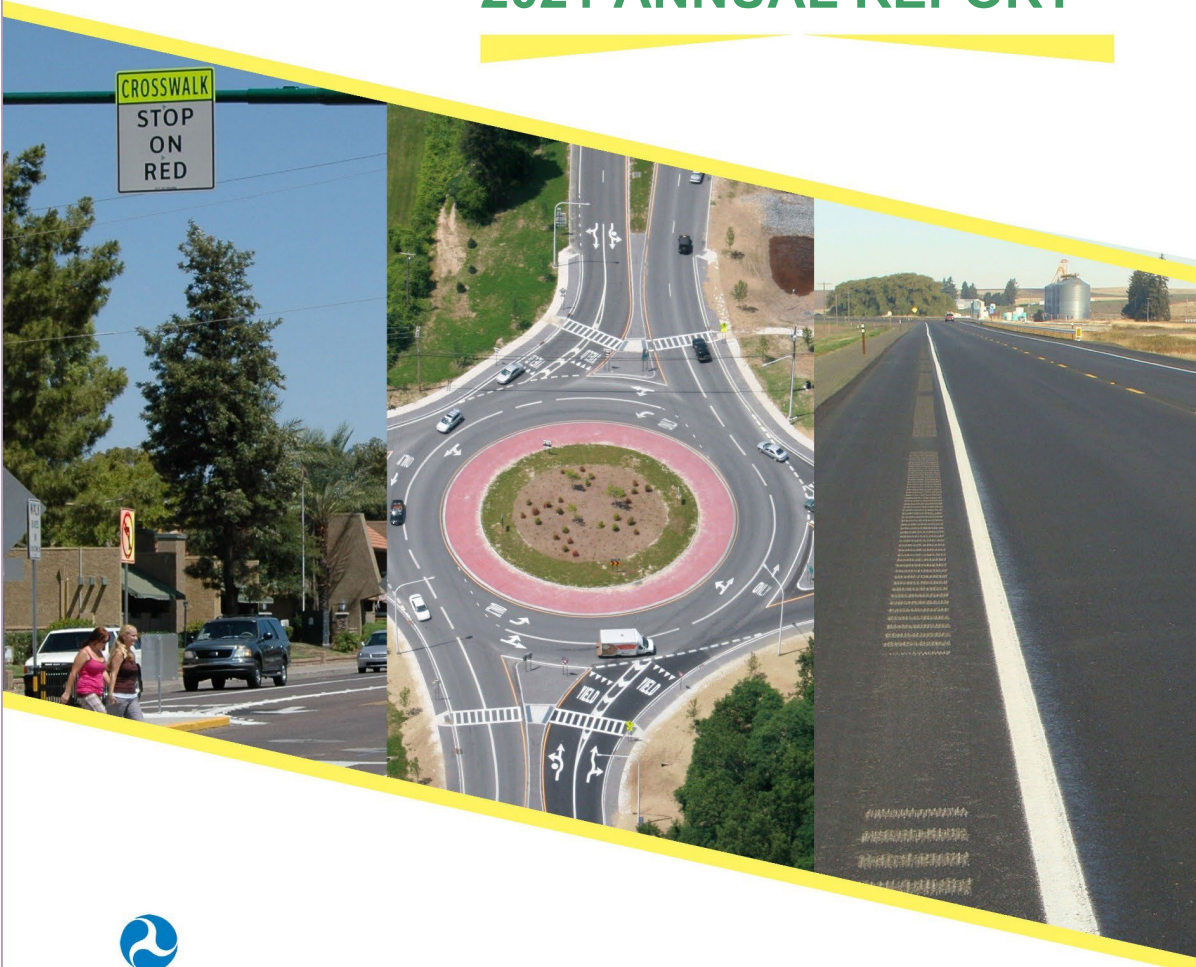




UTAH

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2021 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. 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

From 2013-2016, the State of Utah experienced an increase in traffic fatalities each year. The 2017-2019 period marked a return to our past long-term downward trends in fatalities. Serious injury crashes peaked in 2015 and then trended downward through 2019. However, 2020 experienced a higher number of fatal and serious injury crashes than the year before as Utah mirrored trends seen in other states during the COVID-19 pandemic. We are hopeful that our efforts to prioritize safety projects with the greatest potential to reduce fatalities and serious injuries will lead to a resumption of the downward trends in those crash types as more normal traffic patterns emerge following the pandemic.

We continue to use both crash analysis and systemic modeling to identify the projects most likely to reduce fatalities and serious injuries. We modified our project selection process in 2019 to fund the projects with the highest B/C ratios even if doing so results in HSIP funding not being allocated to each region of the state evenly. The first year of this change has proven to be a success and we expect that continuing along this path will lead to the best projects being funded each year.

The FAST Act approved by Congress five years ago removed our ability to fund education and enforcement efforts with HSIP funds. We have been using State funds to continue these programs. Education and enforcement remain important parts of our comprehensive safety strategy to reduce severe crashes.

During FY21, we updated our Strategic Highway Safety Plan (SHSP). The plan is currently awaiting signature from the UDOT Executive Director and should be signed shortly after submitting this annual HSIP report. The new SHSP has been upgraded to emphasize a web-based version rather than a static PDF report. The new web version is complete with charts that show real-time crash and fatalities data. This allows SHSP readers to use this real-time data to track progress and inform decisions regarding the different focus areas.

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.

UDOT's Safety Programs Engineer (located within the Traffic & Safety Division) oversees HSIP activities within Utah. This person is responsible for setting the policies and procedures required to fulfill the federal HSIP mandate set forth by the FAST Act. The UDOT region offices also play a major role in the development and implementation of HSIP projects. They work in concert with the UDOT Traffic & Safety Division to identify potential project locations, submit HSIP funding applications, and participate in the screening and prioritization process. Once projects are selected and funded in each region, the region offices take ownership of project delivery, assigning project managers, and proceeding according to standard federal environmental, design, and construction processes.

HSIP funds can be used for infrastructure improvements on any publicly owned roadway. Any local agency may apply for HSIP funding as long it controls the right-of-way for the location in question. However, the Traffic & Safety Division researches the crash history at these locations just as they do with projects developed internally. In order for HSIP funds to be used, all locations must show either a proven crash history or have characteristics that conform to systemic situations that UDOT has identified as a funding priority. UDOT also works with Metropolitan Planning Organizations to help them integrate safety into their long-range planning efforts.

The project process includes the following steps:

- Crash data evaluation and coordination with region offices to identify candidate projects.
- Analysis of candidate projects to determine anticipated benefit/cost ratios.
- Joint prioritization and selection of projects between the Central Traffic & Safety office and the region offices.
- Programming of projects into discrete funding years.
- Assignment of project managers and beginning of design process.
- Advertisement and construction.
- Evaluation based on three years of crash data before and after construction.
- Reporting in the annual HSIP report.

Additionally, UDOT began during FY20 to implement a new procedure that will take effect beginning in FY23. UDOT's four region offices have historically been prorated a percentage of Utah's HSIP funds based on the relative numbers of severe crashes that occur within each region. The region offices were given discretion to prioritize their funding allocation to projects of their choosing as long as those projects had an estimated benefit-cost ratio greater than 1.0. This historic funding allocation model will continue through FY22. Beginning

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in FY23, however, regions will not be given a set funding allocation. Instead, funding will be prioritized based on projects' benefit-cost ratio. This means that the projects most likely to reduce severe crashes will be funded regardless of location. The Traffic and Safety Division believes that this new process will lead to fewer severe crashes and help Utah best meet the Zero Fatalities goal.

Where is HSIP staff located within the State DOT?

Operations

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process
- Formula via Districts/Regions

UDOT has historically allocated funds to region offices according to a preset formula based on the share of severe crashes occurring within each region. This model will continue through FY22. Beginning with FY23, however, UDOT plans to move to a competitive selection process based on estimated project benefit-cost ratio.

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

Local roads are eligible for HSIP funds if projects meet program requirements. UDOT currently lacks comprehensive roadway data for local roads (non-State and non-Federal Aid) that would make it easier to compare relative safety needs on State roads and local roads, especially for systemic treatments. However, efforts are underway to work with other State agencies, local governments, and emergency dispatch centers to develop more complete roadway inventory data on local roads. In the meantime we will continue to perform hot-spot analysis on all public roads, including locals. Once we identify a hotspot location and potential countermeasures, we approach the local government to assess their willingness to proceed with an HSIP-funded safety project.

UDOT does perform crash analysis on non-State Federal Aid routes and accepts applications from local agencies for HSIP funding consideration on all public roads. We also apply the usRAP safety protocol to select non-State Federal Aid and local routes. During this reporting period, UDOT completed coding for all Federal-aid routes in all counties of the state.

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

- Design
- Districts/Regions
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

The Central Traffic & Safety office leads the HSIP effort, but various other divisions are involved in the process. The traffic/safety, project management, maintenance, and design groups are all involved at the region level, both with helping to identify candidate projects and to design and construct them.

Describe coordination with internal partners.

Planning

UDOT uses two methods to plan HSIP projects. For the first method, the Traffic & Safety Division works throughout the year with each region to determine their priority projects for HSIP funding consideration. The Traffic & Safety Division then screens the crash data, traffic data, and input from the region offices to determine whether each project meets HSIP eligibility criteria. For the second method, the Traffic & Safety Division employs a network-wide approach to identify projects. This is done by looking at crash and roadway attribute data from a statewide perspective. UDOT has several efforts underway to identify projects systemically and through network screening tools, including the usRAP model and BYU crash prediction model.

Design

After projects are programmed, project managers from the applicable UDOT region offices are assigned to each project. These project managers then shepherd the projects through UDOT's standard federal environmental, design, and construction processes. Project managers generally invite Traffic & Safety staff to attend scoping and design review meetings to make sure that the safety elements are properly incorporated into the project.

Maintenance & Operations

Each region office works with their maintenance and operations staff to give them an opportunity to suggest safety projects based on their experience maintaining the state roadway network every day. Periodic meetings are held between region traffic and safety engineers and maintenance crews. Their round of meetings in the fall is where engineers specifically solicit safety project ideas from maintenance staff. Following these meetings, region traffic and safety engineers submit safety project applications for projects they believe merit funding. These applications are then reviewed by Central Traffic & Safety as described above.

Access to Data

In order to assist each of our partners in this process, we have developed an online crash visualization and analysis tool so everyone has equal access to safety data.

Identify which external partners are involved with HSIP planning.

- Academia/University
- FHWA
- Governors Highway Safety Office
- Local Government Agency
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-SHSP Partners

Describe coordination with external partners.

Academia

UDOT has active and ongoing partnerships with both Brigham Young University (BYU) and the University of Utah to further safety work in Utah. BYU has worked with UDOT over the past several years to develop and continually refine Bayesian crash predictive models that show where crashes are over-represented. Each year BYU provides model output reports to the region offices. The reports show potential safety project locations and countermeasures for their consideration.

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The University of Utah has been working with UDOT the last few years to improve the statewide crash database and to expand the usRAP model on non-State maintained roads. They completed coding of all federal-aid routes in all counties of the state in 2020.

FHWA

We work closely with the Safety Operations Engineer in the local FHWA office to ensure that we are complying with appropriate guidelines in our implementation of the HSIP. We routinely involve him in coordination meetings with the region offices so that he stays informed about the projects we are selecting and implementing with our HSIP funds.

Governor's Office of Highway Safety

The Utah Highway Safety Office (HSO) is housed within the Department of Public Safety. We hold regular meetings involving the HSO to ensure coordination of data, funding, and strategies for our respective programs.

MPOs

The MPOs in Utah have been very motivated to integrate safety into their planning process. UDOT has tried to use several different tools to accomplish this goal, with mixed results. During the past couple of years we have made significant headway by introducing our MPO partners to the usRAP safety model and showing how it can be used as a regional safety planning tool. Specific conversations were held with Cache MPO in 2017 and MAG in 2018. During this past year, coding of all necessary usRAP roadway attributes was completed for all federal aid routes in all counties across the state.

SHSP Partners

SHSP Partners are actively involved in working groups for each of our SHSP emphasis areas.

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

UDOT focuses its infrastructure improvements primarily on the Roadway Departure Crashes, Drowsy Driving, Distracted Driving, and Intersection Safety emphasis areas. The other emphasis areas (Public Outreach and Education, Use of Safety Restraints, Impaired Driving, Aggressive Driving, Pedestrian Safety, Teen Driving Safety, Motorcycle Safety, and Speed Management) are addressed primarily through non-infrastructure efforts such as education, media, and enforcement campaigns. UDOT partners with other state, local, and federal agencies to implement the non-infrastructure components of the SHSP. The FAST Act removed UDOT's ability to fund education and enforcement efforts with HSIP, so we have been using state funds to continue those programs.

A "Zero Fatalities" goal (ut.zerofatalities.com) is also part of the SHSP. UDOT began displaying weekly safety messages on variable message signs during the summer of 2015 to encourage safe driving behaviors such as seat belt use. Those safety messages continue to be posted today.

Program Methodology

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

Yes

Select the programs that are administered under the HSIP.

- HRRR
- HSIP (no subprograms)

Program: HRRR

Date of Program Methodology:10/1/2016

What is the justification for this program?

- Other-Crash data trigger from FHWA

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes

- All crashes

Exposure

Roadway

- Functional classification

What project identification methodology was used for this program?

- Crash frequency

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

Yes

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

Yes

How are projects under this program advanced for implementation?

- Other-Coordination with region offices

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).

Relative Weight in Scoring

Available funding:50

Other-Ability of region to identify eligible project:50

Total Relative Weight:100

Program: HSIP (no subprograms)

Date of Program Methodology:10/1/2019

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes

- All crashes

Exposure

- Traffic
- Volume
- Lane miles

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Critical rate
- Excess proportions of specific crash types
- Other-Hierarchical Bayesian
- Other-usRAP model
- Relative severity index

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

How are projects under this program advanced for implementation?

- Competitive application process

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

Relative Weight in Scoring

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Ranking based on B/C:100

Total Relative Weight:100

What percentage of HSIP funds address systemic improvements?

42

HSIP funds are used to address which of the following systemic improvements?

- Add/Upgrade/Modify/Remove Traffic Signal
- Cable Median Barriers
- Clear Zone Improvements
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Pavement/Shoulder Widening
- Rumble Strips
- Upgrade Guard Rails

What process is used to identify potential countermeasures?

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

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

Connected and autonomous vehicles are identified as a Special Safety Area in our SHSP. We do not have a committed program of HSIP funds being used for V2I technologies. However, we do consider project applications submitted by our region offices. If an application for V2I or other ITS-related technologies is submitted and is worthy of funding, we are able to program the project. We have funded (or are currently funding) ITS technologies such as variable speed limit signing and wrong-way driving sign arrays. We also funded a project to use DSRC technology in snow plows in order to allow them to coordinate their movements with signalized intersections, thereby facilitating much faster snow clearance on a key arterial street.

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.

All construction projects that are funded with HSIP funds are assessed using the following procedures from the HSM:

1. Preliminary analysis is done with crash history and CMFs following procedures of Part D from the HSM.

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2. If a more technical analysis is warranted, the predictive method of Part C is used by utilizing the spreadsheet tools developed and published in the CMF Clearinghouse.
3. Where applicable, potential infrastructure projects are also compared to the usRAP results, which represent a risk-based approach based on roadway characteristics.
4. Methods in Chapter 4 in conjunction with the SPFs of Part C are used to prioritize potential locations of systemic treatments such as rumble strips, median barrier, and raised medians.
5. Utah maintains a list of approved mitigation measures from Part D and the CMF Clearinghouse.
6. Systemic projects are developed on the basis of roadway characteristics by using a sensitivity analysis involving the SPFs and CMFs found in the HSM.
7. Benefit-cost ratios are calculated based on guidance from Chapter 7. No HSIP funds are applied to projects that have a benefit cost ratio less than 1 unless the project can be justified systemically.
8. All projects are prioritized based on benefit-cost ratio.
9. The CAP-X and SPICE worksheets provided at the CMF clearinghouse are used to help decide on installation options of various intersections. Intersections that warrant further study use IHSDM and capacity projection models to determine the best alternatives.
10. Where applicable, design deviations use the predictive methods of Part C to evaluate the safety impact of proposed deviations.

The Bayesian statistical methods outlined in the HSM are also used extensively in a modeling partnership with Brigham Young University in order to identify hot spot crash locations for consideration of HSIP funding.

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

Non-Infrastructure Projects

UDOT uses some of its HSIP funding for eligible non-infrastructure projects that aid roadway safety efforts. Such projects include:

Integrating Safety Into Planning

UDOT Traffic & Safety Division personnel work internally with other UDOT divisions to integrate safety planning into their core processes. UDOT also works with MPOs and other safety partners across the state to supply them with needed data and tools so they can better integrate safety into their internal planning processes. Integrating safety into UDOT and MPO planning processes helps all agencies proactively address safety.

Improving Crash Data Analysis

HSIP funding is also used to improve UDOT's crash database. The ability to accurately locate crashes and understand crash characteristics is vital to programming HSIP funds.

University & Consultant Support

The Traffic & Safety Division uses HSIP funding to contract with universities and consultants who assist with various HSIP functions. The functions include items such as program management, project management, crash data mapping, statistical analysis, safety modeling, report preparation, SPF/CMF development, training, and HSM analysis.

UDOT previously used HSIP funding for education and enforcement efforts that fall within the State's Zero Fatalities effort umbrella. With passage of the FAST Act that led to ineligibility of those activities, UDOT has been using State funds to continue those efforts.

High Risk Rural Road Special Rule

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UDOT was subject to the HRRR Special Rule during FY21 (but will not be for FY22). To identify HRRR-eligible projects, we first look at the roads that qualify for application of the funding. Then, we look for systemic improvements such as warning signs, shoulder treatments, barrier/guardrail, and rumble strips that could be applied to make the roads safer. It is generally difficult to find crash hot spots on these roads due to the lower volumes and crash concentrations so we rely heavily on systemic approaches to finding locations where the money can be wisely spent. We are also occasionally able to use projects that are already planned for HSIP funding when those projects have been selected through other means and are located on a route that qualifies for HRRR funds.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$27,560,608	\$20,100,161	72.93%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$1,513,316	\$1,331,318	87.97%
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	\$6,123,936	\$5,630,882	91.95%
Old HRRR	\$14,858	\$14,858	100%
Totals	\$35,212,718	\$27,077,219	76.9%

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

0%

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

0%

We still have one local road safety project that is going through the construction closeout phase, but none of the funds available for programming or obligation in FY21 were used on new local projects. There was one local road project scheduled to be constructed in FY22, but the sponsoring local agency decided to cancel the project. Currently there are no local road projects planned for HSIP funding on our 3-year plan.

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

33%

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

43%

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?

0%

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

Over the past few years we have made great strides toward getting our HSIP funds obligated by the fiscal year end. From FY19 to FY21 we were able to effectively obligate all of our HSIP funds. The main reason we were able to reach our goal of full obligation was that we consistently encouraged the four region offices to over-program, and they delivered enough of the projects to obligate all available funding.

The principal ongoing challenges we face when trying to achieve full obligation are:

- Reprogramming funds that return from closed projects (or from projects where scope changes reduce the budget) to other projects where they can be spent.
- Delays in project delivery timelines that prevent projects from advertising in the fiscal year originally intended. This became a significant challenge during the last half of FY21 when several projects delayed advertisement to FY22 in order to get better bid prices. This was primarily due to a market where construction costs skyrocketed and bids came in significantly higher than already-inflated engineers estimates.
- Projects that are cancelled for political, practical, or economic reasons.

Over-programming is our primary mitigation tool, which means planning more projects than we have budget for. Experience has taught us that there will always be some projects that ultimately get cancelled and others that return part of their budget, so the only way to have all of our funds obligated at the end of the year is to plan for these occurrences. In the event that we run out of HSIP funds to obligate, we have the option to delay advertisement to the following fiscal year or use some state funds as a temporary bridge across the fiscal year boundary. These measures were necessary from FY19 to FY21 because we were very aggressive with over-programming.

Describe any other aspects of the State's progress in implementing HSIP projects on which the State would like to elaborate.

Project delivery is administered through the UDOT region offices. We work closely with our region counterparts to make sure safety projects are addressed in a timely manner. After projects are programmed, project managers from the applicable UDOT region offices are assigned to each project. These project managers then shepherd the projects through UDOT's standard federal environmental, design, and construction processes.

General Listing of Projects

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

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Region 2 Queue Cutters (PIN 15276)	Railroad grade crossings	Crossing approach improvements	2	Approaches	\$300000	\$4049948	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	41,500	40	State Highway Agency	Spot	Intersections	Intersection Improvements
I-15; MP 121-129, Variable Speed Limits (PIN 15309)	Speed management	Variable speed limits	8	Miles	\$750000	\$750000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	22,000	80	State Highway Agency	Spot	Roadway Departure	Dynamic VMS
BYU Safety Modeling FY21 (PIN 16332)	Miscellaneous	Data analysis	1	Project	\$120000	\$120000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	Non-infrastructure	Non-infrastructure	Data	Safety Modeling
SR-126; MP 20.53-20.86, Intersection Improvements (PIN 16355)	Intersection geometry	Intersection geometry - other	1	Intersections	\$1900000	\$1900000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	10,000	55	State Highway Agency	Spot	Intersections	Intersection Improvements
I-15; MP 132-194.14, Guardrail & Barrier (PIN 16629)	Roadside	Barrier- metal	62	Miles	\$1000000	\$1000000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	18,000	80	State Highway Agency	Systemic	Roadway Departure	Barrier
SR-10; MP 0-12.5, Roadside Improvements (PIN 17230)	Roadside	Roadside grading	12	Miles	\$1500000	\$990000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,200	65	State Highway Agency	Spot	Roadway Departure	Grading
I-80; MP 139.5-143.25, Median Cable Barrier (PIN 17331)	Roadside	Barrier – cable	4	Miles	\$2301000	\$2301000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	61,000	65	State Highway Agency	Systemic	Roadway Departure	Barrier
I-80; MP 167.69-178.49, Upgrade Guardrail (PIN 17332)	Roadside	Barrier- metal	11	Miles	\$4868000	\$4868000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	16,000	70	State Highway Agency	Systemic	Roadway Departure	Barrier
SR-59; MP 19.83-20.74, Shoulder	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	0.9	Miles	\$2500000	\$2500000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	5,300	55	State Highway Agency	Spot	Roadway Departure	Shoulder Widening

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Widening (PIN 17336)															
I-80; MP 84, VMS Wind Warning Sign (WB) (PIN 17611)	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Signs	\$300000	\$600000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	13,000	80	State Highway Agency	Spot	Lane Departure	Dynamic VMS
SR-232; MP 0.3-2.2, Lighting Improvements (PIN 18291)	Lighting	Continuous roadway lighting	2	Miles	\$800000	\$1031090	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	24,500	40	State Highway Agency	Systemic	Intersections	Intersection Improvements
I-15; MP 194.14 to MP 207.00, Cable Barrier (PIN 18298)	Roadside	Barrier – cable	13	Miles	\$3500000	\$3500000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	21,000	80	State Highway Agency	Systemic	Roadway Departure	Barrier
I-15; MP 207-229, Median Cable Barrier (PIN 18299)	Roadside	Barrier – cable	22	Miles	\$5000000	\$5000000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	24,000	80	State Highway Agency	Systemic	Roadway Departure	Barrier
US-89; MP 495.70-495.97, Brake Check Area (PIN 19002)	Shoulder treatments	Shoulder treatments - other	1	Locations	\$1200000	\$1200000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,600	50	State Highway Agency	Spot	Roadway Departure	Brake Check Area
US-89; MP 253.3-254.0, Add Turn Lanes (PIN 19286)	Intersection geometry	Add/modify auxiliary lanes	2	Lanes	\$1000000	\$1450000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,100	40	State Highway Agency	Spot	Intersections	Intersection Improvements

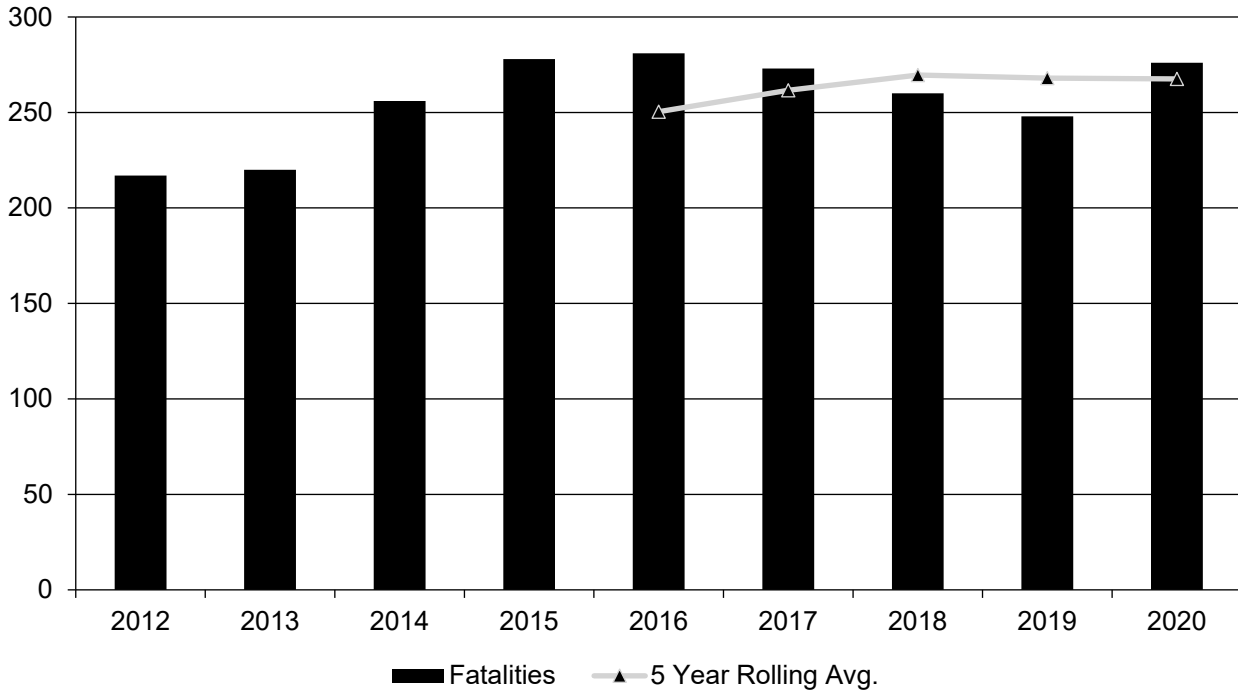
Safety Performance

General Highway Safety Trends

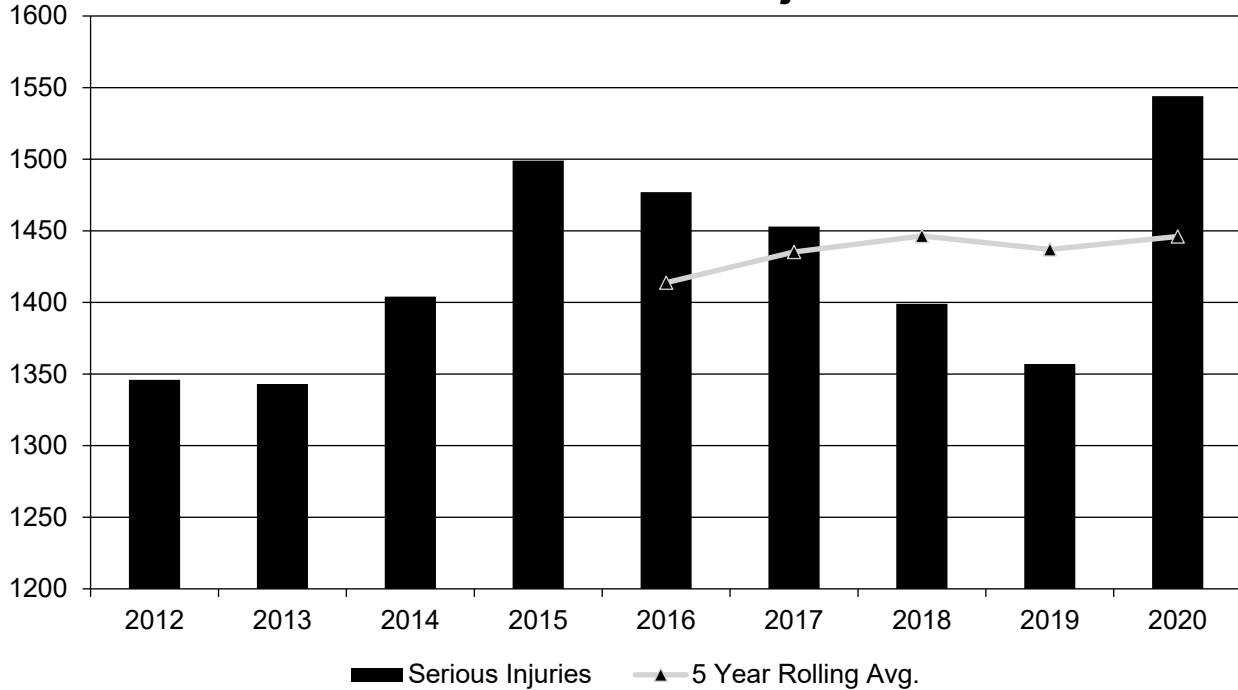
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fatalities	217	220	256	278	281	273	260	248	276
Serious Injuries	1,346	1,343	1,404	1,499	1,477	1,453	1,399	1,357	1,544
Fatality rate (per HMVMT)	0.815	0.814	0.928	0.946	0.913	0.866	0.806	0.753	0.914
Serious injury rate (per HMVMT)	5.053	4.971	5.092	5.099	4.799	4.611	4.337	4.120	5.114
Number non-motorized fatalities	34	36	46	54	44	49	40	48	44
Number of non-motorized serious injuries	192	153	161	155	168	170	173	172	173

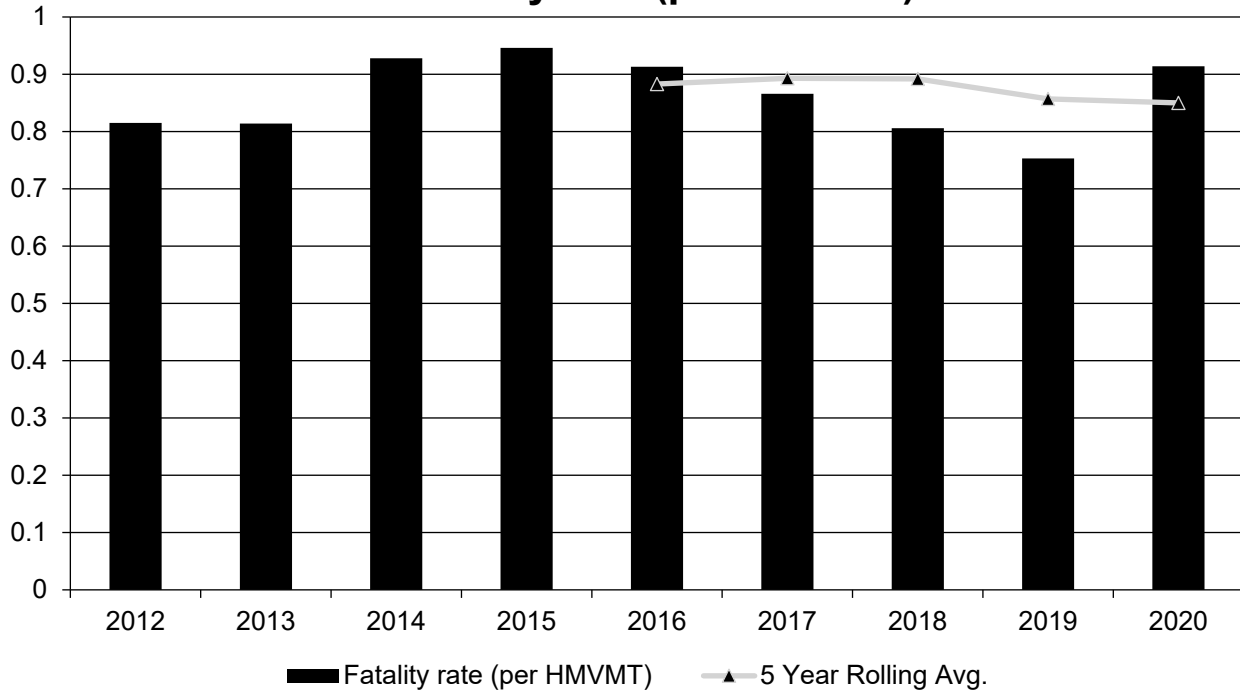
Annual Fatalities



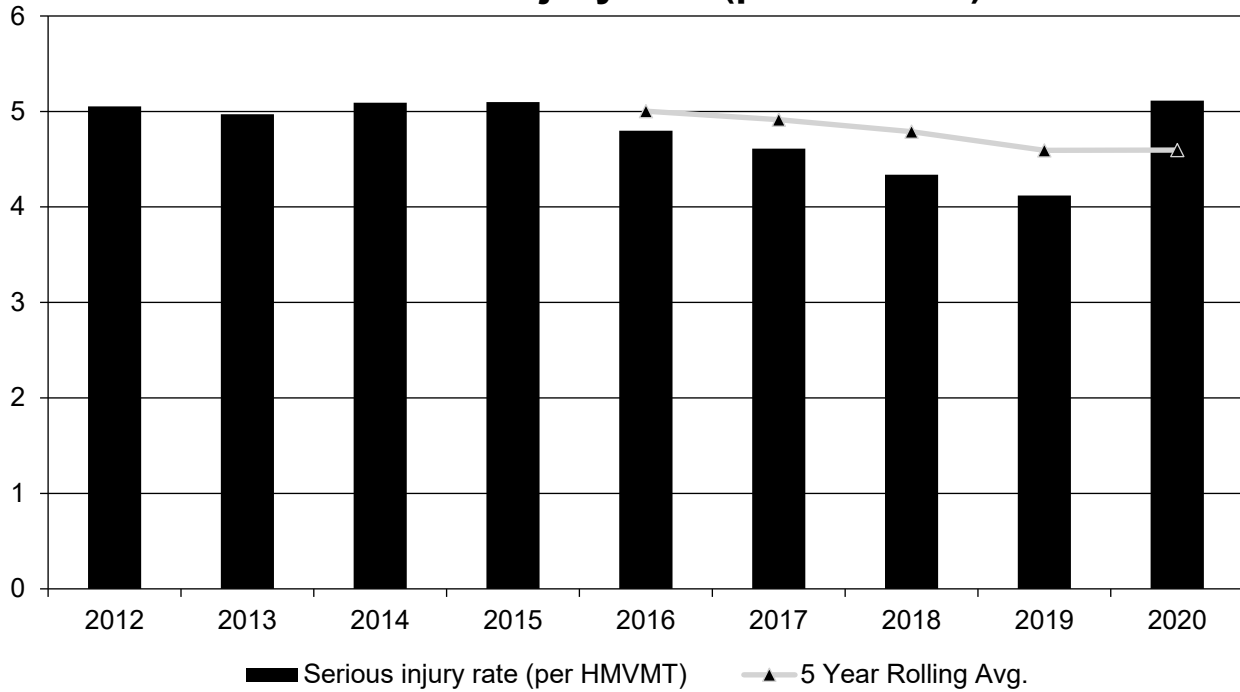
Annual Serious Injuries



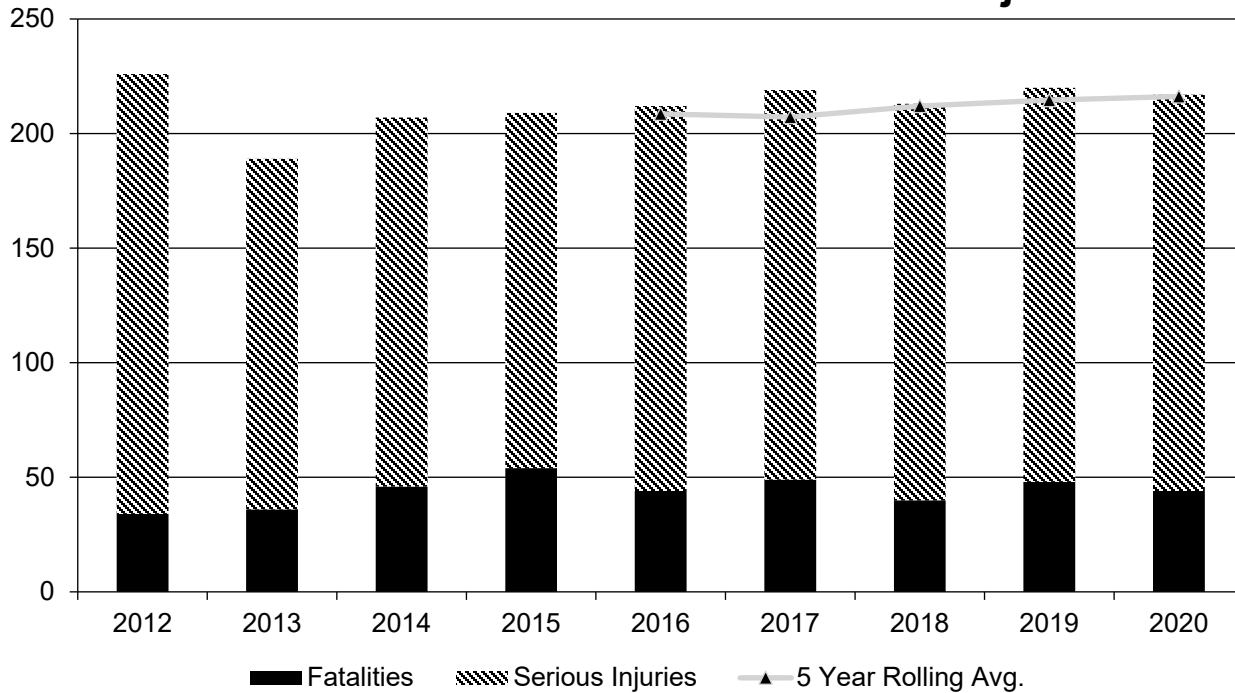
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



Describe fatality data source.

State Motor Vehicle Crash Database

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

Year 2020

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 (RPA) - Interstate	30	110.2	0.89	3.26
Rural Principal Arterial (RPA) - Other Freeways and Expressways	2	3	2.34	3.56
Rural Principal Arterial (RPA) - Other	30.2	102.6	1.57	5.34
Rural Minor Arterial	15.8	58.6	1.86	6.86
Rural Minor Collector	4.2	19.6	1.63	7.5
Rural Major Collector	18.6	60.8	1.86	6.07

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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 Local Road or Street	13.6	71.2	1.12	5.88
Urban Principal Arterial (UPA) - Interstate	20.4	148	0.25	1.83
Urban Principal Arterial (UPA) - Other Freeways and Expressways	3.6	12.2	0.81	2.75
Urban Principal Arterial (UPA) - Other	67	427.6	1.21	7.72
Urban Minor Arterial	27.6	182.8	1.04	6.89
Urban Minor Collector	3.6	19.2	1.24	6.29
Urban Major Collector	16	117.6	0.85	6.24
Urban Local Road or Street	15	114.4	0.39	2.98

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Year 2020

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	191.6	948.6	0.9	4.46
County Highway Agency				
Town or Township Highway Agency				
City or Municipal Highway Agency				
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)				
Indian Tribe Nation				
All Other	76	497.6	0.75	4.89

Provide additional discussion related to general highway safety trends.

The 5-year rolling average for total fatalities increased each year from 2016-2018 but decreased slightly in both 2019 and 2020. The 5-year rolling average for fatality rate increased slightly from 2016 to 2017 but then decreased slightly each year since. The actual number of annual fatalities went down each year from 2016 to 2019 but saw a significant uptick in 2020 that put the annual number of fatalities back to near 2017 levels. The fatality rate went down each year from 2015 to 2019, but the 2020 rate rose sharply back to 2016 levels.

Trends for serious injuries have been similar. The 5-year rolling average for serious injuries increased each year from 2016-2018, decreased in 2019, and then rebounded to 2018 levels in 2020. The 5-year rolling

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average for serious injury rate, however, decreased from 2016 to 2019 and stayed almost exactly constant from 2019 to 2020. Actual numbers of serious injuries and the serious injury rate decreased significantly from 2016 to 2019, but both metrics rose in 2020 to levels higher than any other year in the past decade.

The rise in crashes and crash rates in 2020 is attributable to a spike in crashes coupled with significantly reduced traffic volumes, both of which are likely attributable to the COVID-19 pandemic. It will be interesting to see how crashes and crash rates look in the next few years as Utah and the rest of the US emerge from the pandemic.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2022 Targets *

Number of Fatalities:263.6

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

Step 1: Fatalities and Serious Injuries were reduced by 2.5% per year for 2021 and 2022 to reflect the goal set in our SHSP. Step 2: The 5-year rolling averages were computed using the values calculated in Step 1. The 2018-2022 value for each performance measure is our 2022 target.

Number of Serious Injuries:1455.2

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

Step 1: Fatalities and Suspected Serious Injuries were reduced by 2.5% per year for 2021 and 2022 to reflect the goal set in our SHSP. Step 2: The 5-year rolling averages were computed using the values calculated in Step 1. The 2018-2022 value for each performance measure is our 2022 target.

Fatality Rate:0.823

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

Step 1: Fatalities and Serious Injuries were reduced by 2.5% per year for 2021 and 2022 to reflect the goal set in our SHSP. Step 2: Due to COVID conditions in 2020, the annual VMT for 2021 was estimated based off of 1st quarter 2021 monthly VMT as compared to 2019. This value was held constant for 2022 given the highly variable nature of VMT from year-to-year. Step 3: Rates were estimated using the values calculated in Step 1 and Step 2 and also reflect a 2.5% reduction per year. Step 4: The 5-year rolling averages were computed using the values calculated in Step 1 through Step 3. The 2018-2022 value for each performance measure is our 2022 target.

Serious Injury Rate:4.547

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

Step 1: Fatalities and Serious Injuries were reduced by 2.5% per year for 2021 and 2022 to reflect the goal set in our SHSP. Step 2: Due to COVID conditions in 2020, the annual VMT for 2021 was estimated based off of 1st quarter 2021 monthly VMT as compared to 2019. This value was held constant for 2022 given the highly variable nature of VMT from year-to-year. Step 3: Rates were estimated using the values calculated in Step 1

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and Step 2 and also reflect a 2.5% reduction per year. Step 4: The 5-year rolling averages were computed using the values calculated in Step 1 through Step 3. The 2018-2022 value for each performance measure is our 2022 target.

Total Number of Non-Motorized Fatalities and Serious Injuries:213.8

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

Step 1: Fatalities and Suspected Serious Injuries were reduced by 2.5% per year for 2021 and 2022 to reflect the goal set in our SHSP. Step 2: The 5-year rolling averages were computed using the values calculated in Step 1. The 2018-2022 value for each performance measure is our 2022 target.

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

We held a series of meetings with our MPO and SHSP partners to coordinate and gain consensus on our safety performance targets.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2020 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	263.5	267.6
Number of Serious Injuries	1415.1	1446.0
Fatality Rate	0.820	0.850
Serious Injury Rate	4.400	4.596
Non-Motorized Fatalities and Serious Injuries	210.8	216.2

Despite not meeting our 2020 targets, we did make significant progress. We remain committed to our goal of Zero Fatalities. Implementing measures to improve safety through the HSIP is bringing UDOT closer to that goal. Overall traffic related fatalities are down 25% since 2000. Despite being the country's fastest-growing state over the past decade, Utah's fatality rate for 2020 of 0.91 is 33% lower than the national average of 1.37 fatalities per 100 million vehicle miles traveled*.

We continue to focus on opportunities to reduce fatalities and suspected serious injuries across all performance measures. These increases represent unacceptable trends. We continue to monitor each performance measure closely, seeking to identify and implement projects that will improve safety. We are also working to understand anomalies associated with travel patterns and motorist behavior during the 2020 timeframe of the COVID-19 pandemic, which have led to increased fatality and serious injury rates.

*Source: <https://www.nhtsa.gov/press-releases/2020-fatality-data-show-increased-traffic-fatalities-during-pandemic>

Applicability of Special Rules

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

Yes

Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020
Number of Older Driver and Pedestrian Fatalities	36	52	50	58	42	51	62
Number of Older Driver and Pedestrian Serious Injuries	123	146	147	138	140	166	144

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio
- Other-Reduction of severe crashes

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

The two measures of effectiveness chosen by UDOT are B/C ratio and reduction of severe crashes. Results presented in this report show that UDOT is making progress in both measures. The overall weighted B/C of the 3-year before/after project results is 8.5. Also, between 2016 and 2019, fatal and serious injury crashes and crash rates were generally trending downward. 2020 proved to be a reversal of these trends due to the effects of the COVID-19 pandemic. We are hopeful that the previous downward trends in fatalities and serious injuries will resume as Utah emerges from the pandemic.

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

- HSIP Obligations

Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

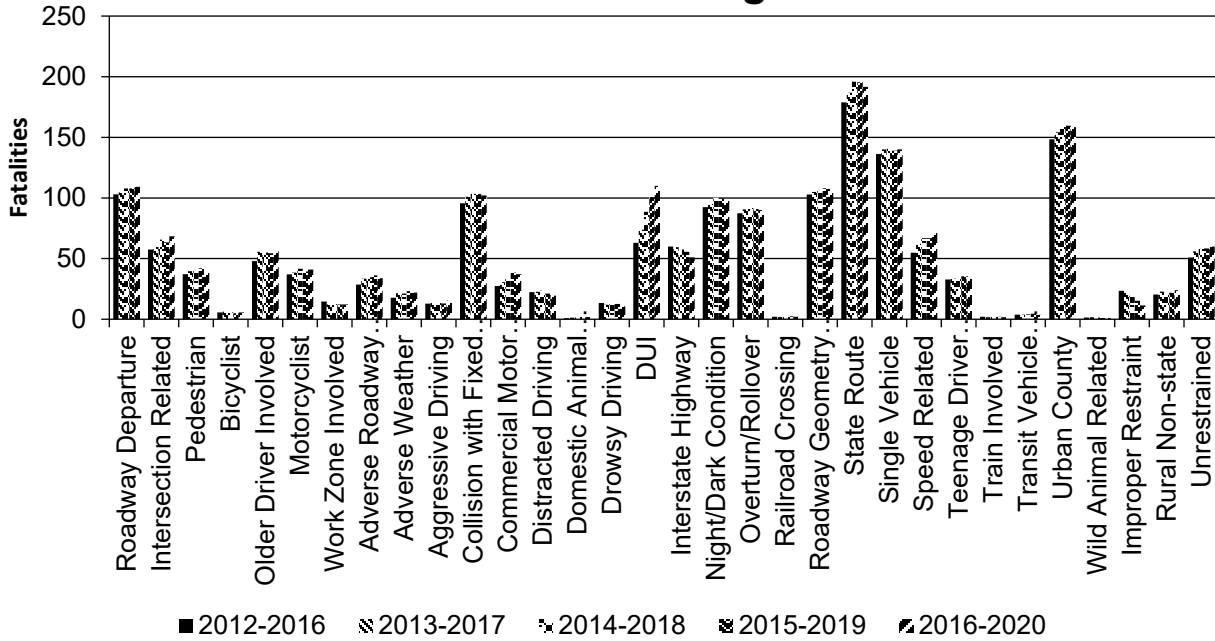
Year 2020

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)
Roadway Departure		109.2	426	0.35	1.35
Intersection Related		68.4	577.8	0.22	1.84
Pedestrian		39.4	125.2	0.13	0.4
Bicyclist		5.6	46.4	0.02	0.15
Older Driver Involved		56.2	229.2	0.18	0.73
Motorcyclist		41	210.8	0.13	0.67
Work Zone Involved		12.2	61.8	0.04	0.2
Adverse Roadway Surface Condition		33.8	207.4	0.11	0.66

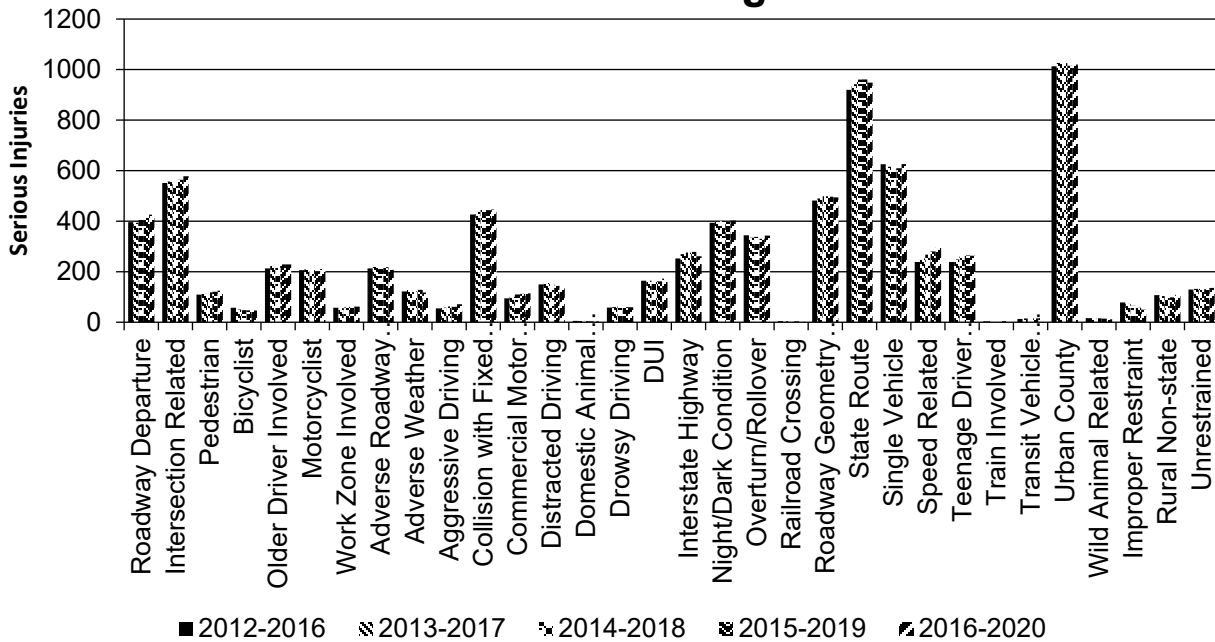
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SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Adverse Weather		22	117.2	0.07	0.37
Aggressive Driving		15.4	71.4	0.05	0.23
Collision with Fixed Object		102	446	0.32	1.42
Commercial Motor Vehicle Involved		37.2	114.4	0.12	0.36
Distracted Driving		19.4	133.8	0.06	0.43
Domestic Animal Related		1.8	3.6	0.01	0.01
Drowsy Driving		10.6	59.4	0.03	0.19
DUI		110	172.6	0.35	0.55
Interstate Highway		51	261.2	0.16	0.83
Night/Dark Condition		98.6	402.6	0.31	1.28
Overturn/Rollover		90	343	0.29	1.09
Railroad Crossing		2	5	0.01	0.02
Roadway Geometry Related		107.4	494.2	0.34	1.57
State Route		191.6	948.6	0.61	3.01
Single Vehicle		140	625.8	0.45	1.99
Speed Related		72.2	296.8	0.23	0.94
Teenage Driver Involved		35.4	263.2	0.11	0.83
Train Involved		1.6	5	0.01	0.02
Transit Vehicle Involved		3.6	16.4	0.01	0.05
Urban County		158.4	1,020	0.5	3.24
Wild Animal Related		1	11.4	0	0.04
Improper Restraint		11.4	49.6	0.03	0.16
Rural Non-state		24	108.4	0.08	0.34
Unrestrained		60	135.8	0.19	0.43

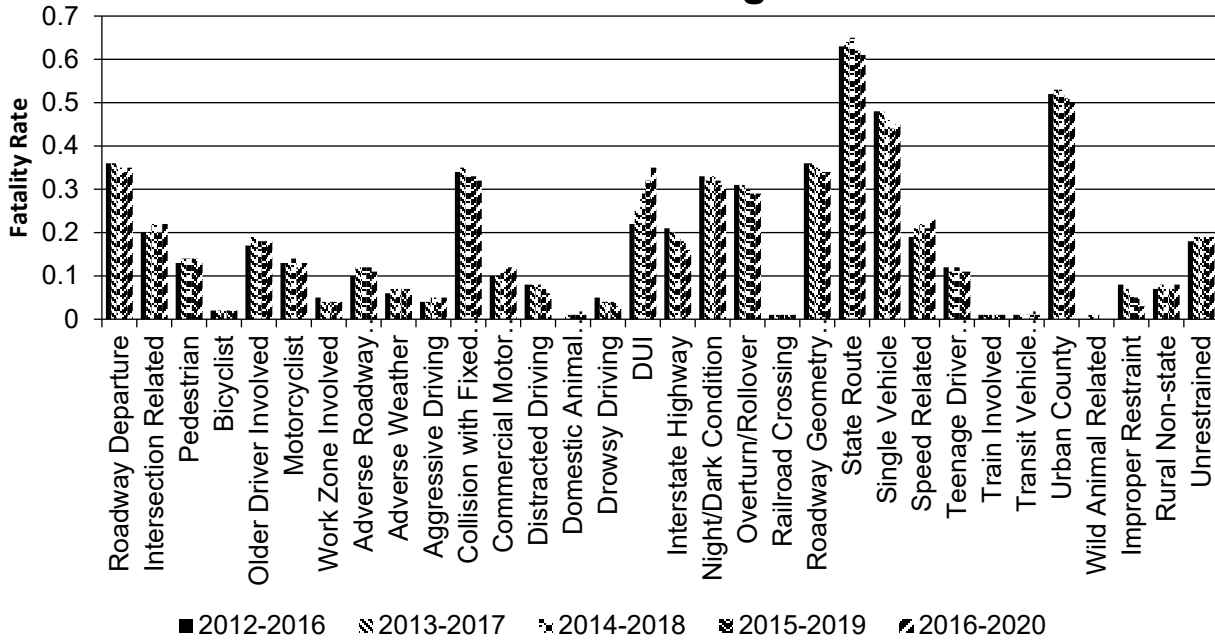
Number of Fatalities 5 Year Average



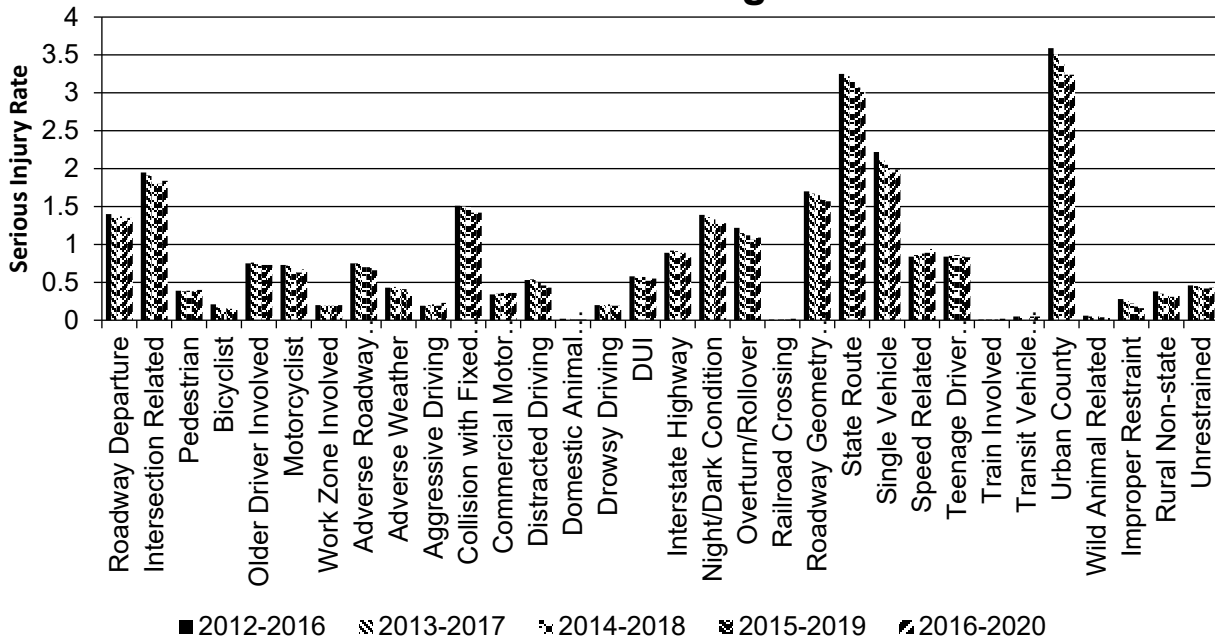
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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

No

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Each year we enter our before/after results for projects that have achieved 3 years of post-construction crash history, so there is information available there for specific types of projects. But we have not completed any grouped studies of the effectiveness of certain types of countermeasures.

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 OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
Ridge Road; Rural Road Safety Improvements (PIN 13447)	Rural Major Collector	Roadside	Barrier- metal		1.00								1.00	-0.2
SR-71/Ellerby Ave Intersection Imps (PIN 11391)	Urban Principal Arterial (UPA) - Other	Intersection geometry	Intersection realignment	1.00				1.00				2.00		28.43
SR-71/Ft. Union Blvd Int. Dual Lefts (PIN 11407)	Urban Principal Arterial (UPA) - Other	Intersection geometry	Intersection geometry - other	35.00	9.00			2.00		22.00	4.00	59.00	13.00	13.29
Various Routes; No-Pass Pennant Signing (PIN 13492)	Rural Principal Arterial (RPA) - Other	Roadway signs and traffic control	Roadway signs and traffic control - other	1.00	1.00							1.00	1.00	0
SR-20; MP 0.50-2.00, Runaway Truck Ramp (PIN 13491)	Rural Principal Arterial (RPA) - Other	Roadside	Roadside - other							1.00		1.00		3.32
US-6; Barrier (MP 192.56-192.82) (PIN 11411)	Rural Principal Arterial (RPA) - Other	Roadside	Barrier concrete -	2.00	4.00							2.00	4.00	-0.19
I-15, I-215, I-80; Interstate Structure Protection (PIN 13308)	Urban Principal Arterial (UPA) - Interstate	Roadside	Barrier concrete -					1.00				1.00		5.06
4100 S; 4000 W, 2700 W & 1300 W Signal Imps (PIN 12225)	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	47.00	31.00				2.00	39.00	21.00	86.00	54.00	-2.4
SR-201; MP 2.8-3.5, Barrier Extension (PIN 14455)	Urban Principal Arterial (UPA) - Other Freeways and Expressways	Roadway	Rumble strips - edge or shoulder	3.00						1.00		4.00		1.88
SR-201; MP 11.0-12.6,	Urban Principal	Roadside	Barrier concrete -	13.00	8.00			3.00		7.00	3.00	23.00	11.00	36.4

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LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
Shoulder Barrier (PIN 14456)	Arterial (UPA) - Other Freeways and Expressways													
SR-71; MP 9.7-12.1, Preservation & Raised Medians (PIN 13223)	Urban Principal Arterial (UPA) - Other	Access management	Raised island - install new	3.00	1.00	1.00				1.00	3.00	5.00	4.00	5.4
SR-36; MP 59.300-62.900, Median Barrier (PIN 14458)	Urban Principal Arterial (UPA) - Other Freeways and Expressways	Roadside	Barrier - concrete	9.00	5.00	1.00		1.00	1.00	4.00	4.00	15.00	10.00	17.27
Washington County Rural Roads (PIN 13448)	Rural Minor Collector	Roadside	Barrier- metal	3.00	3.00					2.00	1.00	5.00	4.00	2.09
US-191; MP 256.6-259.4, Motorcycle-Safe Guardrail (PIN 13494)	Rural Minor Arterial	Roadside	Barrier- metal											0

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

The overall weighted B/C was 8.5 for the projects we reported 3-year before-after crash analysis for this year. This is the second-highest overall B/C that we've reported in the last 5 annual reports. Only 2017 had a higher overall B/C (9.4). A B/C ratio of 8.5 demonstrates that UDOT is selecting projects that are helping to reduce serious and fatal injury crashes.

The actual numbers of fatal and serious injury crashes generally decreased between 2016 and 2019 despite strong VMT growth, but they unfortunately rose sharply in 2020. Fatal and serious injury crash rates experienced similar trends over the past 5 years, including the increases from 2019 to 2020.

Compliance Assessment

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

10/10/2016

What are the years being covered by the current SHSP?

From: 2016 To: 2021

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

2022

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

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

ROAD TYPE	*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) [12]	100	100					100		100	
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					100	100		
	Surface Type (23) [24]	100	3.4					100			
	Begin Point Segment Descriptor (10) [10]	100	100					100		100	
	End Point Segment Descriptor (11) [11]	100	100					100		100	
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
	Functional Class (19) [19]	100	100					100	100	100	
Median Type (54) [55]	100	3.4									

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ROAD TYPE	*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) [23]	100	100								
	One/Two Way Operations (91) [93]	100	3.4								
	Number of Through Lanes (31) [32]	100	3.4					100			
	Average Annual Daily Traffic (79) [81]	100	100					100			
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100		100	
INTERSECTION	Unique Junction Identifier (120) [110]			100	3.4						
	Location Identifier for Road 1 Crossing Point (122) [112]			100	3.4						
	Location Identifier for Road 2 Crossing Point (123) [113]			100	3.4						
	Intersection/Junction Geometry (126) [116]			100	3.4						
	Intersection/Junction Traffic Control (131) [131]			100	3.4						
	AADT for Each Intersecting Road (79) [81]			100	3.4						
	AADT Year (80) [82]			100	3.4						
	Unique Approach Identifier (139) [129]			100	3.4						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					100	100				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					100	100				

ROAD TYPE	*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
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]						100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					100	100				
	Roadway Type at End Ramp Terminal (199) [189]						100				
	Interchange Type (182) [172]					100	100				
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					100	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Percent Complete):		100.00	78.53	100.00	3.40	81.82	100.00	100.00	22.22	100.00	0.00

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

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.

UDOT has now collected all required FDE, however we are still working to merge and organize the data so we are not marking them as complete until data is in a usable and accessible format. For state-maintained roads, FDE are collected using our biennial asset inventory and various internally managed business systems. For the non-state Federal-Aid system, data are collected using various internally managed business systems and the usRAP protocol. This data has all been collected and is going through the organization process.

Local road FDE data are collected through the ARNOLD system and are completed and available now. For unpaved state roads, data are collected via biennial asset inventory and with internal business systems. For non-state unpaved roads, data are collected with the ARNOLD system.

Optional Attachments

Program Structure:

[200929_HSIP_Manual.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.