

ALASKA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2023 ANNUAL REPORT



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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. 407 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

Under the Alaska Highway Safety Improvement Program (HSIP), the Alaska Department of Transportation & Public Facilities (DOT&PF) identifies high risk intersections and roads, scopes and prioritizes corrective projects, funds the most cost-effective projects, and evaluates actual project and program effectiveness. HSIP dollars are distributed to the most effective projects from a single statewide fund. The purpose of the Alaska HSIP is to "maximize lives saved and major injuries eliminated per dollar spent." As of FFY 2023, we currently measure our post-construction program benefit-cost ratio at approximately 6.92:1, a successful ratio achieved through a program that blends spot and systemic projects throughout the State in urban as well as rural locations.

Regional Traffic and Safety personnel identify, scope, estimate, and rank candidate projects according to benefit-cost ratio (ranked projects) and potential for crash reduction (non-ranked projects). HQ Traffic and Safety reviews proposed new projects, works with the regions to clarify project description and scope, and submits recommended projects to DOT&PF's Chief Engineer for approval. Following approval of new HSIP projects, HQ Traffic and Safety selects the most effective projects and proposes a statewide HSIP funding plan for the coming federal fiscal year for approval by the Chief Engineer and the Director of Program Development.

The HSIP funding plan typically includes a blend of ongoing projects and new projects. Regions design and construct funded projects and generate before-after studies when three years of post-improvement crash data becomes available. HQ Traffic and Safety manages funding for the statewide HSIP, annually updates the HSIP Handbook, maintains program effectiveness data, and produces the annual HSIP report.

As noted in previous HSIP Annual Reports, DOT&PF had not been able to provide timely data on serious injuries for a number of years. This was caused by a combination of difficulties in getting crash reports from the Alaska Division of Motor Vehicles (which continues to experience significant and prolonged delays in data availability) and challenges with processing data once it had been received from the DMV.

DOT&PF has worked diligently to resolve the data processing issues that led to this multi-year backlog. In this report, DOT&PF provides crash data through 2022. Please note that, due to an issue with FARS data systems, they are unable to provide certified fatality data, and therefore we have provided 2022 fatality data from our statewide crash database CARE. When the NHTSA data issue is resolved, we intend to revert to using data provided by them. Data in the CARE system is certified through 2021. Calendar year 2022 data entry has been completed for serious crashes resulting in fatalities and serious injuries, but QC is not yet complete. Given the nature of standard QC activities, we anticipate that any changes would result in a decrease.

Introduction

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

Program Structure

Program Administration

Describe the general structure of the HSIP in the State.

The general structure of Alaska's HSIP is described in Sec. 1.3 of the Alaska HSIP Handbook:

Regional Traffic and Safety Engineers in Alaska's three regions (Northern, Central and Southcoast) screen crash data and consider other information to identify projects. Projects can be either ranked or non-ranked.

Ranked projects are implemented at locations with high crash history and are ranked by analyzing the benefit:cost ratio of specific safety-related improvements using estimated crash reduction factors and improvement costs. Non-ranked projects are implemented at locations with potential for severe crashes identified in SHSP strategies and may be spot or system-wide improvements. System-wide, or systemic, improvement projects are implemented to reduce potential for fatal and serious injuries by mitigating road conditions or characteristics associated with specific crash types. Non-infrastructure projects are limited to those types specifically included in Appendix A (p. A-20 to A-22) of the Alaska HSIP Handbook, a reprinting of 23 U.S.C. Section 148 (a)(4)(B).

Alaska's three regional Traffic and Safety sections submit proposed projects to the State Traffic and Safety Engineer for review. HQ Traffic & Safety staff review the proposed new projects, work with regions to clarify project descriptions and scope, and submit recommended projects to the Chief Engineer for advancement as safety projects. Following Chief Engineer approval of new HSIP projects, the State Traffic and Safety Engineer proposes a list of new and ongoing projects for funding and coordinates with HQ Project Development to prepare a funding plan for the coming federal fiscal year.

HQ Traffic and Safety personnel manage the federal funds for approved projects. Regional Traffic and Safety personnel work with preconstruction and construction personnel to ensure projects remain consistent with their HSIP scope throughout design and construction. The regions conduct follow-up studies to determine the effectiveness of completed projects. HQ Traffic & Safety summarizes the overall effectiveness of the statewide program in the annual HSIP Report.

Where is HSIP staff located within the State DOT?

Engineering

The HSIP program manager is located with the DOT&PF Statewide Design and Engineering Services division (Chief Engineer's office). DOT&PF regional HSIP practitioners are located within the regional pre-construction divisions.

How are HSIP funds allocated in a State?

Central Office via Statewide Competitive Application Process

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

Safety projects on all public roads in Alaska are eligible to compete for HSIP funding. The same process is used to prioritize projects on both state and non-state (including local and tribal) roads.

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

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

Describe coordination with internal partners.

Design: Regional Traffic and Safety personnel identify, scope, estimate, and rank candidate projects according to benefit:cost ratio (ranked projects) and potential for crash reduction (non-ranked projects).

HQ Traffic and Safety reviews proposed new projects, works with the regions to clarify project description and scope, and submits recommended projects to the DOT&PF Chief Engineer for funding approval.

Planning: HQ Traffic and Safety develops the funding plan in coordination with the Office of Program Development.

Maintenance and Operations: Regional Traffic and Safety consults with M&O staff to determine alternative project nominations where safety problems may exist despite the lack of historic crash data.

Governors Highway Safety Office: GHSO splits penalty transfer funding to address engineering solutions to highway safety.

Identify which external partners are involved with HSIP planning.

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

External partners participate in the HSIP planning process through both the SHSP and the Performance Target setting process.

Describe coordination with external partners.

The formal mechanisms in the program for coordination with external partners include both the SHSP development and implementation process and establishment of annual performance measure targets. However, Regional Traffic and Safety Engineers continuously work with external partners, including community groups and local and tribal agencies, to identify and develop HSIP project nominations. Their input is valued and considered in the development and delivery of HSIP projects.

Coordination with FHWA is described under the most recent Stewardship and Oversight Agreement.

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.

• HSIP (no subprograms)

Program: HSIP (no subprograms)

Date of Program Methodology:3/10/2023

What is the justification for this program?

Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes Exposure Roadway

All crashesVolume

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Critical rate

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

Ranking based on B/C:90 Available funding:10 Total Relative Weight:100

What percentage of HSIP funds address systemic improvements?

14.3

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

- Add/Upgrade/Modify/Remove Traffic Signal
- Clear Zone Improvements
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- 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
- SHSP/Local road safety plan
- Other-RSAP, Roadside

Does the State HSIP consider connected vehicles and ITS technologies?

No

We do not consider them as a separate class of vehicle or technology at this time.

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

No

2023 Alaska	Highway	Safetv	Improvement	Program

HSM. DOT&PF had envisioned the calibration factors for use at planning level for HSIP nominations, but the calibration factors were much higher than expected, with low confidence for reliable predicted outcomes.

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)	\$24,910,272	\$21,648,135	86.9%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$0	\$0	0%
VRU Safety Special Rule (23 U.S.C. 148(g)(3))	\$6,162,926	\$7,762,404	125.95%
Penalty Funds (23 U.S.C. 154)	\$14,130,717	\$14,466,716	102.38%
Penalty Funds (23 U.S.C. 164)	\$14,130,717	\$21,660,129	153.28%
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	\$4,260,366	\$3,830,680	89.91%
Totals	\$63,594,998	\$69,368,064	109.08%

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

\$3,300,806

How much funding is obligated to local or tribal safety projects? \$3,009,120

How much funding is programmed to non-infrastructure safety projects? \$1,658,558

How much funding is obligated to non-infrastructure safety projects? \$1,051,078

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

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

\$39,477,986

The transfer of HSIP funds to STBG flex was done because: 1) Approximately \$30M worth of HSIP projects planned for FFY23 slipped to FFY24. 2) By transferring the HSIP funds available in FFY23 to STBG, the state was able to deliver additional non-HSIP projects, pay down additional advance construction, and request a larger share of obligation limitation through the August redistribution process. 3) The transfer out was made with an understanding that DOT&PF will transfer a commensurate amount into HSIP from other categories (e.g. STBG, NHPP, etc.) to make the HSIP program whole in FFY24.

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

Issues related to the COVID pandemic are slowly resolving in Alaska, although we continue to see delays related to DOT&PF or contractor staffing levels. Ongoing shortages of skilled labor - already present prior to the pandemic - are exacerbated both by COVID-related issues and as a result of the increase in competition for that labor related to the expanded infrastructure funding from the BIL/IIJA. DOT&PF also has faced increased stress from response to issues caused by melting permafrost, geography, and impacts from natural disasters (for example, flooding and earthquakes).

At present DOT&PF has remained highly successful at obligating HSIP funds and expects to continue reliably obligating HSIP funds.

General Listing of Projects

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

	IMPROVEMENT CATEGORY	SUBCATEGORY		OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION AAI	OT SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Steese Expressway/Chena Hot Springs Road Ramp Termini Roundabouts	Intersection traffic control	Modify control – Modern Roundabout	2	Numbers	\$97800	\$97800	Penalty Funds (23 U.S.C. 154)	Urban	Principal Arterial- Other 8,15	99999	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
	Interchange design	Convert at-grade intersection to interchange	1	Numbers	\$23918643	\$23918643	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial- 16,8 Other	55 55	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
NR Guardrail Inventory and Upgrades	Roadside	Barrier - other	970	Miles	\$467075	\$467075	Penalty Funds (23 U.S.C. 154)	Rural	Principal Arterial- Other 99,9	99999	State Highway Agency	Systemic	Roadway Departure	Implement infrastructure projects to address runoff-road crashes
	Interchange design	Convert at-grade intersection to interchange	1	Numbers	\$6052706	\$6725229	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies 36,2	265 55	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	2	Miles	\$4485146	\$4485146	Penalty Funds (23 U.S.C. 154)	Urban	Major Collector 1,44	99999	State Highway Agency	Spot	Roadway Departure	Implement infrastructure projects to address runoff-road crashes
Chena Pump Rd @ Chena Small Tracts Rd Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	\$900000	\$1000000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies 99,9	99999	Multiple / Varies	Spot	Intersections	Implement infrastructure projects to address intersection crashes
	Pedestrians and bicyclists	Pedestrians and bicyclists – other	4.3	Miles	\$4144714	\$4605238	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Principal Arterial- Interstate 99,9	99999	State Highway Agency	Spot	Pedestrians	Implement infrastructure to address pedestrian safety improvements

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
Murphy Dome Rd Shoulder Widening	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	2	Miles	\$635850	\$706500	HSIP (23 U.S.C. 148)	Rural	Minor Collector	1,730	50	State Highway Agency	Spot	Lane Departure	Reduce the number of fatal and serious injury lane departure crashes.
Seward Highway Passing Lanes, MP 37-52	Roadway	Install / remove / modify passing zone	3.7	Miles	\$334267	\$371408	HSIP (23 U.S.C. 148)	Rural	Principal Arterial- Other	4,429	60	State Highway Agency	Systemic	Lane Departure	Implement infrastructure projects to address head-on crashes
Bogard Rd at Engstrom Rd / Green Forest Dr Intersection Improvements	Intersection traffic control	Modify control – Modern Roundabout	2	Intersections	\$3861000	\$4290000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	99,999	99999	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
CR Guardrail Inventory & Upgrade	Roadside	Barrier - other	654	Miles	\$4484531	\$4953061	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	99,999	99999	State Highway Agency	Systemic	Roadway Departure	Implement infrastructure projects to address runoff-road crashes
Church Rd and Spruce Ave Intersection Flashing Beacon	Intersection traffic control	Intersection flashers —sign- mounted or overhead	1	Locations	\$225000	\$250000	HSIP (23 U.S.C. 148)	Rural	Major Collector	99,999	99999	Multiple / Varies	Spot	Intersections	Reduce the number of fatal and serious injury intersection crashes
Tudor Road: Baxter Road to Patterson Street Channelization	Roadway delineation	Longitudinal pavement markings - remarking	0.5	Miles	\$329940	\$366600	HSIP (23 U.S.C. 148)	Urban	Principal Arterial- Other	99,999	99999	Multiple / Varies	Spot	Lane Departure	Reduce the number of fatal and serious injury lane departure crashes.
Seward Hwy Hooligan Fishery Pedestrian Safety Improvements	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Miles	\$1848332	\$2053752	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Principal Arterial- Interstate	6,040	55	State Highway Agency	Spot	Pedestrians	Implement infrastructure to address pedestrian safety improvements
SIT Halibut Point Road and Peterson Avenue	Lighting	Intersection lighting	1	Intersections	\$128616	\$128616	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	99,999	99999	Multiple/Varies	Spot	Intersections	Implement infrastructure projects to

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
Intersection Safety Improvements															address intersection crashes
KTN Stedman and Deermont Street Intersection Safety Improvements - HSIP	Intersection geometry	Intersection geometry - other	1	Numbers	\$32583	\$32583	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	99,999	99999	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
POW - Hollis Highway Guardrail Safety Improvements HSIP	Roadside	Barrier end treatments (crash cushions, terminals)	27	Locations	\$863815	\$863815	Penalty Funds (23 U.S.C. 154)	Rural	Major Collector	290	50	State Highway Agency	Systemic	Roadway Departure	Reduce the number of fatal and serious injury lane departure crashes.
WRG - Zimpovia Highway Rock Fall Mitigation HSIP	Roadside	Removal of fixed objects (trees, poles, etc.)	2	Miles	\$683570	\$683570	Penalty Funds (23 U.S.C. 164)	Rural	Minor Collector	427	45	State Highway Agency	Systemic	Roadway Departure	Implement HSIP qualified projects
JNU - Egan- Yandukin Intersection Safety Improvements	Speed management	Speed management - other	1	Intersections	\$1177453	\$1177453	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	99,999	99999	State Highway Agency	Spot	Intersections	Implement HSIP qualified projects
SR Regionwide Guardrail Inventory and Upgrade HSIP	Roadside	Roadside - other	113.01	Miles	\$600000	\$600000	Penalty Funds (23 U.S.C. 164)	Multiple/Varies	Multiple/Varies	99,999	99999	State Highway Agency	Systemic	Roadway Departure	Implement infrastructure projects to address runoff-road crashes
JNU Loop Road - Valley Boulevard Intersection Safety Improvements HSIP		Modify control – Modern Roundabout	1	Intersections	\$50000	\$500000	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	99,999	99999	Multiple / Varies	Spot	Intersections	Implement infrastructure projects to address intersection crashes
JNU Vanderbilt Continuous Green T HSIP	Intersection geometry	Innovative Intersection (e.g. MUT, RCUT, QR)	1	Intersections	\$100000	\$100000	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	99,999	99999	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
JNU Glacier Hwy Safety Improvements HSIP - McNugget to Loop Rd	Intersection geometry	Innovative Intersection (e.g. MUT, RCUT, QR)	4	Intersections	\$250000	\$250000	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	99,999	99999	Multiple/Varies	Spot	Intersections	Implement infrastructure projects to address

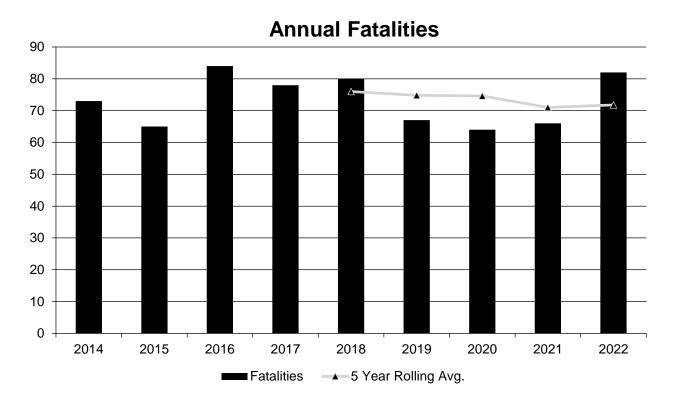
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
															intersection crashes
SR Regionwide Passing Zones Inventory and Restriping HSIP	Roadway delineation	Longitudinal pavement markings - remarking	174.05	Miles	\$500000	\$500000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	99,999	99999	State Highway Agency	Systemic	Lane Departure	Reduce the number of fatal and serious injury lane departure crashes.
HNH Harbor Way Pedestrian Improvements	Pedestrians and bicyclists	Install sidewalk	0.2	Miles	\$126000	\$140000	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Minor Collector	487	20	City or Municipal Highway Agency	Spot	Pedestrians	Implement infrastructure to address pedestrian safety improvements

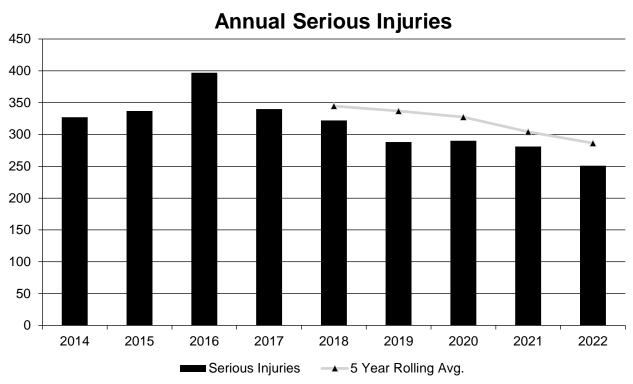
Safety Performance

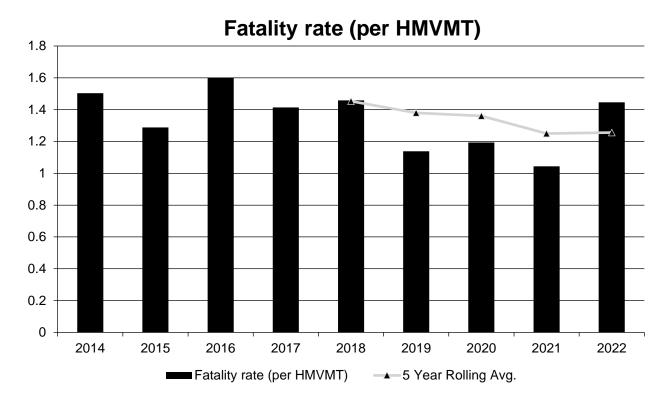
General Highway Safety Trends

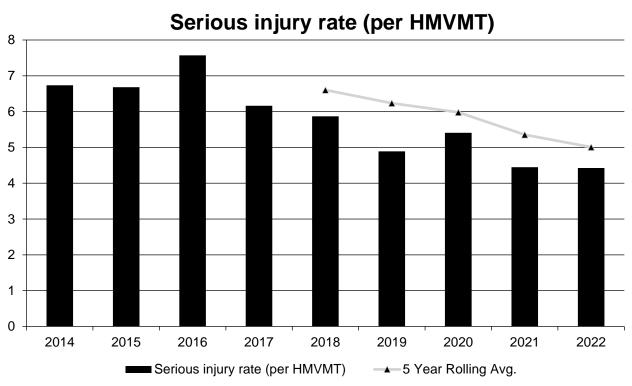
Present data showing the general highway safety trends in the State for the past five years.

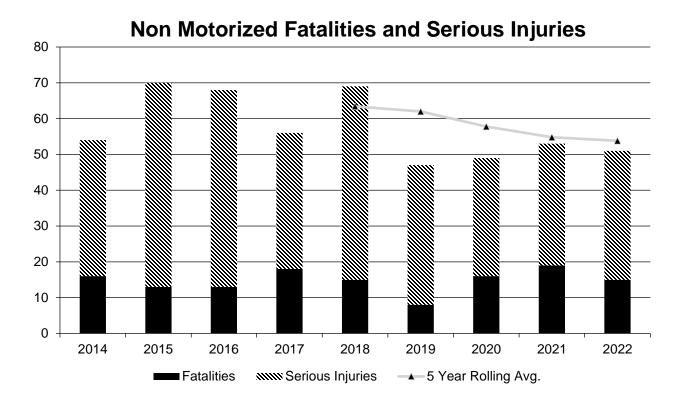
PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fatalities	73	65	84	78	80	67	64	66	82
Serious Injuries	327	337	397	340	322	288	290	281	251
Fatality rate (per HMVMT)	1.503	1.288	1.602	1.414	1.458	1.138	1.194	1.044	1.446
Serious injury rate (per HMVMT)	6.734	6.680	7.571	6.162	5.868	4.891	5.410	4.446	4.427
Number non-motorized fatalities	16	13	13	18	15	8	16	19	15
Number of non- motorized serious injuries	38	57	55	38	54	39	33	34	36











Notes: 2022 data is preliminary. FARS data cannot be provided at this time because NHTSA is experiencing a national problem with data collection and reporting. Therefore both fatality and serious injury data is from the Alaska statewide crash data system, CARE. While CARE data is preliminary, and not all data entry for lower-severity crashes (i.e., 12-209 self reports) is completed, the number of fatalities and serious injuries is not expected to change significantly, and any errors identified are expected to reduce the totals.

Describe fatality data source.

State Motor Vehicle Crash Database

Alaska HSIP has been notified that due to an issue with data collection and reporting in NHTSA's FARS system, DOT&PF will be unable to provide certified or preliminary FARS data. Therefore, Alaska has provided data from our state motor vehicle crash database this year. This is a deviation from our normal practice.

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

Year 2022

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	16.2	44.4	1.98	5.4
Rural Principal Arterial (RPA) - Other		0	0	0

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)
Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	7	19.4	2.43	6.87
Rural Minor Arterial	2	7	1.71	5.99
Rural Minor Collector	5	17.6	2.51	7.7
Rural Major Collector	4	19.6	1.4	6.8
Rural Local Road or Street	3.8	10.4	0.52	1.79
Urban Principal Arterial (UPA) - Interstate	8.6	37.6	1.09	4.75
Urban Principal Arterial (UPA) - Other Freeways and Expressways	0	0	0	0
Urban Principal Arterial (UPA) - Other	14	64.6	1.57	7.22
Urban Minor Arterial	6.2	38.4	1.22	7.65
Urban Minor Collector	1	7.2	0.87	6.49
Urban Major Collector	2.6	20.8	1.1	8.86
Urban Local Road or Street	1	14.8	0.15	2.25
Missing Function Class	0.2	2.6	0	0.96
Other	0	1.8	0	0

Year 2022

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	61.4	220.8	1.59	5.74
County Highway Agency	7.2	47.6	0.62	4.15
Town or Township Highway Agency	0	0	0	0
City or Municipal Highway Agency	2.8	10	0.85	2.94
State Park, Forest, or Reservation Agency	0	0	0	0
Local Park, Forest or Reservation Agency	0	0	0	0
Other State Agency	0	0	0	0
Other Local Agency	0.4	0	5.27	0
Private (Other than Railroad)	0	0.2	0	1.65
Railroad	0	0	0	0
State Toll Authority	0	0	0	0
Local Toll Authority	0	0	0	0
Other Public Instrumentality (e.g. Airport, School, University)	0	0	0	0
Indian Tribe Nation	0	0.2	0	0.09
Other/Unknown	0.2	5.4	0.16	5.21
Federal	0		0	0.15

Safety Performance Targets

Safety Performance Targets

Calendar Year 2024 Targets *

Number of Fatalities:75.0

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

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Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an aspirational view of annual fatality numbers when considering the external upward pressures for this performance measure. Alaska's SHSP was updated in 2023 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision. Since the beginning of Alaska's target setting we've rounded our K and SI targets to the next highest multiple of 5.

Based on the available data, stakeholders set our 2024 target for fatalities at 75; while this is higher than the SHSP 2024 goal (65), it is significantly lower than the actual number of fatalities in Alaska last year (82).

Number of Serious Injuries:300.0

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an aspirational view of annual serious injury numbers continuing to decline even considering the external upward pressures for this performance measure in light of the most likely scenarios. Alaska's SHSP was updated in 2023 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Based on the available data, stakeholders set our 2024 target for serious injuries at 300; while this is higher than the SHSP target of 288, it is significantly lower than the 2023 target of 325.

Fatality Rate: 1.250

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an aspirational view of annual fatality numbers leveling off even considering the external upward pressures for this performance measure in light of the most likely scenarios. It is possible, however, that traffic volumes will decrease more than expected, resulting in a higher fatality rate than expected. Alaska's SHSP was updated in 2023 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Based on the available data, stakeholders set the Alaska 2024 target for fatality rate at 1.250. As the actual fatality rate in Alaska was 1.458 five years ago in 2018, this represents a sizeable decrease.

Serious Injury Rate:5.500

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an aspirational view of annual serious injury numbers continuing to decline even considering the external upward pressures for this performance measure in light of the most likely scenarios. It is possible, however, that traffic

volumes will decrease more than expected, resulting in a higher serious injury rate than expected. Alaska's SHSP was updated in 2023 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Based on the available data, stakeholders set the Alaska 2024 target for the serious injury rate at 5.500. As the actual fatality rate five years ago in 2018 was 5.869, this represents a significant decrease.

Total Number of Non-Motorized Fatalities and Serious Injuries:55.0

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is aspirational, and focused on Alaska's vision of zero deaths, but also considered in light of the current upward trend and external upward pressures for this performance measure in light of the most likely scenarios. Alaska's SHSP was updated in 2023 and continues to reflect the State's vision of Toward Zero Deaths. While there is no specific goal in our current SHSP for this performance measure, reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Based on available data, stakeholders set the Alaska 2024 target for non-motorized fatalities and serious injuries at 55.0. As the actual rate of non-motorized fatalities and serious injuries five years ago in 2018 was 69, this represents a substantial decline.

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

Both the Fairbanks Area Surface Transportation Planning (FAST Planning) Executive Director and Anchorage Metropolitan Area Transportation Solutions (AMATS) Coordinator were included in meetings during the development of initial target recommendations that were delivered to DOT&PF management for review and edits.

The Alaska Highway Safety Office (AHSO) was involved in establishing targets throughout the entire process. An AHSO data analyst attended every meeting and was instrumental in the analysis of data trends and external factors. The Governor's highway safety representative was a signatory to the memo signed by the Governor establishing the State's targets.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2022 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	70.0	71.8
Number of Serious Injuries	325.0	286.4

Fatality Rate	1.300	1.256
Serious Injury Rate	5.900	5.008
Non-Motorized Fatalities and Serious Injuries	58.0	53.8

Because the NHTSA FARS system is experiencing problems with Alaska's data upload, all data this year is provided from the Alaska crash database, CARE. Data entry for 2022 has not yet been completed, but all but one of the remaining crash reports are self-reports, which are not permitted to be used for crashes resulting in serious injuries or fatalities. F inal QC and certification of 2022 data is expected in September 2023; due to the nature of the remaining quality control activities, which includes removal of duplicate reports, any changes in the data seem likely to reduce the number of serious injuries reported.

Applicability of Special Rules

Does the VRU Safety Special Rule apply to the State for this reporting period? Yes

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

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	2016	2017	2018	2019	2020	2021	2022
Number of Older Driver and Pedestrian Fatalities	11	9	10	9	8	16	6
Number of Older Driver and Pedestrian Serious Injuries	27	29	27	26	14	25	24

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Benefit/Cost Ratio

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

The overall benefit / cost ratio of Alaska's HSIP program is 6.92:1 over the last 5 years of completed projects with at least 3 years of post-construction crash data available.

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

HSIP Obligations

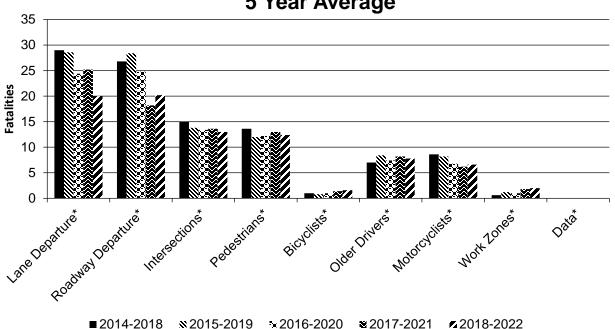
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

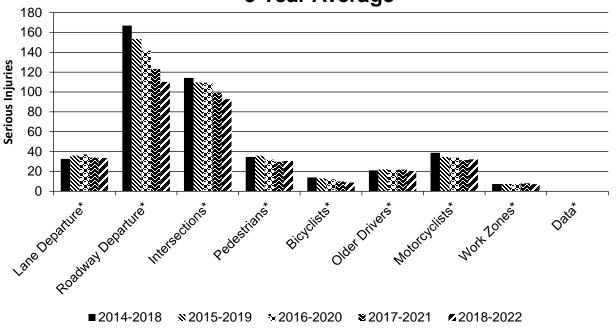
Year 2022

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)
Lane Departure*		20	33.4	0.34	0.59
Roadway Departure*		20.2	110.2	0.36	1.93
Intersections*		13	92.8	0.22	1.63
Pedestrians*		12.4	30.6	0.22	0.53
Bicyclists*		1.6	8.8	0.03	0.15
Older Drivers*		7.8	20.4	0.13	0.36
Motorcyclists*		6.6	32.2	0.12	0.57
Work Zones*		2	7.2	0.03	0.12
Data*		0	0	0	0

Number of Fatalities 5 Year Average

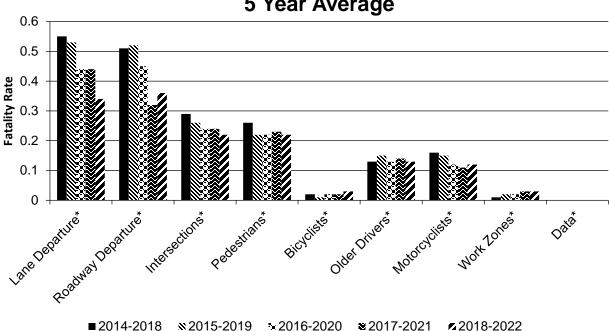


Number of Serious Injuries 5 Year Average

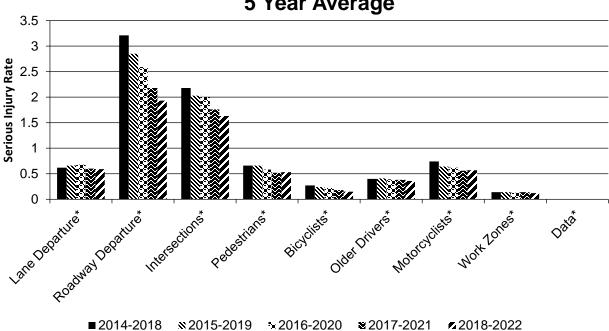


2014-2018 × 2015-2019 ×2016-2020 ×2017-2021 ~ 2018-2022





Serious Injury Rate (per HMVMT) 5 Year Average



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

No

While DOT&PF has not established any new CRFs or conducted any formal research into their development, the HSIP program has initiated a research project with the University of Alaska to conduct an analysis of whether HSIP Improvement Types other than Pedestrian and Bicycle projects were providing "excess" safety benefits to Vulnerable Road Users. The purpose of the Implicit Safety Benefit Study is to establish whether evidence exists that HSIP Improvement Categories not coded as Pedestrian or Bicycle provide unexpected safety benefits for Vulnerable Road Users (VRUs), and if so, the strength of the effect. This project is funded by the Alaska Department of Transportation and Public Facilities (DOT&PF) Research program.

Project Effectiveness

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

LOCATION		IMPROVEMENT CATEGORY	IMPROVEMENT TYPE		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)
14NR08 Eastern AK Named Highways Signing and Striping Updates	Multiple/Varies	Roadway signs and traffic control		58.00	7.00	2.00		8.00	1.00	38.00	3.00	106.00	11.00	29.9:1
14NR10 Dalton Steese and Elliott Highways Signing and Striping Upgrades	Multiple/Varies	Roadway signs and traffic control	Roadway signs and traffic control - other	14.00	2.00	1.00		5.00	3.00	13.00	1.00	33.00	6.00	11.77:1
16NN01 Phillips Field Road Shoulder Widening	Urban Major Collector	Roadside	Roadside grading	3.00				1.00		2.00		6.00		1.92:1
03CR07: Lake Otis Parkway @ 68th Ave Channelization Improvements	Principal Arterial (UPA) -	Intersection geometry	Add/modify auxiliary lanes	13.00	1.00					12.00	1.00	25.00	2.00	7.61:1
	Urban Principal Arterial (UPA) - Other	Intersection geometry	Intersection geometry - other	12.00						2.00	2.00	14.00	2.00	5.06:1
04CR11: Son of Downtown Anchorage Curb Bulb Project	Multiple/Varies	Intersection geometry	Intersection geometry - other	18.00	5.00					4.00	1.00	22.00	6.00	0.19:1
05CR01: Jewel Lake Road @ Raspberry Road East- West Dual Left Turn Lane Project	Urban Minor Arterial	Intersection geometry	Add/modify auxiliary lanes	12.00				2.00		6.00		20.00		23.13:1

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)
05CR02: Ingra Street: 4th Ave to 3rd Ave Channelization Improvements		Intersection geometry	Intersection geometry - other	28.00	2.00			3.00		10.00	3.00	41.00	5.00	7.48:1
05CR04: 34th Avenue at Old Seward Highway Channelization Improvements	Urban Minor Arterial	Intersection traffic control	Intersection signing – add basic advance warning	13.00	1.00					1.00		14.00	1.00	9.17:1
09CR03: Bragaw Street at 16th Avenue Channelization Improvements	Arterial (UPA) -	Intersection geometry	Add/modify auxiliary lanes	29.00				2.00		21.00	1.00	52.00	1.00	6.55:1
10CR01: Municipality of Anchorage Flashing Yellow Arrow Project		Intersection traffic control	Modify traffic signal – add flashing yellow arrow	27.00	17.00			12.00	2.00	25.00	12.00	64.00	31.00	6.64:1
12CR07: Klatt Rd & Johns Rd Intersection Improvements		Intersection traffic control	Modify control – Modern Roundabout	16.00	7.00					4.00		20.00	7.00	0.71:1
13CR09 - Parks Hwy Safety Corridor Median and Lighting Review 1 of 2: MP 44.5 - 48.8	Rural Principal Arterial (RPA) - Other	Access management	Access management - other	64.00	11.00	3.00		6.00		16.00	2.00	89.00	13.00	6.63:1

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)
110001 00	D. ad Director		A 11/ 17	0.00						0.00		5.00		0.00.4
Traffic Safety	Rural Principal Arterial (RPA) - Other	Intersection geometry	Add/modify auxiliary lanes	3.00						2.00		5.00		0.62:1
14CR07: Regional Tree Removal and Sight Distance Enhancement Project	Multiple/Varies	Roadside	Removal of fixed objects (trees, poles, etc.)	44.00	9.00	1.00		17.00	3.00	28.00	13.00	90.00	25.00	25.23:1
KTN North Tongass Highway Illumination Upgrade		Lighting	Continuous roadway lighting	11.00	8.00	1.00		4.00		3.00	4.00	19.00	12.00	1.84:1

Compliance Assessment

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

05/23/2023

What are the years being covered by the current SHSP?

From: 2023 To: 2027

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

2027

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	NON LOCAL F ROADS - SEG		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL ROADS - RA		LOCAL PAVE	D ROADS	UNPAVED ROA	UNPAVED ROADS	
	NO.)	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	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	100					100	75			
	Begin Point Segment Descriptor (10) [10]	100	100					100	100	100	100	
	End Point Segment Descriptor (11) [11]	100	100					100	100	100	100	
	Segment Length (13) [13]	100	100									
	Direction of Inventory (18) [18]											
	Functional Class (19) [19]	100	100					100	100	100	100	

ROAD TYPE	*MIRE NAME (MIRE	NON LOCAL PAY		NON LOCAL P ROADS - INTE		NON LOCAL ROADS - RAI		LOCAL PAVE	D ROADS	UNPAVED ROADS	
	NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	60	60								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	80		
	Average Annual Daily Traffic (79) [81]	100	100					100	100		
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120) [110]										
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]			30	30						
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]			100	100						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]										
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]										
	Location Identifier for Roadway at					100	100				

ROAD TYPE	*MIRE NAME (MIRE	NON LOCAL P ROADS - SEG			NON LOCAL PAVED ROADS - INTERSECTION		PAVED MPS	LOCAL PAVE	D ROADS	UNPAVED ROADS	
	NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]										
	Roadway Type at End Ramp Terminal (199) [189]										
	Interchange Type (182) [172]										
	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 Percen	t Complete):	92.22	92.22	28.75	28.75	63.64	63.64	100.00	95.00	100.00	100.00

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

The AKDOT team did not add or modify the percent complete values on any of the FDEs. The vast majority of the incomplete FDEs are associated with intersections or interchanges/ramps. Esri, our GIS software provider, has changed the way that they model intersections in their LRS-based GIS product, Roads and Highways (R&H). Esri's change will require us to redesign how we manage intersections and interchanges/ramps.

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.

- 1. Work with the Department's Safety staff to prioritize the modeling of the FDEs
- 2. Contract with Esri to model the FDEs to: Develop a practical and useful route segment definition; Identify and address overlapping data needs, such as MIRE and the Highway Performance Monitoring System (HPMS); Align the intersection and interchange/ramp features with Esri's new R&H intersections; Support overlapping data needs

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

Optional Attachments

Program Structure:

L_8-31-23 HSIP Ann Report Cover.pdf Alaska HSIP Handbook 2023.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.