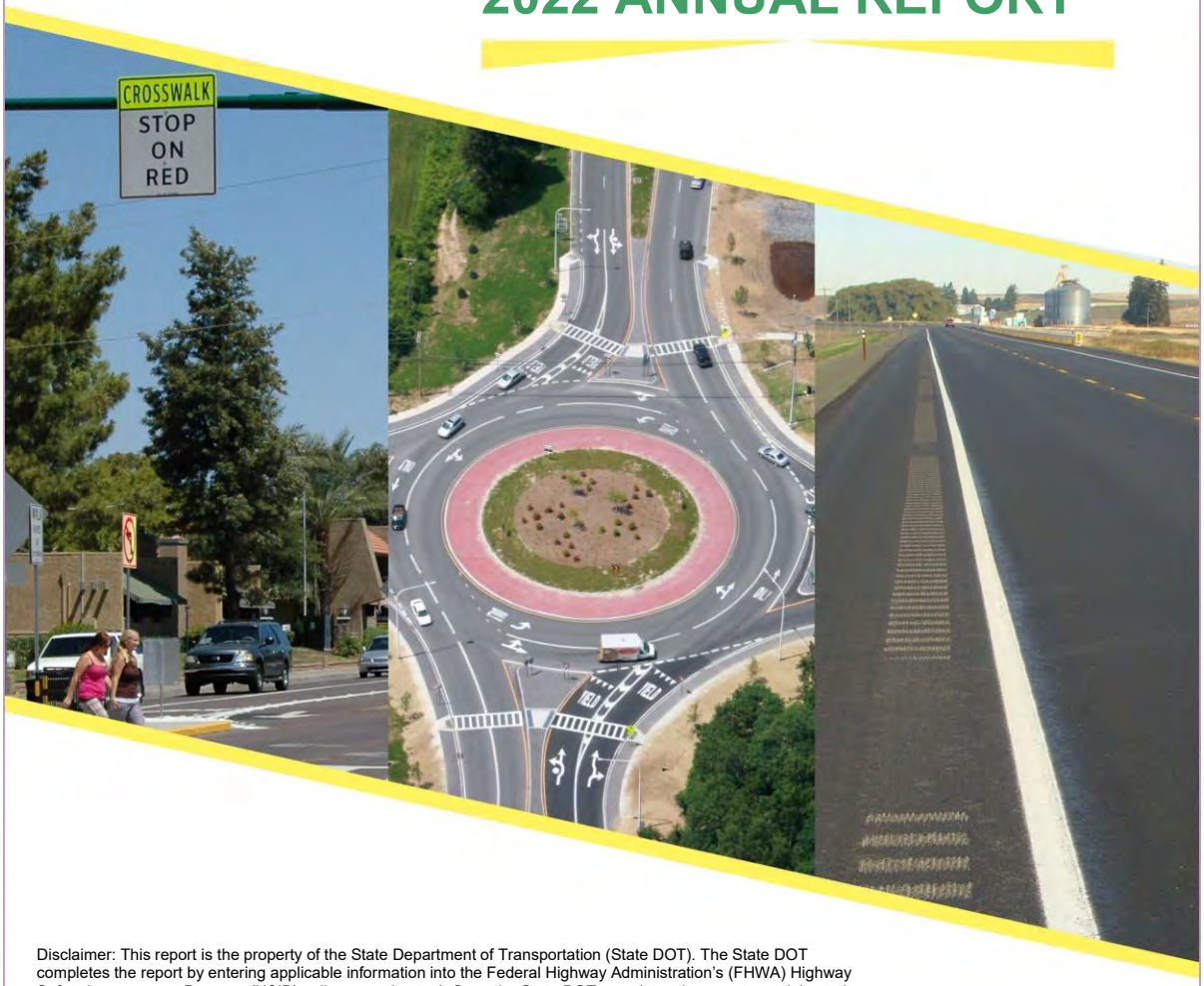
NEW YORK

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2022 ANNUAL REPORT



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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

This report is intended to satisfy reporting requirements under Section 148 of the Title 23, United States Code (23 U.S.C. 148) regulated under 23 CFR 924. MAP-21 and the FAST Act reinforce the importance of the Highway Safety Improvement Program (HSIP). The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Emphasis Areas

The New York State Department of Transportation continues to concentrate on the emphasis areas outlined in the 2017 Strategic Highway Safety Plan (SHSP). The emphasis areas in the plan include intersections, lane departures, driver behavior, vulnerable users, speed and older and younger drivers. The plan also emphasizes emergency response, data and automated/connected vehicles as cross cutting issues that affect all crash types. Site specific projects at high accident locations and systemic improvement projects are being implemented to meet safety goals.

The first ever statewide New York State Pedestrian Safety Action Plan (PSAP) was released in June 2016 and provided funds to improve pedestrian safety in urban areas. The PSAP added pedestrian locations to the state's annual regional work program; implemented pedestrian improvements at approximately 2,400 signalized intersections and 1,350 uncontrolled crosswalks and provided for pedestrian improvements on 5 pedestrian corridors. The PSAP also included statewide pedestrian education and enforcement initiatives. The PSAP was a 5 year program and was completed earlier this year.

Roadway departures are another emphasis area for New York State. To address this issue, NYSDOT is in the process of developing a Roadway Departure Safety Action Plan. Data analysis and countermeasure evaluation have been completed. It is anticipated that this plan will be completed in the next fiscal year.

The New York State Department of Transportation is developing a new safety system called CLEAR (Crash Location Engineering, Analysis and Reporting). The CLEAR system will replace the existing legacy systems that are used to manage and analyze crash data. The systems to be replaced include: Safety Information Management Systems (SIMS), Accident Location Information System (ALIS) and the Post Implementation Evaluation System (PIES). The new system will be available by by the end of 2022.

The State is in the process of updating the NYS Strategic Highway Safety Plan. This process is supported by a consultant and stakeholder workshops will begin this fall. It is anticipated that the updated plan will be completed in 2023.

HSIP Fund Administration

NYSDOT is using a hybrid approach to manage the Highway Safety Improvement Program funds. Approximately half of the funds are provided to the NYSDOT regions according to a formula that includes crashes, population and center line miles. The remaining funds are administered centrally and used to fund a periodic call for projects program, the statewide Pedestrian Safety Action Plan (PSAP) and other statewide safety initiatives that support the emphasis areas in the Strategic Highway Safety Plan. Since FFY13 the statewide call for projects program has funded 113 state and local projects for a total of approximately $273M in HSIP funds. In 2018, the local call for PSAP projects funded 38 local projects for a total of approximately $40M in HSIP funds. The Pedestrian Safety Action Plan included approximately $110M in HSIP funds to improve pedestrian safety at locations in New York State.

All Public Roads

The mandate to address the safety of all public roads has broadened the scope of work of the Department of Transportation and our partners, requiring a greater focus on emphasis areas in order to meet crash goals. The following initiatives support the "all public roads" mandate:

· Projects on locally owned and state-owned roads are eligible for the call for projects programs.

· A local GIS route system was developed.

· The new CLEAR application will enhance the state’s ability to analyze crash data on the local system.

· Additional traffic counts are being taken on local roads.

· The PSAP program funded approximately $40M in local pedestrian projects.

Safety Performance Management

· The FHWA assessment of the 2018 safety targets found that New York State met or made significant progress towards achieving the safety performance targets.

· The FHWA assessment of the 2019 safety targets found that New York State did not make significant progress towards achieving the safety performance targets.

· The FHWA assessment of the 2020 safety targets found that New York State did not make significant progress towards achieving the safety performance targets.

The required HSIP Implementation Plan was submitted to FHWA in June 2022.

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.

Approximately 50% of the HSIP funds in New York State are provided to the Regions according to a formula that includes crashes, lane miles and population. The remaining funds are administered by the Main Office for the implementation of statewide safety programs.

Where is HSIP staff located within the State DOT?

Operations

How are HSIP funds allocated in a State?

- Formula via Districts/Regions
- SHSP Emphasis Area Data
- Other-Periodic Call for Safety Projects

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

All public roads in New York State are eligible for HSIP funds including local roads and roads on tribal lands. The regions work with the Metropolitan Planning Organizations to determine which state and local HSIP projects to include in the capital program. A portion of the Region 11 allocation is provided to New York City for safety projects on local roads owned by New York City. The statewide call for safety projects has awarded HSIP funding to 40 local projects to be let between FFY13 - FFY20 for a total of about $91.6M in HSIP funding. The Pedestrian Safety Action Plan also provided $40M in HSIP funding for local municipalities to implement systemic treatments that improve safety for pedestrians.

All crashes on public roads, regardless of ownership, are included in New York's crash data systems and are available for review and analysis. High crash locations on the state system are identified via an annual network screening process. Improvements to New York's crash data systems are underway and will provide enhanced analysis capabilities to identify high crash locations and perform systemic analysis on local roads.

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

- Design
- Districts/Regions

- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

Describe coordination with internal partners.

The New York State Department of Transportation has a Safety System and Optimization team (SSO) with expertise in highway safety and system optimization. The multidisciplinary team is comprised of members from various areas within the Department. SSO teams are responsible for the following:

- Providing long term guidance on safety and system optimization to ensure consistency with program update strategies;
- Providing clarification and guidance to the 11 NYSDOT Regions;
- Developing technical guidance for safety strategies described in the program update;
- Developing support materials for NYSDOT Regions in preparing safety program proposals;
- Prioritize capital program projects; and
- Monitoring programs and projects to ensure safety goals are met.

Identify which external partners are involved with HSIP planning.

- FHWA
- Governors Highway Safety Office
- Law Enforcement Agency
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency
- Other-New York State Department of Health

Describe coordination with external partners.

New York State coordinates regularly with external partners on safety initiatives. For example:

- New York's 2017 Strategic Highway Safety Plan was developed in coordination with local, state, federal, tribal and private organizations throughout the state.
- NYSDOT coordinates with the Governor's Traffic Safety Committee on safety target setting.
- Conference calls are regularly held with MPO Directors, an MPO Safety Working Group and a Safety Working Group to coordinate and communicate ongoing safety efforts.
- The core team that developed the statewide Pedestrian Safety Action Plan included members from NYSDOT, FHWA, GTSC, NYSDOH and the MPOs.
- The Roadway Departure Safety Action Plan team currently in development also includes members from NYSDOT, FHWA, GTSC, DOH, local governments and the MPOs.
- The GTSC, FHWA, MPOs, local agencies and law enforcement are participating in the design of a new safety management system called CLEAR.
- External partners will be involved in the development of the next Strategic Highway Safety Plan due August 2022.

Program Methodology

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

Yes

This manual is currently being rewritten to be consistent with the new Safety Management system called CLEAR.

Select the programs that are administered under the HSIP.

- Bicycle Safety
- Horizontal Curve
- Intersection
- Local Safety
- Low-Cost Spot Improvements
- Pedestrian Safety
- Right Angle Crash
- Roadway Departure
- Rural State Highways
- Safe Corridor
- Sign Replacement And Improvement
- Skid Hazard
- Wrong Way Driving

Program: Bicycle Safety

Date of Program Methodology:1/1/2010

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 crashes • Other-Priority Investigation Locations (PILS)	• Volume	• Functional classification • Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Horizontal Curve

Date of Program Methodology:11/1/1989

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

- All crashes
- Other-Priority Investigation Locations

Exposure

- Volume

Roadway

- Median width
- Horizontal curvature
- Roadside features

What project identification methodology was used for this program?

- Crash frequency

- Crash rate
- Excess proportions of specific crash types
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Intersection

Date of Program Methodology:11/1/1989

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 crashes • Other-Priority Investigation Locations (PILS)	• Volume	• Functional classification

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Local Safety

Date of Program Methodology:1/1/2013

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 crashes
- Volume

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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- selection committee

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

Rank of Priority Consideration

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

Program: Low-Cost Spot Improvements

Date of Program Methodology:1/1/1999

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

- All crashes

Exposure

- Volume

Roadway

- Median width
- Horizontal curvature

- Other-Priority Investigation Locations (PILS)
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- Other-A project review and windshield survey is conducted as required by the SAFETAP program. Qualified staff decide upon the safety work to be done before, during and after construction to ensure safety is incorporated into maintenance projects.
- Other-Low cost spot improvements are often recommended as a result of a highway safety investigation.
- 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?

No

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

Local road projects are typically identified via local municipalities or through the MPO planning process.

How are projects under this program advanced for implementation?

- Other- Many nominal safety improvements are incorporated into maintenance work
- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Pedestrian Safety

Date of Program Methodology:11/1/1989

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• Other-Crashes involving pedestrians • Other-Priority Investigation Locations (PILS)	• Volume	• Median width • Horizontal curvature • Functional classification • Roadside features • Other-Intersection features; crosswalk features; pedestrian islands etc.

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- Other-Risk factors
- 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?

No

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

Local road projects are typically identified via local municipalities or through the MPO planning process. A local call for projects in 2018 provided $40M in HSIP funding for pedestrian improvements under this program.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Right Angle Crash

Date of Program Methodology:1/1/1989

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 crashes • Other-Priority Investigation Locations (PILS)	• Volume	• Functional classification • Other-Intersection features; speed limit etc.

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization.

Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

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

Program: Roadway Departure

Date of Program Methodology:1/1/1989

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

- All crashes
- Other-Priority Locations (PILS)

Investigation

Exposure

- Volume

Roadway

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

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- Other- CARDs are recommended for projects that will put >=40 mm of asphalt and meet the following: 1) there is no raised median or TWLTL, 2) the CARD quantity is >=1500'; 3) the posted speed >=45 mph; 4) the AADT >=2,000; and 4) the roadway width >=13'.
- Other-High risk factors for roadway departure crashes were identified in a statewide systemic analysis. Additional systemic programs will be investigated in the upcoming years to decrease roadway departures.
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process

How are projects under this program advanced for implementation?

- Other-Centerline and shoulder rumblestrips (CARDS and SHARDS) are approved systemic treatments.
- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Rural State Highways

Date of Program Methodology:1/1/2010

What is the justification for this program?

- Other-The State of New York's evaluation of HRRR aligns with 23 USC 148 (a)(1) and defines significant safety risks as having 'an accident rate per mile above the average crash rate per mile established for the region'

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 crashes • Other-Priority Investigation Locations (PILS)	• Volume	

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Safe Corridor

Date of Program Methodology:1/1/2012

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 crashes • Other-Priority Investigation Locations (PILS)	• Volume	• Functional classification

What project identification methodology was used for this program?

- Crash frequency

- Crash rate
- Excess proportions of specific crash types
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Sign Replacement And Improvement

Date of Program Methodology:1/1/1995

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 crashes • Other-Priority Investigation Locations (PILS)	• Volume	• Functional classification

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- Other-Signs needing improvement can be identified during a SAFETAP review or a Highway Safety Investigation. Some regions have implemented a replacement program where signs are replaced on a defined schedule.
- 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?

No

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

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

- Other-The Priority Investigation Location process mentioned above.
- selection committee

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

Rank of Priority Consideration

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

Program: Skid Hazard

Date of Program Methodology:1/1/1995

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 crashes • Other- Locations are identified where the percentage of wet road accidents is twice the normal proportion for the same county and facility type. • Other-Priority Investigation Locations (PILS)	• Volume	• Functional classification

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Excess proportions of specific crash types
- Relative severity index

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

No

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

How are projects under this program advanced for implementation?

- Other-Locations with >= twice the normal percentage of wet road crashes are identified and friction tested. Tested locations which demonstrate one or more low friction test numbers (FN40 of 32) are treated.

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

Rank of Priority Consideration

Other-Locations with low friction test numbers (FN40 of 32) require treatment.:1

Program: Wrong Way Driving

Date of Program Methodology:4/1/2019

What is the justification for this program?

- Other-Benefit Cost Analysis > 1

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes		

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?

No

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

How are projects under this program advanced for implementation?

- Other-new minimum standards for exit ramp termini

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

Rank of Priority Consideration

Available funding:1
Incremental B/C:2
Cost Effectiveness:2

What percentage of HSIP funds address systemic improvements?

38

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

- Add/Upgrade/Modify/Remove Traffic Signal
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Other-Pedestrian Countdown Timers
- Other-Pedestrian Improvements identified in Pedestrian Safety Action Plan
- Rumble Strips
- Wrong way driving treatments

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
- Stakeholder input

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

The future vision is that Connected Vehicle and Automated Vehicle technology will provide the opportunity to dramatically improve safety by decreasing the number and severity of crashes caused by human error and environmental factors on New York State roads. While guidance, testing, standards, legislation and best practices continue to evolve, it is important for transportation operating agencies to be involved in the national issues and take advantage of the technology as it is deployed.

New York State strategies noted in the 2017 SHSP include:

1. Remain involved in national activities that support the development of CAV technologies, standards and best practices, including the National Pooled Fund Study Group.
2. Express support for the pending NHTSA Notice of Proposed Rule Making for V2V communications utilizing 5.9 GHz dedicated short range communications for light vehicles.
3. Urge NHTSA to follow up with a similar Notice of Proposed Rule Making for heavy vehicles.
4. Support, encourage and participate in the development of a New York State legislative and regulatory framework that allows for the testing and deployment of Connected and Autonomous Vehicles.
5. Support the development of national regulations for both light and heavy vehicles.
6. Continue the networking of existing traffic signals and other roadside systems in a flexible, standardized framework.
7. Improve and standardize GIS mapping and spatial capabilities using the New York State GIS platforms.
8. Continue to develop an understanding of the technology and short term and long term implications.
9. Support the fusion of the latest generation of automobile based sensor systems that provide advanced safety features such as automated braking, driver attention detection, forward collision warning, blind spot warning, lane departure assistance, etc. with V2V real time communications between vehicles to increase the vehicle's situational awareness.

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.

- The State's Safety Information Management System (SIMS) is used to identify High Accident Locations on the state system every year.
- The Highway Safety Manual is an additional source of information when performing highway safety investigations and conducting evaluations.
- The CLEAR application, once in production, will be consistent with HSM methods.

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

The vision and mission statements as stated in the 2017 New York State Strategic Highway Safety Plan are:

Vision: Roads in New York State will be safer to travel for all users.

Mission: New York safety partners will advocate for those who travel by any mode, and deliver data-driven safety programs to decrease the number of injuries and fatalities that occur on public roads in New York State. Together, we will work to ensure safety is a top priority in all engineering, education, enforcement and emergency medical service activities.

The 2017 Strategic Highway Safety Plan includes the following emphasis areas and cross cutting issues: Intersections, Lane Departures, Vulnerable Users, Age-related (older and younger drivers), Road User Behavior, Speed, Emergency response, Improvements to Data and Automated and Connected Vehicles.

Intersections

2020 data shows that intersection related fatalities were 40.3% of total fatalities. New York will take a multifaceted approach to solving intersection-related issues that considers the intersection design, accommodates users from all modes, and implements improvements both systemically and at intersections with a crash history. Examples of strategies include developing an Intersection Safety Action Plan, implementing intersection treatments systemically, improving the enforcement of traffic laws at intersections and supporting the use of technology and traffic incident management to improve safety at intersections.

Roadway Departures

2020 data shows that roadway departure fatalities were 34.8% of total fatalities. To address the wide array of contributing factors to lane departure crashes, New York will take an approach that considers both site-specific and systemic countermeasures, as well as opportunities for education and enforcement. Strategies include the development of a Roadway Departure Safety Action Plan which is currently under development, and the implementation of systemic improvements that decrease the number and severity of lane departure crashes.

Centerline Audible Roadway Delineators (CARDS)

Engineering Instruction EI-13-021 lays out the framework and criteria for installing centerline rumble strips on eligible roads across the state. Any project that places at least 0.75" of asphalt and meets the geometric/operating criteria is required to install CARDS as part of the project. Because of the low cost and proven effectiveness of centerline rumble strips, this new policy is an important tool in reducing both head-on and run-off road crashes. As of March 2022, approximately 5,101 miles of CARDS have been installed.

Skid Accident Reduction Program (SKARP)

SKARP incorporates safety considerations into pavement maintenance activities. SKARP identifies sections of pavement experiencing an unusually high proportion of wet road accidents; friction tests them and schedules treatment for sections experiencing both high wet road crashes and low friction numbers. The frictional quality of NYSDOT-owned pavements has improved since the program’s inception. A summary of PIL testing from 1996 through 2021 shows a decline in the number of sites requiring treatment, from 91 sites in 1996 to 4 sites in 2021.

Safety Appurtenance Program (SAFETAP)

SAFETAP is designed to ensure that roadside safety considerations are incorporated in the Department's preventive maintenance single course overlay projects. Under SAFETAP, a team of agency experts conduct a project review of preventive maintenance paving project sites to decide upon simple, low-cost safety improvements to be implemented at the time of construction, or soon after construction. Over 10,200 safety recommendations have been made since SFY16/17 and over 3,188 of the recommendations were completed during SFY20/21. The State is currently running a pilot in one of the regions to change the methodology for SAFETAP reviews.

Vulnerable Users

Vulnerable users include pedestrians, bicyclists, motorcyclists, and those who work on the roadway. New York will consider infrastructure improvements, as well as opportunities to enhance education, enforcement, emergency response, and data processes in its approach to reduce fatalities and serious injuries of vulnerable users of the roadway network. In June of 2016, NYSDOT announced its first ever statewide Pedestrian Safety Action Plan. The plan includes Engineering, Education and Enforcement measures to improve pedestrian safety. Engineering improvements include the implementation of systemic countermeasures at thousands of signalized intersections and mid-block crosswalks in urban areas between 2016 and 2021.

Pedestrian locations were also added to NYSDOT's annual regional work program where the NYSDOT Regions study 20% of the identified Priority Investigation Locations (PILs) each year to determine what improvements can be made to improve pedestrian safety.

Safer Corridors for Pedestrians:

In 2012 NYSDOT developed a process to evaluate corridors to improve pedestrian safety. To maximize effectiveness, the process emphasizes coordination among the Department and other local, state and federal partners. Solutions involve not only engineering measures, but also enforcement campaigns and educational efforts. The PSAP includes pedestrian improvements at the following 5 pedestrian corridors:

1) Erie Boulevard, City of Syracuse and Town of DeWitt, Onondaga county
2) US 62 Niagara Falls Boulevard, Town of Amherst, Town of Tonawanda, Erie county
3) US 11, Village of Malone, Franklin county
4) Route 59/45, Spring Valley, Rockland county
5) Route 25A, Town of Huntington, Town of Brookhaven, Suffolk county

Complete Streets

On a statewide basis, the New York State Department of Transportation continues to apply Complete Streets provisions in its project planning, programming and delivery processes.

Pedestrian/Bicycle Unit

The Pedestrian Bicycle Unit has two main areas of responsibilities. The first one is coordination and outreach both internally and externally. The second area is specific projects in developing policy and providing technical guidance for capital projects. The unit is working on the following initiatives:

- Development of Bicycle and Pedestrian Counting Protocol guidance has been issued on how to conduct counts, guidance is being developed on when and why counts should be conducted.
- Update of the NYS Pedestrian and Bicycle Master Plan and Active Transportation Plan, coordination on how the plan will be developed and the scope of the plan is ongoing.
- Updating the complete streets checklist to ensure bike/ped concerns are being addressed during the design process.

- Considering revisions to Chapter 18 (pedestrian facility design) of the Highway Design Manual for a full update.
- Collecting comments for a future revision of Chapter 17 (bicycle facility design) of the Highway Design Manual.
- Identify types of active transportation users and their safety needs and develop effective countermeasures for safety concerns.
- Implement and evaluate innovative programming procedures, training techniques, and facility treatments.

The SHSP identifies young drivers as those that are 20 and younger. Drivers that are 65 and older represent the older driver group. Data from 2020 show that 26.90% of fatal and serious injury crashes involved a young or older driver. Decreasing the number of age-related fatalities and serious injuries will be achieved through a multidisciplinary approach incorporating engineering designs to accommodate users of all ages as well as education and enforcement initiatives.

Road User Behavior and Speed

As advancements in vehicle and roadway design continue to improve safety, human behavior continues to be the biggest variable in crash risk. Creating a culture of responsible road users is essential to making a significant impact in the reduction of crashes, fatalities, and injuries. New York will implement roadway improvements that decrease the incidence of distracted and drowsy driving such as flashing beacons, and centerline and edgeline rumble strips as well as improvements that influence driver speed such as signing and speed feedback devices, roundabouts, complete streets and road diets. Education and enforcement efforts are most important to build awareness and promote safer driving habits.

Emergency Response and Traffic Incident Management

A traffic incident is any non-recurring event (such as a vehicle crash, a vehicle breakdown, work zone, or a special event) that causes a reduction in roadway capacity or an abnormal increase in traffic demand that disrupts the normal operation of the transportation system. Traffic incidents are an important concern in New York State because they can result in a safety issue and are a significant cause of congestion delays. In response to this problem, NYSDOT has fostered the development of a Statewide Traffic Incident Management (TIM) Program. A TIM Steering Committee was formed to guide the advancement of the statewide TIM Program in New York State. This Committee has been meeting regularly for 10 years to foster relationships among agencies, determine issues of statewide significance relating to TIM, and to develop training and guidelines for the emergency responder community to use in their everyday efforts to keep themselves and the public safe. The TIM Steering Committee assisted in the advancement of the Move Over law and also provided education on the law to executives and safety stakeholders. The Committee will continue to support similar efforts in the future.

Improvements to Data

Status of Crash Data

This report is based on crash data from the Fatality Accident Reporting System (FARS), NYSDOT's Safety Information System (SIMS) and NYSDMV's Accident Information System (AIS). Crash records and roadway characteristics are analyzed to identify Priority Investigation Locations (PILs). A highway safety investigation is conducted at 20% of the state PILs annually. Crash data has traditionally included fatal, injury, property damage crashes over $1,000 (reportable) and property damage accidents under $1,000 (non-reportable). Additional factors used in developing the PIL list are traffic volumes, divided or undivided, and the number of travel lanes. All PILs studied are on the State system with the exception of some New York City locations.

The Department continues to partner with the NYS Department of Motor Vehicles (NYSDMV), the Governor's Traffic Safety Committee, State Police and other key stakeholders to mutually re-engineer the accident and traffic violation records systems to address safety data information needs. The State continues to use a strategic planning approach to improve its various information systems as articulated in the Traffic Safety Information Systems Strategic Plan. The status of improvements that directly affect the Safety Information Management System (SIMS) are:

Crash Records

The fatal, injury, and electronically submitted Property Damage Only (PDO) crash data is complete through 12/31/2021. The policies surrounding the processing of PDO crashes have changed from year to year. Therefore, it is not possible to compare PDO crash data from year to year.

The change in the MMUCC definition of serious injuries has affected the serious injury trend in New York State.

Traffic and Criminal Software (TraCS)

Use and Dissemination Agreements for use of the software have been signed by more than 500 different police agencies across the state in 57 counties. This represents more than one-third of all law enforcement agencies in NYS who have committed to using the software. As of April 2022, 521 agencies are transmitting data through the TraCS system. The software reduces the workload at NYSDMV decreasing the time it takes to process each crash report.

CLEAR (Crash Location Engineering and Analysis Repository)

A new safety data transfer process that transfers data from NYSDMV to NYSDOT has been designed. The transfer process is phase one of a project to replace NYSDOT's legacy safety data systems with a new system called CLEAR. CLEAR will utilize the new safety data warehouse, integrate with the other NYSDOT enterprise systems, and enhance NYSDOT's ability to perform safety planning, analysis and evaluation on all public roads. Implementation is planned for the end of 2021 but has been delayed by a few months. CLEAR DATA VIEWER is online now, the other elements of CLEAR will hopefully come online in 2022.

Traffic Counts

Traffic count AADTs are required to develop crash rates for the state and local system. The Department has complete traffic volume data for almost 44,000 miles of the approximately 117,000 miles of highway in New York. The remaining 73,000 miles are primarily local streets. The Department and counties continue to partner in a statewide county traffic count program designed to capture traffic volume data on county owned roads. In 2021, the Department took 3,040 traffic counts on 3,400 miles of non-federal aid roads.

Local Highway Route System

The local roads LRS build was completed and included in its entirety to the FHWA with the June 2018 HPMS submission. The Department continues to identify roadways and reverse directions that can be added to the State LRS.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

We exceeded the obligatory requirement of $95,682,088 in our Federal Fiscal Year 2022. $112,344,588.00 was obligated.

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$88,436,847	$84,712,176	95.79%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$97,257,657	$96,418,761	99.14%
State and Local Funds	$46,008,501	$45,082,802	97.99%
Totals	$231,703,005	$226,213,739	97.63%

Although some program funds were 100% obligated, not all were, thus the 95.79% rather than 100% of HSIP funds obligated ...$84,712,576/88,436,847=.95788779%

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

$22,088,173

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

$20,637,923

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

$1,500,000

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

$1,500,000

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.

Impediments to obligating HSIP funds include project delays for reasons not limited to safety projects such as environmental approvals, right of way/easement issues, community issues, other funding needs, resource issues, historic issues, NYS permit issues etc. The complicated process required to implement projects that use federal aid including HSIP can also be an impediment, especially for local governments. In addition, the Federal Obligation Limitation that exists on all federal funding also serves as an impediment to obligating safety funds. The following describes some of the approaches used to overcome those obstacles for HSIP projects.

Statewide Call for Projects
The application process for the statewide HSIP call for projects requires an applicant to identify all potential barriers to a timely implementation. The barriers are one of the factors taken into consideration during the project selection process. Thus, a project with good safety benefits but significant impediments to a timely implementation may be denied funding in favor of another safety project with less risk.

Design Services Agreement
Design resources are sometimes limited at the regional level especially for larger projects. The Department has a statewide design services agreement that can be used to fund contract services to assist with design or other urgent safety project needs. The contract is funded via HSIP dollars specifically set aside for that purpose. HSIP funded design services agreements are also being used for Highway Safety Investigations, PSAP field assessments, and design.

Marchiselli
The Department will continue to support programs such as the Marchiselli Highway Improvement Program which provides funding assistance to local municipalities for approved projects. The Marchiselli program requires state and local governments to share in the cost of approved local projects. The projects are typically funded in shares of 80% Federal, 15% State and 5% local.

Low Cost Countermeasures
The NYSDOT is encouraging and implementing more low cost and systemic safety countermeasures which typically have less impediments to a timely implementation and are often easier for local municipalities to implement.

Toll Credits
Toll credits have been used for the local match for many HSIP projects. Using toll credits can assist local governments that don't have access to funds for the required federal match.

General Listing of Projects

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

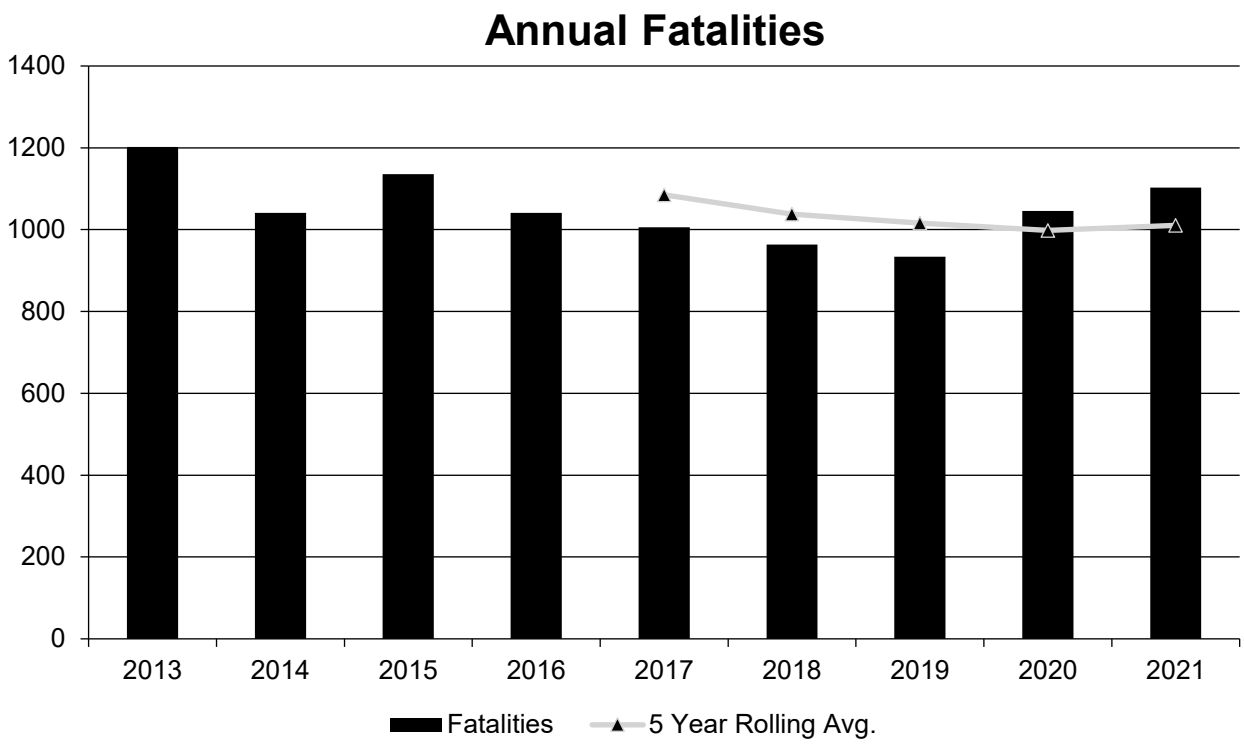
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Project List is attached via an excel file					$0					0					

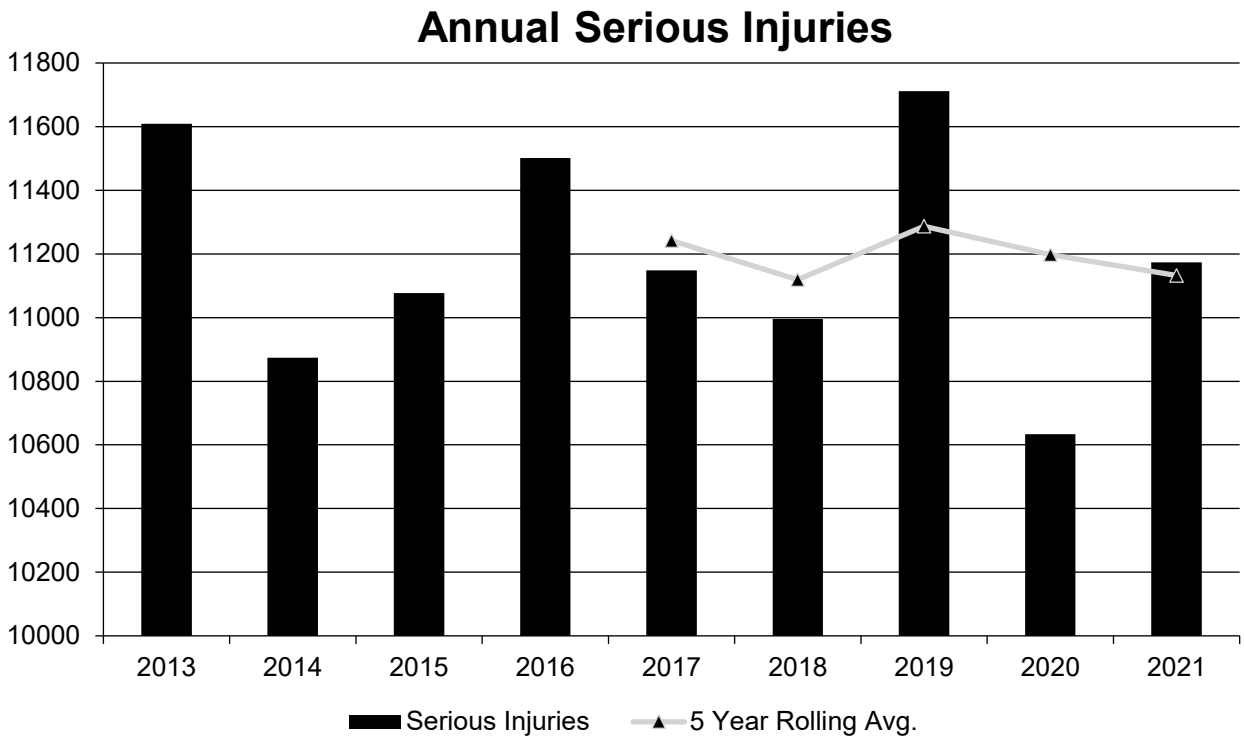
Safety Performance

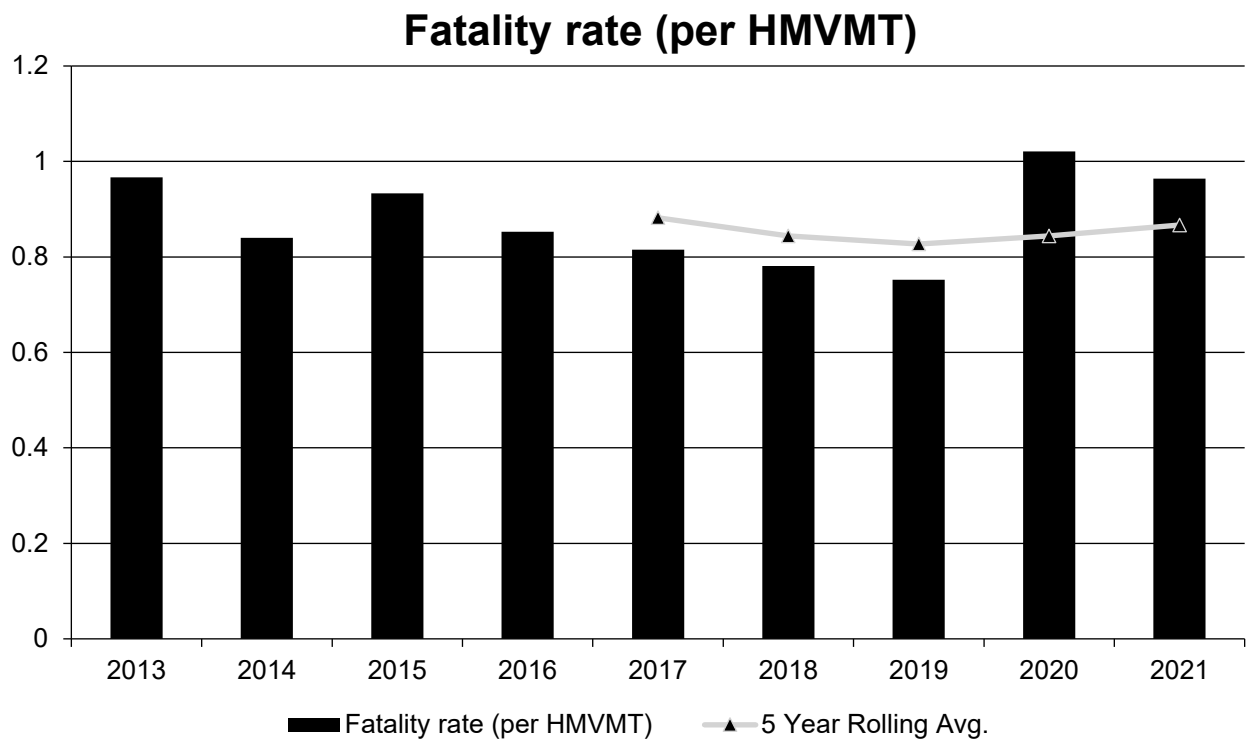
General Highway Safety Trends

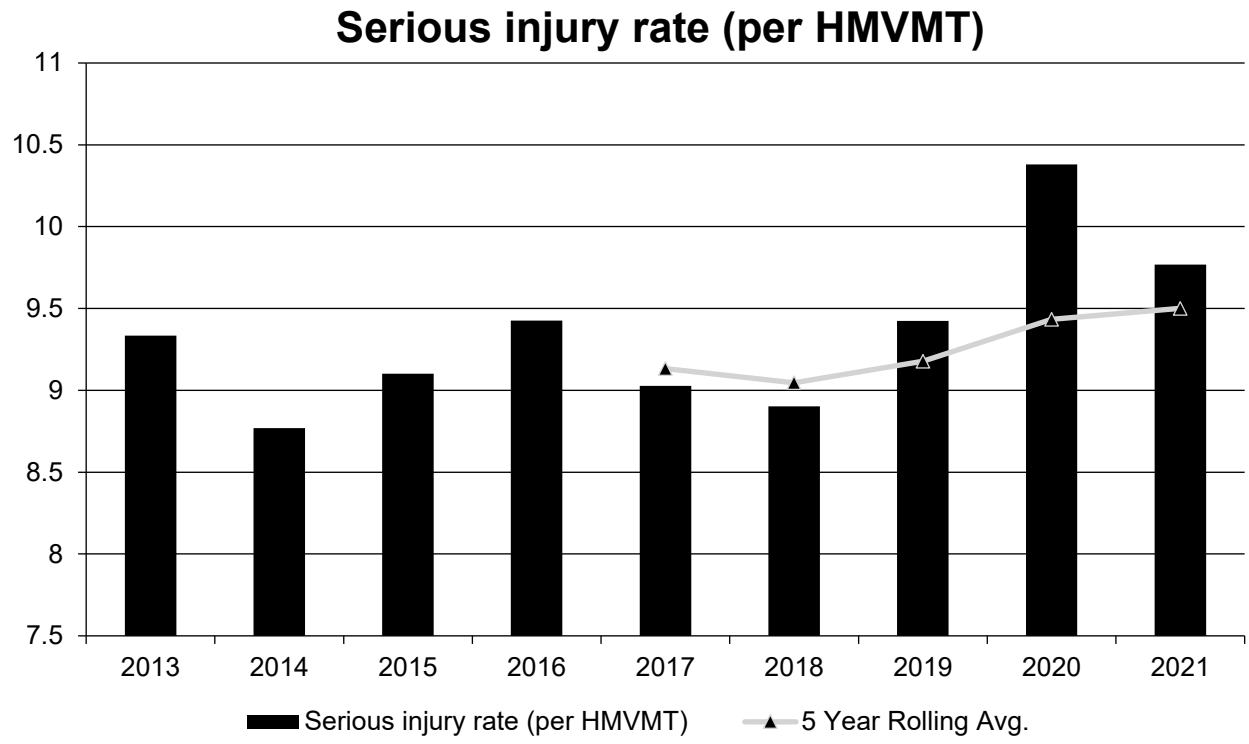
Present data showing the general highway safety trends in the State for the past five years.

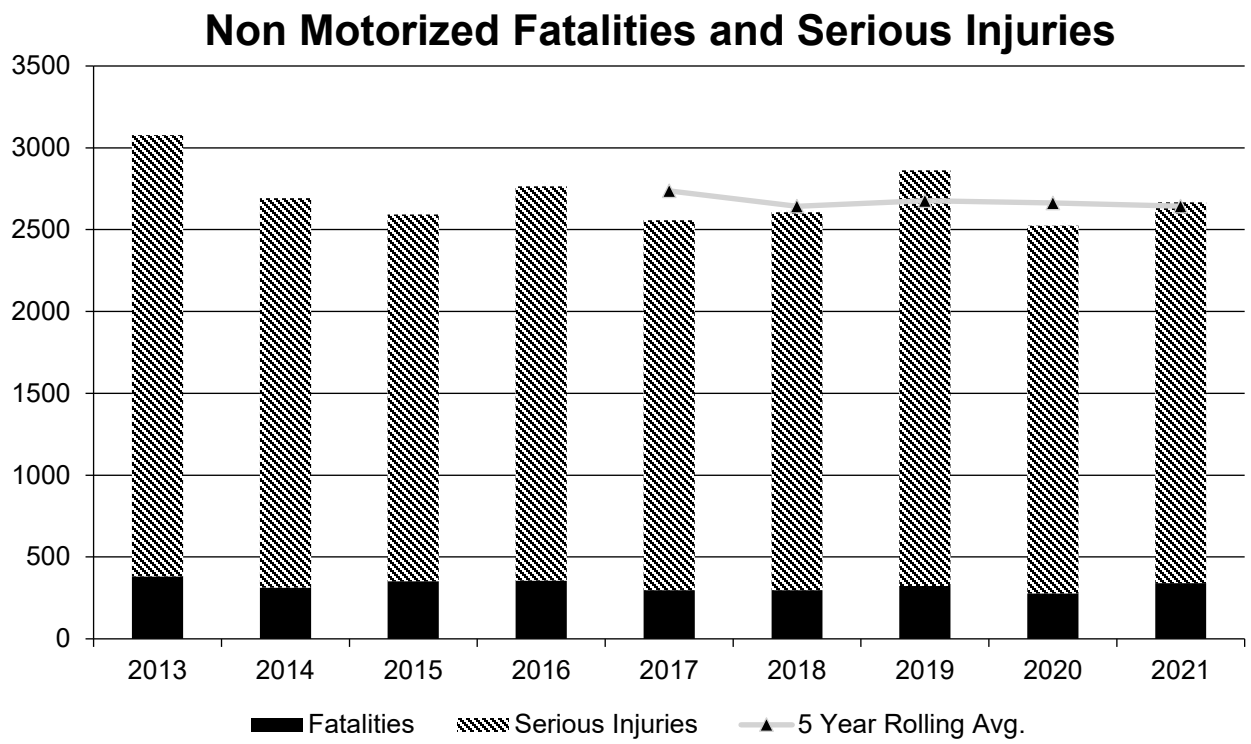
PERFORMANCE MEASURES	2013	2014	2015	2016	2017	2018	2019	2020	2021
Fatalities	1,202	1,041	1,136	1,041	1,006	964	934	1,046	1,103
Serious Injuries	11,609	10,874	11,077	11,501	11,148	10,996	11,712	10,634	11,174
Fatality rate (per HMVMT)	0.967	0.840	0.933	0.853	0.815	0.781	0.752	1.021	0.964
Serious injury rate (per HMVMT)	9.335	8.770	9.102	9.427	9.028	8.903	9.425	10.381	9.769
Number non-motorized fatalities	382	314	353	357	297	298	322	278	340
Number of non-motorized serious injuries	2,696	2,378	2,240	2,407	2,261	2,309	2,540	2,247	2,328


Annual Fatalities
1400
1200
1000
800
600
400
200
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
11800
11600
11400
11200
11000
10800
10600
10400
10200
10000
2013
2014
2015
2016
2017
2018
2019
2020
2021
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.2
1
0.8
0.6
0.4
0.2
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
11
10.5
10
9.5
9
8.5
8
7.5
2013
2014
2015
2016
2017
2018
2019
2020
2021
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Describe fatality data source.

FARS

The fatalities data source for 2017 through 2020 is FARS.
The fatalities data source for 2021 is the New York State Traffic Safety Statistical Repository (TSSR) system.
FARS data for 2021 is not available at the time this report was written.

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

Year 2021

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	14.4	111.4	0.01	0.1
Rural Principal Arterial (RPA) - Other Freeways and Expressways	3.2	31.2	0	0.03
Rural Principal Arterial (RPA) - Other	39.2	301	0.03	0.26
Rural Minor Arterial	43	292.4	0.04	0.25

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Minor Collector	49.2	340.6	0.04	0.31
Rural Major Collector	51.4	418.4	0.05	0.34
Rural Local Road or Street	56.4	483.8	0.05	0.41
Urban Principal Arterial (UPA) - Interstate	61.8	622.8	0.06	0.53
Urban Principal Arterial (UPA) - Other Freeways and Expressways	76.6	585.8	0.07	0.5
Urban Principal Arterial (UPA) - Other	191.8	2,123	0.17	1.81
Urban Minor Arterial	202	2,324.6	0.17	1.99
Urban Minor Collector				
Urban Major Collector	83.6	1,101	0.07	0.94
Urban Local Road or Street	137.8	2,026.4	0.12	1.73

Year 2021

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	379.6	3,272.6	0.33	2.79
County Highway Agency	205	1,667.2	0.18	1.42
Town or Township Highway Agency	119.6	1,195.2	0.1	1.02
City or Municipal Highway Agency	279.8	4,356.2	0.24	3.73
State Park, Forest, or Reservation Agency	1	7	0	0.01
Local Park, Forest or Reservation Agency	0.2	3	0	0
Other State Agency	0.8	6	0	0.01
Other Local Agency	0.2	1.8	0	0
Private (Other than Railroad)				
Railroad				
State Toll Authority	22	222.6	0.02	0.17
Local Toll Authority	1	15	0	0.01
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation	1	9.2	0	0.01

Safety Performance Targets

Safety Performance Targets

Calendar Year 2023 Targets *

Number of Fatalities:988.2

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

The following method was used to define the target: 1) Estimated the existing trend by using a linear trend line which is a clear, straightforward method and recommended by FHWA. The 5 year moving averages were used

as the data point for each year. 2) The 2021 forecast was generated using the FORECAST function in Excel. 3) The forecast was adjusted for reasonability by reviewing external factors and applying a 1% cap. The targets are consistent with the goals identified in the 2017 Strategic Highway Safety Plan.

Number of Serious Injuries:11086.2

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

The following method was used to define the target: 1) Estimated the existing trend by using a linear trend line which is a clear, straightforward method and recommended by FHWA. The 5 year moving averages were used as the data point for each year. 2) The 2021 forecast was generated using the FORECAST function in Excel. 3) The forecast was adjusted for reasonability by reviewing external factors and applying a 1% cap. The targets are consistent with the goals identified in the 2017 Strategic Highway Safety Plan.

Fatality Rate:0.836

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

The following method was used to define the target: 1) Estimated the existing trend by using a linear trend line which is a clear, straightforward method and recommended by FHWA. The 5 year moving averages were used as the data point for each year. 2) The 2021 forecast was generated using the FORECAST function in Excel. 3) The forecast was adjusted for reasonability by reviewing external factors and applying a 1% cap. The targets are consistent with the goals identified in the 2017 Strategic Highway Safety Plan.

Serious Injury Rate:9.337

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

The following method was used to define the target: 1) Estimated the existing trend by using a linear trend line which is a clear, straightforward method and recommended by FHWA. The 5 year moving averages were used as the data point for each year. 2) The 2021 forecast was generated using the FORECAST function in Excel. 3) The forecast was adjusted for reasonability by reviewing external factors and applying a 1% cap. The targets are consistent with the goals identified in the 2017 Strategic Highway Safety Plan.

Total Number of Non-Motorized Fatalities and Serious Injuries:2633.4

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

The following method was used to define the target: 1) Estimated the existing trend by using a linear trend line which is a clear, straightforward method and recommended by FHWA. The 5 year moving averages were used as the data point for each year. 2) The 2021 forecast was generated using the FORECAST function in Excel. 3) The forecast was adjusted for reasonability by reviewing external factors and applying a 1% cap. The targets are consistent with the goals identified in the 2017 Strategic Highway Safety Plan.

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

NYSDOT communicates regularly with the Metropolitan Planning Organizations and the Governors Traffic Safety Committee. NYSDOT produces a fact sheet for the MPOs that identifies the targets and describes the process used to set them.

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	1012.7	1010.6
Number of Serious Injuries	10896.8	11132.8
Fatality Rate	0.824	0.867
Serious Injury Rate	8.865	9.501
Non-Motorized Fatalities and Serious Injuries	2583.5	2644.0

New York State did not make significant progress towards meeting the serious injury or serious injury rate or non-motorized fatality and serious injury targets in 2020. The State submitted the 2022 HSIP Implementation Report. Below is some information from the report related to the targets that were not met.

- Rates were negatively impacted by an 18% decrease in VMT due to COVID-19 between 2019 and 2020.
- While it's not possible to determine how much of the increase in serious injuries was due to a change in the serious injury definition, several factors related to the definition of serious injuries and the processing of crash data had the potential to negatively affect the serious injury trends in NY beginning in 2018.
    - The following changes were made to the police report in 2018 to be compliant with the new MMUCC definition of serious injuries:
        - Severe lacerations, crush injuries, and paralysis were added to the 'type of physical complaint' attribute
        - The definition of "Fracture - Dislocation" was changed to include "Fracture / Distorted / Dislocation"
        - Eye injuries were removed from the serious injury definition
    - 1,160 serious injuries were coded to the changed values above in NYC alone in 2019 and 3,196 serious injuries were coded to the changed values statewide. It is not known how the crashes would have been coded before the change to the police report.
    - An unexplained increase in crashes coded as internal injuries occurred resulting in a serious injury level crash. Training has been provided to ensure internal injury crashes are coded correctly.
    - New York City began processing cases electronically during this 5 year timeframe.

Applicability of Special Rules

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

No

Calculated Rule does not apply since the rate for 2020 is less than the rate for 2018.

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	201	217	200	213	213	203	183
Number of Older Driver and Pedestrian Serious Injuries	1,036	1,090	1,095	1,068	1,208	1,246	944

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries
- Other-target crashes

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

From 2007 until 2020, New York fatality rate was under 1.0 per 100M VMT. The number of fatalities and the fatality rate were on a downward trend at a time when many states were experiencing an increase. The number of serious injuries and serious injury rates were on a downward trend but increased in 2019. Some of the increase in serious injuries was due to a change in the MMUCC definition of serious injuries which was implemented in New York State at the end of 2018.

The Novel Coronavirus (Covid-19) pandemic also affected safety results in NY due to the unprecedented changes in both traffic volumes and the number and severity of crashes during calendar year 2020. While the impacts of this public health crisis have been experienced nationwide, New York State has endured a disproportionate impact of these changes in travel patterns and behavior that still continue.

NYSDOT is waiting for final Pedestrian Safety Action Plan (PSAP) projects to be completed to evaluate that program. When the new system CLEAR goes live, New York State will be able to evaluate projects and programs on multiple levels.

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

- # miles improved by HSIP
- # RSAs completed
- HSIP Obligations
- Increased awareness of safety and data-driven process
- More systemic programs

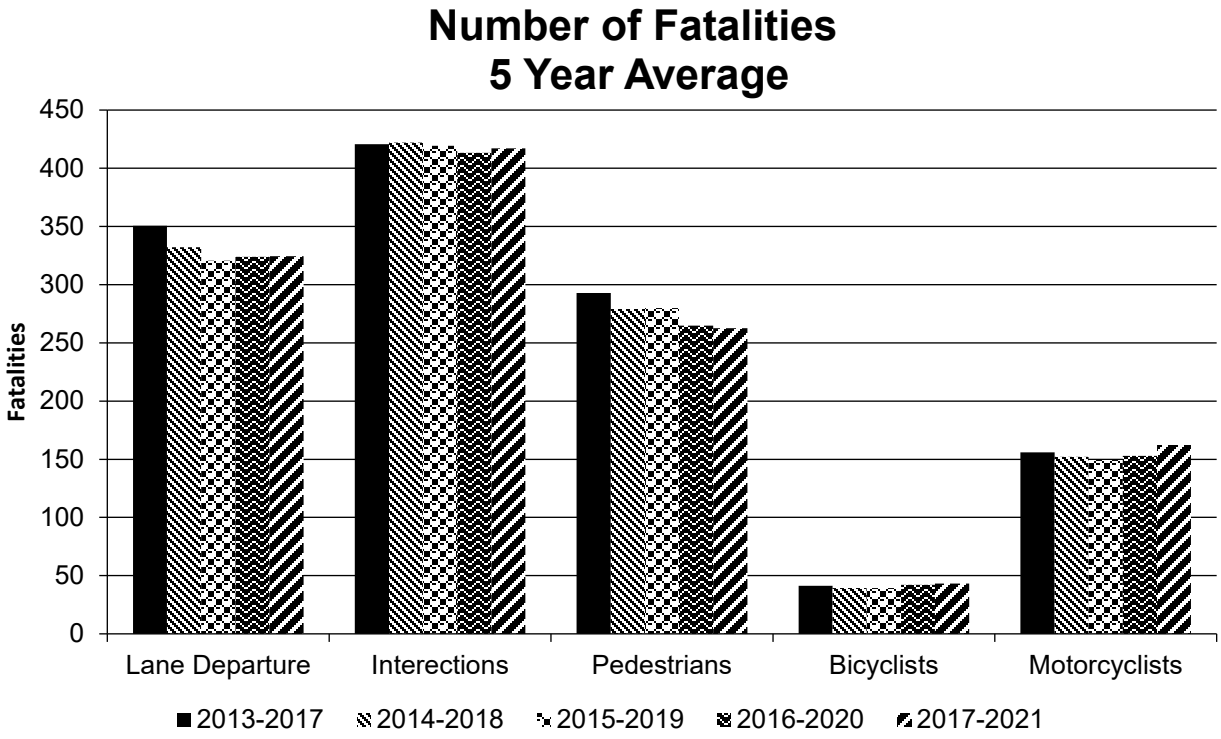
Effectiveness of Groupings or Similar Types of Improvements

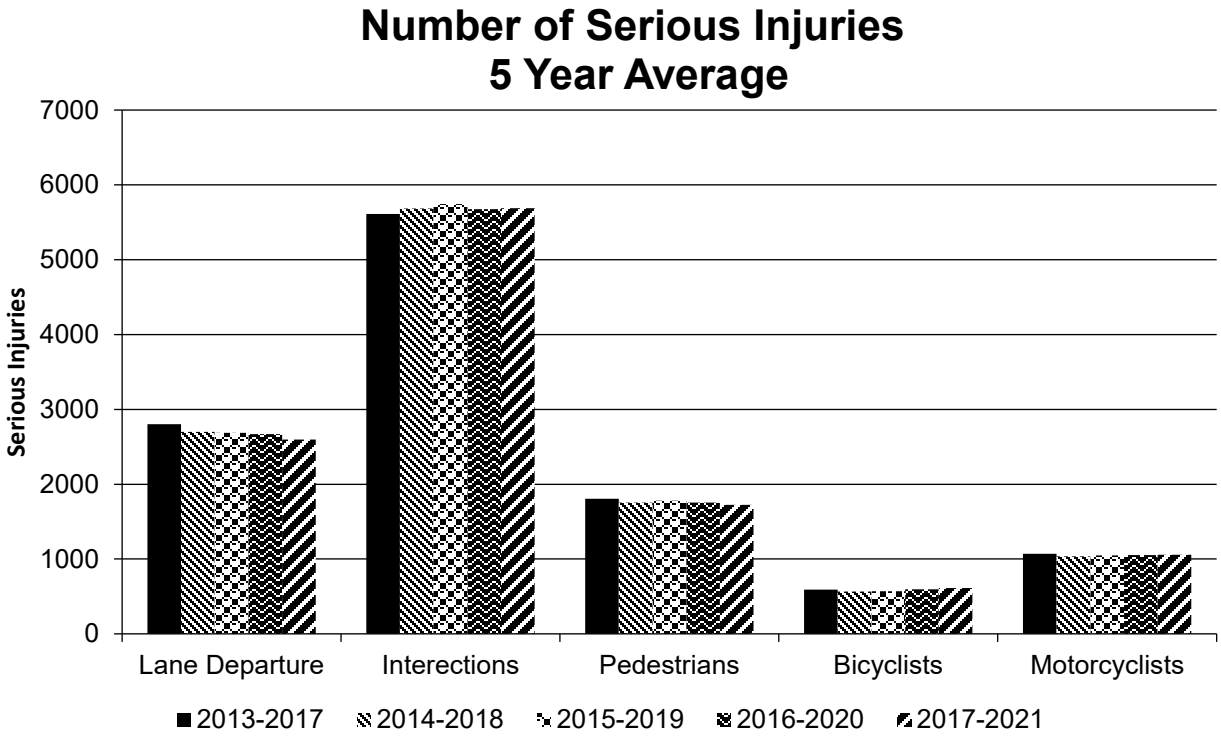
Present and describe trends in SHSP emphasis area performance measures.

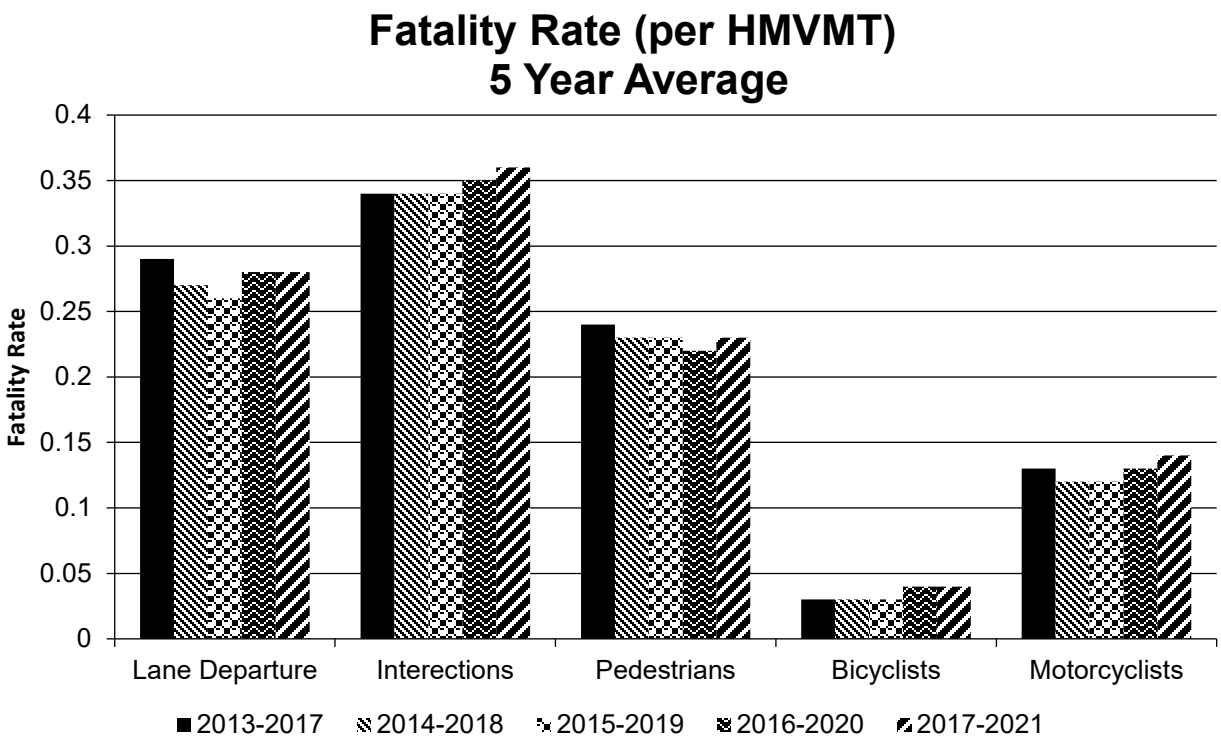
Year 2021

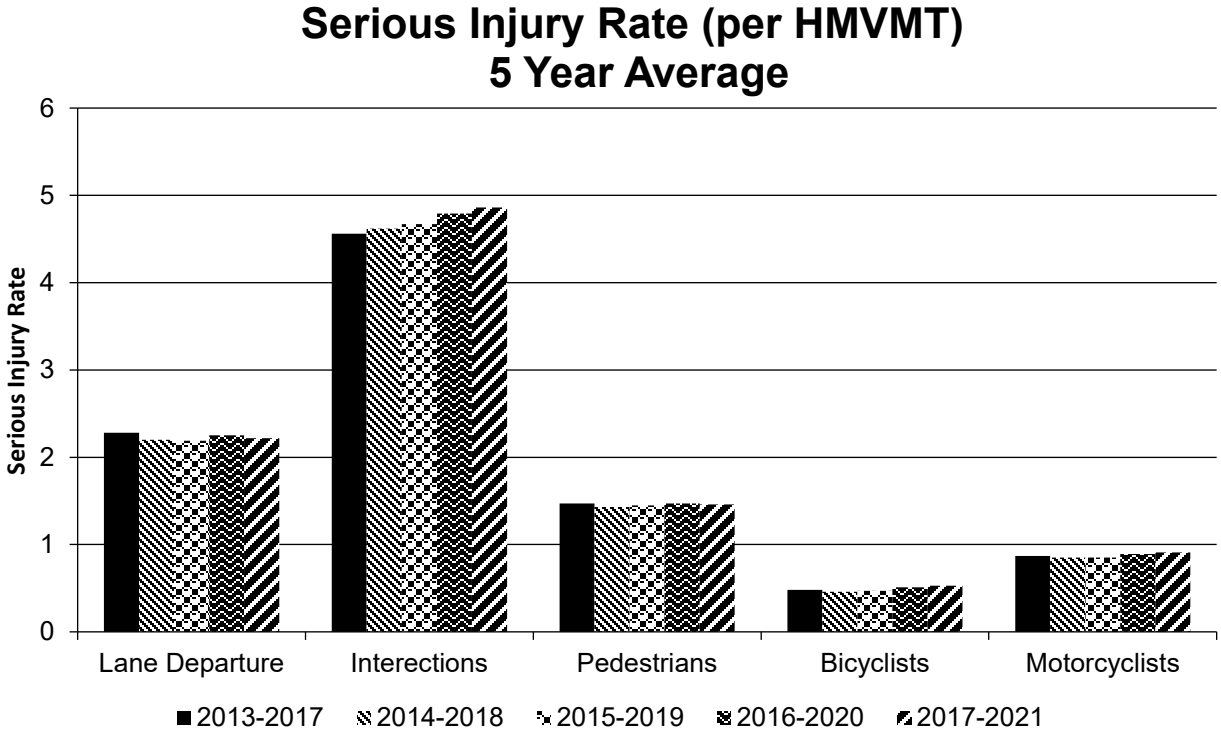
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure		324.4	2,596.2	0.28	2.22
Interections		417	5,687.4	0.36	4.86

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)
Pedestrians		262.6	1,722.8	0.23	1.46
Bicyclists		43.2	612.2	0.04	0.53
Motorcyclists		162.2	1,058	0.14	0.91


Number of Fatalities
5 Year Average
Fatalities
450
400
350
300
250
200
150
100
50
0
Lane Departure
Interections
Pedestrians
Bicyclists
Motorcyclists
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021


Number of Serious Injuries
5 Year Average
Serious Injuries
7000
6000
5000
4000
3000
2000
1000
0
Lane Departure
Interections
Pedestrians
Bicyclists
Motorcyclists
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021


Fatality Rate (per HMVMT)
5 Year Average
Fatality Rate
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Lane Departure
Interections
Pedestrians
Bicyclists
Motorcyclists
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021


Serious Injury Rate (per HMVMT)
5 Year Average
Serious Injury Rate
6
5
4
3
2
1
0
Lane Departure
Interections
Pedestrians
Bicyclists
Motorcyclists
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021

Project Effectiveness

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

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

The new system CLEAR will have updated crash costs that should help the regions identify safety projects with a B/C greater than 1.0.

Compliance Assessment

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

06/13/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2022

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

2022

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	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	100		
	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]	100	100								
	Functional Class (19) [19]	100	100					100	100	100	100
	Median Type (54) [55]	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
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	100		
	Average Annual Daily Traffic (79) [81]	99.5	86.2					18.8	17.2		
	AADT Year (80) [82]	99.4	85.3								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120) [110]			100	100						
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]			100	100						
	Intersection/Junction Traffic Control (131) [131]			100	100						
	AADT for Each Intersecting Road (79) [81]			90	83						
	AADT Year (80) [82]			90	83						
	Unique Approach Identifier (139) [129]										
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	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	100				
	Interchange Type (182) [172]					100	100				
	Ramp AADT (191) [181]					93.1	40.4				
	Year of Ramp AADT (192) [182]					93.1	40.4				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Percent Complete):		**99.94**	**98.42**	**60.00**	**58.25**	**98.75**	**89.16**	**90.98**	**90.80**	**100.00**	**100.00**

*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.

The New York State Department of Transportation is currently working on several Enterprise projects that will capture, maintain, and utilize MIRE segment, ramp and junction data elements. Current project design efforts are focusing on identifying official sources of data, data fields needed by different program areas, and version control. The intersection and ramp data reported in question #49 has been collected and will be available in the production environment when the CLEAR application goes live in mid 2022.

For segments, a new Enterprise application for roadway data called SEE is in development. The new application will allow the program area to manage data for dual carriageways and will improve the workflow of integrating with mile point LRS. Additional local roads are being build to help the safety program locate crashes and meet Federal requirements to map all public roads. The Traffic and Safety program is also developing a new Enterprise safety application. The "Crash Location and Engineering Analysis" (CLEAR) project will implement Transcend Spatial's Intersection analyzer application to add additional MIRE elements captured from the roadway data and calculate an MEV value for crash rate analysis. The Integration of all these elements through multiple enterprise systems with different business needs is no small task and the New York State Department of Transportation is working to ensure we have the most accurate and up to date data.

Optional Attachments

Program Structure:

RED BOOK Highway_Safety_Improvement_Program Procedures__Techniques.pdf
Project Implementation:

HSIP Project List_220603 FINAL.xlsx
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.