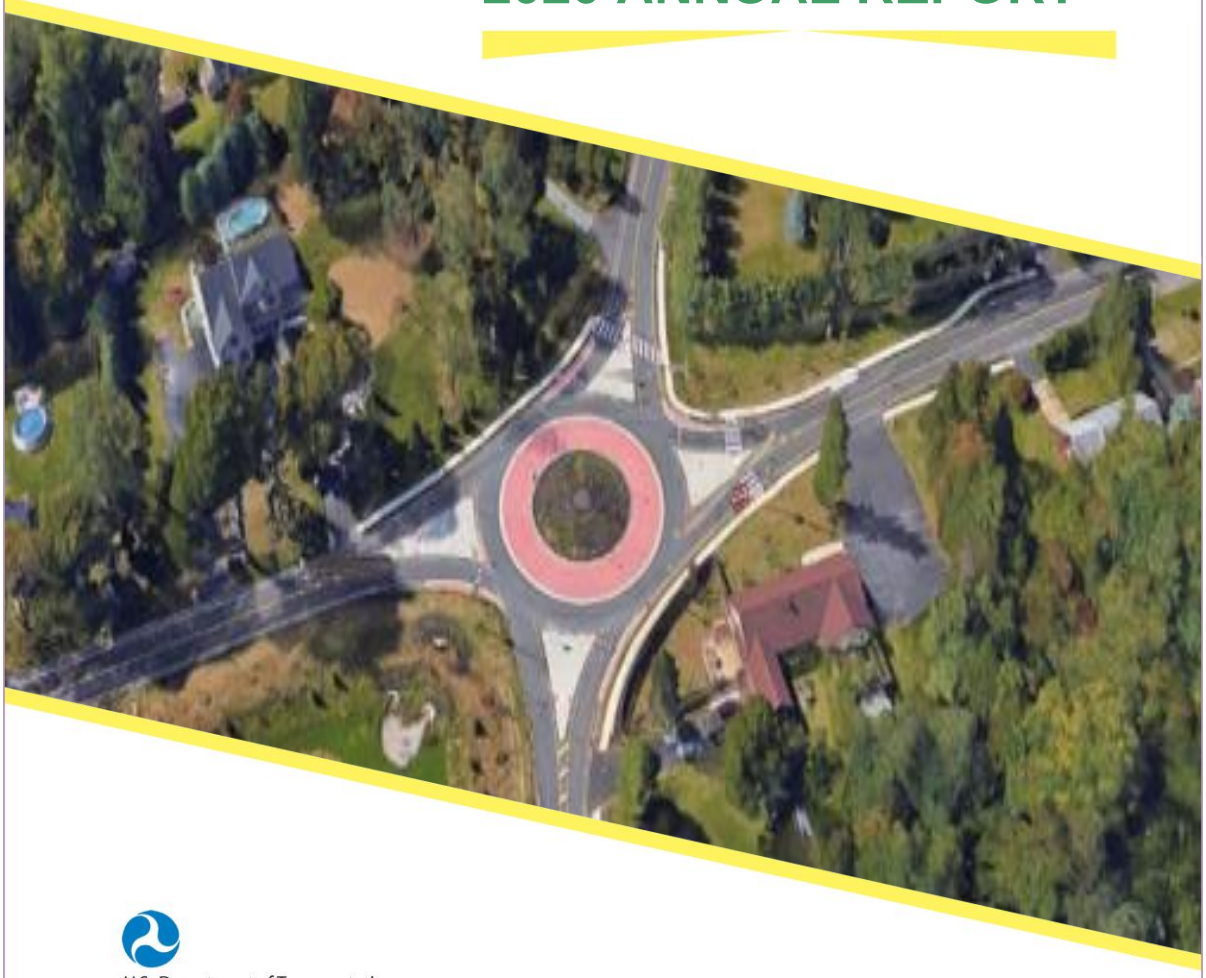
NEW JERSEY

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2020 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo Source:
Google, Burlington County, NJ

Table of Contents

Disclaimer

Protection of Data from Discovery Admission into Evidence

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

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section[HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

The Fixing America's Surface Transportation Act (FAST Act) continues the Highway Safety Improvement Program (HSIP) as a core Federal-aid program to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads. HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

The reporting period for the 2020 Annual Safety Report (ASR) is the Calendar Year (CY) from January 1, 2019 to December 31, 2019.

New Jersey has met or made significant progress towards achieving its safety performance targets for 2018, as communicated by FHWA.

New Jersey has analyzed roadway safety performance as described in Part 30 of this report "General Highway Safety Trends in the State for Past Five Years". New Jersey's five-year rolling average for the period of 2015-2019 for the number of fatalities slightly trickled upward approximately 0.2% while fatality rate has decreased by approximately 0.5%, number of serious injuries increased by approximately 24%, serious injury rates also increased approximately 23% and the number of non-motorized fatalities and serious injuries increased approximately 15%. Over the same five-year period, the actual number of crashes resulting in fatalities and incapacitating injuries in each year has fluctuated. New Jersey's Vehicle Miles Traveled (VMTs) have been increasing on an annual basis over this five year period.

Beginning in 2019, New Jersey updated the police crash report to be consistent with the federally required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). As a result of this change, injuries not previously attributed to the serious injury classification are now included in this number. For example, a crash victim with a broken arm that would have previously been classified as a Moderate Injury, is not classified as a Suspected Serious Injury. As a result, New Jersey saw a 116% increase in reported serious injuries due to the changes in reporting. This large increase creates a challenge in predicting anticipated totals for future years.

To achieve the long-term vision of towards zero deaths on all public roads, New Jersey established a 2.5% per year reduction goal in the five-year rolling average of fatalities and serious injuries in its NJ 2015 Strategic Highway Safety Plan (SHSP). New Jersey's 2019 fatalities and serious injuries actual value, while tracking a slight increase, remains below the projected 2.5% reduction target line. New Jersey aims to revise the stated goal with the update of the SHSP.

New Jersey continues to develop highway safety improvement projects on the basis of both crash experience and crash potential to reduce fatal and serious injury crashes on all public roads understanding the benefits of systemic evaluation and deployment which provide an expanded comprehensive and proactive approach to road safety efforts. New Jersey is constantly evaluating ways to expand the deployment of systemic safety improvements.

Furthering these efforts, New Jersey has completed the inventory and assessment of the state's roadway curves for two of our three metropolitan regions, Delaware Valley River Planning Commission (DVRPC) and South Jersey Transportation Planning Organization (SJTPO). Similar effort in the remaining North Jersey Transportation Planning Authority (NJTPA) metropolitan region is underway.

Evaluations on the Mid Block Crosswalks Pedestrian Safety Improvements are complete. Pilot corridors for deployment of Signal Backplates with Retroreflective Borders Program have been identified. Coordination with our Intelligent Transportation System (ITS) colleagues to seek advanced technology countermeasures for safety enhancement are continuing, such as Lead Pedestrian Intervals at signals equipped with advanced technology. NJ will continue to pro-actively coordinate with our ITS colleagues to seek advanced technology safety solutions.

In addition to exploring and developing systemic programs, New Jersey continues its effort with High Friction Surface Treatment (HFST) on roadway curves which experience high roadway departure crashes such as fixed objects and overturns. New Jersey continues to evaluate HFST installations, update the specifications and coordinate with our local, regional and federal partners.

New Jersey is finalizing the 2020 Strategic Highway Safety Plan (SHSP). The NJ 2020 SHSP reinforces New Jersey's commitment to a performance based, data-driven investment strategy aligning with a Towards Zero Death vision. The plan was developed with extensive collaboration, participation and coordination with state's safety stakeholders through a hierarchal organization structure of a Core Working Group, a Steering Committee, Emphasis Area Teams and the Executive Committee, in addition to robust public engagement through a series of Safety Summits and media presence including a user-friendly website (http://www.saferoadsforallNJ.com). NJ 2020 SHSP will support seven (7) Emphasis Areas with strategic plans capitalizing on the four E's – Engineering, Education, Enforcement and Emergency Response. The State continues to support the goals of NJ 2015 SHSP through the HSIP apportionments for state and local projects and will transition seamlessly to NJ 2020 SHSP following its adoption.

New Jersey strives to improve our programs and supports and encourages the use of innovative techniques in doing so. With guidance from and partnership with our federal and local partners, New Jersey continues its commitment to share information and knowledge with our safety partners through grant programs, such as Accelerated Safety Activities Program (ASAP), Everyday Counts initiatives, such as Safe Transportation for Every Pedestrian (STEP – EDC-4, 5), Reducing Rural Roadway Departures in NJ (EDC-5), workshops and peer exchanges. NJ is continuing to make progress on these EDC initiatives.

One of the important steps in a performance based program is post-evaluation of deployed assets. NJ completed the systemic program of installing Centerline Rumble Strips (CLRS) along state roadways through multiple capital projects in 2016. The 3 year post deployment data, following a 6 month normalization period, is being collected and analyzed. NJ will start reporting on our findings and results with the 2021 HSIP Annual Safety Report.

HSIP is New Jersey's commitment to its safety partners. Continual evaluation and improvement is key to any successful program. To ensure robust and continuous involvement, New Jersey hosts quarterly meetings on its HSIP Portfolio with senior management lead and multi-agency/divisional participation. This provides an opportunity for risk assessment, portfolio updates, programming information, and collaborative decision making. New Jersey's HSIP model has received accolades at a national level.

Our Local Safety Program partners, the metropolitan organizations (MPOs) are a valued partner in the development, programming and construction of projects on our county and local roads through the HSIP Local Safety Program apportionments. A brief update of their accomplishments and efforts is presented below:

NJTPA

The North Jersey Transportation Planning Authority (NJTPA) is the MPO serving thirteen (13) northern counties of New Jersey (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren); in addition to two cities (Newark and Jersey City) for a total of fifteen (15) sub-regions.

To date the NJTPA has allocated $145 million in HSIP funds for 139 projects. In 2019, $12.15 million in HSIP funding was authorized for design, construction and construction inspection of 24 projects. Projects authorized for construction included $1.7 million for a High Risk Rural Roads project in Monmouth County, High Friction Surface Treatment on 11 curves in Ocean County, and improvements to 9 intersections in Essex County.

Since 2015, the NJTPA has also provided funding for consultant inspection during construction on 22 projects

totaling more the $8.6 million. In 2019, $2.8 million in inspection funding was authorized.

Through the Local Safety Engineering Assistance Program (LSEAP), the NJTPA also provides engineering assistance to projects selected to advance through the LSP and HRRRP. To date, $20.5 million in design assistance has been provided for 50 projects including the design of eight modern roundabouts and three road diets. Since the program's inception in 2013, requests for design assistance has continued to increase. Presently, 75% of applications to the LSP/HRRRP request assistance.

In 2019 NJTPA also released the solicitation for the FY 2020 Local Safety and High Risk Rural Roads Programs. Fourteen applications were received totaling $99 million in requested funding. These applications are under review and the technical review committee will recommend a program for the NJTPA Board to advance in the fall of 2020.

The Consultant Assistance Program, which is a companion program to the solicitation, also commenced for the first time in 2019 providing assistance to applicants with traffic counts, signal warrant analysis, crash diagrams, conceptual layouts and cost estimates. Seven sub-regions received assistance with the development of 11 applications. The request for assistance was much greater than the programmed budget for this inaugural year, so the budget for the program has been increased for the next solicitation.

Finally, The NJTPA continues to partner with the NJDOT to conduct Road Safety Audits with a total of 42 completed since 2010. Short term recommendations from 28 RSAs have been or will be incorporated into projects advanced in the LSP. In 2019, four RSAs were completed in Morris, Ocean, Passaic and Somerset Counties.

SJTPO

The South Jersey Transportation Planning Organization (SJTPO) is the MPO serving New Jersey's four southernmost counties, including Atlantic, Cape May, Cumberland, and Salem.

SJTPO has been actively advancing safety through both planning / engineering as well as safety education programs focused on user behavior. More information on SJTPO's safety education programs are available at www.sjtpo.org/education . Recognizing that safety needed attention beyond the $2 million annual HSIP line item, SJTPO has been working with its member jurisdictions to update its Project Evaluation Process to ensure safety is incorporated in all projects funded through SJTPO. That updated process was adopted in July 2020 and will formally take effect with the 2020 solicitation of projects for the FY 2022-2031 Transportation Improvements Program (TIP). However, informally, SJTPO has been working since 2019 on this effort, beginning with Atlantic Avenue in Atlantic City, which was the top ranked bicycle and pedestrian crash corridor in the region. The request for Design funds for repaving was adjusted into a comprehensive safety assessment of the corridor, which is now advancing as Design for a Road Diet.

Other ongoing safety projects include centerline rumble strips in Cape May County, High friction Surface Treatment in Cumberland County, five roundabout projects with two in Cape May County, two in Salem County, and one in Cumberland County, intersection signalization in the City of Vineland, a pedestrian corridor improvement in Salem City, a Regional Curve Inventory and Safety Assessment that was completed in partnership with DVRPC, and preparing six bicycle and pedestrian corridor safety projects, two each in the Cities of Bridgeton, Millville, and Vineland based on the current Cumberland County Bicycle and Pedestrian Safety Action Plan effort. SJTPO has newly entered into Design Assistance on two complex roundabout projects in Salem County and is considering a similar arrangement for other upcoming projects, beginning as soon as FY 2022.

DVRPC

The Delaware Valley Regional Planning Commission (DVRPC) serves four counties in southern New Jersey

(Burlington, Camden, Gloucester and Mercer) and two cities (Camden and Trenton).

DVRPC did not conduct a formal project application solicitation again in 2019 for the Local Federal HSIP and HRRR Programs, but continued to assist member counties with project advancement. During 2019 DVRPC facilitated the consultant selection process for the Systemic Pilot Program for Roundabouts to advance two candidates, one in Burlington County (CR 541 Stokes Road & CR 648 Willow Grove Rd) and on in Camden County (705 Sicklerville Rd & 706 Erial Rd). Both roundabouts successfully authorized for preliminary engineering, but not until January of 2020. Other ongoing safety projects:

• Mt. Ephraim Avenue Corridor-wide Pedestrian Safety Local Concept Development was not completed until spring of 2020 due to problems related to the HSM analysis on the part of the consultant; IRC meeting occurred spring of 2020.

• The Mercer County Brunswick Circle Extension Roundabout preliminary engineering project is also progressing, final design slated for calendar year 2020.

• The Curve Data Gathering and Safety Assessment study was completed in 2019.

• Parkway Avenue CD study was completed in late 2019 and the IRC meeting occurred in the spring of 2020.

New Jersey remains committed to a mission of safe travel for all roadway users.

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.

Under the most recent federal legislation, the FAST Act, NJ is apportioned approximately $60 million annually for the HSIP Program. This apportionment is distributed 60% to local roadways and 40% to state roads based on fatalities and serious injuries data. The local portion is distributed to the 3 MPOs based on census data. Each MPO distributes HSIP funds into the different emphasis areas as described in the SHSP. The funds allocated to state roadways also get distributed into these different emphasis areas.

NJDOT develops an annual safety investment strategy for all HSIP funded activities and projects. The annual investment strategy demonstrates the linkage between the objectives of the SHSP and the projects/programs being developed and implemented to ensure that the focus is on the most effective safety improvements.

HSIP implementation steps for hot spot locations:

- Planning: Verify the identified location with any of the existing Safety Management System (SMS) lists
- Problem Identification: Identify the safety concerns
- Problem Screening Process: Develop the data needed for consideration of the project by the Capital Programming Screening Committee (CPSC) and the Capital Program Committee (CPC).
- Concept Development: Includes the following -

1. Verify that the project’s purpose and need is consistent with the identified safety concern and NJ most current SHSP
2. Prepare an initial cost estimate for at least two Safety Design Alternatives
3. If the identified infrastructure improvements are greater than $250,000 in cost then a Predictive Safety Analysis using the (HSM) will be required

- Design, ROW and Construction
- Post construction Evaluation

Where is HSIP staff located within the State DOT?

Planning

How are HSIP funds allocated in a State?

- Formula via MPOs

- SHSP Emphasis Area Data
- Other-Network screening for high crash locations

The allocation of HSIP funds for local and state roads is based on network screening lists for high crash locations. In addition to the screening for the local roads (county and municipal owned roads), there is also a competitive application process through each MPO.

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

Local Roadways are eligible for HSIP improvements through a competitive application process through their respective MPOs. All Local Roadways in New Jersey are covered by one of three MPOs – NJTPA, SJTPO, or DVRPC. NJDOT oversees the production of network screening lists for each of the MPO regions, including both County and Municipal owned roadways, which assist the MPOs in prioritizing their projects.

The local Screening Lists for each MPO include:

1. High Risk Rural Road Segment List
2. Roadway Corridor Segment List
3. Intersection List
4. Pedestrian/Bicycle Corridor Segment List
5. Pedestrian Corridor Segment List
6. Pedestrian/Bicycle Intersection List
7. Pedestrian Intersection List

The screening lists reflect NJ's commitment to address pedestrian, bicycle and intersection safety concerns in response to FHWA designation of NJ as a Pedestrian/Bicycle and Intersection Focus State.
The lists are shared through the MPOs with the local officials to assist in the selection of regional safety priority locations and develop, design and construct HSIP funded projects, improving safety along NJ's local roadways.

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

- Design
- Local Aid Programs Office/Division
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Project Management
- Other-Environmental

The HSIP Program is managed by the Bureau of Safety, Bicycle and Pedestrian Programs (BSBPP), which is part of Statewide Planning, through active and frequent coordination with internal and external stakeholders. Internal stakeholders include Design, Division of Local Aid, Operations, Planning, Project Management, Environmental and Bureau of Traffic Engineering.

This coordination is critical for HSIP State portfolio to advance.

Describe coordination with internal partners.

NJDOT's Bureau of Safety, Bicycle & Pedestrian Programs (BSBPP), under the Assistant Commissioner of Planning, Multimodal and Grants Administration (PMGA) is responsible for crash analysis and program development. Bureau of Transportation Data Support (BTDS), also under the leadership of Assistant Commissioner of PMGA is responsible for gathering, verifying and sharing crash data. The Division of Project Management (DPM) under the Assistant Commissioner of Capital Program Management (CPM) is responsible for managing the generated projects through the project delivery process from Concept Development to Construction, seeking input from the subject matter experts in the Department.

New Jersey's HSIP Manual identifies the process for coordination and delivery of HSIP projects for roadways under state jurisdiction. This manual was updated in 2016. New Jersey plans on revising the HSIP Manual and Implementation Guide in CY 2021. Regular meetings are conducted between PMGA and staff from DPM to monitor and assist as the projects move through project development to advertisement. Quarterly meetings with BSBPP, BTDS, DPM, Capital Investment and Program Development (CIPD), Bureau of Environmental Engineering and other SME's are conducted led by the Office of Assistant Commissioner, PMGA.

NJDOT supports the advancement of projects under local jurisdiction by participating in the Technical Assistance Team for local safety projects. The Technical Assistance Team consist of NJDOT's Safety, Environmental, and Local Aid staff. NJDOT's Division of Local Aid, under the Assistant Commissioner of PMGA is responsible for coordinating with the MPOs in the selection, authorization and oversight of projects implemented on the local road network.

Identify which external partners are involved with HSIP planning.

- FHWA
- Governors Highway Safety Office
- Local Government Agency
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)

Each state is mandated by the U.S. Department of Transportation to develop a Strategic Highway Safety Plan (SHSP) to guide the allocation of safety funding and resources to reduce highway fatalities and serious injuries on public roadways. A SHSP is required by the Federal Highway Administration (FHWA) Highway Safety Improvement Program (HSIP) as a condition to utilize federal HSIP funds. In the development of the SHSP, all of the external partners mentioned in the question, are involved. Only the selected external partners are involved in the HSIP planning process.

Describe coordination with external partners.

NJDOT coordinates with all the MPOs, Governors Highway Safety Office (Division of Highway Traffic Safety or DHTS) and FHWA on a regular basis. Daily phone calls, scheduled meetings or emails are the main way of communication. The FHWA representative is always available to provide support and guidance.

The same partners were involved in the setting of the performance safety targets.

Coordination with local government agencies is done through the MPOs. The three MPOs provide extensive support and assistance to their subregions in regards to their safety projects. Quarterly meetings are conducted between NJDOT and the MPOs to discuss any major concern and to keep track of the status of the projects and the funding.

Describe HSIP program administration practices that have changed since the last reporting period.

NJDOT has made a few changes to the STIP programming, organization structure and implementation process. The changes are highlighted in**BOLD** and explained below:

2020 STIP Programming for HSIP funds:

1. Highway Safety Improvement Program Planning
2. Local Safety/High Risk Rural Roads Program
3. Motor Vehicle Crash Record Processing
4. Utility Pole Mitigation Program
5. **Safety Programs**

In addition, some large projects are line items on the STIP. These large projects are funded with HSIP funds but are separated from the Programs and Sub-programs due to the size of the projects. These projects end up picking up the leftover funds from the programs already established. This way, a large project doesn't utilize the whole amount of funds designated to one program.

Furthermore, the criteria to include projects under the programs and sub-programs remains the same.

Safety Programs includes the following sub-programs:

1. Pedestrian Improvement Program (including Bicycle Safety)
2. Intersection Improvement Program
3. Segment Improvement Program (Excluding at-intersection crashes)
4. Crash Reduction Programs for Roadway Departure and Fixed Object crashes.

Organizational:

Motor Vehicle Crash Record Processing (MVCRP) team now reports to Bureau of Transportation Data Support (BTDS), while the Highway Safety Improvement Program (HSIP) Planning team continues to report to Bureau of Safety, Bicycle and Pedestrian Programs (BSBPP).

Finally, NJDOT has proposed the addition of three activities to the Capital Project Delivery Process that align with HSIP Program delivery. The following are the activities proposed:
1. Conduct HSM Analysis
2. HSM Analysis Review
3. Eligibility Approval by FHWA

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

The Assistant Commissioner of Planning, Multimodal and Grants Administration (PMGA) continues to conduct quarterly collaboration meetings with all three MPOs along with subject matter experts at the NJDOT. These meetings promote partnering with a focus on safety. NJDOT's Division of Local Aid coordinates with the MPOs on regular basis to ensure advancement of Local Safety Projects.

Program Methodology

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

Yes

Select the programs that are administered under the HSIP.

- HRRR
- Intersection
- Local Safety
- Pedestrian Safety
- Roadway Departure
- Segments
- Other-Utility Pole Mitigation

NJDOT has made a few changes to the STIP programming, organization structure and implementation process. The changes are highlighted in**BOLD** and explained below:

2020 STIP Programming for HSIP funds:

1. Highway Safety Improvement Program Planning
2. Local Safety/High Risk Rural Roads Program
3. Motor Vehicle Crash Record Processing
4. Utility Pole Mitigation Program
5. **Safety Programs**

In addition, some large projects are line items on the STIP. These large projects are funded with HSIP funds but are separated from the Programs and Sub-programs due to the size of the projects. These projects end up picking up the leftover funds from the programs already stablished. This way, a large project doesn't utilize the whole amount of funds designated to one program.

Furthermore, the criteria to include projects under the programs and sub-programs remains the same.

Safety Programs includes the following sub-programs:

1. Pedestrian Improvement Program (including Bicycle Safety)
2. Intersection Improvement Program
3. Segment Improvement Program (Excluding at-intersection crashes)
4. Crash Reduction Programs for Roadway Departure and Fixed Object crashes.

Program: HRRR

Date of Program Methodology:9/16/2005

What is the justification for this program?

- Other-HRRRP is part of Local Safety Program

What is the funding approach for this program?

2020 New Jersey Highway Safety Improvement Program

Other-HRRRP funding is part of Local Safety Funding

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes		• Functional classification • Other-Rural

What project identification methodology was used for this program?

- Equivalent property damage only (EPDO Crash frequency)

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

Yes

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

Yes

How are projects under this program advanced for implementation?

- Competitive application process
- 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).

Relative Weight in Scoring

Available funding:20
Ranking based on net benefit:60
Other-Project to address established safety problem as shown through crash history, risk-based (systemic) :20
Total Relative Weight:100

The HRRR Program focuses on reducing fatalities. The identification of locations along rural roadways with safety concerns is based on the historical crash trends.

Rural roads are characterized by lower traffic volumes, leading to lesser number of crashes and an even smaller subset of severe crashes. Therefore, it is important for New Jersey to identify the location with a historical trend of high number of total crashes.

The severity of the historical trends is captured by the Equivalent Property Damage Only (EPDO) methodology.

The HRRR methodology will be changed to:

Federal rules require that states define High Risk Rural Roads (HRRR) in conjunction with the NJ 2020 SHSP. Safety improvements on roads that meet the state's definition of a HRRR may be eligible for federal HRRR Program funds. First, to be eligible as a HRRR, the road segment must have a functional classification as either a rural major collector, a rural minor collector, or a rural local road. In addition to the classification, to qualify for HRRR funds, a data-driven analysis must identify the road segment as having significant safety risks. The FHWA directs that each state develop its own methodology for identifying segments with significant safety risks with FHWA approval.

New Jersey's approved methodology for identifying a road segment as a HRRR is that the rural road segment must demonstrate fatal and incapacitating injury crashes per mile higher than the average for the segment on rural roadways with similar geometric features (Also known as homogeneous segments, defined based on a variety of factors, such as functional class, speed limit, two-lane versus multilane, etc.). Rural major or minor collector segments and local road segments with similar roadway geometric features are referred to as peer groups. The number of fatal and incapacitating injuries for a particular segment are compared to the average number of fatal and incapacitating injuries for peer group segments within the same metropolitan planning organization boundary to determine if the segment in question exceeds the average for the peer group. Segments that exceed the average for the peer group are classified as having a significant safety risk and thus, a HRRR segment.

High risk locations may also be identified through means such as field reviews, safety assessments, Road Safety Audits, and local knowledge and experience. Using information from observations in the field can identify high risk locations that may not be identified through data analysis or by identifying roadway characteristics. High risk rural roadway characteristics that are correlated with specific severe crash types such as cross-section width, lack of shoulders, substandard alignment, and hazardous roadside may be considered for systemic improvements across multiple HRRR segments. Systemic treatments generally involve the widespread implementation of low-cost safety countermeasures such as rumble strips, high friction surface treatment on high risk curves, and back plates with retroreflective borders on traffic signals to increase visibility. NJDOT assessed 5,704 individual rural road segments in 2018. Of those, 41 segments were identified as HRRR in the South Jersey Transportation Planning Organization Region across Atlantic, Cape May, Cumberland, and Salem counties; 54 HRRR segments were identified in the North Jersey Transportation Planning Authority region across Hunterdon, Monmouth, Morris, Ocean, Somerset, Sussex, and Warren counties; and 17 HRRR segments were identified in the Delaware Valley Regional Planning Commission region across Burlington, Gloucester, Mercer, and Camden counties.

Program: Intersection

Date of Program Methodology:1/1/2015

What is the justification for this program?

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

What is the funding approach for this program?

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?

- Equivalent property damage only (EPDO 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-Using the ranking to identify priorities, NJDOT selects and implements projects.

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 net benefit:1
Cost Effectiveness:1

The HSIP Programs are focused on reducing fatalities and serious injuries. The identification of a hotspot location is based on the historical crash trends.

Crashes are stochastic events, and the severity of the crash is dictated by variables and circumstances that are complex behavioral integrated models. It is hard to discern that certain locations with prevalence of severe crashes one year does not rank on the severity safety index the following year.

These are some of the reasons why, as safety practitioners, New Jersey chooses to identify the locations using all crashes. The severity of the historical trends is captured by the Equivalent Property Damage Only (EPDO) methodology. Our network screening lists have been revised recently to help us identify locations with high EPDO scores.

Program: Local Safety

Date of Program Methodology:9/16/2005

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety
- Other-60% of NJ’s injury and fatality events occur on local roadways

What is the funding approach for this program?

2020 New Jersey Highway Safety Improvement 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?

- Equivalent property damage only (EPDO Crash frequency)

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

Yes

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

Yes

How are projects under this program advanced for implementation?

- Competitive application process
- Other-Priority given to State's focus areas
- 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).

Relative Weight in Scoring

Available funding:20
Ranking based on net benefit:60
Other-Project to address established safety problem as shown through crash history, risk-based (systemic) analysis and/or local roadway knowledge:20
Total Relative Weight:100

The HSIP Programs are focused on reducing fatalities and serious injuries. The identification of a hotspot location is based on the historical crash trends.

Crashes are stochastic events, and the severity of the crash is dictated by variables and circumstances that are complex behavioral integrated models. It is hard to discern that certain locations with prevalence of severe crashes one year does not rank on the severity safety index the following year.

These are some of the reasons why, as safety practitioners, New Jersey chooses to identify the locations using all crashes. The severity of the historical trends is captured by the Equivalent Property Damage Only (EPDO) methodology. The local network screening lists have been revised recently to help identify locations with high EPDO scores.

Program: Pedestrian Safety

Date of Program Methodology:9/16/2011

What is the justification for this program?

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

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• Other-Pedestrian Crashes	• Other-NJ is a pedestrian focus state	

What project identification methodology was used for this program?

- Equivalent property damage only (EPDO Crash frequency)
- Other-Pedestrian generators

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-Using the ranking to identify priorities, NJDOT selects and implements projects.

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 net benefit:1
Other-FHWA Ped Focus State:1
This program includes Pedestrian and Bicycle Safety.

The HSIP Programs are focused on reducing fatalities and serious injuries. The identification of a hotspot location is based on the historical crash trends.

Crashes are stochastic events, and the severity of the crash is dictated by variables and circumstances that are complex behavioral integrated models. It is hard to discern that certain locations with prevalence of severe crashes one year does not rank on the severity safety index the following year.

These are some of the reasons why, as safety practitioners, New Jersey chooses to identify the locations using all crashes. The severity of the historical trends is captured by the Equivalent Property Damage Only (EPDO) methodology. Our network screening lists have been revised recently to help us identify locations with high EPDO scores.

Program: Roadway Departure

Date of Program Methodology:9/16/2008

What is the justification for this program?

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

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes

- All crashes

Exposure

- Lane miles

Roadway

- Roadside features
- Other-Horizontal Curvature

What project identification methodology was used for this program?

- Equivalent property damage only (EPDO 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-Sites identified based on methodology developed for systemic treatment for roadway departure crashes
- Other-Using the ranking to identify priorities, NJDOT selects and implements projects

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 net benefit:1

The HSIP Programs are focused on reducing fatalities and serious injuries. The identification of a hotspot location is based on the historical crash trends.

Crashes are stochastic events, and the severity of the crash is dictated by variables and circumstances that are complex behavioral integrated models. It is hard to discern that certain locations with prevalence of severe crashes one year does not rank on the severity safety index the following year.

These are some of the reasons why, as safety practitioners, New Jersey chooses to identify the locations using all crashes. The severity of the historical trends is captured by the Equivalent Property Damage Only (EPDO) methodology. Our network screening lists have been revised recently to help us identify locations with high EPDO scores.

Program: Segments

Date of Program Methodology:2/1/2016

What is the justification for this program?

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

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes	• Volume • Lane miles	

What project identification methodology was used for this program?

- Equivalent property damage only (EPDO Crash frequency)
- Other-Exposure is taken into consideration

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-Using the ranking to identify priorities, NJDOT selects and implements projects

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 net benefit:1
Cost Effectiveness:1

The HSIP Programs are focused on reducing fatalities and serious injuries. The identification of a hotspot location is based on the historical crash trends.

Crashes are stochastic events, and the severity of the crash is dictated by variables and circumstances that are complex behavioral integrated models. It is hard to discern that certain locations with prevalence of severe crashes one year does not rank on the severity safety index the following year.

These are some of the reasons why, as safety practitioners, New Jersey chooses to identify the locations using all crashes. The severity of the historical trends is captured by the Equivalent Property Damage Only (EPDO) methodology. Our network screening lists have been revised recently to help us identify locations with high EPDO scores.

Program: Other-Utility Pole Mitigation

Date of Program Methodology:10/1/2015

What is the justification for this program?

- Other-To mitigate some of the Lane Departure crashes involving a utility pole

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes

- Other-Fixed Object crashes

Exposure

Roadway

- Roadside features

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-by ranking

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-Field investigation:1

What percentage of HSIP funds address systemic improvements?

14

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

- Other-High Friction Surface Treatment
- Other-Roundabout Pilot Program
- Rumble Strips

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?

No

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 Highway Safety Manual is a helpful tool used to prioritize the HSIP investments. The HSM is used to analyze different alternatives, with every effort made to select the alternative with benefit cost ratio greater than 1.0.

The NJ HSIP Manual and Implementation Guide requires that HSM Analysis be performed and approved for at least three alternatives, including the no-build, for the project to be deemed eligible for HSIP funding. The analysis is one of the key variables in the selection of a Preliminary Preferred Alternative (PPA).

NJDOT has completed the research in developing calibration factors specific to NJ, as per the guidance in HSM. These calibration factors will be used for all HSM Analyses submitted in Fall 2020. We will review their applicability after the release of HSM, 2nd Edition.

Describe program methodology practices that have changed since the last reporting period.

NJDOT has revised the Network Screening Lists to reflect the latest available data. The following is a list of revised Network Screening Lists:

1. 2019 NJDOT Intersection Screening List (2014-2016 crash data)
2. 2019 NJDOT Segment Screening List (2014-2016 crash data)
3. 2019 NJDOT Fixed Object, Divided Roadways Screening List (2014-2016 crash data)
4. 2019 NJDOT Fixed Object, Undivided Roadways Screening List (2014-2016 crash data)
5. 2019 Pedestrian Safety Management System Intersection Screening List (2013-2017 crash data)
6. 2019 Pedestrian Safety Management System Segment Screening List (2013-2017 crash data)

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

NJDOT is planning on initiating the revision and update to our HSIP Manual and Implementation Guide, with active participation of key stakeholders.

NJDOT will also revise the Network Screening Lists, either annually or every two years, to better reflect the latest available data.

Additionally, NJDOT has proposed the addition of three activities in the Capital Project Delivery Process that align with the HSIP Program delivery. The following are the activities added to the Capital Project Delivery Process:

1. Conduct HSM Analysis
2. HSM Analysis Review
3. Eligibility Approval by FHWA

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Calendar Year

The NJDOT decided to select calendar year as the reporting period to be consistent with the reporting period of crashes and to be more precise in the reporting of the projects that get authorized during that period. Most of the HSIP authorizations in the NJDOT are processed during the months of August and September and the report is finalized during the month of August.

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$54,849,250	$37,221,271	67.86%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$2,310,187	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$0	$948,876	0%
Totals	$54,849,250	$40,480,334	73.8%

HSIP Obligated funds = Total HSIP - HRRRP

In Calendar year 2019, $948,876 State and Local Funds were authorized for the FD phase of a project called “Route 15 & Berkshire Valley Road (CR 699)”. The rest of the phases for this project will use HSIP funds since this project meets the criteria to be included in our Safety Programs.

Being that the reporting period is Calendar Year 2019, the programmed funds are calculated as follows:

3/4 of the programmed funds for FFY 2019 plus 1/4 of the programmed funds for FFY 2020.

Values are based on the STIP.

$2.310 million has been authorized in Calendar Year 2019 under the HRRR. This is from unobligated HRRRP from previous years.

Approximately $0.249 million for CY 20 and $2.060 million for CY 21 are programmed to be authorized under HRRR so far.

It has been determined that the HRRR special rule does not apply to New Jersey for the 2020.

Attached are the following supporting documents:

1. "Q#23 2020 Calculations" showing the calculations for obligated funds for: Total HSIP, HRRRP, Non-infrastructure, Local projects, and Systemic improvements.
2. “Q#23 Programmed Vs Obligated Funds” showing the calculations for the Programmed funds. The file has two tabs.

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

$22,000,000

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

$15,173,561
Being that the reporting period is Calendar Year 2019, the programmed funds were calculated by taking ¾ of the programmed funds in the STIP for the FFY 2019 plus ¼ of the programmed funds for FFY 2020 as follows:

(3/4) of the programmed funds for FFY 19 + (1/4) of the programmed funds for FFY 20

(3/4) * 22,000,000 + (1/4) * 22,000,000 = 22,000,000

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

$6,500,000

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

$15,526,991

The STIP Programming is based on Federal Fiscal Year (FFY) and the HSIP Annual Report is based on Calendar Year (CY). This creates challenges in understanding and reporting the programming.

For the purposes of calculation, the programming is reported as ¾ of the programmed funds in STIP for FFY 2019 and ¼ of the programmed funds in FFY 2020.

However, this does not provide a complete picture, as all the FFY 2020 programmed funds are available for obligation in October (which is technically still CY 2019).

It is due to this reason that there remains a possibility of double obligations in one CY, as you see in the details for 2019 and 2020 MV Crash Records. (Obligation of $9.241 million for a programmed amount of $5 million over FFY 2019 and FFY 2020).

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.

The 2019 programmed funds for NJ's HSIP program on the Capital side were as follows:

- Crash Reduction Program - $4 million
- Intersection Improvement Program - $5 million
- Pedestrian Safety Improvement Program - $4 million
- Segment Improvement Program - $2 million
- Utility Pole Mitigation - $0.175 million
- Local Safety/High Risk Rural Roads Program - $22 million
- Motor Vehicle Crash Record Processing - $2.5 million

The programmed funds for NJ's HSIP Local Safety Program increased substantially from approximately $5 million in FY2011 to $22 million in FY2018, based on the priorities and guided investment strategies set by 2015 updated Strategic Highway Safety Plan to reduce fatalities and serious injuries on New Jersey's roads. The change allowed the program to address substantive safety on local infrastructure, and no longer be limited to low cost improvements.

However, on the State side the individual programs still presented a challenge to address safety concerns with the limited funds. To address this impediment, partially, the four programs: Crash Reduction Program, Intersection Improvement Program, Pedestrian Safety Program and Segment Improvement Program- were aggregated into Safety Programs (as mentioned earlier in the report). The aggregation of four programs into Safety Programs line item (2020 STIP) will help provide flexibility, both in terms of funds and deliverability.

The Utility Pole Mitigation Program faces a challenge with the utility companies' acceptance of the revised Agreement language. NJDOT and the DAG's Office are coordinating with utility companies and FHWA to address any concerns.

For projects requiring infrastructure improvements, the Capital Project Delivery Process has to be followed. NJDOT is taking a phased approach in overcoming the impediments to the HSIP obligations. The Capital Project Delivery Process is being revised with the addition of the following activities, as mentioned earlier. This change will address Project Managers' request for clarity on requirements for HSIP eligibility.

Another impediment and challenge is training. BSBPP is collaborating with Bureau of Research and FHWA, through their training effort, to include HSM Training in their portfolio. BSBPP, through the Bureau of Research, has developed NJ specific Calibration Factors. NJDOT will require the use of NJ Calibration Factors on any submission starting Fall, 2020**.**

Finally, NJDOT, in collaboration with our MPO and local partners, will investigate the development of a robust Systemic Program and create a list of shelf ready projects. It has been our experience that smaller HSIP projects get absorbed by larger capital projects that are funded by NHPP or STGBT-Flex funds. Providing for systemic shelf projects will bridge that gap in the obligated vs. authorized funds.

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

In addition to the efforts mentioned above, BSBPP is actively collaborating with Division of Project Management, Local Aid and MPOs to provide support and guidance on implementation of HSIP projects. The efforts include training, programming coordination, HSM review support, quarterly meetings to assess status of active HSIP projects, explore multi-year funding for construction, serve on the Technical Evaluation Committees for consultant selection on HSIP projects.

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
Route US 30 and Mill Road (CR 651) (FD)	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$494702.29	$494702.29	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	35,614	40	State Highway Agency	Spot	Intersections	Improve geometry/layout to improve safety
Rt. 22 WB Vicinity of Vaux Hall Rd - Bloy St (UTILITY)	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$696163.24	$696163.24	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	60,424	45	State Highway Agency	Spot	Roadway Departure	Install shoulder and auxiliary lanes, improve ramp geometry
Rt. 22 WB Vicinity of Vaux Hall Rd - Bloy St (CON)	Roadway	Roadway widening - add lane(s) along segment	1	Lanes	$3249807.18	$3249807.18	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	60,424	45	State Highway Agency	Spot	Roadway Departure	Install shoulder and auxiliary lanes, improve ramp geometry
Rt 66, Jumping Brook Rd to Bowne Rd/Wayside Rd (FD)	Intersection traffic control	Modify control - traffic signal to roundabout	1	Intersections	$3289461.1	$3289461.1	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	22,500	50	State Highway Agency	Spot	Intersections	Install roundabouts to control traffic and reduce conflicts between vehicles at intersections. Improve geometry/layout to increase safety.
Int. Impr. Prog. 2017-2 (NJ 36 and Broadway), (NJ 70 and New Hampshire), (US 1 and Wooding) - FD	Intersection geometry	Intersection geometry - other	3	Intersections	$1100772.24	$1100772.24	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Improve the visibility of traffic signals
2020 Staff Work Program - Safety	Non-infrastructure	Non-infrastructure - other			$1940866	$1940866	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency		Safety Planning	
NJ 2020 SHSP	Non-infrastructure	Non-infrastructure - other			$846300	$846300	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency		SHSP	
2019 MV Crash Records	Non-infrastructure	Non-infrastructure - other			$4512068.06	$4512068.06	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency		Data	

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
2020 MV Crash Records	Non-infrastructure	Non-infrastructure - other			$4729057.18	$4729057.18	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency		Data	
NJ Regional Curve Inventory and Safety Assessment for NJTPA Region	Non-infrastructure	Non-infrastructure - other			$3498700	$3498700	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency		Data	
Newark - Broad Street Phase II - 5 intersections - FD	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	5	Intersections	$143598	$143598	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	34,800	25	City or Municipal Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
Morris - Center Grove road (CR 670) & Quakerchurch Road - 1 intersection - FD	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$146574	$146574	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	5,800	40	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1
Ocean -Traffic Safety Improvements at the intersection of Cedar Bridge Avenue (CR 528) & Oberlin Avenue - 1 intersection - INSPECTION	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$190000	$190000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	21,100	50	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1
Union - East Front Street (CR 620) and Watchung Avenue, Roosevelt Avenue, Richmond - Street/Norwood Avenue - 3 intersections - FD	Intersection traffic control	Modify traffic signal - modernization/replacement	3	Intersections	$113102	$113102	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	9,300	30	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1
JC- Oakland Avenue & St.	Intersection traffic control	Intersection traffic control - other	1	Intersections	$60185	$60185	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	5,500	25	City or Municipal	Spot	Intersections	Pedestrian-A2

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
Pauls Avenue - FD												Highway Agency			
Monmouth - Leonardville Road & East Road - intersection upgrades - FD	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$128755	$128755	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	11,400	35	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1
Passaic – Allwood Road (CR 602) and Clifton Avenue (SR 161) Corridors - PE	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	3.34	Intersections	$782582	$782582	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	20,600	30	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1;
Passaic – Market Street (CR 648) Corridor - PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	1.35	Intersections	$669969	$669969	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	14,000	25	County Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
JC – West Side Avenue Corridor - PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	23	Intersections	$662808	$662808	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	8,000	25	City or Municipal Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
JC – Sip Avenue Corridor - PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	13	Intersections	$562843	$562843	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	10,500	25	City or Municipal Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
Middlesex – Main Street (CR 531) Metuchen - PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	1.04	Intersections	$552843	$552843	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	15,300	30	County Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
Hudson – Park Avenue, JFK Blvd East, JFK Blvd. - PE	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	3.83	Intersections	$970688	$970688	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	9,500	25	County Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
Somerset – Easton Avenue (CR 527) - PE	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$385128	$385128	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	41,100	45	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1
Union – East Front Street, 7th Street - PE	Intersection traffic control	Modify traffic signal - modernization/replacement	6	Intersections	$351222	$351222	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	9,300	30	County Highway Agency	Spot	Intersections	Intersection-Signalized-D1
Monmouth – Roundabout - Holmdel - PE	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$295262	$295262	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	6,000	40	County Highway Agency	Systemic	Intersections	Intersection-Unsignalized-F3

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
HRRR-Monmouth - Stage coach Road (CR 524), corridor, HFST, safety edge, chevron signs, (HRRR) - Phase III - PE	Roadway	Pavement surface - high friction surface	1.7	Miles	$573187	$573187	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	2,500	50	County Highway Agency	Spot	Roadway Departure	Lane Departure-A4, A6
Somerset - Allen Road (CR 652) and Somerville Road Roundbout - PE	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$334851	$334851	HSIP (23 U.S.C. 148)	Urban	Major Collector	6,500	40	County Highway Agency	Systemic	Intersections	Intersection-Unsignalized-F3
Ocean -New Central Ave (CR31) and North Hope Chapel Rd (CR 639) Roundabout - PE	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$344950	$344950	HSIP (23 U.S.C. 148)	Urban	Major Collector	4,000	40	County Highway Agency	Systemic	Intersections	Intersection-Unsignalized-F3
Newark - Ferry Street - 16 intersections, traffic signal upgrade - FD	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	16	Intersections	$167367	$167367	HSIP (23 U.S.C. 148)	Urban	Major Collector	13,700	25	City or Municipal Highway Agency	Spot	Pedestrians	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
Ocean-Horizontal Curve High Friction Surface Treatment (HFST) HRRR-Phase I - INSPECTION	Roadway	Pavement surface - high friction surface	6	Curves	$146000	$146000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		County Highway Agency	Systemic	Lane Departure	Lane Departure-A6
Ocean-Horizontal Curve High Friction Surface Treatment (HFST)- Phase II (LSP Segments) - CON	Roadway	Pavement surface - high friction surface	11	Curves	$2256639	$2256639	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		County Highway Agency	Systemic	Lane Departure	Lane Departure-A6

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
HRRR-Monmouth-Roadway Improvements and resurfacing along CR 524 (Stage Coach Road) - Phase I - CON	Roadway	Pavement surface - high friction surface	0.3	Miles	$1737000	$1737000	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	1,900	50	County Highway Agency	Spot	Roadway Departure	Lane Departure-A4, A6
Somerset - Main Street (CR 533) Manville - FD	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	15	Intersections	$383049.97	$383049.97	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	17,500	40	County Highway Agency	Spot	Intersections	Intersection-Signalized-A6, D1; Pedestrian-A2,B1
Egg Harbor Township Centerline Rumble Strips	Roadway	Rumble strips - center	35.3	Miles	$660634.93	$660634.93	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Lane Departure	Install shoulder and centerline rumble strips
Cape May County Pilot Roundabout 2 (Woodbine)	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$1402569.8	$1402569.8	HSIP (23 U.S.C. 148)	Rural	Major Collector	4,478	50	County Highway Agency	Systemic	Intersections	Install roundabouts
Cumberland County Flashers (10 Locations)	Intersection traffic control	Intersection flashers - add overhead (continuous)	10	Intersections	$1151753	$1151753	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		County Highway Agency	Spot	Intersections	Improve signs, pavement markings, overall lighting,and pedestrian-scale lighting

In Calendar year 2019, $948,876 **State Funds** were authorized for the FD phase of a project called “Route 15 & Berkshire Valley Road (CR 699)”. This project meets the criteria to be included in our Safety Programs and the rest of the phases for this project will use HSIP in future years. This Project is not included in this list.

Non-Federal Match – Toll Credit

Toll Credits were created in the *Transportation Equity Act for the 21stCentury* (TEA-21), and are to be used as credits toward the non-federal matching share of programs authorized by Title 23 (except for the emergency relief program) and for transit programs authorized by Chapter 53 of Title 49.

The amount of credit earned is based on revenues generated by the toll authority (i.e., toll receipts, concession sales, right-of-way leases or interest), including borrowed funds (i.e., bonds, loans) supported by this revenue stream, that are used by the toll authority to build, improve or maintain highways, bridges and/or tunnels that serve interstate commerce. The federal government has allowed state and local governments to use toll credits as part of the local matching funds in regard to transit grants. This allowance results from the recognition that different modes of transportation are interconnected. Capital expenditures to reduce congestion in a particular corridor benefit all modes of transportation in that corridor, be they automobiles, transit buses, or a rail system.

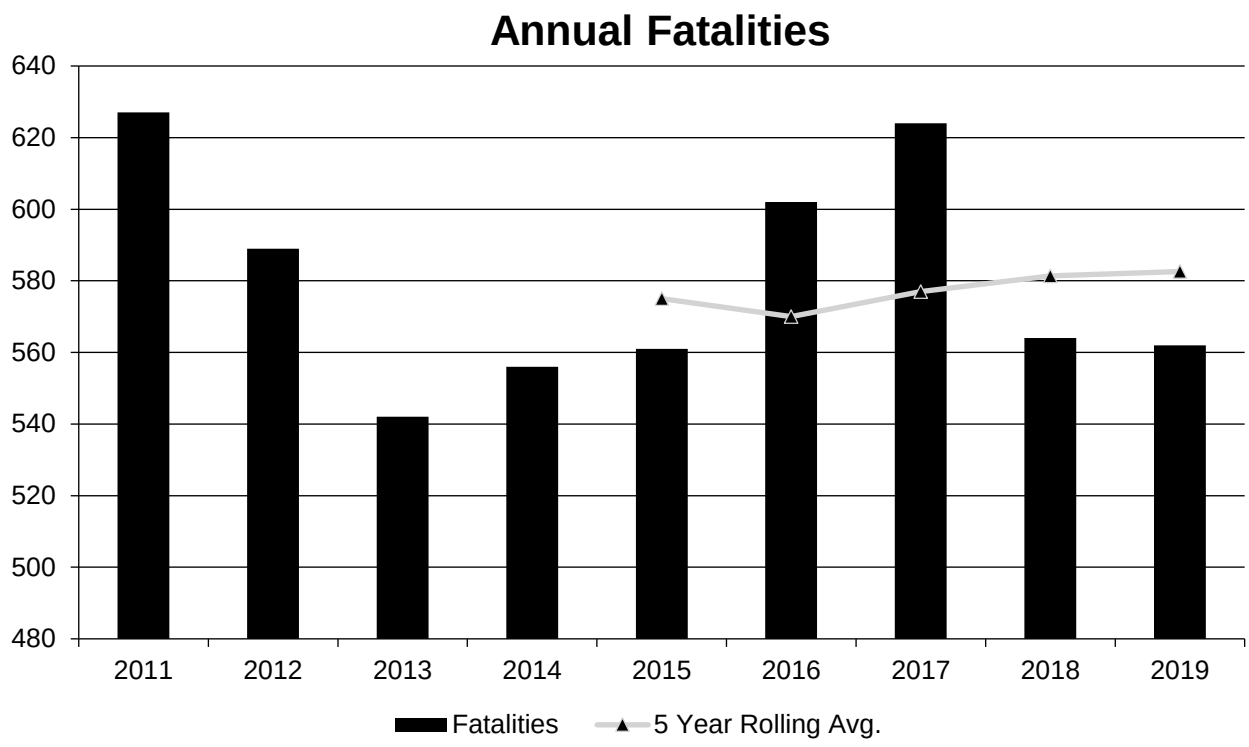
With the assumption that federal funds apportionments will continue to remain flat and a steady or increasing request for additional credits will continue, there is an expectation for the available balance of toll credits to accrue over the next 10 years. With new credits outpacing usage, New Jersey expects to have sufficient toll credits to continue to utilize the soft match of federal funds over the entire 10 year plan.

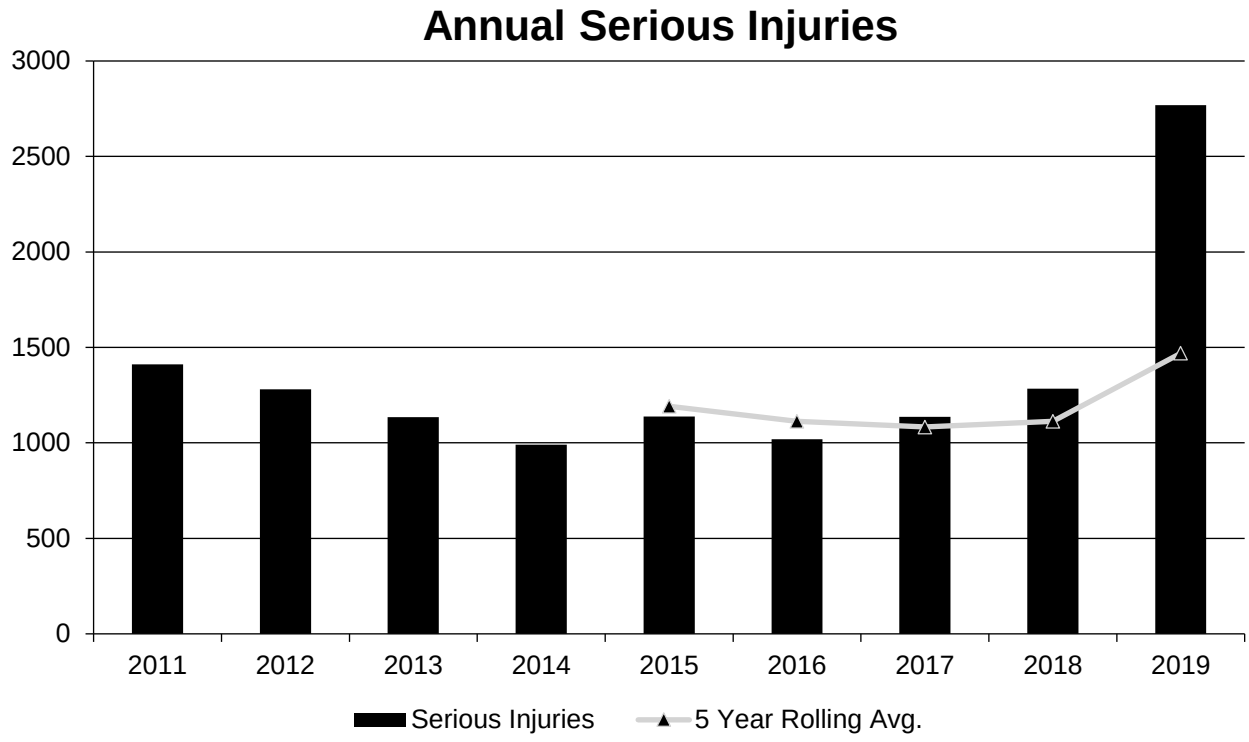
Safety Performance

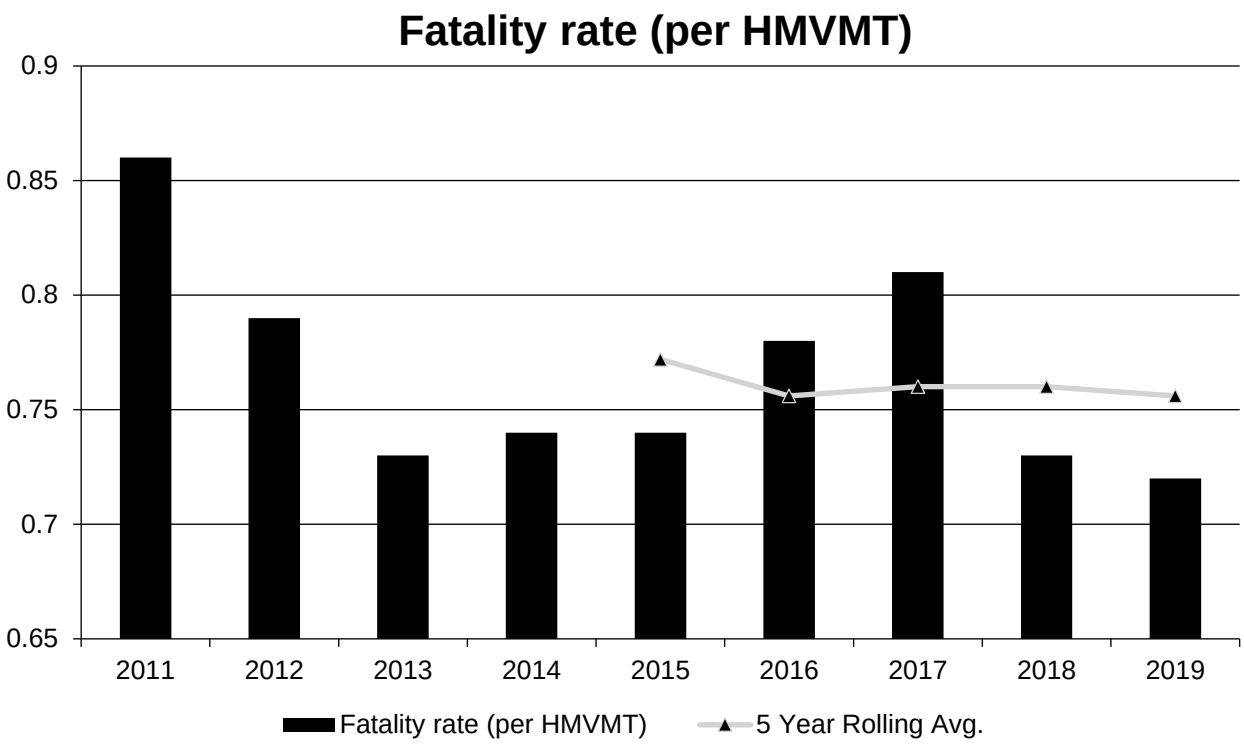
General Highway Safety Trends

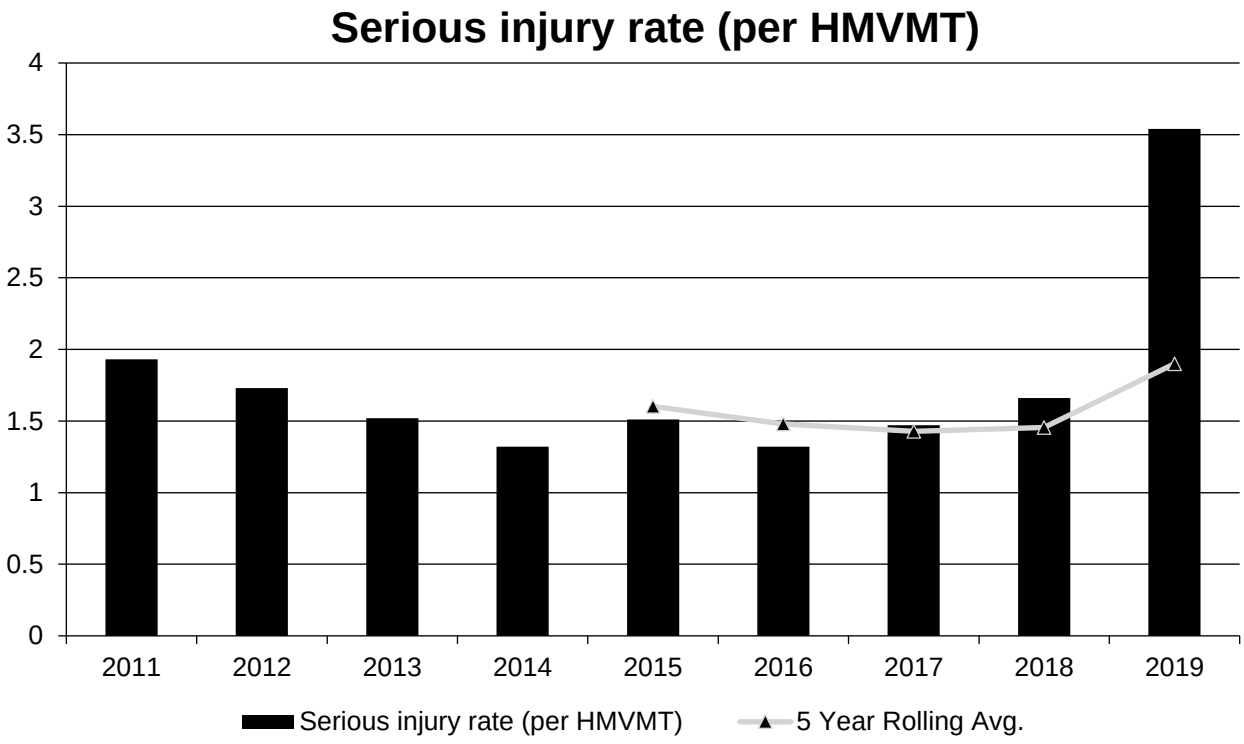
Present data showing the general highway safety trends in the State for the past five years.

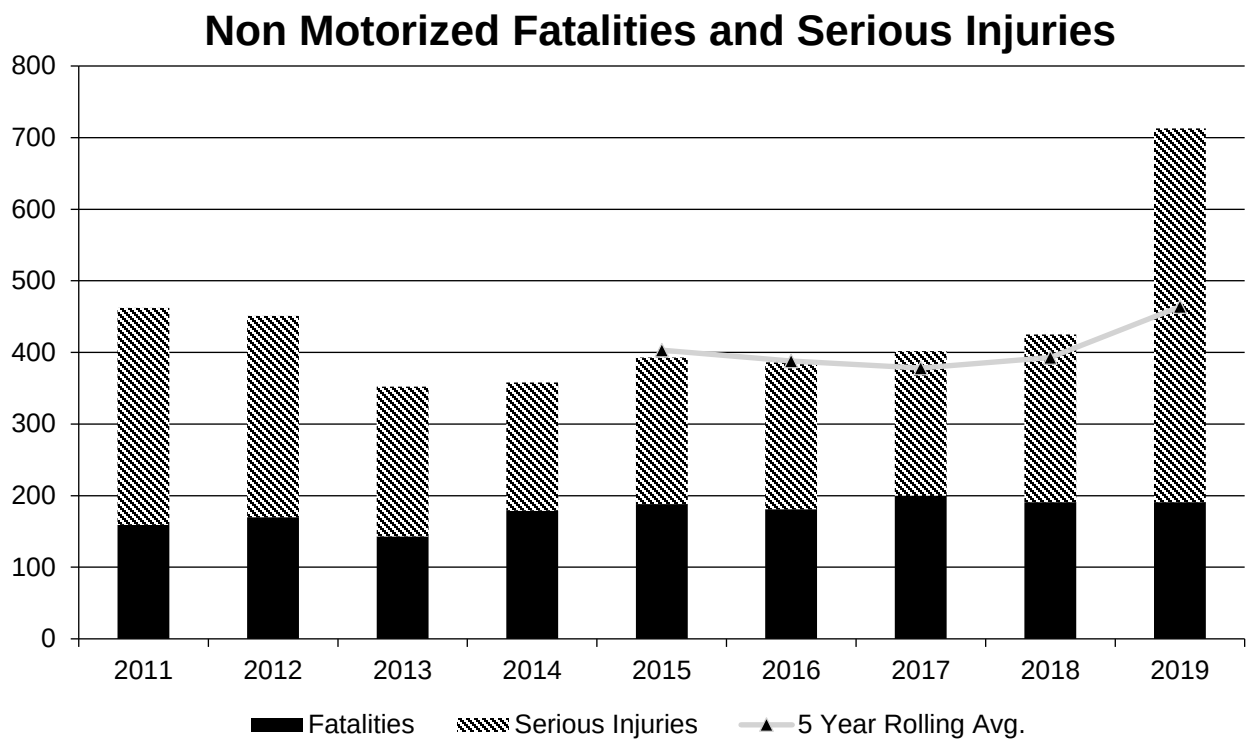
PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fatalities	627	589	542	556	561	602	624	564	562
Serious Injuries	1,412	1,281	1,134	990	1,138	1,019	1,137	1,284	2,768
Fatality rate (per HMVMT)	0.860	0.790	0.730	0.740	0.740	0.780	0.810	0.730	0.720
Serious injury rate (per HMVMT)	1.930	1.730	1.520	1.320	1.510	1.320	1.470	1.660	3.540
Number non-motorized fatalities	159	170	143	179	188	181	200	191	191
Number of non-motorized serious injuries	303	281	209	179	205	205	202	234	522


Annual Fatalities
640
620
600
580
560
540
520
500
480
2011
2012
2013
2014
2015
2016
2017
2018
2019
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
3000
2500
2000
1500
1000
500
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
0.9
0.85
0.8
0.75
0.7
0.65
2011
2012
2013
2014
2015
2016
2017
2018
2019
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
4
3.5
3
2.5
2
1.5
1
0.5
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



The amounts shown on this table were calculated in March 2020 for the Safety Performance Target calculations.

VMT for 2019 was not available at the time the calculations were done. 2019 VMT was estimated based on calculations using available data. Note that 2012 &2016 were adjusted for Leap Years (366 days)

2011-2018 Number of Fatalities is based on available data as of 3/29/20.

2019 Number of Fatalities are based on available NJ State Fatal Accident Investigation Unit as of 3/17/20.

Number of Serious Injuries is based on available NJDOT data (DOT-ARD database) as of 3/4/20. 2019 numbers are estimated based on calculations using available data.

Fatality, Serious Injury, and VMT data is provided by NJDOT - BTDS

Describe fatality data source.

FARS

Fatalities are taken from FARS if available.

For General Trends and Safety Performance: Fatalities are from FARS as of 3/29/20 except for 2019 fatalities that are from NJ State Police Fatal Accident Investigation as of 3/17/20.

For Functional Classification: 2017 and 2018 fatalities have been updated from FARS. 2019 fatalities are from NJDOT-ARD database. 2019 data for FARS is not available yet.

For Roadway Ownership: 2019 Fatalities are from NJDOT-ARD database. 2019 FARS data is not available yet.

For Older Drivers and Pedestrians: 2014-2018 Fatalities are from FARS. 2019 Drivers fatalities are from NJSP Fatal report.

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

Year 2019

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)
2	2,016	2,017	2,018	2,019
Rural Principal Arterial (RPA) - Interstate	6.2	7.6	0.51	0.62
Rural Principal Arterial (RPA) - Other Freeways And Expressways	5.4	5	1.14	1.05
Rural Principal Arterial (RPA) - Other	10	20.6	1.44	2.98
Rural Minor Arterial	10.4	17.2	1.57	2.58
Rural Minor Collector			1.08	3.48
Rural Major Collector	18.6	26.8	2.26	3.27
Rural Local Road Or Street	13.4	9.8	1.57	1.12
Urban Principal Arterial (UPA) - Interstate	55.8	93.8	0.37	0.61
Urban Principal Arterial (UPA) - Other Freeways And Expressways	52.2	88.4	0.4	0.68
Urban Principal Arterial (UPA) - Other	183.2	397	1.13	2.45
Urban Minor Arterial	120.4	339.6	1.07	3.01
Urban Minor Collector		8	0.4	1.15
Urban Major Collector	39.2	107.4	0.86	2.33
Urban Local Road Or Street	46.4	91.6	0.4	0.82

Year 2019

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	245	476.2	0.8	1.56
County Highway Agency	182	475.6	1.24	3.21
Town or Township Highway Agency				
City or Municipal Highway Agency	91.6	189.8	1.76	3.63
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority	47.4	67.2	0.33	0.47
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

For Functional Classification:

- 2017 Fatality counts have been updated from FARS.

- 2018 counts have been updated. Fatalities from FARS and SI from NJDOT-ARD database.

- 2019 Fatal and SI counts are from the NJDOT-ARD database. 2019 data for FARS is not available yet.

- VMT data provided by NJDOT on 8/11/2020.

For Ownership calculations:

- 2019 Fatal and incapacitated counts are from the ARD database. 2019 FARS data is not available yet.

- 2019 VMTs provided by NJDOT on 8/11/2020.

- VMT and HMVMT figures for 2011 and 2012 are estimations based off of real 2013 VMTs.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2021 Targets *

Number of Fatalities:574.0

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

See attached document called "Basis for established target"

Number of Serious Injuries:2124.8

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

See attached document called "Basis for established target"

Fatality Rate:0.740

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

See attached document called "Basis for established target"

Serious Injury Rate:2.724

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

See attached document called "Basis for established target"

Total Number of Non-Motorized Fatalities and Serious Injuries:588.5

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

See attached document called "Basis for established target"

The five- year rolling average targets above, incorporating serious injuries, indicate a large increase. This is a result of a large spike in reported serious injuries in 2019 crashes.

Beginning in 2019, New Jersey updated the police crash report to be consistent with the federally required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). As a result of this change, injuries not previously attributed to the serious injury classification are now included in this number.

For example, a crash victim with a broken arm that would have previously been classified as a Moderate injury, is now classified as Suspected Serious Injury. As a result, New Jersey saw a 116% increase in reported serious injuries due to the changes in reporting.

This large increase creates a challenge in predicting anticipated totals for future years. New Jersey expects the five-year rolling average to increase over the next few years until the data stabilizes.

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

The NJDOT took the lead to establish the five safety performance targets. Several meetings with the MPOs and DHTS took place during the process. The New Jersey Division FHWA Safety Engineer also attended these meetings and offered input in an advisory capacity. Throughout the process, the NJDOT coordinated with MPOs and DHTS to:

a) share data for the measures
b) develop and discuss methods to set statewide targets
c) discuss preliminary targets using the methodology that was agreed upon in earlier meetings

The NJDOT coordinated these targets with the MPOs and DHTS and obtained their concurrence.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2019 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	605.0	582.6
Number of Serious Injuries	1101.4	1469.2
Fatality Rate	0.780	0.756
Serious Injury Rate	1.422	1.900
Non-Motorized Fatalities and Serious Injuries	393.9	463.8

The attached excel file called "Q#37 Progress meeting 2019 SPT" describes the progress toward meeting the State's 2019 Safety Performance Targets.

NJDOT's target setting process included coordination with NJ's three Metropolitan Planning Organizations (MPOs) and FHWA's NJ Division Office, along with NJ's Division of Highway Traffic Safety (DHTS) to ensure a consistent approach for target setting. The identified targets reflect coordination and collaboration with NJ's Governor's Highway Safety Representative. The selected targets for number of fatalities, fatality rates, and number of serious injuries are consistent with the targets which will be reported in NJ's Highway Safety Plan by the Division of Highway Traffic Safety.

The targets were established after careful consideration of previous trends (statistical forecasting to predict probable outcomes), recently built projects and the current socioeconomic environment. The targets are based on five year rolling average values and are reported to satisfy federal requirements with the understanding that New Jersey's safety vision is to achieve zero deaths on all public roads. This long-term safety vision requires

time to change attitudes and behaviors and to construct infrastructure improvements to reduce the frequency and severity of crashes.

Number of Fatalities:

Outcome: 582.6

Target: 605.0

The target was met with the outcome being 3.7% better.

Fatality Rate:

Outcome: 0.756

Target: 0.780

The target was met and the outcome was 3.07% better.

Number of Serious Injuries:

Outcome: 1469.2

Target: 1101.4

Baseline: 1092.5

The target was not met and the outcome was not better than baseline. The outcome was with 33.4% greater than the target and 34.5% greater than the baseline.

Serious Injury Rate:

Outcome: 1.900

Target: 1.422

Baseline: 1.439

The target was not met and the outcome was not better than the baseline. The outcome was 33.6% greater than the target and 32% greater than the baseline.

Number of Non-Motorized Fatalities and Serious Injuries:

Outcome: 463.7

Target: 393.9

Baseline: 379.1

The target was not met and the outcome was not better than the baseline. The outcome was 17.7% greater than the target and 22.3% greater than the baseline.

The five year rolling average targets above, incorporating serious injuries, indicate a large increase. This is a result of a large spike in reported serious injuries in 2019 crashes. Beginning in 2019, New Jersey updated the police crash report to be consistent with the federally required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). As a result of this change, injuries not previously attributed to the serious injury classification are now included in this number. For example, a crash victim with a broken arm that would have previously been classified as a Moderate injury, is now classified as Suspected Serious Injury. As a result, New Jersey saw a 116% increase in reported serious injuries due to the changes in reporting. This large increase creates a challenge in predicting anticipated totals for future years. New Jersey expects the five year rolling average to increase over the next few years until the data stabilizes.

Applicability of Special Rules

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

No

The HRRR methodology will be changed to:

Federal rules require that states define High Risk Rural Roads (HRRR) in conjunction with the NJ 2020 SHSP. Safety improvements on roads that meet the state's definition of a HRRR may be eligible for federal HRRR Program funds. First, to be eligible as a HRRR, the road segment must have a functional classification as either a rural major collector, a rural minor collector, or a rural local road. In addition to the classification, to qualify for HRRR funds, a data-driven analysis must identify the road segment as having significant safety risks. The FHWA directs that each state develop its own methodology for identifying segments with significant safety risks with FHWA approval. New Jersey's approved methodology for identifying a road segment as a HRRR is that the rural road segment must demonstrate fatal and incapacitating injury crashes per mile higher than the average for the segment on rural roadways with similar geometric features (Also known as homogeneous segments, defined based on a variety of factors, such as functional class, speed limit, two-lane versus multilane, etc.). Rural major or minor collector segments and local road segments with similar roadway geometric features are referred to as peer groups. The number of fatal and incapacitating injuries for a particular segment are compared to the average number of fatal and incapacitating injuries for peer group segments within the same metropolitan planning organization boundary to determine if the segment in question exceeds the average for the peer group. Segments that exceed the average for the peer group are classified as having a significant safety risk and thus, a HRRR segment.

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	2013	2014	2015	2016	2017	2018	2019
Number of Older Driver and Pedestrian Fatalities	109	75	84	86	95	103	87
Number of Older Driver and Pedestrian Serious Injuries	103	111	141	102	123	148	326

2014-2018 Fatalities for Drivers and Pedestrians are from FARS.

2019 Drivers Killed from NJSP Fatal report.

2011-2019 Pedestrian Serious Injuries are from NJDOT-ARD database.

Driver counts are of drivers only; excludes all other persons involved in the crash (pedestrian, occupants, etc.).

Pedestrian counts are of pedestrians and cyclists who were involved in a crash that has an older driver.

Older Driver and Pedestrian Special Rule doesn't apply to NJ in Federal Fiscal Year 2020. See attached memo called “FFY 20 Older Drivers and Pedestrians"

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio
- Change in fatalities and serious injuries
- Economic Effectiveness (cost per crash reduced)
- Lives saved

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

NJDOT currently evaluates the safety projects funded by HSIP based on before and after crash data and the Benefit Cost Ratio. The HSIP Safety Performance Targets charts, which includes fatalities, serious injuries and their rates, gives us an idea how New Jersey is performing in the area of traffic and pedestrian safety.

NJDOT, with assistance from the FHWA, has begun planning an evaluation effort to improve their HSIP evaluation process. The evaluation effort will be conducted to provide direction and improve decisions and processes to NJDOT's HSIP evaluation process of countermeasures, projects and programs.

NJDOT updates the HSIP Portfolio quarterly, tracking the projects within the program in terms of authorizations and delivery. The HSIP Program will be evaluated using the following metrics, starting next year:

1. Return on Investment – Post-deployment Benefit Cost Evaluation (Systemic Programs funded by HSIP)
2. HSIP Funding Assessment – Obligated vs. Authorized funds
3. Construction of projects initiated through the HSIP portfolio – using HSIP or other funds

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

- # RSAs completed
- HSIP Obligations
- Increased awareness of safety and data-driven process
- Increased focus on local road safety
- More systemic programs

- RSAs completed – Measured by the number of RSAs completed
- HSIP Obligations – Comparing the HSIP obligations each year
- Increased awareness of safety and data-driven process – Number of training classes, conferences and webinars
- Increased focus on local road safety – Number of trainings on Local Safety Application, revision of the local safety application, participation in Local Safety Application Technical Review Committees, Number of HSM Analysis reviewed for the local applications
- More systemic programs – Comparing the number of Systemic Programs initiated each year.

NJDOT has continued to focus on training in order to increase awareness of safety and data-driven processes. Staff has presented at multiple forums, and collaborated with our MPO partners to increase our reach to the locals.

In consultation with and participation of MPOs, NJDOT developed the network screening lists for local roads in NJ in addition to developing state roadway network screening lists.

NJDOT has invested in initiating efforts to inventory the curves along NJ's roadways. This inventory is anticipated to lead to development of systemic programs.

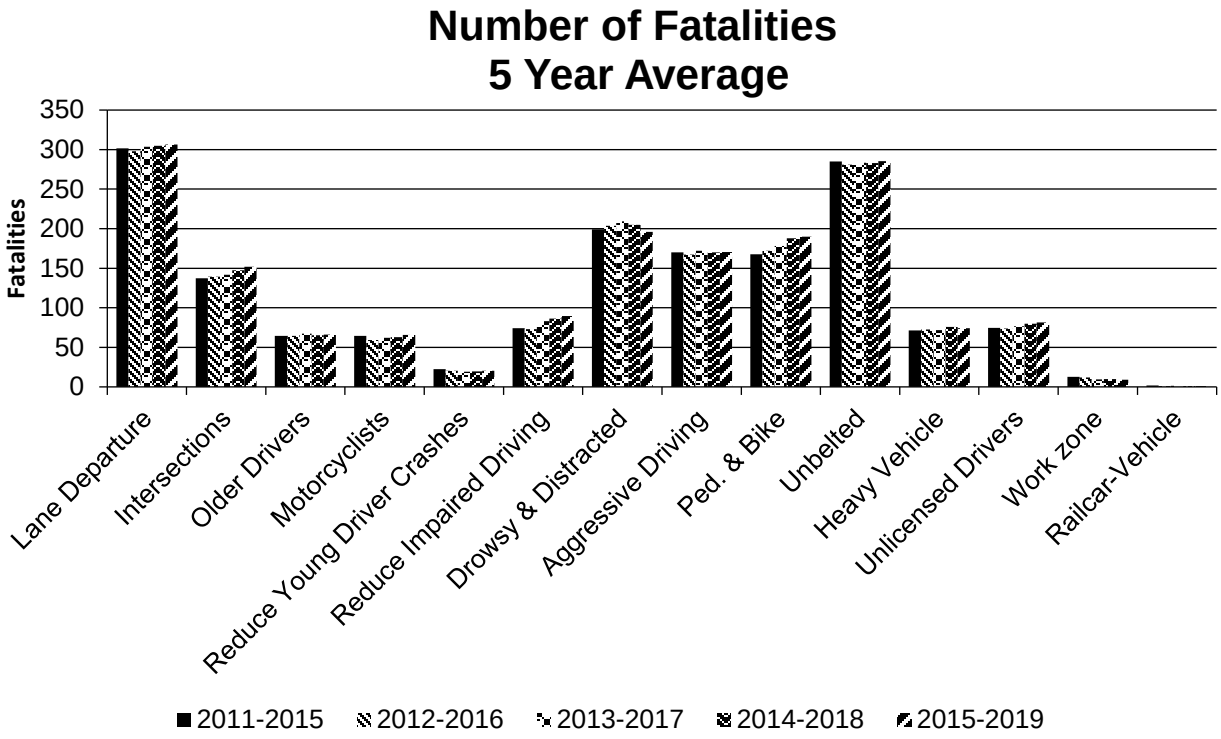
As mentioned earlier, there are some changes anticipated for completion in the forthcoming years that will streamline the HSIP implementation and delivery.

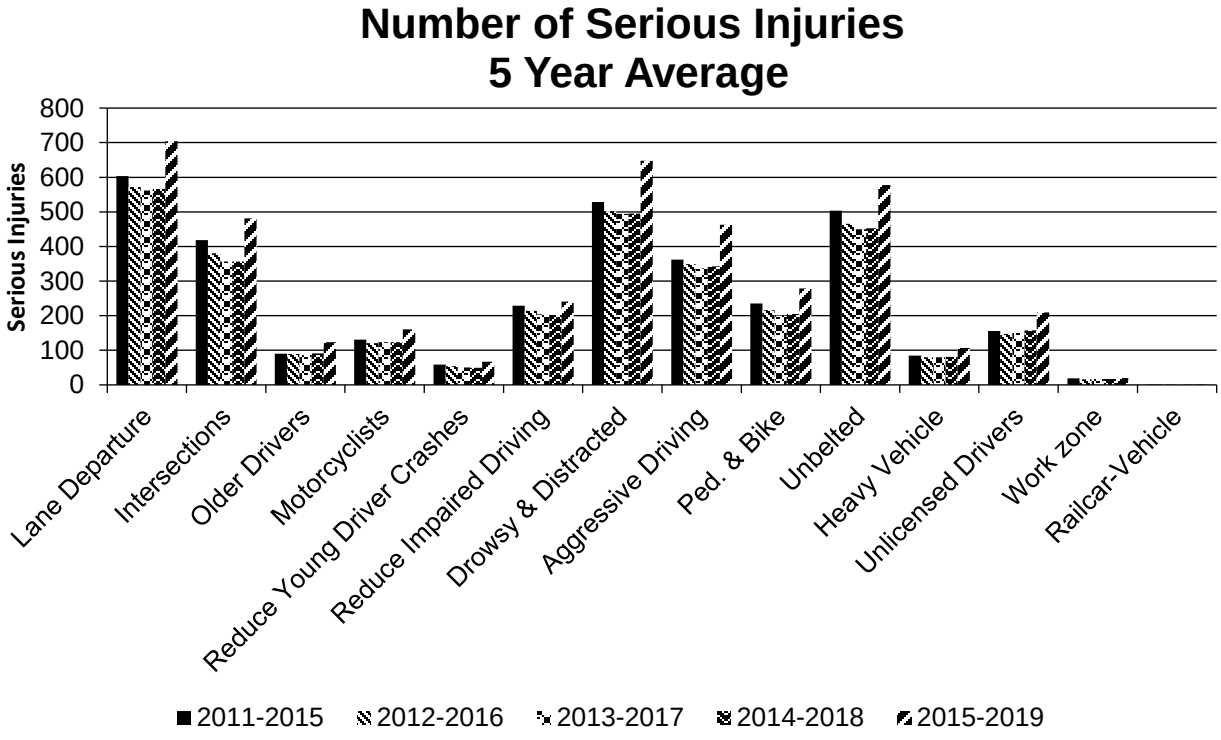
Effectiveness of Groupings or Similar Types of Improvements

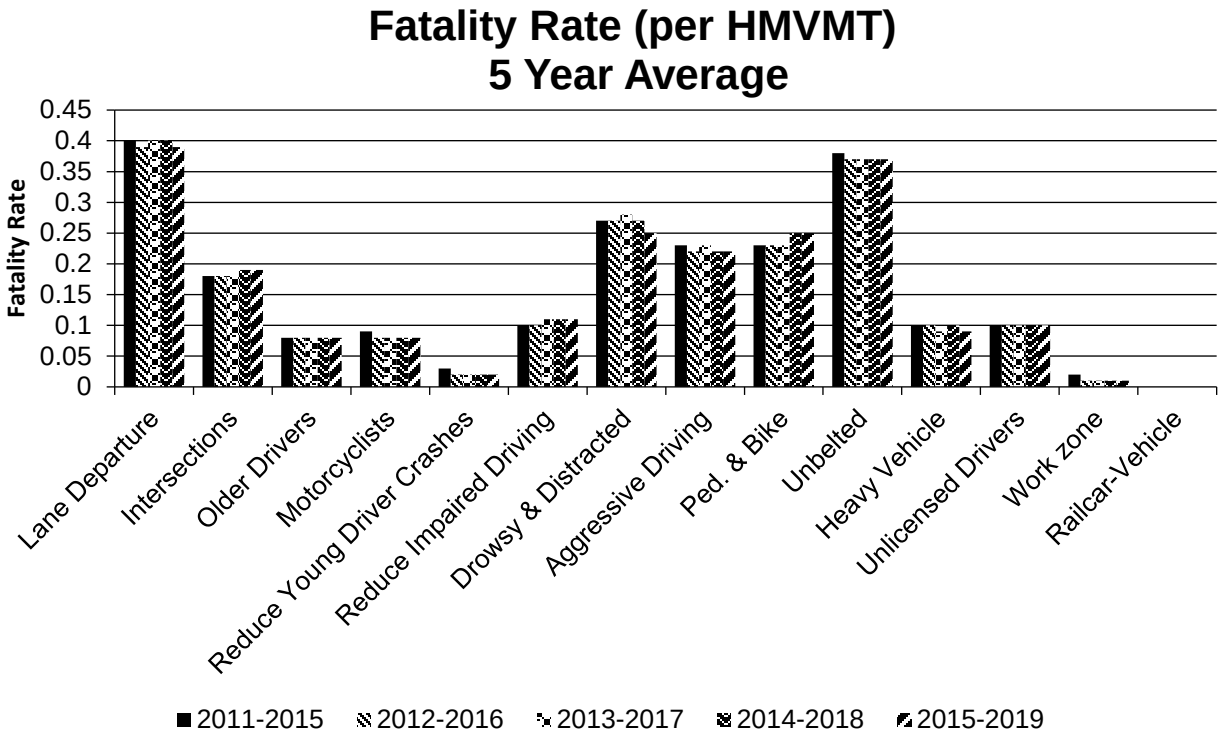
Present and describe trends in SHSP emphasis area performance measures.

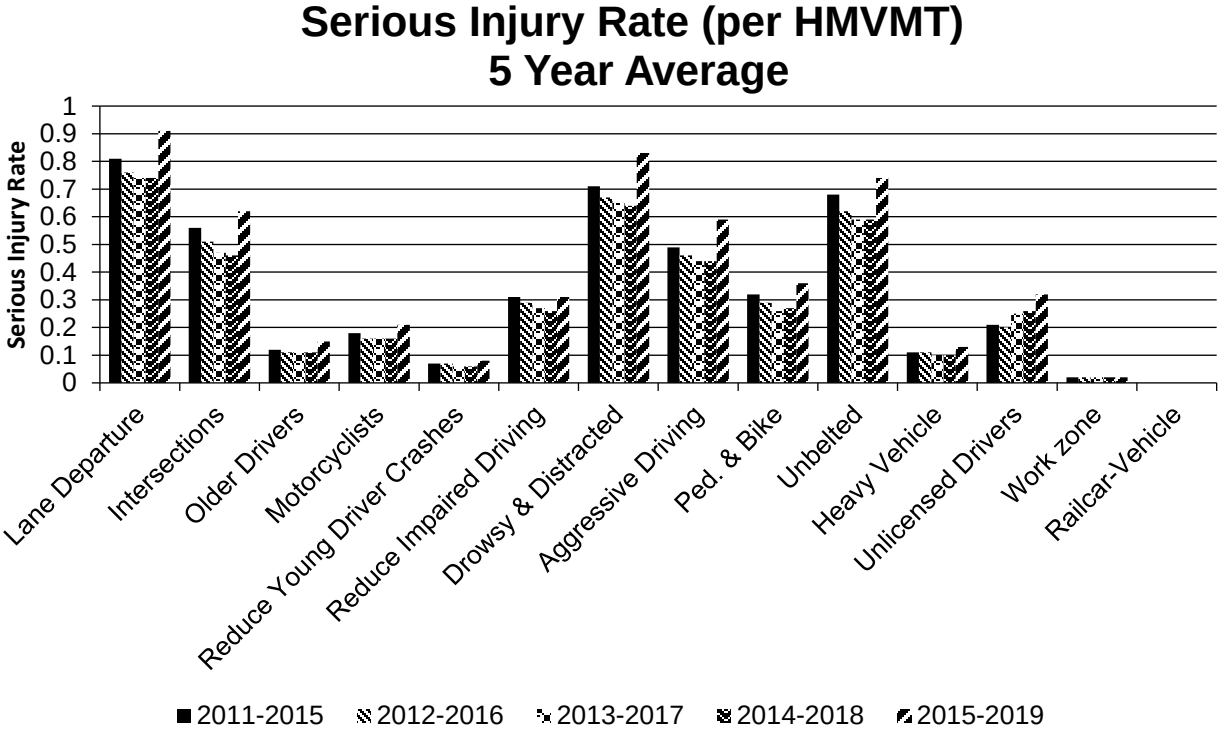
Year 2019

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	Run-off-road	306.6	703.8	0.39	0.91
Intersections	Intersections	151.8	481.2	0.19	0.62
Older Drivers	All	66	123.4	0.08	0.15
Motorcyclists	All	65.6	160.4	0.08	0.21
Reduce Young Driver Crashes	All	20.4	66.8	0.02	0.08
Reduce Impaired Driving	All	89.4	240.6	0.11	0.31
Drowsy & Distracted	All	196	647.6	0.25	0.83
Aggressive Driving	All	170.4	463	0.22	0.59
Ped. & Bike	vehicle-ped and vehicle-bike	190	278.8	0.25	0.36
Unbelted	All	285.4	577.2	0.37	0.74
Heavy Vehicle	All	74.4	106.4	0.09	0.13
Unlicensed Drivers	All	81.6	209	0.1	0.32
Work zone	All	9	20	0.01	0.02
Railcar-Vehicle	All	1	0.4	0	0


Number of Fatalities
5 Year Average
Fatalities
350
300
250
200
150
100
50
0
Lane Departure
Intersections
Older Drivers
Motorcyclists
Reduce Young Driver Crashes
Reduce Impaired Driving
Drowsy & Distracted
Aggressive Driving
Ped. & Bike
Unbelted
Heavy Vehicle
Unlicensed Drivers
Work zone
Railcar-Vehicle
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019


Number of Serious Injuries
5 Year Average
Serious Injuries
800
700
600
500
400
300
200
100
0
Lane Departure
Intersections
Older Drivers
Motorcyclists
Reduce Young Driver Crashes
Reduce Impaired Driving
Drowsy & Distracted
Aggressive Driving
Ped. & Bike
Unbelted
Heavy Vehicle
Unlicensed Drivers
Work zone
Railcar-Vehicle
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019





All numbers are form NJDOT-ARD database with the following exceptions:

Younger Driver: Fatality numbers have been updated from FARS for 2011-2018 based on drivers with age 16-20 inclusive. 2019 Fatalities are from NJSP Fatal report.

Older Drivers: Fatality numbers have been updated from FARS for 2011-2018 based on drivers with age 65 and older. 2019 Fatalities are from NJSP Fatal report.

Older Driver and Younger Driver: Fatal and SI numbers are based on the driver and excludes all other persons involved in the crash (pedestrian, occupants, etc.).

Pedestrian and Bicycle: 2019 fatalities are from 2019 NJSP Fatal report.

Most of the numbers have been updated for 2018-2019 except for Older and Younger Drivers which have been updated for 2011-2019. Pedestrian and Bicycle have been added for 2019 only.

The five- year rolling average targets above, incorporating serious injuries, indicate a large increase. This is a result of a large spike in reported serious injuries in 2019 crashes.

Beginning in 2019, New Jersey updated the police crash report to be consistent with the federally required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). As a result of this change, injuries not previously attributed to the serious injury classification are now included in this number.

For example, a crash victim with a broken arm that would have previously been classified as a Moderate injury, is now classified as Suspected Serious Injury. As a result, New Jersey saw a 116% increase in reported serious injuries due to the changes in reporting.

This large increase creates a challenge in predicting anticipated totals for future years. New Jersey expects the five-year rolling average to increase over the next few years until the data stabilizes.

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

No

NJDOT installed Centerline rumble stripes as part of a Systemic Program, and the construction was completed in October 2016. According to Highway Safety Manual, the post-deployment evaluation should include at least three (3) years of safety data following a six (6) month period of normalization. BSBPP has collected the safety data for the contracts for the first two years with CY 2020 pending. CY 2020 safety data will be available by July 2021.

BSBPP will continue collecting and analyzing the safety data. It is anticipated that post-deployment evaluation reports for the Program will be shared in the CY 2021 ASR.

Project Effectiveness

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
Essex County - CR 602 at Grove St and Coit St, CR 665 at Civic Sq, CR 658 at 6th, 7th, Roseville Ave and 9th St	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	28.00	24.67					14.33	13.67	42.33	38.34	0.71
Monmouth County - Memorial Dr/CR 40A from Rt. 33 to Munroe Ave	Urban Major Collector	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	13.00	10.00					11.67	6.00	24.67	16.00	4.96
Passaic County - Main Avenue (CR 601) from Passaic Avenue to Monroe Street	Urban Principal Arterial (UPA) - Other	Pedestrians and bicyclists	Pedestrian signal	2.33						1.67	3.34	4.00	3.34	0
Union County - East Broad Street (CR 509) at Elm Street	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	2.67	3.67					0.67		3.34	3.67	2.55
Union County - Vauxhall Road (CR 630) at Pine/Barbara Avenues and Caldwell/Glenn Avenues	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	3.67	7.00					1.67	3.67	5.34	10.67	0
Somerset County - Washington Avenue (CR 529) at Greenbrook Road	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	4.67	2.67					2.67	0.67	7.34	3.34	5.79

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)
Ocean County - CR 539 (MP 3.69 - 27.50)	Rural Major Collector	Roadway	Rumble strips - center	51.00	58.67	1.33	1.00	1.33	1.00	21.00	23.67	74.66	84.34	4.89

Attached are 7 files with the B/C calculations.

Passaic County – Main Avenue (CR 601) from Passaic Avenue to Monroe Street: Improvements were pedestrian focused and included 5 upgraded crosswalks and pedestrian signs, ADA compliant curb ramps and pedestrian countdown signals at 5 intersections and a RRFB at one location. The B/C analysis was applied to pedestrian involved crashes only. Although the total crashes decreased from 12 to 7, the moderate crashes increased from 1 to 2 and the complaint of pain crashes increased from 4 to 5.

Union County - Vauxhall Road (CR 630) at Pine/Barbara Avenues and Caldwell/Glenn Avenues improvements included two traffic signal upgrades including pedestrian countdowns and high visibility crosswalks. The 3-year post construction analysis has shown a negative benefit. Crashes increased at both intersections. Crash severity remained consistent with all complaint of pain and PDOs. These two intersection will be analyzed for several more years to see if the 5 year rolling average shows any benefit.

Compliance Assessment

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

08/18/2015

What are the years being covered by the current SHSP?

From: 2016 To: 2020

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

2020

New Jersey is finalizing the 2020 Strategic Highway Safety Plan (SHSP). The NJ 2020 SHSP reinforces New Jersey's commitment to a performance based, data-driven investment strategy aligning with a Towards Zero Death vision. The plan was developed with extensive collaboration, participation and coordination with state's safety stakeholders through a hierarchal organization structure of a Core Working Group, a Steering Committee, Emphasis Area Teams and the Executive Committee, in addition to robust public engagement through a series of Safety Summits and media presence including a user-friendly website (www.saferoadsforallNJ.com). NJ 2020 SHSP will support seven (7) Emphasis Areas with strategic plans capitalizing on the four E's – Engineering, Education, Enforcement and Emergency Response. The State continues to support the goals of NJ 2015 SHSP through the HSIP apportionments for state and local projects and will transition seamlessly to NJ 2020 SHSP following its adoption.

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		50
	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	80					100	65		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100		50
	End Point Segment Descriptor (11) [11]	100	100					100	100		50
	Segment Length (13) [13]	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
	Direction of Inventory (18) [18]	50	50								
	Functional Class (19) [19]	100	100					100	100		20
	Median Type (54) [55]	100	100								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	50		
	Average Annual Daily Traffic (79) [81]	100	80					90	5		
	AADT Year (80) [82]	100	80								
	Type of Governmental Ownership (4) [4]	100	100					100	100		30
INTERSECTION	Unique Junction Identifier (120) [110]			100	100						
	Location Identifier for Road 1 Crossing Point (122) [112]			100	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			100	100						
	Intersection/Junction Geometry (126) [116]			100	100						
	Intersection/Junction Traffic Control (131) [131]			70	20						
	AADT for Each Intersecting Road (79) [81]			100	80						
	AADT Year (80) [82]			100	80						
	Unique Approach Identifier (139) [129]			100	80						

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
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					80	30				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					80	30				
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					40	30				
	Ramp Length (187) [177]					80	30				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					40	30				
	Roadway Type at End Ramp Terminal (199) [189]					40	30				
	Interchange Type (182) [172]					40	30				
	Ramp AADT (191) [181]					80	35				
	Year of Ramp AADT (192) [182]					80	35				
	Functional Class (19) [19]					80	35				
	Type of Governmental Ownership (4) [4]					40	30				
Totals (Average Percent Complete):		**97.22**	**93.89**	**96.25**	**82.50**	**61.82**	**31.36**	**98.89**	**80.00**	**0.00**	**40.00**

*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.

On the actions the State will take moving forward to meet the requirement to have complete access to the MIRE FDE on all public by September 30, 2026:

1. some of the current MIRE FDEs are stored in the SLD database.
2. the NJDOT Information Tech Unit will continue to upload the available MIRE FDE to Business Objects (TransINFO) NJDOT website so that the MIRE FDE would be available/accessible to all NJDOT or MPOs.
3. NJDOT is proposing to create the MIRE FDE database and export the data to ArcGIS Interactive Transportation Data Applications similar to the current NJDOT roadway Information and Traffic Monitoring (Annual Average Daily Traffic Flow) on the NJDOT website for public use.
4. Procuring funds to collect all Annual Average Daily Traffic (AADT) is a critical issue.

5. the NJDOT's BDTS currently collects many of the required MIRE FDE and developed a plan for the collection and/or update of the remaining required elements. Through BTDS's Data Warehouse Maintenance (DWM), HPMS Contract and TMS contracts the following MIRE FDE will be collected in the short-term (1-3 years):

- 178. Unique Interchange Identifier
- 131. Intersection/Junction Traffic Control
- 182. Interchange Type
- 4. Ramps Type of Government Ownership
- 195. Roadway Type at Beginning Ramp Terminal
- 197. Location identifier at Beginning Ramp Terminal
- 199. Roadway Type at End Ramp Terminal
- 201. Location identifier at End Ramp Terminal
- 187. Ramp Length
- 79. Average Annual Daily Traffic – on the approach leg of the intersection/junction and local Paved Roads – Non-State owned AADT
- 191. Ramp AADT

Optional Attachments

Program Structure:

Q#23 Programmed Vs Obligated funds.xlsx
Q#23 2020 Calculations.xlsm
Project Implementation:

Q#23 Programmed Vs Obligated funds revised.xlsx
Q#23 2020 Calculations revised.xlsm
Q#34 Basis for established target.docx
Safety Performance:

Q#39 FFY 20 Older Drivers and Pedestrians.pdf
Q#34 2021 Safety Performance Targets transmittal July 17 2020.docx
Q#34 HSIP PM Targets 2021 - Charts Final_20200416.pdf
Q#34 SAFETY - STATEWIDE TARGETS.docx
Q#34 Basis for established target.docx
Q#34 Commissioner's letter to FHWA.pdf
Q#37 Progress meeting 2019 SPT.xlsx
Q#39 FFY 20 Older Drivers and Pedestrians.pdf
Evaluation:

Q#46 -Essex - Lyons Park Clinton analysis.xlsx
Q#46 -Monmouth-MemorialDrive.xlsx
Q#46 -Ocean - CR 539.xlsx
Q#46 -Passaic-Main Avenue.xlsx
Q#46 -Somerset-Washington Avenue.xlsx
Q#46 -Union-East Broad Elm.xlsx
Q#46 -Union-Vauxhall.xlsx
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.