SJTPO FY 2016-2017
Local Safety
Program

PROGRAM GUIDANCE

INTRODUCTION

The South Jersey Transportation Planning Organization (SJTPO) is working collaboratively with the NJ Division of Federal Highway Administration (FHWA), New Jersey Department of Transportation (NJDOT), and other state and local agencies to address identified safety concerns within the SJTPO region, with funding through the Highway Safety Improvement Program (HSIP).

The purpose of the HSIP is to achieve a significant reduction in fatalities and serious injuries on all public roads through a data-driven, strategic approach to improving highway safety. This includes roadways on and off the federal aid system, regardless of ownership.

Within the current new transportation reauthorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21) greater emphasis has been placed on performance measurement and project evaluation; the HSIP is on the leading edge in addressing this demand. To ensure the spirit of federal guidance is satisfied and that projects chosen are truly worthy investments, data drives the SJTPO Local Safety Program project development process in every step.

Local Safety Program funding may be used for all phases of a project, including design, right-of-way acquisition, construction, and construction inspection. Assistance with final design of safety projects is being offered by SJTPO.

Application Process

The FY 2016-2017 Application for SJTPO Local Safety Program must be completed (with all attachments) and returned to SJTPO no later than Tuesday, February 24, 2015.

If requesting raw crash data from SJTPO, all requests must be made no later than Friday, January 16, 2015.

Applying for funding through SJTPO's Local Safety Program requires applicants to follow an intuitive five-step, data driven process. The Project Application and this document (Program Guidance) direct applicants through that process.

- Step 1 – Location Selection
- Step 2 – Problem Identification
- Step 3 – Countermeasure Selection
- Step 4 – Benefit-Cost Analysis
- Step 5 – Technical Committee Review

Schedule

- **November 18, 2014** Program solicitation published to website
- **January 16, 2015** Last day to request raw crash data from SJTPO
- **February 24, 2015** Application deadline
- **March 19, 2015** Applications sent to Technical Review Committee for evaluation
- **April 27, 2015 (week of)** Project selection meeting
- **May 11, 2015** TAC recommendation of projects to Policy Board
- **May 26, 2015** Policy Board approval of projects

In an effort to remove a common barrier to submitting safety projects for consideration, SJTPO is offering final design assistance. SJTPO will serve as Project Managers for consultant-led design services after projects are selected and approved for Local Safety Program funding. Applicants can request assistance by checking a box (question F.3) as part of their Local Safety Program application.

A. PROJECT SUMMARY

Please include the basic information for your project as requested in the "Project Summary" portion of the application. For systemic applications, **PLEASE ATTACH** a list that addresses items A.2-7 for all included locations in Excel format.

Jurisdictions can submit more than one project application, but should identify the sponsor's priority of each application.

B. SPONSORING AGENCY

Only counties or municipalities within the SJTPO region are eligible to submit applications for this program. The project sponsor must have a full-time employee on staff who will serve as the designated "Responsible Charge" for the federal project. This person will be responsible for managing the federal funding process.

If the project sponsor is not the sole roadway owner, written documentation of support for submitted application(s) must be presented by the roadway owner. Example: If the city and county jointly have ownership both agencies must indicate support.

The project sponsor must be eligible to receive federal funding as determined by the NJDOT Division of Local Aid and Economic Development for each individual phase of the project, as applicable.

C. LOCATION SELECTION (STEP 1)

Project locations must generally be selected in one of two ways: using the hot spot approach, by selecting off one of four lists of Network Screening locations, or using the systemic approach, based on the geometric traits of a series of locations. SJTPO will work to incorporate safety improvements based on both the hot spot and systemic approaches.

Hot Spot Approach (Network Screening Lists)

To apply for a project at a hot spot, applicants are strongly encouraged to select locations from one of the Network Screening lists developed for each county, below. Working with Rutgers Center for Advanced Infrastructure and Transportation (CAIT) and the Plan4Safety crash analysis tool, the lists were developed identifying high crash locations in the SJTPO region, utilizing a data-driven process. Lists include crash location information, number of crashes, weighted crash value (based upon severity), and ranking within the SJPTO region.

- **Intersection Ranking Lists** – includes all crash types identified as "At Intersection" on NJTR-1 utilizing 2011-2013 data
  - **SJTPO Region**
  - Atlantic County
  - Cape May County
  - Cumberland County
  - Salem County
- **Pedestrian Corridor Ranking Lists** – 1.0-mile roadway corridors with a minimum of two pedestrian type crashes utilizing 2009-2013 data
  - **SJTPO Region**
  - Atlantic County
  - Cape May County
  - Cumberland County
  - Salem County
- **Pedestrian Spot Ranking Lists** – 0.1-mile roadway segments with a minimum of two pedestrian type crashes utilizing 2009-2013 data
  - **SJTPO Region**
  - Atlantic County
  - Cape May County
  - Cumberland County
  - Salem County

High Risk Rural Roads (HRRR)

Roadway segments within the High Risk Rural Road corridor list include roadways, which are functionally classified as a rural major or minor collector or as a rural local roads and have crash rates that exceed the SJTPO region's average for those functional classes of roadways.

Because New Jersey's fatality rate on rural roads increased over the most recent two-year period, the State must obligate money along high risk rural roads in the next fiscal year. With Rutgers CAIT and the Plan4Safety crash analysis tool, a list, specifically along high risk rural road segments, was developed.

- **High Risk Rural Roads (HRRR) Lists** – roadway segments of various length which meet or exceed the minimum criteria for the HRRR program utilizing 2011-2013 data
    - **SJTPO Region**
    - Atlantic County
    - Cape May County
    - Cumberland County
    - Salem County

While selecting a location that appears on one of the Networking Screening lists provides the basic eligibility parameters, project sponsors must complete the entire application and all projects must identify documented safety concerns (Step 2) at specific locations and propose solutions to those specific problems (Step 3) in order to be considered.

Strong preference will be given to project locations ranked higher on one of the Network Screening lists. Bonus points awarded for projects with an SJTPO Ranking within the top 25 of each list.

For project locations not on one of the Network Screening lists, applicants must sufficiently demonstrate a significant (three-year) crash history. Applicants are strongly encouraged to request this crash history by contacting SJTPO staff as soon as possible, no later than January 16, 2015. The crash history should be presented to SJTPO prior to beginning an application to allow time to determine if the location is eligible. This is not applicable for systemic applications.

Systemic Approach

An alternative and complementary approach to the traditional site analysis is the systemic approach to safety, which looks at risk across an entire roadway system rather than managing risk at a singular location. This approach provides a more comprehensive method for safety planning and implementation. More information related to the systemic approach can be found on FHWA's Safety website http://safety.fhwa.dot.gov/systemic/.

The installation of centerline rumble strips is a systemic treatment, which has been implemented in New Jersey over the past year. Together, with the State, the MPOs are looking to include systemic application along select roadway curves.

- **Centerline Rumble Strips:** Installation of a centerline rumble strips are one of the proven countermeasures that reduce the risks of cross centerline crashes and is a good example of a systemic approach to safety. To help promote the installation of this safety improvement in the SJTPO region a candidate list of centerline rumble strip locations was compiled with the assistance of the NJDOT's Bureau of Transportation Data and Safety. Minimum roadway width, shoulder width, and posted speed limit were used as variables in the screening lists for centerline rumble strips.

Urban Roadways

- Atlantic County
- Cape May County
- Cumberland County
- Salem County

Rural Roadways

- Atlantic County
- Cape May County
- Cumberland County
- Salem County

For reference, a sample PS&E package and contract documents for the installation of centerline rumble strip is available on SJTPO's FTP site; please email **jmarandino@sjtpo.org** to gain access.

- **Horizontal Curve Treatment:** A proven countermeasure for some horizontal curves includes a combination of enhanced signage and high friction surface treatment. Based upon Minnesota's experience, a 1,200 foot radius or smaller was selected as a maximum radius to consider for installation of the treatment package. SJTPO recently performed an inventory on a number of curves in the region and identified locations that meet the criteria for this treatment. To discuss piloting a project in your jurisdiction, please contact Jennifer Marandino at (856) 794-1941 or via email **jmarandino@sjtpo.org**.

D. PROBLEM IDENTIFICATION (STEP 2)

This step provides an understanding of the crash patterns and examines the geometric and physical characteristics of the location, providing a diagnosis of the location. Whereas, the network screening provides a broad look at the number of crashes, the crash analysis in this step should investigate the types of crashes and circumstances around the crash history to identify patterns. These patterns will provide additional details related to the cause of the crashes and help diagnose the safety concern, leading to an improvement that will directly link to the problem at the location.

It is not enough to select a location from the Network Screening lists; identifying a location with a significant crash history does not directly translate into a project that can be funded through the Local Safety Program. However, proper diagnosis of the problem can help to identify a good project.

Road Safety Audits (RSAs) and Road Safety Scans (RSS)

Road safety audits are an important tool in advancing quality safety projects and can be a valuable component in SJTPO's data-driven approach. Once a project location has been identified from the Network Screening lists (Step 1), the site analysis in an RSA/RSS can be utilized in problem identification (Step 2) and countermeasure selection (Step 3). As a result, locations from the network screening where an RSA or RSS has occurred are likely excellent locations to pursue for local safety funding.

With the assistance of the Rutgers CAIT, the RSA and RSS locations over the last few years have been mapped and overlaid with the Network Screening locations. These overlap locations should be strongly considered for potential project locations.

All projects seeking Local Safety Program funding must address priorities in the State's Strategic Highway Safety Plan (SHSP). New Jersey is currently in the process of updating the State's SHSP, until its release, emphasis areas within the September 2007 Comprehensive Strategic Highway Safety Plan should be utilized.

All projects must demonstrate a crash history and **ATTACH** a full three-year crash history of the location in Excel format; inclusion of crash diagram(s) is encouraged. Applicants are strongly

encouraged to request a crash history for your project location by contacting SJTPO staff. All requests for crash data must be made no later than January 16, 2015. Applicants are encouraged to make their request as soon as possible to allow more time to complete their application.

E. COUNTERMEASURE SELECTION (STEP 3)

The selection of an appropriate countermeasure is another key step in the process, which addresses the problems identified at the location. For locations selected based on network screening locations, countermeasures must address the types of crashes at the particular location on the Network Screening list. For a systemic approach, countermeasures must address the geometric roadway features related to a specific crash type.

FHWA Proven Safety Countermeasures

FHWA has studied and identified nine safety countermeasures that are statistically proven to address specific crash types. These should be considered in all Local Safety Program projects where the following crash problems exist.

- **Intersection Crashes**
  - Inclusion of Roundabout
  - Corridor Access Management Improvements
  - Installation of Traffic Signal Back-Plates with Retro-Reflective Borders
  - "Road Diet" Roadway Configuration
- **Pedestrian Crashes**
  - "Road Diet" Roadway Configuration
  - Medians and Pedestrian Crossing Islands in Urban and Suburban Areas
  - Pedestrian Hybrid Beacon
- **Run-Off Road Crashes**
  - Longitudinal Rumble Strips and Stripes on Two-Lane Roads
  - Safety Edge$_{SM}$
  - Enhanced Delineation and Friction for Horizontal Curves

Ineligible Activities

The following types of projects are NOT eligible for the program:

- Routine maintenance/replacement projects;
- Roadway capacity enhancements (road widening);
- Improvements involving State, U.S., and Interstate highways including any improvements at intersections with such facilities; and
- Aesthetic improvements along the right-of-ways (i.e. streetscapes)

Project Examples

Some examples of improvements previously authorized using Federal HSIP funding in New Jersey include:

1. Installation of a roundabout at an existing STOP-sign controlled intersection;
2. Reconfiguration of the roadway, also known as a “Road Diet”;
3. Intersection improvements including traffic signal upgrades, modified signal operations, left-turn bays, striping, and pedestrian countdown signal heads;
4. Installation or upgrade of traffic control or other warning devices to improve a documented safety hazard including traffic signals, pedestrian countdown signals, over-height vehicle detectors, and signage
5. Pedestrian or bicyclist safety improvements such as textured pavement crosswalks, crosswalk striping, and ADA compliant curb ramps;
6. Installation of warning devices such as rumble strips/rumble stripes along high frequency crossover and/or roadway departure locations;
7. Installation of a skid-resistant surface treatment at intersections or locations with a high frequency of crashes;

F. BENEFIT-COST ANALYSIS (STEP 4)

It is not enough to simply have a location with a crash history and apply the correct countermeasures; projects must also provide a benefit that exceeds their cost of construction. To this end, all projects must include an estimate of cost as well as additional information (Appendix A) that SJTPO will utilize to perform a Highway Safety Manual (HSM) analysis. This analysis will be utilized to measure the safety benefits relative to the total cost of the entire project. This step in the process is not applicable for systemic applications.

Highway Safety Improvement Program (HSIP) funding may be used for all phases of a project, including design, right-of-way acquisition, construction, and construction inspection. However, it should be noted the cost of each phase of the project may be considered when performing a benefit-cost analysis.

SJTPO staff will conduct a safety performance evaluation of the project in accordance with the HSM. **PLEASE ATTACH** a completed Appendix A Spreadsheet of HSM Data Inputs to assist SJTPO staff in this evaluation. The crash prediction estimate, along with the cost estimate, will be utilized to calculate an economic analysis reporting a benefit-cost ratio.

G. TECHNICAL REVIEW COMMITTEE (STEP 5)

The final step in SJTPO's data-driven Local Safety Program project selection process is review by a Technical Review Committee (TRC), comprised of SJTPO and NJDOT staff including Local Aid District 4, Bureau of Environmental Resources, and Bureau of Transportation Data and Safety. Staff from FHWA NJ Division Office of Safety and NJDOT Local Aid Trenton advise the TRC, but do not score the application.

The TRC evaluates all projects seeking HSIP funding through SJTPO's Local Safety Program, with the exception of systemic treatments. Members of the TRC evaluate the projects and score each application according to several factors including expected safety benefit and construction readiness. Answers within section G of the application will assist the TRC in making a determination related to construction readiness. If a project is believed to have "fatal flaws", questions within Section G require further evaluation, the project my require delay into the next fiscal year. For those projects requesting final design assistance (box checked within F.3), construction readiness will be evaluated for the second year of the two year solicitation.

H. ATTACHMENTS

Elements required in submission include:

1. Straight Line Diagram, if applicable;
2. Demonstration of a safety need by including crash history data; reporting of number, type, and severity of crashes by year are required, inclusion of crash diagram(s) is encouraged;
3. Project schedule, including CED, Preliminary PS&E, Final PS&E;
4. Line item cost estimate;
5. Reduced size preliminary or final plans, as appropriate; and
6. USGS MAP showing the project location, limits, and all environmental parameters (e.g., wetlands, historic properties) relevant to your project. Please also include route/street names and mileposts.

I. APPLICATION SUBMISSION

All applications must be submitted digitally. To avoid issues with submitting large files, please email **jmarandino@sjtpo.org** to gain access to SJTPO's FTP site. Alternatively, digital applications may be submitted by CD or DVD to the address below. Each application requires multiple attachment files. For applicants submitting more than one application, each application with ALL of its required attachments should be contained in its own separate folder, named for that project application.

South Jersey Transportation Planning Organization
782 South Brewster Road, Unit B6
Vineland, NJ 08361
Attn: Jennifer Marandino

APPLICATION DEADLINE: Tuesday, February 24, 2015

Questions or comments may be directed to Jennifer Marandino at (856) 794-1941 or via email at **jmarandino@sjtpo.org**.

This application, program guidelines, and all SJTPO Network Screening lists are available on our website at **www.sjtpo.org/HSIP.html**.

J. PROJECT EVALUATION

All projects seeking HSIP funding through SJTPO's Local Safety Program, with the exception of systemic treatments, will be evaluated by members of the TRC committee. Each project will be evaluated based upon following factors:

Factor		***Possible Points***
1.	**Priority Crash Location** (select best option below)	
	• Project location has a SJTPO rank of 25 or higher on one of the Network Screening Lists	**5**
	• Project location has any rank on one of the Network Screening Lists	**3**
	• Project location *does not* appear on any of the Network Screening Lists, *BUT* sufficiently demonstrates a significant crash history	**1-2**
2.	**Construction readiness** (select best option below):	
	• Project application demonstrates final design is ***substantially complete*** and questions within Section G of the application are ***answered to satisfaction***	**3**
	• Project application ***requires*** final design; questions within Section G of the application are ***answered to satisfaction***	**2**
	• Project application ***requires*** final design; questions within Section G of the application ***require further evaluation***	**1**
3.	**Potential for safety benefit:**	
	• Points awarded based upon the actual Benefit / Cost ratio of the project *(rounded to a tenth of a point)* as reported in Section F of the application	
4.	**Bonus points** (total from categories below):	
	• Project location appears on *more than one* network screening list, 1 point for any rank, 2 points for an SJTPO rank of 1-25 on two or more lists	**1-2**
	• Project includes recommendations from a previously sponsored Road Safety Audit or Road Safety Scan	**1**
	• Project application illustrates crash history through a crash diagram	**1**
	• Project incorporates any FHWA Proven Safety Countermeasure; 1 point for one countermeasure, 2 points for two or more countermeasures	**1-2**
	• Project demonstrates a high potential for safety benefit; Benefit / Cost ratio exceeds 3.0	**2**
	• Project demonstrates a moderate potential for safety benefit; Benefit Cost ratio between 1.5 and 3.0	**1**

K. FEDERAL PROCESS

Federal Authorization Process

Once Local Safety Program projects are selected and approved for funding by the SJTPO Policy Board, applicants must work directly with NJDOT, Division of Local Aid and Economic Development, to fulfill all requirements for federal authorization. The timeframe generally needed to complete the environmental approval process and to prepare the requisite plans, specifications, and estimate (i.e. PS&E documents) for this program is six months.

- For projects to be advanced in the requested fiscal year, the project sponsor agency must obtain environmental approval and make the applicable submissions ***no later than*** the following dates:

	Fiscal Year 2016	**Fiscal Year 2017**
CED and 30% Plans	March 31, 2016	March 31, 2017
Final PS&E	May 13, 2016	May 15, 2017
Anticipated Federal Authorization	September 1, 2016	September 1, 2017

- Missing this submission deadlines may jeopardize the ability to obtain federal funding authorization in the requested fiscal year and may require delaying the project into the next fiscal year.
- Federal National Environmental Policy Act (NEPA) regulations must be followed. As such, projects must have minimal or no environmental and cultural resource impacts.
- Advertising and construction cannot commence until federal authorization is obtained.
- Projects must be advertised for construction within 60 days of receiving federal construction authorization. Project sponsors must also follow federal regulations for a competitive bid process. Funds may be forfeited if construction occurs prior to federal authorization.
- Projects must be fully constructed within two (2) years of receiving this authorization.

Federal Funds Reporting Requirements

There are additional administrative requirements that accompany the use of federal funds. Project sponsors are required to report progress to the NJDOT on a quarterly basis. Quarterly reports shall be in writing (by letter or e-mail to the program manager(s) specified at the time) and include technical and financial progress. The SJTPO project manager shall be copied on all formal communications regarding these products so project status is known and any problems which may arise can be dealt with in a timely manner. For more details on the federal aid process, see the NJDOT web page on Federal Aid at www.state.nj.us/transportation/business/localaid/fedaid.shtm.