Through engaging peer workshops, the RSPCB Program matches agencies seeking solutions to roadway safety issues with trailblazers who have addressed similar challenges and emerged with a roadmap and noteworthy practices for approaching the issue.

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Highway Safety Improvement Program: Local Roads Safety Policy Peer Exchange

An RSPCB Peer Exchange

OVERVIEW

This report is a summary of the Highway Safety Improvement Program (HSIP) Local Roads Safety Policy Peer Exchange held in Lee's Summit, Missouri on November 16-17, 2016 sponsored by the Federal Highway Administration (FHWA) Office of Safety. Participants from Federal, State, and local agencies from Arizona, Arkansas, Connecticut, Illinois, Kansas, Louisiana, Maryland, Missouri, Nebraska, and New Jersey shared knowledge on approaches and practices for developing local road safety policies within HSIPs, building collaborative relationships with local agencies, and improving safety on local road systems. An event agenda is found in Appendix A and a full list of attendees is provided in Appendix B.

TOPIC AREAS

- HSIP Funding Structures to Support Local Road Safety
- Partnerships with Local Agencies
- Application Processes and Requirements
- Project Selection Criteria
- Key Strategies to Building a Robust Local Road Safety Program

The two-day event included presentations on developing, administering, and funding a local safety program with HSIP funds; leading practices for soliciting local agencies for applications and selecting projects; approaches for providing data and training to local agencies; and key strategies for building and maintaining a local road safety policy. The peer States and representatives from FHWA's Office of Safety engaged in a robust dialogue to highlight common practices. The meeting culminated in a discussion resulting in a draft framework for a local safety policy.

Key takeaways from this peer exchange included:

- Strong relationships and partnerships between State and local agencies are key to successful HSIP local road safety policies.
- Local agencies and officials often need technical support or technical guidance to overcome technical expertise barriers.
- Data driven and systemic safety improvement practices lend authority to project selection decisions and make it easier to work with stakeholders.
- Regional or local safety plans can be a useful tool for guiding project selection and spending.
- Application and implementation procedures need to be documented but flexible enough to handle unique circumstances and needs.

PROCEEDINGS

The following sections summarize the discussions across the five key topic areas.

Organizing and Funding a Local HSIP Program

The structure and funding mechanisms employed in HSIP local road safety policies was a central focus during the peer exchange. With regard to distributing HSIP funds, Arizona, Louisiana, Illinois, Kansas, and New Jersey use set-asides to specifically allocate HSIP funds to local road safety projects. In New Jersey, funding is distributed according to the percentage of fatalities on the local system and further broken out by the relative population of each Metropolitan Planning Organization (MPO). On the contrary, local road safety projects in Connecticut and Nebraska compete directly against State projects. Arizona is planning a shift away from a percentage allocation toward a direct competition framework.

A central planning mechanism is used in most peer States for selecting projects for funding. Connecticut, Illinois, Kansas, Nebraska, and New Jersey all have centralized selection processes. Nebraska has a Safety Committee comprised of representatives from the State and local level who review all projects for funding. Arizona leaves administration of the local projects to the DOT district offices on the premise that each region has a greater understanding of conditions on the ground. Louisiana administers its program through the Louisiana Local Technical Assistance Program (LTAP).

MPOs and Councils of Governments (COG) are key partners for local road safety. In New Jersey, the entire state is covered by one of three MPOs. The MPOs in New Jersey act as intermediaries between the State Department of Transportation (DOT) and local agencies by having an annual solicitation for projects and performing first-level review before forwarding applications to the DOT for consideration. The Connecticut, Illinois, and Arizona DOTs also rely on their MPOs and COGs to filter project applications and help local agencies prepare strong HSIP applications.

HSIP Application and Program Requirements

The processes for soliciting project applications, receiving application materials, and selecting which projects to fund varies among peer States. Most of the peers solicit and review projects on an annual basis. Louisiana currently reviews projects on a quarterly basis, although they may move to an annual process in the near future. Nebraska was a notable departure from the annual standard; the Nebraska Safety Committee reviews projects every month and applications may be submitted at any time.

The peer States developed various application requirements designed to provide sufficient information for the selection body to adequately understand the scope and impact of each project. Arizona DOT's application includes a 20-tab Excel booklet which consists of cost estimates, detail maps, and an assessment of benefit/cost ratios. Illinois DOT's application is managed through a SharePoint site where local agencies - with the assistance of the

district local engineer - are able to publish and update application materials. In most cases, the benefit-cost ratio of the project is required in applications and applications have to reference either local/regional safety plans (e.g. Connecticut), or emphasis areas from the State's Strategic Highway Safety Plan (SHSP) (e.g. Arizona and New Jersey). Additionally, Illinois requires local agencies to conduct road safety audits (RSAs) for any project valued at over $1 million. Louisiana Department of Transportation and Development (DOTD) and Nebraska Department of Roads (DOR) require local agencies to complete technical training courses prior to certain applications.

Peer states discussed local funding match requirements for selected projects. Nebraska, Connecticut, Illinois, and Kansas generally require local agencies to supply 10 percent of the project funding. Both Arkansas and Missouri, which do not currently have local HSIP policies, expressed a likely preference toward a 10 percent funding match structure. Parishes and MPOs within Louisiana generally lack sufficient resources to support a 10 percent match on major safety improvement projects. In some cases, the MPOs and parishes in Louisiana were borrowing between each other in order to secure enough funding on any given year to apply for HSIP funding. The Louisiana LTAP determined this funding mechanism was not sustainable and moved toward funding local safety projects at 100 percent using penalty transfer funds. Arizona DOT uses a variable match according to which countermeasures are included in the project; proven countermeasures are incentivized with lower or no match while non-standard treatments require a local match.

The funds distributed through the local HSIP programs in each State can be applied in varying ways. Some State DOTs, such as Nebraska DOR, allow HSIP funds to be used throughout a project (from preliminary engineering through construction). Others, such as Connecticut DOT, restrict funding usage and do not permit HSIP funds to be used for design or right-of-way purchases.

Although each of the peer States require an application package that includes a detailed analysis of the potential impact of the safety improvement, only a few States follow up regularly with safety studies after implementation. Louisiana LTAP completes a before-after study for each HSIP funded project, and Arizona DOT recently implemented a program for follow-up studies. Other states, such as Illinois, Kansas, and Nebraska, check the efficacy of some projects but do not have a comprehensive mechanism for evaluating the effectiveness of all projects which use HSIP dollars. Illinois checks all projects for proper use of the benefit-cost safety analysis and annual reviews of all local crashes' severity, frequency, and rate.

Safety Data and Training

Each peer State collects and maintains safety data through a variety of means. Each State has a mechanism for collecting local crash reports to identify fatal and serious injury crashes. These supply the foundational information for examining the State and local road networks. Some DOTs, such as New Jersey DOT, require more comprehensive analysis techniques for project applications – New Jersey uses Highway Safety Manual (HSM) analysis methods which require information on roadway geometry. States which lack system-wide roadway data fall back to more traditional approaches such as using observed crashes for cost-benefit analyses.

Safety data, including roadway attributes, crashes, and traffic volumes on local roads, are typically collected by local agencies, with the State DOT acting as a broker to compile data into a single framework and provide central access. An example is Illinois DOT's safety portal which allows anyone with access to retrieve and examine crash data information. In other States, such as Connecticut and Louisiana, crash data is aggregated and managed by a partner university (University of Connecticut and Louisiana State University, respectively). Regardless of where the State's safety data is housed, peer States report on providing safety analysis results to local agencies for project development and applications. In 2016, Illinois DOT provided local agencies a tiered system of "5% lists" (high, medium, and low severity lists), or lists of segments and intersections with a potential for safety improvement

(PSI) number, although local agencies may still make their own assessment using the raw safety data. Illinois has identified 23 counties out of 102 that account for 87.3 percent of the injury crashes and developed County Strategic Highway Safety Plans for these overrepresented counties. County Plans include 14 emphasis areas in heat maps, data trees, and detailed metropolitan crash maps.

Louisiana DOTD is developing parish profiles through their LTAP, which include rankings of each route within the parish according to crash frequency, and is further ranking all the parishes against one another using this data. From this ranking process, they have identified the top 20 parishes which account for 90 percent of all local road crashes and the key crash segments within each of those parishes. All of these statistics are further broken down according to crash type and crash factors for countermeasure selection.

Although States provide data and information to their local partners, local agencies and officials often lack the technical expertise needed to prepare applications to the State for HSIP funding. As a result, the peer States offer technical support to the local agencies. Connecticut has a Safety Circuit Rider (SCR) program which coordinates road safety assessments (or road safety audits, RSAs), collects and analyzes traffic volume data, helps to identify low cost improvements, delivers local road safety training, and provides assistance for developing Local Road Safety Plans. Complementing the SCR program, Connecticut DOT hosts a Safety Academy which provides additional training opportunities specializing in traffic and safety issues, including fundamentals of local road safety and data analysis, horizontal curve alignment, sign retroreflectivity, use of guiderail, Americans with Disabilities Act (ADA) evaluation and transition, and modern roundabout design. Comprehensive training support is offered in Louisiana through the LTAP, including "*Road Safety 365*" which incorporates a crash data workshop, work zone safety and basic flagger training, and "Road to Better Signing." The LTAP also includes the Louisiana Center for Transportation Safety which supports regional SHSP data dashboard workshops. Kansas also makes use of their LTAP for training local officials, and similar to Connecticut, is interested in a Safety Circuit Rider program through the LTAP.

Missouri DOT raised the important note that many of the local officials which receive advanced technical training for tools such as HSM software only rarely use those skills and, as a result, lose those skills over time.

Project Selection and Implementation

The peer States have institutionalized practices for project selection and implementation. Kansas DOT's SHSP has seven emphasis area teams and two support teams, several of which include local road safety. These teams coordinate their individual project selection for local roads. However, these improvements have largely been across the State system in recent years. The Local Roads emphasis area team is working to build local road safety plans for specific counties and more directly target local issues.

Nebraska DOR, as described earlier, uses a more centralized approach for project selection through its Safety Committee. By bringing relevant State and local stakeholders together for project selection, they are able to effectively prioritize and plan improvements. Nebraska has a parallel High Risk Rural Roads (HRRR) Committee which also considers and advances projects independent from the Safety Committee. Large projects coming out of either committee (budgeted above $400,000) must be reviewed by the Strategic Safety Infrastructure Team prior to approval. Illinois DOT has safety committees at the regional level which are operated by their districts but also has a centralized safety committee that ultimately makes the final selections of projects that are submitted by the local agencies to be funded with HSIP funds.

Performance measures and targets to direct project selection was a key point of interest for the peer States. Nebraska DOR, Illinois DOT, and Louisiana DOTD are all actively updating their SHSPs, while Missouri DOT and

Arizona DOT recently completed updates. Across the board, performance measures in alignment with Moving Ahead for Progress in the 21st Century (MAP-21) and Fixing America's Surface Transportation (FAST) Act requirements are being incorporated and States are working to set clear safety targets.

Building and Maintaining an HSIP Local Program

The peer States provided feedback for Missouri DOT, Arkansas HTD, and Maryland State Highway Administration (SHA) to consider as they develop local road safety programs. Much of this feedback emphasized the importance of communication and relationship building. Kansas DOT, Nebraska DOR, Connecticut DOT, New Jersey DOT, and Louisiana DOTD all rely on strong relationships with county associations, LTAPs, MPOs, COGs, and key municipalities to coordinate safety improvement efforts. Louisiana DOTD emphasized the importance of strong leadership from a safety champion at the State level to add weight to these relationships. Illinois DOT suggested having cross-agency workshops and trainings to provide opportunities for collaboration and network building.

Having a systemic, data-driven approach to decision-making lends authority the project selection process. Kansas DOT found that using a systemic approach helped convince stakeholders of the importance of the projects. Similarly, multiple peers emphasized the possibility of piloting local safety efforts based on data-driven practices to provide a concrete example for other local agencies to follow. Building from smaller successes to establish larger programs was highlighted by both Connecticut DOT and Louisiana DOTD/LTAP.

Finally, incentives can be used by States to encourage local agencies to apply for HSIP funds and complete safety improvements on the local system. These incentives range from providing set-aside funding sources (e.g., Arizona DOT), giving out safety equipment for participating in trainings and workshops (e.g., Nebraska DOR), or providing clear guidance and information on practices and approaches such as those created by New Jersey DOT.

CONCLUSION

The final session of the peer exchange focused on developing a prospective framework for a Local Safety Policy from which Missouri DOT (and other peers without local safety programs) can use as a starting point to build a local safety policy. This framework includes key takeaways from the entire meeting and focuses on the high-level building blocks which any local program should consider in order to be successful.

A Framework for a Local Safety Policy

BUSINESS CASE. Make the business case for local safety improvements. The purpose of a local safety policy is founded on reducing fatalities and serious injuries on all public roads.

BUILD COALITIONS & FOSTER RELATIONSHIPS.

- Engage and empower MPOs and COGs to coordinate State and local efforts.
- Consider how LTAPs may act as unifying agents in a local HSIP program.
- Reach out directly to local governments (cities, counties) and form robust relationships.
- Central State and district DOT offices must communicate with their partners clearly and effectively to build effective relationships.

ESTABLISHING A LOCAL ROAD SAFETY PROGRAM. To establish a local road safety program, an agency should consider the following:

- A mechanism to allocate funds (e.g., set-aside, competition with State-system projects, etc.)
- Level of local match for projects (e.g., 10%, no match, etc.)
- Administration process
    - Who will be in charge of soliciting projects?
    - Who will review projects?
    - What is the project selection process? Is it clearly documented?
    - Who will award applications?
    - When do local agencies apply?
    - What is the application format?
    - What are the eligibility requirements?
        - Are there minimums or maximums for project scope?
        - Are there design or construction engineering requirements?
        - What sort of data must be included? How must it be analyzed?
    - What is the evaluation process? What are the measures of success?

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APPENDIX A: AGENDA

Wednesday, November 16th, 2016

Time	Topic	Speaker
8:00 AM	Registration	
8:30 AM	Welcome • Peer exchange objectives • Introductions	John Miller, MoDOT Kevin Ward, FHWA Missouri Division
9:00 AM	Overview of current Missouri HSIP process and Future Direction	Jon Nelson, MoDOT
10:00 AM	Break	
10:15 AM	Presentation followed by Panel Discussion: Organization/Program/Funding Structure o *How are HSIP funds distributed to locals (e.g. set-aside, compete directly with State projects)?* o *What amount of HSIP funds are for local safety projects?* o *How is the amount of HSIP for local roads determined (crash distribution, fixed amount, case-by-case basis, etc.)?* o *How does the program fit into your state's overall LPA program?* o *Are your local HSIP funds programmed by Central Office (i.e., headquarters) or are they distributed to your districts/regions?* o *What is the role of the districts, LTAP/TTAP Centers, and MPO/RPOs in the HSIP application process for local projects?* o *How long have you been using HSIP for local roads?* o *What percent of your highway system is local roads?* o *What percent of your fatalities are on local roads?*	Presentation by: Arizona Panel Discussion: All Peer States
11:15 AM	Roundtable Discussion/Key Takeaways	All
12:00 PM	Lunch	
1:00 PM	Presentation followed by Panel Discussion: Applications and Program Requirements o *How do locals apply for HSIP? What frequency (e.g. annual, biennial, continuous)?* o *Do the locals contribute the 10% match? Do you use different rate of match? Why? What are the benefits?* o *Are there any prerequisites for a local agency to compete (local SHSP, trainings, RSA, HSM, etc.)?* o *Are there any restrictions on locals' use of HSIP funds (e.g. construction only)?* o *Do you require before/after analysis of the improvements?*	Presentations by: Illinois New Jersey Panel Discussion: All Peer States
2:00 PM	Roundtable Discussion/Key Takeaways	All
2:45 PM	Break	

Time	Topic	Speaker
3:00 PM	Presentation followed by Panel Discussion: Process to Identify Safety Issues – Methods, Training & Technical Assistance o *What level of safety data and data analysis is required for local HSIP projects?* o *To what extent are crash and roadway data on local roads?* o *Do local agencies have access to crash and roadway data for analysis purposes?* o *Does the DOT provide data analysis assistance to local agencies when applying for projects?* o *What are the most common types of projects or safety improvements under this program?* o *What types of training and technical assistance do you provide to local agencies to ensure participation in HSIP? Why is it necessary?*	Presentations by: Connecticut Louisiana Panel Discussion: All Peer States
4:00 PM	Roundtable Discussion/Key Takeaways	All
4:45 PM	Wrap-up	Karen Scurry, FHWA
5:00 PM	Adjourn	

Thursday, November 17th, 2016

Time	Topic	Speaker
8:00 AM	Day 1 Recap	Karen Scurry, FHWA
8:30 AM	Presentation followed by Panel Discussion: Project Selection and Implementation o *How are proposed projects evaluated for funding?* o *Who selects which projects get funded?* o *Are there methods in place to prevent ineffective projects?* o *What post award requirements are in place (e.g. projects must be obligated in 1 year, let to construction in 2 years)?* o *Who delivers local safety projects (i.e. state or local let)?* o *What practices do you use to streamline the Federal-aid process for local agencies?* o *Are funds set aside for locals getting programmed and spent?* o *Do you have plenty of interest from locals?* o *Do you get enough proposals each year to select optimal projects?* o *Do you have the same local agencies apply each year or is it a good mix?*	Presentations by: Kansas Nebraska Panel Discussion: All Peer States
9:30 AM	Roundtable Discussion/Key Takeaways	All
10:15 AM	Break	

Time	Topic	Speaker
10:30 AM	o *Roundtable Discussion: Getting Started, Establishing and Maintaining Interest* o *How do you get local agencies interested in the HSIP? How do you keep their interest?* o *What strategies are used to increase local participation in the HSIP process? How do you measure success?* o *Describe the process for initially implementing the program.* o *How were locals made aware?* o *Did you have to get DOT leadership support?* o *How is it being/was sold to leadership?* o *How did you convince others using HSIP on local roads was a good thing?* o *How long did it take?* o *Did you have to reduce HSIP spending on the state system?* o *Do you use any incentives to encourage local participation?* o *What have been your biggest challenges/difficulties?* o *What have been your greatest successes?* o *What other advice would you offer a state as they begin a program to spend HSIP on local roads?*	Peer States
11:30 AM	Roundtable Discussion: Key Elements of a HSIP Local Safety Policy	All
12:00 PM	Lunch	
1:00 PM	Develop Framework for Local Safety Policy	Missouri Stakeholders, with input from Peer States
3:00 PM	Wrap-up/Adjourn	Karen Scurry, FHWA

APPENDIX B: PARTICIPANT LIST

First	Last	Title	Agency	Email
Mona	Aglan-Swick	HSIP Program Manager	Arizona Department of Transportation	maglan-swick@azdot.gov
Ben	Whatley	Engineer	Arkansas State Highway and Transportation Department	benjamin.whatley@ahtd.ar.gov
Joe	Ouellette	State Safety Engineer	CT Department of Transportation	joseph.ouellette@ct.gov
Alan	Ho	Mobility & Safety Team Leader/Safety Engineer	FHWA IL Division Office	alan.ho@dot.gov
Filiberto	Sotelo	Safety Evaluation Engineer	Illinois DOT	filiberto.sotelo@illinois.gov
Steven	Buckley	State Highway Safety Engineer	Kansas DOT	steven.buckley@ks.gov
David	LaRoche	Safety/Traffic Engineer	FHWA - KS Division	david.laroche@dot.gov
Bill	Legge	Local Road Engineer	KDOT	bill.legge@ks.gov
Daniel	Magri	Highway Safety Administrator	LA DOTD	dan.magri@la.gov
Marie	Walsh	Director	Louisiana LTAP	marie.walsh@la.gov
Sae'd	Rahwanji	Assistant Division Chief	Maryland State Highway Administration	srahwanji@sha.state.md.us
Aaron	Bartlett	Senior Transportation Planner	Mid-America Regional Council	abartlett@marc.org
Susan	Barry	District Planning Manager	MoDOT	susan.barry@modot.mo.gov
Jim	Hubbell	Principal Planner	Mid-America Regional Council	jhubbell@marc.org
Natasha	Longpine	Principal Planner	Ozarks Transportation Organization	nlongpine.ozarkstransportation.org
John	Miller	Traffic Liaison Engineer	MoDOT	john.p.miller@modot.mo.gov
Anna	Musial	Transportation Safety Planner	East-West Gateway Council of Governments	anna.musial@ewgateway.org
Jon	Nelson	Traffic Safety Engineer	MoDOT	jonathan.nelson@modot.mo.gov
Derek	Olson	District Traffic Engineer	MoDOT	derek.olson@modot.mo.gov
Marc	Thornsberry	Safety & Mobility Engineer	FHWA - MO	marc.thornsberry@dot.gov
Kenny	Voss	Local Programs Administrator	MoDOT	kenneth.voss@modot.mo.gov
Dan	Waddle	Traffic Engineer	Nebraska Department of Roads	dan.waddle@nebraska.gov
Sophia	Azam	Acting Manager	NJDOT	sophia.azam@dot.nj.gov
Christine	Mittman	Project Manager	North Jersey Transportation Planning Authority	cmittman@njtpa.org
Caroline	Trueman	Safety Engineer	NJ Division Office FHWA	caroline.trueman@dot.gov
Rosemarie	Anderson	Transportation Specialist	FHWA Office of Safety	rosemarie.anderson@dot.gov

First	Last	Title	Agency	Email
Karen	Scurry	Transportation Specialist	FHWA Office of Safety	karen.scurry@dot.gov
Laura	Black	Civil Engineer	U.S. DOT Volpe Center	laura.black@dot.gov
Stephen	Zitzow-Childs	Operations Research Analyst	U.S. DOT Volpe Center	s.zitzow-childs@dot.gov