Hazard Elimination Project for Existing Roads and Streets

Laura Slusher, PE, Project Manager
What is HELPERS?

NOT JUST SIGN PROJECTS!
What is HELPERS?

- **H**-hazard
- **EL**-elimination
- **P**-project
- **E**-existing
- **R**-roads
- **S**-streets
HELPERS Overview

HELPERS Goal: Reduce the number and severity of crashes on Indiana’s local roads

- Identify low cost safety improvements
- Facilitate procurement of funds
- Assist with Road Safety Audits
- Offer technical expertise
- Provide safety-related training
HELPERS Overview

HELPERS focus

- Group III and IV agencies outside MPO areas
  - Group III: Population between 5,000 and 50,000
  - Group IV: Population less than 5,000 or county government

- Other agencies work through their local MPO
Services HELPERS provides

- Volume Counts
- Ball Bank Studies
- Road Safety Audits
- Signal Warrant Analysis
- Low Cost Improvement Ideas
- HSIP Application Assistance
- Safe Routes to School Application Assistance

- Speed Studies
- Crash Analysis
- Safety Training
HELPERS Overview

- Agencies who have received HELPERS Assistance
  - Bainbridge
  - Bicknell
  - Blackford County
  - Boone County
  - Brazil
  - Clay County
  - Clinton
  - Clinton County
  - Daviess County
  - Dubois County
  - Eaton
  - Greencastle
  - Fountain County
  - Fulton County
  - Hamlet
  - Hancock County
  - Hartford City
  - Huntington City
  - Huntington County
  - Knox
  - Knox County
  - Lawrence County
  - Lynn
  - Miami County
  - Monroe County
  - Morgan County
  - North Judson
  - Oaktown
  - Otterbein
  - Owen County
  - Pike County
  - Posey County
  - Putnam County
  - Ridgeville
  - Salem
  - Sharpsville
  - Scott County
  - Spencer
  - Starke County
  - Sullivan
  - Warren County
  - Wayne County
  - Waynetown
  - Wells County
  - Whitley County
HSIP Submittals by HELPERS

- Spring 2010
  - 5 Projects totaling $1.2 million

- Fall 2010
  - 4 Projects totaling $1.2 million

- Spring 2011
  - 16 Projects totaling $1.7 million
HSIP Submittals by HELPERS

- Fall 2010
  - 4 Projects totaling $1.2 million
Road Safety Audits

- Vine Street, City of Clinton
- High School Road, Posey County
- CR 725E, Putnam County
- CR 100E, Wells County
Road Safety Audits

- Vine Street, City of Clinton
Vine Street, Clinton

- City had been trying to address issue for 6 years
- City wanted to preserve on-street parking if possible
56% of crashes were parking-related
Crash rate of 5.6 crashes/mvmt
Speed Limit = 20 mph
85th percentile speed = 39 mph (westbound)
Vine Street, Clinton

- Identified issues
  - Vehicle Speeds
  - On-street Parking
  - Pedestrians
  - Sight Distance
  - Pavement Markings
  - Sidewalk Curb Ramps

- RSA lessons learned
  - Bees like yellow safety vests
Vine Street, Clinton

- Traffic calming effect – reduces speed
- Decreases crossing distance for pedestrians
- Makes pedestrians more visible
- Provides protection for people entering/exiting parked vehicles
Vine Street, Clinton

PROPOSED HSIP PROJECT

- HSIP project submitted September 2010
- $90,500 Project Cost
- Approved
Road Safety Audits

- High School Road, Posey County
High School Rd, Posey County

- History of crashes on High School Road
  - Teen drivers involved in 83% of crashes (at fault in 72%)
  - Mostly during peak school hours
  - Crash rate of 5.6 crashes/mvmt

- Multiple requests from the school
High School Rd, Posey County

- Identified issues
  - No School Zone Speed Limit
  - No School warning signs
  - Student Drivers
  - Sight Distances
  - Bus vs. student vehicle conflicts
  - Faded Pavement Markings
  - Roadside hazards
  - Lack of Shoulder
  - Internal traffic flow

- RSA lessons learned
  - Always triple-check the time zone!
  - Make sure multiple people are taking pictures
High School Rd, Posey County

- HSIP Project
  - Improve Sight Distance
  - Add Pavement Markings
  - Add/Upgrade Signage
  - Student Driver Education
  - School Zone Speed Limit
  - School Warning Sign with Flashing Beacon

- $40,000 project approved

- Copy of report provided to School
Road Safety Audits

- CR 725E, Putnam County
CR 725E, Putnam County

- History of wet roadway departure crashes in curves
- Large truck volume on narrow roadway
CR 725E, Putnam County

- Identified issues
  - Horizontal curve issues
  - Lack of shoulders
  - Roadside hazards
  - Two hazardous intersections
  - Speed limit in narrow section
  - No speed advisory through curves
  - Pavement condition
  - No guardrail in one curve

- RSA lessons learned
  - Be flexible with the project limits
CR 725E, Putnam County

- Proposed Project
  - Improve pavement
  - Add shoulders
  - Add guardrail
  - Add signage
  - Add pavement markings
  - Remove roadside hazards
  - Improve hazardous intersections
  - Add superelevation to curves
  - Add advisory speeds

- $550,000 project to be submitted March 2011
Road Safety Audits

- CR 100E, Wells County
CR100E, Wells County

- History of crashes in vicinity of school
  - Crash rate of 9.51 crashes/mvmt
- Congestion during school peaks causing safety issues on CR100E and adjacent state highway
CR100E, Wells County

- Identified issues
  - Inexperienced Student Drivers
  - Bus vs. student vehicle conflicts
  - No school warning signs
  - No reduction in speed limit for school zone
  - Proximity of school driveway to adjacent state highway intersection
  - Internal traffic flow of school
Wells County Commissioners have directed their highway department to make suggested improvements.

INDOT District and School Officials provided a copy of the RSA report.
Potential Projects

- Low Cost
- High Impact
  - Crash Reduction Factors
    [http://www.cmfclearinghouse.org](http://www.cmfclearinghouse.org)
  - Highway Safety Manual
- Address a traffic safety need
  - Based on crash history
- Require a Road Safety Audit
  - Expert, independent opinions
Potential Projects

- Eliminating/Minimizing Roadside Hazards
- Improving Sight Distance
- Improving Curves
- Improving Intersections
- Rumble Strips
- Pavement Issues
Potential Projects

- Improving Railroad Crossings
- Adding Shoulders
- Advance Warning
- Systemic Improvements
- Adding backplates to signals
- Your improvement here
Roadside Hazards
Roadside Hazards
How you can help

- Be our eyes in the field – report hazardous roads
- Volunteer for Road Safety Audits
- Attend safety training and apply that training
  - Road Scholar Course on Safety ~ June 1, Indianapolis
  - Traffic Safety Conference ~ July 28, West Lafayette
  - MUTCD Training ~
    - May 10, Huntingburg
    - May 12, Brownstown
    - May 24, Selma
    - May 26, Danville
    - June 7, Fort Wayne
    - June 9, South Bend
Laura Slusher
Phone: 765.494.7038
Toll Free: 800.428.7639
Email: lslusher@purdue.edu