

**Intersection Safety Emphasis Area Team Report  
Tuesday December 19, 2017, 2:00 p.m.**

**Participants**

<b>Name</b>	<b>Agency/Organization</b>
Brian Moen, Team Leader	City of Frisco
Chris Adkins	Professional Pavement Products
Tim Barrette	TTI
Juanita Daniels-West	TxDOT Tyler District
John Denholm	Lee Engineering
Susan Herbel	SUB Consulting
Maurice Johnson	TxDOT Houston District
James Keener	TxDOT
Darren McDaniel	TxDOT
Amanda Martinez	TxDOT
Ruby Martinez	TxDOT Pharr District
Stephen Ratke	FHWA-TX
Robert Rodriguez	TxDOT
Robyn Root	City of McKinney
Barbara Russell	TxDOT
Buck Russell	Union Pacific Railroad Public Safety
Darius Samuels	TxDOT
Eva Shipp	TTI
Stacey Schrank	TTI
Rebecca Wells	TxDOT - ATL
Packyen Wilson	City of Fort Worth
Robert Wunderlich	TTI

## Action Plan Development

During the Traffic Safety Conference participants had the opportunity to prioritize the countermeasures in each of the seven emphasis areas. The top 3-5 countermeasures in each emphasis area were presented during the facilitated discussion sessions and preliminary action plans for some of the prioritized countermeasures were developed. Most of these action plans are incomplete and require more consideration by EA team members.

Through a collaborative process EA team members reviewed, revised and/or confirmed the countermeasure rankings and identified all needed action plans based on the following guidelines:

- Action Plan is not needed for every countermeasure
- All strategies must have at least one countermeasure with an action plan.
- Ensure that all EA team priorities are addressed.
- Countermeasures can be combined when appropriate (some were already combined at the conference).

## Intersection Safety Strategies - Revised

*Strategy #1: Improve data systems for identifying specific intersections and intersection types at high probability for serious injury crashes*

### *Countermeasures and Programs*

- 1a Create a statewide intersection safety and roadway elements database. (Incorporate Model Inventory of Roadway Elements format, create a standardized data structure to support GIS applications, create an app for data collection, develop partnerships between TxDOT, MPOs, and local agencies to populate the database, and develop and implement an intersection identifier system for posting at intersections).

*Strategy #2: Consider alternative design strategies for improving intersection safety*

### *Countermeasures and Programs*

- 2a Construct roundabouts and create an outreach program to educate the public and public officials about roundabout advantages and safety benefits.
- 2b Convert signalized intersections to diverging left intersections.
- 2c Encourage use of the Intersection Control Evaluation process for use in project development by TxDOT and local agencies – develop case studies, provide training, and conduct outreach.

***Strategy #3: Improve pedestrian safety at intersections with high probability of crashes***

***Countermeasures and Programs***

3a Develop methods to identify and target high pedestrian crash probability locations: Systemic methods (i.e., based on characteristics) and screening for locations with above average crash experience.

3b Install low to medium cost improvements to increase pedestrian safety:

Eliminate free flow turn lanes or convert them to angled turn lanes that require stopping/yielding, add turn islands and median islands and curb bulb outs, convert permissive only or protected permissive phasing to protected only (when pedestrian is present or during active times of day), provide enhanced measures – rectangular rapid flash beacon, pedestrian hybrid beacon, lighting, etc. at uncontrolled high risk locations, and pedestrian islands. At targeted intersections:

Prohibit right on red and permissive left turns at high probability locations, install/improve pedestrian signals, pedestrian crosswalks, lighting, and/or high friction surface treatment on intersection approaches, and ensure pedestrian signals, push buttons, crosswalk markings, etc. meet current requirements or upgrade to current requirements, including signal timing.

**Note: Countermeasures 3b & 3c combined by EA team**

***Strategy #4: Increase driver awareness of intersections***

***Countermeasures and Programs***

4a Develop Texas specific resources on the use of specific countermeasures, based on roadway types, system ownerships, rural/urban character, etc. as a guide to practitioners.

4b Implement proven, low cost engineering countermeasures in a systemic manner: modify operations, add or enhance signs, and add or enhance physical conditions. (Install driver speed feedback signs in advance of intersections. 4c, Implement current Texas Intersection Safety Implementation Plan to prepare for the next iteration of the HSIP.)

**Note: Countermeasures 4b & 4c combined by EA team**

***Strategy #5: Develop educational campaigns incorporating data analysis to improve intersection safety.***

***Countermeasures and Programs***

5a Publicize high crash locations and point out the contributing crash factors (e.g., red light running, speeding impaired driving, texting, phone use).

5b Increase and renew emphasis on safe driving behaviors in driver education

- 5c Create info graphics and other social media friendly information.
- 5d Develop and implement a young driver educational campaign relating to signalized intersections.

***Strategy #6: Reduce red light running***

***Countermeasures and Programs***

- 6a Use targeted enforcement at high incident locations. Install red light indicator (in most cases, white) lights to inform law enforcement of red signal onset.  
**Note: Countermeasures 6a & 6f combined by EA team**
- 6b Research, identify, and address the factors contributing to the trend of reduced law enforcement citations for intersection violations.
- 6c Develop best practice guide for Automated enforcement. Educate decision makers and the public on the effectiveness and appropriate use of automated enforcement.  
**Note: Additional wording added by EA team**
- 6d Install automated red light enforcement cameras.
- 6e Improve traffic signal timing and interconnect signals to improve efficient traffic flow and encourage a safe travel speed.

**Intersection Safety Countermeasures for Action Planning**

- 1a Create a statewide intersection safety and roadway elements database.  
(Incorporate Model Inventory of Roadway Elements format, create a standardized data structure to support GIS applications, create an app for data collection, develop partnerships between TxDOT, MPOs, and local agencies to populate the database, and develop and implement an intersection identifier system for posting at intersections).  
**Lead: Stephen Ratke**
- 5a Publicize high crash locations and point out the contributing crash factors (e.g., red light running, speeding impaired driving, texting, phone use).  
**Lead: James Keener**
- 3b Install low to medium cost improvements to increase pedestrian safety:  
  
Eliminate free flow turn lanes or convert them to angled turn lanes that require stopping/yielding, add turn islands and median islands and curb bulb outs, convert permissive only or protected permissive phasing to protected only (when pedestrian is present or during active times of day), provide enhanced measures – rectangular rapid flash beacon, pedestrian hybrid beacon, lighting, etc. at uncontrolled high risk locations, and pedestrian islands. At targeted intersections:  
  
Prohibit right on red and permissive left turns at high probability locations, install/improve pedestrian signals, pedestrian crosswalks, lighting, and/or high friction surface treatment on intersection approaches, and ensure pedestrian signals, push

buttons, crosswalk markings, etc. meet current requirements or upgrade to current requirements, including signal timing.

- 4b Implement proven, low cost engineering countermeasures in a systemic manner: modify operations, add or enhance signs, and add or enhance physical conditions. (Install driver speed feedback signs in advance of intersections. 4c, Implement current Texas Intersection Safety Implementation Plan to prepare for the next iteration of the HSIP.)
- 6e Improve traffic signal timing and interconnect signals to improve efficient traffic flow and encourage a safe travel speed.
- 6a Use targeted enforcement at high incident locations. Install red light indicator (in most cases, white) lights to inform law enforcement of red signal onset.
- 2c Encourage use of the Intersection Control Evaluation process for use in project development by TxDOT and local agencies – develop case studies, provide training, and conduct outreach.
- 2a Construct roundabouts and create an outreach program to educate the public and public officials about roundabout advantages and safety benefits.

**Lead: Brian Moen ; Asst: Rebecca Wells**

### *Next Steps*

- Review Action Plan drafts
- Assign groups for countermeasures not covered

### *Additional Resources*

- FHWA red light running resources:  
<https://safety.fhwa.dot.gov/intersection/conventional/signalized/rl/>

### *Upcoming Meeting Dates*

- Round 2 EA team meeting: Late January/Early February – based on doodle poll results
- Round 3 EA team meeting: Late February/Early March
- May - Regional workshops in Houston, San Antonio, Dallas-Fort Worth and Midland-Odessa
- August 8-10, 2018 - Traffic Safety Conference, Sugarland