

# Implementing Traffic Safety Evaluations to Enhance Roadway Safety

Intersection of Peak Road & CR-34 Barnes County, ND

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The economic and health-related impacts of crashes remain an important focus area for improving the transportation system. According to the Federal Highway Administration (FHWA) there are nearly 43,000 crash related fatalities every year, with an additional 3 million injuries.

## Traffic Safety Evaluations

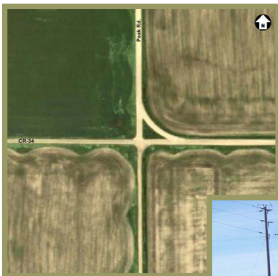
Traffic Safety Evaluations (TSEs), commonly referred to as Road Safety Audits (RSAs), are a tool used to assess the safety performance of a roadway facility. A TSE generally takes a proactive approach to addressing safety concerns, and can be done at any stage of a project from planning and design to existing facilities.

**Purpose** Traffic Safety Evaluations consist of a formal examination of the safety and performance of a roadway facility by an independent, multi-disciplinary team. The purpose of conducting a TSE is to identify potential safety issues and opportunities for safety improvements. A TSE looks to provide a proactive approach in identifying opportunities that eliminate or mitigate safety concerns.

**Background/Observations** Concerns have been raised regarding the intersection of Peak Rd and CR-34 southeast of Valley City, due to the unique alignment and several safety issues. They include:

1. Unique intersection geometry
2. Slight-distance issues
3. Both paved and gravel roadway composition
4. Only documented crash in the last 3 years resulted in a fatality

### 1. Unique Intersection Geometry



### 2. Slight-Distance Issues



3. Both paved and gravel roadway composition

## Suggestions for Improvement

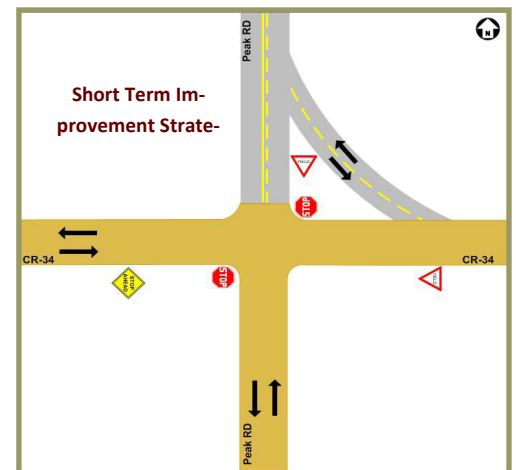
**Short Term Improvement** The majority of the traffic uses the intersection spur by traveling north to east, therefore installation of yield signs is recommended on the north side and east side of the intersection prior to the merge with the spur. This will allow the majority of the vehicles to have free movement. In addition, stop signs are recommended for the east-west approaches at the intersection. Stopping traffic at these approaches will be beneficial in offsetting the issues created by limited sight distance. It is also recommended that an advance traffic control sign be used on the eastbound approach to warn drivers of the intersection.

**Procedure** The process of conducting a TSE is outlined by the FHWA, and consists of the following steps.

1. Identify the roadway facility or project to be evaluated
2. Select the independent, multidisciplinary evaluation team
3. Conduct a pre-evaluation meeting
4. Perform field reviews under various conditions
5. Conduct analysis and document the findings
6. Present findings to project owner/management
7. Prepare a formal response
8. Incorporate findings into the project when appropriate

## Benefits of TSEs

1. Pro-Active approach to addressing safety
2. Results should produce fewer and less severe crashes
3. The process allows identification of low-cost/high-value improvements
4. Promotes a safety-conscious environment by improving the consistency of how safety is considered
5. Provides a continuous advancement of safety knowledge
6. Provides a benchmark for safety issues on future projects
7. Promotes an efficient use of time, money, and resources



**Long Term Improvement** The optimal safety improvement would be removing the intersection spur and controlling the intersection. It is recommended by the evaluation team that the spur be removed and the intersection be widened to accommodate turning vehicles (trucks). The intersection should remain controlled as a two-way stop, with the eastbound and westbound vehicles yielding to north-south traffic.



### Implemented Improvements



Eastbound View



Northbound View



Westbound View



Southbound View

### In Conclusion...

- ◆ TSEs are a valuable tool for improving the safety of roadway facilities
- ◆ Limited resources are required to conduct a TSE
- ◆ Efficient use of time, money, and resources



For more information contact:  
Rural Transportation Safety and  
Security Center

UGPTI, NDSU

Fargo, ND 58105

Email: [rtsscinfo@ugpti.org](mailto:rtsscinfo@ugpti.org)

Phone: 701.231.7767

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