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**Program Number(s)**

**TO:** District Engineers

**Key Number(s)**

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Design/Traffic Services

**Program ID, County, Etc.**

**RE:** Speed Zone Change Procedures and Guidance on Engineering and Traffic Investigations and Studies

District Traffic Engineers (DTE) are responsible for completing the engineering and traffic investigation when evaluating speed zones on the state highway system. And they are responsible for preparing the engineering and traffic study supporting their recommended speed limit for a given highway segment. The District Engineer (DE), as delegated by the Idaho Transportation Board, holds approval authority for establishing speed limits on the state highway system. When making speed zone adjustments, follow the procedures outlined below:

- Engineering and traffic investigation and study:
  - DTE completes an investigation of the subject highway segment.
  - The District coordinates with local stakeholders.
  - DTE consults with Design Traffic Services (DTS) on the investigation, the study, and the proposed modifications.
  - DTE prepares and seals the engineering and traffic study report.
- Highway Leadership Team (HLT) and District Transportation Board member coordination:
  - The District discusses with the HLT and informs their Board member of any proposed speed limit adjustments.
  - If recommended by the HLT or their Board member, inform the appropriate state elected official(s) (through ITD Governmental Affairs) of proposed changes, in particular those that may be contentious.
- Transportation Board notification or concurrence:
  - DTE provides DTS a summary of the speed zone modifications, stakeholder coordination efforts, and copies of the sealed engineering and traffic study report and the draft minute entry.
  - DTS prepares and presents a Board item to inform the Transportation Board of or to request their concurrence on the planned speed zone modifications.
    - Board concurrence is required for both raising to and lowering from 70 mph (state highway) or 80 mph (interstate) speed limits.
- Communication plan:
  - The District develops a communication plan with ITD Communications.
- Approval and Implementation:
  - DE approves speed minute entry after Transportation Board notification or concurrence.
  - DTE updates Roads & Highways GIS.
  - The District notifies state and local law enforcement of change.
  - The District implements the communication plan.
  - The District posts new speed limit.
- Update speed zone log:
  - DTE provides DTS copies of the approved minute entry.
  - DTS updates speed zone log.

A flow chart of the process above along with an outline for conducting the engineering and traffic investigation and for preparing the study is attached. These procedures for setting speed limits on the state highway system and the speed zone study report outline will be incorporated into the next update of the ITD Traffic Manual.

cc: COO, CE, HCOA, GA, HQ Comm, Hwys Mgrs, DEM2s, District TE/TMs

# Speed Zone Change Procedures



## Engineering and Traffic Investigation and Study

- Complete investigation of subject highway segment
- Stakeholder coordination
- Design/Traffic Services consultation
- Engineering and traffic study prepared and sealed by the District Traffic Engineer



## Highway Leadership Team & Board Member Coordination

- Discuss with HLT proposed speed limit adjustments
- Inform Board member of planned changes
- Coordination with State elected officials



## Transportation Board Notification or Concurrence

- Provide DTS a summary of proposed speed limit adjustments
- DTS informs or requests Board concurrence
  - Concurrence required for changes to and from 70 mph (state highway) and 80 mph (interstate) speed limits

## Communication Plan

- Develop a communication plan with ITD Communications



## Approval and Implementation

- District Engineer approves the speed minute entry after Transportation Board notification or concurrence
- DTE updates Roads & Highways GIS
- Notify state and local law enforcement
- Implement communication plan
- Post new speed limit



## Update Speed Zone Log

- Send DTS approved speed minute entry
- DTS updates speed zone log

# Engineering Speed Zone Study Report Outline

## Executive Summary

Prepare an executive summary of the pertinent data and speed limit recommendation. Provide Figures or Tables as appropriate.

## Previous Studies

Has a speed study been performed for the study area? What data was collected and what were the recommendations of the previous study? Provide Figures or Tables as appropriate.

## Statutory Speed Limit

What is the statutory speed limit for the highway or roadway being studied? Provide Figures or Tables as appropriate.

*Note: The statutory speed limits are as follows:*

- *Interstate highways: 75 mph (or 80 mph if the Transportation Board concurs)*
- *U.S. and State highways: 65 mph (or 70 mph if the Transportation Board concurs)*

## Study Area

Describe the segment of highway that was studied. Provide the highway number, the mile posts, descriptive features (such as intersecting roads, rivers, etc.), or other pertinent descriptions. Describe the extents of the study area and why those extents were chosen. Provide Figures or Tables as appropriate.

## Speed Distribution of Free-Flowing Vehicles

Perform an engineering speed zone study of free-flowing vehicles. Describe how the study was performed. How were non-free-flowing vehicles excluded from the data?

What is the observed 85<sup>th</sup> percentile speed of free-flowing vehicles? What is the observed pace? Provide Figures or Tables as appropriate.

How does the speed study compare with previous studies of the same area? Explain possible reasons for differences.

### **Crash Data**

Investigate crash data in the study area for at least a 12-month period (preferably 3 to 5 years).

Are there highway or roadway improvements that can or have been made to address the reported crashes?

Calculate the crash rate for all crashes and for fatal and injury crashes. How do the crash rates compare with the crash rates of similar highways or roadways? Provide Figures or Tables as appropriate.

### **Highway or Road Characteristics**

Describe the highway or roadway characteristics. Describe features such as lane widths, curb or shoulder condition, grade, alignment, median type, and sight distance. Provide Figures or Tables as appropriate.

*Note: Highway or road characteristics are typically not reasons for lowering the speed limit. Adverse effects from highway or roadway characteristics are reflected in speed and crash data.*

### **Highway or Road Context**

Describe the highway or road context such as roadside development and environment including number of driveways and land use, functional classification, parking practices, presence of sidewalks/bicycle facilities. Provide Figures or Tables as appropriate.

*Note: Highway or road context is typically not a reason for lowering the speed limit. Adverse effects from highway or roadway context are reflected in speed and crash data.*

### **Highway or Road Users**

Describe observed non-motor vehicle highway or road users such as pedestrian activity, bicycle activity. Provide Figures or Tables as appropriate.

## Speed Limit Recommendation

Recommend a posted speed limit based on the speed distribution of free-flowing vehicles, crash data, highway or road characteristics, highway or road context, and highway or road users. Currently, the MUTCD recommends setting speed zones within 5 mph of the 85<sup>th</sup> percentile speed of free flowing traffic.

Some considerations and objectives when selecting an appropriate speed limit:

- Strive to minimize differential vehicle speeds and promote smoother, uniform traffic flow.
  - It's the differential in vehicle speeds in the traffic stream that increases crash potential not higher speeds.
- Drivers travel the speed they are comfortable driving regardless of the posted limit.
  - The 85<sup>th</sup> percentile speed is self-enforcing.
  - Speed limits lower than within 5 mph of the 85<sup>th</sup> percentile (i.e., 50<sup>th</sup> percentile) require additional measures to gain motorist compliance.
  - Concerns over posting low speed limits without additional traffic calming measures:
    - Ingrains a disregard of the law and traffic control devices.
    - Creates a false sense of security for all road users.
    - Taxes law enforcement resources.

Describe the proposed speed zone extents and why the selected boundaries are appropriate.

Provide figures, such as line graphs, to depict the existing and recommended speed limits and speed zone extents.

*Note: By state statute, truck speed limits on Interstate Highways in nonurban areas are to be 10 mph lower than the speed limit posted for other vehicles. Trucks are limited to a maximum speed limit of 65 mph on Interstate Highways in urban areas.*

## Expert Method Verification

Use USLIMITS2 to check the speed limit recommendation. Reconsider the speed limit recommendation if USLIMITS2 recommends a different speed limit. Provide the USLIMITS2 output in the report.

*Note: USLIMITS2 will not recommend a speed limit above 75 mph on divided highways or a speed limit above 65 mph on non-divided highways.*

## **Speed Limit Setting Resources**

Traffic Manual (ITD)

Manual on Uniform Traffic Control Devices (FHWA)

Manual of Transportation Engineering Studies (ITE)

Traffic Control Devices Handbook (ITE)

Traffic Engineering Handbook (ITE)

USLIMITS2 (FHWA)

Methods and Practices for Setting Speed Limits: An Informational Report (FHWA)