
Procedure for Installation of New Traffic Signal

Purpose and Objective:

The purpose of this procedure is to establish in writing the process to be followed when considering the installation of a new traffic signal. The objective is to clarify and streamline the process so that it can be completed with improved efficiency and consistency. For convenience, this procedure is designed to be used as a form.

References:

Ohio Manual of Uniform Traffic Control Devices Section Four
Traffic Engineering Manual Section Four
District 7 Traffic Signal Warrants Policy

Process:

- 1) New traffic signal is proposed.

Location: _____
Proposed by: _____ Date: _____

- 2) Check files for historic data.

Was location previously studied? Yes No

If yes, please answer the following questions:

When was it studied? _____
What initiated the study? _____
What were the results? _____

- 3) Obtain traffic counts for the intersection.

Are recent counts available that will suffice for analyzing signal warrants? Yes No

Date counts were performed: _____
Type of count (i.e. Turning Movement Count (preferred), Numetrics): _____
Length of count (minimum of 8 hours, 12 hours preferred): _____
Intersection ADT: _____ Percent Trucks: _____
 Factorize Right Turns using Form 496-12 in the TEM.

- 4) Analyze crash data.

Crashes must be run for the most recent three years. A collision diagram must then be made.

Total Crashes: _____ Crash Rate: _____
Crashes correctable by traffic signal during the most recent year available: _____

Crash data beyond the three years required for signal warrant analysis may be helpful in determining the long term crash trends of the intersection. Judgment should be applied in deciding if this data is needed.

Expanded Crash History Dates: _____
Total Crashes: _____
Crashes correctable by traffic signal: _____

- 5) Run Signal Warrants. *Note: At least one of the Traffic Signal Warrants must be satisfied to justify traffic signal installation. Generally, District 7 prefers that either Warrant 1 or Warrant 2 is met.*

Area Type Urban Rural

Warrant 1: Eight Hour Vehicular Volume	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 2: Four Hour Vehicular Volume	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 3: Peak Hour	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 4: Pedestrian Volume	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 5: School Crossing	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 6: Coordinated Signal System	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 7: Crash Experience	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>
Warrant 8: Roadway Network	Satisfied <input type="checkbox"/>	Unsatisfied <input type="checkbox"/>

6) Visit proposed traffic signal location in field.

Date of Visit: _____

Take photos (If needed – photos may have been taken for previous study.)

Draw Condition Diagram (If already existing, check in field.)

Is sufficient sight distance available for all stop approaches?

Yes

No

Area Description (i.e. Central Business District, Commercial, Residential, etc.)

Is the signal in close proximity to a school, hospital, fire station or other traffic signals? Yes

No

If yes, please describe: _____

Other applicable geometric or local conditions: _____

7) Consider any other applicable factors.

Are traffic volumes expected to...

Increase

Decrease

Not Change

Why? _____

Have other changes recently been made that may improve the operation / safety of the intersection, but are new enough that impact is not yet known? Yes

No

If yes, describe the changes and when they were completed: _____

Are there other more appropriate changes that should be made to the intersection such as conversion to a roundabout or four-way stop, installing turn lanes, etc. instead of installing a traffic signal? Yes

No

If yes, please comment on other alternatives: _____

If a traffic signal is installed, are there other changes / improvements that would need to be made such as pedestrian signals, emergency preemption, etc.? Yes

No

If yes, please describe: _____

8) Make final decision.

Apply engineering judgment to the data, site conditions, and other factors to determine if a traffic signal should be installed.

Final Decision: _____

Justification for decision: _____

Other Recommendations: _____

Attached Documents:

Initiating letter, study, etc.

Traffic Count Data

Crash Data, including Collision Diagram

Other Information: _____

Signal Warrant Analysis

Condition Diagram

Photos