Purpose
To define the process for the warranting, programming, designing, and installing Utah Department of Transportation (Department) traffic signals. Refer to the Department’s Guidelines for Left-Turn Phases at Signalized Intersections for the left-turn phasing criteria and the Department’s current Signalized Intersection Design Guidelines for more information.

Policy
It is the policy of the Department to warrant and install traffic signals on state highways on the basis of an engineering and traffic investigation according to the most recent adopted edition of the Manual on Uniform Traffic Control Devices (MUTCD). The design and installation of a traffic signal must be in accordance with the Department’s most current Signalized Intersection Design Guidelines.

This policy includes procedures for determining when traffic signals are warranted or modifications are needed. It also establishes criteria for the implementation of these improvements and installation of traffic signals on state highways.

New Traffic Signals
An intersection may be considered for traffic signal installation as part of a future signal program when it is found to meet one or more warrants according to Part 4 of the MUTCD and Procedure 06C-51.1. The satisfaction of a traffic signal warrant or warrants does not in itself necessitate the installation of a traffic signal. The selection and use of traffic signals should be based on an engineering study of roadway, traffic, and other conditions identified during the on-site review meeting.

Modifications to Existing Traffic Signals
Any modification, deletion, or addition to an existing traffic signal that fundamentally changes the function of the signal, including adding phasing or geometry changes, may be implemented only after a traffic engineering study and field review determine a need in conformance with Part 4 of the MUTCD, Procedure 06C-51.1, and the Department’s Guidelines for Left-Turn Phases at Signalized Intersections. Changes should be coordinated between the Region, Traffic Operations Center, and Engineer for Traffic and Safety.
Access-Controlled Traffic Signals

The following conditions must be met before a signal system is designed and installed when the initial permitting or construction of a private or municipal development necessitates the installation or modification of a traffic signal:

1. The intersection created by the existing driveway or commercial access and the state highway must meet the signal warrants outlined in Part 4 of the MUTCD. Projections of traffic volumes will not be used unless verified and accepted by the Engineer for Traffic and Safety.

2. The developer or local authority should fund the total cost of the signal installation, including the design, right-of-way acquisition, utilities, materials, and all associated roadway modifications.

3. The driveway or driveways, if on both sides of the state highway, must be constructed to Department roadway intersection standards, with the cost to be borne by the developer or local authority.

4. The driveway should have a restricted access for a minimum of 200 feet into the developer's or owner's property. The restricted access may be greater than 200 feet as determined by an engineering study that is performed or approved by the Region Traffic Operations Engineer and Traffic and Safety Design Engineer. An easement may be established to accommodate installation and maintenance of Department equipment if one is needed.
Responsibility: Region Director or Region Traffic Operations Engineer

Actions

1. Submit request to conduct a traffic signal warrant study to the Traffic and Safety Studies Engineer.

Responsibility: Engineer for Traffic and Safety

2. Direct the Traffic and Safety Studies Engineer to schedule the necessary study upon receipt of traffic signal study request from the Region.

Responsibility: Traffic and Safety Studies Engineer

3. Perform traffic count, generate crash history report, and determine whether a signal is warranted.

4. Submit results and recommendations to the Region Traffic Operations Engineer.

5. Perform traffic modeling as necessary. The study must analyze and evaluate the proposed signal impact to signal operation along the corridor and identify beneficial or adverse impacts to the corridor.

6. Schedule and hold on-site review meeting with appropriate representatives from the Department and other governmental agencies if traffic signal warrant criteria are met. Attendees should include:

   a. Traffic and Safety Design Engineer and Studies Engineer

   b. Region Traffic Operations Engineer and Signal Maintenance Supervisor

   c. TOC Traffic Signal Operations Engineer

   d. Local representatives

The purpose of this meeting is to determine if the location should be placed on the warranted signal construction list or if major highway modifications are necessary in conjunction with or in lieu of a signal installation. Items normally considered at the meeting include safety, traffic management, geometric feasibility, environmental concerns, and impacts to right-of-way and utilities.
7. Place subject location in one of the three following categories based on the results of the signal warrant study and on-site review meeting:
   a. Does not meet a minimum warrant for signalization
   b. Warranted and justified
   c. Warranted and unjustified

8. Summarize study results and decisions made at the on-site review meeting and submit them to Region Director and meeting attendees listed in step 6 above.

   **Responsibility:** Region Director or Region Traffic Operations Engineer

9. Review, recommend, and provide comments to the Engineer for Traffic and Safety.

   **Responsibility:** Traffic and Safety Design Engineer

10. Add location to warranted signal construction list and notify the Traffic Signal Engineer if traffic signal is warranted and Region Director concurs.

   **Responsibility:** Traffic Signal Engineer

11. Prepare signal packages from the warranted signal construction list.
   a. Summarize scope of work
   b. Recommend options to expedite design and construction

12. Establish the project accounting.

13. Assign packages to the Region to oversee design and construction.
   a. The Traffic and Safety Design Engineer may offer to assist the Region with in-house design or construction in order to expedite signal installation.