

# Methodology Discipline Guidelines

## Study Methodology for Design

In general, the applicant needs to meet design standards and specifications.

### For modifications that are limited to one road

Design is chiefly concerned about the impacts that the project will have on motor safety, geometry, and operations. The following types of analyses must be performed for the road segment being modified:

#### Documents/Information for review:

- Concept Analysis
- Safety Analysis
- Typical Sections
- Preliminary Plans
- Desired Posted Speed
- Permit Involvement Form (Environmental Needs)

### For modifications that are not limited to only one road (i.e., multiple roads being modified)

All the previous analyses ought to be performed for each of the roads being significantly modified so that the impact on the network can be determined.

## Study Methodology for Traffic Operations

In general, there are two kinds of requests, those involving changes to only one road (i.e., link), and those involving changes to multiple roads (i.e., network). The type of analysis to be developed depends on whether changes occur on a link or a network.

### For modifications that are limited to one road

Traffic Operations is chiefly concerned about the impacts that the project will have in mobility and safety. The following types of analyses must be performed for the road segment being modified:

#### Mobility

- Capacity
  - Single vehicle Capacity
    - Existing capacity
    - Capacity under proposed conditions
  - Pedestrian capacity
    - Existing capacity
    - Capacity under proposed conditions
  - Transit capacity
    - Existing capacity
    - Capacity under proposed conditions
- Demand
  - Single vehicle demand
    - Existing demand
    - Demand under proposed conditions
  - Pedestrian / bicyclist demand
    - Existing demand
    - Demand under proposed conditions
  - Transit demand
    - Existing demand
    - Demand under proposed conditions
- Capacity & demand analysis
  - If any type of demand is expected to decrease, why is it expected to do so? What assumptions are being made?
  - Is the gap between each type of demand and capacity increasing or decreasing?
  - If the gap is increasing, how will excess demand be accommodated?
- Delay Analysis (Synchro or similar software), determine delay and LOS for the following scenarios:
  - existing conditions & existing traffic
  - proposed conditions & short-term forecasted traffic (1 – 3 years after implementation)
  - proposed conditions & long-term forecasted traffic (10 – 25 years after implementation)
- Parking study

- Parking spaces being reduced/increased
- Proposed parking management strategy, if any
- Signal system enhancements
  - Are any enhancements to the signal system being proposed as part of this project?
  - If yes, what impact are they expected to have in safety/mobility
- Emergency evacuation
  - How will the current functionality of the road during evacuation plans be impacted? If it is to be diminished, which how will the gap be bridged? (ex., improvements on parallel roads, etc).
- Active management
  - If the road is currently actively managed, what impact will these improvements have in the active management?
  - If the road is currently not actively managed, are there any plans to actively manage the corridor?
- Are any experimental traffic control devices being recommended for implementation?
  - If yes, has the appropriate agency (ex., FHWA, FDOT) approved the request to experiment?

## Safety

- Are any of the improvements within a high crash spot and/or high crash segment
- Are any of the improvements within the Department's 5% list (list of the 5% spots and segments with the highest number of crashes)
- Collision diagram
  - 5 year crash data for pedestrian/bicyclist crashes
  - 3 year crash data for all other types of crashes
- Crash analysis
  - Identify crash patterns within improvement area
  - Are proposed improvements expected to reduce the identified crash patterns
  - Calculate expected crashes using Safety Performance Functions, if available, for the following scenarios:
    - Existing conditions & existing demand
    - Proposed conditions & forecasted demand

## For modifications that are not limited to only one road (i.e., multiple roads being modified)

All the previous analyses ought to be performed for each of the roads being significantly modified so that the impact on the network can be determined.

## **Study Methodology for Planning and Environmental Management**

In general, the applicant needs to determine consistency with MPO LRTP and Thoroughfare Plan.

### **For modifications that are limited to one road**

PL&EM is chiefly concerned about the capacity and level of service for existing and future conditions.

The following types of analyses must be performed for the road segment being modified:

#### **Documents/Information for review:**

- Existing Roadway and intersection geometry and Level of Service
- Future proposed Roadway and intersection geometry and Level of Service
- Network Analysis
- Access Study
- Safety Analysis
- Transit/Ped./Bike Accommodation Plan
- Operation Study for on-street parking
- Hurricane Route analysis mitigation
- Typical Sections
- Traffic Diversion Analysis

### **For modifications that are not limited to only one road (i.e., multiple roads being modified)**

All the previous analyses ought to be performed for each of the roads being significantly modified so that the impact on the network can be determined.

## **Study Methodology for Office of Modal Development**

In general, the applicant needs to determine impacts to multi-modal transportation.

OMD is chiefly concerned access to transit facilities, feedback from transit agency regarding transit operations, bicycle, pedestrian accommodations, the American with Disabilities Act, proximity to freight and goods facilities and airports and consistency with State, Regional and Local Plans.

### **Documents/Information necessary for review:**

- All pertinent information particular to the project
- Typical Plan View
- Typical Sections
- Letter or response from transit agency
- Map showing nearest Intermodal facilities
- Downtown Master Plan

### **For modifications that are not limited to only one road (i.e., multiple roads being modified)**

All the previous analyses ought to be performed for each of the roads being significantly modified so that the impact on the network can be determined.

## **Study Methodology for Legal Department**

Legal is chiefly concerned with access, circuitry of access and the effect on underlying easements or dedications, if they exist.

### **Documents/Information necessary for review:**

- Recorded easements and/or dedications
- Site plan of potentially effected properties

### **For modifications that are not limited to only one road (i.e., multiple roads being modified)**

All the previous analyses ought to be performed for each of the roads being significantly modified so that the impact on the network can be determined.