

## Section 6A.1

### QUEUE ANALYSIS FOR LANE CLOSURES ON INTERSTATE

#### 6A.1.1 LEGAL

Revised Statute 48:279

#### 6A.1.2 DEFINITION

This policy is regarding queue analyses for scheduled Interstate lane closures for construction, maintenance and permit projects.

#### 6A.1.3 POLICY

The queue analysis shall determine delay caused by lane closures. A queue analysis shall be performed for all lane closures on Interstates with ADT's equal to and greater than 25,000. Lanes shall not be closed during the hours where the lane capacity exceeds 1,309 vehicles per hour lane. The restrictions may be more restrictive if the District Traffic Operations Engineer (DTOE) or Project Engineer (PE) deems necessary.

- i. Queue analysis shall be requested by:
  1. Construction projects - during Stage 0 and reevaluated by the Project Manager at Stage 3 and Stage 4 to validate traffic volumes
  2. Maintenance projects - during the planning stage by Maintenance Project Managers
  3. Permitted projects - prior to issuance of the permit by the District
- ii. The DTOE, Metropolitan Planning Organizations, Office of Planning and Programming, or consultants may collect traffic volumes. Traffic volumes shall consist of 24 hour, 7 day counts in 15 minute intervals.
- iii. Adjust raw volumes with adjustment factors obtained from the DOTD Planning Division. These factors are:
  1. % Trucks
  2. Axle Adjustments
  3. Adjustment for month of count
  4. Adjustment for month of construction
- iv. The DTOE shall perform or review and approve all queue analyses based on the following method:
  1. Using the 7 day 24 hour adjusted volumes, the minimum work restrictions shall occur where there are more than 1,309 vehicles per hour per open lane (*Highway Capacity Manual*, 2010, Ch.10)

- v. The PE shall report back to the DTOE on actual queues experienced during construction. This will allow the DTOE to refine the queue analysis.

**Alternatives to Prevent, Reduce, and Mitigate Queues Due to Lane Closures:**

- i. Projects with expected delay due to lane closures shall include:
  - 1. Standard Temporary Traffic Control Details (TTC) in plans
  - 2. Standard specification for Temporary Traffic Control pay item
- ii. The designer should consider the following to mitigate delays when lane closures are necessary:
  - 1. Alternate route plan
  - 2. Limit lane closures to off peak week nights and weekends
  - 3. Limit maximum physical length of lane closure
  - 4. Maintain existing number of lanes with lane narrowing and lane shifts
  - 5. Merge left before a lane closure
  - 6. Public information program identifying alternate routes through press releases

**6A.1.4 APPROVAL**

The District Traffic Operations Engineer shall perform or review all queue analyses based on using 7 day 24 hour adjusted volumes and the minimum work restrictions where 1,309 vehicles per hour per open lane.

The Project Engineer shall report back to the DTOE during construction to allow for the refinement of the queue analysis.

**6A.1.5 WAIVERS**

The minimum work restrictions may be less restrictive with a written justification based on the history of a previous project recommended for approval by the DTOE and the District Administrator and approved by the Chief Engineer.