LA DOTD Road Design Section

It is recommended that Offset Left Turn Lanes (OSLTL) be used on 4-lane divided roadways with special emphasis on non-signalized intersections.

Please note that the information contained herein is considerations and not standards. Each use of the OSLTL should be engineered on a site-by-site basis. All plans and geometrics need to be reviewed by the Road Design Section and the Traffic Engineering Development Section (Geometrics Unit). These reviews will be provided during routine plan development.

Design Considerations for Offset Left Turn Lanes

The sight distance for vehicles making left turns at intersections is often restricted by vehicles in the opposing left turn lane. In order to rectify this situation, offsetting the opposing left turn lanes can eliminate this sight distance interference. Research has determined that problems *normally* occur when the width of the median is 18 feet or greater. It is recommended that the minimum width of the median be 18 feet. This width will allow a 10-foot turn lane with a positive 2-foot offset. A smaller median can be used but will require a design waiver. The definition of offset distance is the distance between the right edge of the opposing left turn lane and the left edge of the turn lane. If the offset distance is to the left of the turn lane, the offset is considered negative. If the offset distance is to the right of the turn lane, the offset is considered positive.

Once it is determined that offset left turn lanes are feasible, the following considerations need to be evaluated. Note that these are considerations and not design guidelines. **All criteria need to be evaluated on a case-by-case basis.**

1. **Medial separation type and width**
   - Raised (Between opposing traffic and left turn lane)
   - Flush and painted (Between the left turn lane and through traffic)
   - Medial separation width (See attached detail)
     - 18 feet (minimum) passenger cars only
     - Normally used in retrofit situations

2. **Offset distance (positive) (See attached detail)**
   - 2.0 feet (min) for cars
   - 3.5 feet (min) for trucks

3. **U-turns**
   - Check turning radii for left turn vehicles
   - Improved shoulders may be required
     - Paved shoulders may need to be reinforced for U-turn movements that encroach on the shoulders.
   - Curbed roadways may be restrictive
     - Ensure the wheel path for U-turns does not damage the existing curb

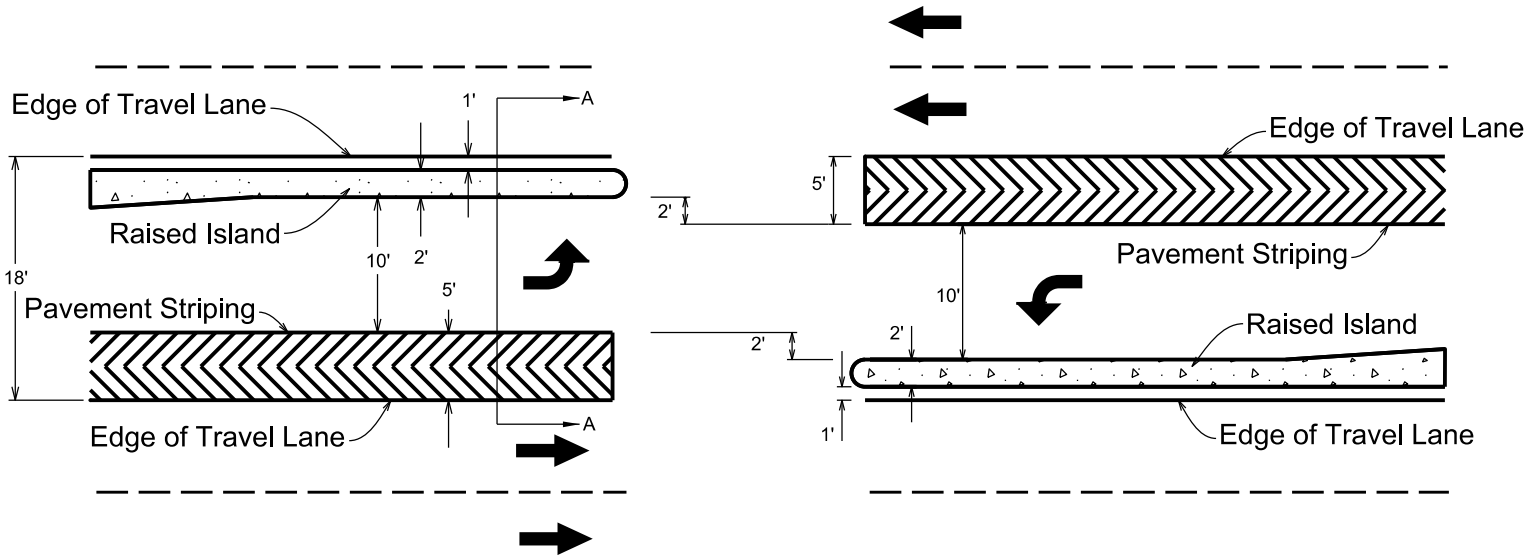
4. **Roadway Lighting**
    - Lighting in the boulevard medians may need to be relocated
    - If relocation is not possible, then the width of the median shall be wide enough to accommodate for the horizontal clearance for the approach roadway as well as the adjacent through lanes.

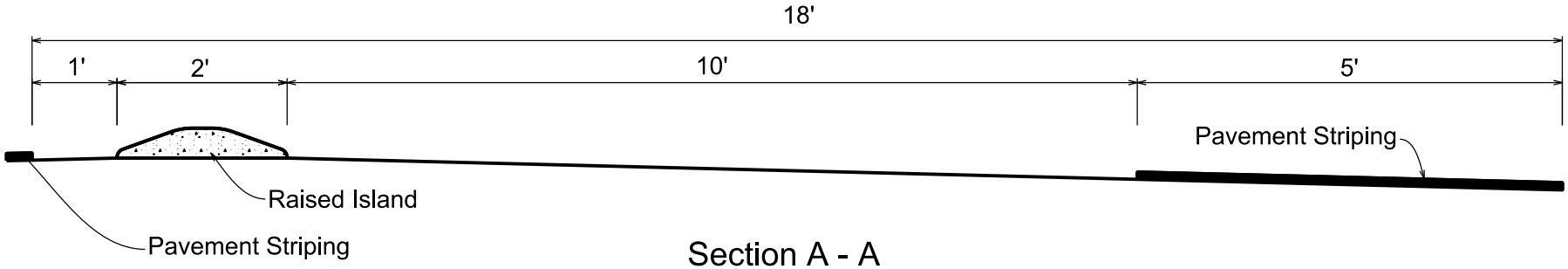
5. **Length of Taper**
    - Desired minimum length of taper is 165 feet
    - Taper rate may vary from 8:1 to 15:1 for design speeds from 30 MPH to 50 MPH, respectively, depending on the situation.
6. **Drainage**
    - Drain water across entire roadway
    - Provide drainage system in median

7. **Typical Section**
    - Cross slope of turn lane may need to be different than travel lanes to facilitate drainage into the median ditch, instead of across the travel lanes.
    - Elevations of the two curbs could be an aesthetic as well as a maintenance problem.
    - Review width of medial separator

8. **Cost**
    - More costly to construct
    - More costly to maintain

Offset Left Turn Lane





Section A - A