**DESIGN NOTES**

1. The information shown on this index is intended solely for the purpose of clear sight development and maintenance of intersecting highways, roads, and streets, and is not intended to be used to establish roadways and roadways safely extra as related to clear sight corridors. An analysis of sight distance shall be conducted for all intersections.

2. Details are based on the AASHTO's Policy on Geometric Design of Highways and Streets, 2001, CHAPTER 9 - INTERSECTION SIGHT DISTANCE, Cases B and F, and Department practices for channellized median openings (left turns from major roadways).

3. The minimum driver eye height of 14.3 feet from the edge of the traveled way may be adjusted on any intersection leg only when justified by a documented, site specific field study of vehicle stopping position and driver eye position.

4. For SIGNALIZED INTERSECTIONS sight distances should be developed based on AASHTO "Case D-Intersections With Traffic Signal Control." All signalized intersections, the first vehicle stopped on one approach should be visible to the driver of the first vehicle stopped on each of the other approaches. Left-turning vehicles should have sufficient sight distance to select gaps in oncoming traffic and complete left turns. Apart from these sight conditions, there are generally no other approach or departure sight triangles needed for signalized intersections. However, if the traffic signal is to be placed on two-way flashing operation (i.e., flashing yellow on the major-road approaches and flashing red on the minor-road approaches) under off-peak or nighttime conditions, then the appropriate departure sight triangles for Case D, both to the left and to the right, should be provided for the minor-road approaches. In addition, if right turns on a red signal are to be permitted from any approach, then the appropriate departure sight triangle to the left for Case B2 should be provided to accommodate right turns from that approach.

5. Where curvature, superelevation, adverse sight profiles or other conditions preclude the use of standard tree sizes and spacing, proof of view and shadowing restraints must be documented and the size and location of trees in medians detailed in the plans.

6. Intersection sight distance values are provided for Passenger Vehicles, SUV Vehicles and Combination Vehicles. Intersection sight distance based on the Passenger Vehicle is suitable for most intersections. Where substantial volumes of heavy vehicles enter the major -road, such as from ramp terminals with stop control or roadways serving truck terminals, the use of tabulated values for SD Vehicles or Combination Vehicles should be considered.

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**TREE SPACING TABLE**

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<thead>
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<th>Diameter (Inches)</th>
<th>Speed (mph)</th>
<th>Minimum Spacing (feet)</th>
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**GENERAL NOTES**

5. (Cont.)

- **Ground Cover & Trunked Plants**

  - **Separate or Combined**

  - **Ground Covers** - Plant selection of low growing vegetation that at maturity does not exceed a height greater than 18" below the sight line datum. For ground cover in combination with trees and palms, the following heights below the sight line datum will apply:
    - 24" for trees and palms ≤ 11" dia., and 18" for sabal palms > 11" dia.
    - 18" within Sight Window.

  - **Trunked Plants** - Trunk selection of a mature trunk diameter ≤ 11" or less measured at 6' above the ground. Canopy or high borne foliage shall never be lower than 5' above the sight line datum. These selections shall be spaced no closer than 20'.

- **Trees**

  Trees can be installed with sod; pavers; gravel; mulch; ground covers or other Department approved material. The clear sight window must be in conformance with the WINDOW DETAIL modified to attain the height requirement listed in Ground Coves above.

  - **A. Size and spacing shall conform to the Tree Spacing Table.**

  - **B. Requirements for placement within medians at median openings and at unsignalized and signalized intersections:**

    - **Horizontal clearance for the mature specimen shall be maintained as specified in Index 700.** Specimens whose mature trunk diameter is greater than 18 inches shall not be permitted.

    - **Trunk selection of a mature trunk diameter ≤ 11" or less measured at 6' above the ground. Canopy or high borne foliage shall never be lower than 5' above the sight line datum. These selections shall be spaced no closer than 20'.**

    - **Trunk selection of a mature trunk diameter ≤ 11" or less measured at 6' above the ground. Canopy or high borne foliage shall never be lower than 5' above the sight line datum. These selections shall be spaced no closer than 20'.**

- **C. For safely, these additional setbacks are required:**

  - **D. Where left turns from the major road are permitted, no trees shall be located within the distance of 'd', Sheet 2 of 6; and not less than the distances called for in (c) or (d), as applicable.**

- **For low speed facilities (design speed less than 50 mph), size and spacing shall conform to the Tree Spacing Table.** No trees shall be permitted within 200' of the restricted median nose. Beyond this limit, size and spacing shall conform to the Tree Spacing Table.
**Limit Of Clear Sight**

The intent of this standard is to provide a window with vertical limits of not less than 0' above and 1'-6" below the sight line datum, and horizontal limits defined by the limits of clear sight.

**Definitions**
- **R/W Line**: Right of Way Line
- **HC**: Horizontal Clearance
- **d**: Vertical clearance
- **w**: Roadway width
- **Min. Spacing When Tower is 175' or Less**: Minimum spacing when tower is 175' or less

**Design Note 1**
- For horizontal clearances (HC) of six feet (6'), the values for d may be determined by the equation d = d (w/(w+12)). For roadways with nonrestricted conditions, d and d should be based on the geometry for the left turn lane storage and on clear zone widths (see Index No. 700).

**Design Note 2**
- All values for d should be based on the geometry for the left turn lane storage and on clear zone widths (see Index No. 700).

**Note:**
- The d values in this table were established by the method referenced in Design Note 2, and are applicable to urban, predominantly curved roadways with design speeds of 45 mph or less and meeting the restricted conditions defined in Index No. 700. For horizontal clearance (HC) of six feet (6'), the values for d may be determined by the equation d = d (w/(w+12)). For roadways with nonrestricted conditions, d and d should be based on the geometry for the left turn lane storage and on clear zone widths (see Index No. 700).

**Note:**
- The clear sight line origin is assumed to be 14.5' from the edge of the near lane.

**Note:**
- Areas Free Of Sight Obstructions

**Channelized Directional Median Openings**

**Perception Diagram**

**Setting Sabal Palm (State Tree) Spacing**

**Setting Sabal Palm (State Tree) Spacing**

**Shadow Diagram**

**Legend**

**PICTORIAL WINDOW DETAIL**

**PICTORIAL**

**ORIGIN OF CLEAR SIGHT LINE ON MINOR ROAD**

**Perception Diagram**

**Setting Sabal Palm (State Tree) Spacing**

**Shadow Diagram**

**Legend**

**Areas Free Of Sight Obstructions**

**CHANNELIZED DIRECTIONAL MEDIAN OPENINGS**

**FDOT DESIGN STANDARDS**

**FY 2012/2013**

**SIGHT DISTANCE AT INTERSECTIONS**

**INDEX NO.**

**546**

**SHEET NO.**

**2**
SIGHT DISTANCE AT INTERSECTIONS

PICTORIAL
2 LANE UNDIVIDED

PICTORIAL
2 LANE 2 WAY • FLARED FOR OPPOSING LEFT TURN CENTERED ON ALIGNMENT

PICTORIAL
2 LANE 2 WAY • FLARED FOR SINGLE SIDE LEFT TURN CENTERED ON ALIGNMENT

SIGHT DISTANCE (d) AND RELATED DISTANCES (dL, dR) (FEET)
2 LANE UNDIVIDED

LEGEND
 Areas Free Of Sight Obstructions

NOTE: See Sheet 2 for intersecting roadway origin of clear sight and quadrant corner clips.
PICTORIAL
4 LANE UNDIVIDED

PICTORIAL
4 LANE UNDIVIDED FLARED - SYMMETRICAL

PICTORIAL
4 LANE UNDIVIDED WITH OPTIONAL LANE

LEGEND
Areas Free Of Sight Obstructions

NOTE: See Sheet 2 for intersecting roadway origin of clear sight and quadrant corner clips.

Areas Free Of Sight Obstructions

SIGHT DISTANCE AT INTERSECTIONS

SIGHT DISTANCE (d) AND RELATED DISTANCES (dL, dR) (FEET)

4 LANE UNDIVIDED

4 LANE UNDIVIDED FLARED - SYMMETRICAL

4 LANE UNDIVIDED WITH OPTIONAL LANE
SIGHT DISTANCE AT INTERSECTIONS

4 LANE DIVIDED ROADWAY

SIGHT DISTANCES (d) & (d') AND RELATED DISTANCES (d_L, d_m, & d_V) (FEET)