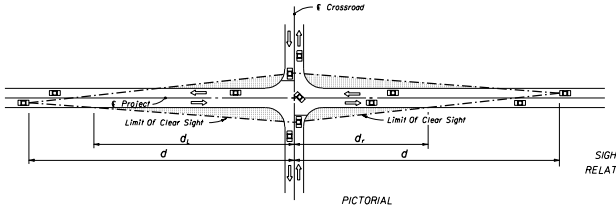
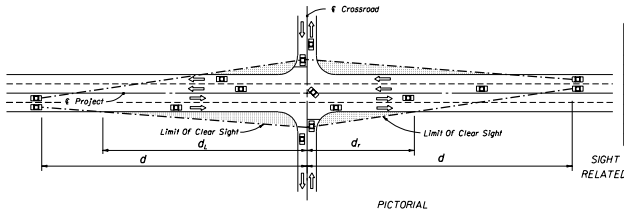


Design Speed	d	d_L	d_r
30	380	290	200
35	470	370	250
40	580	450	310
45	710	550	380
50	840	650	450
55	990	760	520
60	1150	890	600
65	1350	1040	710
See General Note 2			

SIGHT DISTANCE (d) AND RELATED DISTANCES (d_L , d_r) (FEET)

PICTORIAL

2 LANE UNDIVIDED

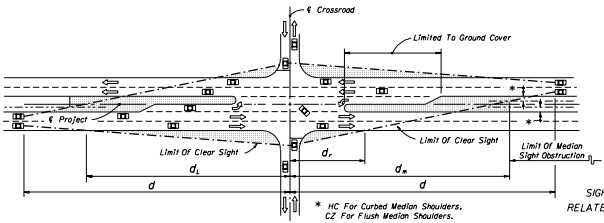


Design Speed	d	d_L	d_r
30	380	290	160
35	470	370	190
40	580	450	240
45	710	550	290
50	840	650	340
55	990	760	400
60	1150	890	460
65	1350	1040	540
See General Note 2			

SIGHT DISTANCE (d) AND RELATED DISTANCES (d_L , d_r) (FEET)

PICTORIAL

MULTILANE UNDIVIDED



Design Speed	d	d_L	d_r	d_m
30	380	290	120	300
35	470	370	150	370
40	580	450	180	460
45	710	550	220	560
50	840	650	260	670
55	990	760	300	780
60	1150	890	360	910
65	1350	1040	430	1070
See General Note 2				

* HC For Curbed Median Shoulders, CZ For Flush Median Shoulders.

SIGHT DISTANCE (d) AND RELATED DISTANCES (d_L , d_r , d_m) (FEET)

PICTORIAL

MULTILANE DIVIDED

LEGEND

Areas Free Of Sight Obstructions

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

GENERAL NOTES

1. Details apply to both rural and urban intersections under stop sign control or flashing beacon control. For full signal controlled intersections see Design Note No. 4 below.
2. Sight distance (d) applies to normal and skewed intersections (intersecting angles between 60° and 120°), and where vertical and/or horizontal curves are present. Sight distance (d) is measured along the major roadway from the center of the intersecting roadway. Distances d_L and d_r are measured from the centerline of the intersecting roadway to a point on the edge of the near side outer traffic lane on the major roadway. Distance d_m is measured from the centerline of the intersecting roadway to a point on the median clear zone limit or horizontal clearance limit for the far side roadway of the major roadway.
3. a. The limits of clear sight define a corridor throughout which a clear sight window must be preserved. See WINDOW DETAIL, Sheet 2.
   b. Clear sight must be provided between vehicles at intersection stop locations, and vehicles on the major roadway within dimension 'd'.
   c. Since observations are made in both directions along the line of sight, the reference datum between roadways is 3'-6" above respective pavements.
4. Barrier systems within intersection sight corridors, where penetration into the sight window might occur, shall be located to provide the least adverse effect practical.
5. The corridor defined by the limits of clear sight is a restricted planting area. Drivers of vehicles on the intersecting roadway and vehicles on the major roadway must be able to see each other clearly throughout the limits of 'd'. If, in the Engineers judgement landscaping interferes with the line of sight corridor prescribed by these standards the Engineer may rearrange, relocate or eliminate plantings. Plants within the restricted areas are limited to selections as follows:

   Ground Cover & Trunked Plants (Separate or Combined):

   Ground Covers - Plant selection of low growing vegetation which at maturity does not attain 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" x18" dia. (dia. -within Sight Window).

   Trunked Plants - Plant selection of a mature trunk diameter 4" 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 used with lawn; pavers; pavement; gravel, bark or wood chip beds; ground covers or other Department approved material. The clear sight window must be in conformance with the 'WINDOW DETAIL' modified to attain the height requirements listed in 'Ground Covers' above. Tree size and spacing shall conform to the following tabular values:

Description	Speed (mph)											
	30		35		40		45		50		55		60	
	(Inches)											
Diameter (Within Limits Of Sight Window)	>4 ≤11	>11 ≤18	>4 ≤11	>11 ≤18	>4 ≤11	>11 ≤18	>4 ≤11	>11 ≤18	>4 ≤11	>11 ≤18	>4 ≤11	>11 ≤18	>4 ≤11	>11 ≤18
	(Feet)											
Minimum Spacing (c. to c. Of Trunk)	22	91	27	108	33	126	40	146	45	165	52	173	60	193

   Sizes and spacings are based on the following conditions:
   (a) A single line of trees in the median parallel to but not necessarily colinear with the centerline.
   (b) A straight approaching mainline, within skew limits as described in No. 2 above.
   (c) 1. Trees and palms ≤ 11" in diameter casting a vertical 6' wide shadow band on a vehicle entering at stop bar location when viewed by mainline driver beginning at distance 'd'; see SHADOW DIAGRAM, Sheet 2.
   2. Sabal palms with diameters >11" to 18" spaced at intervals providing a 2 second full view of entering vehicle at stop bar location when viewed by mainline driver beginning at distance 'd'; see PERCEPTION DIAGRAM, Sheet 2.

   For any other conditions the tree sizes, spacings and locations shall be detailed in the plans; see Design Note No. 5.

DESIGN NOTES

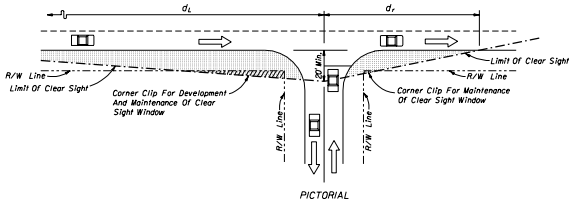
1. The information shown on this Index is intended solely for the purpose of clear sight development and maintenance at intersecting highways, roads and streets, and is not intended to be used to establish geometric design, speed control, signing, marking, lighting or signalization, or to establish roadway and roadside safety except as related to clear sight corridors. An analysis of sight distance shall be documented for all intersections.
2. Details are based on the AASHTO 'A Policy On Geometric Design Of Highways And Streets', Chapter IX. Cases III and III, and Department practices for channelized median openings (left turns from major roadways).
3. The minimum driver eye setback of 20' from the edge of the traffic lane 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: Due to a variety of standard operational characteristics associated with signal controlled intersections, the sight distances based on Case III procedures should be available to the driver. Unanticipated vehicle conflicts at signalized intersections, such as violation of the signal, turns on red, malfunction of the signal, or use of the flashing red/yellow mode further substantiate the need for incorporation of Case III sight distances. If the proper sight distances can not be attained, other design features such as 'no right-on-red' may be necessary. Where landscaping is incorporated with construction or superimposed on existing facilities, the planting restrictions listed under the General Notes above are to be considered in the sight distance analysis.
5. Where curvature, superelevation, adverse spill 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.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

SIGHT DISTANCE AT INTERSECTIONS

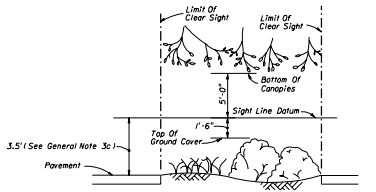
	Names	Dates	Approved By
Designed By	KWK-JRC	12/93	State Roadway Design Engineer
Drawn By	RJG	07/99	Revision
Checked By	DJD/KWK	10/99	Sheet No. 1 of 2

Index No. 546



PICTORIAL

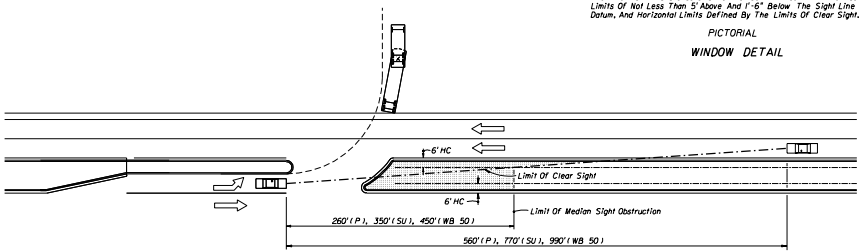
ORIGIN OF CLEAR SIGHT LINE AND PROPERTY CORNER CLIPS



The Intent Of This Standard Is To Provide A Window With Vertical Limits Of Not Less Than 5' Above And 1'-6" Below The Sight Line Datum, And Horizontal Limits Defined By The Limits Of Clear Sight.

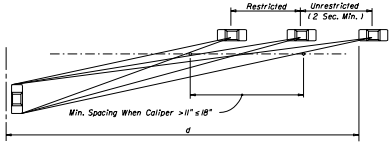
PICTORIAL

WINDOW DETAIL



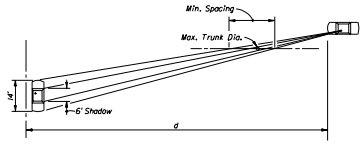
PICTORIAL

CHANNELIZED DIRECTIONAL MEDIAN OPENINGS



PERCEPTION DIAGRAM

SETTING SABAL PALM (STATE TREE) SPACING



SHADOW DIAGRAM

LEGEND

Areas Free Of Sight Obstructions

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

SIGHT DISTANCE AT INTERSECTIONS

	Names	Dates
Designed By	KIM JOE	11/03
Drawn By	ABC	10/99
Checked By	JOHN DOE	10/99

Approved By _____ State Roadway Design Engineer

Revision | Sheet No. | Index No.
00 | 2 of 2 | 546

SSSSSSSTITLESSSSSS