

**DESIGN NOTES**

- The information shown on this index is intended solely for the purpose of clear sight development and maintenance at intersecting highways, roads, streets and driveways, and is not intended to be used to establish roadway and roadside safety except as related to clear sight corridors. An analysis of sight distance shall be documented for all intersections.
- For the purpose of this Index, Minor Road is defined as all intersecting highways, roads, streets and driveways.
- Details are based on the AASHTO 'A Policy On Geometric Design Of Highways And Streets, 2001', CHAPTER 9, INTERSECTION SIGHT DISTANCE, CASES B and F, and Department practices for channelized median openings (left turns from major road).
- The minimum driver eye setback of 14.5' 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.
- For SIGNALIZED INTERSECTIONS sight distances should be developed based on AASHTO 'Case D-Intersections With Traffic Signal Control'. 'At 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 B, 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.'
- Where curvature, superelevation, adverse split 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.
- Intersection sight distance values are provided for Passenger Vehicles, SU 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 SU Vehicles or Combination Vehicles should be considered.

**TREE SPACING TABLE \*\***

| Description<br><br>Diameter<br>(Within Limits Of Sight Window) | Design Speed (mph) |        |       |        |       |        |       |        |       |        |       |        |       |        |
|--|--------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
|  | 30                 |        | 35    |        | 40    |        | 45    |        | 50    |        | 55    |        | 60    |        |
|  | (Inches)           |        |       |        |       |        |       |        |       |        |       |        |       |        |
|  | >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)                            | 25                 | 90     | 30    | 105    | 35    | 120    | 40    | 135    | 50    | 150    | 55    | 165    | 60    | 180    |

\*\* Sizes and spacings are based on the following conditions:

- A single line of trees in the median parallel to but not necessarily colinear with the centerline.
- A straight approaching mainline, within skew limits as described in No. 2 above.
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" ≤ 18" spaced at intervals providing a 2 second full view of entering vehicle at stop bar location when viewed by the mainline driver beginning at distance 'd'; see PERCEPTION DIAGRAM, Sheet 2.
- Trees with diameters ≤ 11" intermixed with trees with diameters > 11" ≤ 18" are to be spaced based on trees with diameters > 11" ≤ 18".

For any other conditions the tree sizes, spacings and locations shall be detailed in the plans; see Design Note 5.

**GENERAL NOTES**

- 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. At intersections listed in the Department's High Crash Intersection Report, designers shall give attention to keeping to a minimum, objects that distract or affect sight distance.
- Sight distance 'd' applies to normal and skewed intersections (intersecting angles between 60° and 120°), and where vertical and/or horizontal curves are not present. Sight distance 'd' is measured along the major road from the center of the entrance lane of the minor road to the center of the near approach lane (right or left) of the major road. Distances 'd<sub>L</sub>' and 'd<sub>r</sub>' are measured from the centerline of the entrance lane of the minor road to a point on the edge of the near side outer traffic lane on the major road. Distance 'd<sub>m</sub>' is measured from the centerline of the entrance lane of the minor road to a point on the median clear zone limit or horizontal clearance limit for the far side road of the major road.
- 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 road 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.
- Barrier systems within intersection sight corridors, where penetration into the sight window might occur, shall be located to provide the least adverse affect practical.
- The corridor defined by the limits of clear sight is a restricted planting area. Drivers of vehicles on the intersecting road and vehicles on the major road must be able to see each other clearly throughout the limits of 'd' and 'd<sub>a</sub>'. 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:

- (Cont.)  
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" but ≤ 18" 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 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 requirements listed in 'Ground Covers' 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:

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

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

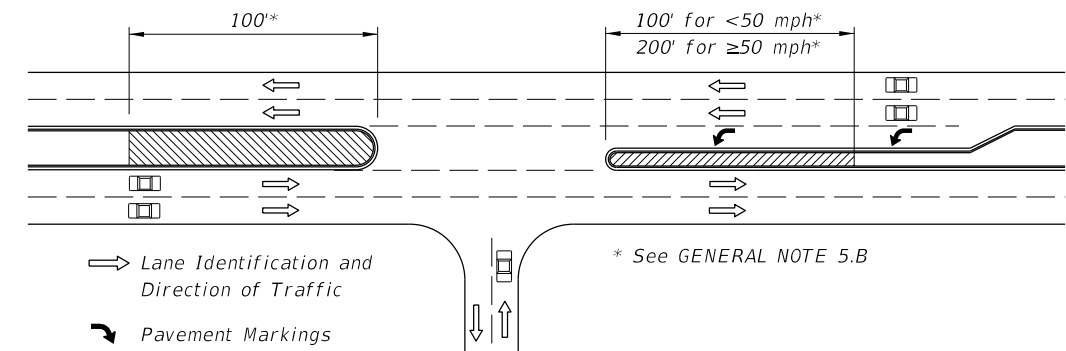
c. For safety, these additional setbacks are required:

1. Where no left turn lane is present, size and spacing shall conform to the Tree Spacing Table. No trees shall be permitted within 100' of the restricted median nose (measured from the edge of pavement),

2. Where left turn lane(s) are present, the following requirements apply:

- 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 100' of the restricted median nose (measured from the edge of pavement).

- For high speed facilities (design speed 50 mph or greater), 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.

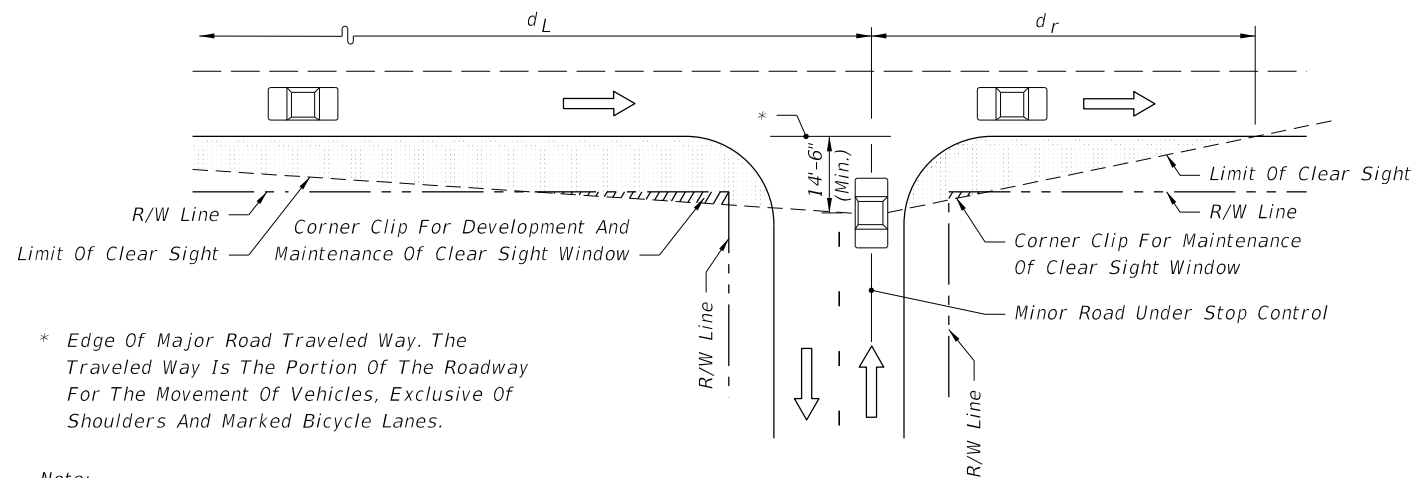


\* See GENERAL NOTE 5.B

**PLAN**  
Special Areas Limited to Ground Cover

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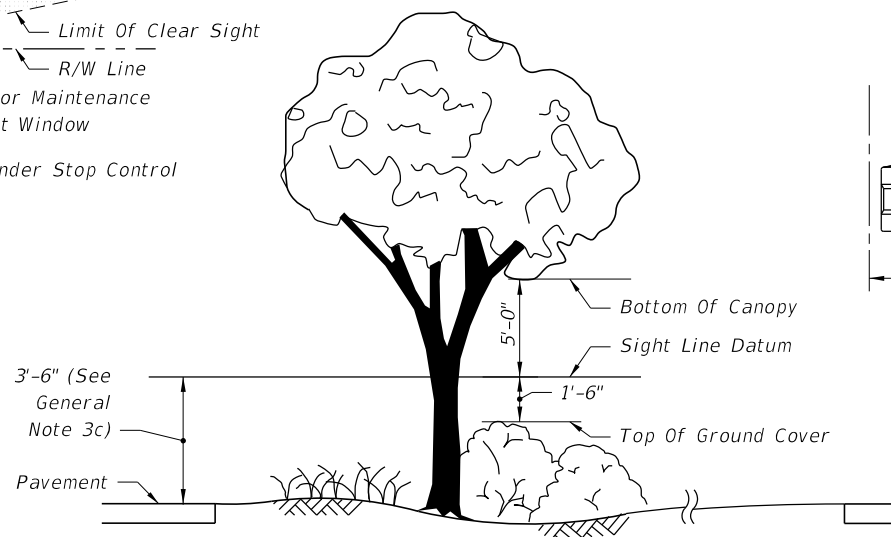
|                           |          |              |                                    |                                 |                  |                     |
|---------------------------|----------|--------------|------------------------------------|---------------------------------|------------------|---------------------|
| LAST REVISION<br>07/01/15 | REVISION | DESCRIPTION: | <br>FY 2016-17<br>DESIGN STANDARDS | SIGHT DISTANCE AT INTERSECTIONS | INDEX NO.<br>546 | SHEET NO.<br>1 of 6 |
|---------------------------|----------|--------------|------------------------------------|---------------------------------|------------------|---------------------|



\* Edge Of Major Road Traveled Way. The Traveled Way Is The Portion Of The Roadway For The Movement Of Vehicles, Exclusive Of Shoulders And Marked Bicycle Lanes.

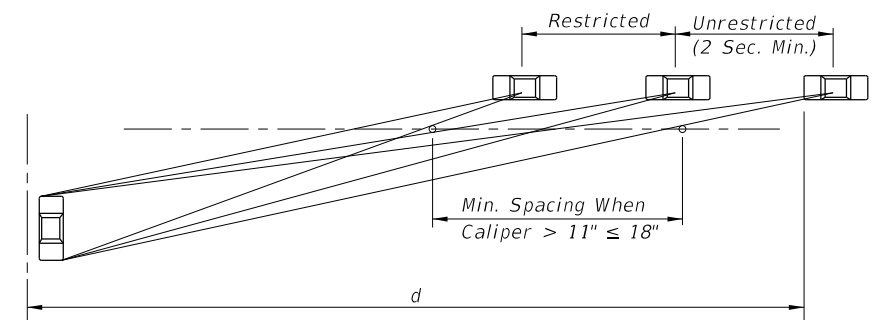
Note:  
Lines For 'Limit Of Clear Sight' Are Opposite Hand When Major Road Near Lane Traffic Moving Left (e.g., One-Way Left).

PICTORIAL  
ORIGIN OF CLEAR SIGHT LINE  
ON MINOR ROAD

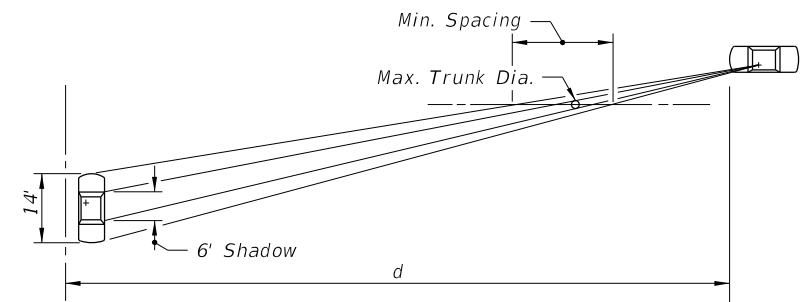


The Intent Of This Standard Is To Provide A Window With Vertical Limits Of Not Less Than 5' Above And 1'-6" Below The Sight Line Datum, And Horizontal Limits Defined By The Limits Of Clear Sight.

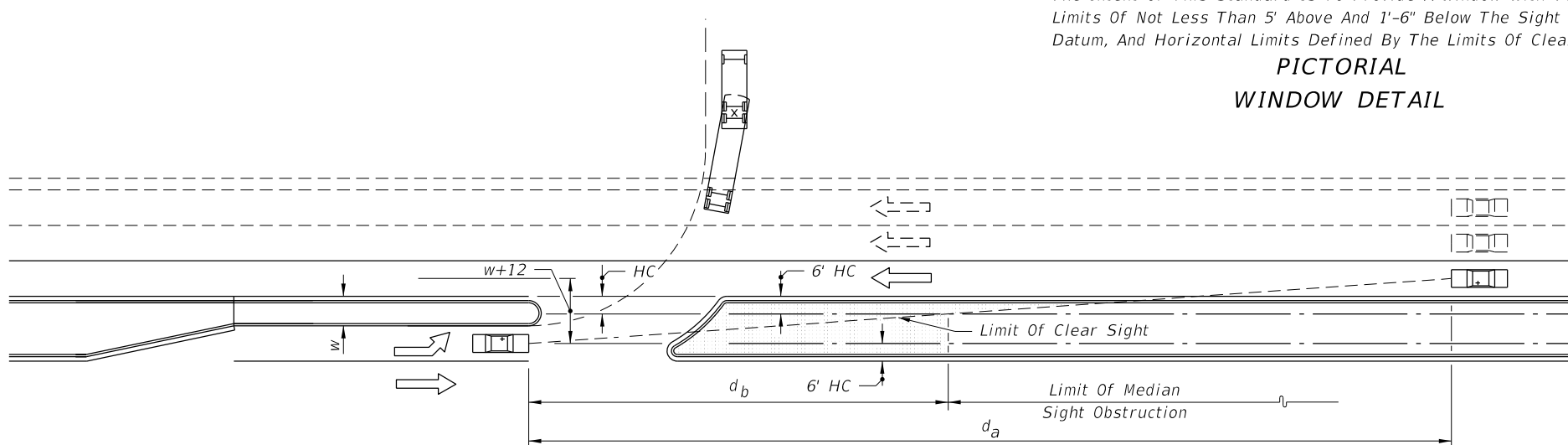
PICTORIAL  
WINDOW DETAIL



PERCEPTION DIAGRAM  
SETTING SABAL PALM (STATE TREE) SPACING



SHADOW DIAGRAM



PICTORIAL

LEGEND

Areas Free Of Sight Obstructions

| Design Speed MPH | $d_a$ (Feet)   |     |       |                 |     |       |                 |     |       |
|------------------|----------------|-----|-------|-----------------|-----|-------|-----------------|-----|-------|
|                  | 1 Lane Crossed |     |       | 2 Lanes Crossed |     |       | 3 Lanes Crossed |     |       |
|                  | P              | SU  | Comb. | P               | SU  | Comb. | P               | SU  | Comb. |
| 30               | 245            | 290 | 330   | 265             | 320 | 365   | 290             | 350 | 395   |
| 35               | 285            | 335 | 385   | 310             | 370 | 425   | 335             | 410 | 460   |
| 40               | 325            | 385 | 440   | 355             | 425 | 485   | 385             | 465 | 525   |
| 45               | 365            | 430 | 495   | 400             | 475 | 545   | 430             | 525 | 590   |

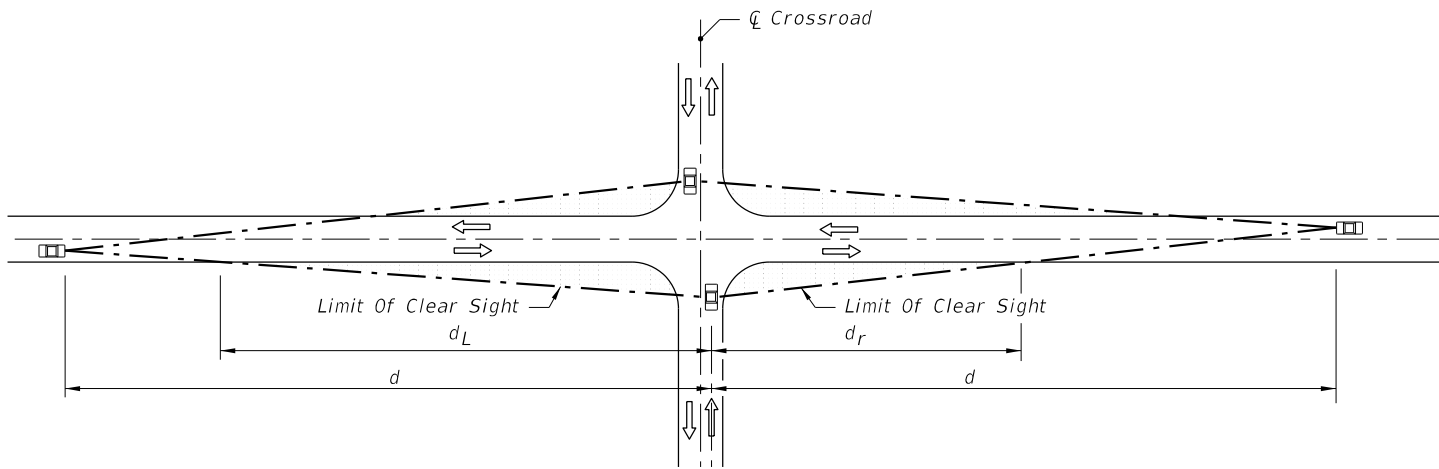
☆ See Note

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

For wide medians where the turning vehicle can approach the through lanes at or near 90°, use  $d_v$  values from tables on sheets 5 or 6. (The clear sight line origin is assumed to be 14'-6" from the edge of the near lane.)

CHANNELIZED DIRECTIONAL MEDIAN OPENINGS

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| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 335 | 240            | 155            |
| 35           | 390 | 275            | 175            |
| 40           | 445 | 315            | 200            |
| 45           | 500 | 355            | 225            |
| 50           | 555 | 395            | 250            |
| 55           | 610 | 435            | 275            |
| 60           | 665 | 470            | 300            |
| 65           | 720 | 510            | 325            |

Passenger Vehicle

| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 420 | 300            | 190            |
| 35           | 490 | 350            | 220            |
| 40           | 560 | 400            | 250            |
| 45           | 630 | 450            | 285            |
| 50           | 700 | 495            | 315            |
| 55           | 770 | 545            | 345            |
| 60           | 840 | 595            | 375            |
| 65           | 910 | 645            | 410            |

SU Vehicle

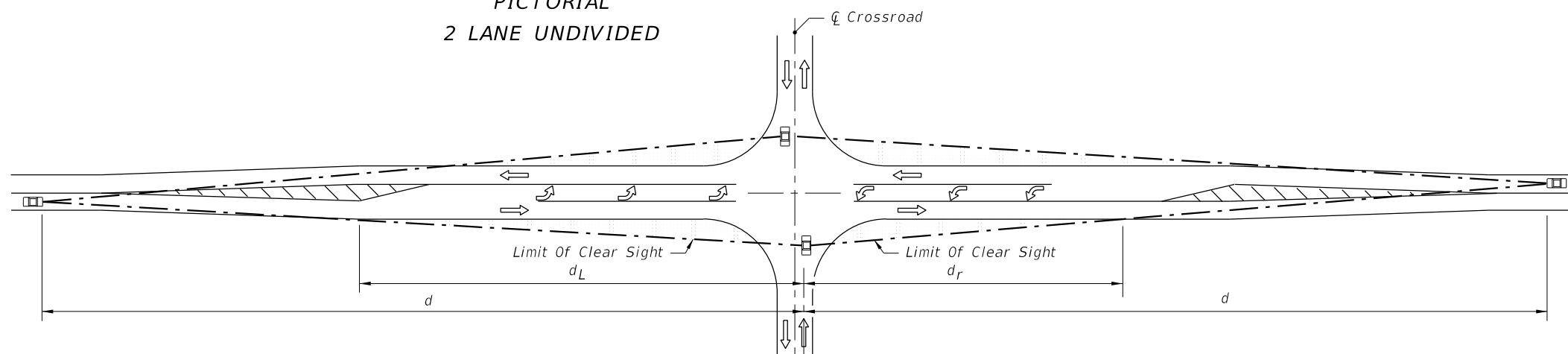
| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 510  | 365            | 230            |
| 35           | 595  | 420            | 265            |
| 40           | 680  | 480            | 305            |
| 45           | 765  | 545            | 345            |
| 50           | 845  | 600            | 380            |
| 55           | 930  | 660            | 415            |
| 60           | 1015 | 720            | 455            |
| 65           | 1100 | 780            | 495            |

Combination Vehicle

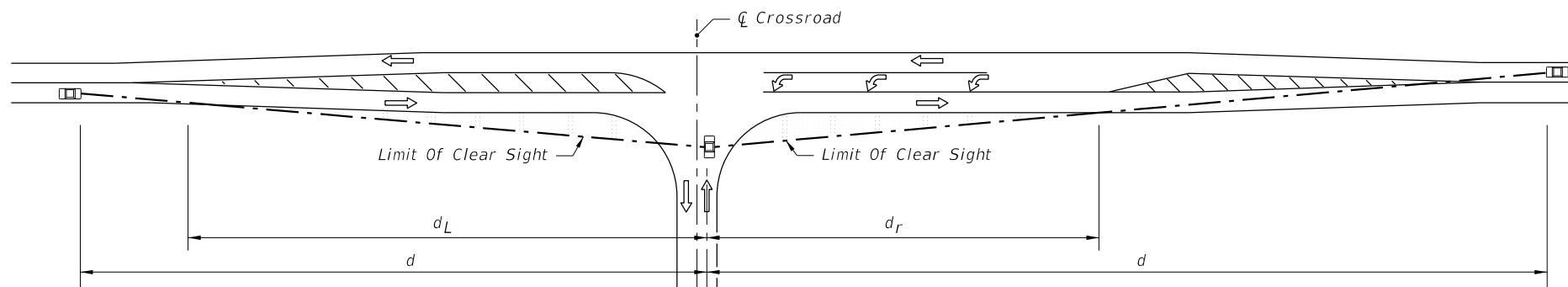
SIGHT DISTANCE (d) AND RELATED DISTANCES (d<sub>L</sub>, d<sub>r</sub>) (FEET)

2 LANE UNDIVIDED

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

| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 355 | 195            | 135            |
| 35           | 415 | 230            | 160            |
| 40           | 475 | 260            | 180            |
| 45           | 530 | 290            | 200            |
| 50           | 590 | 325            | 225            |
| 55           | 650 | 355            | 245            |
| 60           | 710 | 390            | 270            |
| 65           | 765 | 420            | 290            |

Passenger Vehicle

| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 450 | 250            | 170            |
| 35           | 525 | 290            | 200            |
| 40           | 600 | 330            | 230            |
| 45           | 675 | 370            | 255            |
| 50           | 750 | 410            | 285            |
| 55           | 825 | 455            | 315            |
| 60           | 900 | 495            | 340            |
| 65           | 975 | 535            | 370            |

SU Vehicle

| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 540  | 295            | 205            |
| 35           | 630  | 345            | 240            |
| 40           | 720  | 395            | 275            |
| 45           | 810  | 445            | 305            |
| 50           | 900  | 495            | 340            |
| 55           | 990  | 545            | 375            |
| 60           | 1080 | 590            | 410            |
| 65           | 1170 | 640            | 440            |

Combination Vehicle

SIGHT DISTANCE (d) AND RELATED DISTANCES (d<sub>L</sub>, d<sub>r</sub>) (FEET)

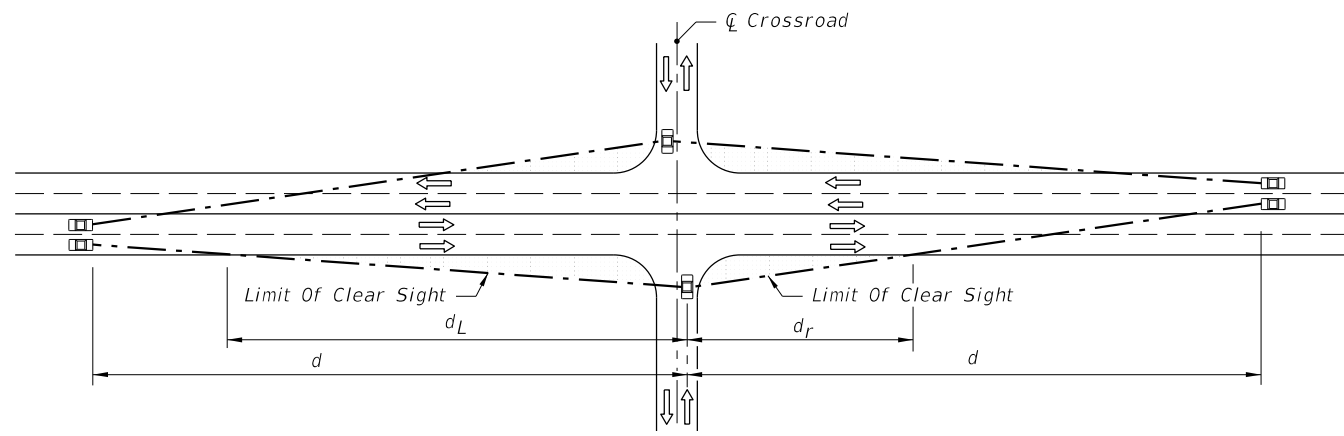
2 LANE 2 WAY • FLARED FOR LEFT TURNS

LEGEND

Areas Free Of Sight Obstructions

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

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PICTORIAL  
4 LANE UNDIVIDED

| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 355 | 255            | 120            |
| 35           | 415 | 295            | 135            |
| 40           | 475 | 335            | 155            |
| 45           | 530 | 375            | 175            |
| 50           | 590 | 420            | 195            |
| 55           | 650 | 460            | 215            |
| 60           | 705 | 500            | 230            |
| 65           | 765 | 545            | 250            |

Passenger Vehicle

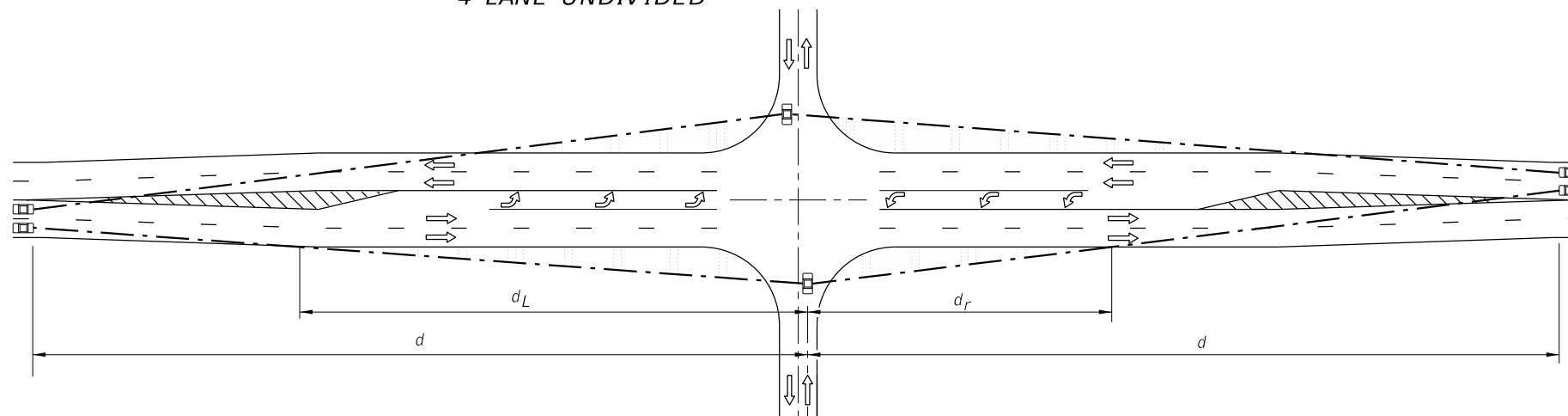
| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 450 | 320            | 150            |
| 35           | 525 | 375            | 175            |
| 40           | 600 | 425            | 200            |
| 45           | 675 | 480            | 220            |
| 50           | 750 | 530            | 245            |
| 55           | 825 | 585            | 270            |
| 60           | 900 | 640            | 295            |
| 65           | 975 | 690            | 320            |

SU Vehicle

| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 540  | 385            | 180            |
| 35           | 630  | 450            | 205            |
| 40           | 720  | 510            | 235            |
| 45           | 810  | 575            | 265            |
| 50           | 900  | 640            | 295            |
| 55           | 990  | 700            | 325            |
| 60           | 1080 | 765            | 355            |
| 65           | 1170 | 830            | 385            |

Combination Vehicle

SIGHT DISTANCE (d) AND RELATED DISTANCES (d<sub>L</sub>, d<sub>r</sub>) (FEET)  
4 LANE UNDIVIDED



PICTORIAL  
4 LANE UNDIVIDED FLARED - SYMMETRICAL

| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 375 | 205            | 110            |
| 35           | 440 | 245            | 130            |
| 40           | 500 | 275            | 145            |
| 45           | 565 | 310            | 165            |
| 50           | 625 | 345            | 180            |
| 55           | 690 | 380            | 200            |
| 60           | 750 | 410            | 215            |
| 65           | 815 | 450            | 235            |

Passenger Vehicle

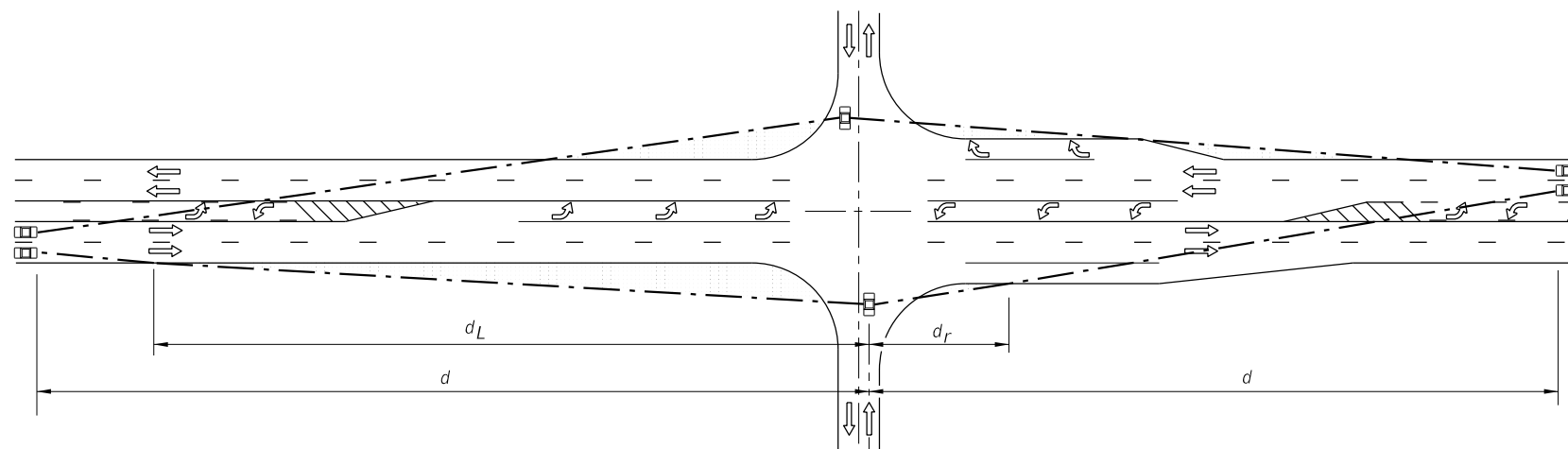
| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 480  | 265            | 140            |
| 35           | 560  | 310            | 165            |
| 40           | 640  | 350            | 185            |
| 45           | 720  | 395            | 210            |
| 50           | 800  | 440            | 230            |
| 55           | 880  | 485            | 255            |
| 60           | 960  | 525            | 280            |
| 65           | 1040 | 570            | 300            |

SU Vehicle

| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 570  | 315            | 165            |
| 35           | 665  | 365            | 195            |
| 40           | 760  | 420            | 220            |
| 45           | 855  | 470            | 245            |
| 50           | 950  | 520            | 275            |
| 55           | 1045 | 575            | 300            |
| 60           | 1140 | 625            | 330            |
| 65           | 1235 | 675            | 355            |

Combination Vehicle

SIGHT DISTANCE (d) AND RELATED DISTANCES (d<sub>L</sub>, d<sub>r</sub>) (FEET)  
4 LANE UNDIVIDED FLARED - SYMMETRICAL



PICTORIAL  
4 LANE UNDIVIDED WITH OPTIONAL LANE

| Design Speed | d   | d <sub>L</sub> | d <sub>r</sub> |
|--------------|-----|----------------|----------------|
| 30           | 375 | 265            | 80             |
| 35           | 440 | 315            | 95             |
| 40           | 500 | 355            | 110            |
| 45           | 565 | 400            | 120            |
| 50           | 625 | 445            | 135            |
| 55           | 690 | 490            | 150            |
| 60           | 750 | 530            | 160            |
| 65           | 815 | 580            | 175            |

Passenger Vehicle

| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 480  | 340            | 105            |
| 35           | 560  | 400            | 120            |
| 40           | 640  | 455            | 135            |
| 45           | 720  | 510            | 155            |
| 50           | 800  | 570            | 170            |
| 55           | 880  | 625            | 190            |
| 60           | 960  | 680            | 205            |
| 65           | 1040 | 740            | 220            |

SU Vehicle

| Design Speed | d    | d <sub>L</sub> | d <sub>r</sub> |
|--------------|------|----------------|----------------|
| 30           | 570  | 405            | 125            |
| 35           | 665  | 470            | 145            |
| 40           | 760  | 540            | 165            |
| 45           | 855  | 605            | 185            |
| 50           | 950  | 675            | 205            |
| 55           | 1045 | 740            | 225            |
| 60           | 1140 | 810            | 245            |
| 65           | 1235 | 875            | 265            |

Combination Vehicle

SIGHT DISTANCE (d) AND RELATED DISTANCES (d<sub>L</sub>, d<sub>r</sub>) (FEET)  
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.

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LAST REVISION  
07/01/14

REVISION

DESCRIPTION:



FY 2016-17  
DESIGN STANDARDS

SIGHT DISTANCE AT INTERSECTIONS

INDEX NO.  
546

SHEET NO.  
4 of 6

| MEDIAN 22' OR LESS |     |                |                |                |
|--------------------|-----|----------------|----------------|----------------|
| Design Speed       | d   | d <sub>L</sub> | d <sub>r</sub> | d <sub>m</sub> |
| 30                 | 395 | 280            | 90             | 325            |
| 35                 | 460 | 325            | 100            | 380            |
| 40                 | 525 | 375            | 115            | 430            |
| 45                 | 590 | 420            | 130            | 485            |
| 50                 | 655 | 465            | 145            | 540            |
| 55                 | 720 | 510            | 160            | 590            |
| 60                 | 785 | 555            | 175            | 645            |
| 65                 | 850 | 605            | 185            | 700            |

| 25'-64' MEDIAN |     |                |                |                 |
|----------------|-----|----------------|----------------|-----------------|
| Design Speed   | d   | d <sub>L</sub> | d <sub>v</sub> | d <sub>vL</sub> |
| 30             | 355 | 255            | 330            | 240             |
| 35             | 415 | 295            | 390            | 280             |
| 40             | 470 | 335            | 445            | 320             |
| 45             | 530 | 375            | 500            | 360             |
| 50             | 590 | 420            | 550            | 400             |
| 55             | 650 | 460            | 610            | 440             |
| 60             | 705 | 500            | 665            | 480             |
| 65             | 765 | 545            | 720            | 520             |

PASSENGER VEHICLE (P)

| MEDIAN 35' OR LESS |      |                |                |                |
|--------------------|------|----------------|----------------|----------------|
| Design Speed       | d    | d <sub>L</sub> | d <sub>r</sub> | d <sub>m</sub> |
| 30                 | 540  | 385            | 110            | 460            |
| 35                 | 630  | 450            | 125            | 535            |
| 40                 | 720  | 510            | 145            | 615            |
| 45                 | 810  | 575            | 160            | 685            |
| 50                 | 900  | 640            | 180            | 760            |
| 55                 | 990  | 700            | 195            | 840            |
| 60                 | 1080 | 765            | 215            | 915            |
| 65                 | 1170 | 830            | 230            | 990            |

| 40'-64' MEDIAN |     |                |                |                 |
|----------------|-----|----------------|----------------|-----------------|
| Design Speed   | d   | d <sub>L</sub> | d <sub>v</sub> | d <sub>vL</sub> |
| 30             | 450 | 320            | 420            | 330             |
| 35             | 525 | 375            | 490            | 385             |
| 40             | 600 | 425            | 560            | 440             |
| 45             | 675 | 480            | 630            | 490             |
| 50             | 750 | 530            | 700            | 545             |
| 55             | 825 | 585            | 770            | 600             |
| 60             | 900 | 640            | 840            | 655             |
| 65             | 975 | 690            | 910            | 710             |

SINGLE-UNIT TRUCK (SU)

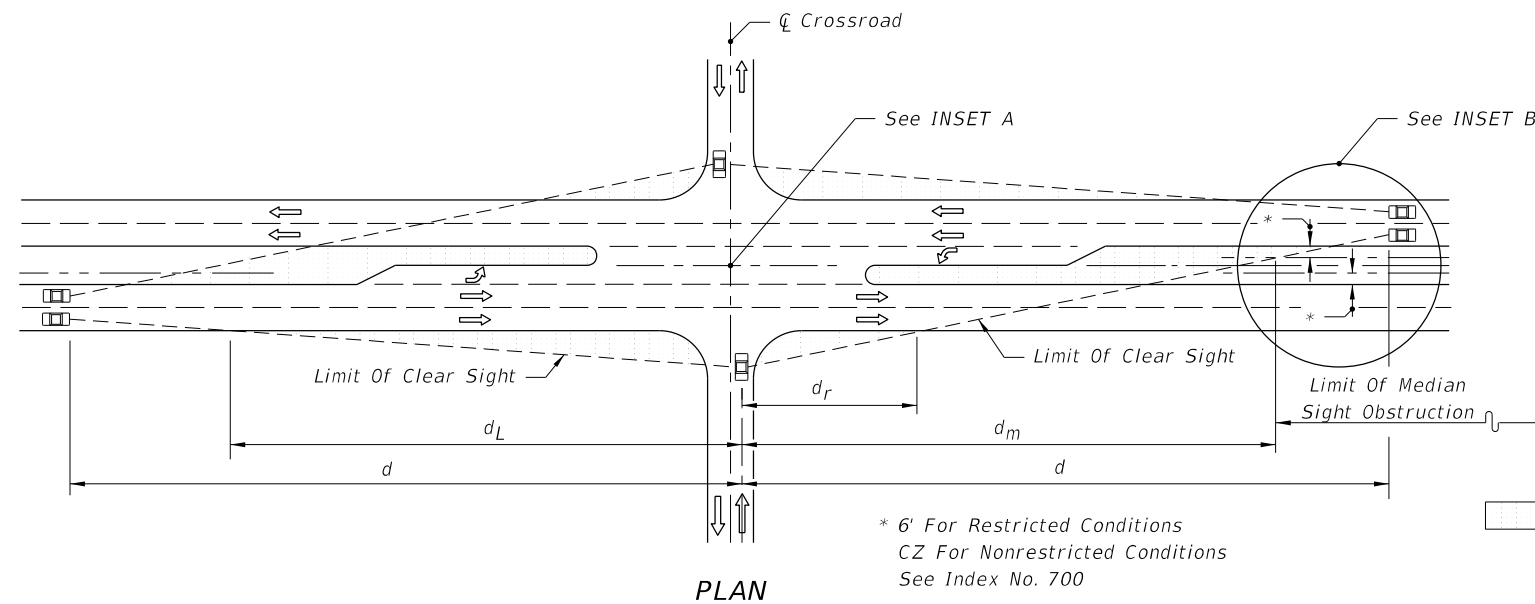
| MEDIAN 30' OR LESS |      |                |                |                |
|--------------------|------|----------------|----------------|----------------|
| Design Speed       | d    | d <sub>L</sub> | d <sub>r</sub> | d <sub>m</sub> |
| 30                 | 615  | 435            | 120            | 520            |
| 35                 | 720  | 510            | 140            | 605            |
| 40                 | 820  | 580            | 160            | 690            |
| 45                 | 925  | 655            | 180            | 780            |
| 50                 | 1025 | 725            | 200            | 860            |
| 55                 | 1130 | 800            | 220            | 950            |
| 60                 | 1230 | 870            | 240            | 1035           |
| 65                 | 1335 | 945            | 260            | 1120           |

| 35'-50' MEDIAN |      |                |                |                |
|----------------|------|----------------|----------------|----------------|
| Design Speed   | d    | d <sub>L</sub> | d <sub>r</sub> | d <sub>m</sub> |
| 30             | 670  | 475            | 105            | 585            |
| 35             | 780  | 555            | 120            | 680            |
| 40             | 890  | 630            | 140            | 780            |
| 45             | 1000 | 710            | 155            | 875            |
| 50             | 1110 | 790            | 170            | 970            |
| 55             | 1225 | 870            | 190            | 1070           |
| 60             | 1335 | 945            | 205            | 1165           |
| 65             | 1445 | 1025           | 225            | 1265           |

| 64' MEDIAN   |      |                |                |                 |
|--------------|------|----------------|----------------|-----------------|
| Design Speed | d    | d <sub>L</sub> | d <sub>v</sub> | d <sub>vL</sub> |
| 30           | 540  | 385            | 510            | 435             |
| 35           | 630  | 450            | 595            | 500             |
| 40           | 720  | 510            | 680            | 575             |
| 45           | 810  | 575            | 760            | 645             |
| 50           | 900  | 640            | 845            | 720             |
| 55           | 990  | 700            | 930            | 790             |
| 60           | 1080 | 765            | 1015           | 865             |
| 65           | 1165 | 825            | 1100           | 935             |

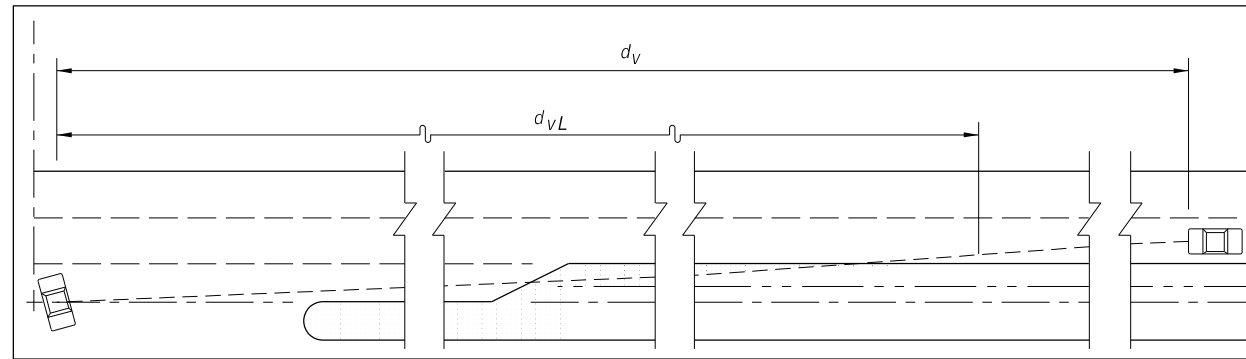
INTERMEDIATE SEMI-TRAILERS (WB-40 & WB-50)

| Vehicle Type     | Vehicle Length (Ft.) |
|------------------|----------------------|
| Passenger (P)    | 19                   |
| Single Unit (SU) | 30                   |
| Large School Bus | 40                   |
| WB-40            | 45.5                 |
| WB-50            | 55                   |



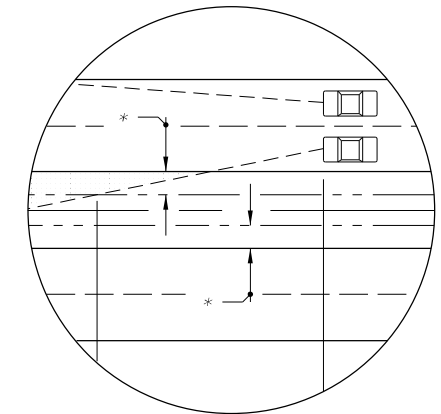
PLAN

PICTORIAL



INSET A

Where The Median Is Sufficiently Wide For The Design Vehicle To Pause In The Median (Vehicle Length Plus 6' Min.) The Clear Line Of Sight To The Right (d<sub>v</sub>) Is Measured From The Vehicle Pause Location, i.e., Not From The Cross Road Stop Position; Distances d<sub>r</sub> & d<sub>m</sub> Do Not Apply.



INSET B

NOTES FOR 4-LANE DIVIDED ROADWAY

- See Sheet 2 for origin of clear sight line on the minor road.
- Values shown in the tables are the governing (controlling) sight distances calculated based on 'AASHTO Case B - Intersection with Stop Control on the Minor Road.'

SIGHT DISTANCES (d) & (d<sub>v</sub>) AND RELATED DISTANCES (d<sub>L</sub>, d<sub>r</sub>, d<sub>m</sub> & d<sub>vL</sub>) (FEET)

4 LANE DIVIDED ROADWAY

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| MEDIAN 22' OR LESS |       |       |       |       |
|--------------------|-------|-------|-------|-------|
| Design Speed       | $d_x$ | $d_L$ | $d_r$ | $d_m$ |
| 30                 | 415   | 295   | 80    | 355   |
| 35                 | 485   | 345   | 90    | 415   |
| 40                 | 555   | 395   | 105   | 470   |
| 45                 | 625   | 445   | 115   | 530   |
| 50                 | 690   | 490   | 130   | 585   |
| 55                 | 760   | 540   | 140   | 645   |
| 60                 | 830   | 590   | 155   | 705   |
| 65                 | 900   | 640   | 170   | 765   |

| 25'-64' MEDIAN |     |       |       |          |
|----------------|-----|-------|-------|----------|
| Design Speed   | $d$ | $d_L$ | $d_v$ | $d_{vL}$ |
| 30             | 375 | 265   | 330   | 240      |
| 35             | 440 | 315   | 385   | 280      |
| 40             | 500 | 355   | 445   | 320      |
| 45             | 565 | 400   | 500   | 360      |
| 50             | 625 | 445   | 555   | 400      |
| 55             | 690 | 490   | 610   | 440      |
| 60             | 750 | 530   | 665   | 480      |
| 65             | 815 | 580   | 720   | 520      |

**PASSENGER VEHICLE (P)**

| MEDIAN 35' OR LESS |       |       |       |       |
|--------------------|-------|-------|-------|-------|
| Design Speed       | $d_x$ | $d_L$ | $d_r$ | $d_m$ |
| 30                 | 570   | 405   | 90    | 495   |
| 35                 | 665   | 470   | 105   | 580   |
| 40                 | 760   | 540   | 120   | 660   |
| 45                 | 855   | 605   | 135   | 745   |
| 50                 | 955   | 675   | 155   | 830   |
| 55                 | 1050  | 745   | 170   | 915   |
| 60                 | 1145  | 810   | 185   | 995   |
| 65                 | 1240  | 880   | 200   | 1080  |

| 40'-64' MEDIAN |      |       |       |          |
|----------------|------|-------|-------|----------|
| Design Speed   | $d$  | $d_L$ | $d_v$ | $d_{vL}$ |
| 30             | 480  | 340   | 420   | 330      |
| 35             | 560  | 400   | 490   | 385      |
| 40             | 640  | 455   | 560   | 440      |
| 45             | 720  | 510   | 630   | 490      |
| 50             | 805  | 570   | 700   | 545      |
| 55             | 885  | 625   | 770   | 600      |
| 60             | 965  | 685   | 840   | 665      |
| 65             | 1045 | 740   | 910   | 710      |

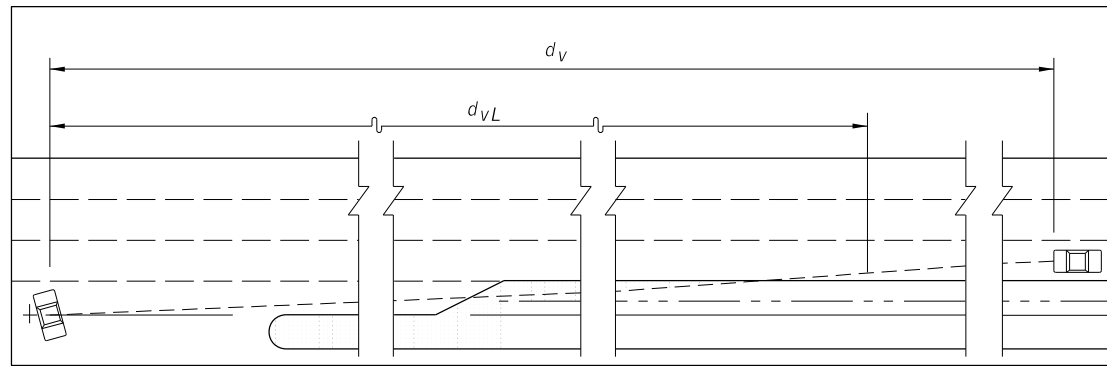
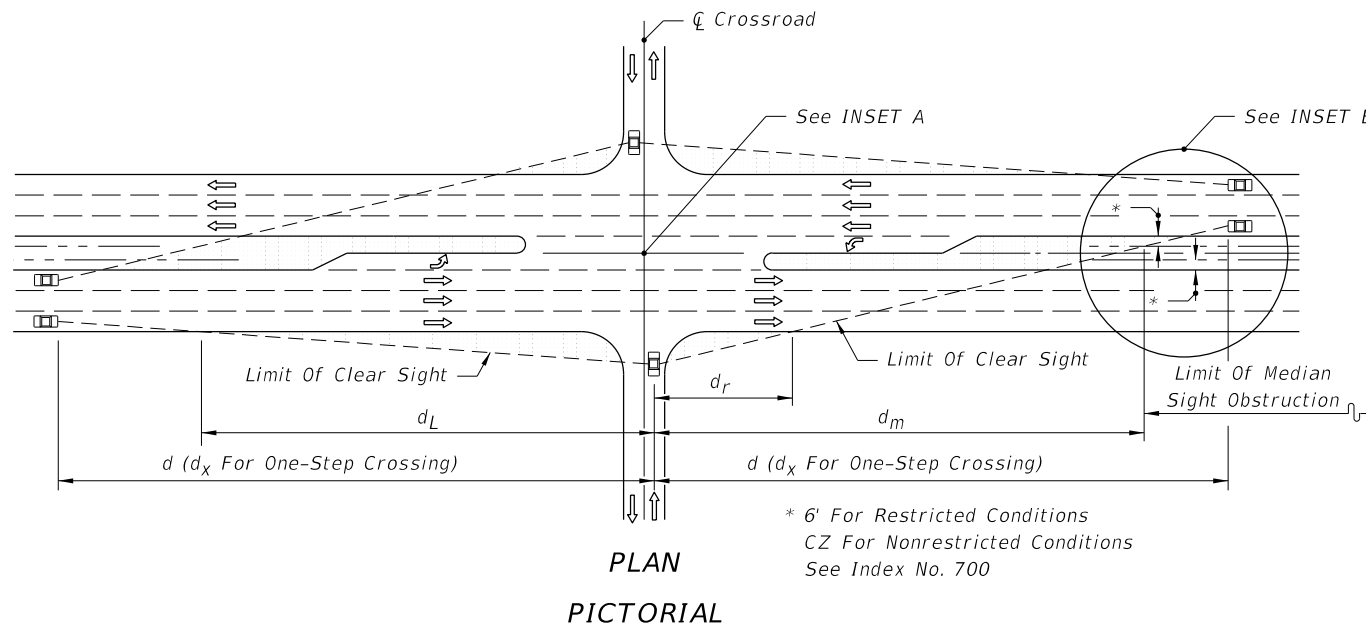
**SINGLE-UNIT TRUCK (SU)**

| MEDIAN 30' OR LESS |       |       |       |       |
|--------------------|-------|-------|-------|-------|
| Design Speed       | $d_x$ | $d_L$ | $d_r$ | $d_m$ |
| 30                 | 650   | 460   | 110   | 560   |
| 35                 | 755   | 535   | 130   | 655   |
| 40                 | 865   | 615   | 145   | 745   |
| 45                 | 970   | 690   | 165   | 835   |
| 50                 | 1080  | 765   | 185   | 930   |
| 55                 | 1185  | 840   | 200   | 1025  |
| 60                 | 1290  | 915   | 220   | 1115  |
| 65                 | 1400  | 990   | 235   | 1210  |

| 35'-50' MEDIAN |       |       |       |       |
|----------------|-------|-------|-------|-------|
| Design Speed   | $d_x$ | $d_L$ | $d_r$ | $d_m$ |
| 30             | 700   | 495   | 95    | 625   |
| 35             | 815   | 580   | 115   | 725   |
| 40             | 930   | 660   | 130   | 825   |
| 45             | 1045  | 740   | 145   | 930   |
| 50             | 1165  | 825   | 160   | 1035  |
| 55             | 1280  | 905   | 175   | 1140  |
| 60             | 1395  | 990   | 190   | 1240  |
| 65             | 1510  | 1070  | 210   | 1340  |

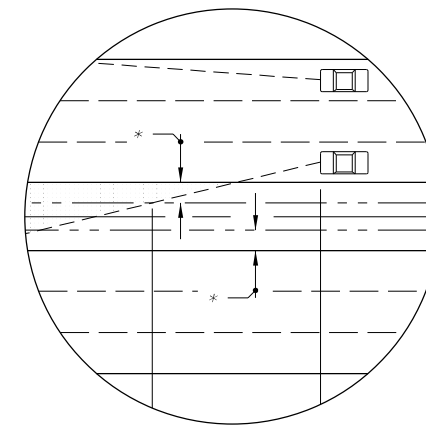
| 64' MEDIAN   |      |       |       |          |
|--------------|------|-------|-------|----------|
| Design Speed | $d$  | $d_L$ | $d_v$ | $d_{vL}$ |
| 30           | 570  | 405   | 510   | 435      |
| 35           | 665  | 470   | 590   | 500      |
| 40           | 760  | 540   | 680   | 575      |
| 45           | 855  | 605   | 760   | 645      |
| 50           | 950  | 675   | 845   | 720      |
| 55           | 1045 | 740   | 930   | 790      |
| 60           | 1140 | 805   | 1015  | 865      |
| 65           | 1235 | 875   | 1100  | 935      |

**INTERMEDIATE SEMI-TRAILERS (WB-40 & WB-50)**



Where The Median Is Sufficiently Wide For The Design Vehicle To Pause In The Median (Vehicle Length Plus 6' Min.) The Clear Line Of Sight To The Right ( $d_v$ ) Is Measured From The Vehicle Pause Location, i.e., Not From The Cross Road Stop Position; Distances  $d_r$  &  $d_m$  Do Not Apply.

**INSET A**



**INSET B**

**NOTES FOR 6-LANE DIVIDED ROADWAY**

1. See Sheet 2 for origin of clear sight line on the minor road.
2. Values shown in the tables are the governing (controlling) sight distances calculated based on 'AASHTO Case B - Intersection with Stop Control on the Minor Road.'

SIGHT DISTANCES ( $d$ ), ( $d_v$ ) & ( $d_x$ ) AND RELATED DISTANCES ( $d_L$ ,  $d_r$ ,  $d_m$  &  $d_{vL}$ ) (FEET)

**6 LANE DIVIDED**

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|                           |          |              |                                |                                 |                  |                     |
|---------------------------|----------|--------------|--------------------------------|---------------------------------|------------------|---------------------|
| LAST REVISION<br>07/01/14 | REVISION | DESCRIPTION: | FY 2016-17<br>DESIGN STANDARDS | SIGHT DISTANCE AT INTERSECTIONS | INDEX NO.<br>546 | SHEET NO.<br>6 of 6 |
|---------------------------|----------|--------------|--------------------------------|---------------------------------|------------------|---------------------|