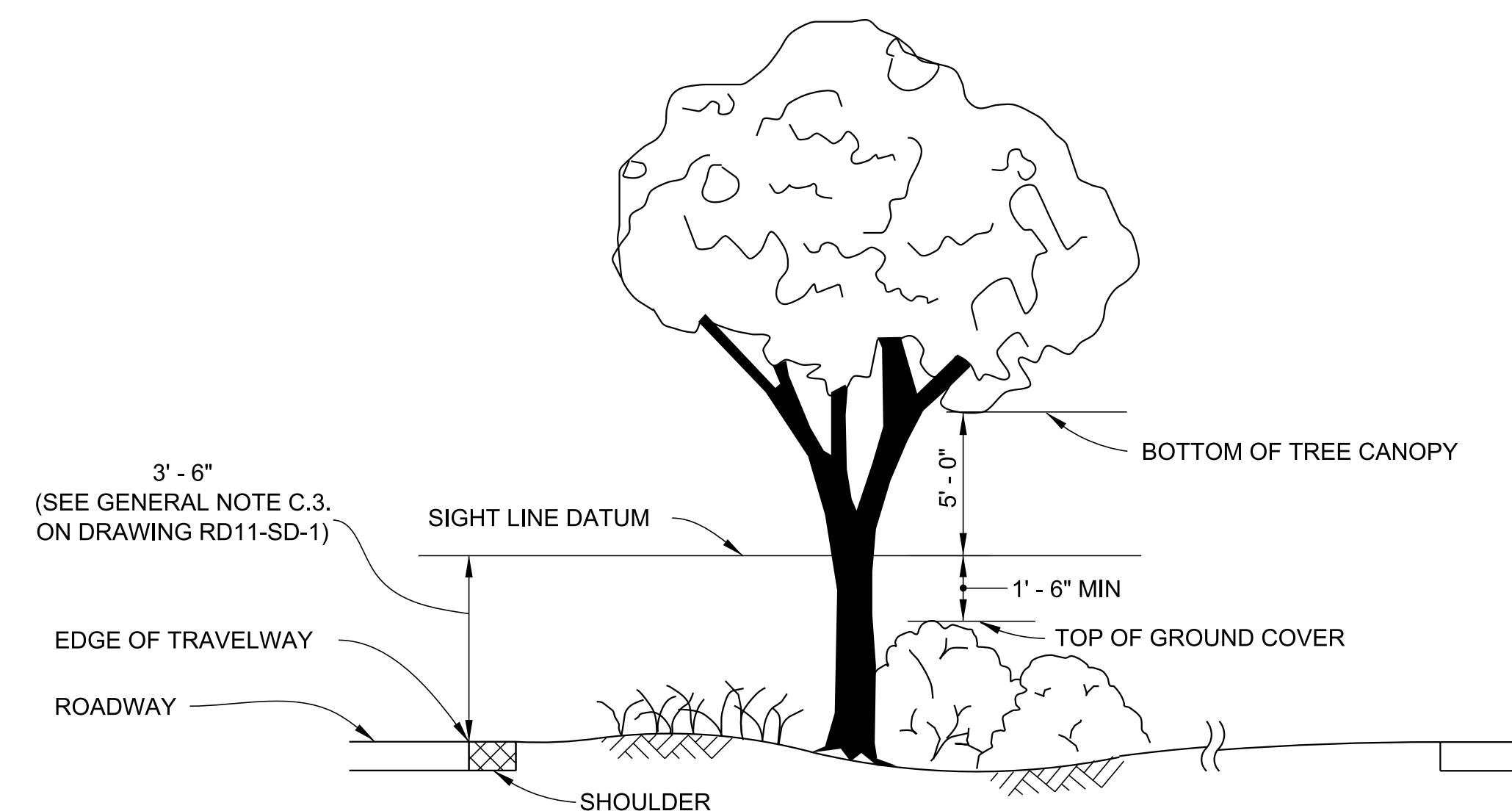


CHANNELIZED DIRECTIONAL MEDIAN OPENINGS

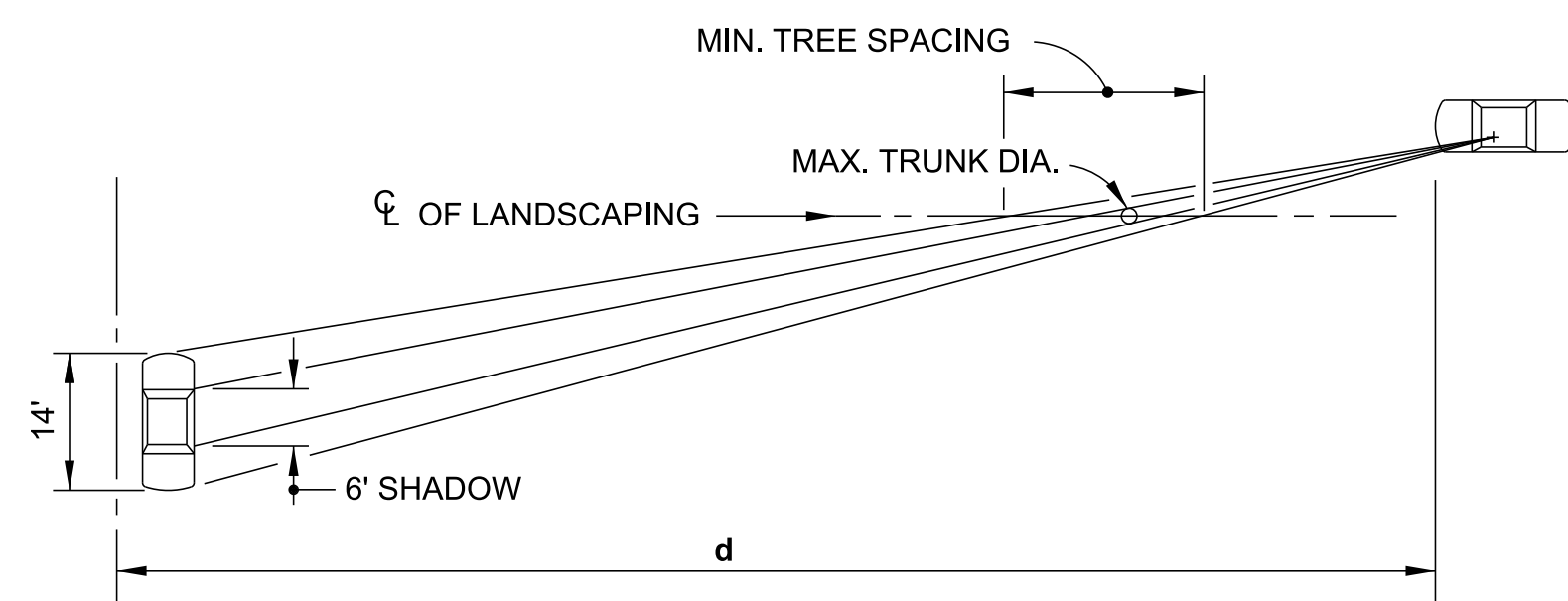
LEGEND

AREAS FREE OF SIGHT OBSTRUCTIONS



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.

VERTICAL LIMITS OF CLEAR SIGHT DISTANCE
(SEE FOOTNOTE C.1. ON SHEET RD11-SD-1)



HORIZONTAL LIMITS OF CLEAR SIGHT DISTANCE

CHANNELIZED DIRECTIONAL MEDIAN OPENINGS									
d_a (CLEAR LINE SIGHT DISTANCE IN FEET)									
POSTED SPEED (M.P.H.)	1 LANE CROSSED			2 LANE CROSSED			3 LANE CROSSED		
	P	SU	COMB.	P	SU	COMB.	P	SU	COMB.
30	245	290	335	265	320	365	290	350	395
35	285	335	390	310	370	425	335	410	460
40	325	385	445	355	425	485	385	465	525
45	365	430	500	400	480	545	430	525	590

THE **d_a** VALUES IN THE TABLE ARE APPLICABLE TO URBAN, PREDOMINANTLY CURBED ROADWAYS WITH DESIGN SPEEDS OF 45 MPH OR LESS AND ARE BASED ON CHAPTER 9, INTERSECTION SIGHT DISTANCE, CASES B AND F, AND THE DEPARTMENT PRACTICES FOR CHANNELIZED MEDIAN OPENINGS (LEFT TURNS ON MAJOR ROADWAYS). FOR HORIZONTAL CLEARANCE (HC) OF SIX FEET (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. THE **w** IS THE MEDIAN WIDTH.

P = PASSENGER VEHICLE, SU = SINGLE UNIT TRUCK, COMB. = COMBINATION

CLEAR SIGHT DESIGN NOTES

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 SHOULD BE ABLE TO SEE EACH OTHER CLEARLY THROUGHOUT THE LIMITS OF 'd' AND 'd_a'. IF IN THE ENGINEER'S 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. THE FOLLOWING HEIGHTS BELOW THE SIGHT LINE DATUM WILL APPLY: 24" FOR TREES < 11" DIA.

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:

WHERE LEFT TURNS FROM THE MAJOR ROAD ARE PERMITTED, NO TREES SHALL BE LOCATED WITHIN THE DISTANCE 'd_b'.

WHERE LEFT TURN LANES ARE PRESENT, THE FOLLOWING REQUIREMENTS APPLY FOR MINIMUM DISTANCE:

(A) FOR LOW SPEED FACILITIES (DESIGN SPEED LESS THAN 50 M.P.H.), SIZE AND SPACING SHALL CONFORM TO THE TABLE BELOW. NO TREES SHALL BE PERMITTED WITHIN 100' OF THE RESTRICTED MEDIAN NOSE (MEASURED FROM THE EDGE OF PAVEMENT).

(B) FOR HIGH SPEEDS FACILITIES (DESIGN SPEED 50 M.P.H. OR GREATER) NO TREES SHALL BE PERMITTED WITHIN 200' OF THE RESTRICTED MEDIAN NOSE. BEYOND THIS LIMIT, SIZE AND SPACING SHALL CONFORM TO THE TABLE BELOW.

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:

DESIGN SPEED (MPH)	30	35	40	45	50	55	60
MINIMUM SPACING (FT) (Center to Center of Trunk)							
4" ≤ Ø ≤ 11"	22	27	33	40	45	52	60
12" ≤ Ø ≤ 18"	91	108	126	146	165	173	193

Ø = DIAMETER OF TREES WITHIN LIMITS OF SIGHT WINDOW (INCHES)

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 DESIGN NOTE B ON RD11-SD-1.
- (C) TREES ≤ 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.
- (D) 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 RD11-SD-1, DESIGN NOTE NO. 8.