

TRAFFIC ENGINEERING
POLICY TE 13

SIGHT DISTANCE STANDARDS

GENERAL STATEMENT

Sight distance is the continuous length of highway ahead visible to the driver. Two types of sight distance are considered here: passing and stopping. Stopping sight distance is the minimum sight distance to be provided on multi-lane highways and on 2-lane roads when passing sight distance is not economically obtainable. Stopping sight distance also is to be provided for all elements of intersections at grade, including private road connections.

The following table shows the standards for passing and stopping sight distance related to design speed. **These are the minimum values that shall be used in design.**

TABLE
Sight Distance Standards

Design Speed * (mph)	Stopping * (ft.)	Passing * (ft.)
20	125	800
25	150	950
30	200	1100
35	250	1300
40	300	1500
45	360	1650
50	430	1800
55	500	1950
60	580	2100
65	660	2300
70	750	2500
75	840	2600
80	930	2700

Passing Sight Distance

Passing sight distance is the minimum sight distance required for the driver of one vehicle to pass another vehicle safely and comfortably. Passing must be accomplished without reducing the speed of an oncoming vehicle traveling at the design speed should it come into view after the overtaking maneuver is started. The sight distance available for passing at any place is the longest distance at which a driver whose eyes are 3.5 feet above the pavement surface can see the top of an object 4.25 feet high on the road.

Passing sight distance is considered only on two-lane roads. At critical locations, a stretch of three or four-lane passing section with stopping sight distance is sometimes more economical than two lanes with passing sight distance.

See Chapter 6 of the CALTRANS Traffic Manual for criteria relating to barrier striping of no-passing zones.

Stopping Sight Distance

The minimum stopping sight distance is the distance required by the driver of a vehicle, traveling at a given speed, to bring his vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eyes, which are assumed to be 3.5 feet above the pavement surface, to an object 0.5-foot high on the road.

To lay out a sight distance triangle, place the entering driver's eye 10 feet back of flow line, measure to the center of the approach lane the required sight distance. If the approach lane is wider than 12 feet, measure to a point 6 feet from the adjacent lane line or center line of roadway.

The stopping sight distances shown in the Table should be increased by 20% on sustained downgrades steeper than 3% and longer than one mile.