

Table 10.15-3 Street Design Guidelines

Access Category	Low Volume			Medium Volume									High Volume					
	1-50 ADT			50-100 ADT			100-400 ADT			400-1500			1500+			100 PCE+		
Density Pattern	R	V/U	I/C	R	V/U	I/C	R	V/U	I/C	R	V/U	I/C	R	V/U	I/C	R	V/U	I/C
Minimum Right of Way	40'	40'	40'	40'	40'	50	50	50	50	50	50	60	60	60	60	60	60	60
Minimum Traveled Way Width	14'	16'	16'	18'	18'	24'	18'	20'	28'	18'	20'	30'	20'	22'	30'	22'	24'	30'
Minimum Shoulder Width (each side)*	0'	0'	4'	0'	1'	2'	2'	1'	2'	2'	2'	4'	3'	4'	5'	3'	4'	5'
Clear Zone Width (each side)	7'	7'	7'	7'	7'	7'	7'	7'	7'	8'	8'	8'	8'	8'	8'	8'	8'	8'
Minimum Vertical Clearance**	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'
Minimum Grade	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.5
Maximum Grade***	8%	8%	5%	8%	8%	5%	8%	8%	5%	6%	6%	5%	6%	6%	5%	5%	5%	5%
Minimum Centerline Radius****	100'	100'	350'	100'	100'	350'	100'	100'	350'	140'	140'	350'	140'	140'	350'	350'	350'	350'
Roadway Crown Asphalt Surface	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"/ft	.25"
Roadway Crown Aggregate Surface	.5"/ft	N/A	N/A	.5"/ft	N/A	N/A	.5"/ft	N/A	N/A	.5"/ft	N/A	N/A	.5"/ft	N/A	N/A	.5"/ft	N/A	N/A
Minimum Internal Sight Distance	155'	155'	230'	155'	155'	230'	155'	155'	230'	155'	155'	230'	155'	155'	230'	155'	155'	230'
Minimum Internal Spacing Standards*****	25'	25'	40'	25'	25'	40'	25'	25'	40'	25'	25'	40'	25'	25'	40'	25'	25'	40'
Minimum Internal Access to Street Corner Clearance*****	30'	30'	75'	30'	30'	75'	30'	30'	75'	30'	30'	75'	30'	30'	75'	30'	30'	75'

*The Board may require an increase in shoulder width for stormwater management purposes or road stabilization.

**The minimum vertical clearance is the vertical clearance over the entire roadway width, including any shoulders.

***Maximum grade may be exceeded for a length of

****Superelevation is not recommended for any subdivision street, unless recommended by Town engineer or Town-hired consultant.

*****Internal spacing distances are measured from the edge of one internal subdivision access to another, excluding curb radii.

*****Internal access to street corner clearances are measured from the edge of an internal subdivision access to an intersecting public road, excluding curb radii.

The street design guidelines used in the *Model* were developed to be compatible with the low, medium and high traffic volume thresholds used to guide access design in Section 10.15.1.A.7. These standards are further broken down by the estimated traffic volume expected to be served by the internal subdivision street, and the density pattern defined by zone in Section 10.15.1.B.2.f. The road standards were developed to correspond with ADT and zoning density information in order to provide Boards with context sensitive design criteria for geometric road standards.

The right-of-way must be wide enough to contain the traveled way, the clear zone, curbing or shoulders where constructed, and drainage swales or utility infrastructure where they are needed. Streets wider than necessary may have unintended deleterious effects on the visual characteristics of an area. Full grading of the right-of-way should not take place, if it is not necessary.

The traveled way must be wide enough to allow safe passage of vehicles in either direction, yet should not be wider than necessary. Wider roads tend to compromise the intended design speed of the street. In the preparation of the *Model*, several sources were consulted. The recommendations contained herein are based on references that advocate minimal widths without compromising safety or access for emergency vehicles.

Shoulders have multiple purposes for streets. At a minimum, shoulders may be required for stormwater management purposes or for road stabilization. The shoulder guidelines in Table 10.15-3 are based on the assumption that shoulders are not needed for stormwater management or road stabilization. For residential access streets with low Average Annual Daily Traffic in particular, shoulders are discouraged to minimize maintenance costs (other than mowing) and maintain the narrow appearance of the street in order to discourage speeding. An additional benefit to shoulders is that they can have some safety benefits to pedestrians that don't have sidewalks, bicyclists, or cars that don't have parking lanes dedicated to them on the side of the street. Further on in this section, the *Model* provides some direction for Boards interested in providing additional shoulder lengths for sections of road that can be expected to have a high demand of pedestrian and bicycle activity or demands for on-street parking.

Clear zone widths are sometimes confused with shoulder widths. The clear zone does not require a base above the natural topography of the ground, except for cut and fill alterations for stormwater management. The clear zone is an area that can be used as a snow removal location in the winter, it can serve the function of a shoulder and provide some space for an occasional vehicle to park, or provide space to an occasional pedestrian walking down a street.

The 14 foot minimum vertical clearance is designed to accommodate service delivery vehicles, emergency vehicles, or large trucks.

A minimum grade is required to prevent standing water from accumulating within the street.

The maximum permissible grade is often a trade-off between minimizing construction costs and maximizing safety. ITE's Recommended Guidelines vary the maximum permissible grade depending on the general terrain of the area. ITE suggests a 4% maximum grade in generally level (grade range of less than 8%) areas, an 8% maximum grade in rolling (grade range of 8% - 15%) areas and a 15% maximum grade in hilly (grade range of over 15%) areas. However, ITE also suggests that areas with winter icing conditions may prefer a maximum grade of 8%. The *Model* therefore suggests maximum grades of 8% or less. The footnote to the table does permit the maximum grade to be exceeded for short lengths.

A minimum centerline radius controls how sharp a curve may be designed into a street. The Model does not recommend superelevating any curves, because the design speeds for all subdivisions in this Model are designed for slow speeds.

A roadway must be crowned (higher in the center) to provide adequate drainage of storm water from the traveled surface. Aggregate surface streets require more crown due to their relative surface roughness.

Internal sight distances are inserted into the internal design of the subdivision street so that sight distance obstructions including vegetation, structures, and vertical and horizontal curves do not compromise the safety of drivers, pedestrians, and bicyclists using the subdivision street.

Internal spacing standards are applicable to the accesses inside the subdivision and their relationship to one another. This distance is represented by the edge of one driveway or entrance to another not including the curb radius.

Internal access to street corner clearance refers to the distance from the edge of the driveways and entrances (not including curb radii) internal to the subdivision to intersecting public streets.