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# Center and Edge Line Pavement Markings



*This New Hampshire rural collector carries more than 3000 vehicles per day. It should have both center and edge lines. Engineering judgment would probably conclude that the centerline should define no passing zones*

Pavement markings guide road users along travel paths and inform them of regulations. This article describes the MUTCD rules for two of them: centerlines and edge lines. They are especially important at night and for motorists new to the road. They are often required or recommended on local roads.

The box on page 3 contains definitions of key terms. Readers should also note the use of particular verbs. “Shall,” “must,” and “required” denote MUTCD Standards, or mandatory rules. “Should” and “recommend” denote Guidelines, or recommendations. “May” denotes Options, or allowable actions. For illustrations of the rules, readers should refer to Figures in MUTCD Section 3B

## Centerline Markings

Centerline stripes inform motorists that others will travel in opposite directions on a roadway. Solid or broken lines define passing rules. The MUTCD requires centerline markings

- ◆ On urban arterials and collectors with a 20 foot or more travel way width, and an ADT of 6,000 vehicles per day or greater.
- ◆ On two-way roads with three or more traffic lanes.

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It recommends centerline markings

- ◆ On urban arterials and collectors with a 20 foot or more travel way width, and an ADT of 4,000 vehicles per day or greater.
- ◆ On rural arterials and collectors with an 18 foot or more travel way width, and an ADT of 3,000 vehicles or greater.
- ◆ On other travel ways where an engineering study indicates a need.

The MUTCD allows engineering estimates of ADTs if traffic counts are not available. Cities and towns may place centerline stripes at specific locations. Examples include around curves, over hills, and before bridges.

Centerline stripes must be yellow, and 4 to 6 inches wide. On two-lane, two-way roadways they must be one of the following:

- ◆ A broken yellow line where crossing the centerline for passing is permitted for traffic traveling in either direction.
- ◆ A broken yellow line and a solid yellow line where crossing the centerline for passing is permitted for the traffic traveling adjacent to the broken line, but is prohibited for traffic traveling adjacent to the solid line.
- ◆ Two solid yellow lines where crossing the centerline markings for passing is prohibited for both directions.

On undivided two-way roadways with four or more traffic lanes, centerline stripes shall be two solid yellow lines. On two-way roadways with three traffic lanes, one- or two-direction no-passing zone markings should designate two lanes for traffic in one direction.

### Edge Line Markings

Edge line stripes inform motorists of roadway edges. They are especially important during adverse weather and visibility. The MUTCD requires them on rural arterials with a 20 foot or more travel way, and an ADT of 6,000 vehicles per day or greater. It recommends edge line markings:

- ◆ On rural arterials and collectors with a 20 foot or more travel way, and an ADT of 3,000 vehicles per day or greater.

- ◆ On other roads where an engineering study indicates a need.

Municipalities may place edge lines

- ◆ on roads without centerline markings;
- ◆ where edge delineation is desirable to minimize unnecessary driving on paved shoulders or on roads with less pavement strength than the adjacent roadway.

Edge lines must be white, and 4 to 6 inches wide. They should continue through driveways, but not through intersections

If edges have curbs, parking, bicycle lanes, or other markings, municipalities may exclude edge lines. They should base such decisions on engineering judgment. In addition, they should not place edge lines where engineering judgment indicates they would decrease safety.

### Terms and Definitions

**MUTCD.** The Manual of Uniform Traffic Control Devices, which provides the rules for pavement marking installation and maintenance.

**Urban areas** have high-density land development, usually with populations of 5,000 or more.

**Urban roads** are highways and streets in urban areas. Their primary uses are for commuting and shopping.

**Rural roads** are outside of cities. They serve as links between population centers.

**Arterial roads** serve travel between cities, large towns, and other transportation generators. Traffic volumes and speeds are usually very high.

Collector roads collect traffic from local urban streets and rural roads, and convey it to arterial roads.

**ADT.** Average Daily Traffic. The average of 24 hour traffic counts, usually expressed in vehicles per day (VPD).

**Engineering judgment.** The MUTCD recommends that engineering judgment be the basis for all traffic device decisions. It also recommends that agencies without staff engineers seek engineering assistance from others.