

LOCATION OF RUMBLE STRIPS

GENERAL: Install rumble strips on new or existing asphalt or concrete shoulders. The pattern is designed so that it can be milled or ground into the shoulder material. See specifications for details.

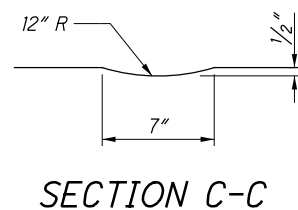
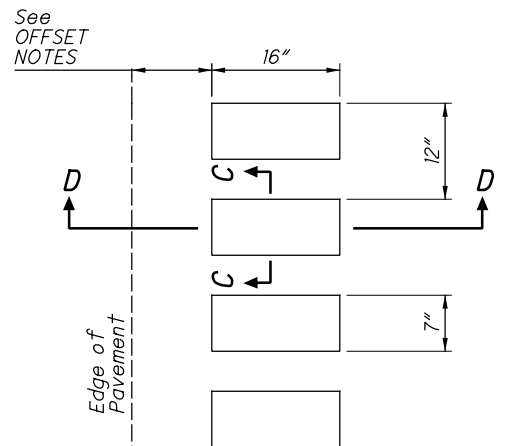
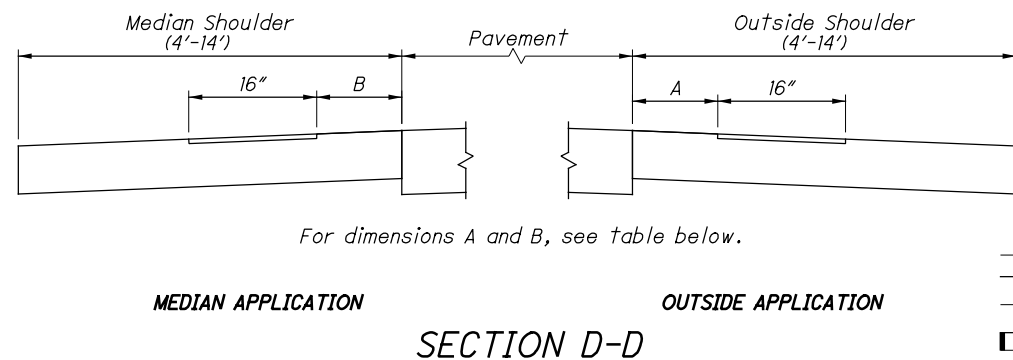
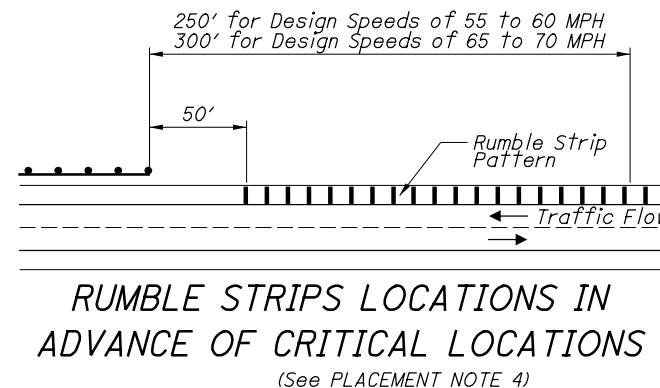
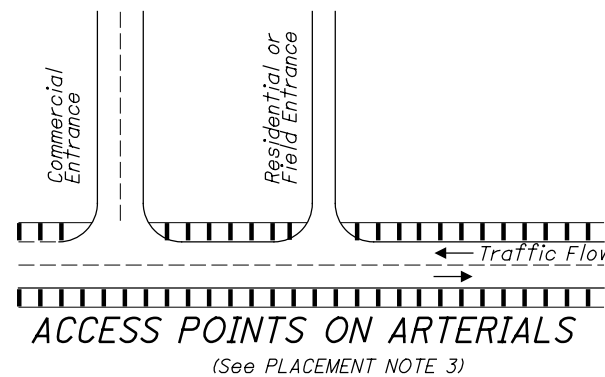
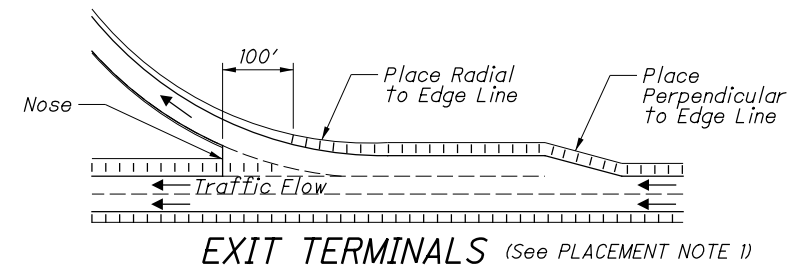
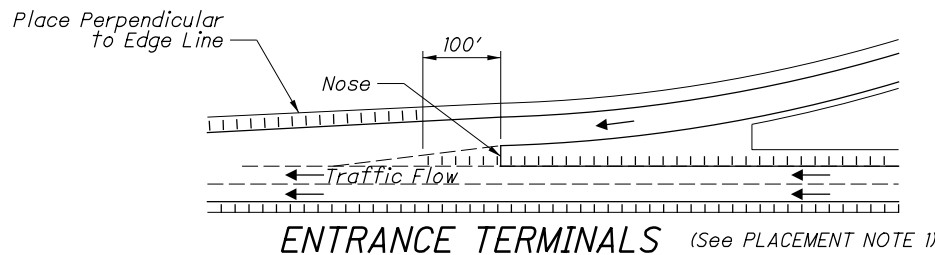
See PLACEMENT NOTES Location of Rumble Strips.

A rumble strip should not be closer than 4" to any joint, transverse or longitudinal, in concrete shoulders.

SHOULDER OFFSET: On median shoulders 12 feet or wider, where the shoulders have been designed for maintenance of traffic during construction, the pattern may be placed near the middle of the shoulder (see table below for offsets). The purpose for this is so that traffic can be maintained on the median shoulder during a "Phase 1" traffic maintenance sequence and straddle the pattern. "Phase 2" traffic can be maintained on the newly-paved outside shoulder prior to placement of new rumble strip pattern. See table, below.

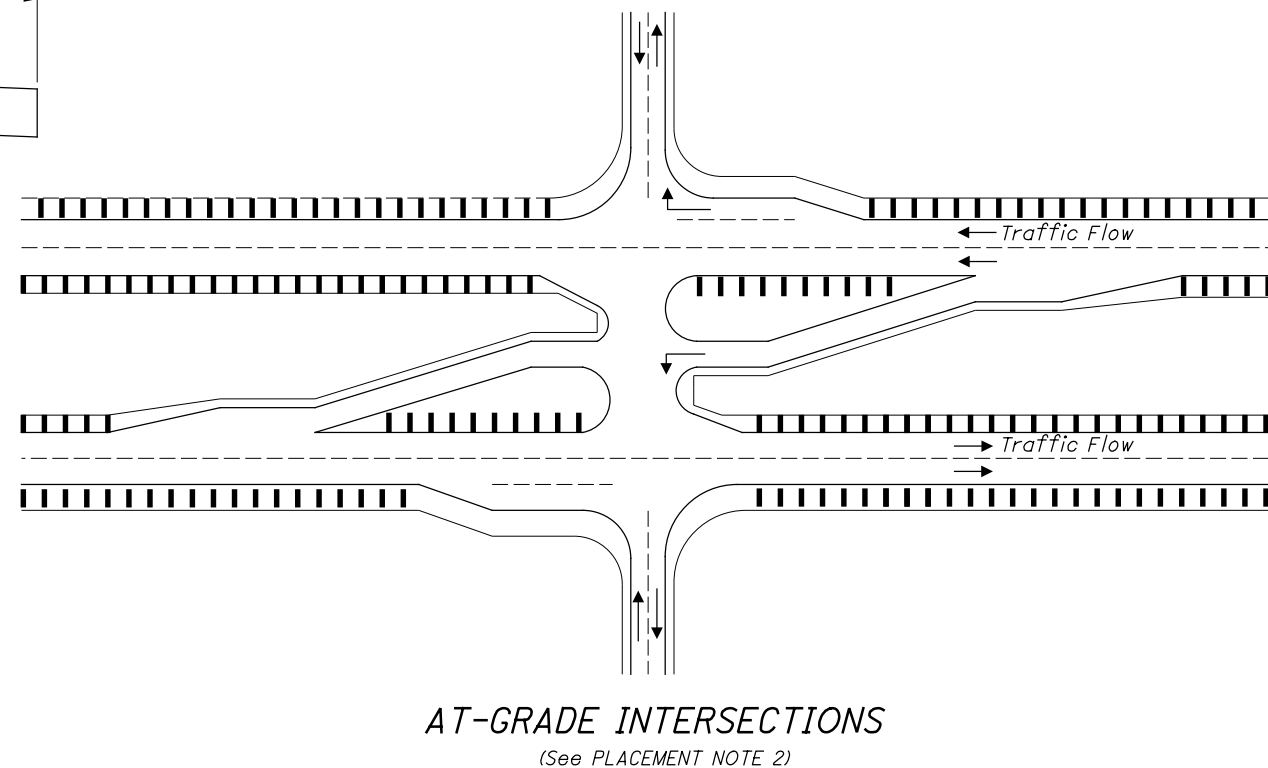
In built-up residential areas where noise may be objectionable, the median shoulder dimension may be increased, but should not exceed 24". See table, below.

PAYMENT: Rumble Strips are to be paid under **Item 618 - Rumble Strips, (Asphalt, Concrete) Lineal Feet (Miles).**



OUTSIDE SHOULDER OFFSET (See NOTES)
A = 6" FOR 4' to 6' shoulders
A = 10" for shoulders greater than 6'
MEDIAN SHOULDER OFFSET (See NOTES)
B = 6" for 4' to 6' shoulders
B = 10" for 8' to 10' shoulders
B = 5' for 12' shoulders
B = 6' for 14' shoulders

OFFSET DIMENSIONS



PLACEMENT NOTES

- At entrance and exit terminals, the outside shoulder pattern should be extended toward the ramp juncture as far as possible, and then shifted over to the outside shoulder of the terminal area. The "nose" of an entrance or exit terminal is a logical reference point. On either terminal, extend the pattern 100' into the terminal area and then transfer to the outside shoulder.
- The AT-GRADE INTERSECTION diagram shows a typical application for divided roadways, but the patterns on the outside shoulders are also applicable to undivided roadways.
- Where rumble strips are used on the shoulders of arterial roadways, the pattern should be interrupted across residential or commercial drives.
- Rumble strips, when used in advance of critical locations, such as approaches to narrow bridges, in gore areas, and ahead of impact attenuators or other barrier end treatments, should be placed as shown.
- For designated bicycle routes or areas of substantial bicycle traffic, use a 48' strip and 12' gap.