4. CROSS SECTION ELEMENTS
Practices and Procedures

4-1 ROADWAY SECTION

4-1.01 Travel Lanes

Widths

See EI C1 - Lane Width and Shoulder Width.

Cross Slopes

See EI C4 – Cross Slopes.

Pavement Design

See 8-2 Structural Pavement Design in Pavement Design

4-1.02 Shoulders and Curb Offsets

Widths

See EI C1 - Lane Width and Shoulder Width.

Transitions

Use 50 feet of length for every 2 foot width of transition. For transitions of paved shoulders to gravel shoulders, transition from full width to 2 feet.

Surface Type

See Maine Department of Transportation Shoulder Surface Type Policy.

Cross Slopes

See both EI C4 – Cross Slopes and Design Guidance – High Side Shoulder Rollover.

Pavement Design

See 8-2.02 Shoulder HMA Thickness in Pavement Design
4-1.03 Auxiliary Lanes

Widths

See EI C1 - Lane Width and Shoulder Width.

Cross Slopes

Reference Section 4.2.2 Cross Slope in the AASHTO Green Book.

Transition Lengths

See 5-5 Auxiliary Lanes in Intersections and Interchanges.

4-1.04 On-Street Parking

See Design Guidance – On and Off-Street Parking.

4-1.05 Curbs

See Design Guidance – Curb Type and Mold Usage.

4-1.06 Sidewalks

Width

Standard sidewalk width will be 5 feet, exclusive of the curb width. Where utilities and other appurtenances are present, a width of 4 feet is acceptable, exclusive of curb width. In extreme situations, a minimum clear width of 3 feet can be used. Where widths of less than 5 feet are used, 5 foot by 5 foot passing spaces must be provided at least every 200 feet. Entrances may be used as passing spaces.

Preferably, any roadside appurtenances (e.g. utility poles, traffic signs, fire hydrants) will be placed behind the sidewalk. In highly urbanized areas (central business districts), sidewalks are often paved from the back of the curb to the front edge of the building.

Cross Slope

Sidewalk cross slopes shall be a maximum of 2.0%. Typically, sidewalk cross slopes are 2.0% and are sloped towards the roadway for drainage purposes.

Curb Ramps

See Design Guidance - Minimum ADA Requirements for Pedestrian Facilities.
4-2 MEDIANS

4-2.01 Width

Reference Section 4.11 Medians in the AASHTO Green Book.

4-2.02 Type

See Design Guidance – Medians and Islands.

4-3 ROADSIDE ELEMENTS

For information on fill slopes, earth cuts and rock cuts see Design Guidance – Sideslopes and Backslopes.

4-4 TYPICAL SECTIONS

The following figures present typical sections which will apply to all new construction and reconstruction projects. The typical section figures are:

- Figure 4-1 Typical Depressed Median Section
- Figure 4-2 Typical Two-Lane Rural Highway
- Figure 4-3 Typical Raised Median Section
- Figure 4-4 Typical Two-Lane Urban Street
- Figure 4-5 Miscellaneous Details
Notes:

1. The width of the depressed median will be determined by field conditions. The minimum width will be 22 feet. Where a median barrier is warranted, see Figure 4-5 for typical section.

2. See EL C2 – Clear Zone for the determination of the applicable clear zone distance. On fill slopes, the hinge point at the 6:1/4:1 break will be placed at the subgrade intersection with the fill slope or at the clear zone distance, whichever is the greater distance from the roadway.

3. If it is anticipated that a median barrier may be warranted in the future, consider providing 10:1 median slopes, if practical.

TYPICAL DEPRESSED MEDIAN SECTION

Figure 4-1
TYPICAL TWO-LANE RURAL HIGHWAY

Figure 4-2

Notes:

1. Lane and shoulder widths will be based on Corridor Priority. See EI C1 – Lane Width and Shoulder Width.

2. See EI C2 – Clear Zone for the determination of the applicable clear zone distance.

3. Sideslopes and backslopes will be based on Corridor Priority. See Design Guidance – Sideslopes and Backslopes.

4. If a curbed section is used on a rural road, see Figure 4-4 for details.
Notes:

1. The median width will be determined by the width of the raised island plus the shoulder width or curb offset on either side of the raised island. See Section 4-2 for more discussion on the width of raised medians. In addition to raised medians, a flush median or a continuous two-way, left-turn lane may be used on an urban arterial.

2. Where utilities or other appurtenances are present, a clearance width of 4 feet is acceptable, however a minimum clearance width of 3 feet must be provided. See Figure 4-5 for a typical sidewalk section with a buffer area.

3. A vertical curb should be used where sidewalks are present. Where there is no curb or sidewalk, the roadside design will be according to the criteria for rural arterials. See Figure 4-2.

4. See Section 4-3 for more information.

TYPICAL RAISED MEDIAN SECTION

Figure 4-3
Notes:

1. Lane and shoulder/curb offset widths will be based on Corridor Priority. See EI C1 – Lane Width and Shoulder Width.

2. Where utilities or other appurtenances are present, a clearance width of 4 feet is acceptable, however a minimum clearance width of 3 feet must be provided. See Figure 4-5 for a typical sidewalk section with a buffer area.

3. A vertical curb should be used where sidewalks are present. Where there is no curb or sidewalk, the roadside design will be according to the criteria for rural arterials. See Figure 4-1.

4. See Section 4-3 for more information.

TYPICAL TWO-LANE URBAN STREET

Figure 4-4
MISCELLANEOUS DETAILS

TYPICAL SIDEWALK WITH BUFFER

CONCRETE MEDIAN BARRIER
(Superelevated Section)

CONCRETE MEDIAN BARRIER
(Where warranted)

METAL MEDIAN BARRIER
(Where warranted)

Figure 4-5