this section, the Standard Drawings and the MUTCD, the guidelines in this section and the Standard Drawings should be followed, consistent with sound engineering practices and judgement.

Traffic signs are installed to regulate, warn, and guide road users. Installation, reflectivity, legend size, legend color, placement, and support type should all be considered to provide a consistent, safe and informative signing plan.

904.01 SIGN STRUCTURE INSTALLATIONS

904.01.01 Ground Mounted

Ground mounted signs are unobtrusive and can provide drivers with the essential information in most instances. They are appropriate for marking all intersections and most interchanges. Typical guide sign treatments at expressway interchanges with main roads are diagrammed in Figure 900.01 and Figure 900.02.

Sign post lengths are to be calculated based upon the Standard Drawings and the roadway cross section at the sign locations. Foundations for stubs shall be flush with the ground and stub protrusions of the concrete foundation shall also conform to the Standard Drawings. Signs installed in the median are to be designed for the ultimate roadway section.

904.01.02 Overhead Mounted

Overhead signs may detract from the aesthetic appearance of the roadway and architectural treatment of bridge structures. They also limit the clearances for large trucks and their loads. As a rule, overhead signs should be used sparingly at locations where ground mounted signs cannot provide the essential directions to the motorist.

Overhead guide signs are principally applicable for marking free flow traffic movements at interchanges between rural expressways where lane orientation is necessary for directing the motorist, or at locations where lateral space for ground mounted signs is not available. Overhead guide sign use should be limited to:

1. Designating the lane use at forks of major inter-city expressway routes.

2. Where roadway and ramp configurations may be misleading without lane designations, such as: locations where the through expressway lanes end beyond the interchange in a terminal, or locations where two or more ramps depart from the through lanes and require lane use demarcation for clarity.

3. Where lateral space is unavailable for a ground mounted sign.

At interchanges between rural expressways, it is desirable to sign the through expressway lanes in addition to the ramp lanes. This can be accomplished with a ground mounted guide sign in the median, if the median is wide enough. If the median width is inadequate, the through lanes guide sign may be cantilevered overhead in the median. The ramp sign may also be cantilever-mounted for uniform appearance.

Similarly, space for other ground mounted guide signs may be restricted, thereby indicating the use of an overhead cantilever mounting.

Typical overhead guide sign treatments at major rural expressway junctions are portrayed in Figure 900.02.

Tubular Structure - Advanced guide and exit direction signing on the mainline shall use tubular cantilever and tubular sign bridge structures.

The Standard Drawings have tubular sign structures which have been developed to accommodate sign panels up to 4 m in height including the exit panel. Therefore, all efforts should be made to limit sign panel heights to 4 meters. This may require some minor reductions in legend size or spacing. The use of sign panels in excess of 4 m in height will require a complete sign structure design. Tubular sign structure standards shall be incorporated in the final plan submittal.

Interchange sequential signs shall be located in the center of the median back to back on a single structure approximately halfway between