

Traffic Control Device



- Why are traffic control devices needed?
- What are information needs of drivers?
- How is information transfer accomplished?



Three levels of driver information

- Navigation – planning and execution (guide signs).
- Guidance – selecting a safe speed and path (pavement markings, regulatory and warning signs).
- Control – physical manipulation of vehicle (primarily from vehicle itself).

Positive Guidance

- If drivers are given enough information when needed in a useable form, they can perform more safely and efficiently.



Avoid:

- Information overload
- Defective information display
- Missing information
- Deficient traffic control device



- Traffic Signs
- Pavement Markings
- Traffic Signals

Manual on Uniform Traffic Control Devices (MUTCD)

Principles of the MUTCD

- Fulfill a need
- Command attention
- Convey a clear, simple message
- Command respect of road users
- Give adequate time for a proper response

Contents of the MUTCD

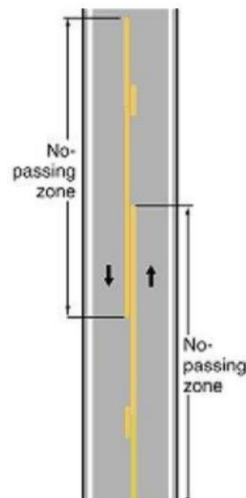
- Detailed standards for physical design of device
- Detailed standards and guidelines for placement of device
- Warrants that justify use of a particular device

Legal wording in the MUTCD

- Shall (mandatory)
- Should (advisory)
- May (permissive)

Communicating with the driver

- Color
- Shape
- Pattern
- Legend



Traffic Signs

- Regulatory - inform users of a law
- Warning – inform users of hazards
- Guide – navigation information

Traffic Signals

- Traffic signals must operate at all times
- If properly designed signals will:
 - Provide for orderly flow of traffic
 - Reduce frequency of some crashes
 - Increase capacity
 - Provide gaps for minor movements
- If improperly designed may:
 - Result in excessive delay
 - Increase frequency of some crashes
 - Cause disregard for the signal
 - Encourage drivers to use less appropriate routes



Pedestrian Signals



Pavement Markings

- Longitudinal lines (white or yellow)
- Transverse lines (white)
- Arrows, words, symbols
- Special markings

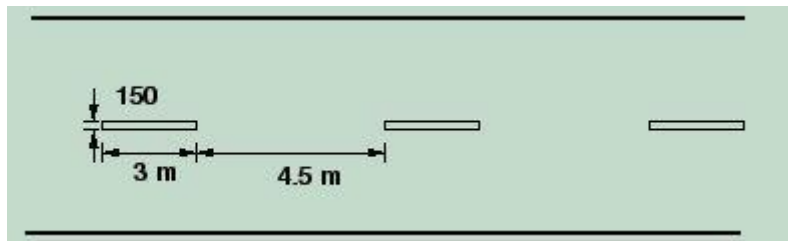


Figure: Center line marking for a two lane road.

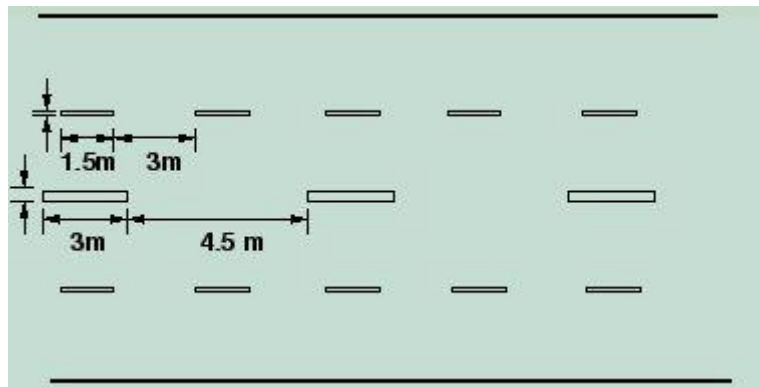


Figure: Center line and lane marking for a four lane road.

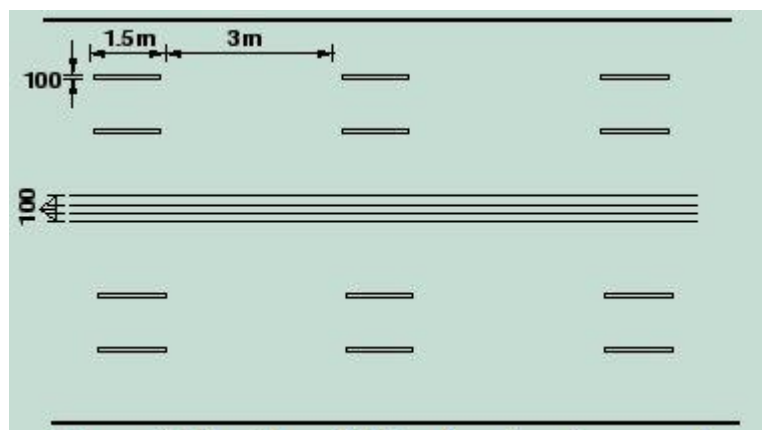


Figure: Double solid line for a two lane road.

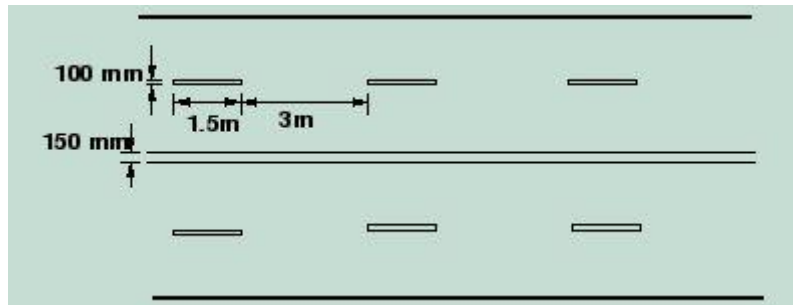


Figure: Center barrier line marking for four lane road.

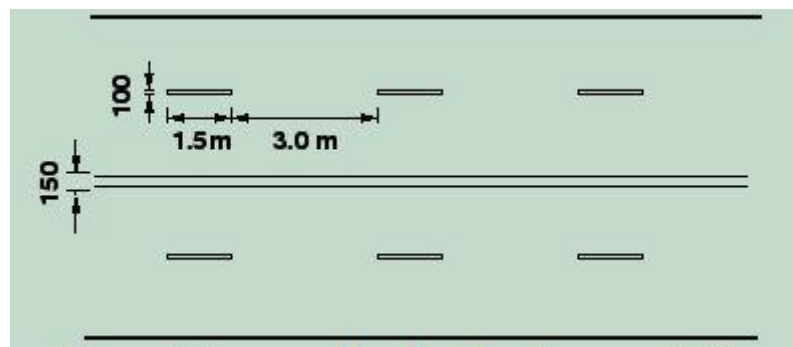


Figure: Lane marking for a four lane road with solid barrier line.

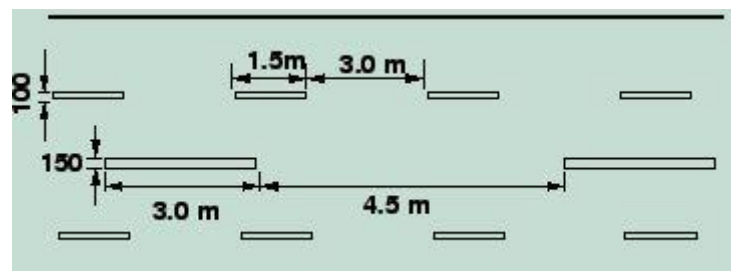


Figure: Traffic lane marking for a four lane road with broken center line.

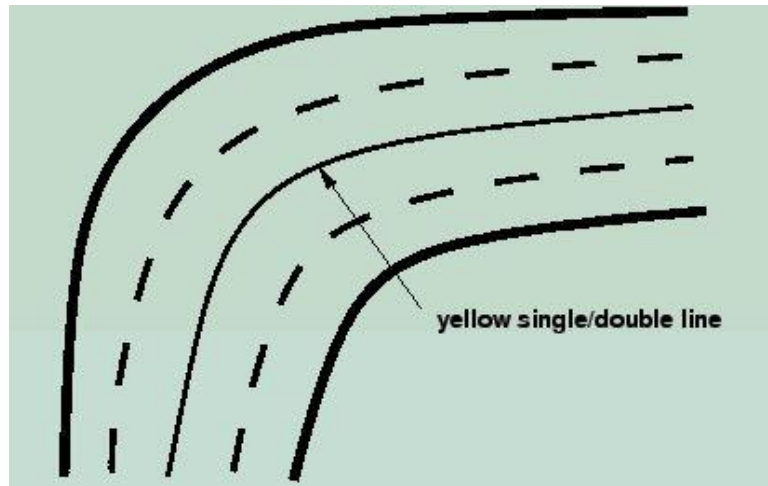


Figure: Barrier line marking for a four lane road.

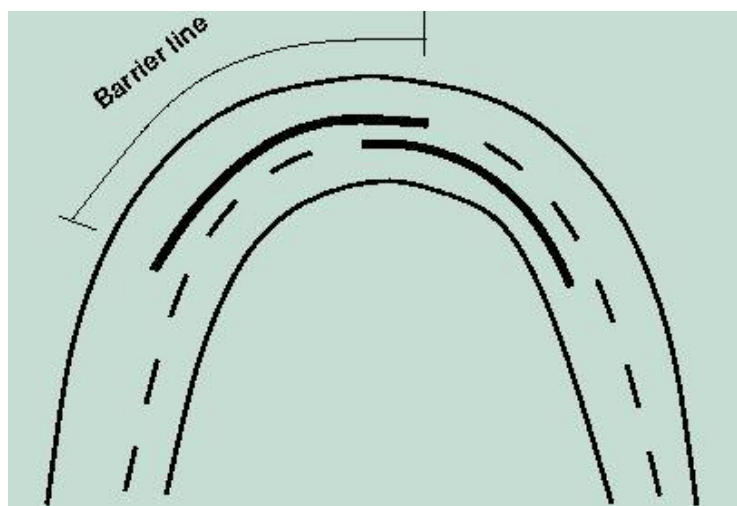


Figure: No passing zone marking at horizontal curves.

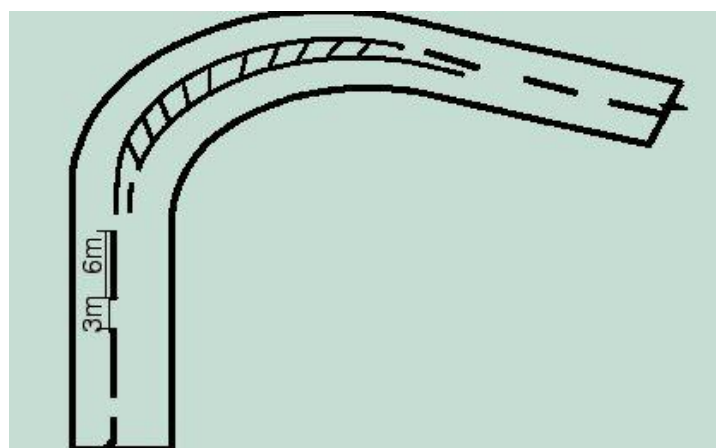


Figure: Warning line marking for a two lane road.

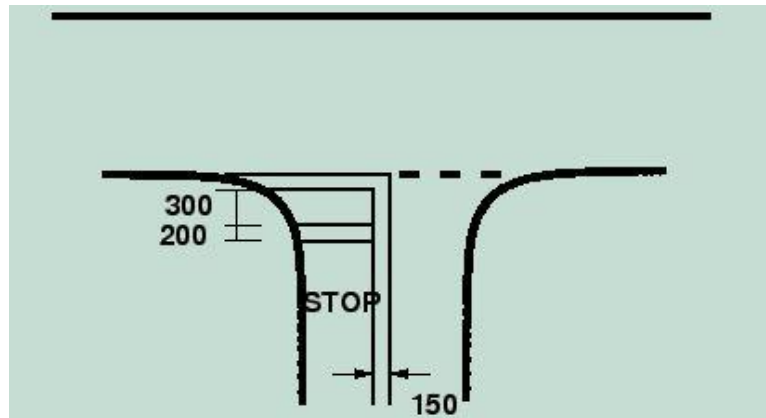


Figure: Stop line marking near an intersection.

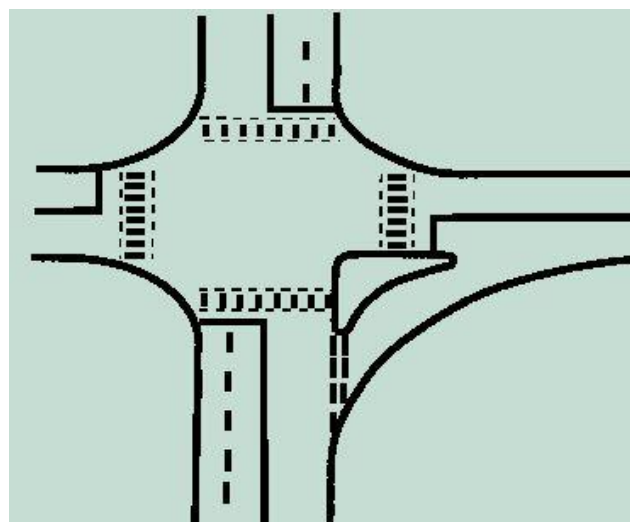


Figure: Pedestrian marking near an intersection.

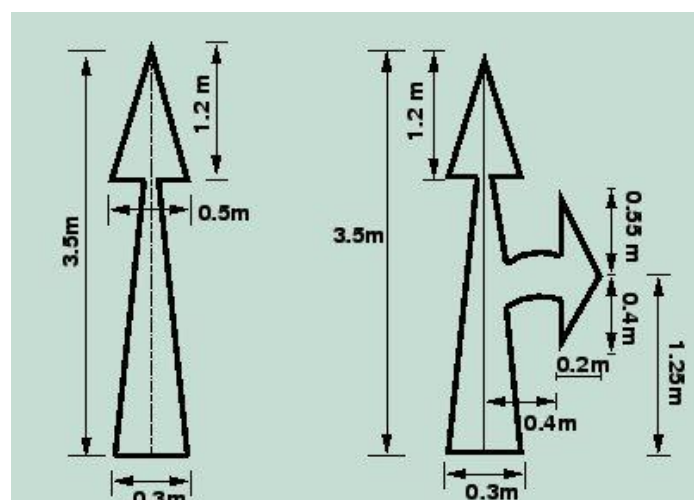


Figure: Directional arrow marking.