**Delaware Department of Transportation**
**Division of Transportation Solutions**
**Design Guidance Memorandum**

Memorandum Number 1-14

1. Road Design Manual 2. Bridge Design Manual 3. Utilities Design Manual
4. Real Estate Manual 5. Standard Specifications 6. Standard Construction Details

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Title: Bus Shelter Setback Requirements Effective date: Jan. 1, 2003

Implementation by: X Project Teams, ___ Bridge, ___ Team Support, ___Specifications, ___ Utility, ___ Real Estate, X Quality, X DTC, Other Planning

## I. Purpose:

To establish the appropriate location of bus shelters in relation to the travel lane.

## II. Design Guidance:

Clear zone is the area, beside the travel lane, where about 80% of the vehicles leaving the roadway out of control could recover. The width of this area depends on design speed, traffic volume, cross slopes and curvature of roadway. The required clear zone width values can be obtained in Reference (1). Any fixed object within the clear zone needs to be shielded, or made breakaway type. This concept is originally for the safety of the motorist.

Unless it is designed to be breakaway, a bus shelter is considered a fixed object. The presence of bus passengers near or at the bus shelter contributes to the risks associated with an out of control vehicle. The following guidance is set up for the safety of both bus passengers and motorists.

1. If the design speed is 60 mph or higher, a bus shelter should be off-site, not by the roadside.

2. If the design speed is 55 mph, a bus shelter should be off-site or outside the clear zone without curbing.

3. If the design speed is 50 mph or less (as in approaching or in an urban area) a bus shelter should be (a) outside the clear zone without curbing, (b) at a minimum 5’ setback from a barrier curb or (c) at a minimum 8’ setback from the face of curb if the curb is depressed for the handicapped.

4. The requirements of # 3 above should be provided at any off-site facilities, such as park and ride or transit hubs.

5. If a barrier curb is used, it should be extended up stream from the shelter a distance determined by Section 5.6.4, Length of Need of Reference 1. This distance is generally between 110’ and 210’ depending on the traffic volume, design speed and the shelter setback.

6. If the required setback requirement can not be met, a design exception with necessary documentation/justification should be processed.

**III. Justification:**

Location of bus shelters can affect the safety of bus passengers and motorists.

REFERENCE: 1. AASHTO Roadside Design Guide
2. PI DTC-05 Bus stop and Passenger Facilities Policy

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Recommended by Assistant Chief Engineer Date

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