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**VOLUME 6 ROAD GEOMETRY**  
**SECTION 2 JUNCTIONS**

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**PART 3**

**TD 50/04**

**THE GEOMETRIC LAYOUT OF SIGNAL-CONTROLLED JUNCTIONS AND SIGNALISED ROUNDABOUTS**

**SUMMARY**

This document sets out the design standards, methodology and good design practice for the geometric layout of signal-controlled junctions and signalised roundabouts for trunk roads. Measures to ensure safe operation for all road users are described. TD 50/04 supersedes TD 50/99.

**INSTRUCTIONS FOR USE**

This Standard now contains expanded advice at paragraph 2.10 for Junction Intervisibility Zones for junctions with Advance Stop-Lines for cyclists.

1. Remove existing contents page for Volume 6 and insert new contents pages for Volume 6 dated November 2004.
2. Remove TD 50/99 from Volume 6, Section and archive as necessary.
3. Insert TD 50/04 into Volume 6, Section 2, Part 3.
4. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



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**THE DEPARTMENT FOR REGIONAL DEVELOPMENT  
NORTHERN IRELAND**

# **The Geometric Layout of Signal- Controlled Junctions and Signalised Roundabouts**

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### Swept Path Requirements

2.34 The swept path requirements of the **Design Vehicle** are defined in **TD 42 (DMRB 6.2.6)**.

2.35 The nature of the signal-controlled junction and its associated splitter islands and pedestrian refuges may restrict the movement of vehicles, particularly large goods vehicles, and allowance shall be made for the swept turning paths of the design vehicle where provision is to be made for large goods vehicles.

2.36 It is essential to ensure that adequate turning radii are provided for the swept paths of all types of vehicles using the junction and the swept paths should be checked for all permitted turning movements. **Figures 2/12** and **2/13** indicate examples of swept paths to illustrate the general requirements.

2.37 The assessment of swept paths using simple templates or overlays is not recommended as they do not adequately predict the swept paths of the vehicles

for non-standard situations. The use of computer simulated models of the vehicles and their movements which can be interactively superimposed upon a computer generated design model of the junction is preferred. The use of computer simulated models to predict swept paths may assist the designer to minimise the required widening within the junction. This may identify areas of superfluous carriageway [See **Figure 2/12**] which can be effectively removed to provide greater footway width for pedestrians, or to minimise the required widening and hence construction costs.

2.38 The nosing of central reserves and pedestrian refuges should be set back a minimum distance of 1.5m, measured from a line extended from the edge of the intersecting road as indicated in **Figures 2/5, 2/8, 2/9** and **5/1**.

2.39 Adequate clearance between the edge of carriageway and any street furniture (including signal heads, backing boards and subsidiary signal heads) is needed to prevent damage by vehicles having a lateral overhang. A minimum clearance of 450mm should be provided. Additional clearance may be required where the crossfall of the carriageway is greater than 2.5%.

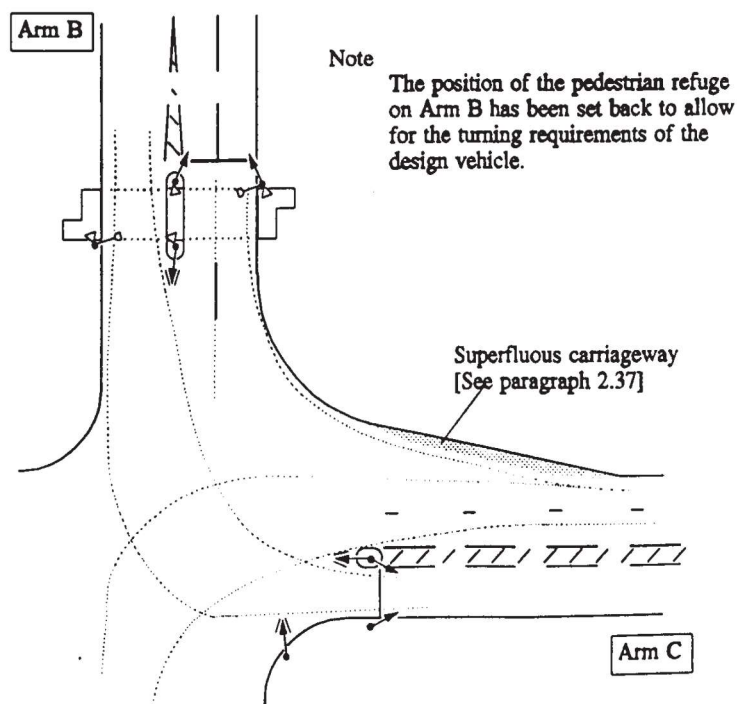


Figure 2/12: Examples of Swept Paths