8 Junctions

8.1 General

The design of junctions is a complex subject. More research and experimentation will be needed before we can confidently recommend junction designs that can handle Bangladesh’s mixed traffic in a safe and efficient way. In the meantime some general advice can be given on the principles to be followed. This should be read in conjunction with the Road Safety Division’s Design Advice Notes on junctions – these contain provisional designs for most types of junction.

8.2 Design Principles

The key requirements are:

- Design for all road users, including the NMVs and the pedestrians
- Minimise conflicts
- Ensure good visibility
- Keep the paved area to the minimum needed for manoeuvring – excessive space means higher speeds, less control over how vehicles move through the junction, and more danger for pedestrians
- Junction geometry should encourage appropriate speeds
- Ensure that the layout is clear and simple – define the vehicle paths clearly – ensure that it is obvious who has precedence - allow complicated manoeuvres to be carried out a step at a time
- Provide kerbed footways and pedestrian guardrail – to keep pedestrians out of the junction and channel them to safe crossing points – guardrail also discourages buses and rickshaws from stopping in the junction and keeps the carriageway clear of people selling things

8.3 Priority Junctions (e.g. T-junctions)

Key points to consider are:

- Cross-roads should not be used, because they tend to have a high rate of accidents – staggered T-junctions are much safer;
- Y-junctions (where one road joins another at a small angle) are also dangerous and should not be used;
- T-junctions work best when the minor road meets the major road at an angle of 90°;
- Corner radii at T-junctions can be between 6 and 10m depending on the turning traffic (buses and trucks need larger radii) and the amount of traffic on the main road – where the junction will be frequently used by buses it is best to use a larger, compound curve;
- At T-junctions put a channelising island in the minor road arm if there is a significant volume of minor road traffic or there are many pedestrians crossing (Figure 8.2);
- At busy T-junctions provide a right-turning lane in the main road – this must be created with physical islands not painted island markings, as the latter are likely to be ignored (Figure 8.3).
Figure 8.1  Simple Priority Junction

Figure 8.2  Priority Junction with Minor Road Channelising Island

Figure 8.3  Priority Junction with Channelising Islands in Both Roads (Single Lane Dualling)

Figure 8.4  Roundabout