STANDARD CROSS SECTIONS FOR RHD ROADS

**NOTES**

General:
These RHD standard cross sections are to apply to all roads. Other cross-sections are only permissible in exceptional circumstances and with the written approval of the Chief Engineer.

The cross-sections for Design Types 3 – 6 may be provided with extra-wide embankments in order to enable the road to be easily upgraded as traffic volumes grow.

Crossfall of paved carriageway and shoulder should normally be 3%. Crossfall of unpaved shoulder and verges should be 5%.

Design Capacities:
This diagram forms part of the RHD Geometric Design Standards document. This document should be referred to for further information on Cross Sections and Geometric Designs.

Type 1: Maximum capacity: 850 PCU/hr (NMV lane to be provided in all cases)

Type 2: Maximum capacity: 4500 PCU/hr (assumed NMVs are either prohibited or are less than 50 PCE/hr. If NMV PCE/hr exceeds 50 adopt the type 2a cross section).

Type 3: Maximum capacity: 2100 PCU/hr (assumed NMV/MV ratio of 0.2)

Type 4: Maximum capacity: 1600 PCU/hr (assumed NMV/MV ratio of 0.14)

Type 5: Maximum capacity: 800 PCU/hr (NMVs will use carriageways and the shoulder)

Type 6: Maximum capacity: 400 PCU/hr (NMVs will use carriageways and the shoulder)

**PCU Equivalent**
The wide variety of vehicle types in use on Bangladesh roads makes it appropriate to define traffic flow in terms of passenger car units (PCU) rather than vehicles. The PCU values are given below:

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>PCU Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck/Bus/Minibus</td>
<td>3.00</td>
</tr>
<tr>
<td>Car/Utility</td>
<td>1.00</td>
</tr>
<tr>
<td>Baby taxi/Motorcycle</td>
<td>0.75</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0.50</td>
</tr>
<tr>
<td>Cycle Rickshaw</td>
<td>2.00</td>
</tr>
<tr>
<td>Bullock Cart</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**Estimating Design Year PCU:**

\[ PCU = \frac{PCU_{present} \times (1+g/100)^{dy}}{dy} \]

For, \( dy = 10 \) years and \( g = 8 \% \)

\[ PCU_{dy} = 2.16 \times PCU_{present} \]

* PCU / hour is the peak hour PCU / hr (total of both directions) in the design year (dy)