This circular supersedes SES 01/10

Background

A revised version of Australian Standard 3600 Concrete Structures was published in December 2009. This edition of AS3600 includes a number of amendments that have produced variances to the corresponding provisions in Bridge Design Code AS5100. Of note is Section 13.1 ‘Stress Development of Reinforcement’.

A comparison between the AS3600-2009 requirements for development length and the bridge design code AS5100 showed that the AS5100 produced lesser requirements for large number of situations, particularly for smaller diameter bars at centres of 150mm or more.

The provisions in AS3600-2009 are considered to be the most accurate and appropriate method available and shall be used for calculating the development length of reinforcement bars. In keeping with the MRWA practice of specifying the lap length as a multiple of diameter of the bars, the lap lengths have been revised to conform to AS3600-2009 as follows.

Action

The minimum lap length shall be as per table below:

<table>
<thead>
<tr>
<th>Bar Diameter D</th>
<th>Lap length</th>
<th>Horizontal bars with &gt; 300mm of concrete cast below</th>
</tr>
</thead>
<tbody>
<tr>
<td>24mm and below</td>
<td>45D</td>
<td>60D</td>
</tr>
<tr>
<td>Greater than 24mm</td>
<td>50D</td>
<td>65D</td>
</tr>
</tbody>
</table>

Adam Lim
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19 July 2012

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