SCOPE OF MOTOR GRID STANDARD DRAWINGS

The scope of Motor Grid Standard Drawings is to provide indicative standard details for various Grid Construction Scenarios.

If it is the responsibility of the project design engineer to provide project specific drawings to suit grid spans, widths, road crossfall and other site specific conditions.

ASSOCIATED DOCUMENTS:

- Iron Roads Specifications and Technical Standards Manual
- Manual of Traffic Control Devices (MTCD):
  - Design Criteria for Motor Grids – Technical Note 18
  - Design Criteria for Bridges and Other Structures

REFERENCE SCENARIOS:

<table>
<thead>
<tr>
<th>RAIL TYPE</th>
<th>ALIGNMENT</th>
<th>RAIL GAUGE</th>
<th>DRAWING REFERENCE</th>
</tr>
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<tbody>
<tr>
<td>Cast Iron</td>
<td>Not Applicable</td>
<td>SD 1561 Motor Grid – General Arrangement</td>
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<tr>
<td>Motor Grid</td>
<td>Motor Grid</td>
<td>SD 1562 Motor Grid – Cast Iron Rail Alignment</td>
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<tr>
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<td>SD 1565 Motor Grid – Steelwork</td>
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<tr>
<td>Steel</td>
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Standard Specifications:

- Motor Grids, Retaining Structures and Protective Treatment
- Screwed Ironwork Surfaces (Excluding Domestic)
- Steel Furniture
- Supply of Cover Assemblies
- Motor Grids – Steelwork
- Motor Grids – Manufacture of Precast Elements
- Motor Grids – Fabrication of Steelwork

Australian Standards:

- AS 1111.1: 19 Standard Metric Bolts and Nuts – Product Grade C – Bolts
- AS 1112.1: 19 Standard Metric Bolts and Nuts – Product Grade A and B
- AS 1115.4: 19 Standard Metric Bolts and Nuts – Product Grades A and B
- AS/NZS 1163: Cold-Formed Structural Steel Sections
- AS 1214: Hot-Dipped Galvanized Coatings on Threaded Bar Products
- AS/NZS 1594: Hot-Dipped Galvanized Bar Products
- AS/NZS 3610: Concrete Stairs
- AS/NZS 3679: Structural Steel – Hot-rolled Sections
- AS/NZS 3667: Structural Steel – Cold-formed Sections
- AS/NZS 4651: Steel Reinforcing Bars

GENERAL NOTES FOR STANDARD MOTOR GRIDS

1. The applicable Standard Drawings shall be chosen from TABLE: GRID CONSTRUCTION SCENARIOS.
2. STANDARD DETAILS FOR GRID construction are shown in table below, for other widths where specifically approved. The standard width may be varied as required provided the beam spacing does not exceed 700mm, and the rail overhang does not exceed 250mm.
3. No SPANS are required for the standard grid widths as in Table 2. Other widths where approved may be varied as required. The grid width is less than the beam width.
4. The required grid (GRID) as specified, for full formation with the unreel should be 250mm.
5. Motor Grid Design Life shall be 50 years.
6. Design Traffic Load 100kN/m (10kN/m and 140kN/m) to 5kN/m.
8. CONCRETE to be in accordance with MTCD (cast in situ concrete) and MOTOR grid (precast concrete).
9. EXPANSION JOINTS and CRABER as maintained shall be in accordance with AS 3650.
10. Concrete strength and cover to reinforcement shall be as shown in Table below.
11. Expansion joints strength and cover to reinforcement shall be as shown in Table below.
12. Expansion joints strength and cover to reinforcement shall be as shown in Table below.
13. Expansion joints strength and cover to reinforcement shall be as shown in Table below.

MOTOR GRID – GENERAL ARRANGEMENT

<table>
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<th>DRAWING NO.</th>
<th>DATE</th>
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