

NOTES:

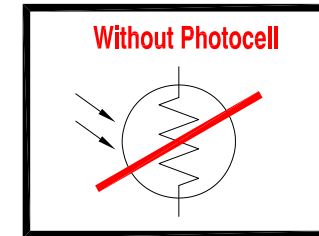
- (a) Electrical switchboards shall wherever possible be located adjacent to the property boundary with the door facing the roadway.
- (b) Electrical switchboards shall wherever possible be located outside the clear zone (refer RPDM - Volume 3, Part 6). Where site constraints require that electrical switchboards are situated within the clear zone then an assessment in accordance with the provisions of RPDM - Volume 3, Part 6 must be carried out to determine whether protection (i.e. by safety barrier) is required.
- (a) Ensure there are no underground services in the vicinity prior to installing earth electrode.
- (b) Earth pits shall be minimum of 3m apart.
- (c) The earth electrode must be driven no less than 1300mm vertically into the ground, leaving a minimum 150mm exposed length of the electrode in the base of the pit. 426 and 427 shall be approved only.
- (d) Earth rods are not to be cut under any circumstances. In difficult soils, dig out the appropriate P3 pit size, auger a 75mm hole vertically to 1300mm, install the earth electrode in the centre of the hole, fill the auger hole with LSI RESLO or equivalent, then install the pit over the earth electrode.
- (e) Only one earth electrode connected to one main earth conductor permitted in one earth pit.
- (f) For existing no.7 pit and pits of greater depth, a 1.8m earth stake is to be used, where it is not viable to install a separate adjacent dedicated earth P3 pit with a new 1.5m earth stake.
- (g) Attach a permanent label to the main earthing conductor at the connection to the earth electrode stating: "WARNING: MAIN ELECTRICAL EARTHING CONDUCTOR - DO NOT DISCONNECT"
- The Switchboard enclosure and electrical component details shall comply with MRTS228 and MRTS256.
- Approximately a 20mm length of booker rod must be screwed into the switchboard post earthing pin.
- Attach a permanent label in the switchboard stating: "EARTH ELECTRODE IN ADJACENT EARTH PIT"
- Dimensions are in millimetres unless shown otherwise.

ASSOCIATED DEPARTMENTAL DOCUMENTS:

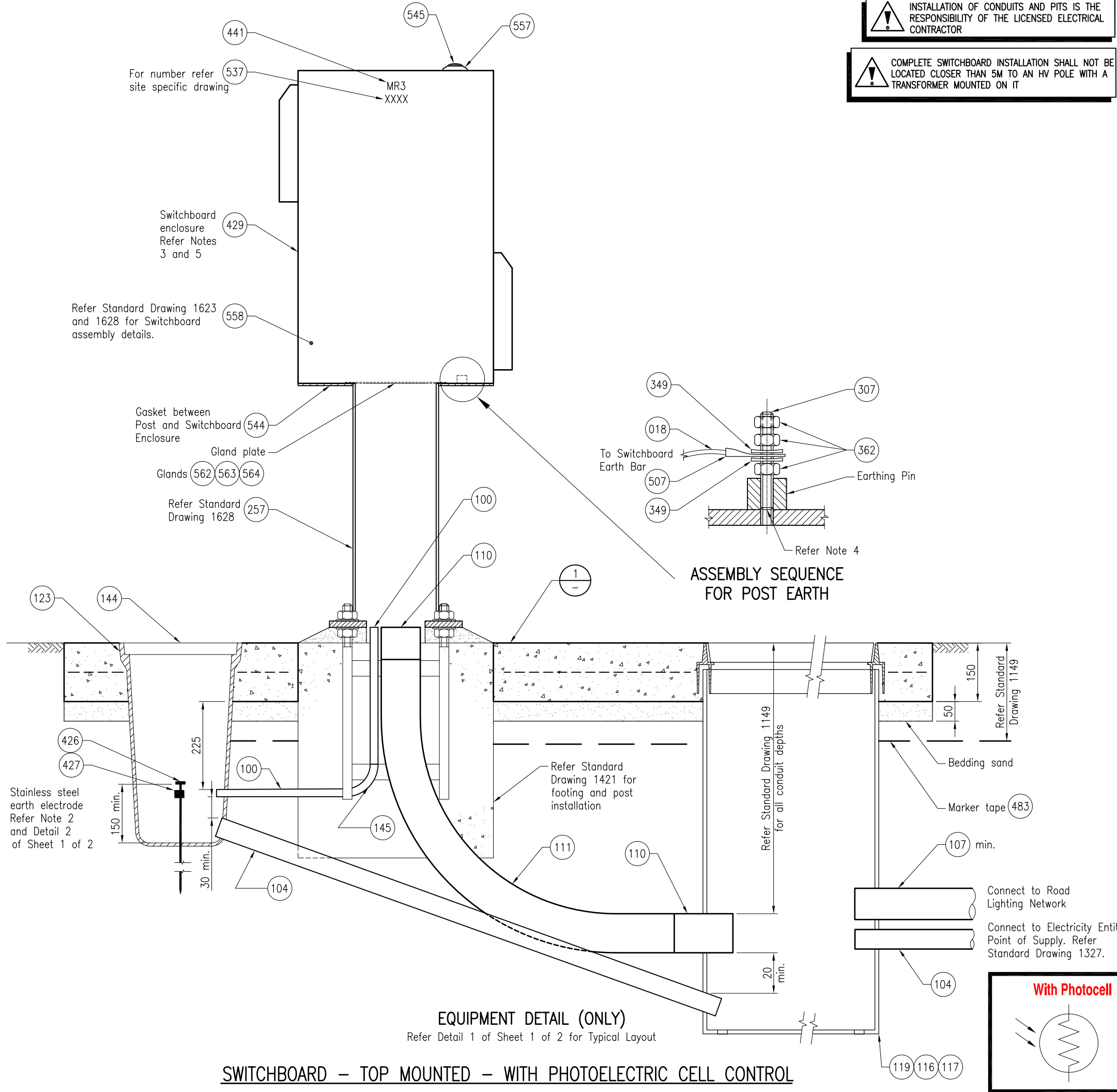
- Standard Drawings Specifications
- Traffic and Road Use Management Manual (TRUM) - Volume 4.3 Electrical Design for Roadside Devices
- Road Planning and Design Manual (RPDM) - Volume 3 Part 6 Roadside Design, Safety and Barriers

REFERENCED DOCUMENTS:

- Departmental Standard Drawings:
 - 1149 Traffic Signals/Road Lighting/ITS - Installation of Underground Electrical and Communications Conduit
 - 1327 Traffic Signals/Road Lighting - Mains Connections
 - 1421 Traffic Signals - Traffic Signals Post and Footing Installation Details
 - 1428 Traffic Signals - Traffic Signal Post Base Mounted
 - 1623 Road Lighting - Switchboard Typical Layout and Circuit Diagram MEN System
 - 1628 Road Lighting - Post - Top Mounted Switchboard
 - 1699 Traffic Signals/Road Lighting/ITS - Parts List indicated as (XXX)
- Departmental Specifications:
 - MRTS91 Conduits and Pits
 - MRTS92 Traffic Signal and Road Lighting Footings
 - MRTS210 Provision of Mains Power
 - MRTS228 Electrical Switchboards
 - MRTS256 Power Cables
- Australian Standards:
 - AS/NZS 3000 Electrical Installations (Wiring Rules)



Department of Transport and Main Roads			
ROAD LIGHTING			
SWITCHBOARD TOP MOUNTED SHEET 1 OF 2		A3	Standard Drawing No
		Not to Scale	1627
			Date 7/2023
			8 H J K L M



- NOTES:**
- (a) Electrical switchboards shall wherever possible be located adjacent to the property boundary with the door facing the roadway.
 - (b) Electrical switchboards shall wherever possible be located outside the clear zone (refer RPDM – Volume 3, Part 6). Where site constraints require that electrical switchboards are situated within the clear zone then an assessment in accordance with the provisions of RPDM – Volume 3, Part 6 must be carried out to determine whether protection (i.e. by safety barrier) is required.
 - (a) Ensure there are no underground services in the vicinity prior to installing earth electrode.
 - (b) Earth pits shall be minimum of 3m apart.
 - (c) The earth electrode must be driven no less than 1300mm vertically into the ground, leaving a minimum 150mm exposed length of the electrode in the base of the pit. (426) and (427) shall be approved only.
 - (d) Earth rods are not to be cut under any circumstances. In difficult soils, dig out the appropriate P3 pit size, auger a 75mm hole vertically to 1300mm, install the earth electrode in the centre of the hole, fill the auger hole with LSI RESLO or equivalent, then install the pit over the earth electrode.
 - (e) Only one earth electrode connected to one main earth conductor permitted in one earth pit.
 - (f) For existing no.7 pit and pits of greater depth, a 1.8m earth stake is to be used, where it is not viable to install a separate adjacent dedicated earth P3 pit with a new 1.5m earth stake.
 - (g) Attach a permanent label to the main earthing conductor at the connection to the earth electrode stating: "WARNING: MAIN ELECTRICAL EARTHING CONDUCTOR – DO NOT DISCONNECT".
 - The Switchboard enclosure, photoelectric switch and electrical component details shall comply with MRTS228 and MRTS256.
 - Approximately a 20mm length of booker rod must be screwed into the switchboard post earthing pin.
 - Attach a permanent label in the switchboard stating: "EARTH ELECTRODE IN ADJACENT EARTH PIT"
 - Dimensions are in millimetres unless shown otherwise.

ASSOCIATED DEPARTMENTAL DOCUMENTS:

- Standard Drawings Specifications
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 - Volume 4.3 Electrical Design for Roadside Devices
- Road Planning and Design Manual (RPDM)
 - Volume 3 Part 6 Roadside Design, Safety and Barriers

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- 1327 Traffic Signals/Road Lighting – Mains Connections
- 1421 Traffic Signals – Traffic Signals Post and Footing Installation Details
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- 1623 Road Lighting – Switchboard Typical Layout and Circuit Diagram MEN System
- 1628 Road Lighting – Post – Top Mounted Switchboard
- 1699 Traffic Signals/Road Lighting/ITS – Parts List indicated as (XXX)

Departmental Specifications:

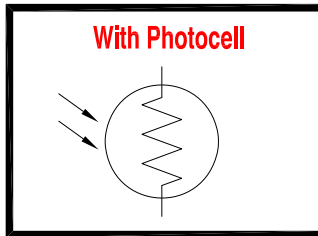
- MRTS91 Conduits and Pits
- MRTS92 Traffic Signal and Road Lighting Footings
- MRTS210 Provision of Mains Power
- MRTS228 Electrical Switchboards
- MRTS256 Power Cables

Australian Standards:

- AS/NZS 3000 Electrical Installations (Wiring Rules)

EQUIPMENT DETAIL (ONLY)
Refer Detail 1 of Sheet 1 of 2 for Typical Layout

SWITCHBOARD – TOP MOUNTED – WITH PHOTOELECTRIC CELL CONTROL



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ROAD LIGHTING			
SWITCHBOARD TOP MOUNTED SHEET 2 OF 2		A3 Not to Scale	Standard Drawing No 1627 Date 7/2023
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