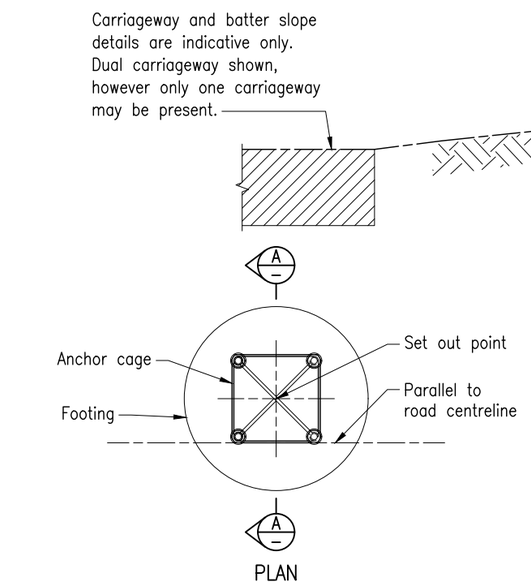
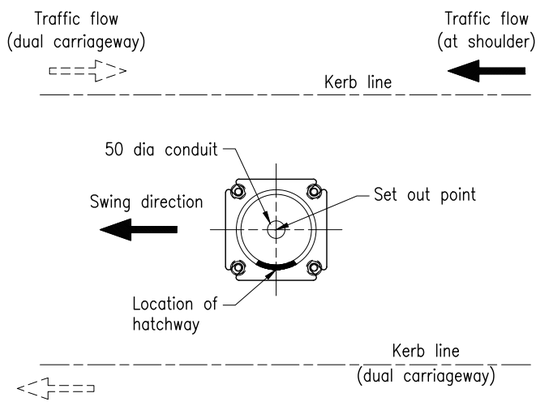
The purpose of this Standard Drawing is to provide typical standard details that shall be used within the limitations specified in the drawing, and shall be assessed by the project designer for project specific slope and soil conditions. When there is uncertainty regarding the application of the standard details on this drawing for a specific project, advice shall be sought from E&T Structures. The details specific to the project shall be shown on the project specific drawings, and certified by an RPEQ Engineer.

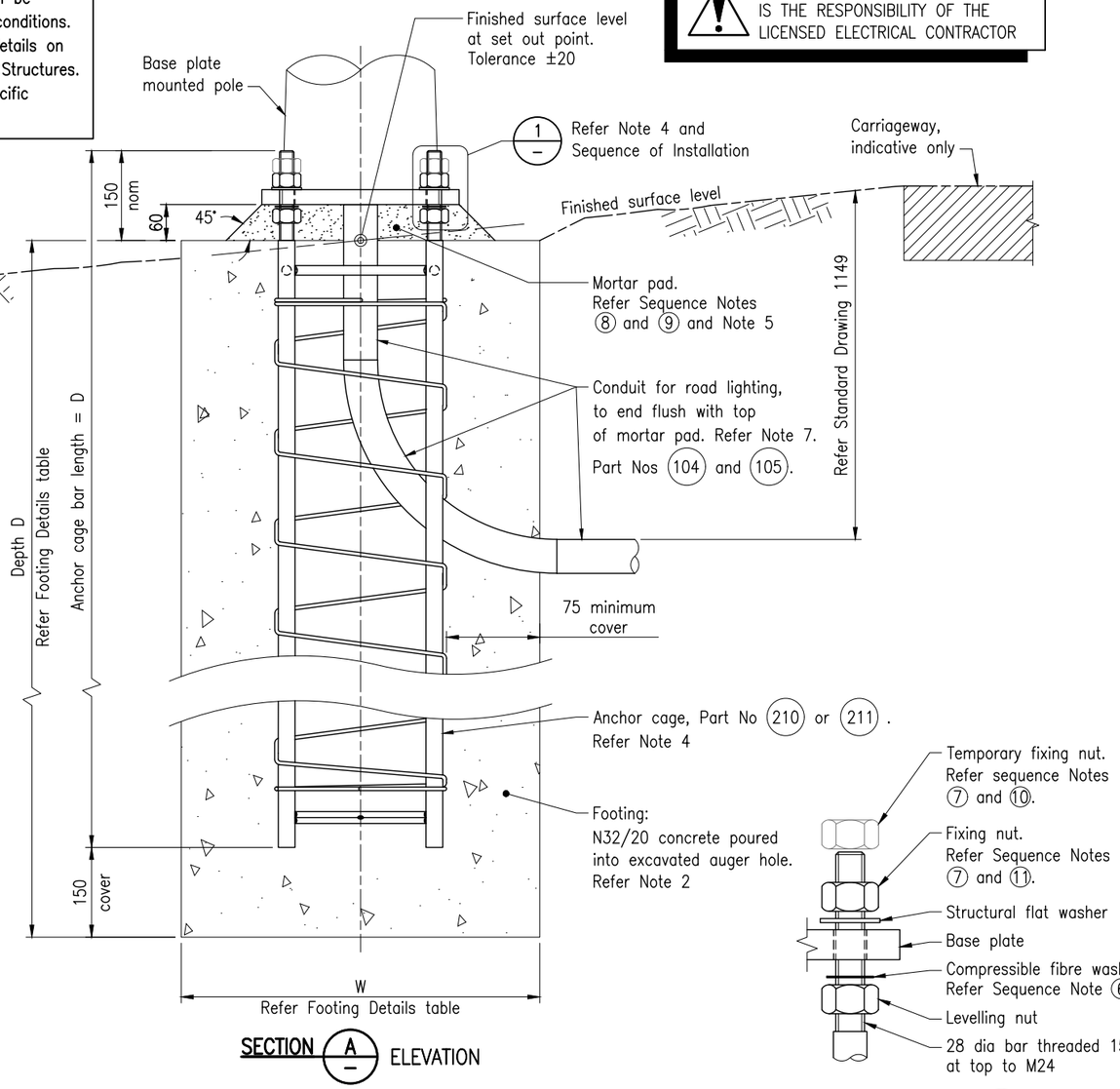
INSTALLATION OF CONDUITS AND PITS IS THE RESPONSIBILITY OF THE LICENSED ELECTRICAL CONTRACTOR



SET OUT DETAILS FOR ANCHOR CAGE



BASE PLATE ORIENTATION FOR HINGED POLES



SECTION A – A ELEVATION

INSTALLATION DETAILS ON SLOPES OF UP TO AND INCLUDING 1:2

DETAIL 1

SEQUENCE OF INSTALLATION:

1. Footing shall be accurately located horizontally and vertically, and existing utility service investigation carried out, prior to commencement of excavation. HOLD POINT 1 of MRTS92.
2. Dig/bore and excavate the hole to the required depth and width for the specified anchor cage. The excavation shall be inspected by the Administrator, HOLD POINT 2 of MRTS92, and surveyed as per of MRTS56.
3. Determine finished surface level and suspend the anchor cage in correct position such that the finished surface level is 150 below the top of anchor cage, and at correct orientation relative to the roadway. WITNESS POINT 18 of MRTS56.
4. Threads shall be protected and conduit plugged before pouring concrete.
5. Pour concrete footing to bottom of the threads of anchor cage and allow to set. Allow seven day minimum curing period or until 20MPa before installing the pole.
6. Locate pole 60 above top of footing. Ensure compressible fibre washers are placed on the levelling nuts.
7. Level pole using the levelling nuts, then finger tighten the fixing nuts and temporary nuts on each threaded bar onto the base plate.
8. Immediately form mortar pad under base plate using a TMR registered high early strength, rapid setting, flowable, cementitious grout, in accordance with manufacturer's specifications. Mortar pad edges bevelled as shown. Conduit to end flush with top of mortar pad.
9. Wait until mortar has achieved final set in accordance with manufacturer's specifications before tensioning the fixing nuts.
10. Remove the temporary nuts from top of base plate.
11. Tension the remaining fixing nuts to torque of 135 Nm.

NOTES:

1. SCOPE : This standard drawing shall be used for base plate mounted hinged pole footing details when installed on slopes of up to and including 1:2, and in good to average soil. Installations proposed for locations with greater slope and/or in poor soil or sandy materials shall require specialist design by Geotechnical Engineer.
2. FOOTING for base plate mounted pole shall be to MRTS92 and in accordance with the details on this drawing.
   Selection of depth of footing is to be determined by the designer from the project design documents, such as geotechnical report, site survey, and road cross sections.
   No permanent forms shall be used for excavation except if required for top 1000.
3. Good Soil ($S_u \geq 50$ kPa) consists of Stiff to Hard Clayey materials or Weathered Rocks.
   Average Soil (25 kPa $\leq S_u <$ 50 kPa) consists of Firm Clayey materials or Compacted Earthfill materials.
   Poor Soil ($S_u <$ 25 kPa) requires specialist design, and consists of Very Soft to Soft Clayey materials.
   S_u is the undrained shear strength of clayey materials.
   Sandy Materials comprising Loose to Very Dense Sands require specialist design.
4. ANCHOR CAGE shall be in accordance with Standard Drawing 1328 and with the details on this drawing.
   Finished surface level shall be determined prior to commencement of installation.
   Positional tolerances in accordance with MRTS70.
   Compressible fibre washers can only be used once. If an existing slip base mount is being reinstated onto its original anchor cage, new fibre washers are required to be used.
5. CONCRETE shall be in accordance with MRTS70.
   MORTAR under the base plate shall be a TMR registered high early strength, rapid setting, flowable, cementitious grout product with the following minimum strengths:
   4 hours to 15MPa and 28 days to 32MPa.
6. 6. CONDUIT shall be in accordance with MRTS91. Ensure the conduit is not blocked. 500 minimum/3000 maximum distance from edge of footing to pit.
7. BASE PLATE MOUNTED POLE shall be in accordance with MRTS97.
8. ORIENTATION OF HATCHWAY for hinged poles shall be in accordance with the details on this drawing. The orientation of the hatchway for each pole shall be documented on the as constructed drawings for future reference by maintenance crews.
9. Dimensions are in millimetres.

REFERENCED DEPARTMENTAL STANDARD DRAWINGS AND SPECIFICATIONS:

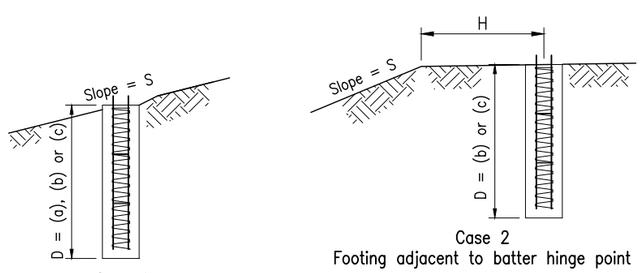
1149 Installation of Underground Electrical and Communications Conduit
1328 Road Lighting – Anchor Cage Fabrication Details
1699 Traffic Signals/Road Lighting/ITS – Parts List
MRTS56 Construction Surveying
MRTS70 Concrete; MRTS91 Conduits and Pits;
MRTS92 Traffic Signal and Road Lighting Footings
MRTS97 Mounting Structures for Roadside Equipment

FOOTING DEPTHS

Vertical Height of Hinged Pole		Minimum Diameter of Footing W	Minimum Depth of Footing D	
			Good soil, refer Note 3	Average soil, refer Note 3
CCTV Pole	8000	600	2000 (a), 2500 (b), 2900 (c)	2700 (a), 3100 (b), 3600 (c)
CCTV Pole	10000	600	2000 (a), 2500 (b), 2900 (c)	2700 (a), 3100 (b), 3600 (c)
CCTV Pole	12000	600	2000 (a), 2500 (b), 2900 (c)	2700 (a), 3100 (b), 3600 (c)
CCTV Pole	15000	700	2600 (a), 3100 (b), 3600 (c)	3500 (a), 4000 (b), 4500 (c)
Lighting Pole	10000	600	2200 (a), 2700 (b), 3100 (c)	3000 (a), 3400 (b), 3900 (c)
Lighting Pole	13000	700	2600 (a), 3100 (b), 3600 (c)	3500 (a), 4000 (b), 4500 (c)

Slope ranges (S)
(a) where S = flat up to and including 1:6
(b) where S = greater than 1:6 up to and including 1:3
(c) where S = greater than 1:3 up to and including 1:2

NOTE: Depths specified in the table for Case 1 conditions (b) and (c) shall also apply for poles installed on a verge/shoulder within the horizontal distances (H) from the batter hinge point as shown in Case 2 of Slope Diagram.



SLOPE DIAGRAM

Department of Transport and Main Roads

ROAD LIGHTING / ITS

BASE PLATE MOUNTED HINGED POLE – FOOTING DETAILS FOR INSTALLATION ON SLOPES OF UP TO AND INCLUDING 1:2

Queensland Government

A3
Not to Scale

Standard Drawing No 1684
Date 3/2025

A | B | C