

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 site 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.

WARNING

In order for the slip base mechanism to operate correctly it is IMPERATIVE that the anchor cage is installed to the dimensions marked '*' and the nuts are installed as per sequence notes ⑩ and ⑭. Failure to install the anchor cage and nuts strictly in accordance with this plan will make the Contractor liable for any resulting loss or damage to the Principal and to third parties.

SEQUENCE OF INSTALLATION IN THE MEDIAN:

- 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 MRTS56.
- ③ Determine finished surface level and suspend the anchor cage in correct position such that the finished surface level is 25 above 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 25 above bottom of the threads of anchor cage, ensuring 125 protrusion, and allow to set. Allow seven day minimum curing period or until 20MPa before installing the slip base mount.
- ⑥ Locate slip base mount 60 above top of footing. Ensure compressible fibre washers are placed on the levelling nuts under the slip base mount.
- ⑦ Level slip base mount using the levelling nuts, then finger tighten the fixing nut on each threaded bar onto the bottom base plate. Form a 100 dia void in the mortar pad above the electrical conduit with a 60 long x 100 dia conduit.
- ⑧ Immediately form mortar pad under bottom 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.
- ⑨ Wait until mortar has achieved final set in accordance with manufacturer's specifications before tensioning the fixing nuts.
- ⑩ Tension the fixing nuts on the slip base mount to 135 Nm minimum, in accordance with TN64.
- ⑪ Apply surface tolerant TMR approved epoxy coating (2 coats) to the outside faces of the slip base mount including base plate, and also the protruding threaded bar and the nuts.
- ⑫ In the recess, place layer of bedding sand to 50 below projected finished surface level, then infill with mortar 1:3 dry pack, sloped to prevent ponding, and flush with median, cover 25 min to top of bars.
- ⑬ Install the light pole.
- ⑭ Tension the M36 clamping bolts to $90 \pm 10\text{Nm}$ in accordance with TN64.
- ⑮ Install the slip bolt tethering system in accordance with TN200 and SD 1755.

NOTES:

1. SCOPE : This standard drawing shall be used for slip base mounted pole footing details when installed in the median, and in good to average soil. Installations proposed in poor soil or in sandy materials shall require specialist design by Geotechnical Engineer.
2. FOOTING for slip base mounted pole shall be in accordance with MRTS92 and 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 ($S_u \geq 50 \text{ kPa}$) consists of Stiff to Hard Clayey materials or Weathered Rocks. Average Soil ($25 \text{ kPa} \leq S_u < 50 \text{ kPa}$) consists of Firm Clayey materials or Compacted Earthfill materials. Poor Soil ($S_u < 25 \text{ kPa}$) 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 the details on this drawing. Finished surface level shall be 75 from the slip plane. For the level of the slip plane to be within tolerance, the projected finished surface level shall be 150 above the top of the footing ± 25 . Horizontal tolerance shall be 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. Road/Median surface of the errant vehicle approach to the slip base mounted pole must be uniform and be consistent for the type of crossfall installation. Refer Warning text box for further information.
6. 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.
7. CONDUIT shall be in accordance with MRTS91. Ensure conduit is not blocked, and is flush with top of footing, with 100 void formed above in the mortar pad. 500 minimum/3000 maximum distance from edge of footing to pit.
8. SLIP BASE MOUNTED POLE shall be in accordance with MRTS97. Positioning of the clamping bolts will depend on the slip base orientation. Slip bolt tethering shall be accordance with TN200 and Standard drawing 1755.
9. ORIENTATION OF HATCHWAY: Typical orientation for slip base pole is detailed on this drawing.
10. Dimensions are in millimetres.

REFERENCED DEPARTMENTAL STANDARD DRAWINGS, SPECIFICATIONS AND TECHNICAL NOTES:

1149	Installation of Underground Electrical and Communications Conduit
1328	Road Lighting – Anchor Cage Fabrication Details
1699	Traffic Signals/Road Lighting/ITS – Parts List
1755	Road Lighting – Slip Bolt Tethering System for Slip Base Poles
MRTS56	Construction Surveying;
MRTS92	Traffic Signal and Road Lighting Footings
MRTS97	Mounting Structures for Roadside Equipment
TN64	Tensioning and Re-tensioning of Slip Base Light Pole Bolts
TN200	Slip Base Pole Clamping Bolt Tethering System Installation

