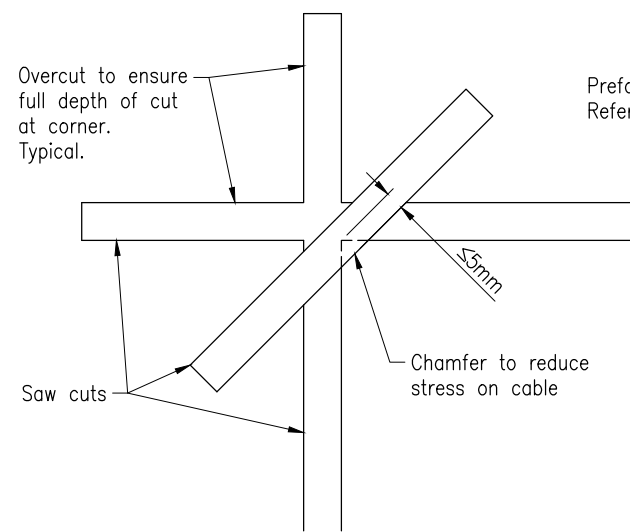
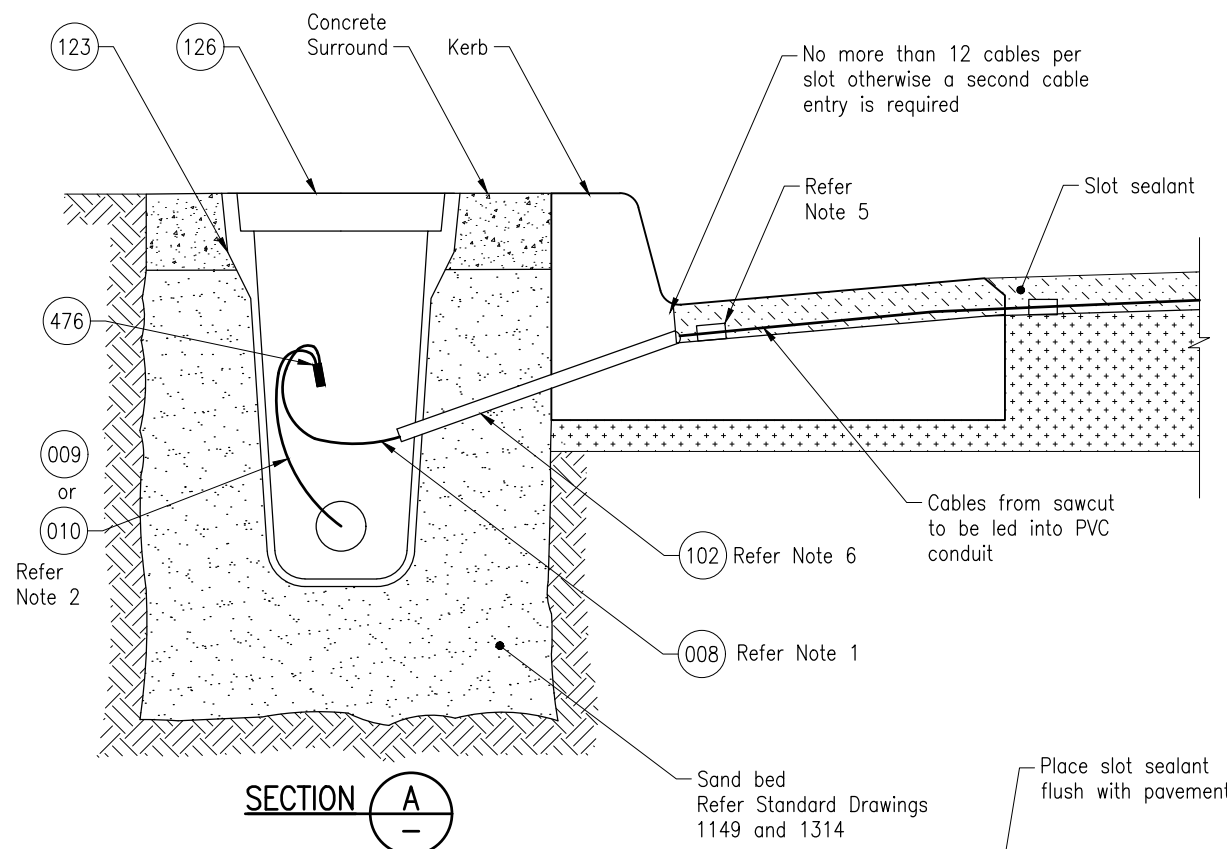


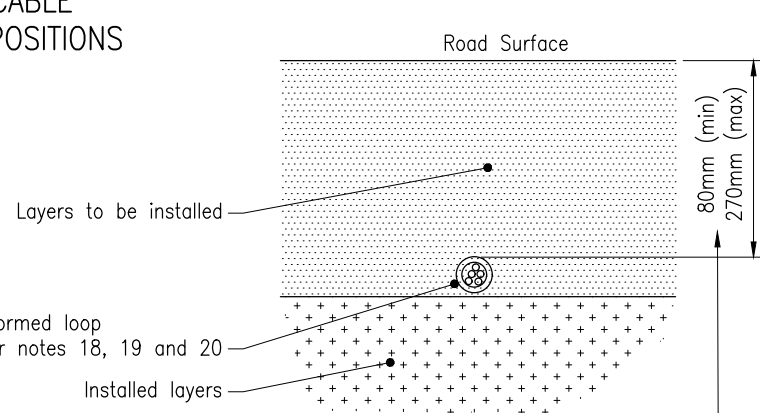
TYPICAL RECTANGULAR LOOP CABLE WIRING FOR 4 POSSIBLE ENTRY POSITIONS (DIAGRAMMATIC)



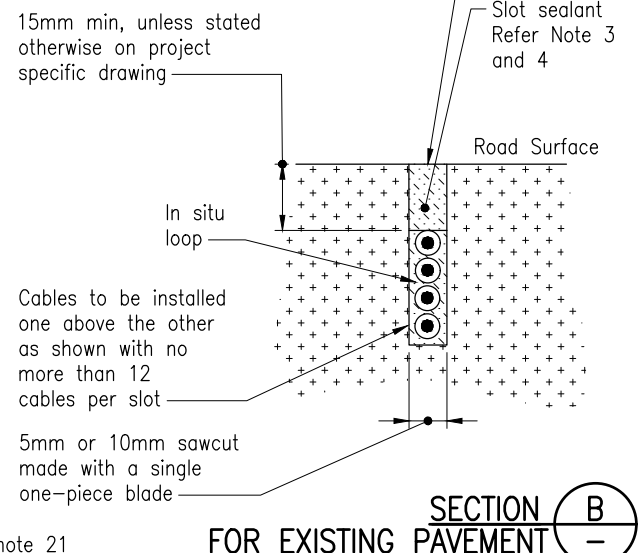
DETAIL 1
NTS
STRESS RELIEF CHAMFER FOR CABLE



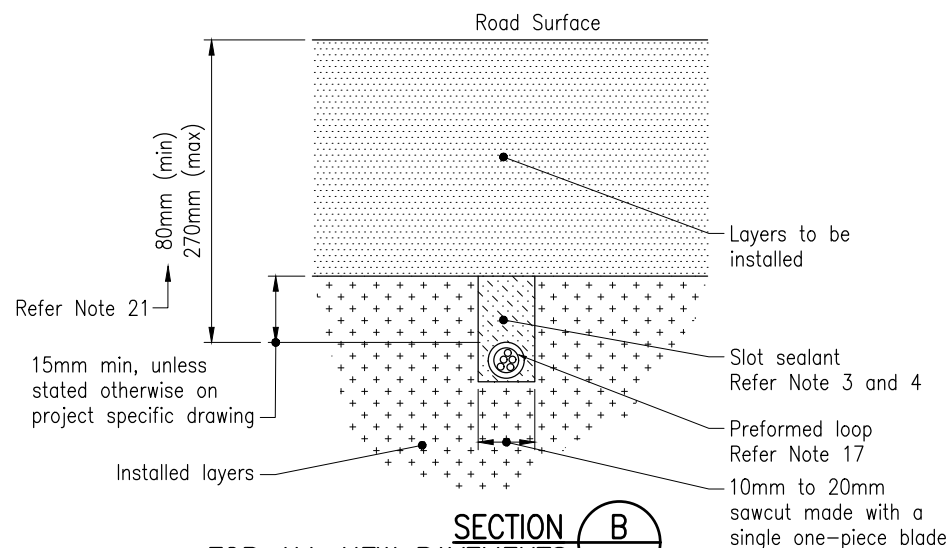
SECTION A



SECTION B
FOR ALL NEW PAVEMENTS (CONCRETE OR ASPHALT BASE) OVERLAY METHOD (PREFERRED)



SECTION B
FOR EXISTING PAVEMENT FOR IN SITU REPLACEMENT OF DAMAGED LOOPS IN ASPHALT PAVEMENTS



SECTION B
FOR ALL NEW PAVEMENTS (ASPHALT BASE) SAW CUT METHOD

NOTES:

1. Preformed loop cable shall comply with MRTS257.
2. Loop feeder cable shall comply with AS/NZS 2276 - Part 2.
3. The loop shall be sealed in the slots using slot sealant approved by DTMR.
4. Slots shall be cut in the pavement surface using
 - (a) a water-cooled diamond-tipped blade for asphalt surfaces,
 - (b) a carborundum blade for spray sealed surfaces.
5. Fit retaining wedges at 300-400mm spacing to ensure loop cable does not move while sealant is applied. The wedge material is to be resilient and impervious to water.
6. Item 102 is indicative only. Use larger diameter conduit if required to accommodate additional cables.
7. Loop cable shall be continuous, i.e. no joints permitted.
8. Lead-in to each loop shall be twisted together at minimum 1 turn per 100mm.
9. Loop detector cables and feeder cables shall be jointed in assigned pits. Each joint shall be separately insulated and sealed to prevent ingress of water.
10. All loop feeders shall be returned to the cable pit in the footpath or the median where over 2 metres wide. However for right turn presence loops or loops in the two lanes adjacent to the median in a four or more lanes approach, feeders may be returned to a cable pit in the median (if available).
11. All loop cable ends shall be labeled with Helagrip markers (HG2-5) or equivalent, with Start (S), Finish (F) and numbered as per the design plan.
12. All feeder cables shall be labeled with Helagrip markers (HG4-9), or equivalent, at each end to show the detector number as per the design plan.
13. For loops cut in situ the number of turns for loops shall be:
 - Rectangular - 4 or 5 turns (or as per the design specification)
 - Quadrupole - 3 turns (or as per the design specification)
14. Wiring instructions
 - a. Mark 'S' at start end of cable.
 - b. Change direction at the centre (longitudinal) cut to make a figure '8' pattern for Quadrupole loops.
 - c. Mark 'F' at finish end of cable.
15. For new pavements or resurfacing, only preformed loops shall be used. Preformed loops shall be installed prior to laying the wearing surface.
16. For preformed loop installation, overlaying method should be used where possible.
17. If overlaying method is not possible, then saw cutting is permitted with due care. Before cutting, determine depth of asphalt layer and do not cut to full depth.
18. Ensure preformed loops are anchored on profiled or milled asphalt, and then apply a tack coat above the preformed loops. Then cover the preformed loops with a small amount of hand placed asphalt to protect against damage from construction vehicles and plants, prior to placing asphalt with a paver. Refer to the manufacturer's instructions for further guidance.
19. If a strain alleviating membrane (SAM) seal is installed at the interface between new asphalt pavement and existing (profiled) asphalt, preformed loops shall be installed above the SAM seal.
20. For loop installation on concrete base, preformed loops to be placed and anchored as per the overlaying method.
21. Preformed loops bury depth:
 - 80mm to 200mm for 9.5 OD preformed loop
 - 200mm to 270mm for 16 OD preformed loop

ASSOCIATED DEPARTMENTAL DOCUMENTS:

- Manual of Uniform Traffic Control Devices (MUTCD)
 - Part 14 Traffic Signals
- Traffic Road Use Manual (TRUM)
 - Volume 4 Part 5 Configuration and Placement of Traffic Sensors

REFERENCED DOCUMENTS:

- Standard Drawings:
 - 1149 Traffic Signals/Road Lighting/ITS - Installation of Underground Electrical and Communications Conduit
 - 1314 Traffic Signals/Road Lighting - Cable Jointing Pit Drainage Details
 - 1425 Traffic Signals - Detector Loops Placement Details
 - 1426 Traffic Signals - Detector Loops Standard Configuration
 - 1699 Traffic Signals/Road Lighting/ITS - Parts List
 - 1702 ITS - Detector Loops Motorway Management Placement Details

Departmental Specifications:

- MRTS93 Traffic Signals
- MRTS257 Feeder Cable and Loop Cable for Vehicle Detector

Australian Standards:

- AS/NZS 2276 Cables for Traffic Signal Installations
- AS 2703 Vehicle detector systems

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

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TRAFFIC SIGNALS				A3	Standard Drawing No
DETECTOR LOOPS INSTALLATION DETAILS		Not to Scale	1424		Date 11/23
B	C	D	E	F	G