List of Standard Details

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- TS-SD-1.4B  Minimum Clearances to Signal Heads, PBU/PDUs
- TS-SD-1.8C  Bracket Layout for Single Pole Puffin
- TS-SD-2.5B  Stop Lines – ASLs Stop Line Loops Setting Out Details
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- TS-SD-5.1A  Duct Details
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- TS-SD-7.2A  Details of Detector Cable In Slot
- TS-SD-7.3B  Additional Loop Setting Out Information
- TS-SD-7.5B  N+1 Count (2+3 Lane Carriageway)
NOTES

1. All signal heads shall be fitted with appropriate heads and backing boards. The head type shall be indicated on the scheme drawing using the suffix P (primary) and S (secondary).

2. If louvres are required, these may be either HL (horizontal) or VL (vertical), they will be detailed on the scheme drawing.

3. If rotating tactile units are to be installed in a push button unit, this shall be indicated on the scheme drawing by the suffix T (tactile).
Minimum Clearances To Signal Heads, PBU/PDUs

Recommended minimum due to tolerances
Sheffield Streets Ahead

Standard Detail
Bracket layout for Single Pole Puffin

Original Drg Size: A3
Scale: N15

Drawing No: TS-SD-1.8
Revision: C

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Notes:

1. In the absence of a stud / drop crossing line, the 2500 offset from the centre of the primary signal pole to the stopline should be used, in lieu of the offset (2950) shown - see fig 1.

2. Any variations due to skew alignments and / or existing ironworks within the carriageway should be agreed with the Traffic Signals Engineer prior to implementation.

3. * see also TS/SD/7.1/a for definition of point D on xyz loops in lieu of stopline loops.

4. Where necessary, by site restrictions, a stop line may be reduced to 1.5m from centre of the pole.
RS115DF NAL Limited Retention socket with duck foot bend. Locking cover to be opposite side of post to carriageway. Concrete infill (ST4/C25 mix or stronger) with minimum pole surround. All dimensions for the base to be in accordance with the manufacturer's installation guide within the PCI Pack. (If ground is uncompacted a wider, deeper base of concrete should be used). Reinforcing mesh may also be required.

### Foundation Length and Width

<table>
<thead>
<tr>
<th>Foundation Length and Width</th>
<th>Nominal thickness 3.0-3.6mm</th>
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</thead>
</table>

### Maximum height to top of pole: 3400mm

**Traffic signal head for diagrammatic purposes only**

Black 115mm dia pole

Top of base sufficiently below finished level to allow site specific surface treatment.

Compacted hardcore

### 2325mm +/- 25mm

RS115DF NAL Limited Retention socket with duck foot bend. Locking cover to be opposite side of post to carriageway.

Concrete infill (ST4/C25 mix or stronger) with minimum pole surround. All dimensions for the base to be in accordance with the manufacturer's installation guide within the PCI Pack. (If ground is uncompacted a wider, deeper base of concrete should be used). Reinforcing mesh may also be required.

### Foundation Depth

<table>
<thead>
<tr>
<th>Foundation Depth</th>
<th>Nominal thickness 3.0-3.6mm</th>
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</table>

### NAL Retention Socket

**Traffic signal head for diagrammatic purposes only**

Black 115mm dia pole

Top of base sufficiently below finished level to allow site specific surface treatment.

Compacted hardcore
NOTES

1. All dimensions in millimetres unless otherwise stated.

2. The requirements of Clause 503 Para 6 (compressible board at joint) shall apply to rigid duct pipes in accordance with clause 514 read in conjunction with clause 501. The compressible board shall be fibre building board to BS 1142 Type LME-18mm thick.

3. For duct crossings in (i) existing carriageways the full length of the trench shall be excavated and approved before ducts are laid. The contractor shall take the necessary measures to maintain traffic flows as required in the contract or as agreed with the Engineer.

4. Where new ducting crosses existing underground equipment a clearance of 150mm shall be maintained.

5. Acceptable earthworks material for selected backfill in duct surround B for all ducts under carriageway shall be class EN to table 6/1 except that 100% of the material shall pass the 37.5mm sieve. BUT ALSO KEY NOTE 2

6. Trench backfill when required in footways and/or verges shall be selected backfill.

7. Slag shall not be used as fill material.

8. If duct surround A encroaches into the sub-base of trench reinstatement the sub-base thickness shall be reduced accordingly except that the resulting sub-base thickness is 100mm or less the sub-base shall be replaced with Class E concrete.

9. If duct surround A encroaches into the road-base course of trench reinstatement the roadbase thickness is 75mm or less the roadbase shall be replaced with Class E concrete.

10. If the depth to the top of the duct surround is less than that required for trench reinstatement the sub-base thickness is reduced accordingly.

11. A marker strip shall be laid 150mm above the top of the duct(s) or, for duct surround A, immediately on top of the concrete.

12. Thermoplastic ducts for use in conjunction with street lighting and traffic signal/sign installation shall be 80mm Nom. Id 6m, Nom Wall thickness, colour orange in medium density polyethylene unless otherwise specified fittings shall be compatible with ducts used.

13. Service duct marker blocks shall be located at the ends of each duct run on the centre line of each trench where necessary.
NOTES

i. Sides of boxes NOT to be made up from different size panels (i.e. a 750 box NOT to be made from a 300 and 450 sections).

ii. All dimensions in millimetres

iii. The number of incoming carriageway and footway ducts will be shown on the scheme drawings.

iv. Step irons to be placed in accordance with BS 1917 and manufactured in accordance with BS 15101 (on chambers exceeding 1m in depth)

v. Frames and covers are to comply with BS EN124 and be suitable for the environment in which they are to be used.
   (Class B125 for footpaths and Class C250/D400 for carriageways depending on proposed loading)

vi. Bracing to be used during construction of the chamber where required.

vii. Ducts entering the chambers are to be cut flush with the side of the chamber.

viii. Any gaps surrounding the duct and chamber wall are to be filled with mortar or expanding foam. If expanding foam is used this is to be cut flush with the side of the chamber.

Plan view of box section

Cross section through box

Typical side panel (approx 750 x 160)

Typical side panel (approx 600 x 160)

Typical side panel (approx 450 x 160)

Typical end panel (approx 300 x 160)

Sections of boxes connected by corner sections / lugs around box edges (see manufacturer's specifications for more information)

Cut outs / knock outs either located in set positions or can be drilled to suit.

Panels to construct boxes manufactured in a variety of sizes to suit required internal dimensions.

Please refer to manufacturer's specifications for exact dimensions.

Concrete or backfill, refer to manufacturer's specifications for type and dimensions

Single section of chamber to be installed below the lowest section containing a duct entry.

All boxes to have a concrete base min 150

Files ref - c:\users\122659\desktop\ts-sd-5.2.dwg
Double Loop Standard Configurations - New Installations
1. Loop Configuration For 2 Lane Dual Carriageway

Single Loop Speed Discrimination Loops

Double Loop Single Loop Speed Discrimination Loops
1. Loop Configuration For 2 Lane Dual Carriageway

2. Loop Configuration For 2 Lane Approach Single Carriageway

To Stop Line

Width Varies
1800 min
3600 max

Presence Loop
(For details see scheme dwg.)

Single Loop Speed Discrimination Loops - New Installations

3. Loop Configuration For Single Lane Approach - Single Carriageway

Distance from stop line to loop (pt D)
Single Stopline Loop 2.1m

4. SCOOT And Counting Loops For 2 Lane Dual Carriageway

SCOOT Loop Counting Loops

5. SCOOT Loop For 2 Way Carriageway
(approach may be marked as two lanes)

6. Measured Distance To Loop Pt D

7. Uni - Directional Loops
Preferred 1100

Alternative 100

8. Mova IN or X Loop

9. Mova Stop Line Loop

NOTES
1. All dimensions in millimetres
2. All Dimensions ± 20mm

Distance from stop line to loop (pt D)

<table>
<thead>
<tr>
<th>Z</th>
<th>Y</th>
<th>X</th>
<th>Speed Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>5m</td>
<td>18m</td>
<td>40m</td>
<td>79m</td>
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<table>
<thead>
<tr>
<th>Standard Config</th>
<th>Speed Disc</th>
<th>Presence Loop</th>
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<tbody>
<tr>
<td>Loop Perimeter</td>
<td>No. of Turns</td>
<td>Loop Perimeter</td>
</tr>
<tr>
<td>&lt; 8m</td>
<td>3</td>
<td>all</td>
</tr>
<tr>
<td>&gt; 8m</td>
<td>2</td>
<td>-</td>
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</tbody>
</table>
**DETAIL OF LOOP CABLE SLOT**

(i) loop in bituminous road surface

(ii) loop slot in bituminous road surface

(iii) modification of slot corners showing cable route

**DETAIL OF FEEDER CABLE SLOT**

20mm (±3/-3mm)

Hot Oxidised Bitumen R85/40

Low Viscosity Epoxy Resin

65mm (±10/-4mm)

Fine Cold Ashpalt

45mm (±5/-3mm)

Fine Cold Ashpalt

Hot Oxidised Bitumen R85/40

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*Note: All dimensions are approximate and may vary.*
Loops set out from centre line of lane 2, with loops in lanes 1 & 3 being adjusted independently for carriageway lane width.

Between 7.2m to 8.7m, increase all three loops equally. Above 8.7m only increase the centre loop. Below 7.2m reduce the outer loops equally.