Standard Construction Details (SCDs) – Series 2700

TII Publications contains Standard Construction Details (SCDs) for use on National Road schemes in Ireland. This composite document brings together all the Series 2700 SCDs from TII Publications current at the date of this document’s publication, into a single location for convenience.

Every effort has been made to keep this composite document updated and available from the TII Publications website (http://www.tiipublications.ie/). Please note that the SCD drawings available from the TII Publications website (individually linked below) are the controlled versions for all SCDs.

The SCDs contained in this document are as follows:

**Series 2700 Watermains, Utilities and Accommodation Works**

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TRENCH DETAIL WHERE MINIMUM COVER NOT PROVIDED

<table>
<thead>
<tr>
<th>PIPE ø (mm)</th>
<th>TRENCH WIDTH W (mm)</th>
<th>CONCRETE SURROUND H (mm)</th>
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<tr>
<td>80</td>
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<td>400</td>
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<tr>
<td>100</td>
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<td>1600</td>
</tr>
<tr>
<td>1200</td>
<td>2400</td>
<td>1750</td>
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</table>

NOTES:
1. TRENCH WIDTH SHALL BE WITHIN THE LIMITS SHOWN UP TO A MINIMUM OF 300MM ABOVE THE CROWN OF THE PIPE.
2. IN THE CASE OF PIPES LAID IN FOOTPATHS OR GRASSMARGINS, THE MINIMUM DEPTH OF COVER SHALL BE MEASURED FROM THE LEVEL OF THE ADJOINING ROAD SURFACE.

TRENCH DETAIL WHERE MINIMUM COVER PROVIDED

TII PUBLICATION NUMBER: CC-SCD-02701
### NOTES:
1. TRENCH WIDTH SHALL BE WITHIN THE LIMITS SHOWN UP TO A MINIMUM OF 300MM. ABOVE THE CROWN OF THE PIPE.

<table>
<thead>
<tr>
<th>PIPE Ø (mm)</th>
<th>TRENCH WIDTH W (mm)</th>
<th>CONCRETE SURROUND H (mm)</th>
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<tr>
<td>80</td>
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<td>1200</td>
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<td>1750</td>
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**TRENCH DETAIL WHERE MINIMUM COVER NOT PROVIDED**

**TRENCH DETAIL WHERE MINIMUM COVER PROVIDED**

- **EXISTING ROAD PAVEMENT**
- **MARKER TAPE TO CLAUSE 2710**
- **CLAUSE 601, TABLE 6/1, CLASS B CLASS 1 MATERIAL**
- **MATERIAL TO CLAUSE 503, TABLE 5/3**
NOTES.
1. TRENCH WIDTH SHALL BE WITHIN THE LIMITS SHOWN UP TO A MINIMUM OF 300MM, ABOVE THE CROWN OF THE PIPE.
HYDRANT CHAMBER FITTING

TYPICAL SCREWDOWN FIRE HYDRANT TO BS. 750 WITH BAYONET LUGGED OR LONDON ROUND THREAD OUTLET.

NOTES:
1. PIPE LAYOUT AT CHAMBER AS DRAWN UNLESS SPECIFIED OTHERWISE.
2. HYDRANT SHOULD BE MARKED IN ACCORDANCE WITH B.S. 3251 CLASS A.
3. HYDRANT IS NOT TO BE POSITIONED IN THE ROADWAY, (SEE RCD/2700/9).

SCALE 1:25

SECTION A–A (SEE DRG. NO. RCD/2700/8 FOR PLAN)

NATIONAL ROADS AUTHORITY

ROAD CONSTRUCTION DETAILS

WATERMAIN

TII PUBLICATION NUMBER: CC-SCD-02707

AIR VALVE OR HYDRANT CHAMBER
(MAINS 400MM Ø OR LESS)
(SHEET 1 OF 2)

NRA

RCD/2700/7
Refer to ORG. No. RCD/2700/11 for standard roof joint details.

Plan View of Hydrant Fitting.

2 NO. LIFTING HANDLES TO BE CAST IN SLAB. FOR DETAILS REFER TO ORG. NO. RCD/2700/11

Section of P.C.C. lintel

215mm Wide x 100mm deep pre-cast concrete lintel over both wall ope.

Minimum length = OPE size + 300mm

C25/30 concrete reinforced with 2 NO. high yield reinforcing bars 12mm in diameter.

ST4 concrete floor slab with class u2 finish.

150, 125, PFE 00, 125, 150

C25/30 concrete in chamber floors.

NOTE

Clear ope in wall size varies with main pipeline diameter.

OPE height = OD + 300mm

OPE width = OD + 250mm

National Roads Authority

Road Construction Details

Wettermain

Air valve or hydrant chamber (mains 400mm Ø or less)

(Sheet 2 of 2)

TII Publication Number: CC-SCD-02708

Drawing No. RCD/2700/8

Scale 1:25
SECTION A-A  (SEE RCD/2700/10 FOR PLAN)

PRECAST C25/30 CONCRETE ROOF SLAB BEDDING IN CLASS 1 MORTAR 20MM THICK.

BOUNDARY WALL OR INNER EDGE OF FOOTPATH.

PRECAST CONCRETE MARKER POST REFER TO RCD/2700/13

ELEVATION:

150MM SURROUND C25/30 CONCRETE

SCREWDOWN FIRE HYDRANT TO BS 750 WITH BAYONET LUGGED OR LONDON ROUND THREAD OUTLET.

80mm @ ALL FLANGED DUCTILE IRON SPACER PIECE LENGTH TO SUIT ON SITE DIMENSIONS

ST4 CONCRETE FLOOR SLAB WITH CLASS U2 FINISH.

FILL MATERIAL IN ACCORDANCE WITH RCD/2700/2 OR RCD/2700/3, AS APPROPRIATE.

80MM @ FLANGE OFF FLANGE TEE OR 80MM SOCKET OFF SOCKET TEE OR 80MM @ FLANGE OFF SOCKET TEE (TEE PIECE AS SPECIFIED IN LOCATION AND ROTATED TO SUIT)

400mm WIDE ST4 CONCRETE ANCHOR BLOCK

25mm ST2 CONCRETE BLINDING LAYER

FLANGE ON SOCKET 90° SHORT RADIUS HYDRANT DUCKFOOT BEND.

200MM DEPTH OF GRANULAR MATERIAL PIPE
25MM X 25MM PLASTIC A2 SEALANT ON
BOND BREAKING TAPE ON
WATERPROOF, NON-ROTTING
PREFORMED BITUMEN BONDED CORK JOINT FILLER BOARD
20MM CLASS 1 MORTAR BED ON
2 NO. LAYERS OF BITUMASTIC BASED HESSIAN TYPE D.P.C. LAID BREAKING JOINT.
CHAMBER WALLS

JUNCTION A

PRE-CAST CONCRETE ROOF SLAB BEDDED ON
20MM CLASS 1 MORTAR BED ON
2 NO. LAYERS OF BITUMASTIC BASED HESSIAN TYPE D.P.C. LAID BREAKING JOINT.
POLYSULPHIDE SEALANT REBATE 25MM X 20MM CHAMBER WALLS

JUNCTION C

25MM X 25MM PLASTIC A2 SEALANT ON
BOND BREAKING TAPE ON
WATERPROOF, NON-ROTTING PREFORMED BITUMEN BONDED CORK JOINT FILLER BOARD 19MM Ø PREFORMED SELF ADHESIVE NEOPRENE SEAL

JUNCTION B

SCALE 1:200

LIFTING HANDLE DETAILS

200MM X 100MM X 75MM DEEP POCKET IN ROOF SLAB.

20MM DIA. MILD STEEL BARS BENT AS SHOWN AND HOT DIPPED GALVANIZED TO EN ISO 1461.

SCALE 1:250

JOINTS AND LIFTING HANDLE
SCALE 1:5

**I.D. PLATES**

- 180mm X 210mm X 10mm DEEP INSET IN MARKER POST TO ACCOMMODATE 6mm THICK MARKER PLATE WITH 50mm HIGH RAISED LETTERS STANDING 6mm OUT FROM FACE OF PLATE.
- PLATE TO BE FIXED TO MARKER POST WITH ALL STAINLESS STEEL FIXINGS.
- HYDRANT PLATE TO BE PAINTED YELLOW.
- LETTERING TO BE PAINTED BLACK (2 COATS).

**ST4 CONCRETE SURROUND**

- 3 NO. T10 REINFORCING BARS
- 150mm ST4 CONCRETE SURROUND AROUND MARKER POST

SCALE 1:10

SCALE 1:20

MARKER POST AND PLATES

TII PUBLICATION NUMBER: CC-SCD-02713
MARKER SLAB, REINFORCED WITH 100 X 100mm Sq. MESH 5mm DIA. SLAB THICKNESS IS 40mm. GRADE C25/30 CONCRETE.
REINFORCING BARS SHALL BE 20mm IN FROM EDGE OF CONCRETE SLAB.
GRADE ACCESS TO FIELD AND PROVIDE ACCESS ROAD AS PER RCD/700/6

FIELD ACCESS GATE AS SPECIFIED

EXISTING GROUND LEVEL

SECTIONAL ELEVATION

EDGE OF PAVEMENT

EMBANKMENT CUT/FILL

LAND ACQUISITION BOUNDARY FENCE (TYPICAL)

4m FIELD ACCESS

1m

FIELD ACCESS GATE AS SPECIFIED

TII PUBLICATION NUMBER: CC-SCD-02754

NATIONAL ROADS AUTHORITY

ROAD CONSTRUCTION DETAILS

ACCOMMODATION WORKS

P2  06/13

P1  03/00

FIELD ACCESS

Drawing No.

RCD/ 2700/101
1. All dimensions are in millimetres.
2. Cattle grids shall comply with this detail and the additional requirements of I.S. 185 or BS 4008.
3. The pit length for stock except deer shall be at least 2.6m. For deer this shall be increased to at least 4.0m.
4. The pit width shall be equal to the width of the access on which it is being provided but shall not be less than 2.75m.
5. The pit depth shall be at least 250mm which is considered the preferred depth in terms of animal welfare. Any increased depth should be only to permit drainage falls and/or to accommodate structural members.
6. Adequate drainage shall be provided to prevent water collecting in the pit.
7. Guard fencing shall be provided where specified to prevent animals scrambling round the terminal posts or pillars of the fence or wall that meets the grid on each side.
8. Ramps to aid the escape of small animals shall be provided in one or two corners to exit the pit on the side away from the stock containment.

TII PUBLICATION NUMBER: CC-SCD-02755
NOTE: FOR TYPE 3 (i.e. 2 X 75 GALLONS), 2 NO. 12mm. WATER CONNECTIONS MUST BE MADE TO INDIVIDUAL BALLCOCKS, DOWNSTREAM OF STOPCOCK.

### 30 GALLON PRECAST CONCRETE WATER TROUGH

<table>
<thead>
<tr>
<th>TYPE</th>
<th>CAPACITY (GALLONS)</th>
<th>TROUGH DIMENSIONS ( L \times W \times D ) M</th>
<th>PLINTH DIMENSIONS ( L \times W ) M</th>
<th>HARDSTANDING DIMENSIONS (M)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>1.35 \times 0.57 \times 0.3</td>
<td>1.8 \times 1.1</td>
<td>4.0 \times 4.0</td>
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<tr>
<td>2</td>
<td>75</td>
<td>1.5 \times 0.9 \times 0.3</td>
<td>2.1 \times 1.4</td>
<td>4.0 \times 4.0</td>
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<tr>
<td>3</td>
<td>150</td>
<td>2 x TYPE 2</td>
<td>2.3 \times 2.0</td>
<td>5.5 \times 4.0</td>
</tr>
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**APPLICATION NUMBER:** CC-SCD-02756