

HORIZONTAL BEND THRUST BLOCK TYPE 2

PLAN

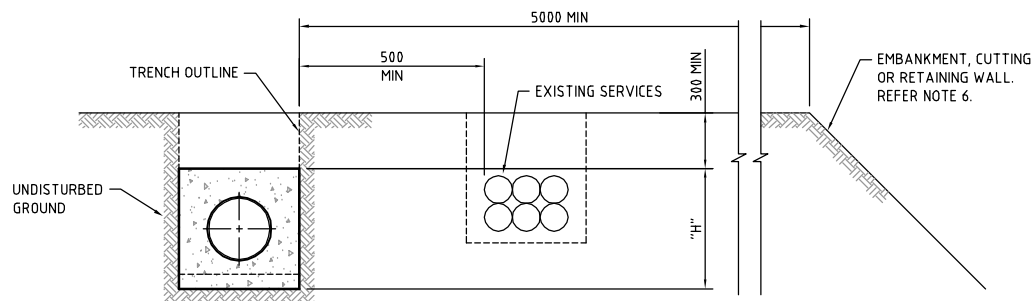
SCALE 1:20

THRUST BLOCK AREAS & DIMENSIONS FOR 11.25° HORIZONTAL BENDS - TYPE 2 (m<sup>2</sup>)

DN	OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHBP	REQUIRED BEARING AREA	L	H
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m <sup>2</sup> )	(mm)	(mm)
100	122	120	150	3.4	50	0.067	600	450
150	177	120	150	7.1	50	0.142	600	500
200	232	120	150	12.2	50	0.244	600	550
250	286	120	150	18.5	50	0.370	600	600
300	345	120	150	26.9	50	0.539	600	650

THRUST BLOCK AREAS & DIMENSIONS FOR 22.5° HORIZONTAL BENDS - TYPE 2 (m<sup>2</sup>)

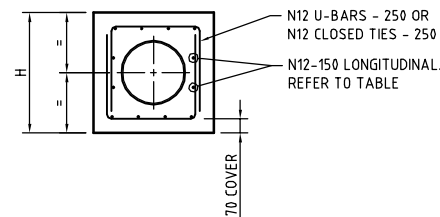
DN	OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHBP	REQUIRED BEARING AREA	L	H
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m <sup>2</sup> )	(mm)	(mm)
100	122	120	150	6.7	50	0.134	600	450
150	177	120	150	14.1	50	0.282	600	500
200	232	120	150	24.3	50	0.485	600	550
250	286	120	150	36.9	50	0.737	600	600
300	345	120	150	53.6	50	1.073	850	650



HORIZONTAL BEND THRUST BLOCK TYPE 2

ELEVATION

SCALE 1:20



CONCRETE ENCASEMENT DETAIL

SCALE 1:20

CONCRETE ENCASEMENT  
REINFORCEMENT DETAILS

MAIN SIZE	LONGITUDINAL REINFORCEMENT
DN100	8N12
DN150	8N12
DN200	12N12
DN250	12N12
DN300	12N12

## NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- THRUST BLOCKS DESIGNED TO WITHSTAND A DESIGN PRESSURE OF 120m AND A TEST PRESSURE OF 150m HEAD OF WATER.
- THE ALLOWABLE HORIZONTAL BEARING PRESSURE (AHBP) OF UNDISTURBED NATURAL SOIL TO BE DETERMINED BY A SUITABLY EXPERIENCED GEOTECHNICAL ENGINEER PRIOR TO CASTING THRUST BLOCKS.
- CAST THE THRUST AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL.
- DO NOT USE THRUST BLOCKS SPECIFIED IN THIS DRAWING IN SOILS WHERE AHBP<50KPa.
- DO NOT USE THRUST BLOCKS SPECIFIED IN THIS DRAWING. WITHIN 5m OF AN EMBANKMENT, CUTTING OR RETAINING WALL.
- ALL DI FITTINGS AND PIPES TO NE WRAPPED IN POLYETHYLENE SLEEVING. TAPE 700 LONG PE SLEEVING TO END OF DICI PIPE TO BE ENCASED 150 FROM THE SOCKET FACE TO OVERLAP PE SLEEVED DICI PIPE. WHEN CONNECTING TO PVC PIPE (WITHOUT PE SLEEVE) TAPE 700 LONG PE SLEEVE TO PVC PIPE. POLYETHYLENE SLEEVING TO PS-320\_SW.
- CONCRETE SHALL BE CLASS N25 TO PS-357\_SW. SLUMP SHALL BE IN THE RANGE 80mm - 120mm. MAXIMUM NOMINAL AGGREGATE SIZE SHALL BE 20mm.
- ALL REINFORCEMENT SHALL BE TO AS4671, SHAPE - D, STRENGTH GRADE = 500 MPa, DUCTILITY CLASS - N.
- MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 70mm.
- DO NOT APPLY ANY THRUST LOAD FOR AT LEAST 14 DAYS AFTER POURING THRUST BLOCKS.
- THRUST BLOCK DESIGNS SHOWN ON THIS DRAWING ARE NOT SUITABLE FOR USE IN AGGRESSIVE OR CONTAMINATED SOILS.

**Sydney**  
**WATER**STATE OF NEW SOUTH WALES THROUGH SYDNEY  
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APPROVED

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MANAGER E & ES

ENGINEERING &amp; ENVIRONMENTAL SERVICES

B

THRUST BLOCK DIMENSIONS REVISED

PJG

29\02\12

A

ORIGINAL ISSUE

PJG

31/01/12

LETTER

DETAILS OF ISSUE / AMENDMENT

APP'D

DATE

DEEMED TO COMPLY DRAWINGS

**THRUST BLOCK DETAILS**  
**DICI AND PVC WATER MAINS ≤ DN300**  
**HORIZONTAL BENDS TYPE 2****DTC****1111**

ISSUE

DATE

**B****29\02\12**