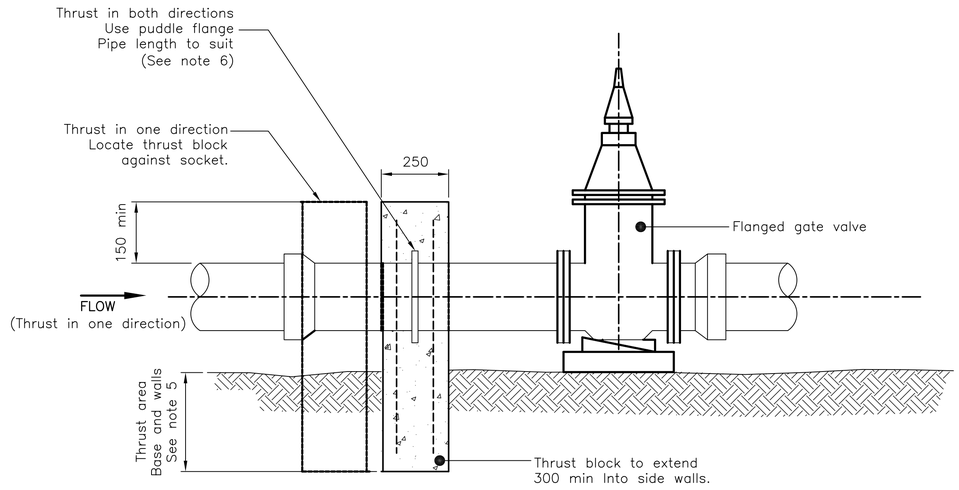
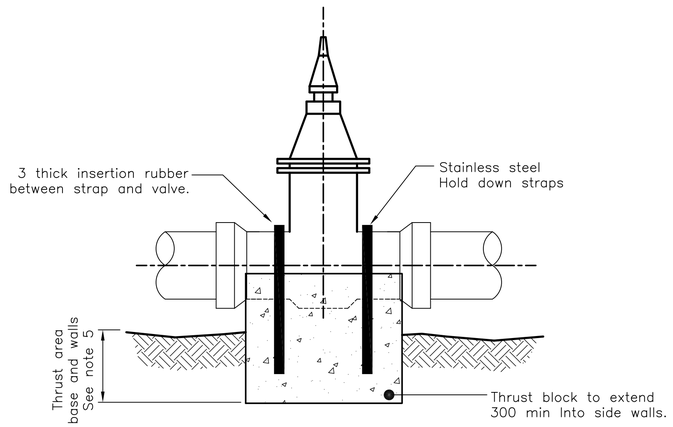


FLANGED VALVES



SOCKETED VALVES

NOTES

1. All dimensions in millimetres unless otherwise shown.
2. Anchor blocks in the table are designed for a test pressure of 1000kPa (100m head). Adjust concrete volume to suit actual test pressure.
3. Where DI pipes and fittings with restrained joints are used thrust blocks are not required. See SD–373.
4. Thrust block reinforcement as specified in design drawings.
5. Where specified provide concrete thrust blocks for SOC–SOC valves. Thrust area to be as for dead ends as shown in SD–371.
6. Install puddle flanges on class K12 DICL pipe.
7. Design of anchor blocks at vertical bends to include allowance for the horizontal component of thrust. Note that bearing areas as per SD–371 may not be appropriate.

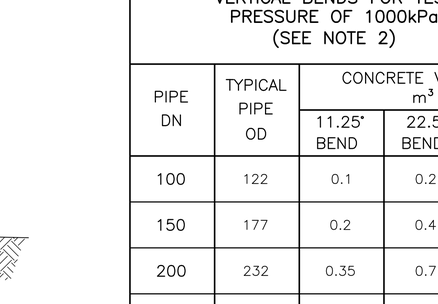
MINIMUM BLOCK VOLUME FOR ANCHORAGE OF VERTICAL COMPONENT OF THRUST

VERTICAL BENDS FOR TEST PRESSURE OF 1000kPa (SEE NOTE 2)

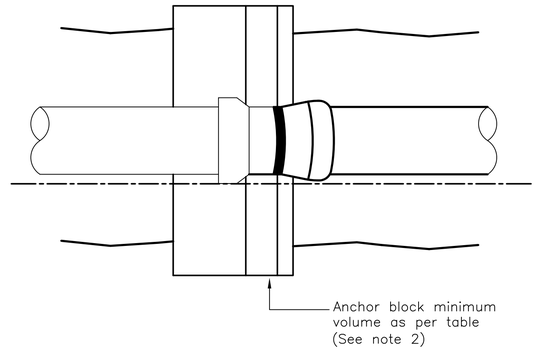
PIPE DN	TYPICAL PIPE OD	CONCRETE VOLUME m^3		
		11.25° BEND	22.5° BEND	45° BEND
100	122	0.1	0.2	0.35
150	177	0.2	0.4	0.75
200	232	0.35	0.7	1.25
225	259	0.45	0.85	1.6
250	286	0.55	1.05	1.95
300	345	0.75	1.5	2.8
375	426	1.2	2.3	4.3
450	507	DETAILED DESIGN REQUIRED (ALTERNIVE METHODS TO BE CONSIDERED)		
500	560			
600	667			
750	826			

IN CALCULATING THE CONCRETE VOLUME NO CONTRIBUTION FROM THE PIPELINE SELF WEIGHT HAS BEEN INCLUDED

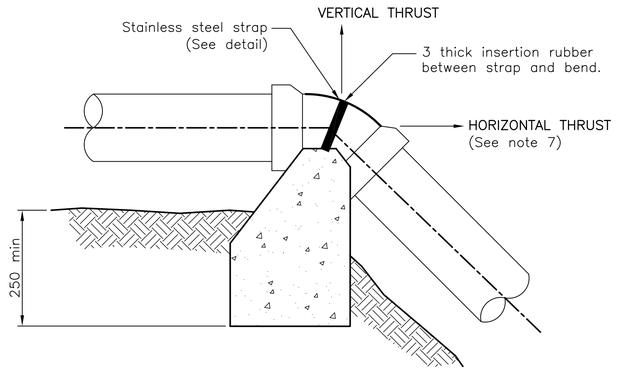
NOTE: CAUTION RECALCULATE AREA FOR 1200 kPa



TYPICAL SS STRAP



PLAN



ELEVATION

VERTICAL BENDS

ANCHOR BLOCK CONSTRUCTION NOTES

- Locate anchor block centrally around bend.
- Key anchor block into base of trench a minimum depth of 250.
- Pour concrete against a solid excavation face.
- Use grade N20 concrete.
- Keep concrete clear of all bolts, nuts and pipe joints.

No.	DATE	DESCRIPTION	AP'D
A		ORIGINAL ISSUE	

REVISIONS

NOTES : BASED ON FORMER WSAA DRAWING WAT–1207

Full Size A1

Not to Scale

DRAWN:

CHECKED: D Moseley

Design Engineer Approved: P Turl

Date: 24–07–2012

Manager Approved: M Harvey

Date: 24–07–2012

City of Townsville

Ph: (07) 4727 9000
www.townsville.qld.gov.au

THRUST AND ANCHOR BLOCKS GATE VALVES AND VERTICAL BENDS

STANDARD DRAWING

WATER

SD–372 | A