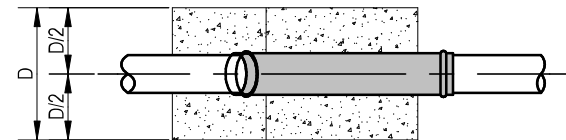
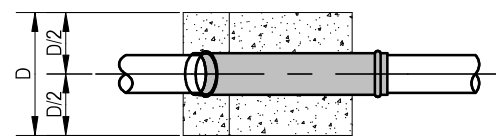


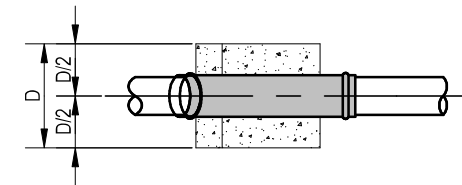
ELEVATION



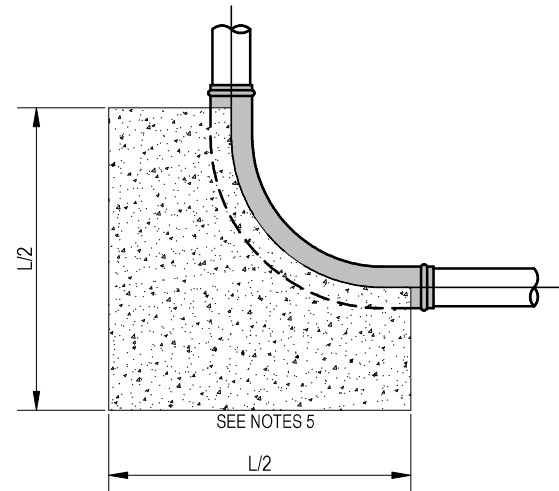
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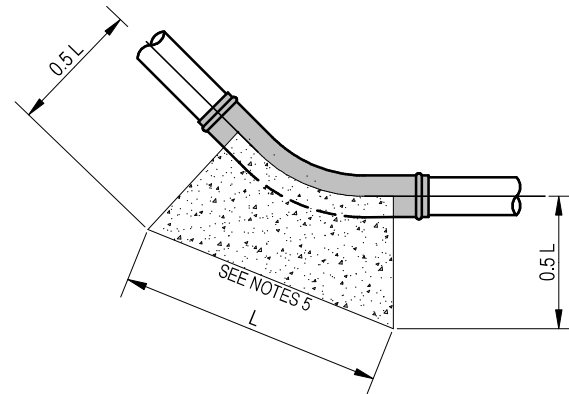
ELEVATION



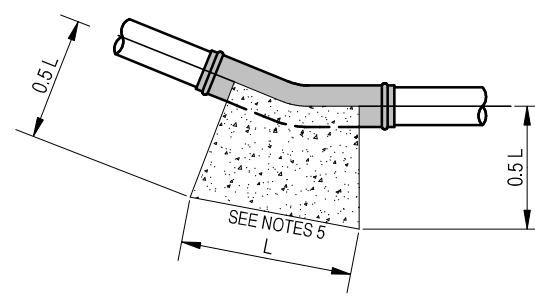
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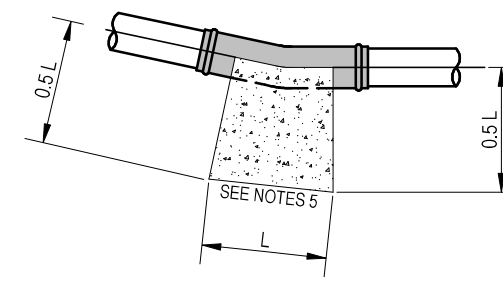
PLAN 90°



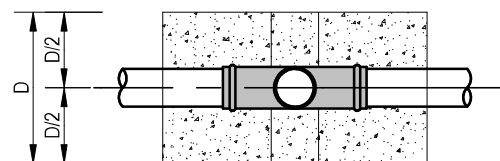
PLAN 45°



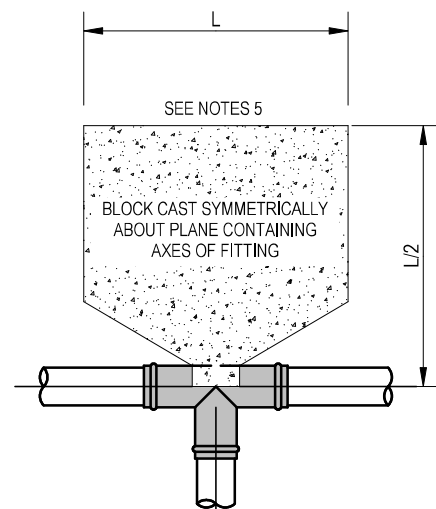
PLAN 22.5°



PLAN 11.25°



ELEVATION



PLAN TEE PIECE

THRUST BLOCK PROTECTION AREA												
Pressure	600 kPa			900 kPa			1200 kPa			1600 kPa		
Dia	L	D	Area	L	D	Area	L	D	Area	L	D	Area
TEE				TEE			TEE			TEE		
500	1800	900	1.62	2000	1200	2.40	2200	1500	3.30	2600	1600	4.16
400	1400	750	1.05	1700	900	1.53	1700	1200	2.04	1900	1400	2.66
300	1200	600	0.72	1500	600	0.90	1300	900	1.17	1500	1000	1.5
200	1000	450	0.45	900	450	0.40	850	600	0.51	1000	700	0.7
160	800	450	0.36	800	300	0.24	650	450	0.29	800	600	0.48
100	500	300	0.15	300	300	0.09	450	300	0.13	600	300	0.18
22.5° BEND AND SMALLER				22.5° BEND AND SMALLER			22.5° BEND AND SMALLER			22.5° BEND AND SMALLER		
500	700	900	0.63	1100	900	0.99	1200	1100	1.32	1400	1200	1.68
400	600	750	0.45	800	750	0.60	1000	800	0.80	1200	900	1.08
300	400	600	0.24	600	600	0.36	900	500	0.45	1000	600	0.6
200	250	450	0.11	350	450	0.15	500	400	0.20	600	500	0.3
160	200	300	0.06	300	300	0.09	350	350	0.12	500	400	0.2
100	100	300	0.03	150	300	0.04	300	300	0.09	400	300	0.12
45° BEND				45° BEND			45° BEND			45° BEND		
500	1400	900	1.26	1500	1200	1.80	1700	1500	2.55	2000	1600	3.2
400	1100	750	0.82	1300	900	1.17	1300	1200	1.56	1600	1400	2.24
300	750	600	0.45	1100	600	0.66	1000	900	0.9	1200	1000	1.2
200	450	450	0.22	650	450	0.29	700	600	0.42	900	600	0.54
160	300	450	0.13	600	300	0.18	500	450	0.225	700	500	0.35
100	200	300	0.06	250	300	0.07	350	300	0.105	400	400	0.16
90° BEND				90° BEND			90° BEND			90° BEND		
500	2400	900	2.16	2800	1200	3.36	3000	1500	4.50	3700	1600	5.92
400	2000	750	1.50	2400	900	2.16	2400	1200	2.88	3100	1200	3.72
300	1200	750	0.90	2000	600	1.20	1800	900	1.62	2100	1000	2.1
200	1000	600	0.60	1200	450	0.54	1200	600	0.72	1200	800	0.96
160	600	400	0.24	800	450	0.36	900	450	0.40	1000	600	0.6
100	500	350	0.17	500	300	0.15	600	300	0.18	800	300	0.24
END CAP				END CAP			END CAP			END CAP		
500	1300	1300	1.69	1600	1600	2.56	2000	1600	3.20	2600	1600	4.16
400	1000	1000	1.00	1300	1300	1.69	1600	1300	2.08	2000	1400	2.8
300	800	800	0.64	1000	1000	1.00	1100	1100	1.21	1300	1200	1.56
200	600	600	0.36	700	700	0.49	800	800	0.64	900	800	0.72
160	400	400	0.16	500	500	0.25	600	600	0.36	800	600	0.48
100	300	300	0.09	350	350	0.12	400	400	0.16	500	400	0.2

NOTES:

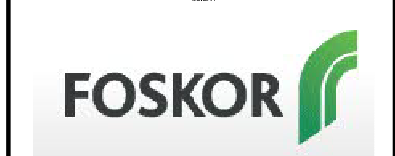
- THRUST BLOCKS**
1. ALL CONCRETE TO BE GRADE 30/19.
  2. A SINGLE LAYER OF 250 MCN POLYTHENE SHEET TO SANS 952 TO BE PLACED BETWEEN THE CONCRETE AND THE PIPE OR FITTING.
  3. MINIMUM COVER OVER PIPE (d)  
 $\varnothing \leq 110$  d=350  
 $110 > \varnothing \leq 200$  d=500  
 $\varnothing > 200$  d=900
  4. ALLOW A MINIMUM OF 75mm BETWEEN THE JOINTS AND THE THRUST BLOCK.
  5. ALL THRUST BLOCKS TO BE CAST AGAINST UNDISTURBED IN-SITU MATERIAL AND SHALL BE KEED INTO THE SIDES AND BOTTOM OF THE TRENCH.
  6. HORIZONTAL SOIL BEARING CAPACITY OF 150kPa.

A	24/05/2023	NN	FOR TENDER
No.	Date	By	Description

REVISIONS  
AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR	ENGINEER
DATE:.....	DATE:.....

CLIENT



Project leader:	Signature:
Date:	

CLIENT DRAWING NUMBER:

**ilifa**  
AFRICA ENGINEERS

PRETORIA  
KRUGERSDORP  
SECUNDA  
NEWCASTLE  
HARRISMITH  
RICHARDS BAY

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**SHEQ**  
National cert

Setmed 650 8899 2012

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Designed:	N. Naumann	Date:		Signature:	
Drawn:	N. Barnard	Date:		Signature:	
Checked:	N. Naumann	Date:		Signature:	
Approved:	C. Claassens	Date:		Signature:	
Pr. Reg No.:	800450				

PROJECT TITLE

**FOSKOR - RELINING OF  
STORMWATER DAMS**

PROJECT DESCRIPTION  
**TECHNICAL DESIGN OF  
STORMWATER DAMS**

DRAWING TITLE  
**TYPICAL DETAIL:  
THRUST BLOCK**

DATE:	MAY 2023	SCALE:	AS SHOWN	A3	SHEET NO:	1 OF 1
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PLAN No.

R21-097-00-351

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