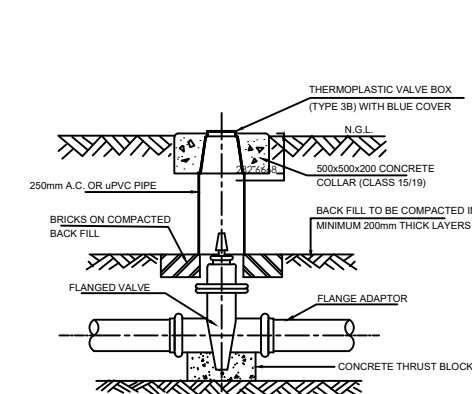
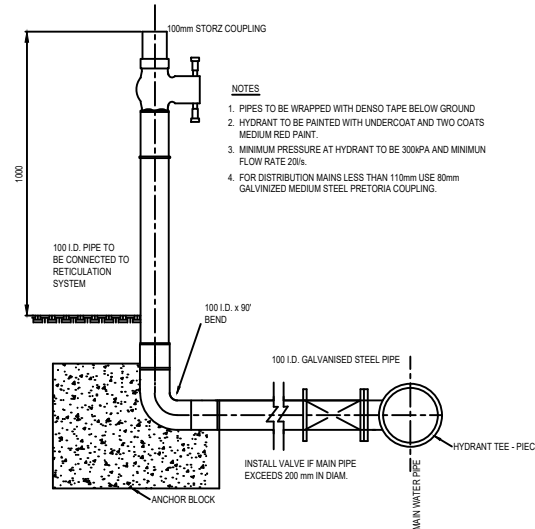
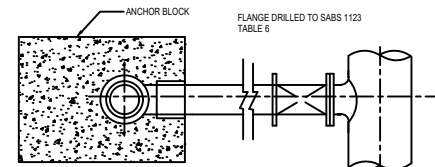




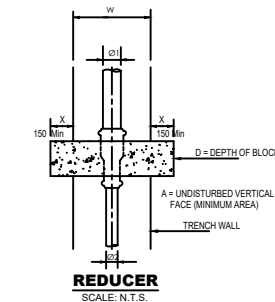
TYPICAL DETAIL : VALVE WITH VALVE BOX.
FOR VALVES 200mm DIAMETER AND SMALLER.
SCALE: N.T.S.



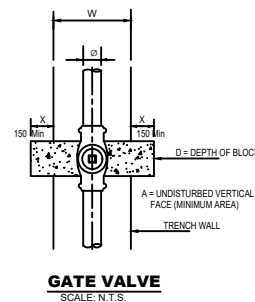
TYPICAL DETAIL OF FIRE HYDRANT
SCALE: N.T.S.



TYPICAL DETAIL : BEDDING FOR FLEXIBLE PIPES.
SCALE: N.T.S.



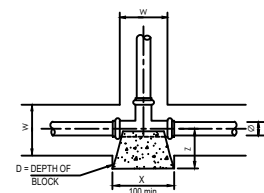
REDUCER
SCALE: N.T.S.



GATE VALVE
SCALE: N.T.S.

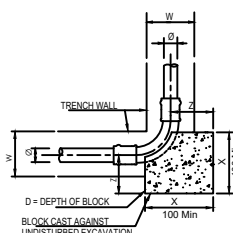
THRUST BLOCKS FOR REDUCERS									
NOMINAL DIAMETER Ø1 (mm)	NOMINAL DIAMETER Ø2 (mm)	DEPTH OF BLOCK D (mm)	MAXIMUM TESTING PRESSURE						
			X	A	X	A	X	A	
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
350	300/250	750	300	0.43	450	0.64	600	0.85	
300	250/200	700	250	0.35	400	0.53	500	0.71	
250	200/150	650	200	0.29	350	0.43	450	0.57	
200	150/100	600	200	0.22	300	0.32	400	0.43	
150	100/75	500	150	0.12	200	0.18	250	0.24	
100	75/50	400	100	0.06	150	0.08	150	0.11	
75	50	300	100	0.03	150	0.04	150	0.05	

THRUST BLOCKS FOR GATE VALVES									
NOMINAL DIAMETER Ø (mm)	DEPTH OF BLOCK D (mm)	MAXIMUM TESTING PRESSURE							
		X	A	X	A	X	A		
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
300	500	500	0.64	850	0.96	1150	1.27		
250	450	300	0.45	600	0.67	800	0.89		
200	400	250	0.29	400	0.43	600	0.57		
150	350	150	0.16	200	0.24	300	0.32		
100	300	100	0.07	150	0.11	150	0.14		
75	250	100	0.04	150	0.06	150	0.08		
50	200	100	0.02	150	0.03	150	0.04		



T - JUNCTION
SCALE: N.T.S.

THRUST BLOCKS FOR TEES									
NOMINAL DIAMETER Ø (mm)	DEPTH OF BLOCK D (mm)	MAXIMUM TESTING PRESSURE							
		X	A	X	A	X	A		
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
300	1200	550	0.64	800	0.96	1100	1.27		
250	1000	450	0.44	700	0.67	900	0.89		
200	800	350	0.28	550	0.43	700	0.57		
150	600	300	0.16	450	0.24	550	0.32		
100	400	200	0.07	300	0.11	350	0.14		
75	300	150	0.04	200	0.06	300	0.08		
50	200	100	0.02	150	0.03	200	0.04		



90° BEND
SCALE: N.T.S.

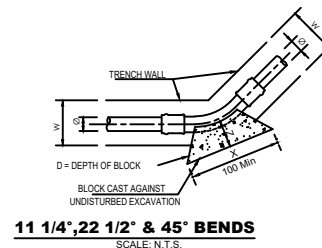
THRUST BLOCKS FOR 90° BENDS									
NOMINAL DIAMETER Ø (mm)	DEPTH OF BLOCK D (mm)	MAXIMUM TESTING PRESSURE							
		X	A	X	A	X	A		
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
300	1200	750	0.80	1150	1.35	1550	1.81		
250	1000	650	0.63	950	0.94	1250	1.29		
200	800	500	0.40	750	0.60	1000	0.81		
150	600	400	0.23	600	0.34	750	0.46		
100	400	250	0.10	400	0.15	500	0.20		
75	300	200	0.06	300	0.09	400	0.12		
50	200	150	0.03	200	0.04	250	0.05		

THRUST BLOCKS FOR 45° BENDS									
NOMINAL DIAMETER Ø (mm)	DEPTH OF BLOCK D (mm)	MAXIMUM TESTING PRESSURE							
		X	A	X	A	X	A		
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
300	1200	450	0.49	650	0.74	850	0.98		
250	1000	350	0.34	500	0.51	700	0.68		
200	800	300	0.22	450	0.33	550	0.44		
150	600	250	0.13	350	0.21	450	0.28		
100	400	150	0.06	200	0.09	300	0.11		
75	300	100	0.03	150	0.05	200	0.06		
50	200	100	0.02	100	0.02	150	0.03		

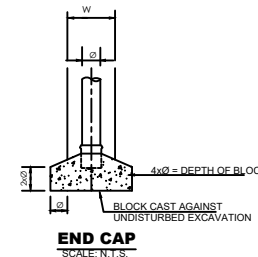
THRUST BLOCK FOR 22 1/2° AND 11 1/4° BENDS									
NOMINAL DIAMETER Ø (mm)	DEPTH OF BLOCK D (mm)	MAXIMUM TESTING PRESSURE							
		X	A	X	A	X	A		
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
300	1200	250	0.25	350	0.38	450	0.50		
250	1000	200	0.18	300	0.28	350	0.35		
200	800	150	0.11	250	0.17	300	0.22		
150	600	100	0.06	200	0.10	250	0.13		
100	400	100	0.04	100	0.04	150	0.06		
75	300	100	0.03	100	0.03	100	0.03		
50	200	100	0.02	100	0.02	100	0.02		

NOTE : X AND A TO BE HALVED FOR 11 1/4° BENDS

TYPICAL DETAILS & SIZES FOR THRUST BLOCKS.
SCALE: N.T.S.



11 1/4°, 22 1/2° & 45° BENDS
SCALE: N.T.S.



END CAP
SCALE: N.T.S.

- NOTES :**
1. CONCRETE IN THRUST BLOCKS IS CLASS 10/19
 2. THIS TABLE IS VALID FOR 100 kPa EARTH BEARING PRESSURE
 3. X-DIMENSION MAY BE REDUCED FOR HIGHER EARTH BEARING PRESSURES
 4. Z SHALL BE THE MINIMUM OF X/2 OR W/2
 5. HALF OF THE DEPTH OF THE BLOCK SHALL BE BELOW THE PIPE AXIS
 6. KEEP COUPLINGS AND FLANGES 25mm CLEAR OF CONCRETE

FOR TENDER				VERSION/AMENDMENTS				CONSULTING ENGINEERS:				PROJECT TITLE:				CLIENT:			
CONTRACT No.	DESCRIPTION	CERTIFIED BY	DATE	No.	DATE	DESCRIPTION	AUTHORISED BY	MAHLANGU – BEHR & ASSOCIATES INFRASTRUCTURE CONSULTANTS 27 Adrin Street Reyno Manor Tel. 083 344 4448 Reyno Ridge Fax. 086 547 9210 WITBANK, 1035 Email. Mbainfraconsult@gmail.com				PROJECT JSM W-20/20-21/W19 REPLACEMENT OF ASBESTOS PIPE AND RETICULATION AT MAKOMETSANE DRAWING TITLE: TYPICAL WATER DETAILS				Dr JS MOROKA LOCAL MUNICIPALITY  Private Bag X 4012 SIYABUSWA 0472 TEL: (013) 973 1390 FAX: (013) 973 2463			
CERTIFIED CONSTRUCTION DRAWING FOR CONTRACTOR :																			
ENGINEER _____ DATE _____																			

SURVEYED - DESIGNED N.B. DRAWN S.C. CHECKED S.C.	
CO-ORDINATE SYSTEM: - DATE:	
APPROVED ON BEHALF OF ENG CONSULTING:	
ENGINEER: _____ DATE: _____	
DRAWING No.: MBA-000/000 VERSION: R0.1	