

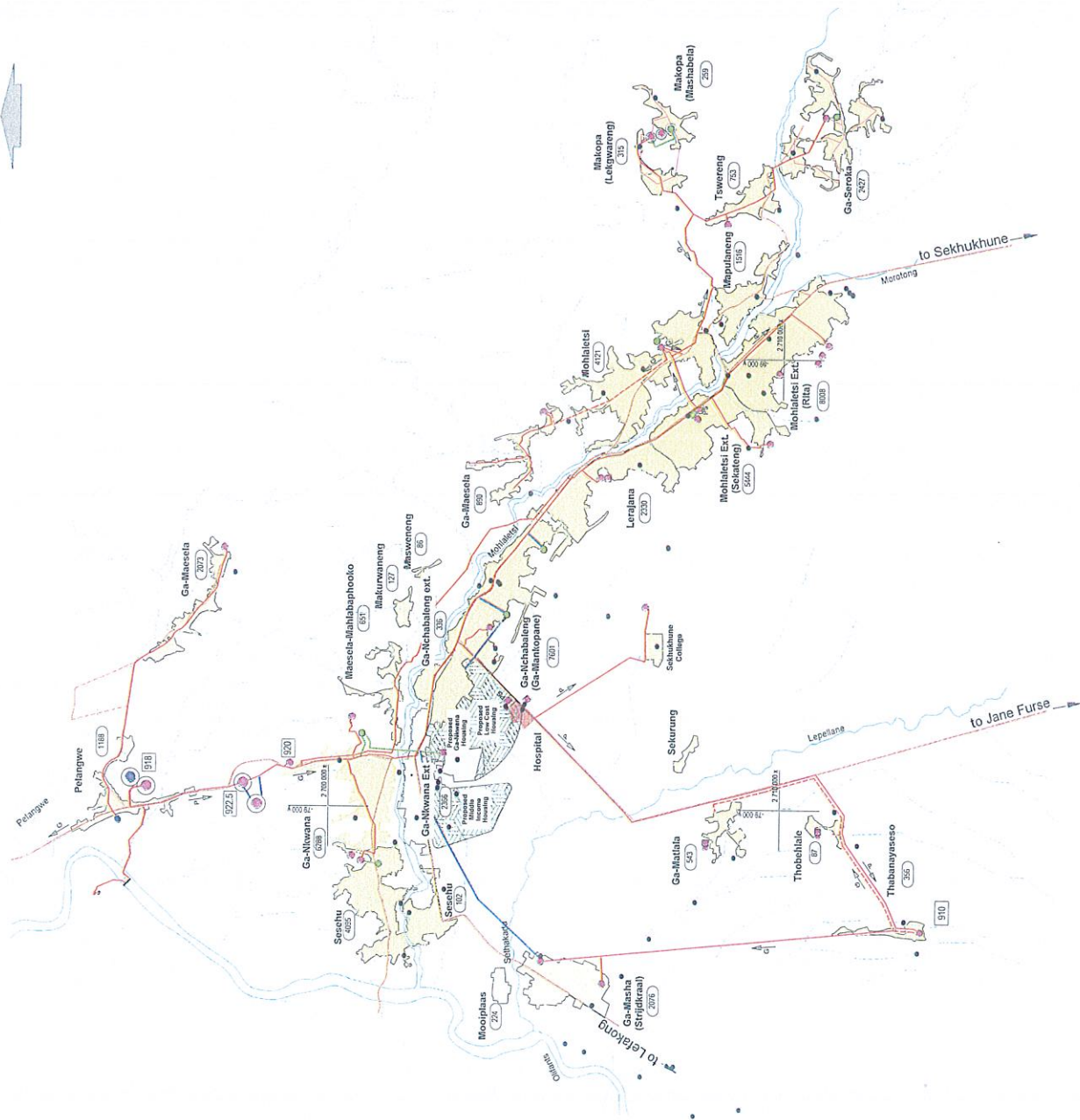


LEGEND

	Village Polygon
	Service Area Boundary
	Sub-Scheme Boundary
	Road
	Proposed Water/Borehole Development
	Existing Boreholes

LEGEND

Back View	Front View	Construction	Future Phases



Associated Drawings

Draw No	Description

Notes

1. This drawing is the property of QN Africa Consulting Services (Pty) Ltd. Copyright Patents and all individual rights reserved.
2. This drawing is to be used in conjunction with all the relevant drawings.
3. Read this plan in conjunction with the Architect's drawings.
4. All dimensions in millimeters.
5. Only dimensions shown on the drawings may be scaled.
6. All levels and dimensions to be verified on site prior to the commencement of any work, and the Engineer to the satisfaction of the Architect.
7. Any approval, check, certificate, consent, examination, inspection, instruction, release, observation, proposal, or other action by the Engineer shall not constitute an absence of responsibility he has under the contract, or any other law or regulation, or any other conditions, discrepancies and non-compliance.

Amendments

Revision	Description	Date

Sekhukhune District Municipality



Employer

Date

EVN AFRICA

CONSULTING ENGINEERS (Pty) Ltd

28 Glenview Avenue, Sandton, Johannesburg 2091, South Africa

Member of CESA

Authorised

Date

Olifantspoort BWS

Phase 6 : Contract 21

Layout Plan: Southern Area

Borehole Positions

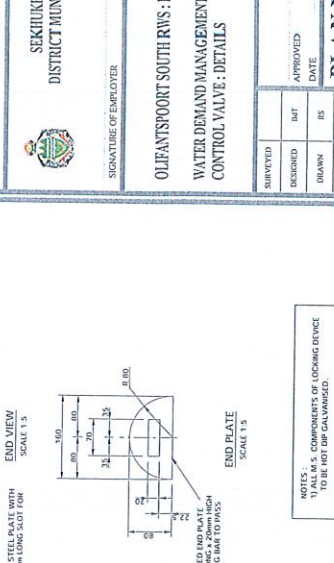
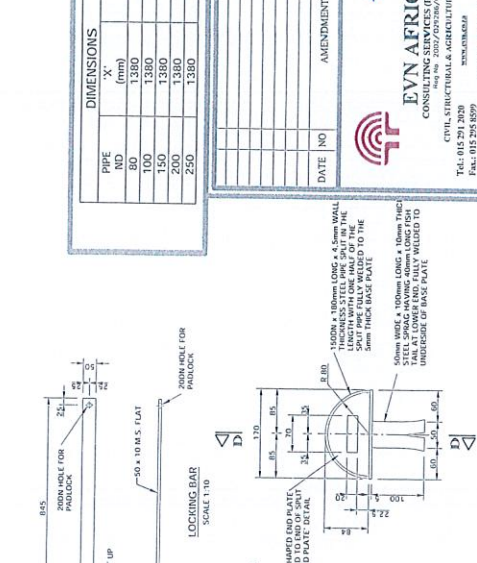
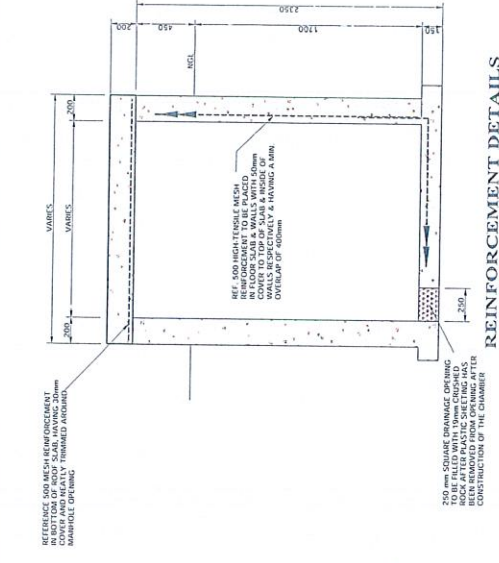
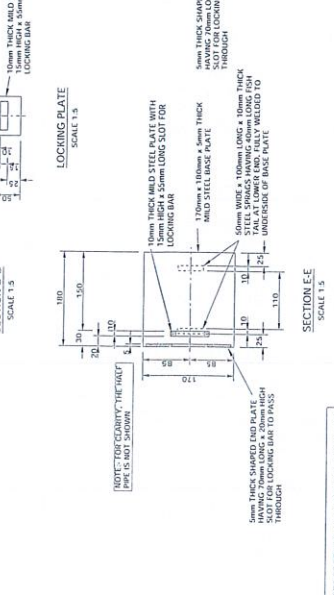
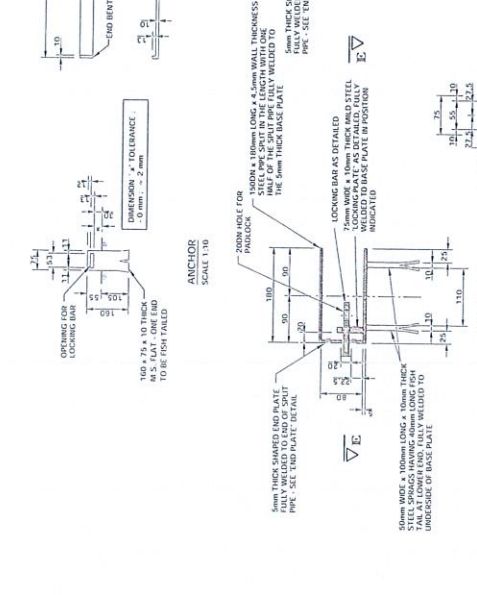
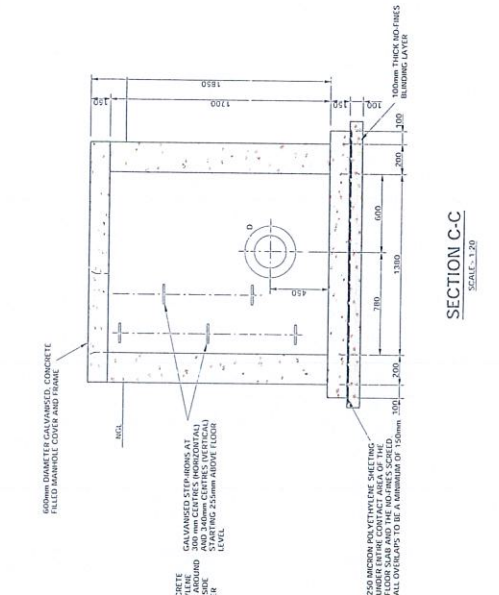
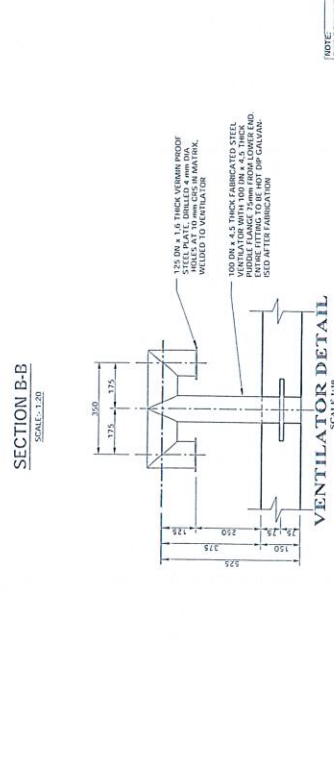
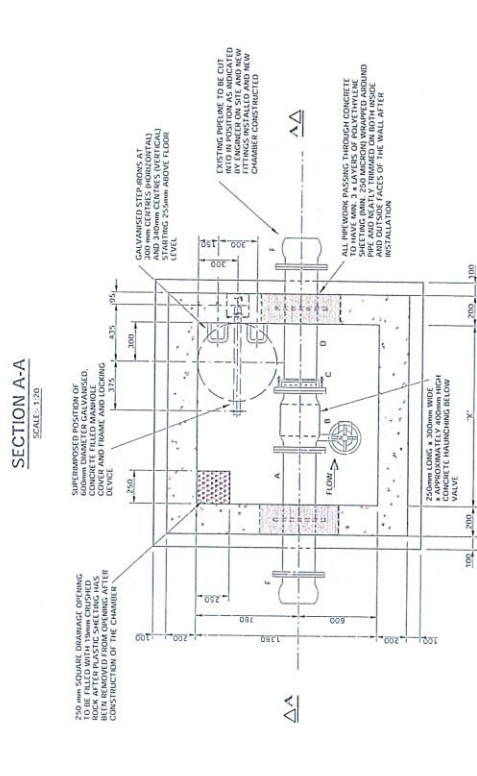
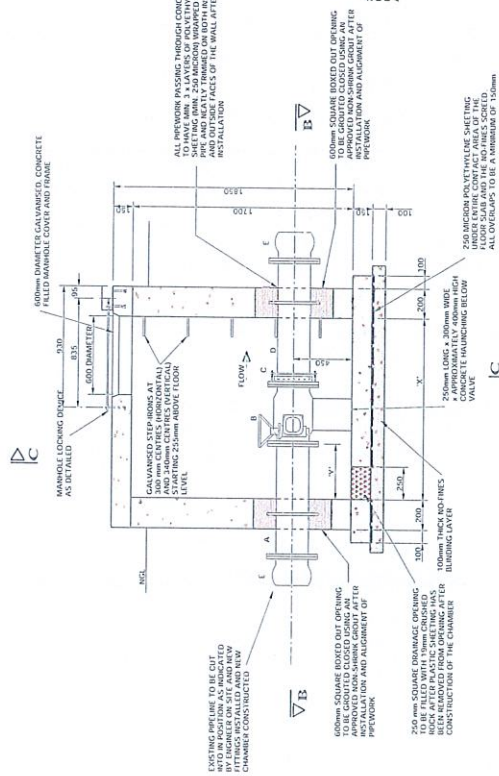
Drawing Classification

Design Engineer	Drawn	Adapted	Survey	Project Number	Sheet No	Revision
				9514S9	1	0





CONCEPT DESIGN CONSTRUCTION AS BUILT	Drawing Classification		Revision 1
	Design Engineer in placed Key	Bdt CGD	
	Job Number 1514.S9		



PIPE NO	X' (mm)	Y' (mm)
80	1380	535
100	1380	515
150	1380	515
200	1380	515
250	1380	485

CESA
CONSULTING SERVICES (PTY) LTD
Reg No: 2007/027266/07
CIVIL STRUCTURAL & AGRICULTURAL ENGINEERS
Toll-free: 015 255 8599
Fax: 015 255 8599
PO BOX 236
38 Selwyn Street
POLOKWANE

EVN AFRICA
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PO BOX 236
38 Selwyn Street
POLOKWANE

SEKIUKHUNE
DISTRICT MUNICIPALITY

DATE: _____

APPROVED: _____

SIGNATURE OF EMPLOYER: _____

DATE: _____

OLIFANTSPORT SOUTH RWS: PHASE 6

WATER DEMAND MANAGEMENT STRUCTURE: CONTROL VALVE: DETAILS

REVISION

PLAN No. 9514.S0101.C.1

REVISION

2011-11-09

NOTES:

- 1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANIZED.
- 2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED.

NOTE: DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No 9514.S0101.C.2 FOR GENERAL NOTES AND FLUMET DRILLING TABLE

△



NUMBER

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100

Abstract

100

100

100

[Download](#)

100%

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1

SCHEDULE OF FITTINGS

REF	DN	DESCRIPTION	WALL THICKNESS (mm)	FLANGE DRILLING (mm)	TREATMENT	QTY
A	800	CHAMBER TYPE 3, CONTROL VALVE AND WATER METER, 2500N	4.5	G	G	200
B	800	650mm LONG FLANGED STEEL PIPE HAVING PUDLE FLANGE 250mm	4.5	G	G	200
C	800	FROM INCOMING FLANGE FACE	4.5	G	G	200
D	800	TO ENGINEER'S SITE RESTRICTION. FACE TO FACE = 350mm	4.5	G	G	200
E	800	YOUNG JOHNSON FLANGE ADAPTOR	4.5	G	G	200
F	800	250mm LONG STEEL PIPE FLANGED ON OUTGOING END ONLY	4.5	G	G	200
G	800	FOR POTABLE WATER AND PRESSURE RATING AS SPECIFIED	4.5	G	G	200
H	800	IN THE PARTICULAR BILL OF QUANTITIES. FACE TO FACE = 250mm	4.5	G	G	200
I	800	UPVC FLANGE ADAPTOR (EAST BORN PROVISIONAL)	4.5	G	G	200
J	800	YOUNG JOHNSON FLANGE ADAPTOR (PROVISIONAL)	4.5	G	G	200
K	800	MISCELLANEOUS FITTINGS	4.5	G	G	200
L	800	1) 300mm LONG x 1.300mm WIDE x 1.700mm HIGH INTERNAL	4.5	G	G	200
M	800	THICK WALLS. FLOOR SLAB TO BE 150mm LONG x 1.500mm	4.5	G	G	200
N	800	WIDE x 150mm THICK WITH 250mm SQUARE DAMAGE OPENING	4.5	G	G	200
O	800	TO ACCESS MANHOLE. CONSTRUCTED ON A 150mm THICK	4.5	G	G	200
P	800	NO FIBRE BLINDING LAYER. ROOF SLAB TO BE 1.700mm	4.5	G	G	200
Q	800	DIAMETER. CONCRETE FILL. GALVANISED MANHOLE	4.5	G	G	200
R	800	COVER AND FRAME. AND LOCKING DEVICE CONSISTING OF	4.5	G	G	200
S	800	LET, FLOOR AND ROOF SLAB TO HAVE SET 500mm	4.5	G	G	200
T	800	1) FLOOR SLAB AND WALLS. 50mm COVER TO TOP OF SLAB AND	4.5	G	G	200
U	800	INSIDE OF WALLS.	4.5	G	G	200
V	800	INSIDE OF WALLS.	4.5	G	G	200
W	800	INSIDE OF WALLS.	4.5	G	G	200
X	800	INSIDE OF WALLS.	4.5	G	G	200
Y	800	INSIDE OF WALLS.	4.5	G	G	200
Z	800	INSIDE OF WALLS.	4.5	G	G	200

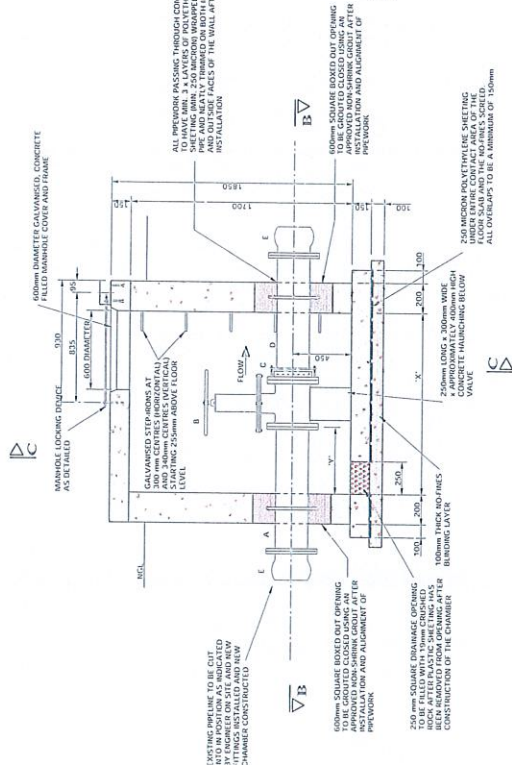
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J	1000	YOUNG JOHNSON FLANGE ADAPTOR (PROVISIONAL)	4.5	G	G	200
K	1000	MISCELLANEOUS FITTINGS	4.5	G	G	200
L	1000	1) 300mm LONG x 1.300mm WIDE x 1.700mm HIGH INTERNAL	4.5	G	G	200
M	1000	THICK WALLS. FLOOR SLAB TO BE 150mm LONG x 1.500mm	4.5	G	G	200
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Q	1000	DIAMETER. CONCRETE FILL. GALVANISED MANHOLE	4.5	G	G	200
R	1000	COVER AND FRAME. AND LOCKING DEVICE CONSISTING OF	4.5	G	G	200
S	1000	LET, FLOOR AND ROOF SLAB TO HAVE SET 500mm	4.5	G	G	200
T	1000	1) FLOOR SLAB AND WALLS. 50mm COVER TO TOP OF SLAB AND	4.5	G	G	200
U	1000	INSIDE OF WALLS.	4.5	G	G	200
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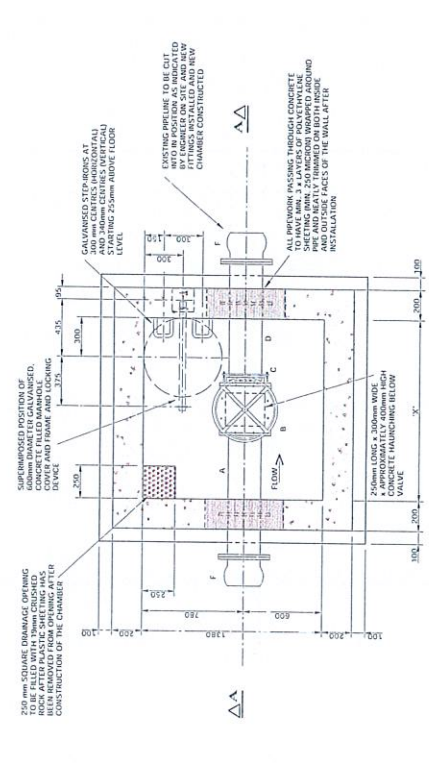
SCHEDULE OF MECHANICAL EQUIPMENT PIPEWORK & FITTINGS

1) THESE NOTES APPLY TO ALL THE SCHEDULES HEREUNDER.

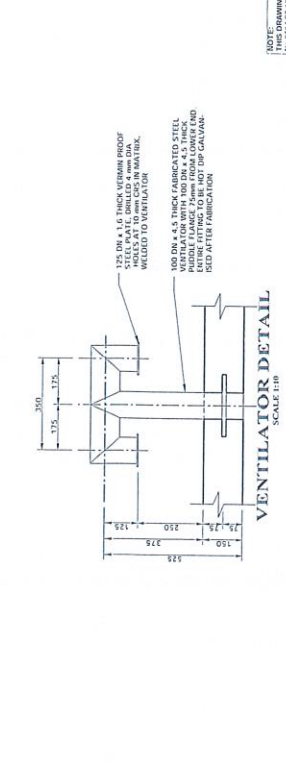
2) THE FOLLOWING SHALL BE THE MINIMUM WALL THICKNESSES FOR PIPES OF NOMINAL OUTSIDE DIAMETER 150mm AND UP TO 300mm 300mm AND UP TO 450mm 450mm AND UP TO 600mm 600mm AND UP TO 750mm 750mm AND UP TO 900mm 900mm AND UP TO 1050mm 1050mm AND UP TO 1200mm 1200mm AND UP TO 1350mm 1350mm AND UP TO 1500mm 1500mm AND UP TO 1650mm 1650mm AND UP TO 1800mm 1800mm AND UP TO 1950mm 1950mm AND UP TO 2100mm 2100mm AND UP TO 2250mm 2250mm AND UP TO 2400mm 2400mm AND UP TO 2550mm 2550mm AND UP TO 2700mm 2700mm AND UP TO 2850mm 2850mm AND UP TO 3000mm 3000mm AND UP TO 3150mm 3150mm AND UP TO 3300mm 3300mm AND UP TO 3450mm 3450mm AND UP TO 3600mm 3600mm AND UP TO 3750mm 3750mm AND UP TO 3900mm 3900mm AND UP TO 4050mm 4050mm AND UP TO 4200mm 4200mm AND UP TO 4350mm 4350mm AND UP TO 4500mm 4500mm AND UP TO 4650mm 4650mm AND UP TO 4800mm 4800mm AND UP TO 4950mm 4950mm AND UP TO 5100mm 5100mm AND UP TO 5250mm 5250mm AND UP TO 5400mm 5400mm AND UP TO 5550mm 5550mm AND UP TO 5700mm 5700mm AND UP TO 5850mm 5850mm 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17700mm AND UP TO 17850mm 17850mm AND UP TO 18000mm 18000mm AND UP TO 18150mm 18150mm AND UP TO 18300mm 18300mm AND UP TO 18450mm 18450mm AND UP TO 18600mm 18600mm AND UP TO 18750mm 18750mm AND UP TO 18900mm 18900mm AND UP TO 19050mm 19050mm AND UP TO 19200mm 19200mm AND UP TO 19350mm 19350mm AND UP TO 19500mm 19500mm AND UP TO 19650mm 19650mm AND UP TO 19800mm 19800mm AND UP TO 19950mm 19950mm AND UP TO 20100mm 20100mm AND UP TO 20250mm 20250mm AND UP TO 20400mm 20400mm AND UP TO 20550mm 20550mm AND UP TO 20700mm 20700mm AND UP TO 20850mm 20850mm AND UP TO 21000mm 21000mm AND UP TO 21150mm 21150mm AND UP TO 21300mm 21300mm AND UP TO 21450mm 21450mm AND UP TO 21600mm 21600mm AND UP TO 21750mm 21750mm AND UP TO 21900mm 21900mm AND UP TO 22050mm 22050mm AND UP TO 22200mm 22200mm AND UP TO 22350mm 22350mm AND UP TO 22500mm 22500mm AND UP TO 22650mm 22650mm AND UP TO 22800mm 22800mm AND UP TO 22950mm 22950mm AND UP TO 23100mm 23100mm AND UP TO 23250mm 23250mm AND UP TO 23400mm 23400mm AND 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63750mm 63750mm AND UP TO 63900mm 63900mm AND UP TO 64050mm 64050mm AND UP TO 64200mm 64200mm AND UP TO 64350mm 64350mm AND UP TO 64500mm 64500mm AND UP TO 64650mm 64650mm AND UP TO 64800mm 64800mm AND UP TO 64950mm 64950mm AND UP TO 65100mm 65100mm AND UP TO 65250mm 65250mm AND UP TO 65400mm 65400mm AND UP TO 65550mm 65550mm AND UP TO 65700mm 65700mm AND UP TO 65850mm 65850mm AND UP TO 66000mm 66000mm AND UP TO 66150mm 66150mm AND UP TO 66300mm 66300mm AND UP TO 66450mm 66450mm AND UP TO 66600mm 66600mm AND UP TO 66750mm 66750mm AND UP TO 66900mm 66900mm AND UP TO 67050mm 67050mm AND UP TO 67200mm 67200mm AND UP TO 67350mm 67350mm AND UP TO 67500mm 67500mm AND UP TO 67650mm 67650mm AND UP TO 67800mm 67800mm AND UP TO 67950mm 67950mm AND UP TO 68100mm 68100mm AND UP TO 68250mm 68250mm AND UP TO 68400mm 68400mm AND UP TO 68550mm 68550mm AND UP TO 68700mm 68700mm AND UP TO 68850mm 68850mm AND UP TO 69000mm 69000mm AND UP TO 69150mm 69150mm AND UP TO 69300mm 69300mm AND UP TO 69450mm 69450mm AND UP TO 69600mm 69600mm AND UP TO 69750mm 69750mm AND UP TO 69900mm 69900mm AND UP TO 70050mm 70050mm AND UP TO 70200mm 70200mm AND UP TO 70350mm 70350mm AND UP TO 70500mm 70500mm AND UP TO 70650mm 70650mm AND UP TO 70800mm 70800mm AND UP TO 70950mm 70950mm AND UP TO 71100mm 71100mm AND UP TO 71250mm 71250mm AND UP TO 71400mm 71400mm AND UP TO 71550mm 71550mm AND UP TO 71700mm 71700mm AND UP TO 71850mm 71850mm AND UP TO 72000mm 72000mm AND UP TO 72150mm 72150mm AND UP TO 72300mm 72300mm AND UP TO 72450mm 72450mm AND UP TO 72600mm 72600mm AND UP TO 72750mm 72750mm AND UP TO 72900mm 72900mm AND UP TO 73050mm 73050mm AND UP TO 73200mm 73200mm AND UP TO 73350mm 73350mm AND UP TO 73500mm 73500mm AND UP TO 73650mm 73650mm AND UP TO 73800mm 73800mm AND UP TO 73950mm 73950mm AND UP TO 74100mm 74100mm AND UP TO 74250mm 74250mm AND UP TO 74400mm 74400mm AND UP TO 74550mm 74550mm AND UP TO 74700mm 74700mm AND UP TO 74850mm 74850mm AND UP TO 75000mm 75000mm AND UP TO 75150mm 75150mm AND UP TO 75300mm 75300mm AND UP TO 75450mm 75450mm AND UP TO 75600mm 75600mm AND UP TO 75750mm 75750mm AND UP TO 75900mm 75900mm AND UP TO 76050mm 76050mm AND UP TO 76200mm 76200mm AND UP TO 76350mm 76350mm AND UP TO 76500mm 76500mm AND UP TO 76650mm 76650mm AND UP TO 76800mm 76800mm AND UP TO 76950mm 76950mm AND UP TO 77100mm 77100mm AND UP TO 77250mm 77250mm AND UP TO 77400mm 77400mm AND UP TO 77550mm 77550mm AND UP TO 77700mm 77700mm AND UP TO 77850mm 77850mm AND UP TO 78000mm 78000mm AND UP TO 78150mm 78150mm AND UP TO 78300mm 78300mm AND UP TO 78450mm 78450mm AND UP TO 78600mm 78600mm AND UP TO 78750mm 78750mm AND UP TO 78900mm 78900mm AND UP TO 79050mm 79050mm AND UP TO 79200mm 79200mm AND UP TO 79350mm 79350mm AND UP TO 79500mm 79500mm AND UP TO 79650mm 79650mm AND UP TO 79800mm 79800mm AND UP TO 79950mm 79950mm AND UP TO 80100mm 80100mm AND UP TO 80250mm 80250mm AND UP TO 80400mm 80400mm AND UP TO 80550mm 80550mm AND UP TO 80700mm 80700mm AND UP TO 80850mm 80850mm AND UP TO 81000mm 81000mm AND UP TO 81150mm 81150mm AND UP TO 81300mm 81300mm AND UP TO 81450mm 81450mm AND UP TO 81600mm 81600mm AND UP TO 81750mm 81750mm AND UP TO 81900mm 81900mm AND UP TO 82050mm 82050mm AND UP TO 82200mm 82200mm AND UP TO 82350mm 82350mm AND UP TO 82500mm 82500mm AND UP TO 82650mm 82650mm AND UP TO 82800mm 82800mm AND UP TO 82950mm 82950mm AND UP TO 83100mm 83100mm AND UP TO 83250mm 83250mm AND UP TO 83400mm 83400mm AND UP TO 83550mm 83550mm AND UP TO 83700mm 83700mm AND UP TO 83850mm 83850mm AND UP TO 84000mm 84000mm AND UP TO 84150mm 84150mm AND UP TO 84300mm 84300mm AND UP TO 84450mm 84450mm AND UP TO 84600mm 84600mm AND UP TO 84750mm 84750mm AND UP TO 84900mm 84900mm AND UP TO 85050mm 85050mm AND UP TO 85200mm 85200mm AND UP TO 85350mm 85350mm AND UP TO 85500mm 85500mm AND UP TO 85650mm 85650mm AND UP TO 85800mm 85800mm AND UP TO 85950mm 85950mm AND UP TO 86100mm 86100mm AND UP TO 86250mm 86250mm AND UP TO 86400mm 86400mm AND UP TO 86550mm 86550mm AND UP TO 86700mm 86700mm AND UP TO 86850mm 86850mm AND UP TO 87000mm 87000mm AND UP TO 87150mm 87150mm AND UP TO 87300mm 87300mm AND UP TO 87450mm 87450mm AND UP TO 87600mm 87600mm AND UP TO 87750mm 87750mm AND UP TO 87900mm 87900mm AND UP TO 88050mm 88050mm AND UP TO 88200mm 88200mm AND UP TO 88350mm 88350mm AND UP TO 88500mm 88500mm AND UP TO 88650mm 88650mm AND UP TO 88800mm 88800mm AND UP TO 88950mm 88950mm AND UP TO 89100mm 89100mm AND UP TO 89250mm 89250mm AND UP TO 89400mm 89400mm AND UP TO 89550mm 89550mm AND UP TO 89700mm 89700mm AND UP TO 89850mm 89850mm AND UP TO 90000mm 90000mm AND UP TO 90150mm 90150mm AND UP TO 90300mm 90300mm AND UP TO 90450mm 90450mm AND UP TO 90600mm 90600mm AND UP TO 90750mm 90750mm AND UP TO 90900mm 90900mm AND UP TO 91050mm 91050mm AND UP TO 91200mm 91200mm AND UP TO 91350mm 91350mm AND UP TO 91500mm 91500mm AND UP TO 91650mm 91650mm AND UP TO 91800mm 91800mm AND UP TO 91950mm 91950mm AND UP TO 92100mm 92100mm AND UP TO 92250mm 92250mm AND UP TO 92400mm 92400mm AND UP TO 92550mm 92550mm AND UP TO 92700mm 92700mm AND UP TO 92850mm 92850mm AND UP TO 93000mm 93000mm AND UP TO 93150mm 93150mm AND UP TO 93300mm 93300mm AND UP TO 93450mm 93450mm AND UP TO 93600mm 93600mm AND UP TO 93750mm 93750mm AND UP TO 93900mm 93900mm AND UP TO 94050mm 94050mm AND UP TO 94200mm 94200mm AND UP TO 94350mm 94350mm AND UP TO 94500mm 94500mm AND UP TO 94650mm 94650mm AND UP TO 94800mm 94800mm AND UP TO 94950mm 94950mm AND UP TO 95100mm 95100mm AND UP TO 95250mm 95250mm AND UP TO 95400mm 95400mm AND UP TO 95550mm 95550mm AND UP TO 95700mm 95700mm AND UP TO 95850mm 95850mm AND UP TO 96000mm 96000mm AND UP TO 96150mm 96150mm AND UP TO 96300mm 96300mm AND UP TO 96450mm 96450mm AND UP TO 96600mm 96600mm AND UP TO 96750mm 96750mm AND UP TO 96900mm 96900mm AND UP TO 97050mm 97050mm AND UP TO 97200mm 97200mm AND UP TO 97350mm 97350mm AND UP TO 97500mm 97500mm AND UP TO 97650mm 97650mm AND UP TO 97800mm 97800mm AND UP TO 97950mm 97950mm AND UP TO 98100mm 98100mm AND UP TO 98250mm 98250mm AND UP TO 98400mm 98400mm AND UP TO 98550mm 98550mm AND UP TO 98700mm 98700mm AND UP TO 98850mm 98850mm AND UP TO 99000mm 99000mm AND UP TO 99150mm 99150mm AND UP TO 99300mm 99300mm AND UP TO 99450mm 99450mm AND UP TO 99600mm 99600mm AND UP TO 99750mm 99750mm AND UP TO 99900mm 99900mm AND UP TO 100050mm 100050mm AND UP TO 100200mm 100200mm AND UP TO 100350mm 100350mm AND UP TO 100500mm 100500mm AND UP TO 100650mm 100650mm AND UP TO 100800mm 100800mm AND UP TO 100950mm 100950mm AND UP TO 101100mm 101100mm AND UP TO 101250mm 101250mm AND UP TO 101400mm 101400mm AND UP TO 101550mm 101550mm AND UP TO 101700mm 101700mm AND UP TO 101850mm 101850mm AND UP TO 102000mm 102000mm AND UP TO 102150mm 102150mm AND UP TO 102300mm 102300mm AND UP TO 102450mm 102450mm AND UP TO 102600mm 102600mm AND UP TO 102750mm 102750mm AND UP TO 102900mm 102900mm AND UP TO 103050mm 103050mm AND UP TO 103200mm 103200mm AND UP TO 103350mm 103350mm AND UP TO 103500mm 103500mm AND UP TO 103650mm 103650mm AND UP TO 103800mm 103800mm AND UP TO 103950mm 103950mm AND UP TO 104100mm 104100mm AND UP TO 104250mm 104250mm AND UP TO 104400mm 104400mm AND UP TO 104550mm 104550mm AND UP TO 104700mm 104700mm AND UP TO 104850mm 104850mm AND UP TO 105000mm 105000mm AND UP TO 105150mm 105150mm AND UP TO 105300mm 105300mm AND UP TO 105450mm 105450mm AND UP TO 105600mm 105600mm AND UP TO 105750mm 105750mm AND UP TO 105900mm 105900mm AND UP TO 106050mm 106050mm AND UP TO 106200mm 106200mm AND UP TO 106350mm 106350mm AND UP TO 106500mm 106500mm AND UP TO 106650mm 106650mm AND UP TO 106800mm 106800mm AND UP TO 106950mm 106950mm AND UP TO 107100mm 107100mm AND UP TO 107250mm 107250mm AND UP TO 107400mm 107400mm AND UP TO 107550mm 107550mm AND UP TO 107700mm 107700mm AND UP TO 107850mm 107850mm AND UP TO 108000mm 108000mm AND UP TO 108150mm 108150mm AND UP TO 108300mm 108300mm AND UP TO 108450mm 108450mm AND UP TO 108600mm 108600mm AND UP TO 108750mm 108750mm AND UP TO 108900mm 10890



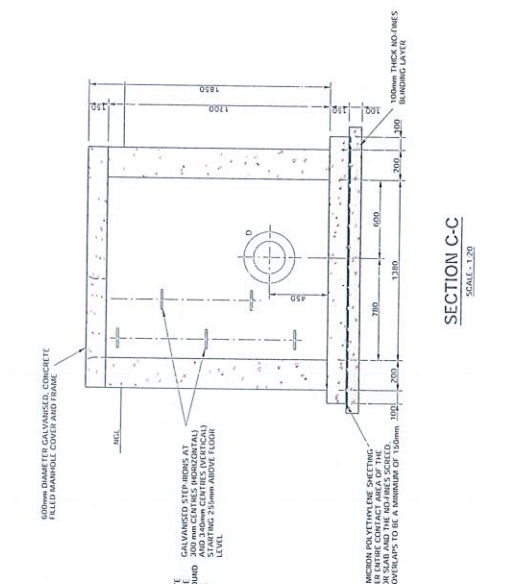
SECTION A-A
SCALE 1:20



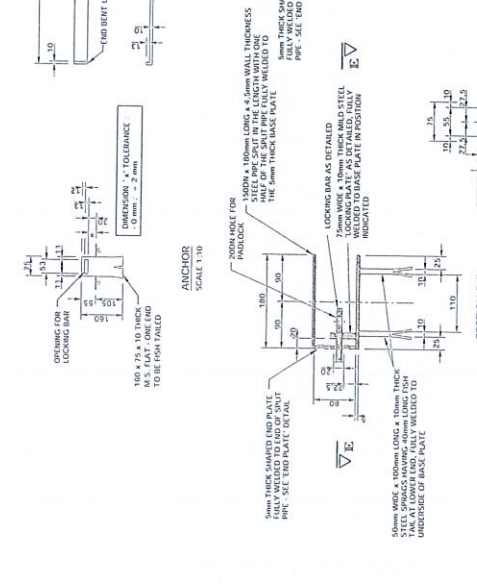
SECTION B-B
SCALE 1:20



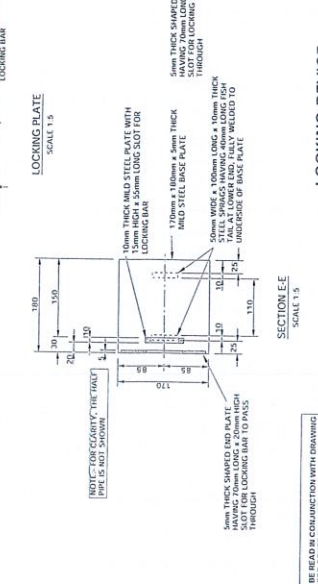
VENTILATOR DETAIL
SCALE 1:10



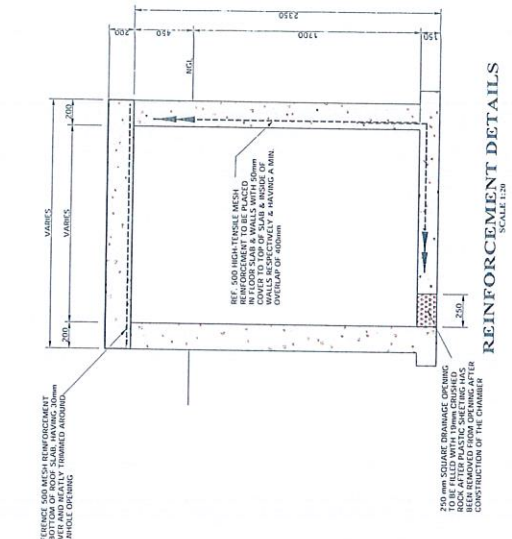
SECTION C-C
SCALE 1:20



SECTION D-D
SCALE 1:5



SECTION E-E
SCALE 1:5

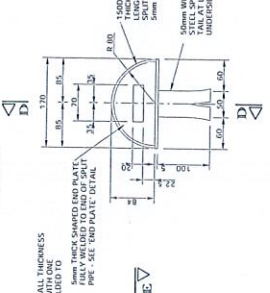


REINFORCEMENT DETAILS
SCALE 1:20

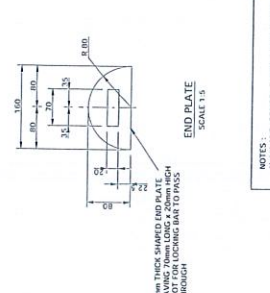
PIPE ND	X' (mm)	Y' (mm)
80	1380	575
100	1380	560
150	1380	550
200	1380	530
250	1380	510



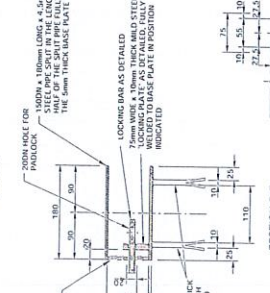
LOCKING BAR
SCALE 1:10



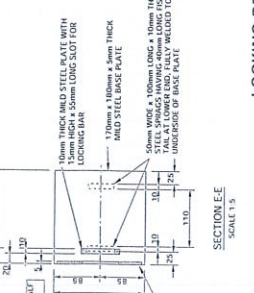
END VIEW
SCALE 1:5



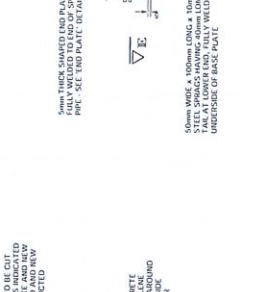
END PLATE
SCALE 1:5



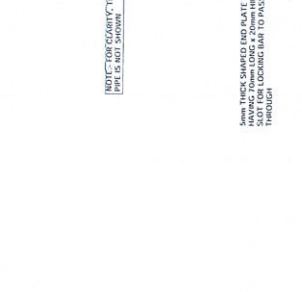
LOCKING PLATE
SCALE 1:5



LOCKING DEVICE
SCALE 1:5

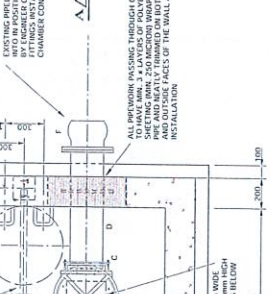


ANCHOR
SCALE 1:10

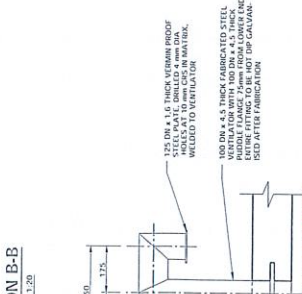


LOCKING BAR
SCALE 1:10

NOTES:
1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANISED.
2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED

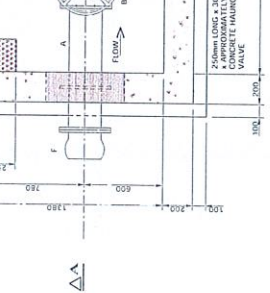


LOCKING BAR
SCALE 1:10

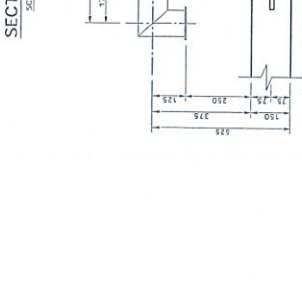


LOCKING BAR
SCALE 1:10

NOTES:
1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANISED.
2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED



LOCKING BAR
SCALE 1:10



LOCKING BAR
SCALE 1:10

NOTES:
1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANISED.
2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED



LOCKING BAR
SCALE 1:10



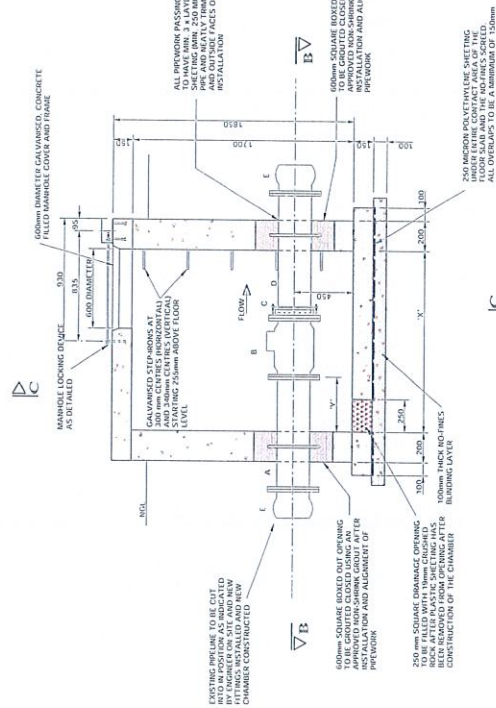
LOCKING BAR
SCALE 1:10

NOTES:
1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANISED.
2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED

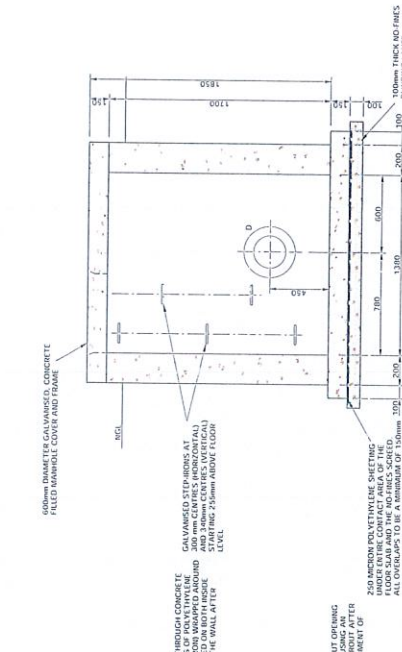
LOCKING BAR
SCALE 1:10

LOCKING BAR
SCALE 1:10

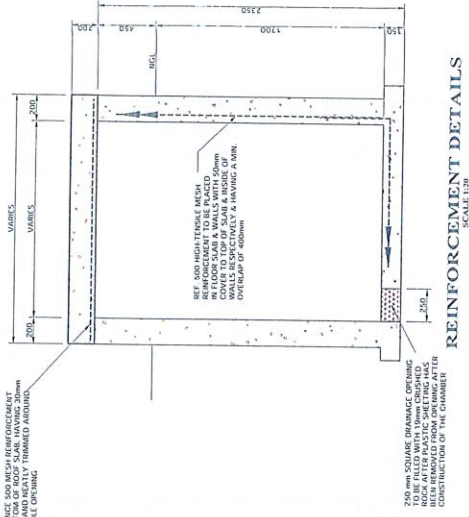
NOTES:
1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANISED.
2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED



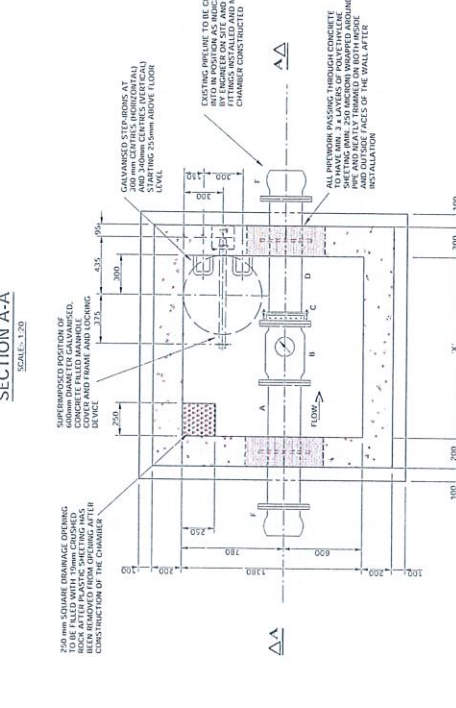
SECTION A-A
SCALE 1:20



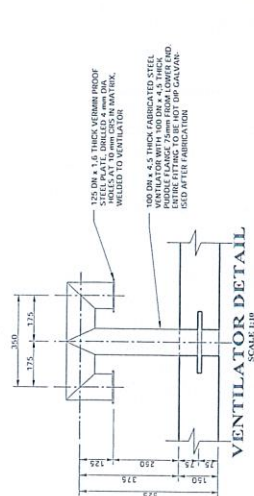
SECTION C-C
SCALE 1:20



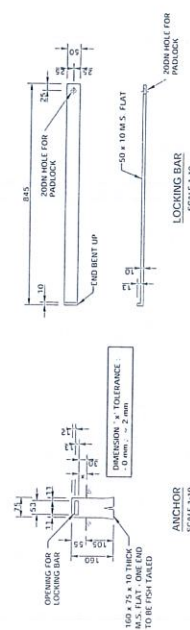
REINFORCEMENT DETAILS
SCALE 1:20



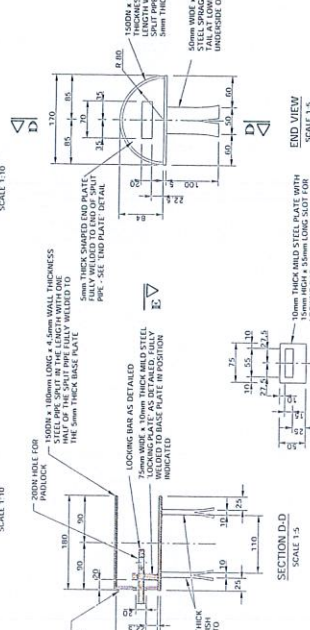
SECTION B-B
SCALE 1:20



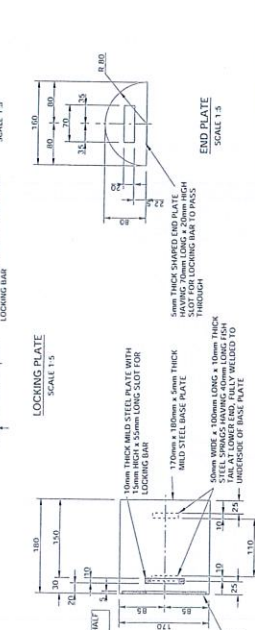
VENTILATOR DETAIL
SCALE 1:10



LOCKING BAR
SCALE 1:10



SECTION D-D
SCALE 1:5



SECTION E-E
SCALE 1:5

NOTES:
1) ALL I.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANIZED.
2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED.

LOCKING DEVICE

NOTE: DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No. 9514 S0.101 W.1 FOR GENERAL NOTES AND 1) LARGE DRAINAGE TIE IN

PIPE ND	X' (mm)	Y' (mm)
80	1380	590
100	1380	565
150	1380	540
200	1380	515
250	1380	465

AMENDMENTS		APPR
DATE	NO	
CESA EVA AFRICA CONSULTING SERVICES (PTY) LTD Reg No: 2007/075866/07 CIVIL STRUCTURAL & MECHANICAL ENGINEER Tel: 011 524 2941 Fax: 011 524 2941 30 Schalkenberg Street PO BOX 236 SANDHURST 2011 SEKUKHUNE DISTRICT MUNICIPALITY		
SIGNATURE OF EMPLOYER		DATE
SIGNATURE OF ENGINEER		DATE
PROJECT NAME		REVISION
OUPANSOORT SOUTH RWS: PHASE 6		PLAN No. 9514.S0.101.W.1
WATER DEMAND MANAGEMENT STRUCTURE: WATER METER: DETAILS		REVISION
SURVISED	DRAWN	CHECKED
DESIGNED	REVIS	APPROVED
DATE	DATE	DATE
2011-11-01	2011-11-01	2011-11-01

SCHEDULE OF FITTINGS

[illegible]

SCHEDULE OF FITTINGS

REF	DN	DESCRIPTION	WALL THICKNESS (mm)	FLANGE DRILLING	TREATMENT	CITY
		CHIMNEY TYPE 5 - WATER METER - 1500N			1 - BRINE 2 - SODIUM HYDROXIDE 3 - SODIUM HYDROXIDE 4 - SODIUM HYDROXIDE	
A	150	1100 mm LONG FLANGED STEEL PIPE HAVING MIDDLE FLANGE 300mm	4.5		G	G
B	150	500mm TYPE 100 PYRAMID TUBING WATER WASTER SUITABLE FOR PORTABLE WATER AND PRESSURE WASTING AS SPECIFIED IN THE PARTICULAR BILL OF QUANTITIES. FACE TO FACE = 300mm			E	E
C	150	100mm JUNCTION FLANGE ADAPTOR			G	G
D	150	100mm JUNCTION FLANGE ADAPTOR			E	E
E	160	APVC FLANGE ADAPTOR (EAST BORN OVER TOP OF FLANGE FACE)	4.5		G	G
F	160	100mm JUNCTION FLANGE ADAPTOR (PROVISIONAL)			E	E
G	160	100mm JUNCTION FLANGE ADAPTOR (PROVISIONAL)			G	G
H	150	100mm JUNCTION FLANGE ADAPTOR (PROVISIONAL)	4.5		G	G
I	150	100mm JUNCTION FLANGE ADAPTOR (PROVISIONAL)			E	E
J	150	100mm JUNCTION FLANGE ADAPTOR (PROVISIONAL)	4.5		G	G
MISCELLANEOUS FITTINGS						
		41 200mm LONG x 1/2 300 mm WIDE x 1/2 700 mm HIGH INTERNAL STEEL WALLS (1000 SLAB TO BE 1, 100mm DIA x 4, 100mm DIA x				

SCHEDULE OF FITTING

REF	DN	DESCRIPTION	WALL THICKNESS (MM)	FLANGE THICKNESS (MM)	QTY
		CHAMBER TYPE 5 - WATER METER - 200MM			
A	200	1 000 mm LONG FLANGED STEEL PIPE HAVING PERFOR. FLANGE 305mm	4.5	G	1mm
B	200	FROM INCOMING FACE TO 100 mm FROM FLANGE END, FLANGE ENDER SUITABLE FOR POTABLE WATER AND PRESSURE WATERS, FACE TO FACE = 350mm		E	1mm
C	200	IN THE PARTICULAR BILL OF QUANTITIES, TAKE TO FACE = 350mm		G	1mm
D	200	'WRING' JUNCTION FLANGE ADAPTOR	4.5	G	1mm
E	200	900 mm LONG STEEL PIPE FLANGED ON OUTGOING END ONLY		G	1mm
F	200	100 mm LONG STEEL PIPE FLANGED ON OUTGOING FLANGE (FACE)		G	1mm
G	200	'WRING' JUNCTION FLANGE ADAPTOR (ASTM A193) (PROVISIONAL)		G	2mm
H	200	200 DN x 150 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 150mm	4.5	G	2mm
I	200	FLANGES FROM 200 DN TO 150 DN OVER A DISTANCE OF 250mm		E	2mm
J	200	200 DN x 100 DN FLANGED STEEL LIVER C = 250mm (PROVISIONAL)		E	2mm
K	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
L	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
M	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
N	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
O	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
P	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
Q	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
R	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
S	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
T	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
U	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
V	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
W	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
X	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
Y	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
Z	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AA	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AB	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AC	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AD	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AE	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AF	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AG	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AH	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AI	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AJ	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AK	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AL	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AM	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AN	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AO	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
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AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
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AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER OVER EXISTING PIPE, 100mm	4.5	G	2mm
AP	100	FLANGES FROM 200 DN TO 100 DN OVER A DISTANCE OF 500mm		E	2mm
AP	100	200 DN x 100 DN FLANGED STEEL LIVER C = 500mm (PROVISIONAL)		E	2mm
AP	100				

1000

[illegible]

SCHEDULE OF MECHANICAL EQUIPMENT PIPEWORK & FITTINGS

- [illegible]

10) STEEL PIPES & FITTINGS
ALL STEEL PIPES AND FITTINGS
GRADE B WITH DESIGN YIELD

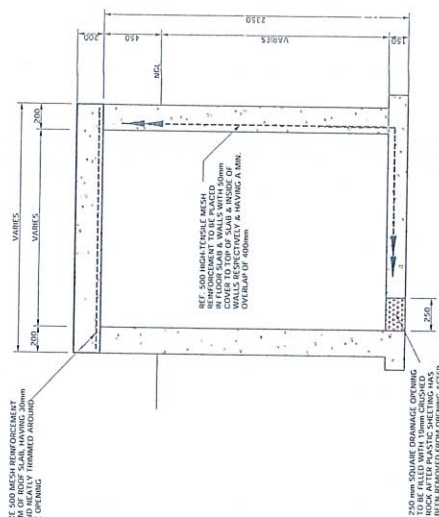
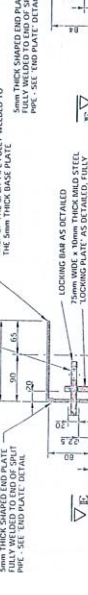
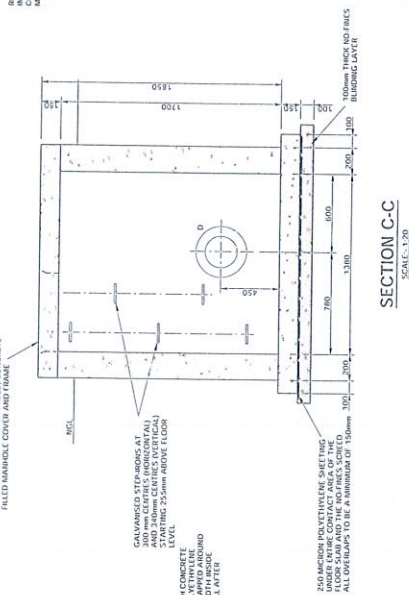
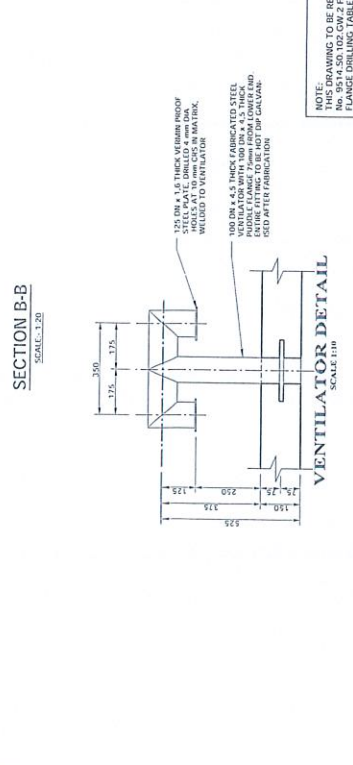
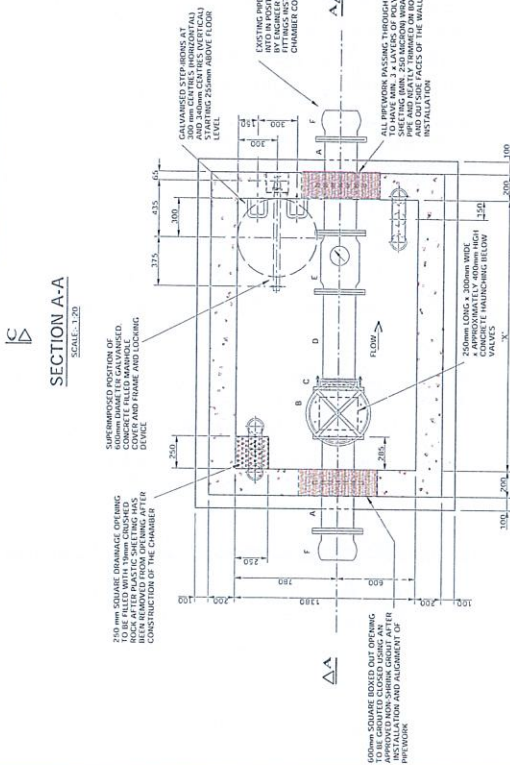
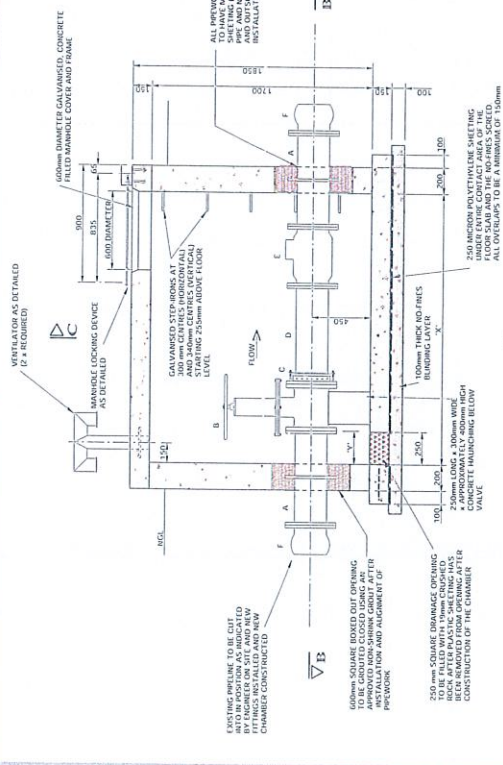
Roll Size	MG	MB	MAT	MAT2	MG2	MB2	MAT2	MG2	MB2	MAT2	MG2	MB2	MAT2
Roll Size	16	9	31	33	17	5	22	26	33	39			
Roll Size	16	9	31	33	17	5	22	26	33	39			

b) 29

Boat Size	546	549	551	553	555	557	559	561	563	565	567	569	571	573	575	577	579	581	583	585	587	589	591	593	595	597	599	601	603	605	607	609	611	613	615	617	619	621	623	625	627	629	631	633	635	637	639	641	643	645	647	649	651	653	655	657	659	661	663	665	667	669	671	673	675	677	679	681	683	685	687	689	691	693	695	697	699	701	703	705	707	709	711	713	715	717	719	721	723	725	727	729	731	733	735	737	739	741	743	745	747	749	751	753	755	757	759	761	763	765	767	769	771	773	775	777	779	781	783	785	787	789	791	793	795	797	799	801	803	805	807	809	811	813	815	817	819	821	823	825	827	829	831	833	835	837	839	841	843	845	847	849	851	853	855	857	859	861	863	865	867	869	871	873	875	877	879	881	883	885	887	889	891	893	895	897	899	901	903	905	907	909	911	913	915	917	919	921	923	925	927	929	931	933	935	937	939	941	943	945	947	949	951	953	955	957	959	961	963	965	967	969	971	973	975	977	979	981	983	985	987	989	991	993	995	997	999																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Thickness (mm)	1	1.6	2	2.5	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	16	17	17	18	18	19	19	20	20	21	21	22	22	23	23	24	24	25	25	26	26	27	27	28	28	29	29	30	30	31	31	32	32	33	33	34	34	35	35	36	36	37	37	38	38	39	39	40	40	41	41	42	42	43	43	44	44	45	45	46	46	47	47	48	48	49	49	50	50	51	51	52	52	53	53	54	54	55	55	56	56	57	57	58	58	59	59	60	60	61	61	62	62	63	63	64	64	65	65	66	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	80	81	81	82	82	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	90	91	91	92	92	93	93	94	94	95	95	96	96	97	97	98	98	99	99																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Outboard Dia (mm)	12.5	15	17	21	24	30	37	44	56	66	79	94	111	130	151	174	200	228	259	293	330	370	413	460	510	563	620	680	743	810	880	953	1030	1110	1195	1285	1380	1480	1585	1695	1810	1930	2055	2185	2320	2460	2600	2740	2880	3020	3160	3300	3440	3580	3720	3860	4000	4140	4280	4420	4560	4700	4840	4980	5120	5260	5400	5540	5680	5820	5960	6100	6240	6380	6520	6660	6800	6940	7080	7220	7360	7500	7640	7780	7920	8060	8200	8340	8480	8620	8760	8900	9040	9180	9320	9460	9600	9740	9880	10020	10160	10300	10440	10580	10720	10860	11000	11140	11280	11420	11560	11700	11840	11980	12120	12260	12400	12540	12680	12820	12960	13100	13240	13380	13520	13660	13800	13940	14080	14220	14360	14500	14640	14780	14920	15060	15200	15340	15480	15620	15760	15900	16040	16180	16320	16460	16600	16740	16880	17020	17160	17300	17440	17580	17720	17860	18000	18140	18280	18420	18560	18700	18840	18980	19120	19260	19400	19540	19680	19820	19960	20100	20240	20380	20520	20660	20800	20940	21080	21220	21360	21500	21640	21780	21920	22060	22200	22340	22480	22620	22760	22900	23040	23180	23320	23460	23600	23740	23880	24020	24160	24300	24440	24580	24720	24860	25000	25140	25280	25420	25560	25700	25840	25980	26120	26260	26400	26540	26680	26820	26960	27100	27240	27380	27520	27660	27800	27940	28080	28220	28360	28500	28640	28780	28920	29060	29200	29340	29480	29620	29760	29900	30040	30180	30320	30460	30600	30740	30880	31020	31160	31300	31440	31580	31720	31860	32000	32140	32280	32420	32560	32700	32840	32980	33120	33260	33400	33540	33680	33820	33960	34100	34240	34380	34520	34660	34800	34940	35080	35220	35360	35500	35640	35780	35920	36060	36200	36340	36480	36620	36760	36900	37040	37180	37320	37460	37600	37740	37880	38020	38160	38300	38440	38580	38720	38860	39000	39140	39280	39420	39560	39700	39840	39980	40120	40260	40400	40540	40680	40820	40960	41100	41240	41380	41520	41660	41800	41940	42080	42220	42360	42500	42640	42780	42920	43060	43200	43340	43480	43620	43760	43900	44040	44180	44320	44460	44600	44740	44880	45020	45160	45300	45440	45580	45720	45860	46000	46140	46280	46420	46560	46700	46840	46980	47120	47260	47400	47540	47680	47820	47960	48100	48240	48380	48520	48660	48800	48940	49080	49220	49360	49500	49640	49780	49920	50060	50200	50340	50480	50620	50760	50900	51040	51180	51320	51460	51600	51740	51880	52020	52160	52300	52440	52580	52720	52860	53000	53140	53280	53420	53560	53700	53840	53980	54120	54260	54400	54540	54680	54820	54960	55100	55240	55380	55520	55660	55800	55940	56080	56220	56360	56500	56640	56780	56920	57060	57200	57340	57480	57620	57760	57900	58040	58180	58320	58460	58600	58740	58880	59020	59160	59300	59440	59580	59720	59860	60000	60140	60280	60420	60560	60700	60840	60980	61120	61260	61400	61540	61680	61820	61960	62100	62240	62380	62520	62660	62800	62940	63080	63220	63360	63500	63640	63780	63920	64060	64200	64340	64480	64620	64760	64900	65040	65180	65320	65460	65600	65740	65880	66020	66160	66300	66440	66580	66720	66860	67000	67140	67280	67420	67560	67700	67840	67980	68120	68260	68400	68540	68680	68820	68960	69100	69240	69380	69520	69660	69800	69940	70080	70220	70360	70500	70640	70780	70920	71060	71200	71340	71480	71620	71760	71900	72040	72180	72320	72460	72600	72740	72880	73020	73160	73300	73440	73580	73720	73860	74000	74140	74280	74420	74560	74700	74840	74980	75120	75260	75400	75540	75680	75820	75960	76100	76240	76380	76520	76660	76800	76940	77080	77220	77360	77500	77640	77780	77920	78060	78200	78340	78480	78620	78760	78900	79040	79180	79320	79460	79600	79740	79880	80020	80160	80300	80440	80580	80720	80860	81000	81140	81280	81420	81560	81700	81840	81980	82120	82260	82400	82540	82680	82820	82960	83100	83240	83380	83520	83660	83800	83940	84080	84220	84360	84500	84640	84780	84920	85060	85200	85340	85480	85620	85760	85900	86040	86180	86320	86460	86600	86740	86880	87020	87160	87300	87440	87580	87720	87860	88000	88140	88280	88420	88560	88700	88840	88980	89120	89260	89400	89540	89680	89820	89960	90100	90240	90380	90520	90660	90800	90940	91080	91220	91360	91500	91640	91780	91920	92060	92200	92340	92480	92620	92760	92900	93040	93180	93320	93460	93600	93740	93880	94020	94160	94300	94440	94580	94720	94860	95000	95140	95280	95420	95560	95700	95840	95980	96120	96260	96400	96540	96680	96820	96960	97100	97240	97380	97520	97660	97800	97940	98080	98220	98360	98500	98640	98780	98920	99060	99200	99340	99480	99620	99760	99900	100040	100180	100320	100460	100600	100740	100880	101020	101160	101300	101440	101580	101720	101860	102000	102140	102280	102420	102560	102700	102840	102980	103120	103260	103400	103540	103680	103820	103960	104100	104240	104380	104520	104660	104800	104940	105080	105220	105360	105500	105640	105780	105920	106060	106200	106340	106480	106620	106760	106900	107040	107180	107320	107460	107600	107740	107880	108020	108160	108300	108440	108580	108720	108860	109000	109140	109280	109420	109560	109700	109840	109980	110120	110260	110400	110540	110680	110820	110960	111100	111240	111380	111520	111660	111800	111940	112080	112220	112360	112500	112640	112780	112920	113060	113200	113340	113480	113620	113760	113900	114040	114180	114320	114460	114600	114740	114880	115020	115160	115300	115440	115580	115720	115860	116000	116140	116280	116420	116560	116700	116840	116980	117120	117260	117400	117540	117680	117820	117960	118100	118240	118380	118520	118660	118800	118940	119080	119220	119360	119500	119640	119780	119920	120060	120200	120340	120480	120620	120760	120900	121040	121180	121320	121460	121600	121740	121880	122020	122160	122300	122440	122580	122720	122860	123000	123140	123280	123420	123560	123700	123840</

5 (c)

[illegible]



DIMENSIONS		
PIPE ND	'X' (mm)	'Y' (mm)
80	1380	350
100	1380	280
150	1380	175
200	1840	285
250	2070	255

[illegible]

 **CESA**
CONSULTING ENGINEERING SERVICES AFRICA
EVN AFRICA
CONSULTING SERVICES (PTY) LTD
Reg. No. 2002/003626/PT
CIVIL, STRUCTURAL & AGRICULTURAL ENGINEERS
P.O. Box 236
38 Selwyn Street
POLOKWANE
TEL: 015 291 2020
FAX: 015 795 8599



SEHUKHUNE
DISTRICT MUNICIPALITY

DATE _____

SIGNATURE OF EMPLOYER _____

OLIFANTSPOOT SOUTH RIVS : PHASE 6

WATER DEMAND MANAGEMENT
STRUCTURE : GATE VALVE AND
WATER METER

SURVEYED		APPROVED	DATE	PLAN No.	REVISION
DESIGNED	BMF				
DRAWN	RS				
CHECKED	BMF				
NEXT ISSUE	2011-06-31			9514.S0102.GW.1	

NOTES :

- 1) ALL M.S. COMPONENTS OF LOCKING DEVICE TO BE HOT DIP GALVANISED.
- 2) EACH LOCKING DEVICE MUST BE PROVIDED WITH A PADLOCK AS SCHEDULED.

LOCKING DEVICE

NOTE:
THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING
No. 951A SO 103 CM 2 FOR GENERAL NOTES AND

SCHEDULE OF FITTINGS

[illegible]

SCHEDULE OF FITTINGS

[illegible]

SCHEDULE OF MECHANICAL EQUIPMENT PIPEWORK & FITTINGS

- 3) THE FOLLOWING SHALL BE THE MINIMUM WALL THICKNESSES FOR PIPES OF NOMINAL OUTSIDE DIAMETER -
 - a) 400 mm DN AND SMALLER DIAMETERS - 4.5 mm
 - b) 450 mm AND UP TO 550 mm DN - 6 mm
- 2) ALL FLANGES TO BE DRILLED SANS 1123-2007 (EDITION 3.1) TABLE 10G001, 16G003, 20G003, 4000G3 AS DETAILED AND REFERRED TO AS SANS 10, SANS 16, SANS 20, OR SANS 40 IN THE SCHED OF FITTINGS

3) MAKE OF ALL VALVES TO BE APPROVED BY ENGINEER IN CHARGE

- 4) THE LENGTHS OF PIPES AND FITTINGS ARE APPROXIMATE ONLY - ACTUAL LENGTH TO BE ADVISED ONLY AFTER APPROVAL OF VALVES BY ENGINEER
- 5) NO ALLOWANCES HAVE BEEN MADE IN PIPE AND FITTING DIMENSIONS FOR PACKINGS, GASKETS AND GAPS BETWEEN PIPEWORK - PROVISION FOR THESE TO BE MADE BY

SUPPLIERS

- 6) FLANGE HOLES TO BE DRILLED TO ALLOW EXACT ALIGNMENT VERTICALLY AND HORIZONTALLY, AS DETAILED ON THE DRAWINGS, OF ALL PIPEWORK AND EQUIPMENT
- 7) WHERE PLAIN ENDS, FOR FLEXIBLE COUPLINGS, ARE CALLED FOR ON STEEL PIPES, THE DIMENSIONS OF SUCH PLAIN ENDS AND THE CORRESPONDING FLEXIBLE COUPLINGS ARE TO BE MATCHED

b) ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION

- 3) RADII APPLICABLE TO PIPE PEDESTALS AND STRAPS TO BE VERIFIED FOR FULL SUPPORT OF PIPE OVER ENTIRE SUPPORT AND STRAPPING AREA
- 3) CORROSION PROTECTION TO BE IN ACCORDANCE WITH SPECIFICATIONS, AS SET OUT IN THE CONTRACT DOCUMENT
- LEGEND OF CORROSION PROTECTION TREATMENT AS FOLLOWS:

G : GALVANISING
ET : EPOXY TAR
FC : FROTHING

- a) GALVANISING - WHERE GALVANISING IS SPECIFIED IT SHALL BE CARRIED OUT BY THE HOT DIP PROCESS TO PROVIDE A MINIMUM THICKNESS OF ZINC COATING OF 105 MICRON IN ACCORDANCE WITH SANS ISO 1461 AND SANS ISO 14713 (AS AMENDED)

b) TWO PACK EPOXY - PRIOR TO EPOXY COATING

- OR LINING TAKING PLACE, ALL PIPES AND FITTINGS SHALL BE PREPARED AND TREATED IN ACCORDANCE WITH DWS 9900 SECTIONS C1 AND C3 AND PARTICULAR SPECIFICATION IN THE DOCUMENT. THE EPOXY COATING/LINING SHALL BE APPLIED IN THE WORKSHOP BY SPRAYING TO A FINAL DRY FILM THICKNESS OF NOT LESS THAN 400 MICRON.

SCHEDULE OF FITTINGS

REF	DN	DESCRIPTION	WALL THICKNESS (mm)	FLANGE DRILLING	TREATMENT	QTY
					INTERIOR EXTERIOR WATER TIGHT	
A	150	CHAMBER TYPE 2 GATE VALVE & WATER METERS, 1500mm FROM INCOMING FLANGE FACE	4.5		G	2no
B	150	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
C	150	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
D	150	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
E	150	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
F	160	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
G	150	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
H	160	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
I	160	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
J	160	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	
K	160	1500mm LONG FLANGED STEEL PIPE HAVING FULL FACE 150mm FROM INCOMING FLANGE FACE			G	

SCHEDULE OF FITTINGS

REF	DN	DESCRIPTION	WALL THICKNESS (mm)	FLANGE DRILLING	TEST METHOD		QTY
					1) HYDRAULIC PRESSURE TEST	2) ULTIMATE TENSILE TEST (INTERNAL & EXTERNAL)	
A	200	CHAMBER TYPE 2 GATE VALVE & WATER METER, 200DN	4.5		G	G	2ea
B	200	750 mm LONG LARGED STEEL PIPE HAVING PUDDLE FLANGE 305mm					
C	200	APPROXIMATELY DOUBLE LARGED WATERBURY'S PATTERNS					
D	200	APPROXIMATELY DOUBLE LARGED WATERBURY'S PATTERNS					
E	200	SHIELD, HANDWELL, AND PLAIN TRIBLET COLUMN AND GUT.					
F	200	FACE TO FACE = 17' 6" PRESSURE AND ACCORDING TO SANS 664					
G	200	"VING JONHSON" FLANGE ADAPTER			E	E	1ea
H	200	"VING JONHSON" FLANGE ADAPTER	4.5		G	G	1ea
I	200	"VING JONHSON" FLANGE ADAPTER (EAST BORN PROVISIONAL)			G	G	1ea
J	200	"VING JONHSON" FLANGE ADAPTER (EAST BORN PROVISIONAL)			E	E	1ea
K	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.	4.5		E	E	2ea
L	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
M	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
N	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
O	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
P	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
Q	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
R	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
S	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
T	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
U	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
V	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
W	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
X	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
Y	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
Z	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AA	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AB	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AC	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AD	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AE	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AF	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AG	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AH	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AI	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AJ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AK	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AL	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AM	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AN	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AO	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AP	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AQ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AR	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AS	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AT	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AU	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AV	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AW	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AX	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AY	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
AZ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BA	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BB	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BC	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BD	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BE	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BF	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BG	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BH	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BI	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BJ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BK	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BL	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BM	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BN	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BO	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BP	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BQ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BR	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BS	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BT	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BU	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BV	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BW	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BX	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BY	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
BZ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CA	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CB	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CC	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CD	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CE	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CF	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CG	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CH	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CI	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CJ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CK	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CL	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CM	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CN	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CO	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CP	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CQ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CR	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CS	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CT	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CU	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CV	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CW	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CX	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CY	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
CZ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DA	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DB	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DC	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DD	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DE	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DF	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DG	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DH	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DI	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DJ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DK	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DL	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DM	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DN	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DO	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DP	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DQ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DR	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DS	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DT	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DU	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DV	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DW	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DX	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DY	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
DZ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EA	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EB	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EC	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
ED	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EE	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EF	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EG	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EH	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EI	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EJ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EK	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EL	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EM	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
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EO	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EP	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EQ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
ER	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
ES	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
ET	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EU	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EV	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EW	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EX	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EY	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
EZ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FA	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FB	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FC	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FD	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FE	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FF	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FG	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FH	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FI	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FJ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FK	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FL	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FM	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FN	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FO	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FP	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FQ	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea
FR	200	200 DN x 150 mm LARGED STEEL LEVEL OUTLET REDUCER, BE.			E	E	2ea</

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[illegible]

DATE	NO	AMENDMENTS	APPR
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EYN AFRICA
CONSULTING
Reg no: 2002/025849/PT LTD
TEL: 011 258 8099
FAX: 011 258 8099
www.eyn.co.za

CIVIL, STRUCTURAL & AGRICULTURAL ENGINEERS
38 Selwyn Street
PO Box 236
38 Selwyn Street
POLOKWANE



SEKIUKHUNE
DISTRICT MUNICIPALITY

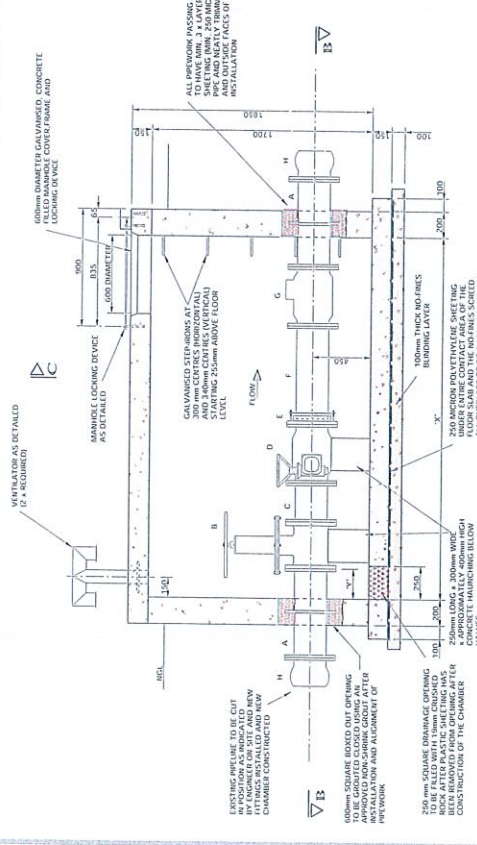
SIGNATURE OF EMPLOYER

OLIFANTSPOORT SOUTH RWS :PHASE 6

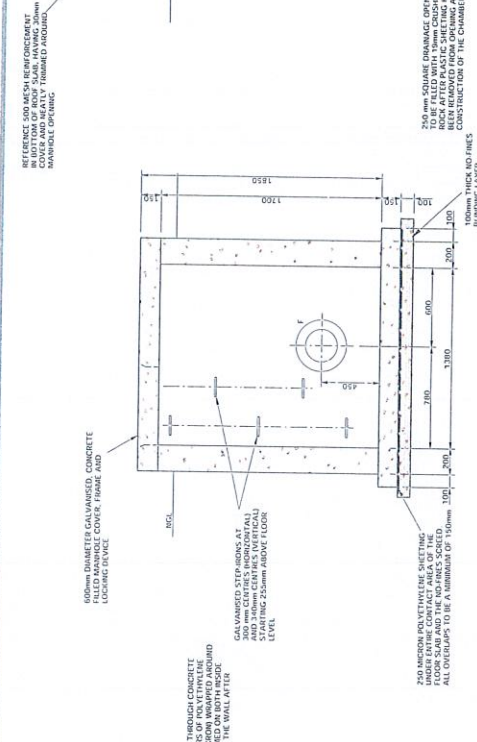
WATER DEMAND MANAGEMENT
STRUCTURE: GATE VALVE & WATER METER
SCHEDULES OF FITTINGS : 800N, 1000N, 1500N,
2000N AND 2500N AND NOTES

DATE

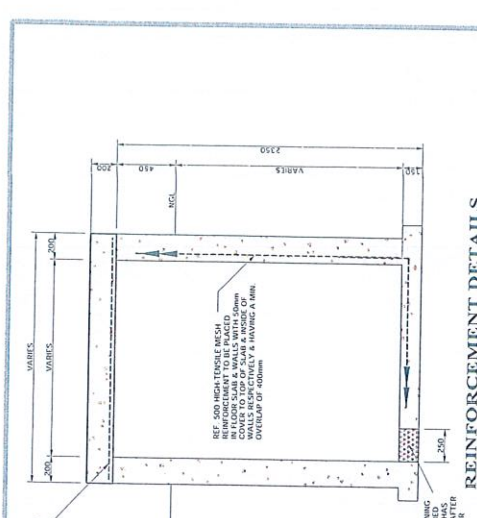
SUBMITTED	DESIGNED	DRAWN	CHECKED	BY	APPROVED	DATE	REVISION
							PLAN No. 9514.S0.102.GW.2
							△



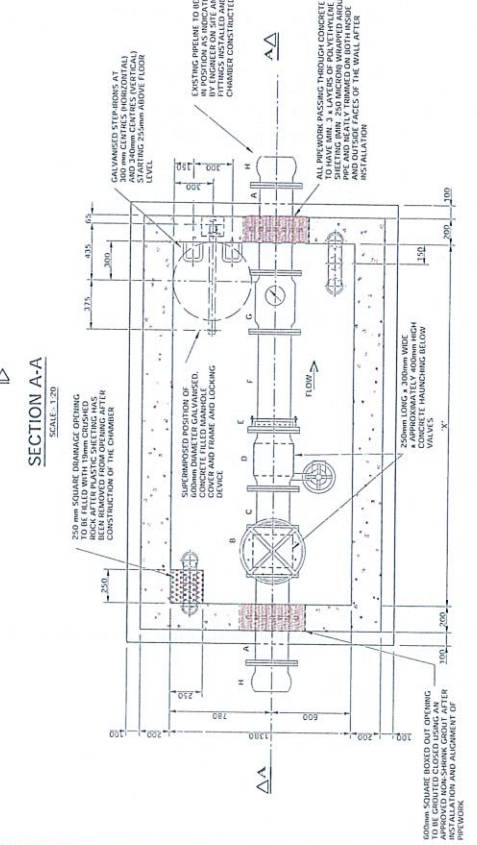
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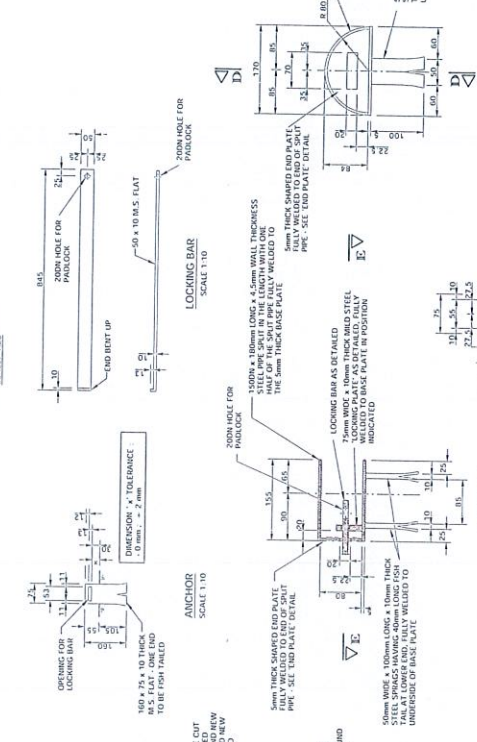
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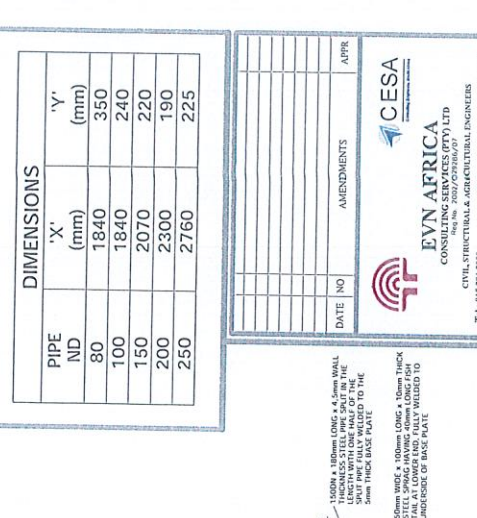
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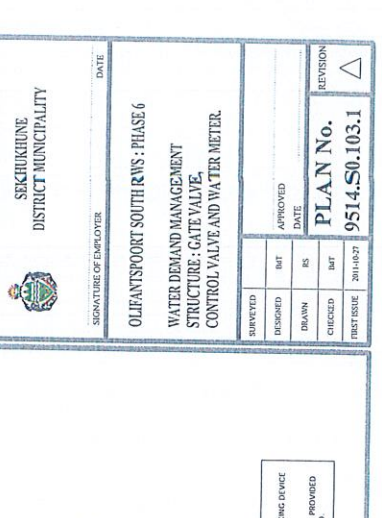
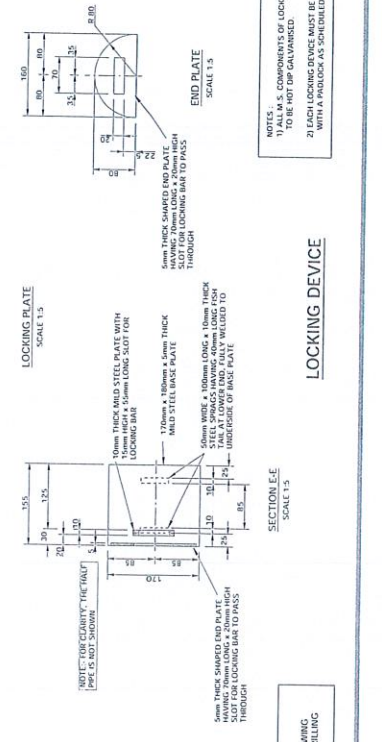
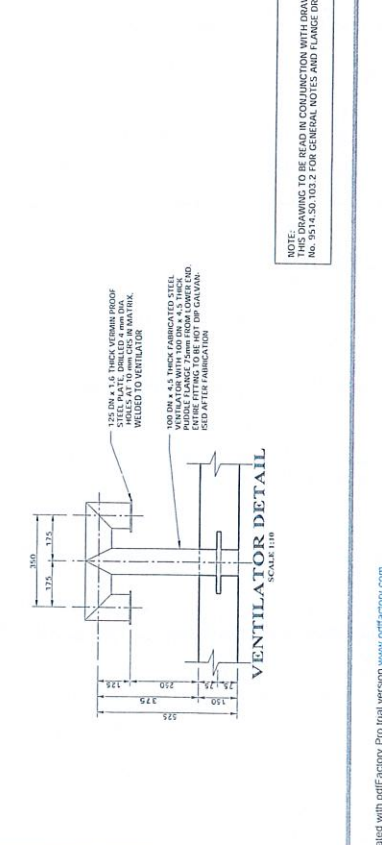
SECTION D-D
SCALE 1:5



SECTION E-E
SCALE 1:5



SECTION F-F
SCALE 1:5



PIPE ND	'X' (mm)	'Y' (mm)
80	1840	350
100	1840	240
150	2070	220
200	2300	190
250	2760	225

AMENDMENTS

DATE	NO	DESCRIPTION

CESA
CONSTRUCTION ENGINEERING SOUTH AFRICA
No. 202/2006/07
P.O. Box 236
Tel: 011 234 2020
Fax: 011 234 2075
30 Shawmas Street
POLOKWANE

EVN AFRICA
No. 202/2006/07
P.O. Box 236
Tel: 011 234 2020
Fax: 011 234 2075
30 Shawmas Street
POLOKWANE

SEKHUKHUNE DISTRICT MUNICIPALITY

OLIFANTSPOORT SOUTH RWS : PHASE 6
WATER DEMAND MANAGEMENT STRUCTURE : GATE VALVE, CONTROL VALVE AND WATER METER.

PLAN No. 9514.S0.103.1

REVISION

REVISED	DATE	BY	REASON

SCHEDULE OF FITTINGS

REF	QTY	DESCRIPTION	WALL THICKNESS (MM)	FLANGE DRILLING	TREATMENT (1 = PROTECTIVE PAINT 2 = GALVANIZED 3 = INTERNAL INTERNAL 3 X 1 INTERNAL)
A	80	QUARRY PIPE, 1 GATE VALVE, CONTROL VALVE & WATERMETER, IRON 240mm LONG FLANGE, 1 PIPE HAVING DOUBLE FLANGE, 300mm FROM RECONSTRUCT FLANGE FACE	4.5		C G
B	80	ANDERWORTH DOUBLE FLANGED WATERWORKS WELLS SHOULDER, HANDWHEEL AND FLANK THRU-OUT CONTAINING AND SUIT- FACE TO FACE = 229 mm			
C	80	150mm LONG FLANGE STEEL PIPE			E G
D	80	"VAG DUNA" CONTROL VALVE WITH HANDWHEEL, SET ACCORDING TO ENGINEERS SITE INSTRUCTION, FACE TO FACE = 310 mm	4.5		E G
E	80	"YIMING JOHNSON" FLANGE ADAPTOR			E G
F	80	250mm LONG STEEL PIPE FLANGED ON OUTGOING END ONLY	4.5		C G
G	80	"SENSO" TYPE 80-DYNAMIC TURBINE WATER METER SUITABLE FOR 150mm LONG FLANGE, 150mm LONG FLANGE, 150mm IN THE PARTICULAR BILL OF QUANTITIES, FACE TO FACE = 300mm			E G
H	75	"MVC" FLANGE ADAPTOR (EAST IRON) (PROVISIONAL)			E G
I	80	"YIMING JOHNSON" FLANGE ADAPTOR (PROVISIONAL)			E G
K		BRICKLANS LUGS FITTINGS a) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) b) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) c) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) d) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) e) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) f) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) g) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) h) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) i) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) j) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) k) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) l) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) m) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) n) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) o) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) p) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) q) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) r) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) s) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) t) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) u) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) v) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) w) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) x) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) y) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) z) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) aa) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ab) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ac) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ad) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ae) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) af) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ag) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ah) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm 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THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ap) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) aq) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) ar) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) as) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) at) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) au) 1 840 mm LONG x 1 380 mm WIDE x 1 700 mm HIGH (INTERNAL THICK WALLS, FLOOR SLAB TO BE 2 440mm LONG x 1 800mm WIDE x 1 700mm HIGH) (PROVISIONAL) av) 1 840 mm LONG x 1 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SCHEDULE OF FITTINGS

[illegible]

SCHEDULE OF MECHANICAL EQUIPMENT

- ## PIPEWORK & FITTINGS
- THESE NOTES APPLY TO ALL THE SCHEDULES HERE FOLLOWING.
- THE FOLLOWING SHALL BE THE MINIMUM WALL THICKNESSES FOR PIPES OF NOMINAL OUTSIDE DIAMETERS:
a) 4 IN AND UNDER 100 FT: 0.1875 IN
b) 10 IN AND UNDER 100 FT: 0.25 IN
c) 16 IN AND UNDER 100 FT: 0.3125 IN
d) 24 IN AND UNDER 100 FT: 0.375 IN
e) 30 IN AND UNDER 100 FT: 0.4375 IN
f) 36 IN AND UNDER 100 FT: 0.5 IN
g) 42 IN AND UNDER 100 FT: 0.5625 IN
h) 48 IN AND UNDER 100 FT: 0.625 IN
i) 54 IN AND UNDER 100 FT: 0.6875 IN
j) 60 IN AND UNDER 100 FT: 0.75 IN
k) 66 IN AND UNDER 100 FT: 0.8125 IN
l) 72 IN AND UNDER 100 FT: 0.875 IN
m) 78 IN AND UNDER 100 FT: 0.9375 IN
n) 84 IN AND UNDER 100 FT: 1.0 IN
o) 90 IN AND UNDER 100 FT: 1.0625 IN
p) 96 IN AND UNDER 100 FT: 1.125 IN
q) 102 IN AND UNDER 100 FT: 1.1875 IN
r) 108 IN AND UNDER 100 FT: 1.25 IN
s) 114 IN AND UNDER 100 FT: 1.3125 IN
t) 120 IN AND UNDER 100 FT: 1.375 IN
u) 126 IN AND UNDER 100 FT: 1.4375 IN
v) 132 IN AND UNDER 100 FT: 1.5 IN
w) 138 IN AND UNDER 100 FT: 1.5625 IN
x) 144 IN AND UNDER 100 FT: 1.625 IN
y) 150 IN AND UNDER 100 FT: 1.6875 IN
z) 156 IN AND UNDER 100 FT: 1.75 IN
aa) 162 IN AND UNDER 100 FT: 1.8125 IN
ab) 168 IN AND UNDER 100 FT: 1.875 IN
ac) 174 IN AND UNDER 100 FT: 1.9375 IN
ad) 180 IN AND UNDER 100 FT: 2.0 IN
ae) 186 IN AND UNDER 100 FT: 2.0625 IN
af) 192 IN AND UNDER 100 FT: 2.125 IN
ag) 198 IN AND UNDER 100 FT: 2.1875 IN
ah) 204 IN AND UNDER 100 FT: 2.25 IN
ai) 210 IN AND UNDER 100 FT: 2.3125 IN
aj) 216 IN AND UNDER 100 FT: 2.375 IN
ak) 222 IN AND UNDER 100 FT: 2.4375 IN
al) 228 IN AND UNDER 100 FT: 2.5 IN
am) 234 IN AND UNDER 100 FT: 2.5625 IN
an) 240 IN AND UNDER 100 FT: 2.625 IN
ao) 246 IN AND UNDER 100 FT: 2.6875 IN
ap) 252 IN AND UNDER 100 FT: 2.75 IN
aq) 258 IN AND UNDER 100 FT: 2.8125 IN
ar) 264 IN AND UNDER 100 FT: 2.875 IN
as) 270 IN AND UNDER 100 FT: 2.9375 IN
at) 276 IN AND UNDER 100 FT: 3.0 IN
au) 282 IN AND UNDER 100 FT: 3.0625 IN
av) 288 IN AND UNDER 100 FT: 3.125 IN
aw) 294 IN AND UNDER 100 FT: 3.1875 IN
ax) 300 IN AND UNDER 100 FT: 3.25 IN
ay) 306 IN AND UNDER 100 FT: 3.3125 IN
az) 312 IN AND UNDER 100 FT: 3.375 IN
ba) 318 IN AND UNDER 100 FT: 3.4375 IN
bb) 324 IN AND UNDER 100 FT: 3.5 IN
bc) 330 IN AND UNDER 100 FT: 3.5625 IN
bd) 336 IN AND UNDER 100 FT: 3.625 IN
be) 342 IN AND UNDER 100 FT: 3.6875 IN
bf) 348 IN AND UNDER 100 FT: 3.75 IN
bg) 354 IN AND UNDER 100 FT: 3.8125 IN
bh) 360 IN AND UNDER 100 FT: 3.875 IN
bi) 366 IN AND UNDER 100 FT: 3.9375 IN
bj) 372 IN AND UNDER 100 FT: 4.0 IN
bk) 378 IN AND UNDER 100 FT: 4.0625 IN
bl) 384 IN AND UNDER 100 FT: 4.125 IN
bm) 390 IN AND UNDER 100 FT: 4.1875 IN
bn) 396 IN AND UNDER 100 FT: 4.25 IN
bo) 402 IN AND UNDER 100 FT: 4.3125 IN
bp) 408 IN AND UNDER 100 FT: 4.375 IN
bq) 414 IN AND UNDER 100 FT: 4.4375 IN
br) 420 IN AND UNDER 100 FT: 4.5 IN
bs) 426 IN AND UNDER 100 FT: 4.5625 IN
bt) 432 IN AND UNDER 100 FT: 4.625 IN
bu) 438 IN AND UNDER 100 FT: 4.6875 IN
bv) 444 IN AND UNDER 100 FT: 4.75 IN
bw) 450 IN AND UNDER 100 FT: 4.8125 IN
bx) 456 IN AND UNDER 100 FT: 4.875 IN
by) 462 IN AND UNDER 100 FT: 4.9375 IN
bz) 468 IN AND UNDER 100 FT: 5.0 IN
ca) 474 IN AND UNDER 100 FT: 5.0625 IN
cb) 480 IN AND UNDER 100 FT: 5.125 IN
cc) 486 IN AND UNDER 100 FT: 5.1875 IN
cd) 492 IN AND UNDER 100 FT: 5.25 IN
ce) 498 IN AND UNDER 100 FT: 5.3125 IN
cf) 504 IN AND UNDER 100 FT: 5.375 IN
cg) 510 IN AND UNDER 100 FT: 5.4375 IN
ch) 516 IN AND UNDER 100 FT: 5.5 IN
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cm) 546 IN AND UNDER 100 FT: 5.8125 IN
cn) 552 IN AND UNDER 100 FT: 5.875 IN
co) 558 IN AND UNDER 100 FT: 5.9375 IN
cp) 564 IN AND UNDER 100 FT: 6.0 IN
cq) 570 IN AND UNDER 100 FT: 6.0625 IN
cr) 576 IN AND UNDER 100 FT: 6.125 IN
cs) 582 IN AND UNDER 100 FT: 6.1875 IN
ct) 588 IN AND UNDER 100 FT: 6.25 IN
cu) 594 IN AND UNDER 100 FT: 6.3125 IN
cv) 600 IN AND UNDER 100 FT: 6.375 IN
cw) 606 IN AND UNDER 100 FT: 6.4375 IN
cx) 612 IN AND UNDER 100 FT: 6.5 IN
cy) 618 IN AND UNDER 100 FT: 6.5625 IN
cz) 624 IN AND UNDER 100 FT: 6.625 IN
da) 630 IN AND UNDER 100 FT: 6.6875 IN
db) 636 IN AND UNDER 100 FT: 6.75 IN
dc) 642 IN AND UNDER 100 FT: 6.8125 IN
dd) 648 IN AND UNDER 100 FT: 6.875 IN
de) 654 IN AND UNDER 100 FT: 6.9375 IN
df) 660 IN AND UNDER 100 FT: 7.0 IN
dg) 666 IN AND UNDER 100 FT: 7.0625 IN
dh) 672 IN AND UNDER 100 FT: 7.125 IN
di) 678 IN AND UNDER 100 FT: 7.1875 IN
dj) 684 IN AND UNDER 100 FT: 7.25 IN
dk) 690 IN AND UNDER 100 FT: 7.3125 IN
dl) 696 IN AND UNDER 100 FT: 7.375 IN
dm) 702 IN AND UNDER 100 FT: 7.4375 IN
dn) 708 IN AND UNDER 100 FT: 7.5 IN
do) 714 IN AND UNDER 100 FT: 7.5625 IN
dp) 720 IN AND UNDER 100 FT: 7.625 IN
dq) 726 IN AND UNDER 100 FT: 7.6875 IN
dr) 732 IN AND UNDER 100 FT: 7.75 IN
ds) 738 IN AND UNDER 100 FT: 7.8125 IN
dt) 744 IN AND UNDER 100 FT: 7.875 IN
du) 750 IN AND UNDER 100 FT: 7.9375 IN
dv) 756 IN AND UNDER 100 FT: 8.0 IN
dw) 762 IN AND UNDER 100 FT: 8.0625 IN
dx) 768 IN AND UNDER 100 FT: 8.125 IN
dy) 774 IN AND UNDER 100 FT: 8.1875 IN
dz) 780 IN AND UNDER 100 FT: 8.25 IN
ea) 786 IN AND UNDER 100 FT: 8.3125 IN
eb) 792 IN AND UNDER 100 FT: 8.375 IN
ec) 798 IN AND UNDER 100 FT: 8.4375 IN
ed) 804 IN AND UNDER 100 FT: 8.5 IN
ee) 810 IN AND UNDER 100 FT: 8.5625 IN
ef) 816 IN AND UNDER 100 FT: 8.625 IN
eg) 822 IN AND UNDER 100 FT: 8.6875 IN
eh) 828 IN AND UNDER 100 FT: 8.75 IN
ei) 834 IN AND UNDER 100 FT: 8.8125 IN
ej) 840 IN AND UNDER 100 FT: 8.875 IN
ek) 846 IN AND UNDER 100 FT: 8.9375 IN
el) 852 IN AND UNDER 100 FT: 9.0 IN
em) 858 IN AND UNDER 100 FT: 9.0625 IN
en) 864 IN AND UNDER 100 FT: 9.125 IN
eo) 870 IN AND UNDER 100 FT: 9.1875 IN
ep) 876 IN AND UNDER 100 FT: 9.25 IN
eq) 882 IN AND UNDER 100 FT: 9.3125 IN
er) 888 IN AND UNDER 100 FT: 9.375 IN
es) 894 IN AND UNDER 100 FT: 9.4375 IN
et) 900 IN AND UNDER 100 FT: 9.5 IN
eu) 906 IN AND UNDER 100 FT: 9.5625 IN
ev) 912 IN AND UNDER 100 FT: 9.625 IN
ew) 918 IN AND UNDER 100 FT: 9.6875 IN
ex) 924 IN AND UNDER 100 FT: 9.75 IN
ey) 930 IN AND UNDER 100 FT: 9.8125 IN
ez) 936 IN AND UNDER 100 FT: 9.875 IN
fa) 942 IN AND UNDER 100 FT: 9.9375 IN
fb) 948 IN AND UNDER 100 FT: 10.0 IN
fc) 954 IN AND UNDER 100 FT: 10.0625 IN
fd) 960 IN AND UNDER 100 FT: 10.125 IN
fe) 966 IN AND UNDER 100 FT: 10.1875 IN
ff) 972 IN AND UNDER 100 FT: 10.25 IN
fg) 978 IN AND UNDER 100 FT: 10.3125 IN
fh) 984 IN AND UNDER 100 FT: 10.375 IN
fi) 990 IN AND UNDER 100 FT: 10.4375 IN
fj) 996 IN AND UNDER 100 FT: 10.5 IN
fk) 1002 IN AND UNDER 100 FT: 10.5625 IN
fl) 1008

19) STEEL PIPES & FITTINGS
ALL STEEL PIPES AND FITTINGS IN CONFORMITY WITH SANS 719/2002
GRADE B WITH DESIGN YIELD STRESS OF 241 Mpa

[illegible]

19) STEEL PIPES & FITTINGS

[illegible]

SCHEDULE OF FITTINGS

REF	DN	DESCRIPTION	SCHEDULE OF FITTINGS	WALL THICKNESS (mm)	FLANGE DRILLING	PACKING ELEMENT	QTY
						U.S. STANDARD INTEGRAL FL. GASKET	
A	200	CHAMFER STEEL 1 GALV. WARE COATING, WAVE & WASTEWATER, 200mm FROM INCOMING FLANGE FACE		4.5	G	G	2000
B	200	ANISWORTH DOUBLE FLANGED WAVE HANDING BRASS W/THIN SPHERICAL MANHOLEWELL AND SLAIN THROTTLE COLLAR AND GUIT. FACE TO FACE = 317 mm					
C	200	250 mm LONG FLANGED STEEL PIPE					
D	200	WAVE BOP FLANGER VALVE, SET ACCORDING TO ENGINEERS SITE INSTRUCTION. FACE TO FACE = 400 mm		4.5	G	G	100
E	200	WING JOHNSON FLANGE ADAPTOR					
F	200	200 mm LONG STEEL PIPE FLANGED ON OUTSICKE END ONLY					
G	200	200 mm LONG WAVE ANISWORTH TURBINE WATER METER SUITABLE FOR POST BOP USE. FACE TO FACE = 317 mm		4.5	G	G	100
H	200	1/2" NPT FLANGE ADAPTOR (EAST RIGOR PROVISIONAL)					
I	200	WING JOHNSON FLANGE ADAPTOR (PROVISIONAL)					
J	200	200 DN x 150 DN FLANGED STEEL LEVEL OFFSET REDUCER, RE-REDUCED ON BOTH ENDS, 150 mm OD, 150 mm ID, 150 mm THICK AND HAVING AN OVERALL FACE TO FACE = 350 mm (PROVISIONAL)					
K	200	200 DN x 150 DN FLANGED STEEL LEVEL OFFSET REDUCER, REDUCED ON ONE END, 150 mm OD, 150 mm ID, 150 mm THICK AND HAVING AN OVERALL FACE TO FACE = 350 mm (PROVISIONAL)					
L	200	200 DN x 150 DN FLANGED STEEL LEVEL OFFSET REDUCER, REDUCED ON ONE END, 150 mm OD, 150 mm ID, 150 mm THICK AND HAVING AN OVERALL FACE TO FACE = 350 mm (PROVISIONAL)		4.5	G	G	200
M	200	200 DN x 150 DN FLANGED STEEL LEVEL OFFSET REDUCER, REDUCED ON ONE END, 150 mm OD, 150 mm ID, 150 mm THICK AND HAVING AN OVERALL FACE TO FACE = 350 mm (PROVISIONAL)		4.5	G	G	200

FOR FLANGE DRILLING AND PRESSURE RATING SEE APPLICABLE BILL OF QUANTITIES

a) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 b) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 c) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 d) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 e) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 f) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 g) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 h) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 i) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 j) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 k) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 l) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK
 m) 200 mm HIGH INTERNAL
 DIMENSIONS OF THE WAVE
 WORKS WALLS FLOOR SLAB TO BE 2 300mm LONG x 1 500mm
 WIDE x 100mm THICK

a) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 b) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 c) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 d) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 e) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 f) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 g) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 h) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 i) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 j) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 k) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 l) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER
 m) ROOF SLAB IN THE BOTTOM OF THE SLAB HAVING 30mm COVER

a) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 b) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 c) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 d) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 e) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 f) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 g) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 h) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 i) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 j) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 k) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 l) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER
 m) 60 mm BRASS KEY-LINE LOCK HAVING A 10 mm DIAMETER

a) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 b) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 c) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 d) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 e) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 f) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 g) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 h) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 i) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 j) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 k) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 l) 250 mm LONG x 200 mm WIDE x 100 mm HIGH
 m) 250 mm LONG x 200 mm WIDE x 100 mm HIGH

SCHEDULE OF FITTINGS

REF	DN	DESCRIPTION	WALL THICKNESS (mm)	FLANGE DRILLING	TEST TREATMENT 1. IS 5100 PART 1 2. IS 5100 PART 2 3. IS 5100 PART 3 4. IS 5100 PART 4 5. IS 5100 PART 5 6. IS 5100 PART 6 7. IS 5100 PART 7 8. IS 5100 PART 8 9. IS 5100 PART 9 10. IS 5100 PART 10 11. IS 5100 PART 11 12. IS 5100 PART 12 13. IS 5100 PART 13 14. IS 5100 PART 14 15. IS 5100 PART 15 16. IS 5100 PART 16 17. IS 5100 PART 17 18. IS 5100 PART 18 19. IS 5100 PART 19 20. IS 5100 PART 20 21. IS 5100 PART 21 22. IS 5100 PART 22 23. IS 5100 PART 23 24. IS 5100 PART 24 25. IS 5100 PART 25 26. IS 5100 PART 26 27. IS 5100 PART 27 28. IS 5100 PART 28 29. IS 5100 PART 29 30. IS 5100 PART 30 31. IS 5100 PART 31 32. IS 5100 PART 32 33. IS 5100 PART 33 34. IS 5100 PART 34 35. IS 5100 PART 35 36. IS 5100 PART 36 37. IS 5100 PART 37 38. IS 5100 PART 38 39. IS 5100 PART 39 40. IS 5100 PART 40 41. IS 5100 PART 41 42. IS 5100 PART 42 43. IS 5100 PART 43 44. IS 5100 PART 44 45. IS 5100 PART 45 46. IS 5100 PART 46 47. IS 5100 PART 47 48. IS 5100 PART 48 49. IS 5100 PART 49 50. IS 5100 PART 50 51. IS 5100 PART 51 52. IS 5100 PART 52 53. IS 5100 PART 53 54. IS 5100 PART 54 55. IS 5100 PART 55 56. IS 5100 PART 56 57. IS 5100 PART 57 58. IS 5100 PART 58 59. IS 5100 PART 59 60. IS 5100 PART 60 61. IS 5100 PART 61 62. IS 5100 PART 62 63. IS 5100 PART 63 64. IS 5100 PART 64 65. IS 5100 PART 65 66. IS 5100 PART 66 67. IS 5100 PART 67 68. IS 5100 PART 68 69. IS 5100 PART 69 70. IS 5100 PART 70 71. IS 5100 PART 71 72. IS 5100 PART 72 73. IS 5100 PART 73 74. IS 5100 PART 74 75. IS 5100 PART 75 76. IS 5100 PART 76 77. IS 5100 PART 77 78. IS 5100 PART 78 79. IS 5100 PART 79 80. IS 5100 PART 80 81. IS 5100 PART 81 82. IS 5100 PART 82 83. IS 5100 PART 83 84. IS 5100 PART 84 85. IS 5100 PART 85 86. IS 5100 PART 86 87. IS 5100 PART 87 88. IS 5100 PART 88 89. IS 5100 PART 89 90. IS 5100 PART 90 91. IS 5100 PART 91 92. IS 5100 PART 92 93. IS 5100 PART 93 94. IS 5100 PART 94 95. IS 5100 PART 95 96. IS 5100 PART 96 97. IS 5100 PART 97 98. IS 5100 PART 98 99. IS 5100 PART 99 100. IS 5100 PART 100	QTY
A	200	700mm LONG FLANGED STEEL PIPE HAVING 6mm WALL THICKNESS, 200mm DIA. 10mm LONG FLANGING FLANGE FACE	4.5	G	G	200
B	200	700mm LONG FLANGED STEEL PIPE HAVING 6mm WALL THICKNESS, 200mm DIA. 10mm LONG FLANGING FLANGE FACE	4.5	G	G	200
C	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
D	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
E	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
F	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
G	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
H	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
I	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
J	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
K	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
L	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100
M	200	250mm LONG FLANGED STEEL PIPE	4.5	E	E	100

SCHEDULE OF FITTINGS

[illegible]

SCHEDULE OF FITTINGS

[illegible][illegible]