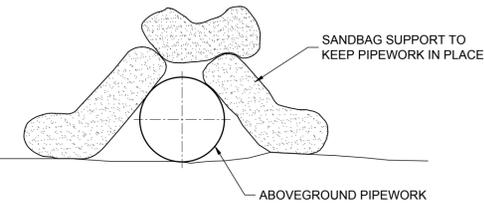
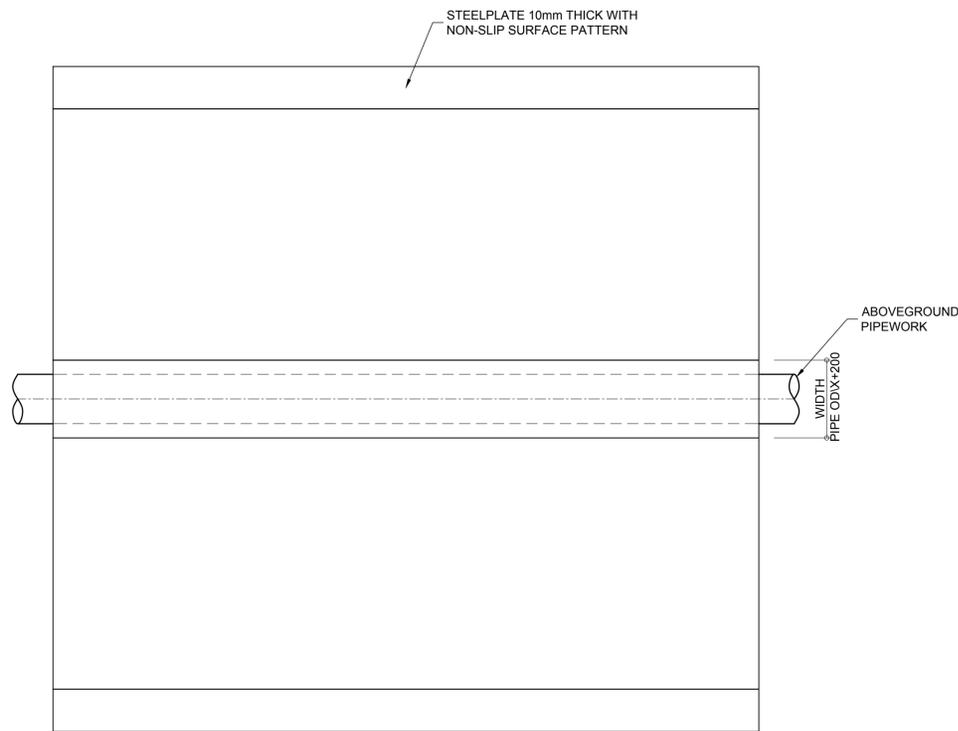
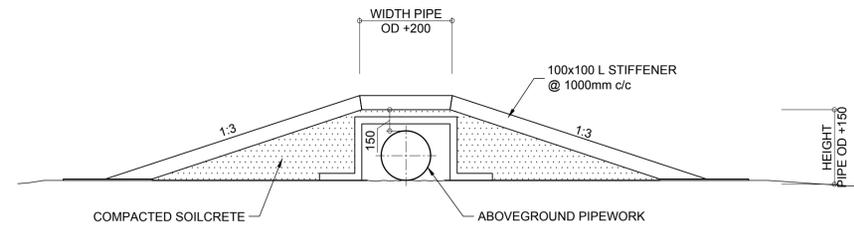


## ANNEXURE 7A: Typical Details

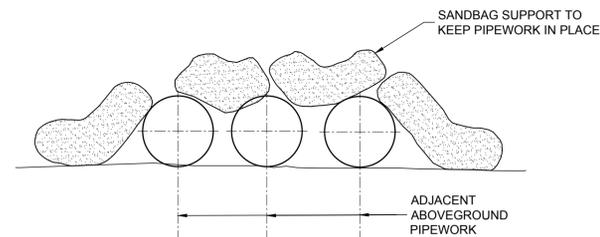


**ABOVEGROUND PIPELINE SUPPORT  
SINGLE PIPELINE**  
SCALE 1:25

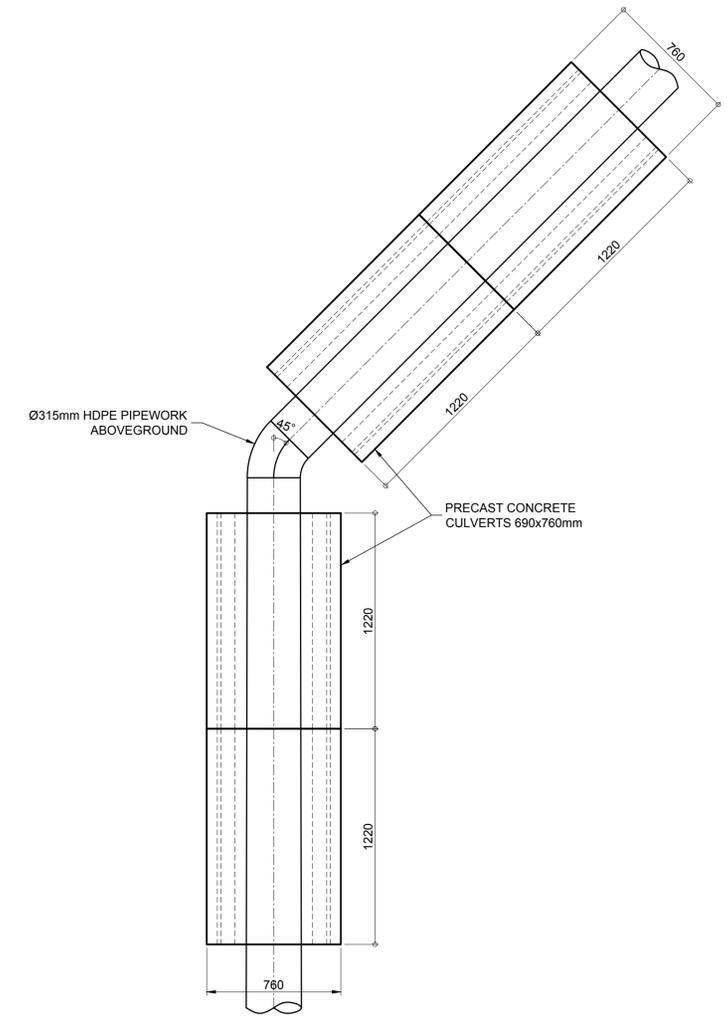
TYPICAL PLAN



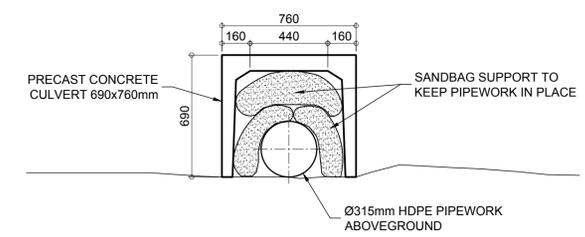
**TYPICAL SECTION  
TYPICAL VEHICLE CROSS-OVER RAMP FOR A ABOVEGROUND PIPES**  
SCALE 1:25



**ABOVEGROUND PIPELINE SUPPORT  
MULTIPLE ADJACENT PIPELINES**  
SCALE 1:25



**PLAN: ABOVEGROUND PIPELINE ANCHOR  
BLOCK SUPPORT BENDS FOR UP TO 45°**  
SCALE 1:20



**ABOVEGROUND PIPELINE ANCHOR  
BLOCK SUPPORT BENDS FOR UP TO 45°**  
SCALE 1:20

FOR INFORMATION ONLY	<input checked="" type="checkbox"/>
PRELIMINARY	<input type="checkbox"/>
FOR APPROVAL	<input type="checkbox"/>
FOR TENDER PURPOSES	<input type="checkbox"/>
FOR CONSTRUCTION	<input type="checkbox"/>
AS BUILT	<input type="checkbox"/>

REV	DATE	REVISION DESCRIPTION	DRAWN	DESIGNED	REV ENGINEER
A	11/09/17	FOR INFORMATION	MJ	VJ	KB

CONSULTING ENGINEER	
DATE	
CLIENT	
DATE	

0 10 20 30 40 50 60 70 80 90 100  
100mm ON ORIGINAL PLAN  
COPYRIGHT HELD BY WORLEYPARSONS RSA (Pty)Ltd

Copyright subsists in this work. Any unauthorised reproduction in any manner or form, publication, making an adaptation of the work and doing in relation to an adaptation of the work, any of the acts above, are acts of copyright infringement and make the DOER liable for civil law copyright infringement and may in certain circumstances make the DOER liable to criminal prosecution. Use of the drawing shall be in accordance with the requirements of Construction Regulation Section 9.2 of the OHS Act. No liability will be accepted unless inspection and certification as envisaged in the Act is conducted.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer.

Copyright reserved

**OneWay**  
to zero harm

Copyright ©  
WorleyParsons Services Pty Ltd  
ABN 61 001 279 812

CLIENT

**CITY OF CAPE TOWN**  
ISIXEKO SASEKAPA  
STAD KAAPSTAD

PROJECT

**WATER RESILIENCE PROJECT**

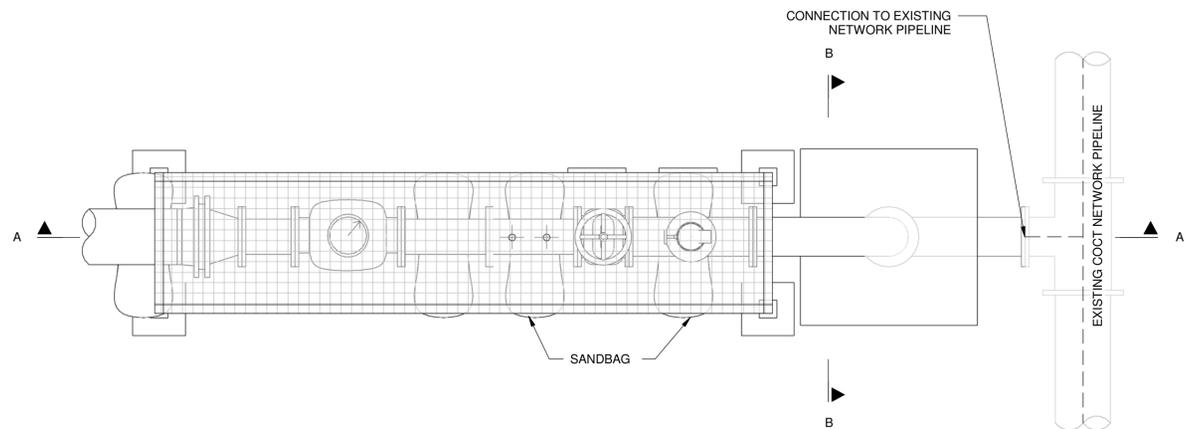
DRAWING DESCRIPTION

**TYPICAL TEMPORARY PIPELINE CROSS-OVER RAMP AND PIPELINE SUPPORT**

**WorleyParsons**  
resources & energy  
P.O.Box 398  
BELLVILLE 7535  
TEL:+27 21912 3000  
FAX:+27 21912 3222  
e-mail: capetown.office@worleyparsons.com

DATE: AUGUST 2017  
SCALE: (ORIGINAL A1) AS SHOWN

DRG No: C00686-00-WW-DRD-0001-001  
REV: A



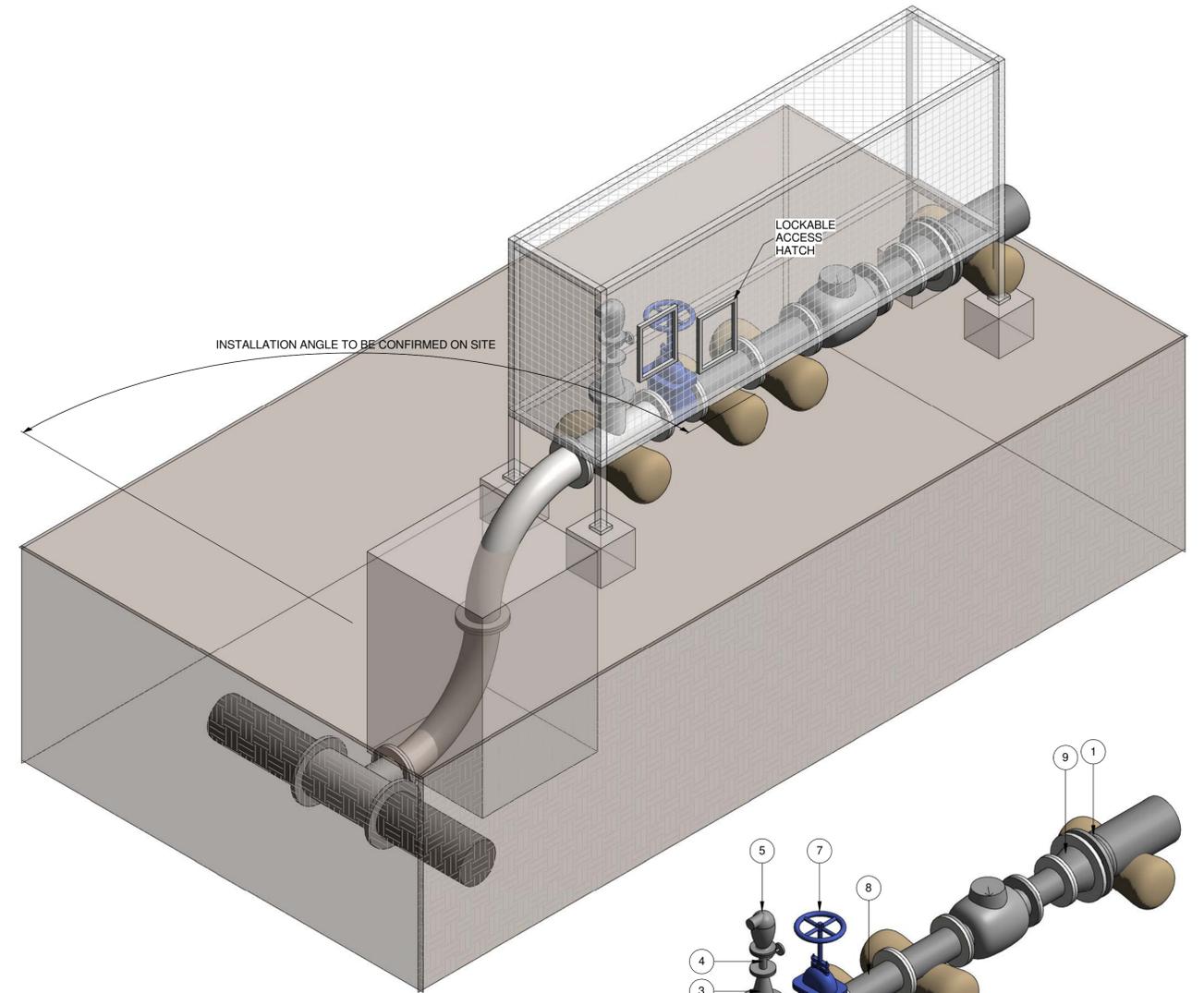
**PLAN VIEW**  
1 : 20

**NOTES**

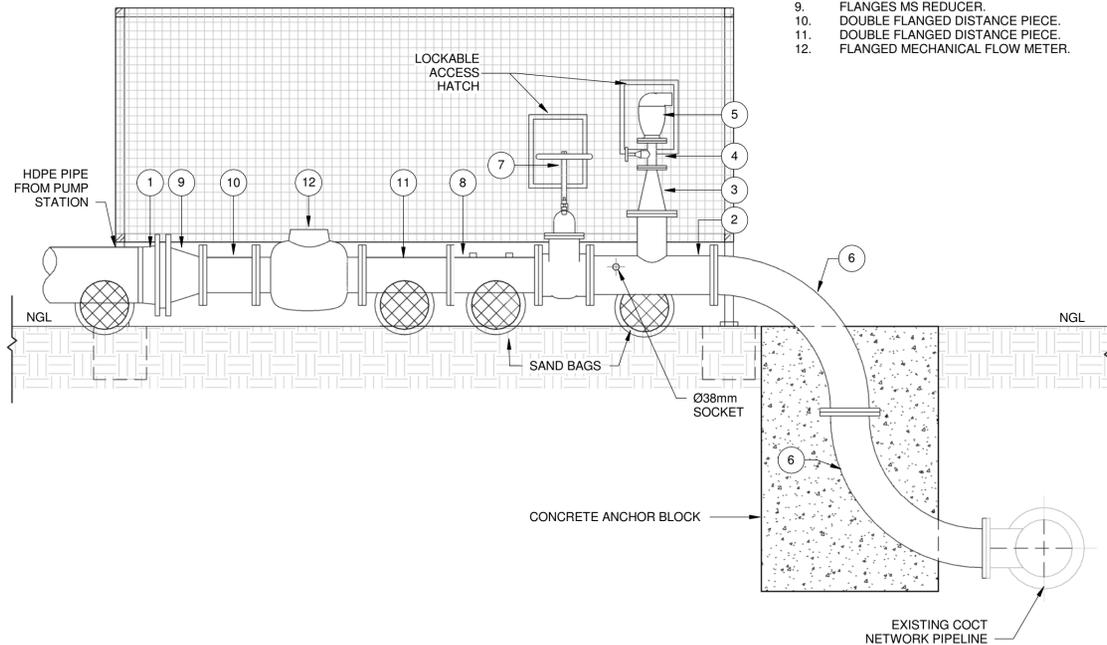
ALL MILD STEEL (MS) PIPES TO BE EPOXY COATED AS SPECIFIED.

**PIPE FITTINGS**

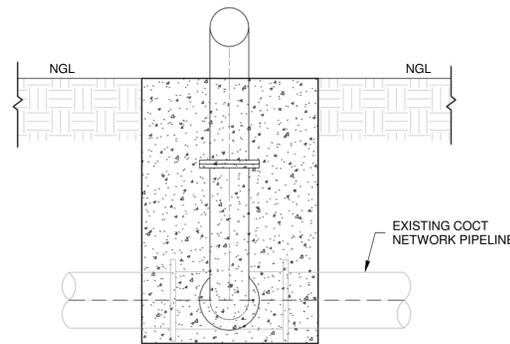
1. PLASSON ELECTROFUSION FLANGE ADAPTOR WITH FLANGE BACKING RING TO SUITE HDPE PIPE AND MS PIPE.
2. FLANGED MS T-PIECE WITH DIAMETER ACCORDING TO TABLE.
3. FLANGES MS REDUCER WITH DIAMETER ACCORDING TO TABLE.
4. FLANGED GATE VALVE WITH HAND WHEEL DIAMETER ACCORDING TO TABLE AS SPECIFIED.
5. FLANGED AIR VALVE WITH DIAMETER ACCORDING TO TABLE AS SPECIFIED.
6. MS PIPE SPECIAL, SIZE AND RADIUS TO CONNECT TO EXISTING PIPELINE ACCORDING TO SPECIFICATION.
7. RSV GATE VALVE FLANGED, (AVK OR SIMILAR), AS PER SPECIFICATION.
8. FLANGED MS PIPE WITH WITH 2x 38mm SOCKET WITH TOTAL LENGTH 500mm.
9. FLANGES MS REDUCER.
10. DOUBLE FLANGED DISTANCE PIECE.
11. DOUBLE FLANGED DISTANCE PIECE.
12. FLANGED MECHANICAL FLOW METER.



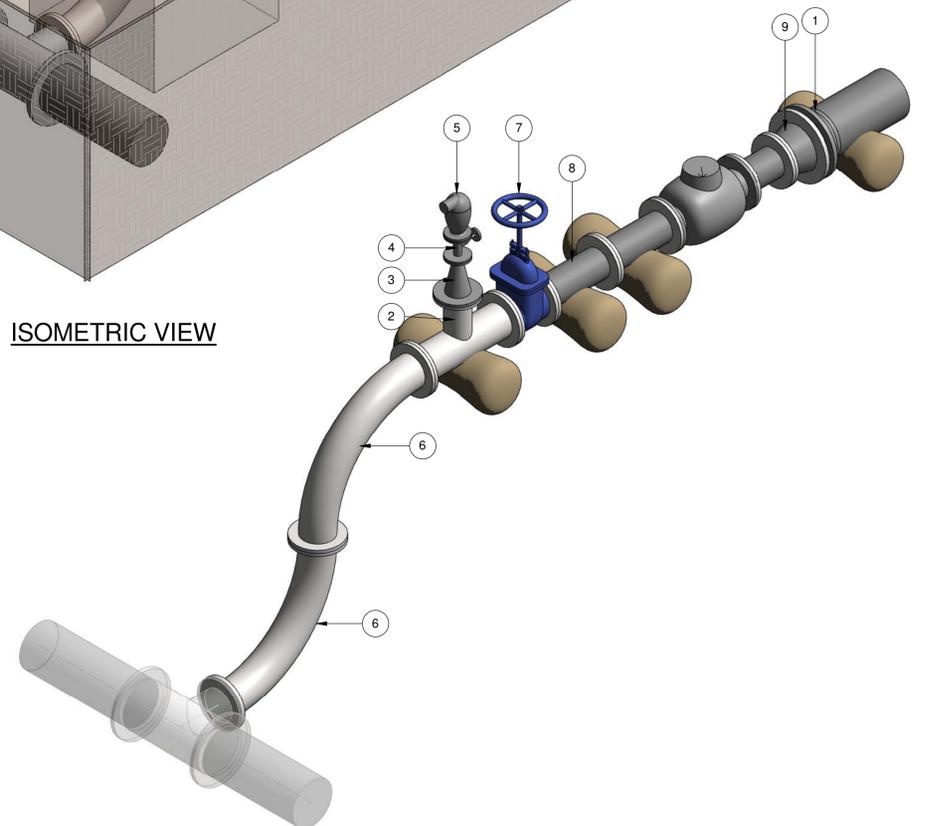
**ISOMETRIC VIEW**



**SECTION A-A**  
1 : 20



**SECTION B-B**  
1 : 20



**PIPEWORK ISOMETRIC VIEW**

FOR INFORMATION ONLY

REV	DATE	REVISION DESCRIPTION	DRAWN	DESIGNED	REV ENGINEER
A	15/09/17	FOR INFORMATION ONLY	HVZ	VJ	KB

CONSULTING ENGINEER	DATE
CLIENT	DATE

Copyright reserved

Copyright ©  
WorleyParsons Services Pty Ltd  
ABN 61 601 279 812

CLIENT

CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD

PROJECT

**WATER RESILIENCE PROJECT**

DRAWING DESCRIPTION

**TYPICAL DETAIL OF TEMPORARY INJECTION POINT AT EXISTING PIPELINE NETWORK**

resources & energy  
P.O.Box 398  
BELLVILLE 7535  
TEL:+27 21812 3000  
FAX:+27 21812 3222  
e-mail: capetown.office@worleyparsons.com

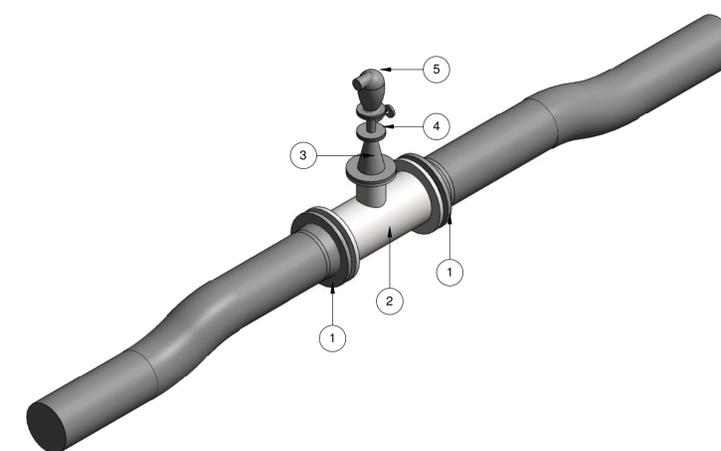
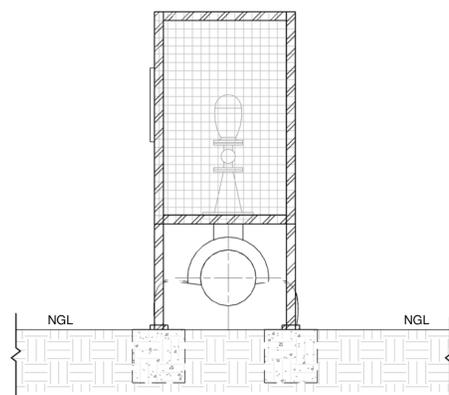
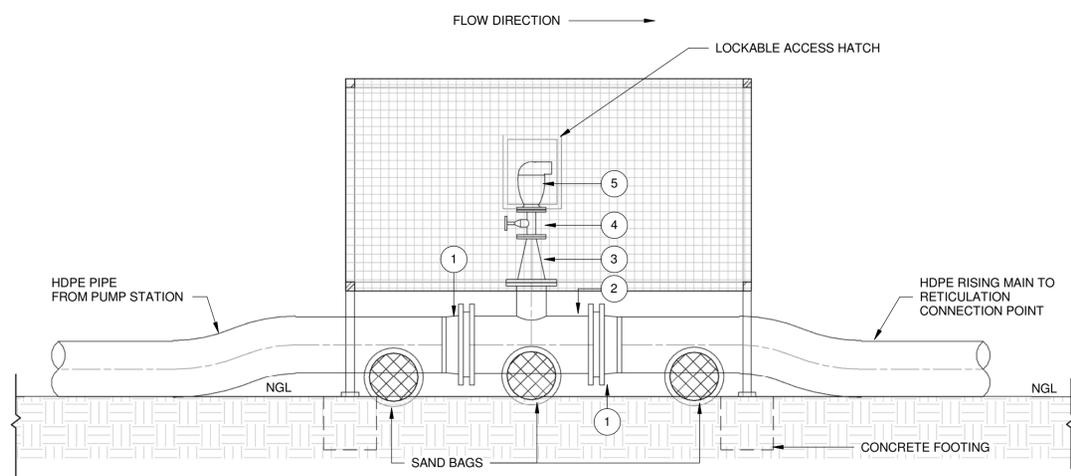
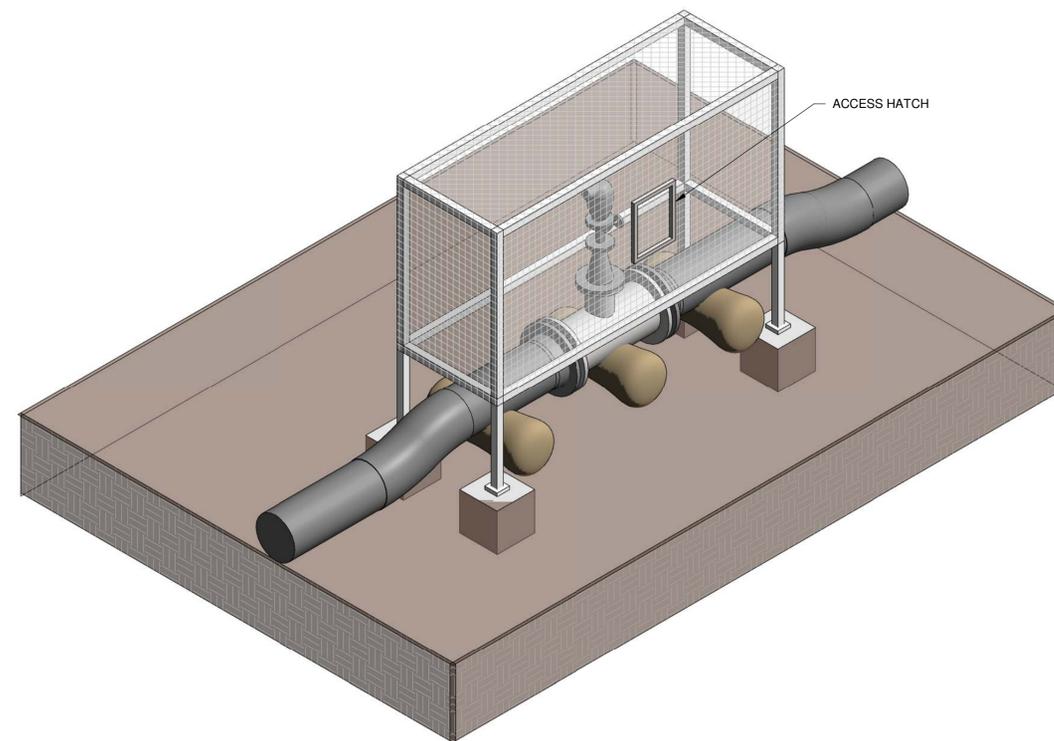
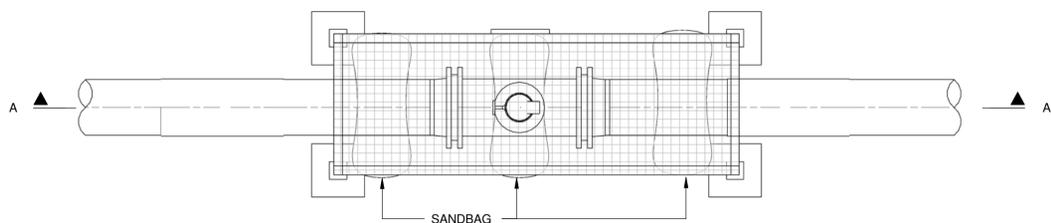
DATE	SCALE: (ORIGINAL A1)
AUGUST 2017	1 : 20
DRG No.	REV.
C00686-00-WW-DRD-0001-002	A

**NOTES**

- ALL MILD STEEL (MS) PIPES TO BE EPOXY COATED AS PER SPECIFICATION.
- CAGES TO BE FITTED WITH REFLECTIVE TAPE ON EDGES.

**PIPE FITTINGS**

1. PLASSON ELECTROFUSION FLANGE ADAPTOR WITH FLANGE BACKING RING.
2. FLANGED MS T-PIECE.
3. FLANGED MS REDUCER.
4. FLANGED GATE VALVE WITH HAND WHEEL, (AVK OR SIMILAR), AS PER SPECIFICATION.
5. FLANGED AIR VALVE, (ARI OR SIMILAR), AS PER SPECIFICATION.



FOR INFORMATION ONLY

REV	DATE	REVISION DESCRIPTION	DRAWN	DESIGNED	REV ENGINEER
A	15/09/17	FOR INFORMATION ONLY	HVZ	VJ	KB

CONSULTING ENGINEER	
DATE	
CLIENT	
DATE	

100mm ON ORIGINAL PLAN  
COPYRIGHT HELD BY WORLEYPARSONS RSA (Pty)Ltd

Copyright subsists in this work. Any unauthorised reproduction in any manner or form, publication, making an adaptation of the work and doing in relation to an adaptation of the work, any of the acts above, are acts of copyright infringement and make the DOER liable to criminal prosecution. Use of the drawing shall be in accordance with the requirements of Construction Regulation Section 9.2 of the OHS Act. No liability will be accepted unless inspection and certification as envisaged in the Act is conducted.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer.

Copyright reserved

OneWay™  
to zero harm  
Copyright ©  
WorleyParsons Services Pty Ltd  
A/NR 01 001 279 812

CLIENT

CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD

PROJECT

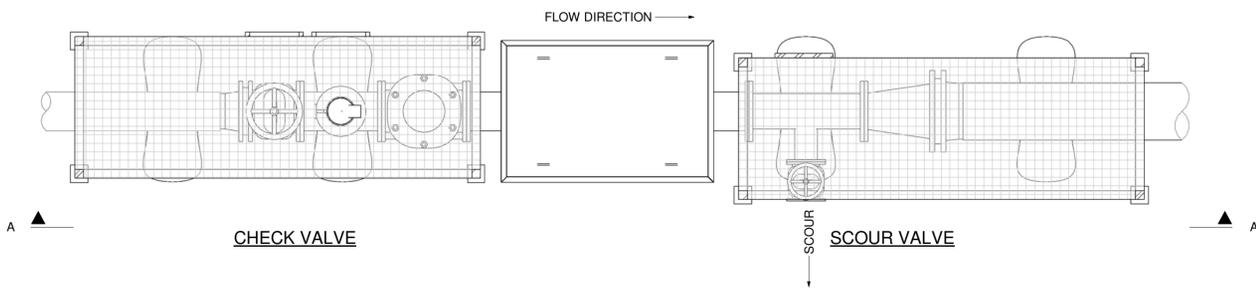
**WATER RESILIENCE PROJECT**

DRAWING DESCRIPTION

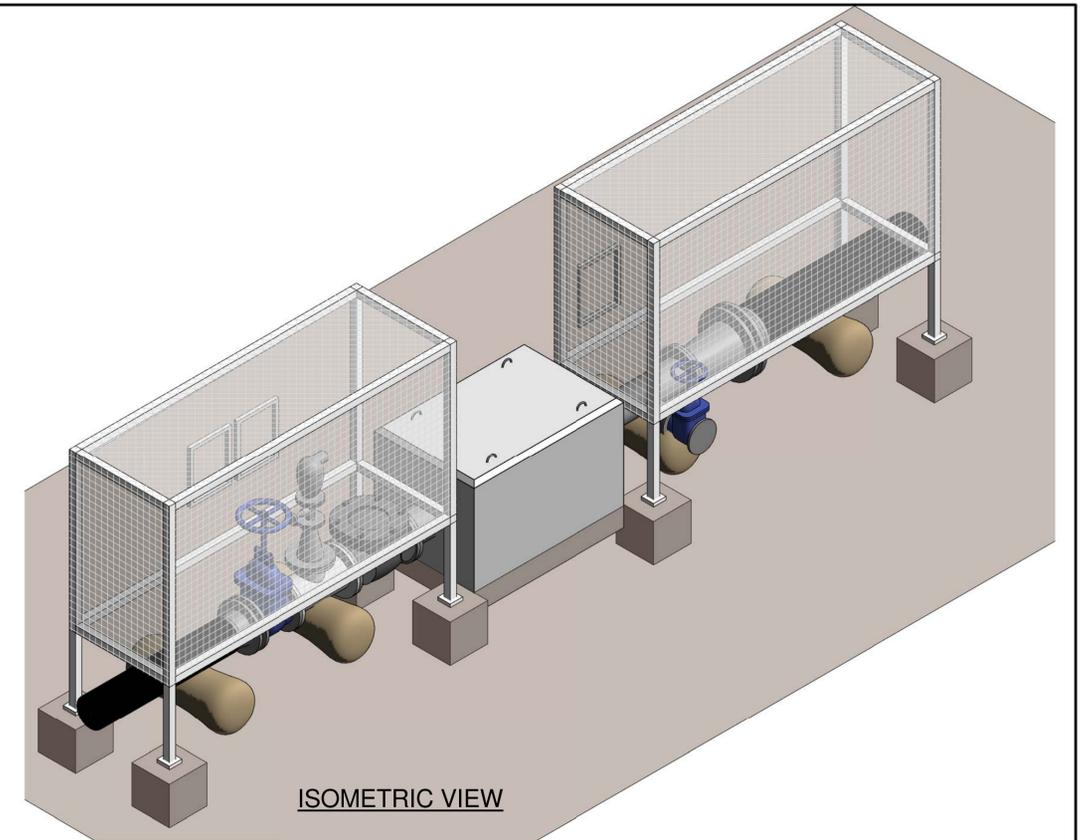
**TYPICAL DETAIL OF TEMPORARY ABOVE GROUND AIR VALVE CHAMBER**

resources & energy  
P.O.Box 398  
BELLVILLE 7535  
TEL:+27 21912 3000  
FAX:+27 21912 3222  
e-mail: capetown.office@worleyparsons.com

DATE	SCALE: (ORIGINAL A1)
AUGUST 2017	1 : 20
DRG No.	REV.
C00686-00-WW-DRD-0001-003	A



**SECTIONAL TOP VIEW**  
1 : 20



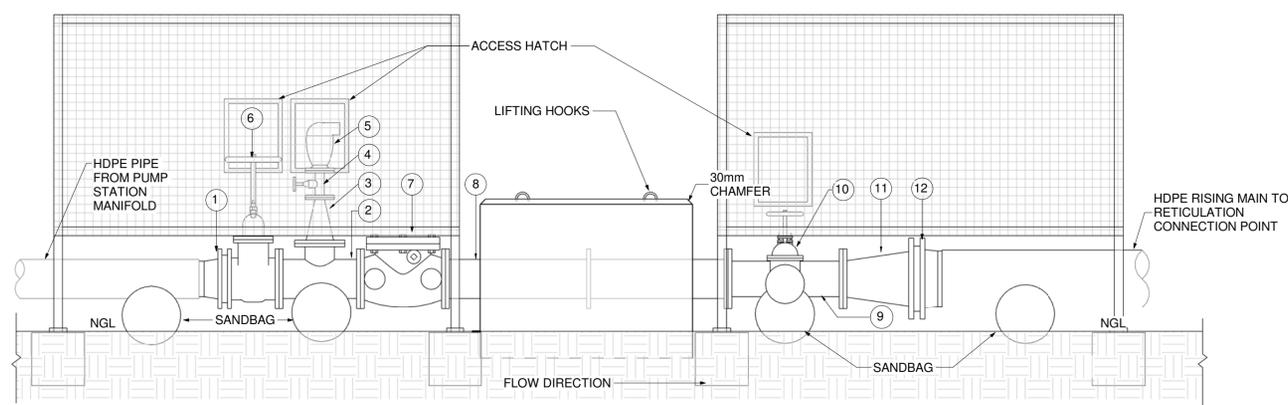
**ISOMETRIC VIEW**

**NOTES**

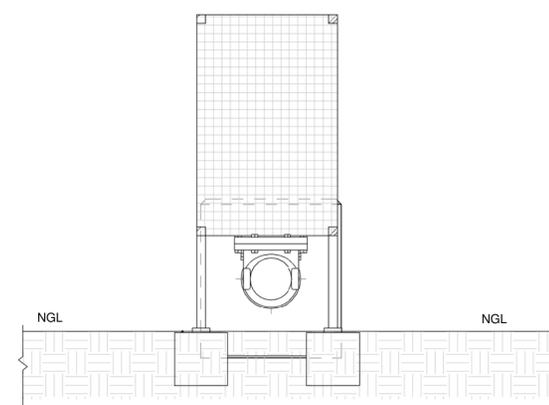
- ALL MILD STEEL (MS) PIPES TO BE EPOXY COATED AS PER SPECIFICATION.
- SCOUR OUTLET SHALL BE AT THE NATURAL DRAINAGE SIDE OF VALVE CHAMBER COMPLETE WITH HDPE PIPING TO NEAREST STORMWATER POINT.

**PIPE FITTINGS**

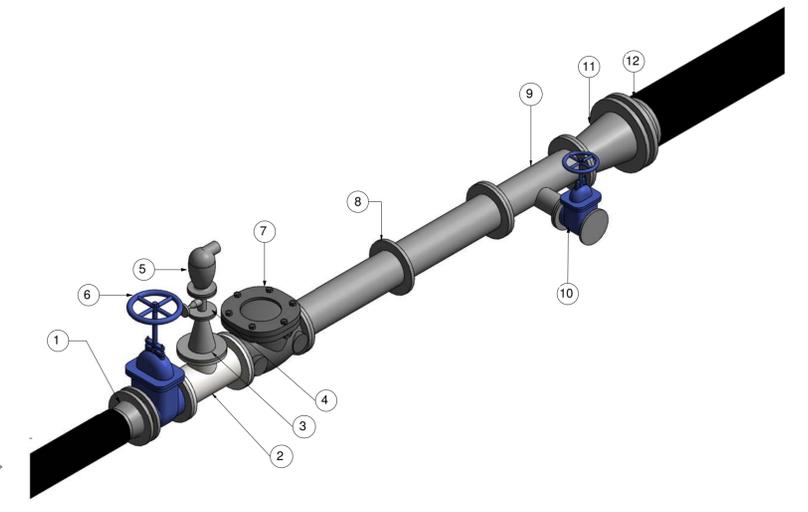
1. PLASSON ELECTROFUSION FLANGE ADAPTOR WITH FLANGE BACKING RING TO SUITE HDPE PIPE AND MS PIPE.
2. FLANGED MS T-PIECE.
3. FLANGED MS REDUCER.
4. FLANGED GATE VALVE WITH HAND WHEEL, (AVK OR SIMILAR), AS PER SPECIFICATION.
5. FLANGED AIR VALVE, (ARI OR SIMILAR), AS PER SPECIFICATION.
6. FLANGED GATE VALVE WITH HAND WHEEL, (AVK OR SIMILAR), AS PER SPECIFICATION.
7. SWING CHECK VALVE FLANGED, (BERMAD OR SIMILAR), AS PER SPECIFICATION.
8. FLANGED MS PUDDLE PIPE WITH TOTAL LENGTH 1600mm, WITH PUDDLE CENTERED AS SHOWN.
9. FLANGED MS SCOUR T-PIECE.
10. FLANGED GATE VALVE WITH HAND WHEEL, (AVK OR SIMILAR), AS PER SPECIFICATION.
11. FLANGED MS REDUCER.
12. PLASSON ELECTROFUSION FLANGE ADAPTOR.



**SECTION A-A**  
1 : 20



**SECTION B-B**  
1 : 20



**PIPEWORK- ISOMETRIC VIEW**

FOR INFORMATION ONLY

REV	DATE	REVISION DESCRIPTION	DRAWN	DESIGNED	REV ENGINEER
A	15/09/17	FOR INFORMATION ONLY	HVZ	VJ	KB

CONSULTING ENGINEER	
DATE	
CLIENT	
DATE	

CLIENT

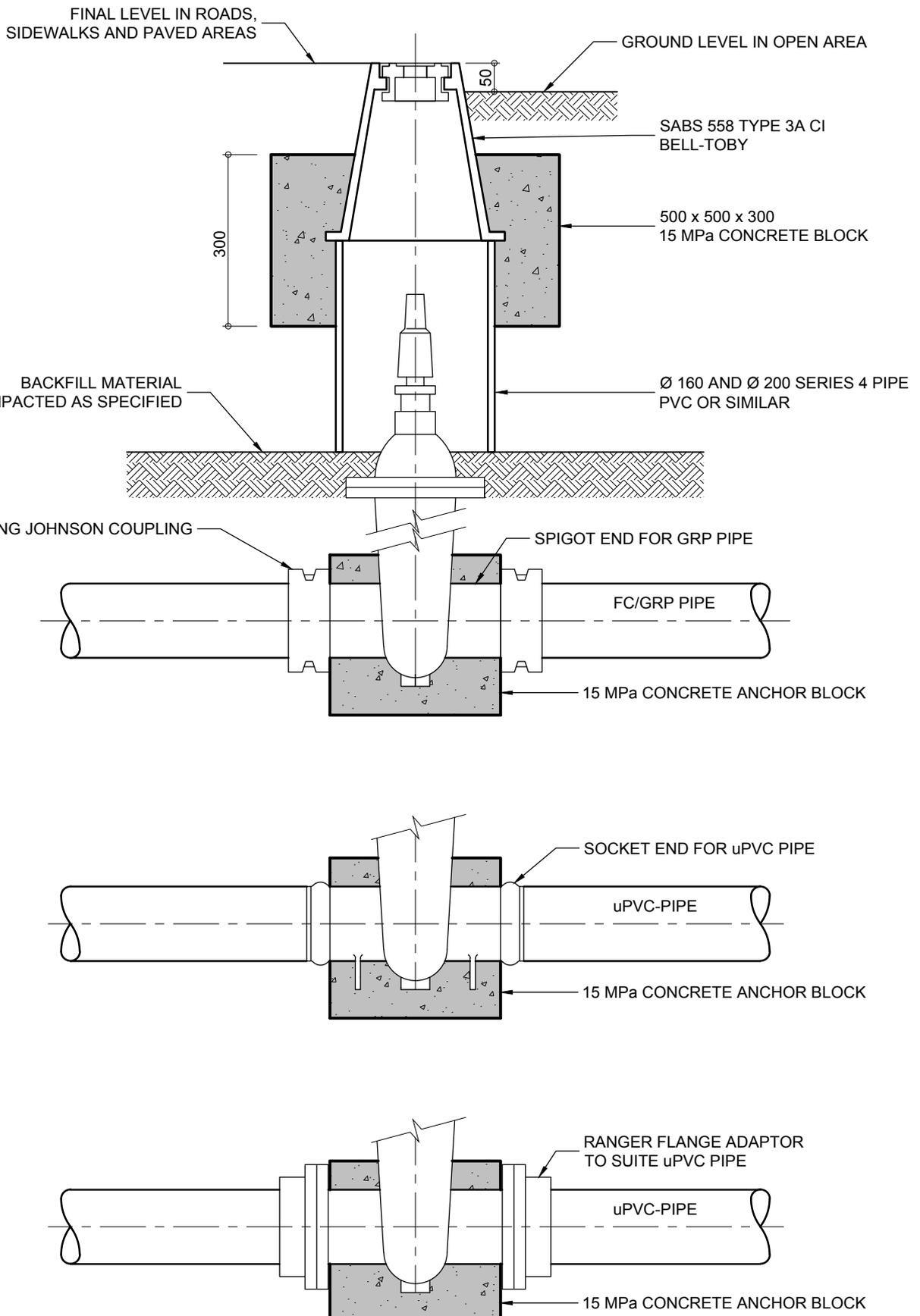
PROJECT

**WATER RESILIENCE PROJECT**

DRAWING DESCRIPTION

**TYPICAL DETAIL OF TEMPORARY ABOVE GROUND CHECK/SCOUR VALVE CHAMBER AT POTABLE WATER PUMP STATION**

DATE	AUGUST 2017	SCALE: (ORIGINAL A1)	1 : 20
DRG No.	C00686-00-WW-DRD-0001-004	REV.	A



WorleyParsons RSA retains the copyright in all intellectual property, including designs and/or documents prepared in terms of this appointment for the project covered by the appointment. The client may use the designs and/or documents for the sole purpose of their intended use on this project only subject to payment for the design having been received. Use for any other purpose, whether or not the design and/or documents have been paid for constitutes an infringement of copyright, and all rights are reserved.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer. Copyright reserved

- ALTERNATIVE VALVE BOX**
1. POLYMER-CONCRETE TYPE 3A
  2. CONCRETE TYPE

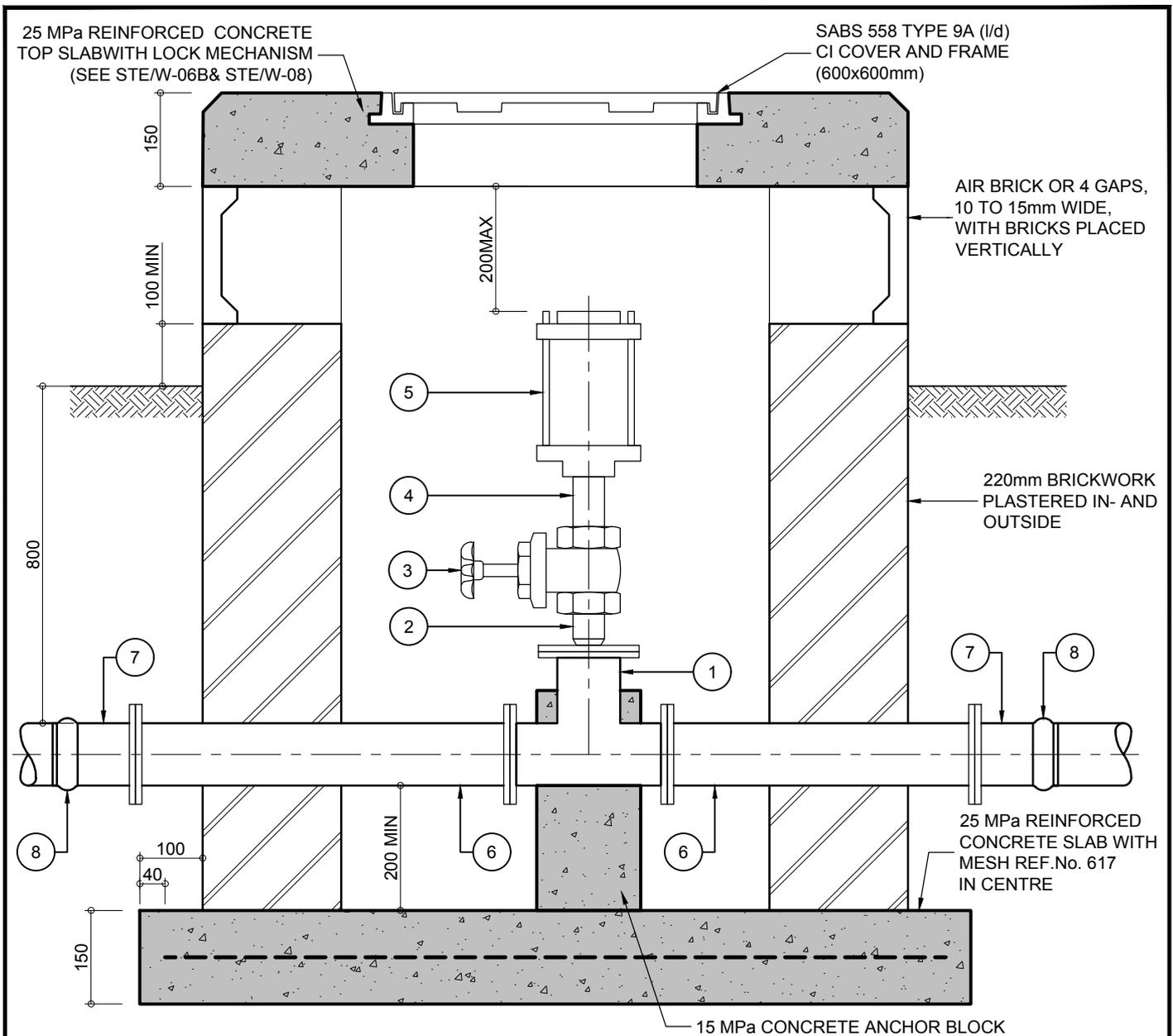


**WorleyParsons**  
resources & energy

P.O.Box 398 TEL:(021) 912 3000  
BELLVILLE 7535 FAX:(021) 912 3222  
E-MAIL: capetown.office@worleyparsons.com

TYPICAL DETAIL OF VALVE CHAMBER

SCALE		NTS	
ORIGINAL DWG SIZE A4			
DATE		SEPTEMBER 2017	
DRAWING NUMBER	REV NO		
C00686-00-WW-DST-0001	A		



**NOTES:**

- INSIDE DIMENSIONS OF VALVE CHAMBER IS 1000x1000mm
- BRICKWORK SHALL CONSIST OF GENERAL PURPOSE CLAY BRICKS (SPECIAL) BEDDED IN 1:3 CEMENT MORTAR WITH 1:3 CEMENT PLASTER ON IN- AND OUTSIDE.
- ALL MS PIPE WORK COVERED WITH COPON EP 2300 AS SPECIFIED
- DETERMINE ALL PIPE DIMENSIONS FINAL ON SITE

**ALTERNATIVE COVER AND FRAME:**

- POLYMER-CONCRETE 600x600mm
- CONCRETE TYPE 9B

**PIPE FITTINGS:**

1. MS T-PIECE FLANGED WITH DIMENSIONS ACCORDING TO TABLE.
2. MS REDUCING FLANGE DRILLED IN THE MIDDLE AND TAPPED WITH 50mm PARALELL YELLOW COPPER NIPPLE TOTAL LENGTH 170mm.
3. 50mm YELLOW COPPER FULL GATE VALVE (CLASS 8).
4. 50mm YELLOW COPPER BODY NIPPLE, LENGTH 190mm.
5. 50mm VENT-O-MAT RBX AIR VALVE.
6. MS PIPE FLANGED (SIZE ACCORDING TO FIT T-PIECE) LENGTH 700mm.
7. MS FLANGE ADAPTOR FOR uPVC OR GRP PIPE.
8. DEKA COUPLING FOR GRP PIPE.

Ø PIPE		T-PIECE
GRP	uPVC	
300	315	300 x 250
350	355	350 x 300
400	400	400 x 350

WorleyParsons RSA retains the copyright in all intellectual property, including designs and/or documents prepared in terms of this appointment for the project covered by the appointment. The client may use the designs and/or documents for the sole purpose of their intended use on this project only subject to payment for the design having been received. Use for any other purpose, whether or not the design and/or documents have been paid for constitutes an infringement of copyright, and all rights are reserved.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer. Copyright reserved



**WorleyParsons**  
resources & energy

P.O. BOX 398 TEL: (021) 912 3000  
BELLVILLE 7535 FAX: (021) 912 3222  
E-MAIL: capetown.office@worleyparsons.com

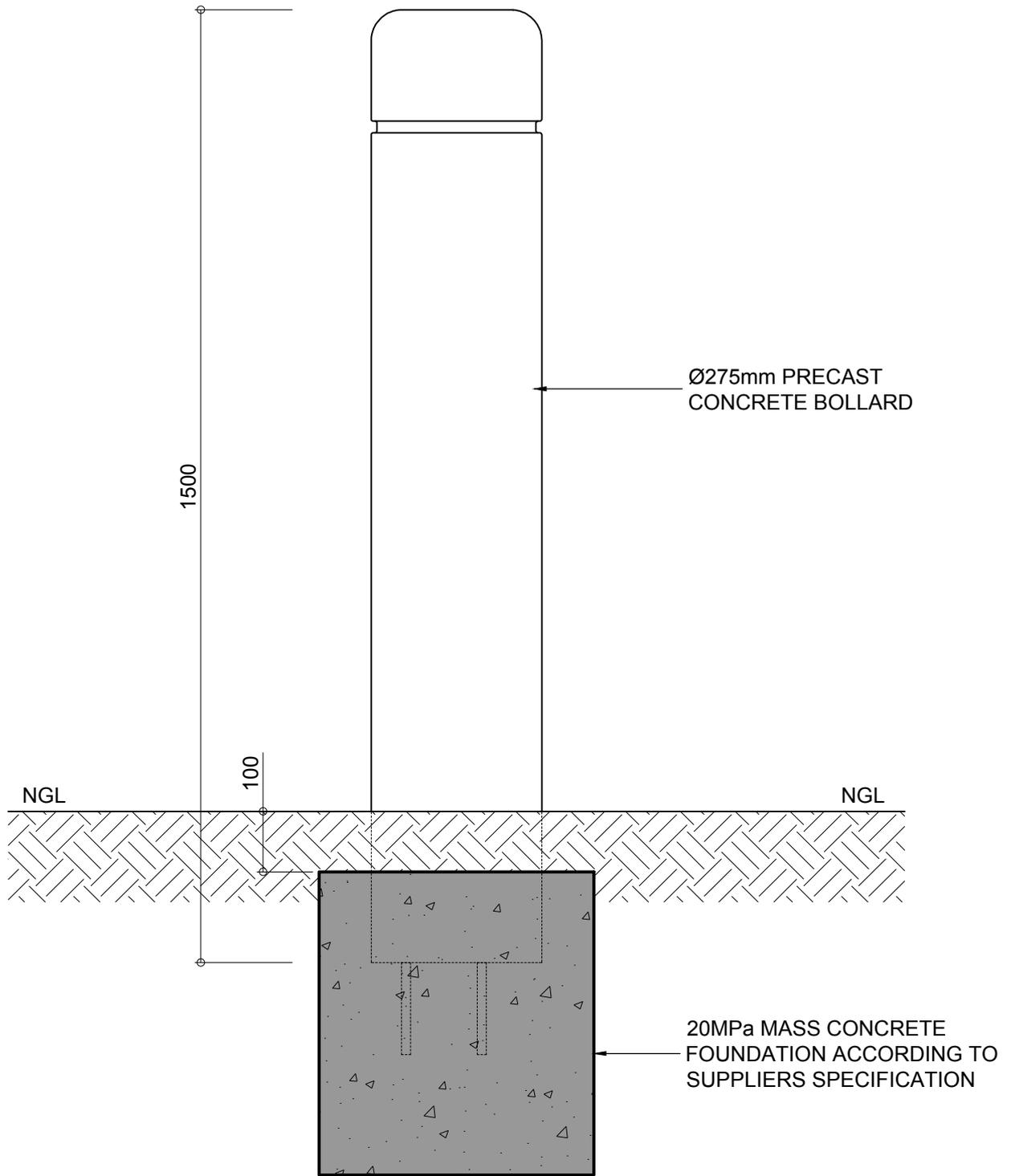
**TYPICAL DETAIL OF AIR VALVE CHAMBER (TYPE C)**

SCALE  
NTS  
ORIGINAL DWG SIZE A4

DATE  
SEPTEMBER 2017

DRAWING NUMBER  
C00686-00-WW-DST-0002

REV NO  
A



## TYPICAL SECTION OF BOLLARD

SCALE 1:20

WorleyParsons RSA retains the copyright in all intellectual property, including designs and/or documents prepared in terms of this appointment for the project covered by the appointment. The client may use the designs and/or documents for the sole purpose of their intended use on this project only subject to payment for the design having been received. Use for any other purpose, whether or not the design and/or documents have been paid for constitutes an infringement of copyright, and all rights are reserved.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer. Copyright reserved

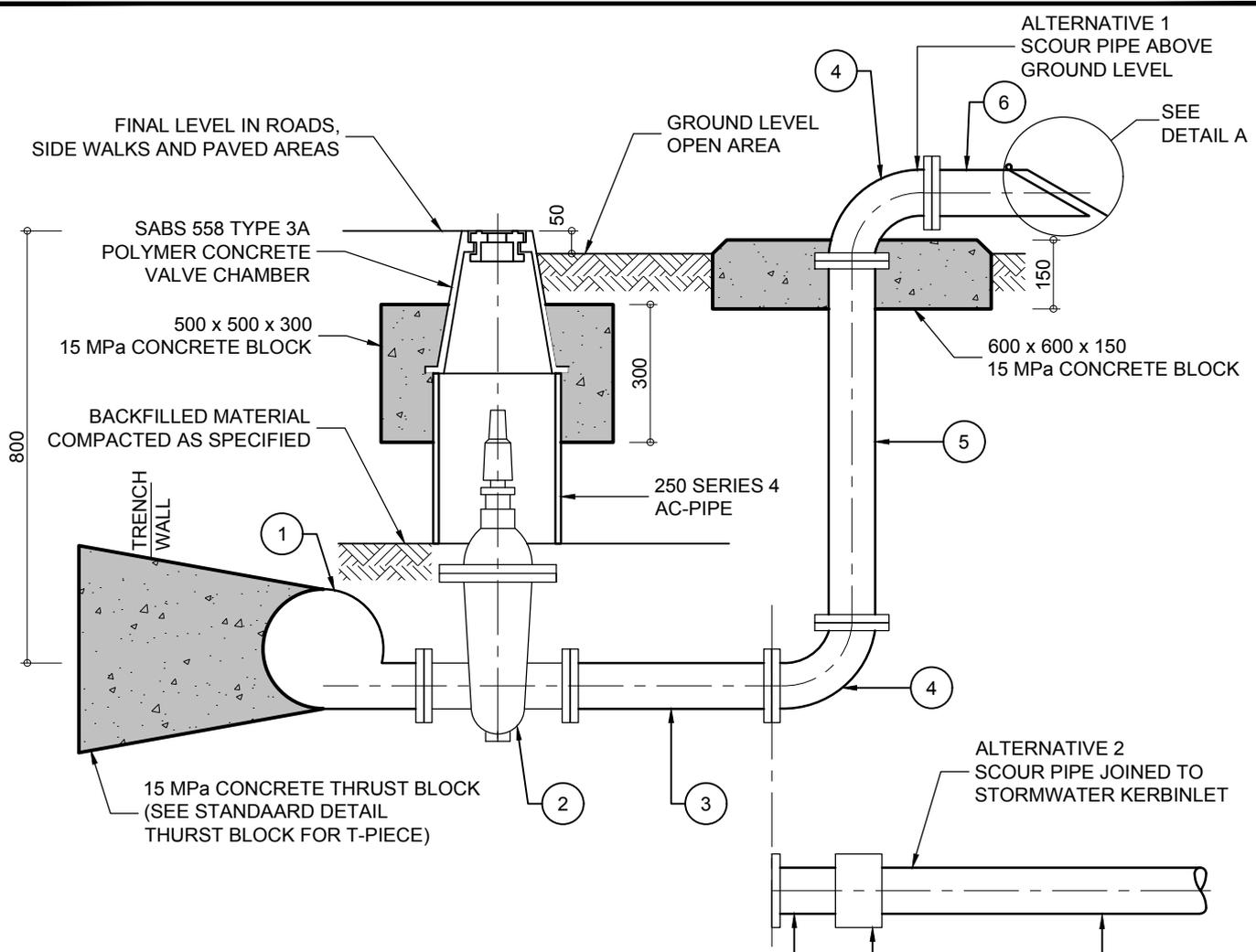


**WorleyParsons**  
resources & energy

P.O.Box 398 TEL:(021) 912 3000  
BELLVILLE 7535 FAX:(021) 912 3222  
E-MAIL: capetown.office@worleyparsons.com

TYPICAL DETAIL OF BOLLARD

SCALE		NTS	
ORIGINAL DWG SIZE A4			
DATE		SEPTEMBER 2017	
DRAWING NUMBER	REV NO		
C00686-00-WW-DST-0006	A		



**NOTES:**

1. SCOUR OUTLET PIPE SHALL BE AT THE NATURAL DRAINAGE SIDE OF THE VALVE CHAMBER (ALTERNATIVE 1 OF 2)
2. ALL MS-PIPEWORK WITH COPON EP 2300 AS SPECIFIED

**PIPE FITTINGS:**  
(ALTERNATIVE 1 & 2)

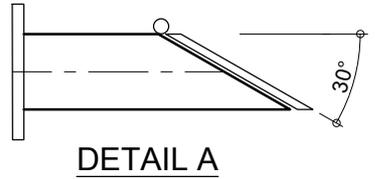
1. CI SCOUR VALVE T-PIECE FOR uPVC- OR GRP-PIPES WITH DIMENSIONS ACCORDING TO MAIN PIPE
2. 100mm FLANGED GATE VALVE WITH HEAD PIECE
3. 100mm FLANGED STEEL PIPE 500mm LENGTH

**(ALTERNATIVE 1)**

4. 100mm FLANGED 90° BEND
5. 100mm FLANGED STEEL PIPE WITH LENGTH 700mm (DETERMINE FINAL ON SITE)
6. 100mm OUTLET ONE END FLANGED OTHER END BEVELLED 30° WITH HINGED LID

**(ALTERNATIVE 1)**

4. 100mm FLANGED ADAPTOR
5. 100mm TRIPLEX COUPLING
6. 100mm AC-PIPE CLASS D



WorleyParsons RSA retains the copyright in all intellectual property, including designs and/or documents prepared in terms of this appointment for the project covered by the appointment. The client may use the designs and/or documents for the sole purpose of their intended use on this project only subject to payment for the design having been received. Use for any other purpose, whether or not the design and/or documents have been paid for constitutes an infringement of copyright, and all rights are reserved.

All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer. Copyright reserved

P.O.Box 398 TEL:(021) 912 3000  
 BELLVILLE 7535 FAX:(021) 912 3222  
 E-MAIL: capetown.office@worleyparsons.com

TYPICAL DETAIL OF SCOUR VALVE CHAMBER  
(TYPE B)

SCALE NTS ORIGINAL DWG SIZE A4	
DATE SEPTEMBER 2017	
DRAWING NUMBER C00686-00-WW-DST-0007	REV NO A