



UMKHANYAKUDE DISTRICT MUNICIPALITY
CONTRACT No. SCMU 020 2022/2023
MANGUZI STAR OF THE SEA
ZONE 7A

APRIL 2023

FOR TENDER

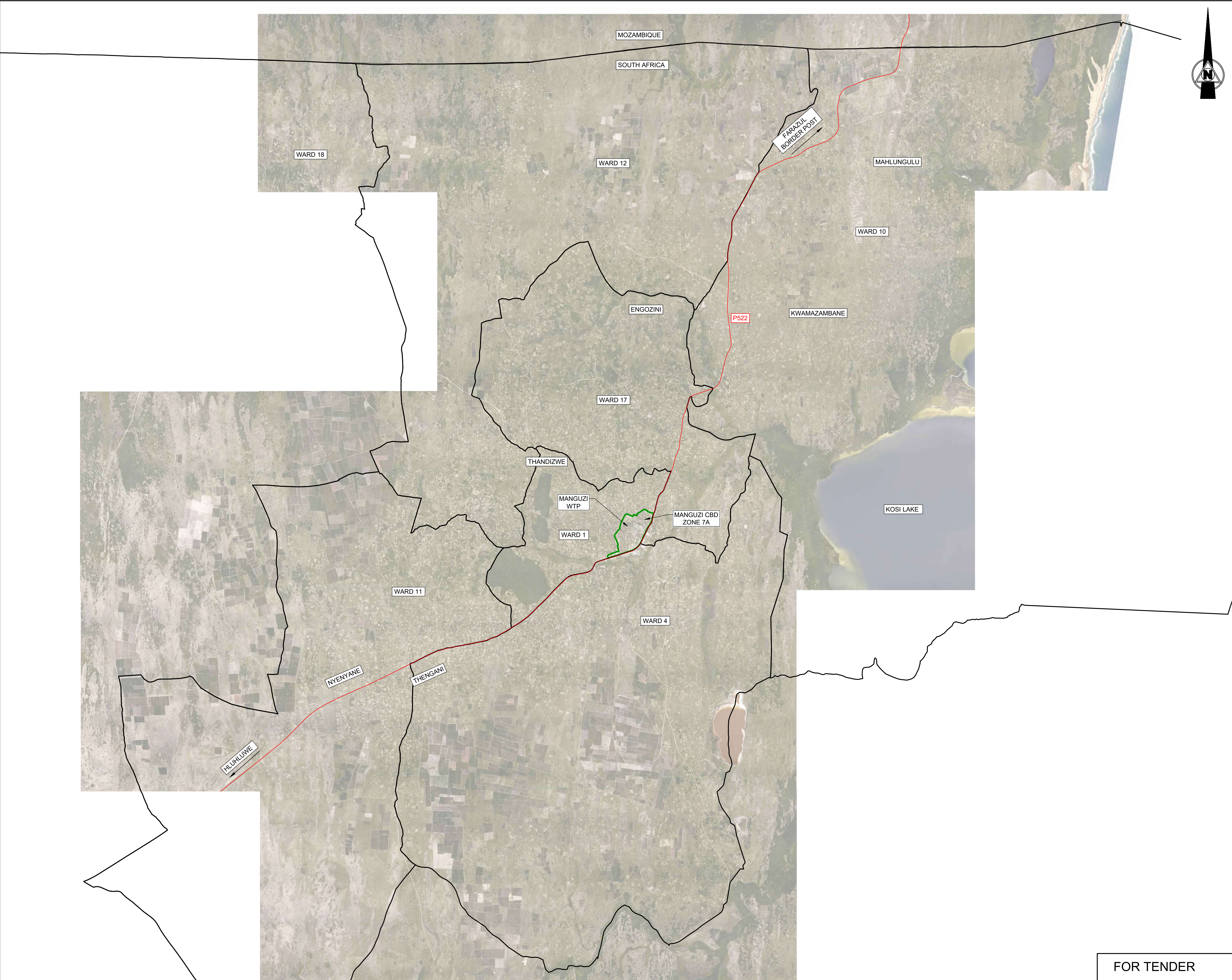
Prepared by :



JG AFRIKA (Pty) Ltd
PO Box 794
HILTON
3245
Tel: 033 343 6700
Fax: 033 343 6701
e-mail: pietermaritzburg@jgafrika.com

Supported By :





NOTES

- P522
- WARD BOUNDARIES
- ZONE 7A BOUNDARY

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



P.O. BOX 449
MKUZE
3965

TEL: (035) 573 8600
FAX: (035) 573 1094

STAND 13433, KINGFISHER ROAD
MKUZE, 3965

UMKHANYAKUDE DISTRICT MUNICIPALITY
DC 27

APPROVED:
CAPACITY:
DATE:



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E-MAIL: pietermaritzburg@jgafrika.com

6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN	DATE: APRIL 2023
DESIGNED: Q SHINGA	CHECKED: T.VAN VUUREN
DRAWN : M SHEZI	CHECKED: Q SHINGA
CONTRACT No. SCMU 020 2022/2023	
DESIGN CHECKED BY: T.VAN VUUREN	
CAPACITY: SENIOR TECHNOLOGIST	
PR.TECH ENG: 2020300712	
APPROVED ON BEHALF OF JG AFRIKA:	
CAPACITY: TECHNICAL DIRECTOR	
DATE: APRIL 2023	

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED



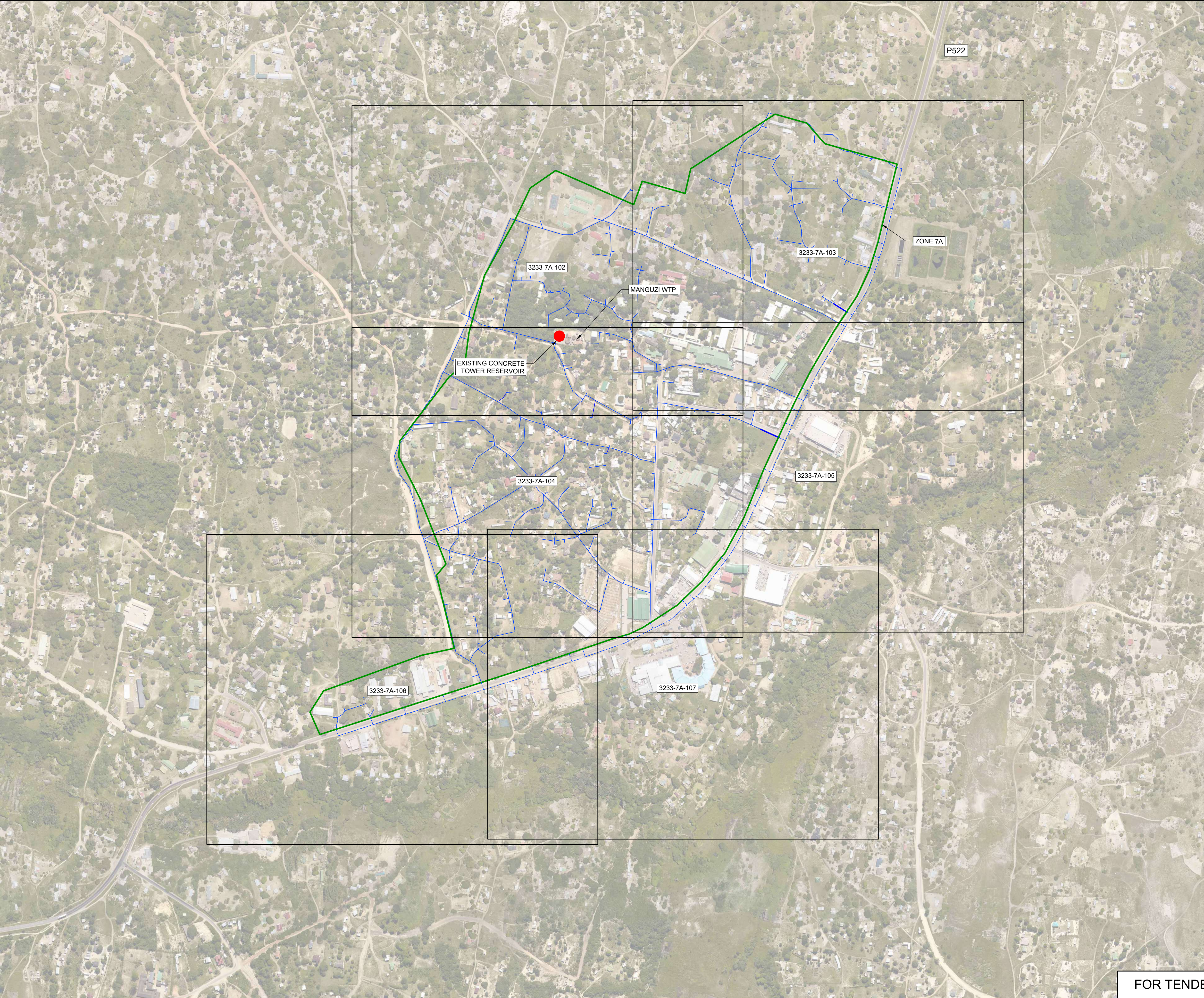
PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: LOCALITY PLAN
DESCRIPTION: SHEET 1 OF 1

FOR TENDER

DRAWING No. 3233-7A-001

A

V:\Waten\3233 - Manguzi Town (NB-SM)\03 Drawings\3 Phase 2\For Tender\Zone 7A2 Locality Plan\3233-7A-001 Rev A.dwg





NOTES

LEGEND:

ZONE 7A RETICULATION —

RESERVOIR ●

ZONE 7A BOUNDARY —

1. THE PORTIONS OF PIPELINE REQUIRING THE METHOD OF HORIZONTAL DIRECTIONAL DRILLING FOR INSTALLATION TO BE CONFIRMED ON SITE.

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION			



Municipal Infrastructure Grant



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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : 1:4 000
DESIGNED: Q SHINGA
DRAWN : M SHEZI
CONTRACT No. SCMU 020 2022/2023
DESIGN CHECKED BY: T VAN VUUREN
CAPACITY: SENIOR TECHNOLOGIST
PR.TECH ENG: 2020300712
APPROVED ON BEHALF OF JG AFRIKA:
CAPACITY: TECHNICAL DIRECTOR
DATE: APRIL 2023

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PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

TITLE: ZONE 7A COMPILATION LAYOUT

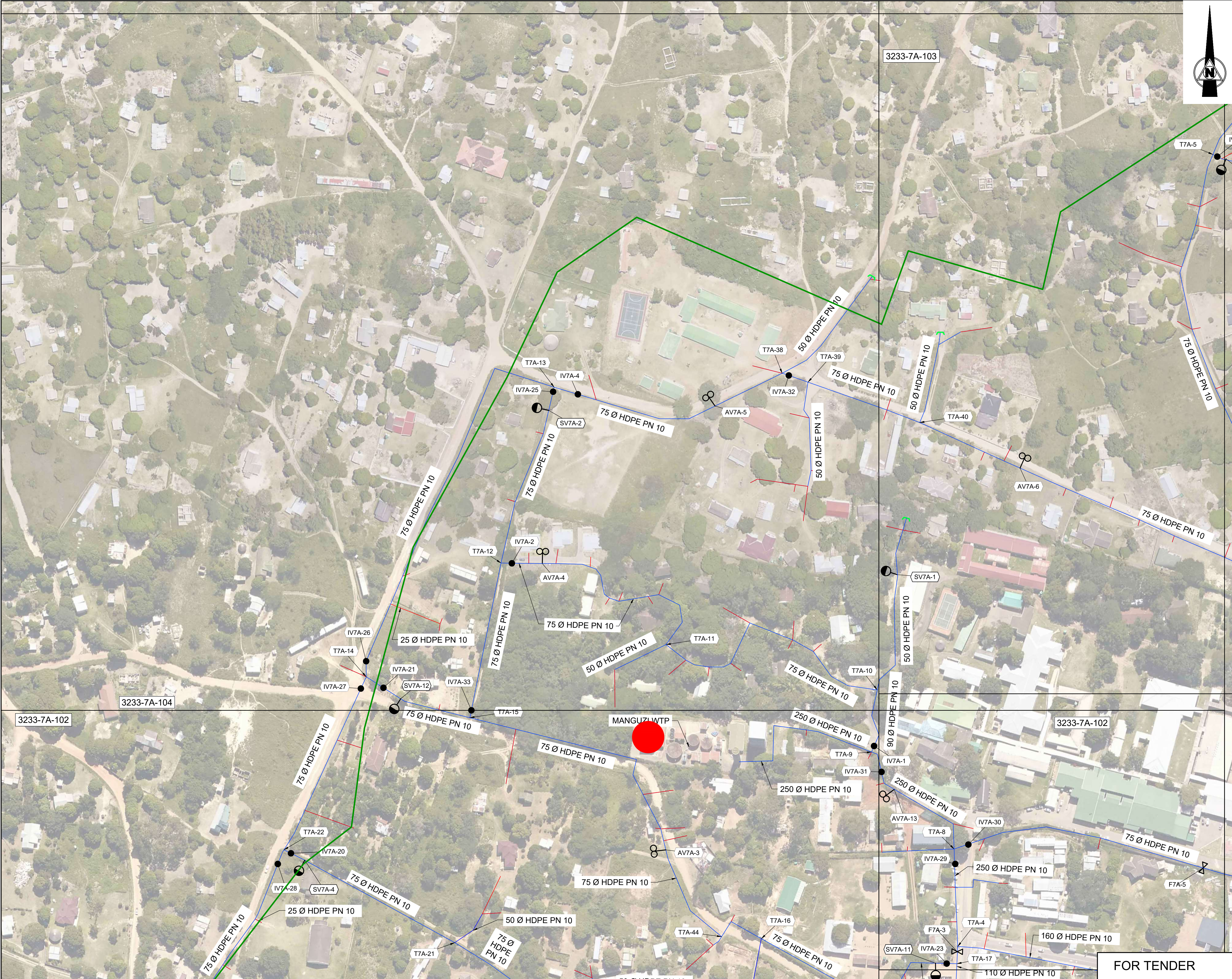
DESCRIPTION: SHEET 1 OF 1

FOR TENDER

DRAWING No. 3233-7A-101



W:\Water\3233 - Manguzi Town (NB-SM)\03 Drawings\3 Phase 2\For Tender\Zone 7A4 Reticulation Layout\3233-7A-100-107 Rev A.dwg



NOTES

1. THE PIPE ROUTES, ERF CONNECTIONS, AIR, SCOUR AND ISOLATING VALVES POSITIONS TO BE CONFIRMED BY THE EMPLOYER'S AGENT ON SITE.

LEGEND	
ZONE 7A RETICULATION (TRENCH EXCAVATION)	—————
ZONE 7A RETICULATION (PIPE DRILLING)	- - - - -
ZONE 7A ERF CONNECTION (TRENCH EXCAVATION)	—————
ZONE 7A ERF CONNECTION (PIPE DRILLING)	- - - - -
ZONE 7A BOUNDARY	—————

END CAP	
AV7-3	AIR VALVE
IV7-3	ISOLATING VALVE
SV7-3	SCOUR VALVE
T7-3	POINT SKETCH
F7-3	FIRE HYDRANT

REVISION			
A	FOR TENDER	QS	APR 23
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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : 1:1250
DESIGNED: Q SHINGA
DRAWN : M SHEZI
CONTRACT No. SCMU 020 2022/2023
DESIGN CHECKED BY: T.VAN VUUREN
CAPACITY: SENIOR TECHNOLOGIST
PR.TECH ENG: 2020300712
APPROVED ON BEHALF OF JG AFRIKA:
CAPACITY: TECHNICAL DIRECTOR
DATE: APRIL 2023

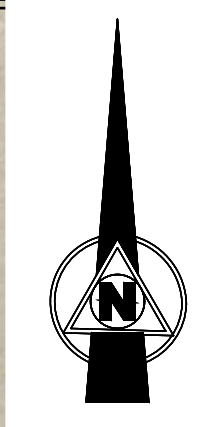
ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED

PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: ZONE 7A RETICULATION
DESCRIPTION: SHEET 1 OF 6

DRAWING No. 3233-7A-102

FOR TENDER

A



NOTES

1. THE PIPE ROUTES, ERF CONNECTIONS, AIR, SCOUR AND ISOLATING VALVES POSITIONS TO BE CONFIRMED BY THE EMPLOYER'S AGENT ON SITE.

LEGEND	
ZONE 7A RETICULATION (TRENCH EXCAVATION)	
ZONE 7A RETICULATION (PIPE DRILLING)	
ZONE 7A ERF CONNECTION (TRENCH EXCAVATION)	
ZONE 7A ERF CONNECTION (PIPE DRILLING)	
ZONE 7A BOUNDARY	

	END CAP
	AIR VALVE
	ISOLATING VALVE
	SCOUR VALVE
	POINT SKETCH
	FIRE HYDRANT

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION




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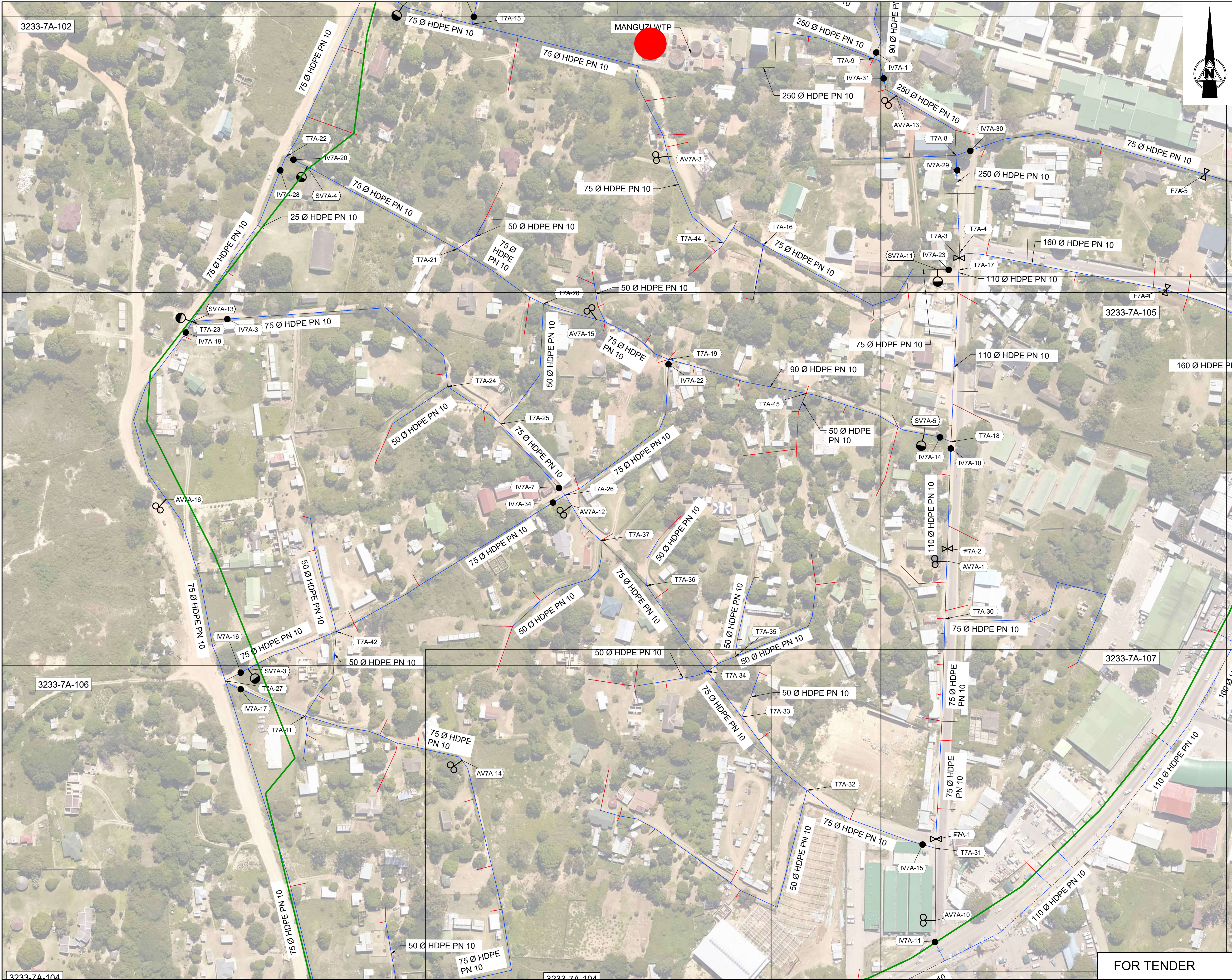
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6 PIN OAK AVENUE, HILTON, 3245
SCALE ON A1 : 1:2 000
DATE: APRIL 2023
DESIGNED: Q SHINGA
CHECKED: T.VAN VUUREN
DRAWN : M SHEZI
CHECKED: Q SHINGA
CONTRACT No. SCMU 020 2022/2023
DESIGN CHECKED BY: T.VAN VUUREN
CAPACITY: SENIOR TECHNOLOGIST
PR.TECH ENG: 2020300712
APPROVED ON BEHALF OF JG AFRIKA:
CAPACITY: TECHNICAL DIRECTOR
DATE: APRIL 2023
ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED

PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: ZONE 7A RETICULATION
DESCRIPTION: SHEET 2 OF 6

FOR TENDER

DRAWING No. 3233-7A-103

A



NOTES

1. THE PIPE ROUTES, ERF CONNECTIONS, AIR, SCOUR AND ISOLATING VALVES POSITIONS TO BE CONFIRMED BY THE EMPLOYER'S AGENT ON SITE.

LEGEND	
ZONE 7A RETICULATION (TRENCH EXCAVATION)	—
ZONE 7A RETICULATION (PIPE DRILLING)	- - -
ZONE 7A ERF CONNECTION (TRENCH EXCAVATION)	—
ZONE 7A ERF CONNECTION (PIPE DRILLING)	- - -
ZONE 7A BOUNDARY	—

END CAP	—
AIR VALVE	—
ISOLATING VALVE	—
SCOUR VALVE	—
POINT SKETCH	—
FIRE HYDRANT	—

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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UMKHANYAKUDE DISTRICT MUNICIPALITY
DC 27

APPROVED:
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DATE:



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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : 1:1250
DATE: APRIL 2023
DESIGNED: Q SHINGA
CHECKED: T.VAN VUUREN
DRAWN : M SHEZI
CHECKED: Q SHINGA
CONTRACT No. SCMU 020 2022/2023
DESIGN CHECKED BY: T.VAN VUUREN
CAPACITY: SENIOR TECHNOLOGIST
PR.TECH ENG: 2020300712
APPROVED ON BEHALF OF JG AFRIKA:
CAPACITY: TECHNICAL DIRECTOR
DATE: APRIL 2023

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED

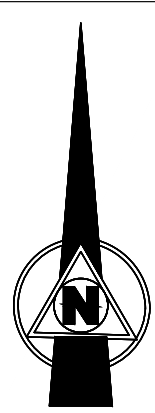


PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: ZONE 7A RETICULATION
DESCRIPTION: SHEET 3 OF 6

FOR TENDER

DRAWING No. 3233-7A-104

A



NOTES

1. THE PIPE ROUTES, ERF CONNECTIONS, AIR, SCOUR AND ISOLATING VALVES POSITIONS TO BE CONFIRMED BY THE EMPLOYER'S AGENT ON SITE.

LEGEND

ZONE 7A RETICULATION (TRENCH EXCAVATION)	—
ZONE 7A RETICULATION (PIPE DRILLING)	- - -
ZONE 7A ERF CONNECTION (TRENCH EXCAVATION)	—
ZONE 7A ERF CONNECTION (PIPE DRILLING)	- - -
ZONE 7A BOUNDARY	—

END CAP	⊗
AIR VALVE	AV7-3
ISOLATING VALVE	IV7-3
SCOUR VALVE	SV7-3
POINT SKETCH	T7-3
FIRE HYDRANT	F7-3

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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UMKHANYAKUDE DISTRICT MUNICIPALITY
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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : 1:1250
DATE: APRIL 2023

DESIGNED: Q SHINGA
CHECKED: T.VAN VUUREN

DRAWN : M SHEZI
CHECKED: Q SHINGA

CONTRACT No. SCMU 020 2022/2023

DESIGN CHECKED BY: T.VAN VUUREN

PR.TECH ENG: 2020300712

APPROVED ON BEHALF OF JG AFRIKA:

CAPACITY: TECHNICAL DIRECTOR

DATE: APRIL 2023

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED



PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

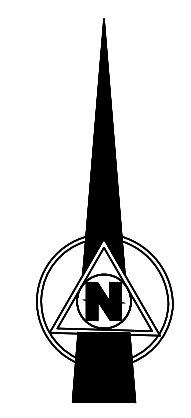
TITLE: ZONE 7A RETICULATION

DESCRIPTION: SHEET 4 OF 6

FOR TENDER

DRAWING No. 3233-7A-105





NOTES

1. THE PIPE ROUTES, ERF CONNECTIONS, AIR, SCOUR AND ISOLATING VALVES POSITIONS TO BE CONFIRMED BY THE EMPLOYER'S AGENT ON SITE.

LEGEND	
ZONE 7A RETICULATION (TRENCH EXCAVATION)	—
ZONE 7A RETICULATION (PIPE DRILLING)	- - -
ZONE 7A ERF CONNECTION (TRENCH EXCAVATION)	—
ZONE 7A ERF CONNECTION (PIPE DRILLING)	- - -
ZONE 7A BOUNDARY	—

⊗	END CAP
⊗	AV7-3 AIR VALVE
⊗	IV7-3 ISOLATING VALVE
⊗	SV7-3 SCOUR VALVE
⊗	T7-3 POINT SKETCH
⊗	F-7-3 FIRE HYDRANT

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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DC 27

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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : 1:1250	DATE: APRIL 2023
DESIGNED: Q SHINGA	CHECKED: T.VAN VUUREN
DRAWN : M SHEZI	CHECKED: Q SHINGA
CONTRACT No. SCMU 020 2022/2023	
DESIGN CHECKED BY: T.VAN VUUREN	
CAPACITY: SENIOR TECHNOLOGIST	
PR.TECH ENG: 2020300712	
APPROVED ON BEHALF OF JG AFRIKA:	
CAPACITY: TECHNICAL DIRECTOR	
DATE: APRIL 2023	

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED



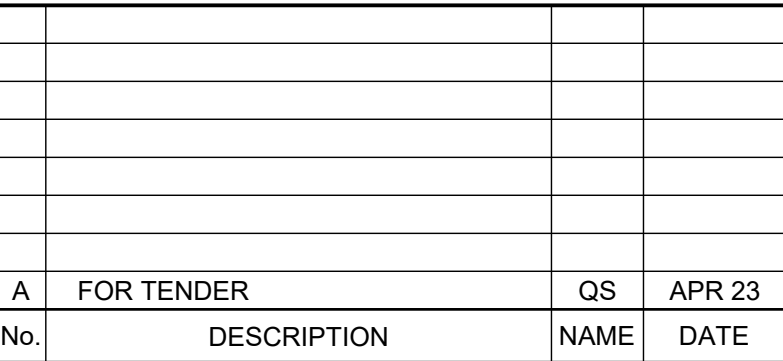
PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: ZONE 7A RETICULATION
DESCRIPTION: SHEET 6 OF 6

FOR TENDER

DRAWING No. 3233-7A-107

A

1. ALL FITTINGS TO BE PN10



mig | Municipal
Infrastructure
Grant



UMKHANYAKUDE DISTRICT MUNICIPALITY
DC 27

APPROVED: _____

CAPACITY: _____

DATE: _____

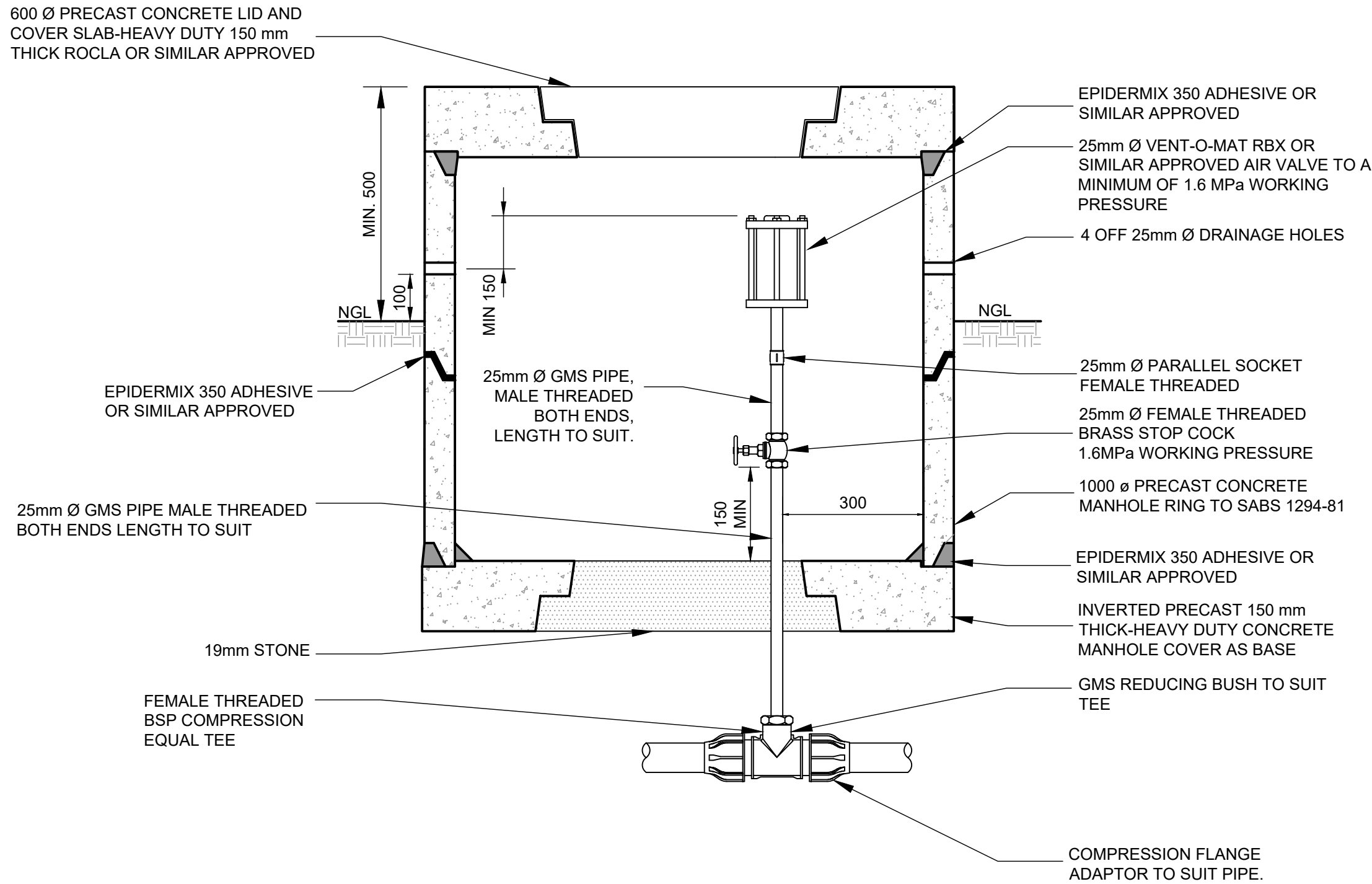


SCALE ON A1 : 1:500 000	DATE: APRIL 2023
DESIGNED: Q. SHINGA	CHECKED: T.VAN VUUREN
DRAWN : G PILLAY	CHECKED: S PEER
CONTRACT No. SCMU 020 2022/2023	
DESIGN CHECKED BY: T.VAN VUUREN	
CAPACITY: SENIOR TECHNOLOGIST	
PR.TECH ENG: 2020300712	
APPROVED ON BEHALF OF JG AFRIKA:	
CAPACITY: TECHNICAL DIRECTOR	
DATE: APRIL 2023	



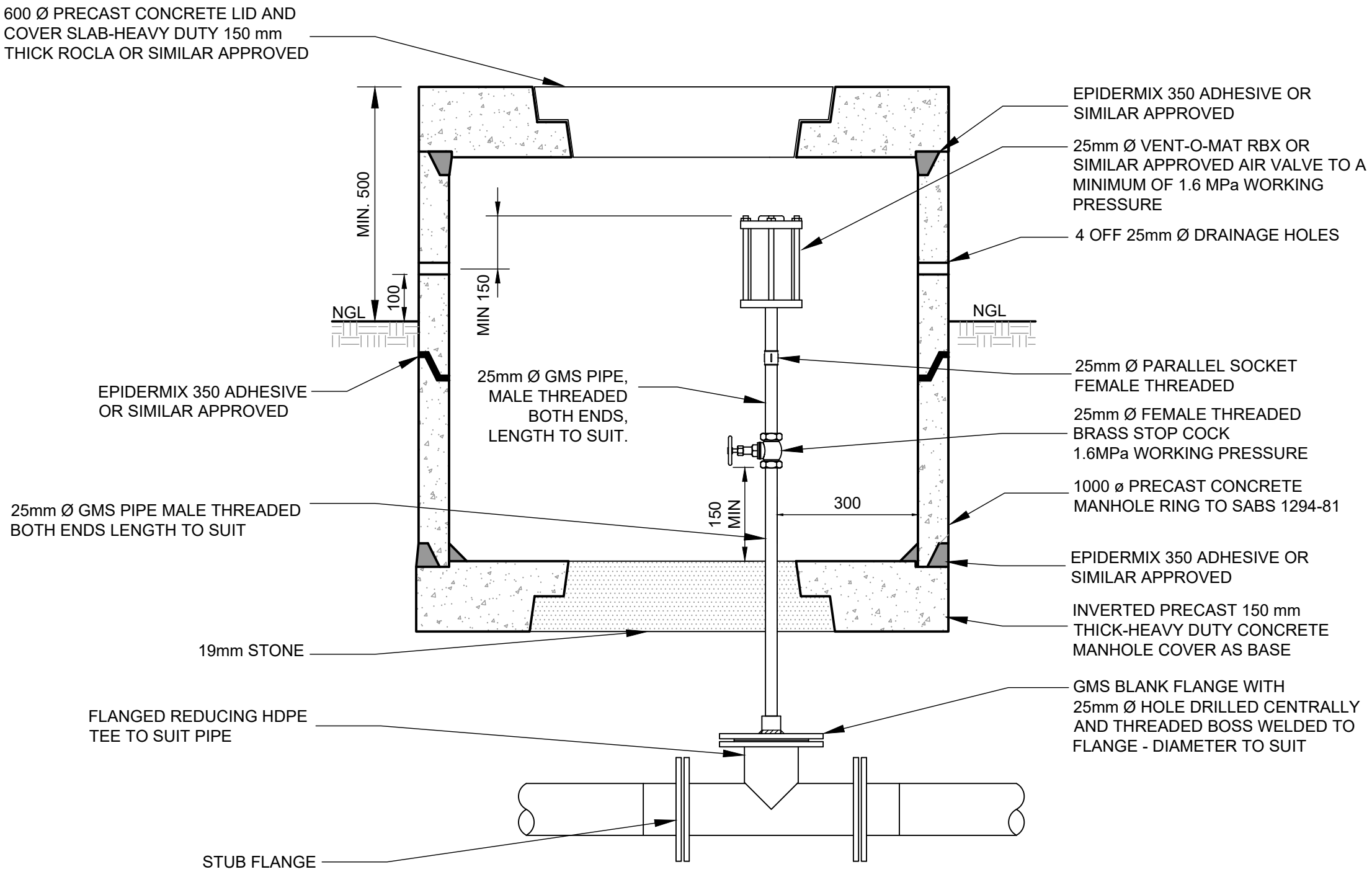
DRAWING No. 3233-7A-500





AIR VALVE CHAMBER
DETAIL FOR HDPE PIPES
FOR 50mm TO 90mm ND

SCALE 1:10



AIR VALVE CHAMBER
DETAIL FOR HDPE PIPES
FOR 110mm TO 250mm ND

SCALE 1:10

NOTES

- ALL DIMENSIONS IN MILLIMETRES.
- AIR VALVE TO BE POSITIONED ABOVE NGL
- ALL FLANGES TO MINIMUM 1 600 kPa OR TO SUIT PIPE CLASS
- ALL THREADS TO BSP STANDARDS.
- ALL BURIED FITTINGS AND HINGES TO BE WRAPPED IN DENSO TAPE.
- ENGINEER TO BE CONSULTED IN RESPECT OF APPROPRIATENESS OF DESIGN FOR PIPE PRESSURE OVER CLASS 16.
- ALL STEEL COMPONENTS INCLUDING BOLTS GALVANISED TO ISO 1461 : 2000 - OVER 1500 TO BE EPOXY COATED (3 COATS TO 250 MICRONS)
- ALL WELDS TO BE FULL PENETRATION TO BS 534 AND FILLET WELD TO BE 80% OF WALL THICKNESS WITH A MINIMUM OF 5mm THICKNESS.
- ALL FLANGES DRILLED TO SANS 1123, TABLE 1600/3

A	FOR TENDER	QS	APR 23
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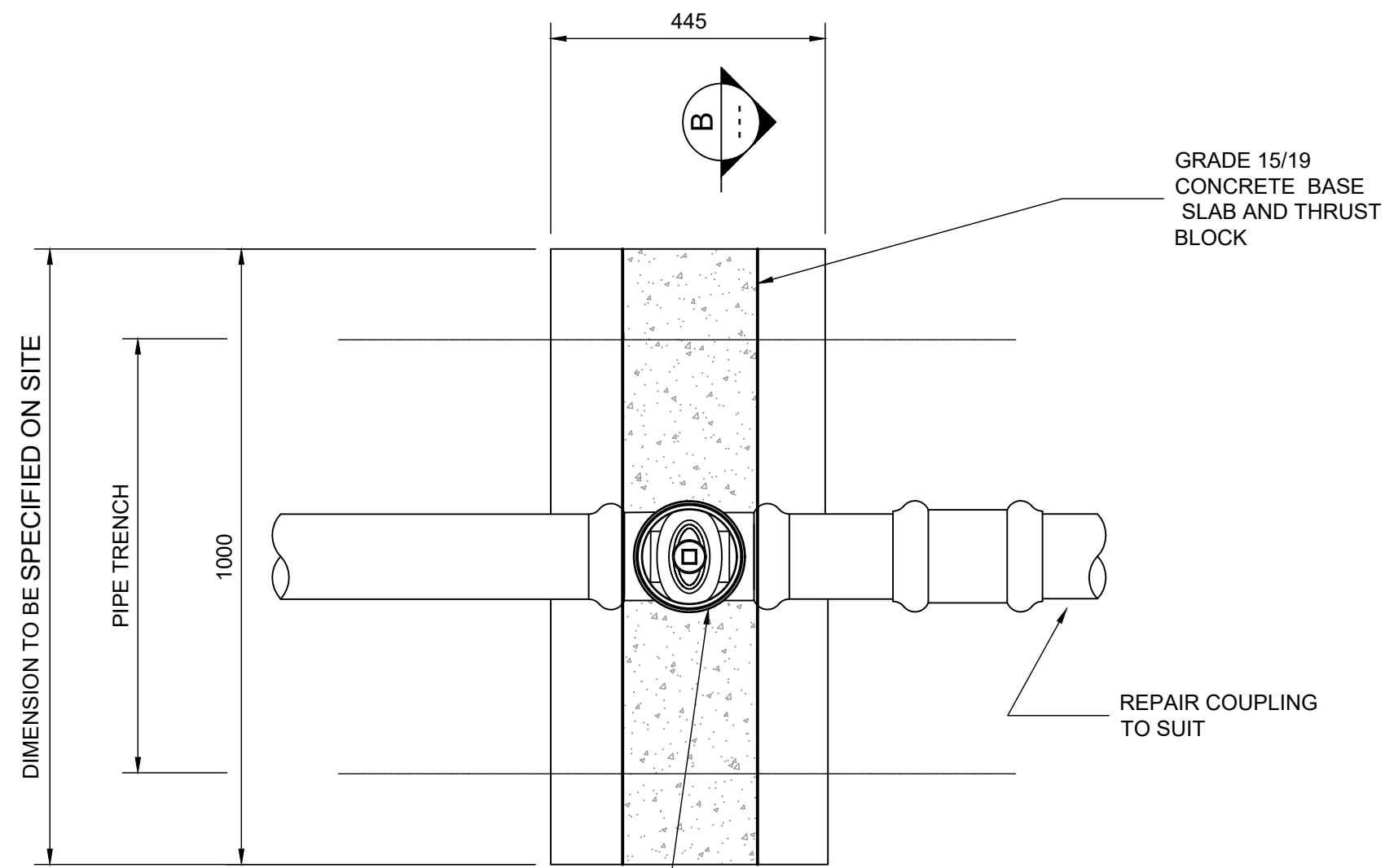


PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: AIR VALVE DETAILS
DESCRIPTION: TYPICAL DETAILS

FOR TENDER

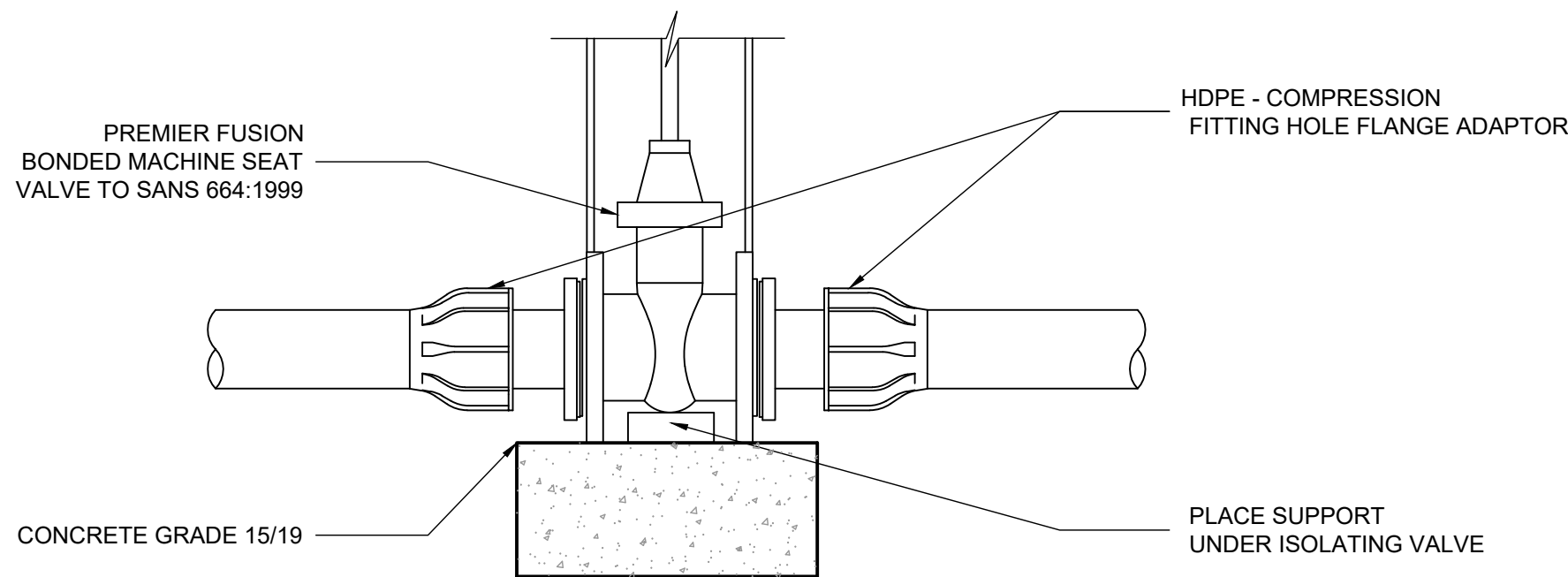
DRAWING No. 3233-7A-900

A



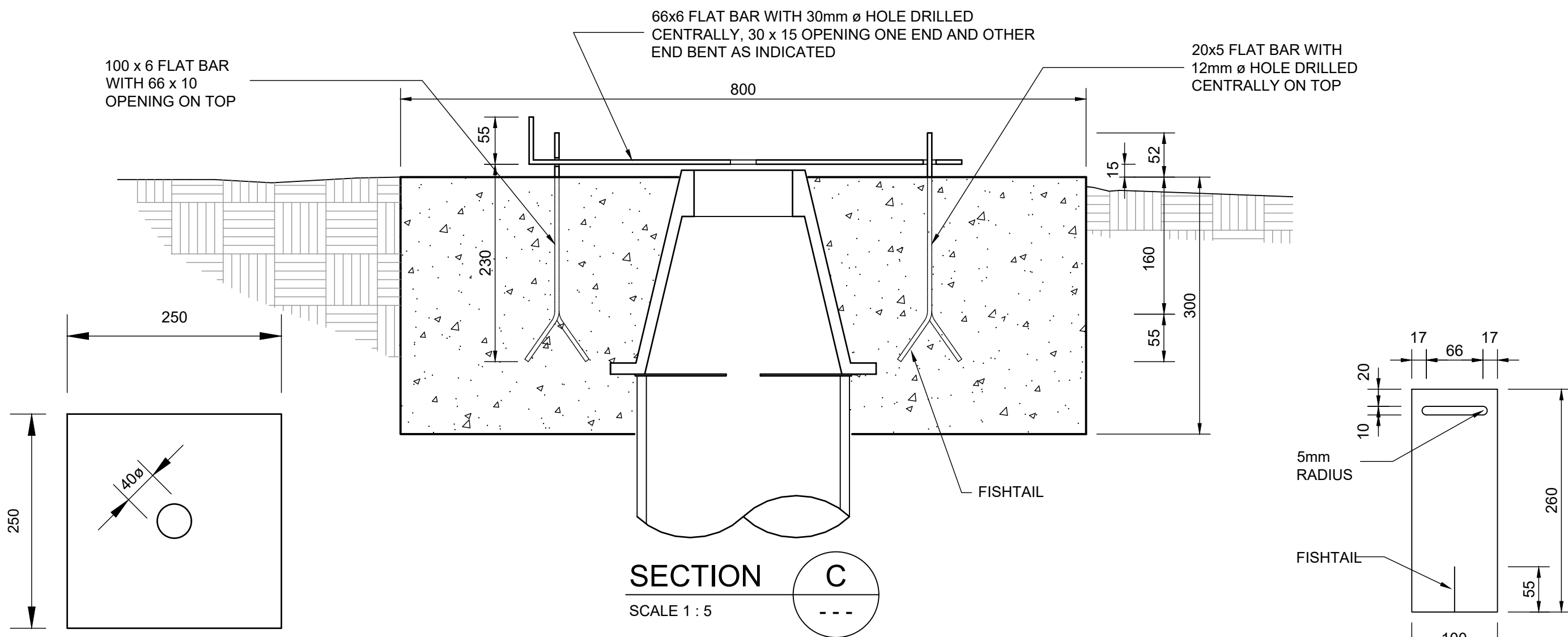
PREMIER FUSION BONDED SOCKETED MACHINE SEAT VALVE TO SANS 664:1999 CLOCKWISE CLOSING WITH NON-RISING SPINDLE

SECTION A
SCALE 1 : 10

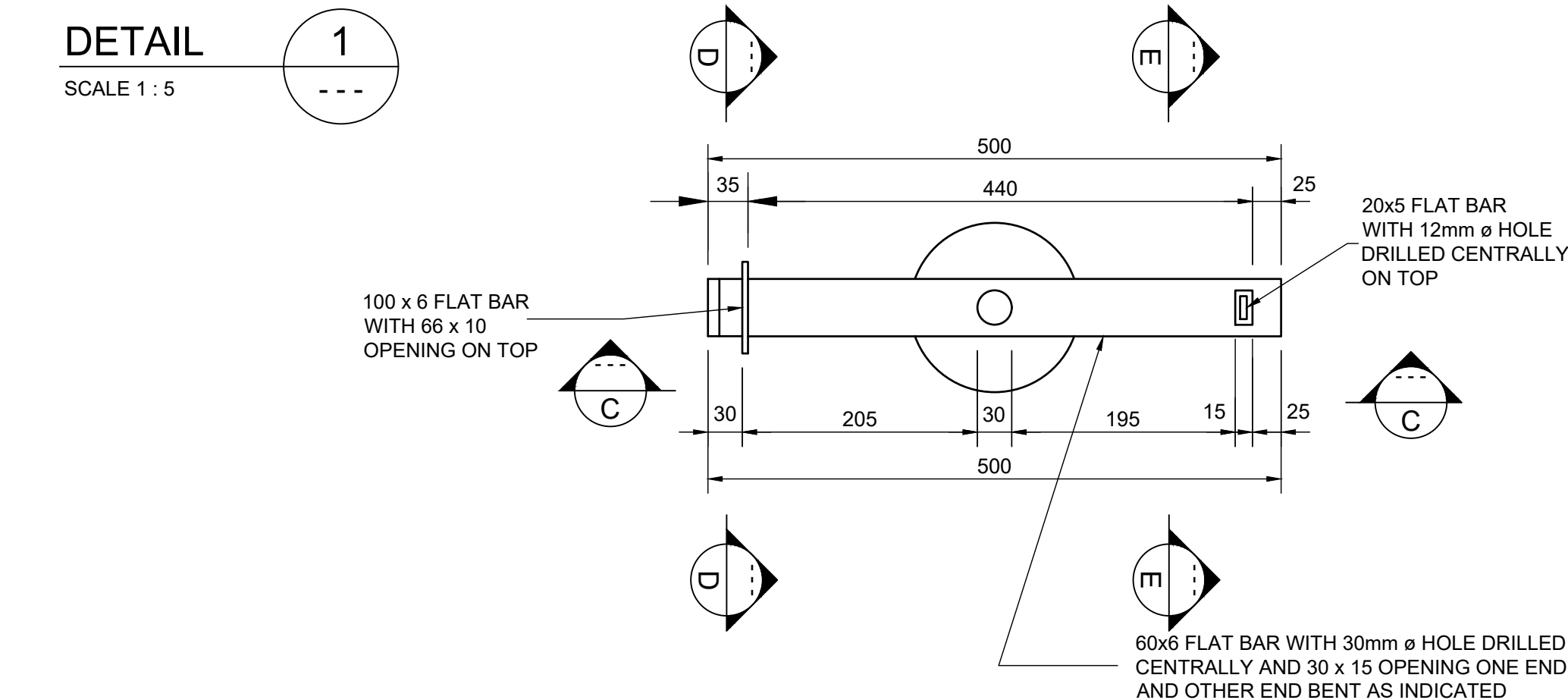


ISOLATING VALVE DETAIL
FOR HDPE PIPING

SCALE 1 : 10

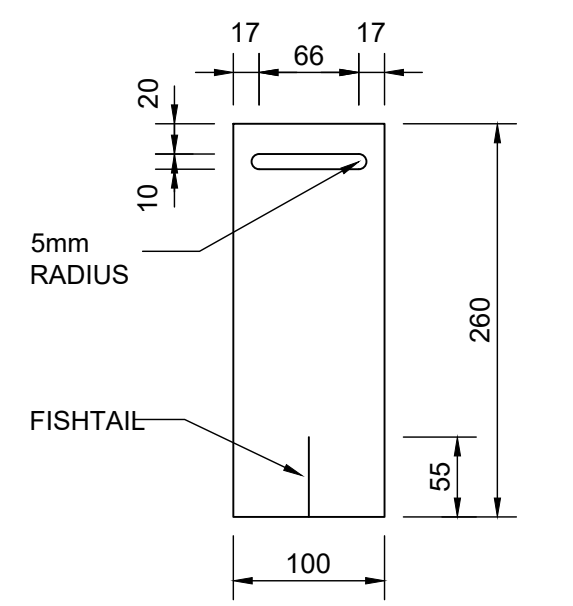


SECTION C
SCALE 1 : 5

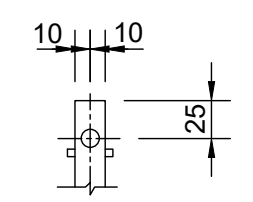


VALVE BOX LOCKING STRAP DETAIL

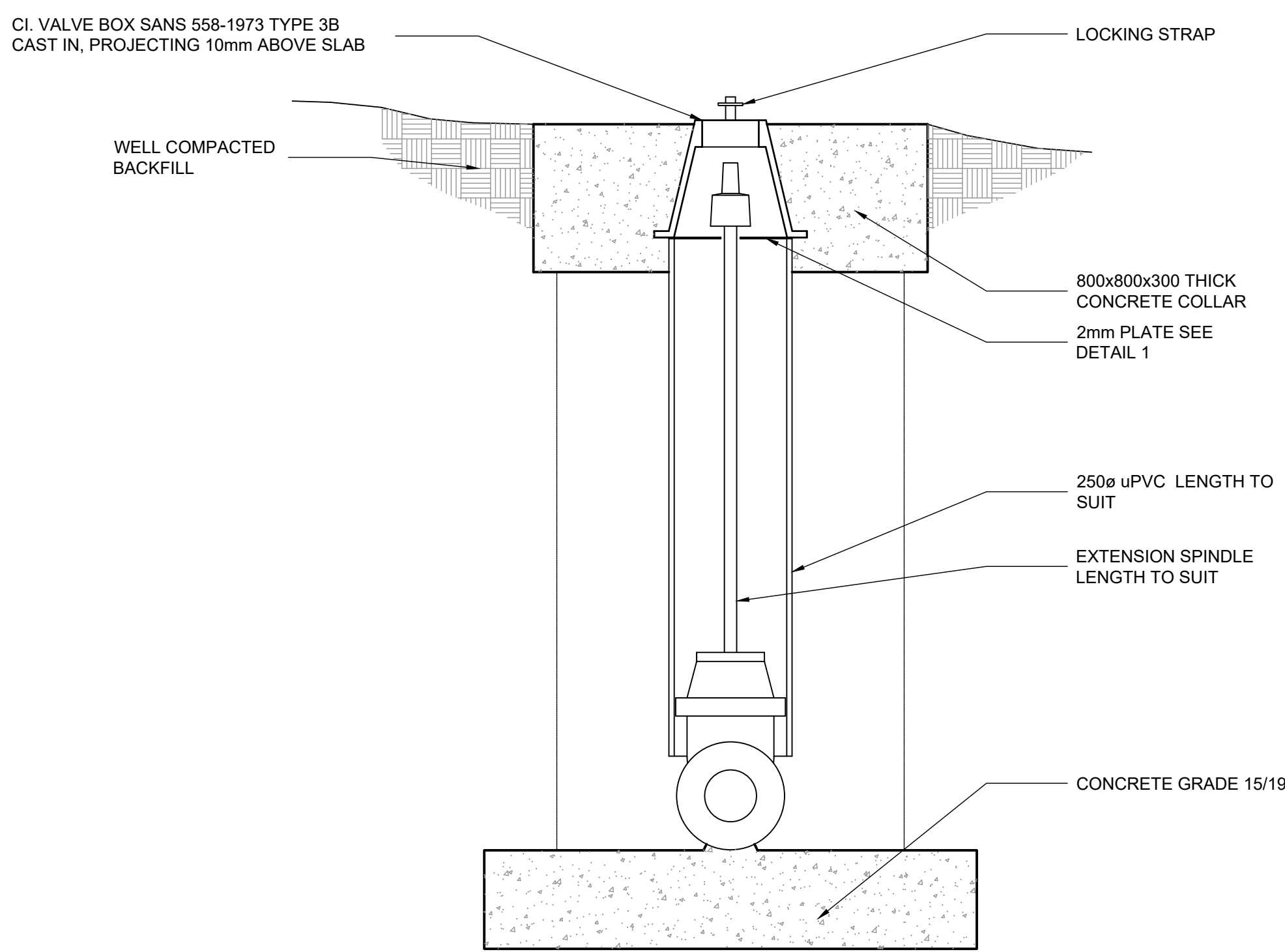
SCALE 1 : 5



SECTION D
SCALE 1 : 5



SECTION E
SCALE 1 : 5



SECTION B
SCALE 1 : 10

NOTES

- ALL DIMENSIONS IN MILLIMETRES.
- CONCRETE TO BE CLASS 15/19 UNLESS OTHERWISE SPECIFIED.
- MARKER POST TO BE ERECTED AT VALVE BOX AS INDICATED BY ENGINEER ON SITE. REFER TO DRAWING 3233-7A-903 FOR VALVE MARKER POST DETAIL.
- ALL STEEL COMPONENTS INCLUDING BOLTS GALVANISED TO ISO 1461-2000.
- ENGINEER TO BE CONSULTED IN RESPECT OF APPROPRIATENESS OF DESIGN FOR PIPE PRESSURE OVER CLASS 16.
- VALVE AND FITTINGS TO SUIT PIPE PRESSURE CLASS

A	FOR TENDER	QS	APR 23
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No.	DESCRIPTION	NAME	DATE
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REVISION



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DC 27

APPROVED:
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SCALE ON A1 : AS SHOWN
DATE: APRIL 2023

DESIGNED: Q SHINGA
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DRAWN : M SHEZI
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CONTRACT No. SCM0 020 2022/2023

DESIGN CHECKED BY: T.VAN VUUREN

CAPACITY: SENIOR TECHNOLOGIST

PR.TECH ENG: 2020300712

APPROVED ON BEHALF OF JG AFRIKA:

CAPACITY: TECHNICAL DIRECTOR

DATE: APRIL 2023

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QUALITY MANAGEMENT SYSTEM
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PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

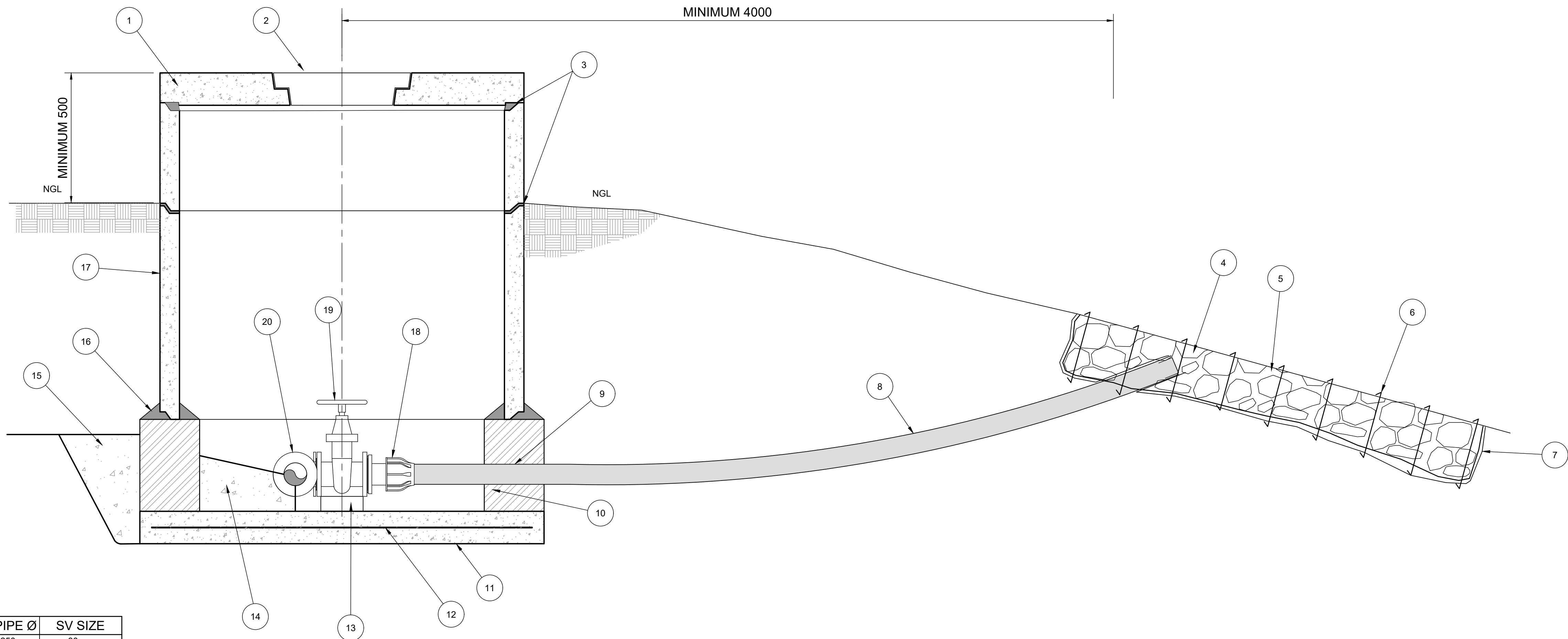
TITLE: ISOLATING VALVE DETAILS

DESCRIPTION: 50mm TO 90mm ND

FOR TENDER

DRAWING No. 3233-7A-901

A



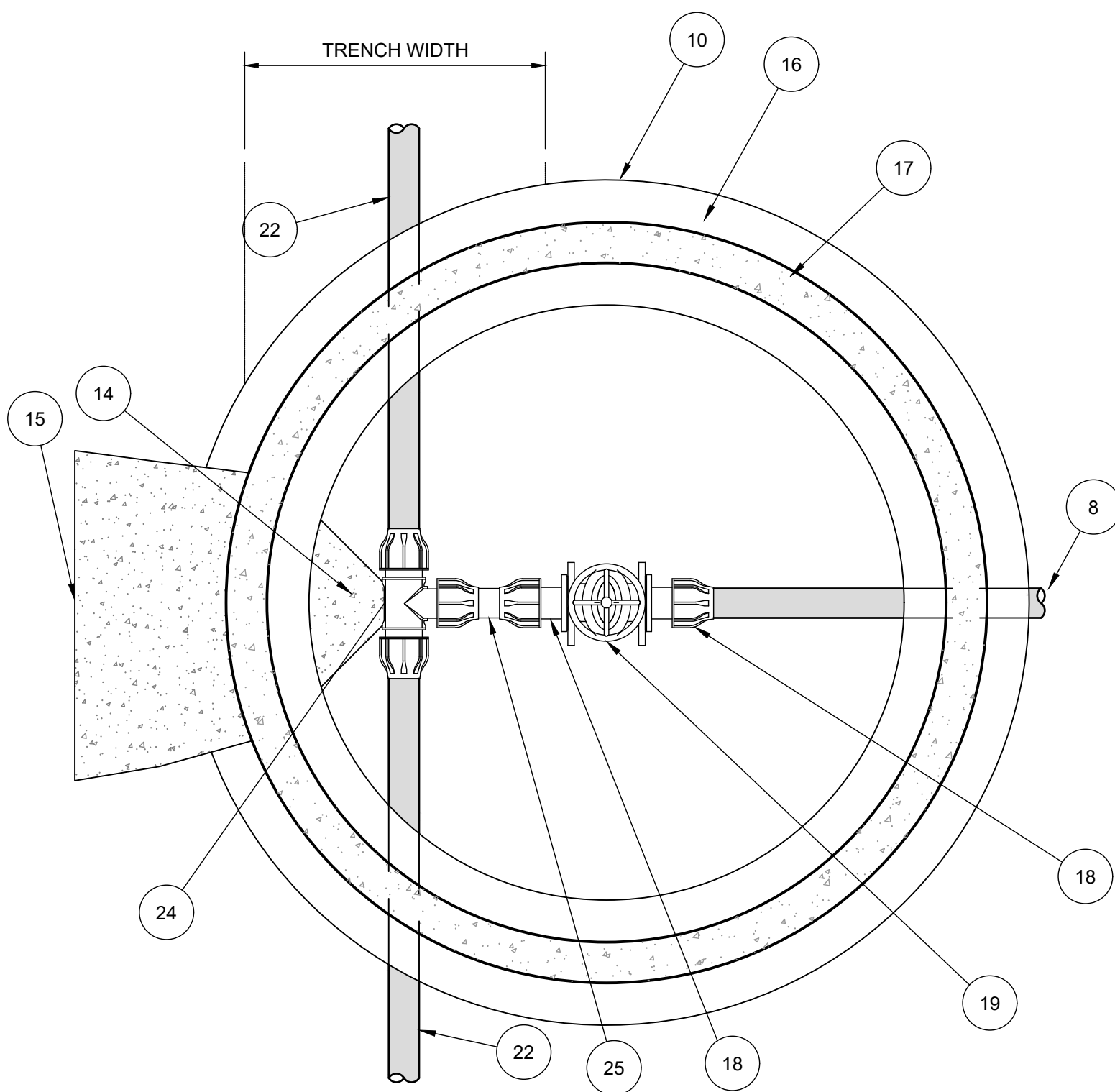
PIPE Ø	SV SIZE
250mm	80mm
200mm	80mm
160mm	80mm
110mm	80mm
90mm	80mm
75mm	80mm
63mm	50mm
50mm	50mm

SCOUR VALVE CHAMBER HDPE
N.T.S.

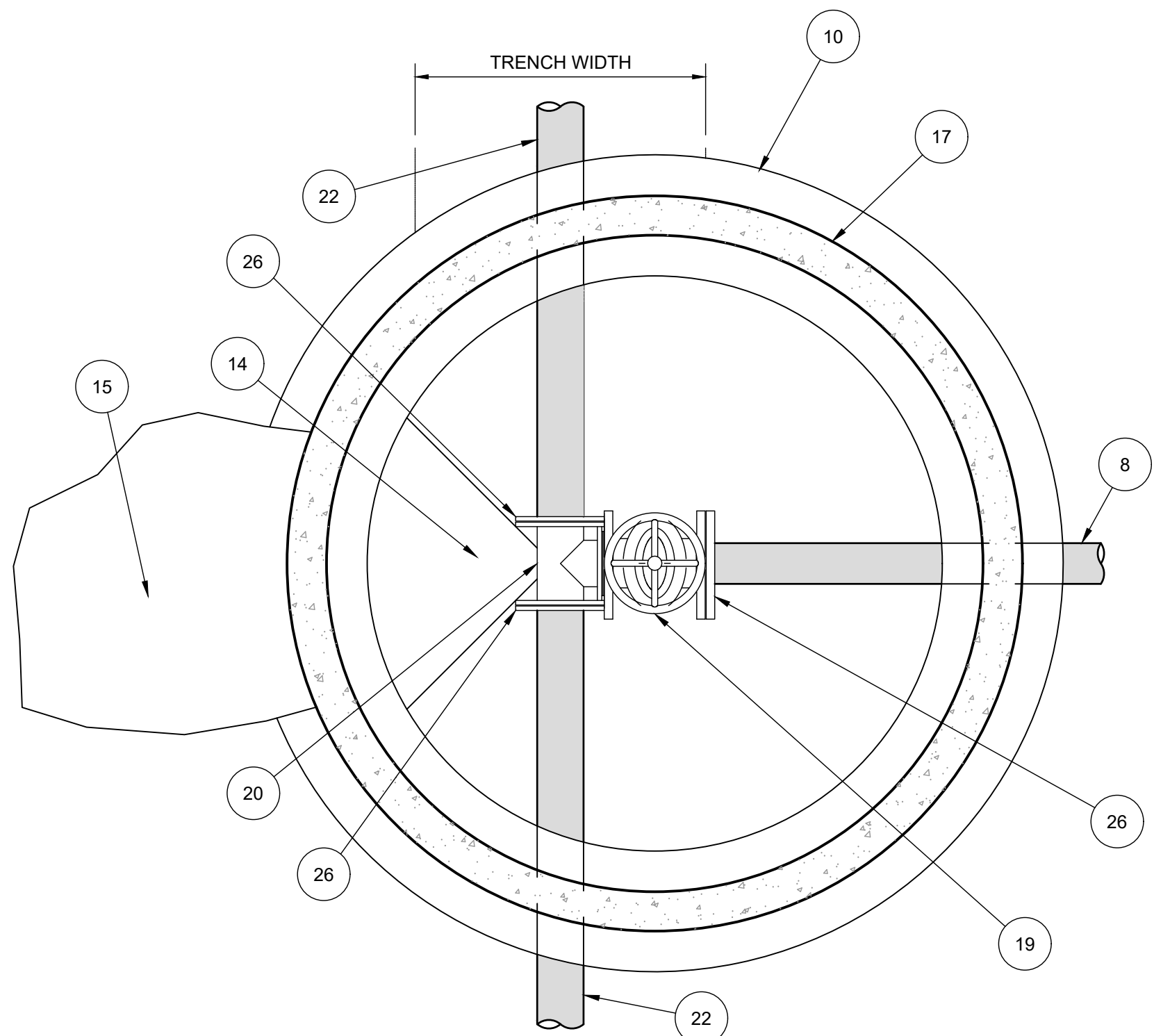
ITEM	DESCRIPTION : CHAMBER
1	GRADE 25/19 MANHOLE COVER 150mm THICK
2	CONCRETE LID
3	EPIDERMIX 350 ADHESIVE OR SIMILAR APPROVED
4	150 ø HARD STONE IN A 300mm LAYER
5	RENO MATTRESS - 2000x1000x300 WITH GALVANIZED BASKET
6	4mmØ GALVANISED WIRE TIES @ 250 C/C BOTH DIRECTIONS
7	RENO MATTRESS TO BE WRAPPED IN GRADE A2 BIDIM GEOTEXTILE OR SIMILAR APPROVE
8	HDPE CLASS 12 PIPE TO SUIT SCOUR TEE
9	ALL PIPE THROUGH BRICKWORK TO BE WRAPPED IN 2000 MICRON PVC SHEET
10	4 COURSES ENGINEERING BRICKWORK - REMOVE BRICKS TO INSERT PIPE AND GROUT OPENING CLOSED
11	150mm THICK CONCRETE GRADE 25/19 SLAB
12	REF. 395 MESH LOCATED CENTRALLY IN SLAB
13	SINGLE MASONRY BRICK PLACED UNDER VALVE
14	CONCRETE GRADE 15/19 (ANCHOR BLOCK)
15	CONCRETE GRADE 15/19 CAST BETWEEN CHAMBER AND UNDISTURBED SOIL AS DIRECTED ON SITE
16	MORTAR 1/3 CEMENT/SAND
17	1250 ø PRECAST CONCRETE RINGS TO SANS 1294-91

ITEM	DESCRIPTION : uPVC PIPE
18	HDPE COMPRESSION FLANGE ADAPTOR
19	CI. FLANGED WATER WORKS GATE VALVE TO SANS 664 WITH MACHINED SEAT TO SUIT SCOUR TEE
20	FLANGED STEEL SCOUR TEE SHALL BE EQUAL TEES FOR PIPES UP TO AND INCLUDING 750. FOR LARGER PIPES SCOUR TEE BRANCH SHALL REDUCE TO 800Ø
22	MAIN PIPE LINE
23	CI. FLANGE ADAPTOR

ITEM	DESCRIPTION : HDPE PIPE
19	CI. FLANGED WATER WORKS GATE VALVE TO SANS 664 WITH MACHINED SEAT TO SUIT SCOUR TEE
20	FLANGED GMS SCOUR TEE SHALL BE EQUAL TEES FOR PIPES UP TO AND INCLUDING 75mmØ. FOR LARGE PIPES SCOUR TEE BRANCH SHALL REDUCE TO 80mmØ
22	MAIN PIPE LINE
26	STUB FLANGE



CHAMBER PLAN
HDPE PIPE LINE
FOR 50mm TO 90mm ND
N.T.S



CHAMBER PLAN
HDPE PIPE LINE
FOR 110mm TO 250mm ND
N.T.S

NOTES

- ALL DIMENSIONS IN MILLIMETERS.
- CONCRETE TO BE CLASS 25/19 UNLESS OTHERWISE SPECIFIED.
- ALL THREADS TO BSP STANDARDS.
- ALL STEEL COMPONENTS INCLUDING BOLTS GALVANIZED TO ISO 1461:2000.
- ENGINEER TO BE CONSULTED IN RESPECT OF APPROPRIATENESS OF DESIGN FOR PIPE PRESSURE OVER CLASS 16 AND OVER CLASS 25

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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UMKHANYAKUDE DISTRICT MUNICIPALITY
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APPROVED:
CAPACITY:
DATE:



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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN	DATE: APRIL 2023
DESIGNED: Q SHINGA	CHECKED: T.VAN VUUREN
DRAWN : M SHEZI	CHECKED: Q SHINGA
CONTRACT No. SCMU 020 2022/2023	
DESIGN CHECKED BY: T.VAN VUUREN	
CAPACITY: SENIOR TECHNOLOGIST	
PR.TECH ENG: 2020300712	
APPROVED ON BEHALF OF JG AFRIKA:	
CAPACITY: TECHNICAL DIRECTOR	
DATE: APRIL 2023	

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED

PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

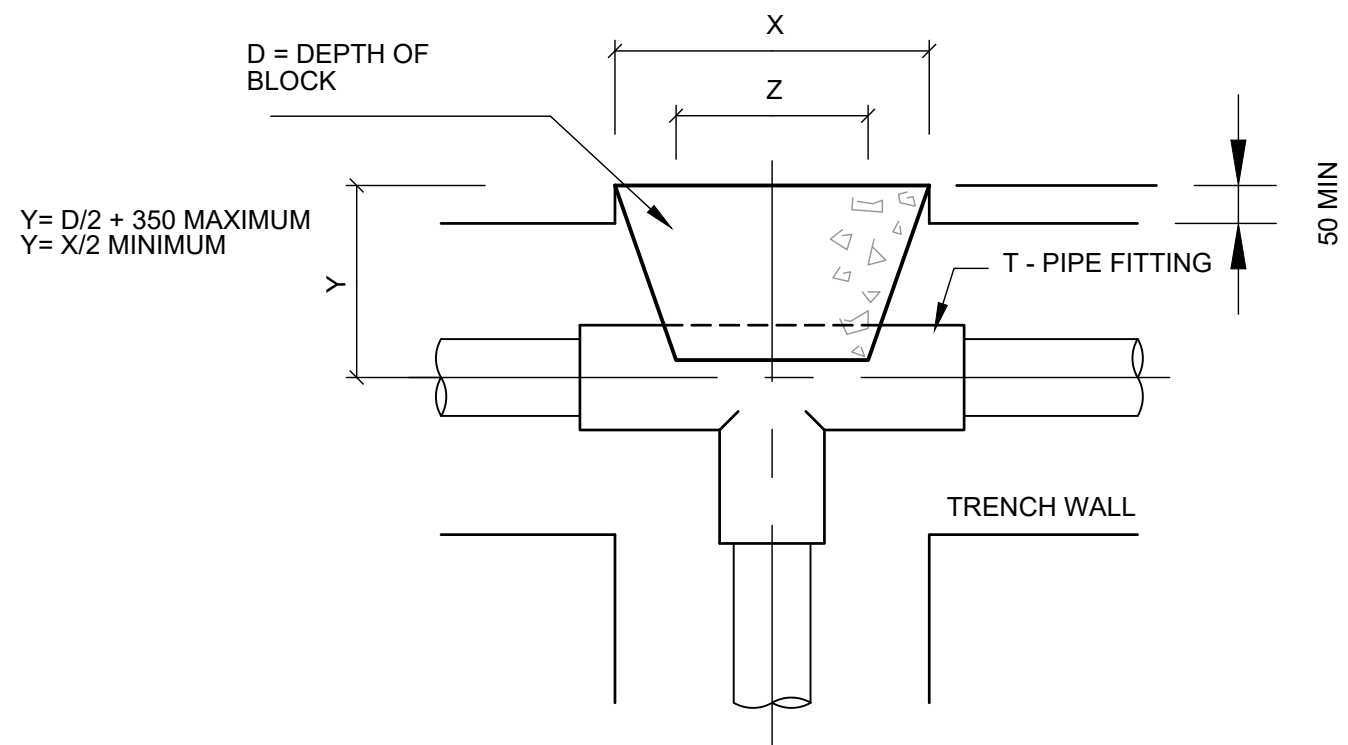
TITLE: SCOUR VALVE DETAILS

DESCRIPTION: TYPICAL DETAILS

FOR TENDER

DRAWING No. 3233-7A-902

A

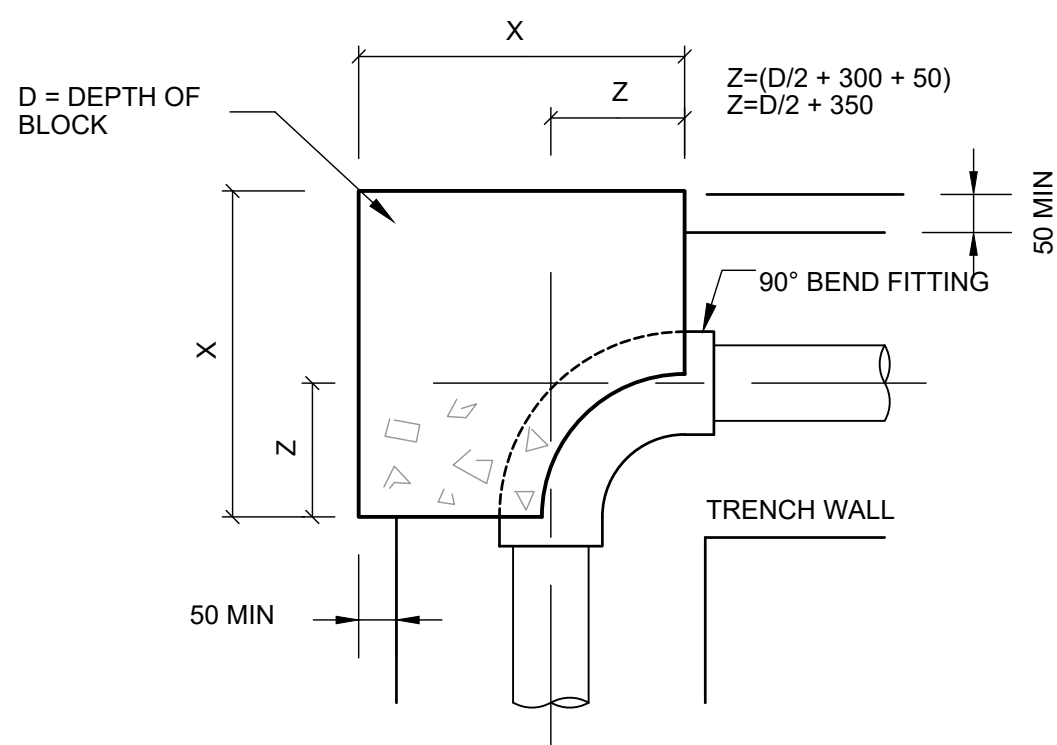


TEE CONNECTION THRUST BLOCK
FOR PRESSURE PIPELINE

SCALE: 1:10

PIPE (mm)	X (mm)	D (mm)	Z (mm)
50	300	150	150
63	300	150	150
75	300	150	150
90	400	200	200
110	600	300	300
160	600	300	300

DIMENSIONS - TEE CONNECTION

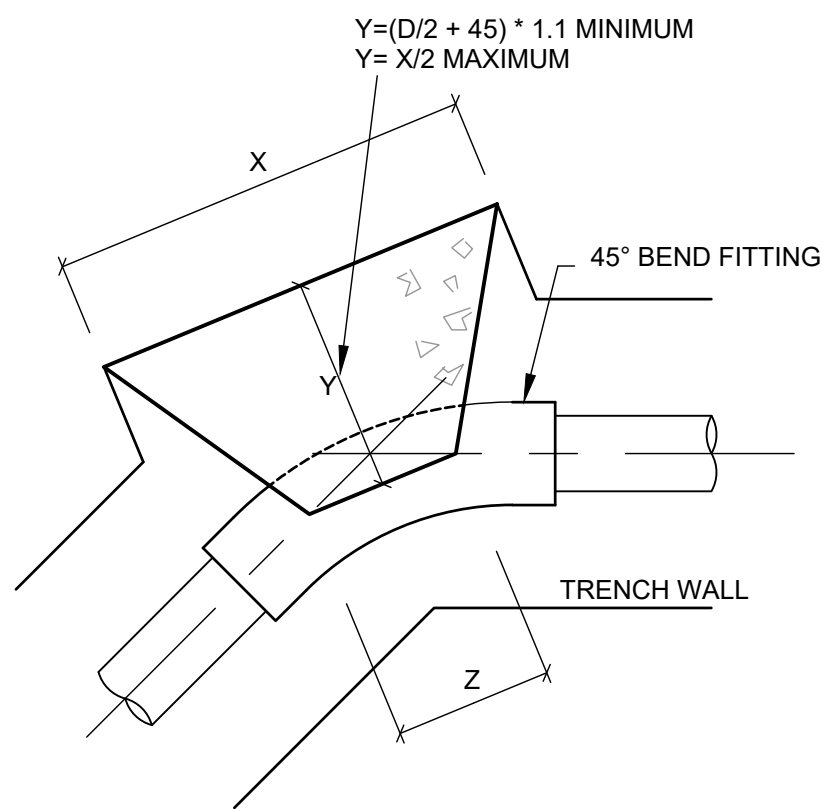


90° BEND THRUST BLOCK
FOR PRESSURE PIPELINE

SCALE: 1:10

PIPE (mm)	X (mm)	D (mm)	Z (mm)
50	560	225	175
63	560	225	175
75	560	225	175
90	650	300	250
110	730	375	320
160	825	450	400

DIMENSIONS - 90° THRUST BLOCK

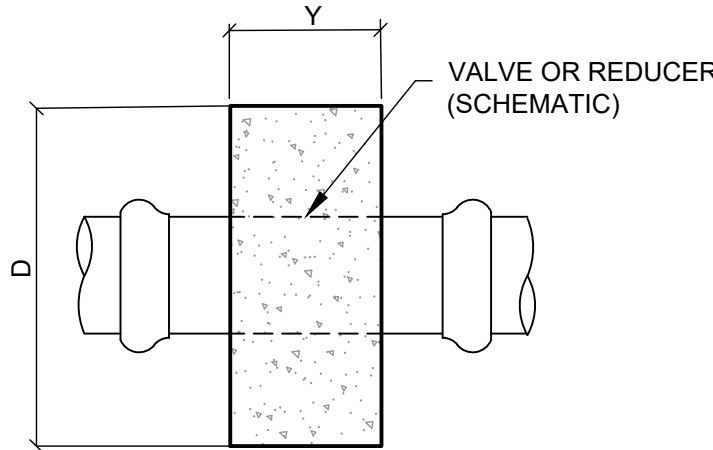


45 ° BEND THRUST BLOCK
FOR PRESSURE PIPELINE

SCALE:1:10

PIPE (mm)	X (mm)	D (mm)	Z (mm)
50	300	150	150
63	300	150	150
75	300	150	150
90	400	200	200
110	500	250	250
160	600	300	300

DIMENSIONS - 45° THRUST BLOCK

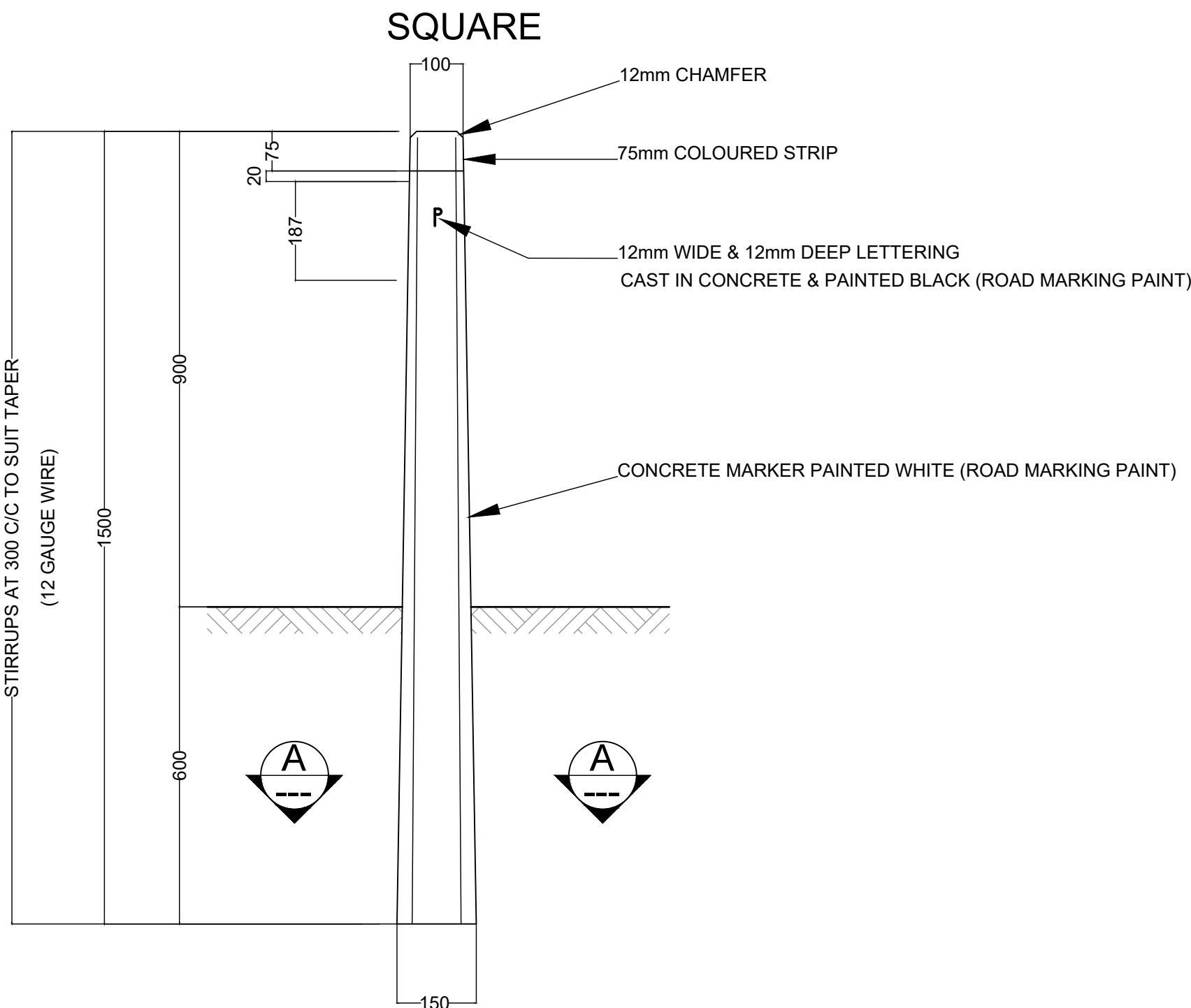


THRUST BLOCK FOR
ISOLATING VALVE OR REDUCER

SCALE:1:10

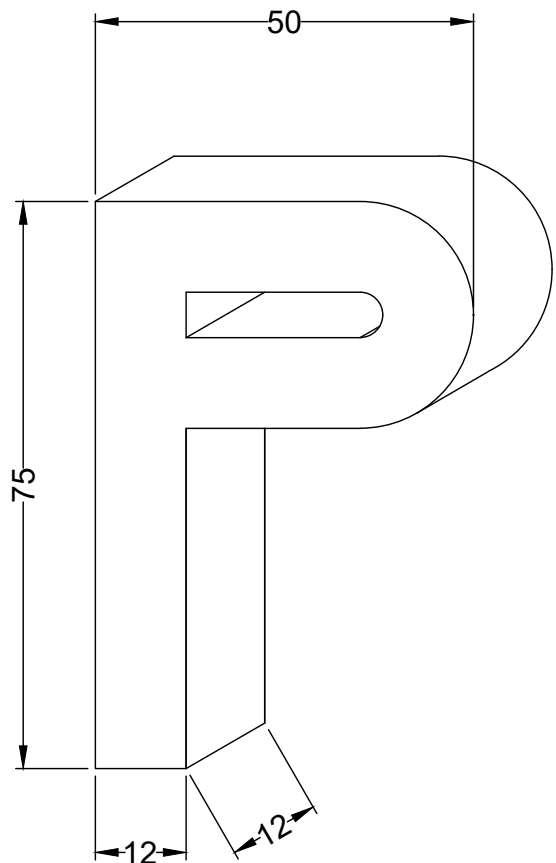
PIPE (mm)	Y (mm)	X (HEIGHT) (mm)	D (mm)
50	150	400	300
63	150	400	300
75	150	400	400
90	200	400	400
110	200	500	500
160	200	600	500

DIMENSIONS - I.V. AND REDUCER
THRUST BLOCK



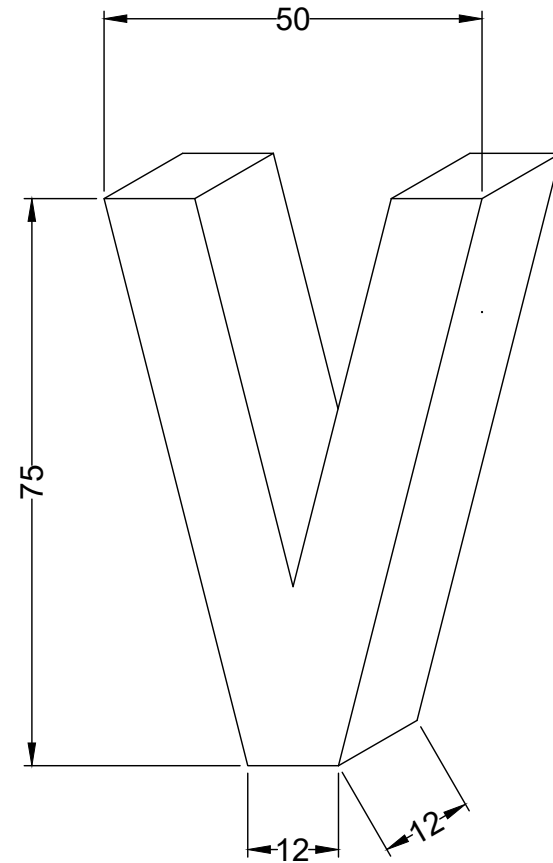
SQUARE
PIPE MARKER

SCALE: 1:10



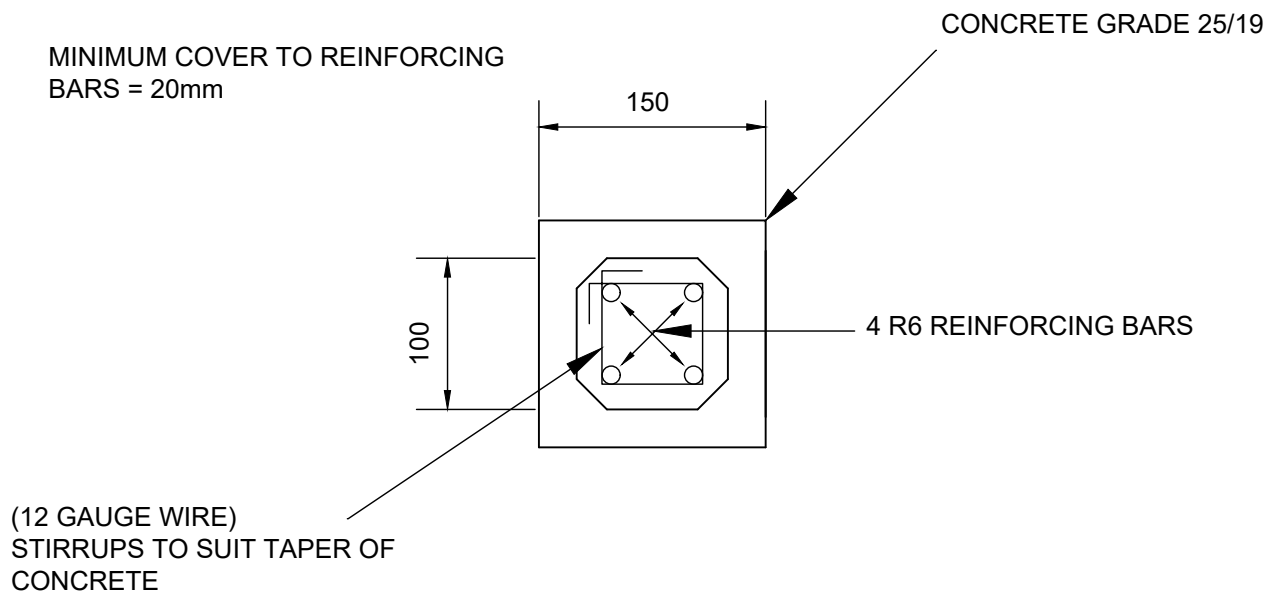
LETTERING DETAIL
FOR PIPE ROUTE

SCALE 1:1



LETTERING DETAIL
FOR ISOLATING VALVE

SCALE 1:1



SECTION B-B

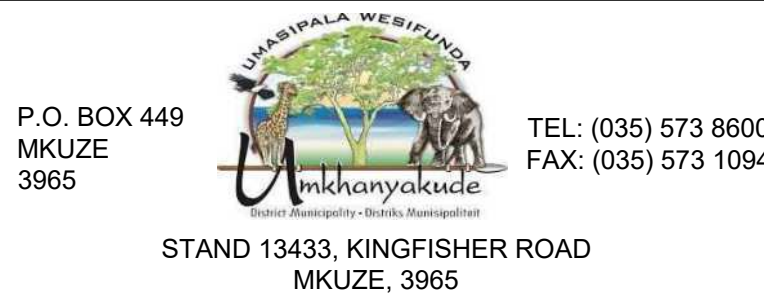
SCALE: 1:5

NOTES

1. REAR END OF ANCHOR BLOCK TO BE CAST AGAINST UNDISTURBED GROUND.
2. MARKER POSTS TO BE ERECTED AT ALL CHANGES IN HORIZONTAL ALIGNMENT AND AT REGULAR INTERVALS ON STRAIGHTS SUCH THAT MARKER POSTS ARE VISIBLE EITHER SIDE OF ANY GIVEN POST, BUT NOT GREATER THAN 150 METRES APART.
3. CONCRETE GRADE 15/19 FOR ALL THRUST BLOCKS.
4. CONCRETE GRADE 25/19 FOR MARKER POSTS.
5. DIMENSIONS FOR THRUST BLOCKS TO BE USED ON PIPES <= PN16.
FOR PIPES . PN16, THRUST BLOCK DIMENSIONS TO BE CONFIRMED BY ENGINEER.

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



UMKHANYAKUDE DISTRICT MUNICIPALITY DC 27

APPROVED:
CAPACITY:
DATE:



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--------------------------------	---

6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN	DATE: APRIL 2023
DESIGNED: Q SHINGA	CHECKED: T.VAN VUUREN
DRAWN : M SHEZI	CHECKED: Q SHINGA

CONTRACT No. SCMU 020 2022/2023	DESIGN CHECKED BY: T.VAN VUUREN
CAPACITY: SENIOR TECHNOLOGIST	PR.TECH ENG: 2020300712
APPROVED ON BEHALF OF JG AFRIKA:	CAPACITY: TECHNICAL DIRECTOR
DATE: APRIL 2023	

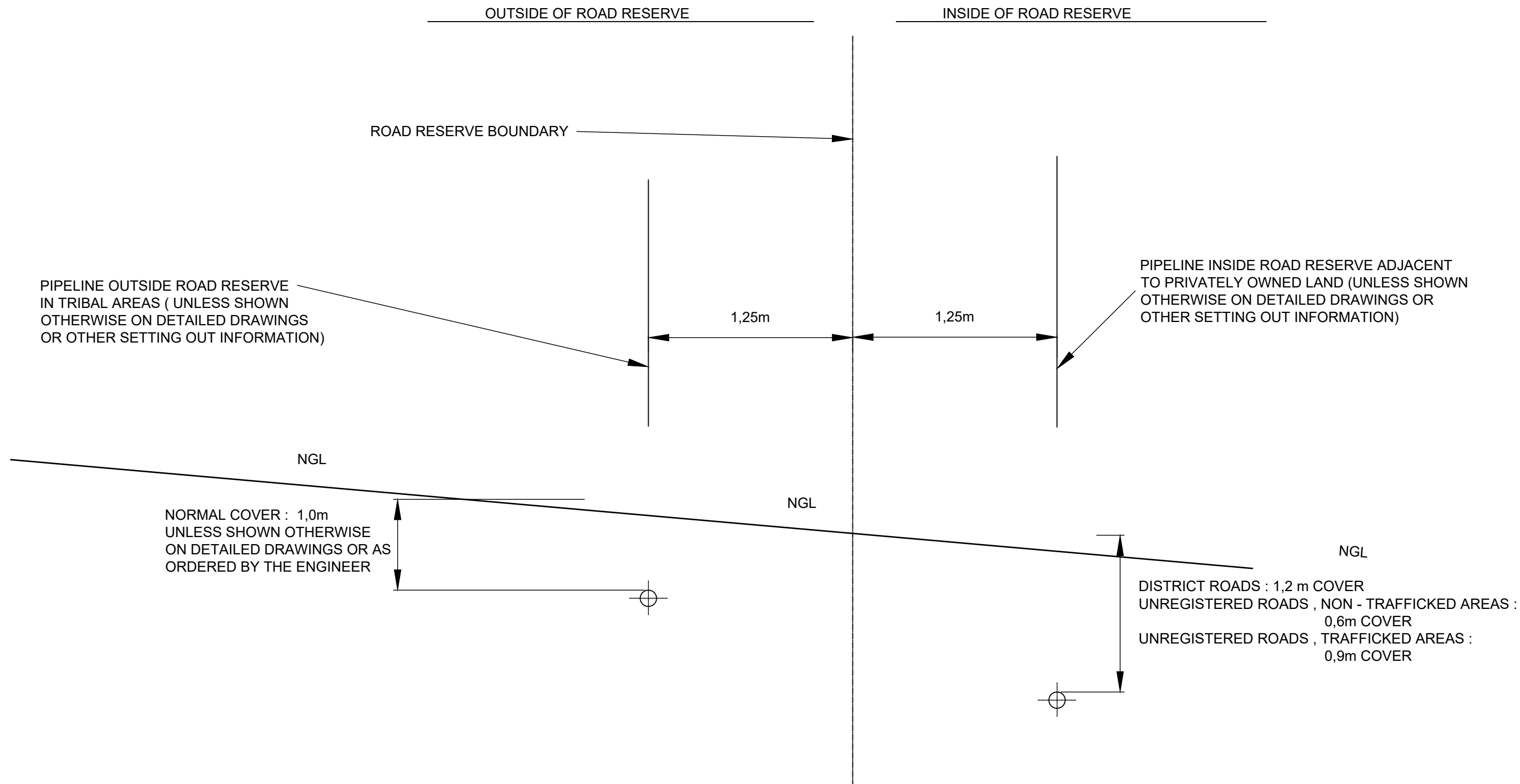
ISO 9001 QUALITY MANAGEMENT SYSTEM DEKRA CERTIFIED
--

PROJECT: MANGUZI STAR OF THE SEA ZONE 7A
TITLE: PIPE MARKER AND THRUST BLOCK DETAILS
DESCRIPTION: TYPICAL DETAILS

FOR TENDER

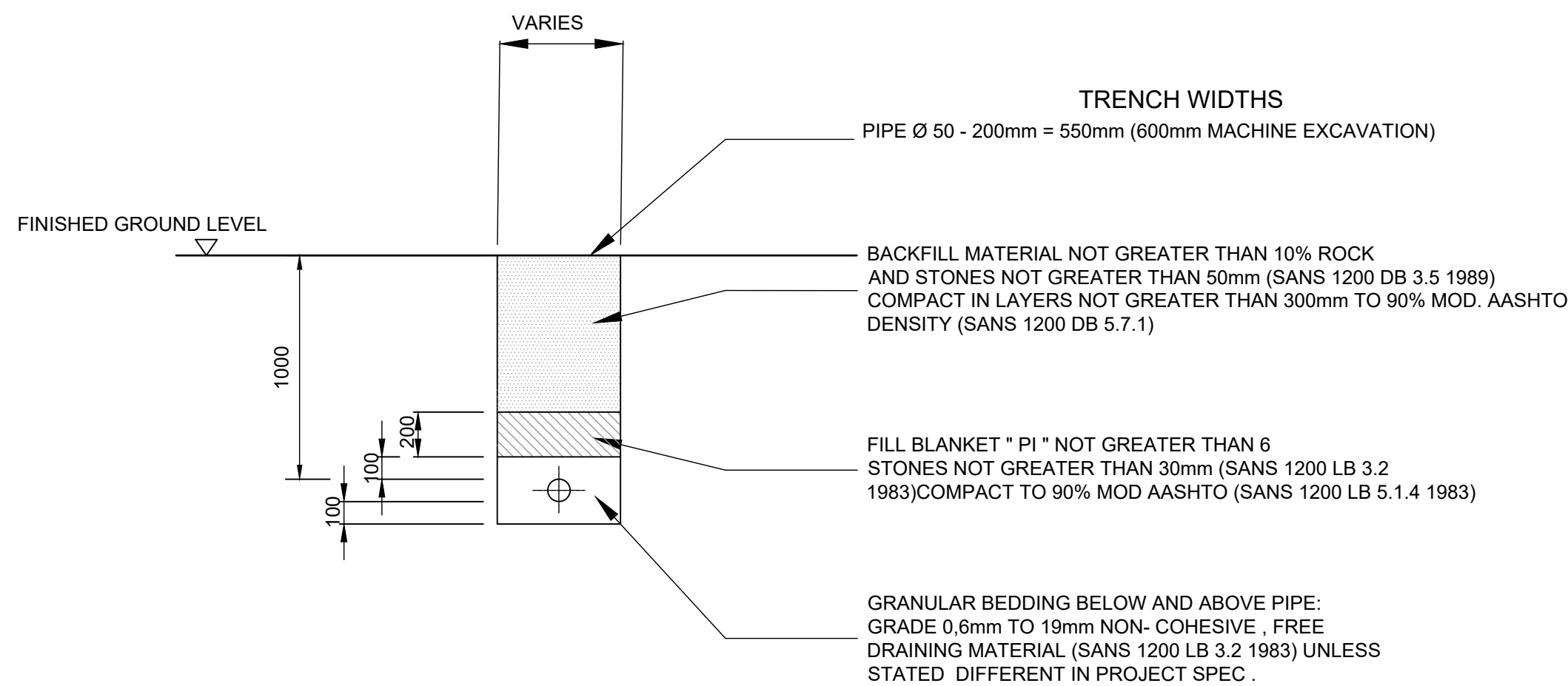
DRAWING No. 3233-7A-903

A



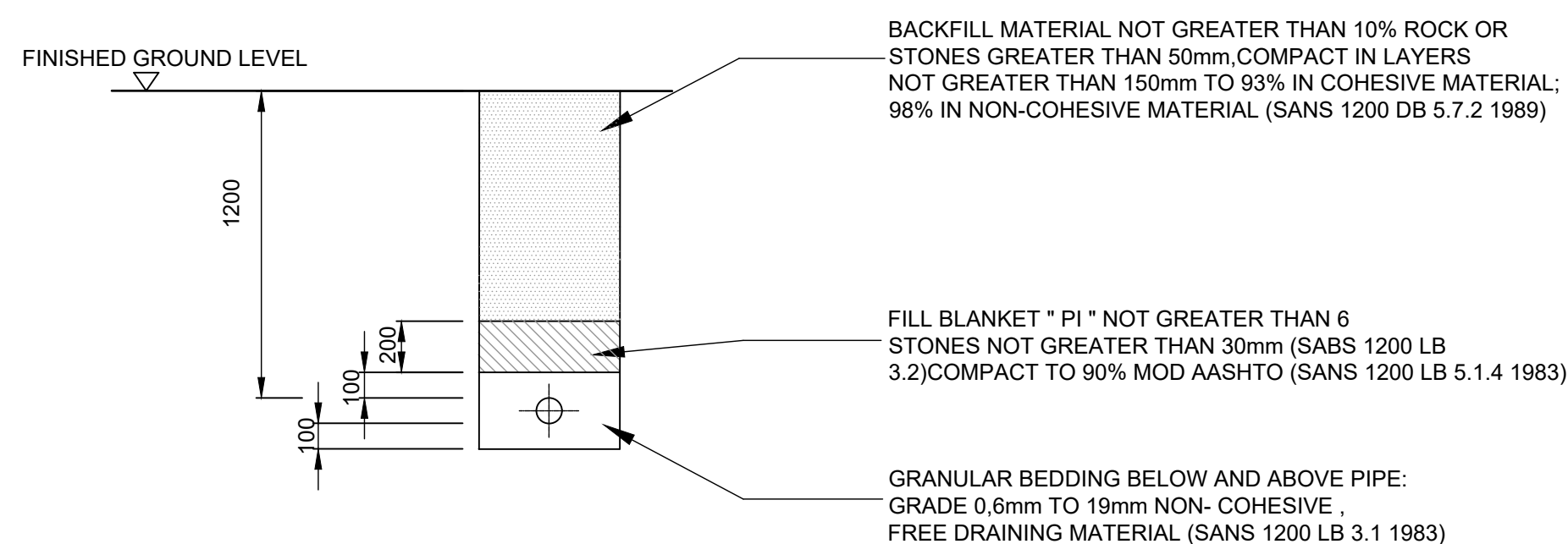
SETTING OUT OF TRENCH FROM :

- 1) ROAD RESERVE BOUNDARY
- 2) FENCE AT EDGE OF MINOR ROADS AND TRACKS



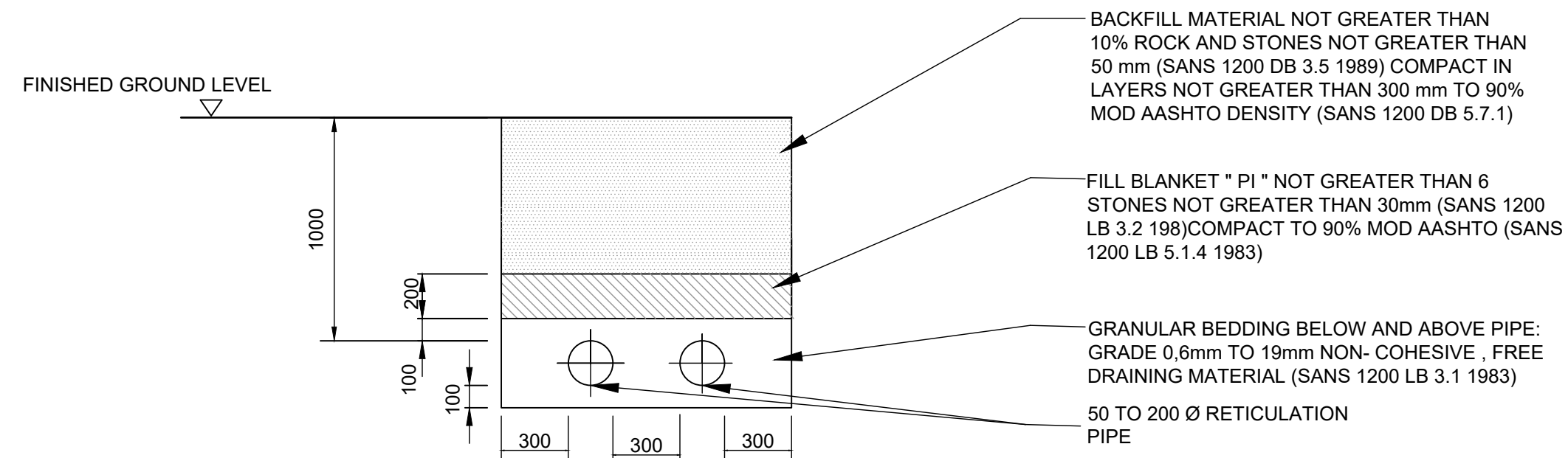
SINGLE PIPE TRENCH IN NON-TRAFFICKED AREAS

SCALE:1:25



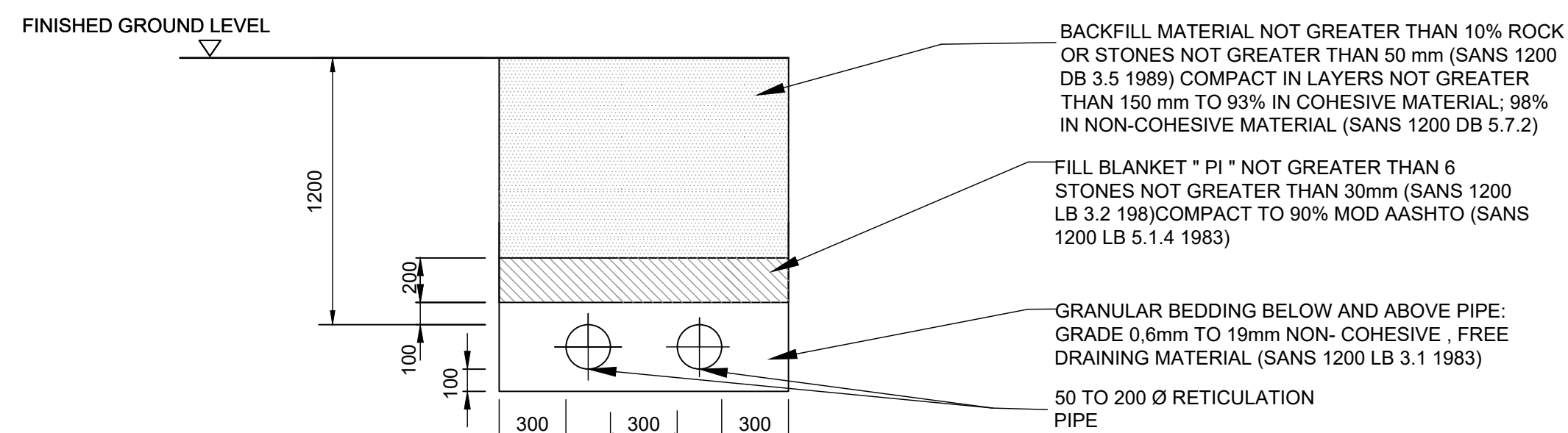
SINGLE PIPE TRENCH IN TRAFFICKED AREAS

SCALE: 1:25



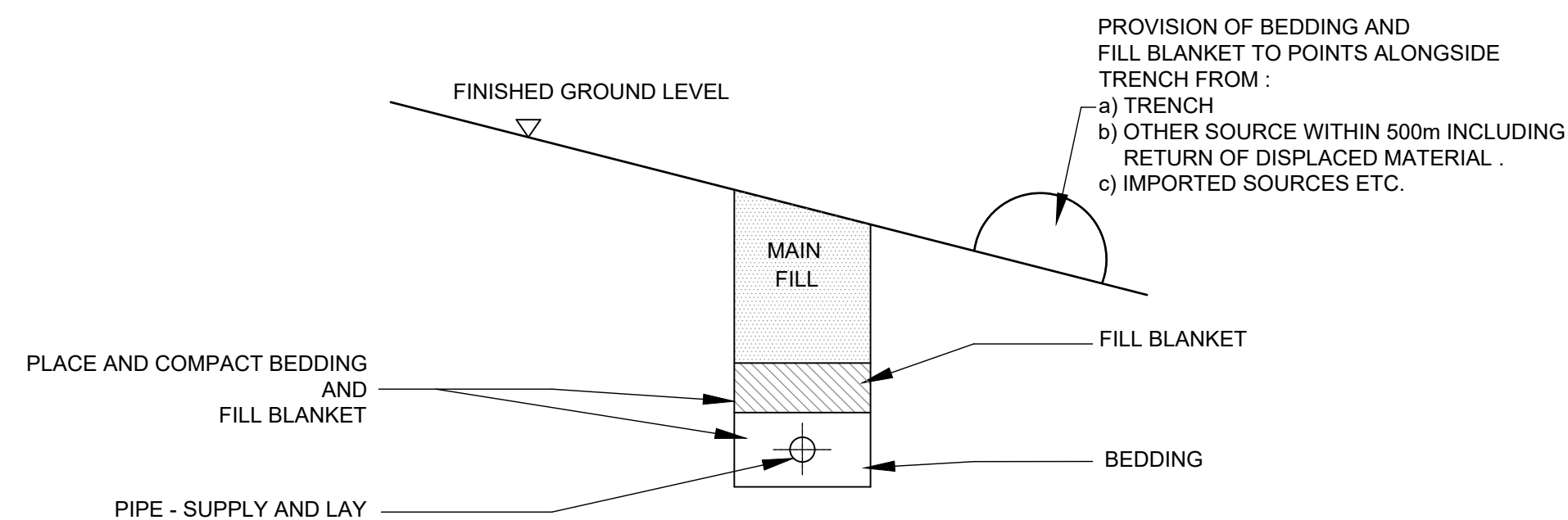
DOUBLE PIPE TRENCH IN NON TRAFFICKED AREAS

SCALE:1:25



DOUBLE PIPE TRENCH IN TRAFFICKED AREAS

SCALE:1:25



TYPICAL TRENCH SECTION

SCALE: 1:25

NOTES

1. SANS 1200 LB AND IN PARTICULAR THE REQUIREMENTS OF SANS 1200 LB (BEDDING) SANS 1200 DB (TRENCH EXCAVATION) AND SANS 1200L (MEDIUM PRESSURE PIPELINES) AS WELL AS THE PROJECT SPECIFICATION SHALL OVERRIDE ANY CONFLICTING SPECIFICATIONS SHOWN ON THIS DRAWING UNLESS OTHERWISE ORDERED BY THE ENGINEER.
2. FREEHAUL DISTANCE FOR BEDDING FROM TRENCH EXCAVATION IS 0,5 km.
3. FREEHAUL DISTANCE FOR DISPOSAL OF SURPLUS EXCAVATION IS 0,5 km FOR MACHINES AND 100m FOR WHEELBARROWS.
4. STEEL PIPES - GRANULAR BEDDING SHALL BE 100mm DEEP, BELOW PIPE AND THEREAFTER BLANKET FILL TO 200mm ABOVE PIPE (SANS 1200 LB drg LB - 1[C]).
5. PIPES IN DISTRICT ROAD RESERVES AND ROADS OF HIGHER STANDARD SHALL HAVE 1,0m COVER AND BE CONSIDERED AS "TRAFFICKED". ALL OTHER PIPES SHALL HAVE 600mm COVER EXCEPT WHERE DEEMED BY THE ENGINEER TO BE TRAFFICKED.

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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DC 27

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CAPACITY:
DATE:



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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN DATE: APRIL 2023

DESIGNED: Q SHINGA CHECKED: T.VAN VUUREN

DRAWN : M SHEZI CHECKED: Q SHINGA

CONTRACT No. SCMU 020 2022/2023

DESIGN CHECKED BY: T.VAN VUUREN

CAPACITY: SENIOR TECHNOLOGIST

PR.TECH ENG: 2020300712

APPROVED ON BEHALF OF JG AFRIKA:

CAPACITY: TECHNICAL DIRECTOR

DATE: APRIL 2023

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED



PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

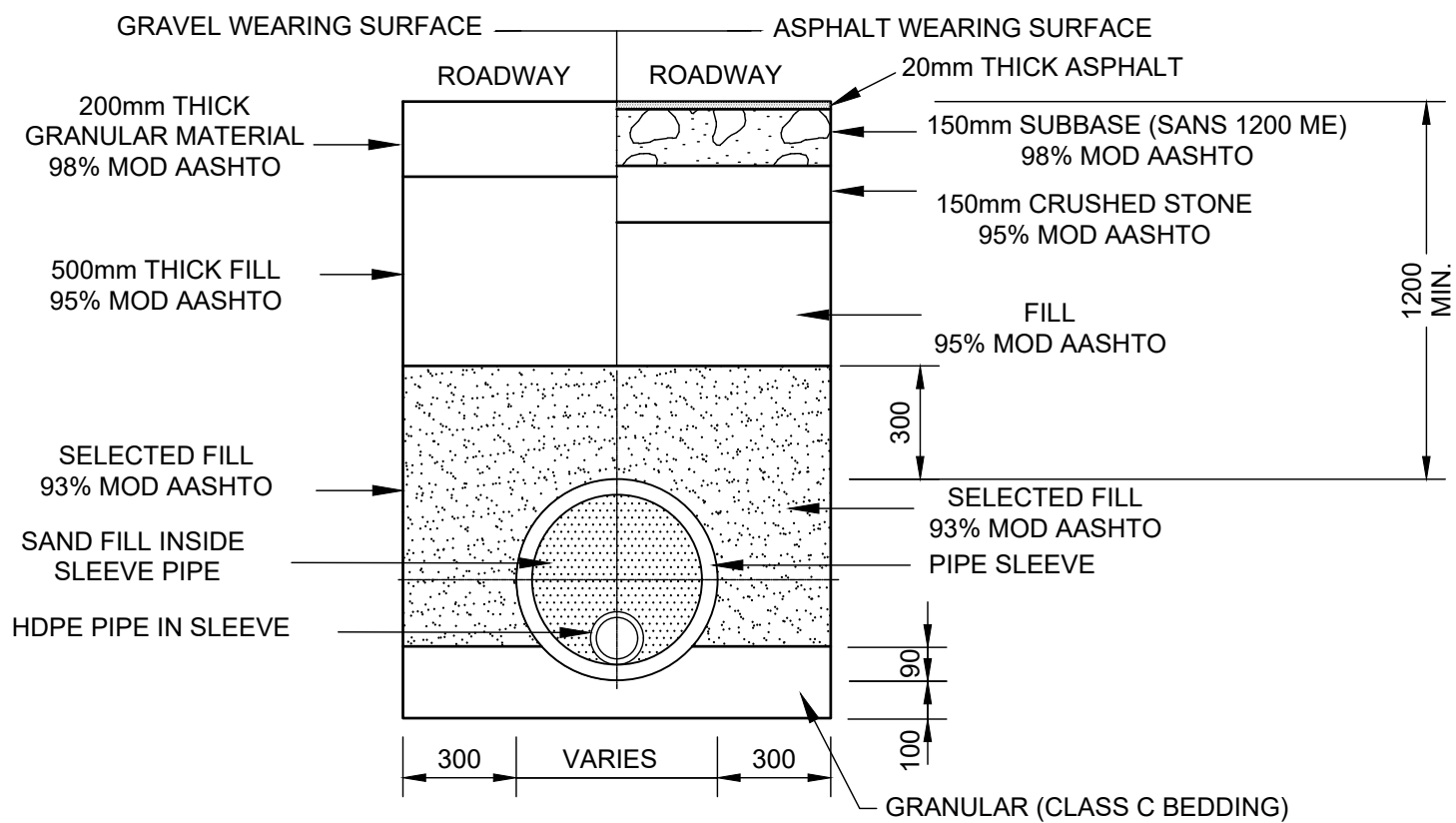
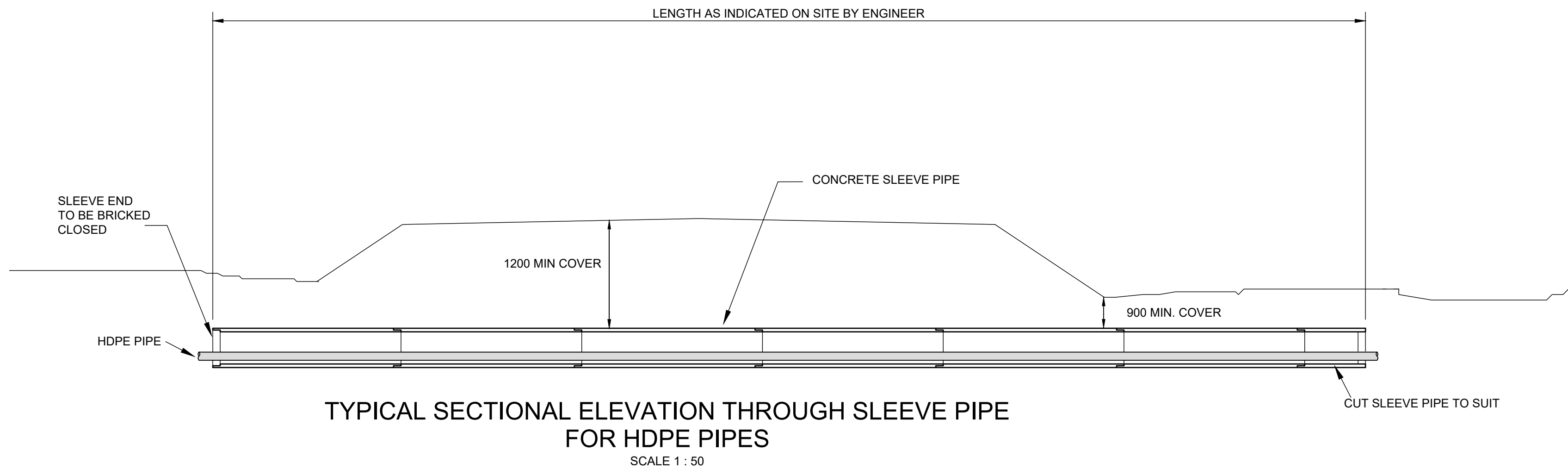
TITLE: SETTING OUT DETAILS

DESCRIPTION: TYPICAL DETAILS

FOR TENDER

DRAWING No. 3233-7A-904





SLEEVE TYPES				
ROAD CLASSIFICATION	ROAD RESERVE	WATER PIPE Ø	CONCRETE SLEEVE PIPE	COVER TO SLEEVE
M (MAIN)	30m	25 TO 200	450 ND 100 D	1 200
		200 TO 400	600 ND 100 D	1 200
D (DISTRICT)	20m	25 TO 63	160 uPVC CL12	1 200
		75 TO 200	450 ND 100 D	1 200
UNCLASSIFIED	N/A	350 TO 400	600	1 200

PIPE HORIZONTAL DIRECTIONAL DRILLING	
WATER PIPE Ø	HDPE SLEEVE PIPE
35	75
75 to 90	160
110	200
160	250
200 to 250	350
315 to 450	630

NOTES

- SLEEVES TO EXTEND MINIMUM OF 2.0m BEYOND ROAD EDGE.
- ALL CROSSINGS TO BE POSITIONED PERPENDICULAR TO THE ROAD EDGE WHERE PRACTICALLY POSSIBLE.
- ALL CROSSINGS TO HAVE A PIPE MARKER AT EACH SIDE OF THE ROAD PLACED AT THE EDGE OF THE ROAD RESERVE.
- HDPE PIPE TO BE JOINTED A MINIMUM OF 2m AWAY FROM THE END OF THE SLEEVE. NO JOINTS PERMITTED INSIDE THE SLEEVE.
- SLEEVE ENDS TO BE BRICKED CLOSED AFTER PIPE INSTALLATION WITH Z30 BRICKWORK AND THE PIPE MORTARED IN PLACE.
- CONCRETE SLEEVE PIPES TO BE SPIGOT AND SOCKET TYPE WITH RUBBER SEALS FOR MAIN ROADS AND OGEE TYPE WITH RUBBER SEALS FOR ALL OTHER ROADS.
- uPVC PIPES TO BE CHANGED TO CLOSEST HDPE PIPE TO GO THROUGH CONCRETE SLEEVE.
- ALL WATER CONDUITS TO BE PRESSURE RATED THE SAME AS ADJOINING PIPE.
- ENGINEER ON SITE TO DETERMINE WHERE PIPE DRILLING WILL BE UNDERTAKEN.

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN	DATE: APRIL 2023
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DRAWN : M SHEZI	CHECKED: Q SHINGA

CONTRACT No. SCMU 020 2022/2023	
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PR.TECH ENG: 2020300712	
APPROVED ON BEHALF OF JG AFRIKA:	
CAPACITY: TECHNICAL DIRECTOR	
DATE: APRIL 2023	

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED

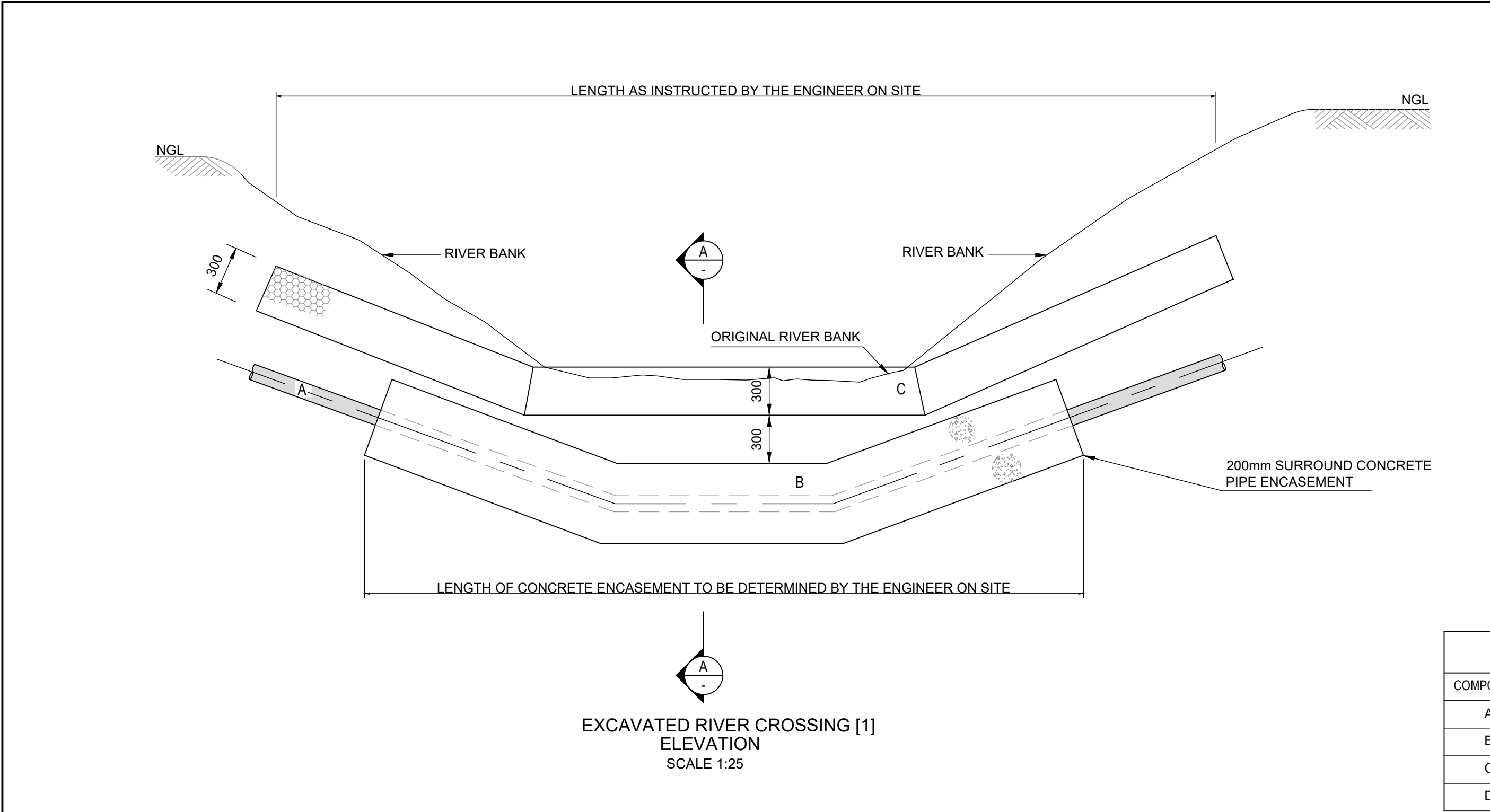


PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: ROAD CROSSING DETAILS
DESCRIPTION: TYPICAL DETAILS

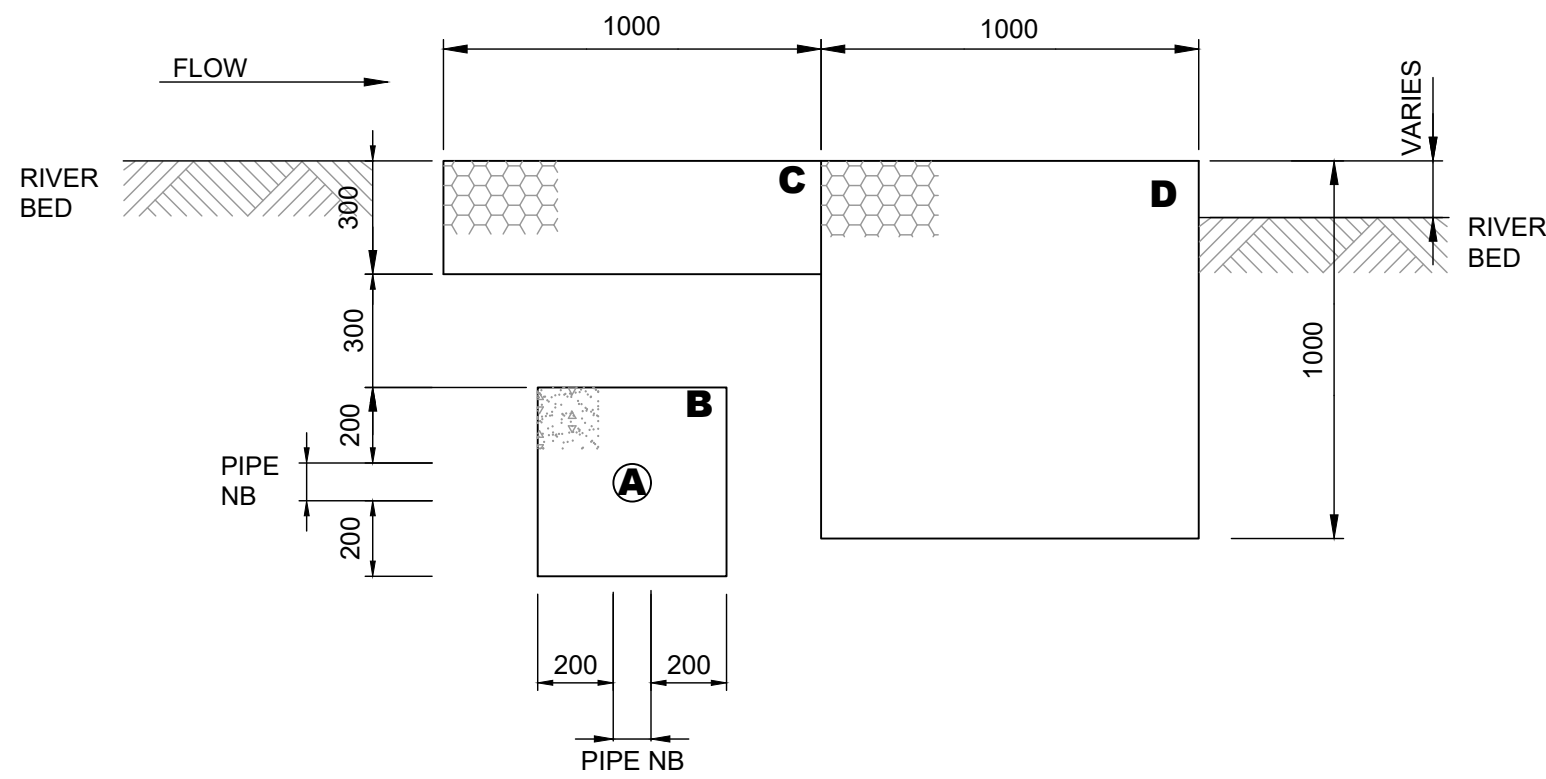
FOR TENDER

DRAWING No. 3233-7A-905

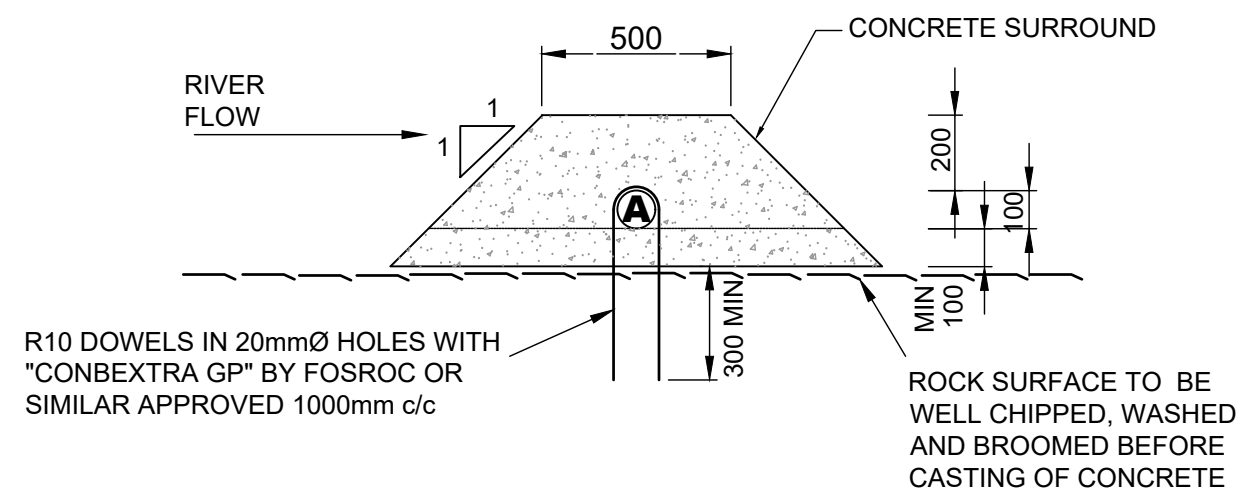
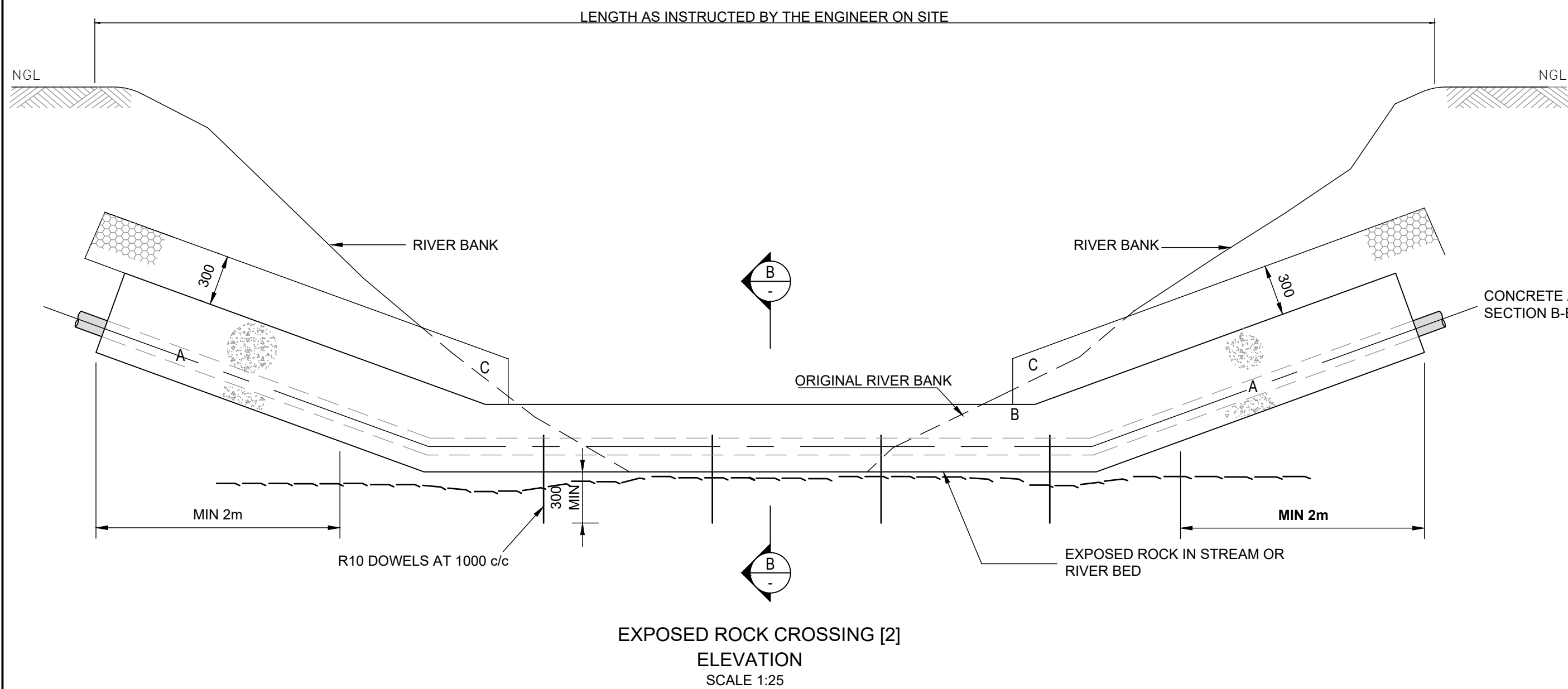
A



COMPONENT LIST	
COMPONENT	DESCRIPTION
A	PIPE
B	200mm SURROUND CONCRETE ENCASEMENT
C	300mm THICK RENO MATTRESS
D	1m x 1m GABION BASKET(LENGTH AS REQUIRED)



EXCAVATED RIVER CROSSING [1]
SECTION A-A
SCALE 1:20



EXPOSED ROCK CROSSING [2]
SECTION B-B
SCALE 1:20

EXCAVATED RIVER CROSSING [1]			
	CONDITIONS ENCOUNTERED WHERE RIVER BED EXCAVATED TO AT LEAST 2m (NO HARD ROCK)	SUGGESTED COMPONENTS TO BE USED	PIPE TYPE (A)
1)	GENTLY FALLING RIVER BED AND SLOW / LOW VELOCITY WITH: (GENERALLY TOWARDS END OF RIVER AND CLOSER TO RIVER MOUTH).	a) MINIMAL EVIDENCE OF ONGOING EROSION IN RIVER BED AND BANKS. b) SOME EVIDENCE OF EROSION IN RIVER BED AND BANKS.	HDPE HDPE
2)	MODERATELY FALLING RIVER BED AND MEDIUM RIVER VELOCITY WITH: (GENERALLY IN MIDDLE AREA OF RIVER).	a) MINIMAL EVIDENCE OF ONGOING EROSION IN RIVER BED AND BANKS. b) SOME EVIDENCE OF EROSION IN RIVER BED AND BANKS. c) SEVERE EROSION EVIDENT.	HDPE HDPE STEEL
3)	STEEP RIVER BED AND HIGH RIVER VELOCITIES WITH: (GENERALLY NEAR RIVER SOURCE).	a) SOME EVIDENCE OF ONGOING EROSION IN RIVER BED AND BANKS. b) SEVERE EROSION EVIDENT.	STEEL STEEL

EXPOSED ROCK CROSSING [2]			
	CONDITIONS ENCOUNTERED WHERE A ROCK SHELF IS PRESENT AT THE RIVER BED OR JUST BELOW	SUGGESTED COMPONENTS TO BE USED	PIPE TYPE
1)	GENTLY FALLING RIVER BED AND SLOW / LOW VELOCITY WITH: (GENERALLY TOWARDS END OF RIVER AND CLOSER TO RIVER MOUTH).	a) MINIMAL EVIDENCE OF ONGOING EROSION IN RIVER BED AND BANKS. b) SOME EVIDENCE OF EROSION IN RIVER BED AND BANKS.	HDPE HDPE
2)	MODERATELY FALLING RIVER BED AND MEDIUM RIVER VELOCITY WITH: (GENERALLY IN MIDDLE AREA OF RIVER).	a) MINIMAL EVIDENCE OF ONGOING EROSION IN RIVER BED AND BANKS. b) SOME EVIDENCE OF EROSION IN RIVER BED AND BANKS. c) SEVERE EROSION EVIDENT.	HDPE HDPE STEEL
3)	STEEP RIVER BED AND HIGH RIVER VELOCITIES WITH: (GENERALLY NEAR RIVER SOURCE).	a) MINIMAL EVIDENCE OF ONGOING EROSION IN RIVER BED AND BANKS. b) SEVERE EROSION EVIDENT.	STEEL STEEL

NOTES

- CONCRETE TO BE CLASS 20/19.
- SITE ENGINEER TO INSPECT & APPROVE ALL FINDINGS BEFORE CASTING OF CONCRETE.
- THIS DRAWING IS INTENDED FOR USE AS A GUIDELINE TO THE SITE ENGINEER. EACH CROSSING ENCOUNTERED IS DIFFERENT AND PROFESSIONAL JUDGEMENT MUST BE USED TO ESTABLISH WHICH ASPECT OF THE DRAWING TO USE SOME GENERAL CRITERIA ARE PRESENT TO ASSIST IN THIS SELECTION
- WHERE HDPE PIPE IS USED, THE RIVER CROSSING MUST CONSIST OF A CONTINUOUS LENGTH OF PIPE (NO JOINTS) EXTENDING AT LEAST 20m FROM THE RIVER BANK ON EACH SIDE. (NO JOINTS IN OR NEAR THE RIVER).
- R10 DOWEL BENT TO SUIT PIPE DIAMETER ON SITE.
- DISTURBED GROUND TO BE RECOMPACTED TO AT LEAST THE SAME DENSITY AS UNDISTURBED INSITU MATERIAL. EVERY EFFORT MUST BE MADE TO MINIMISE DISTURBANCE TO THE NATURAL RIVER.
- WHERE uPVC PIPES ARE REQUIRED TO CROSS RIVERS OR EROSION GULLIES, THE PIPE MUST BE REPLACED WITH SUITABLE GRADE AND DIAMETER HDPE OR STEEL PIPE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTION.

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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CAPACITY:
DATE:



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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN

DATE: APRIL 2023

DESIGNED: Q SHINGA

CHECKED: T.VAN VUUREN

DRAWN : M SHEZI

CHECKED: Q SHINGA

CONTRACT No. SCMU 020 2022/2023

DESIGN CHECKED BY: T.VAN VUUREN

CAPACITY: SENIOR TECHNOLOGIST

PR.TECH ENG: 2020300712

APPROVED ON BEHALF OF JG AFRIKA:

CAPACITY: TECHNICAL DIRECTOR

DATE: APRIL 2023

ISO 9001

QUALITY MANAGEMENT SYSTEM

DEKRA CERTIFIED



PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

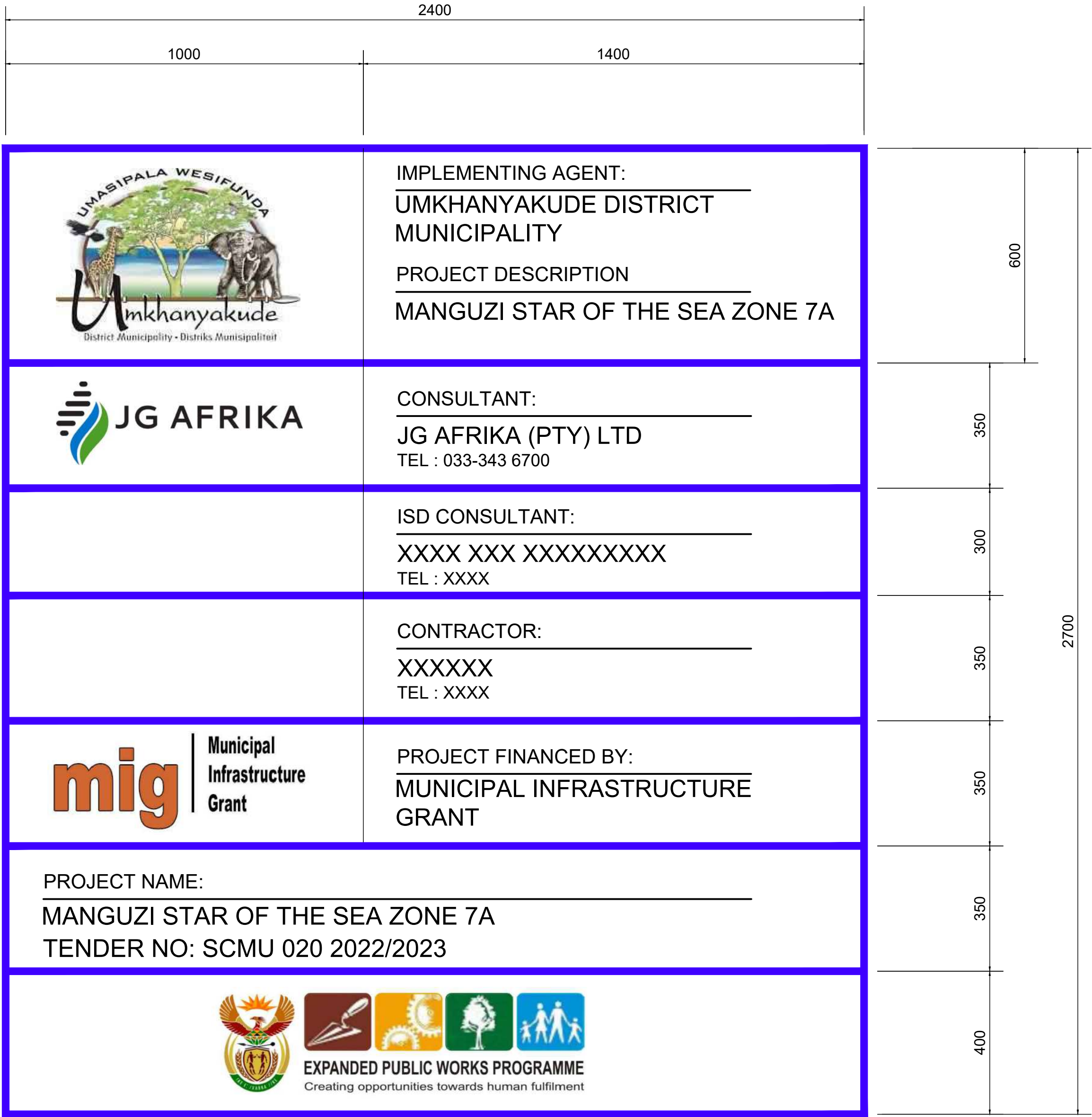
TITLE: RIVER AND EROSION GULLY
CROSSINGS

DESCRIPTION: TYPICAL DETAILS

FOR TENDER

DRAWING No. 3233-7A-906

A



NOTES

- 1. ALL EMBLEMS MUST BE IN THEIR OFFICIAL COLOURS.
- 2. THE BACKGROUND SHALL BE MATT WHITE.
- 3. ALL LETTERS EXCEPT THOSE ON EMBLEMS SHALL BE MATT BLACK IN CAPITALS.
- 4. THE MATERIALS MAY CONSIST OF:
 - 3 TREATED WOODEN POLES PER BOARD (100mm TOP DIAMETER)
 - THE FRAME MAY BE OF 50mm x 50mm STEEL HOLLOW SECTIONS AT 1000mm C/C IN BOTH DIRECTIONS OR A WOODEN FRAME MAY BE USED
 - SIGNBOARD TO BE 5mm CHROMADEK SHEETING
 - THE REVERSE SIDE OF THE BOARD MUST BE LIGHT GREY
- 5. THE 20mm BORDER MUST BE OXFORD BLUE (105 OF BS831 (C) OF 1946)
- 6. THE POSITION AND HEIGHT OF THE BOARDS SHALL BE DETERMINED BY THE ENGINEER ON SITE
- 7. THE SIGN BOARD TO BE APPROVED BY THE ENGINEER PRIOR TO MANUFACTURING

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



Municipal Infrastructure Grant



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STAND 13433, KINGFISHER ROAD
MKUZE, 3965

UMKHANYAKUDE DISTRICT MUNICIPALITY
DC 27

APPROVED:
CAPACITY:
DATE:



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6 PIN OAK AVENUE, HILTON, 3245

SCALE ON A1 : AS SHOWN	DATE: APRIL 2023
DESIGNED: Q SHINGA	CHECKED: T.VAN VUUREN
DRAWN : M SHEZI	CHECKED: Q SHINGA
CONTRACT No. SCMU 020 2022/2023	
DESIGN CHECKED BY: T.VAN VUUREN	
CAPACITY: SENIOR TECHNOLOGIST	
PR.TECH ENG: 2020300712	
APPROVED ON BEHALF OF JG AFRIKA:	
CAPACITY: TECHNICAL DIRECTOR	
DATE: APRIL 2023	

ISO 9001
QUALITY MANAGEMENT SYSTEM
DEKRA CERTIFIED



PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: TYPICAL DETAILS
DESCRIPTION: SIGN BOARD DETAILS

FOR TENDER

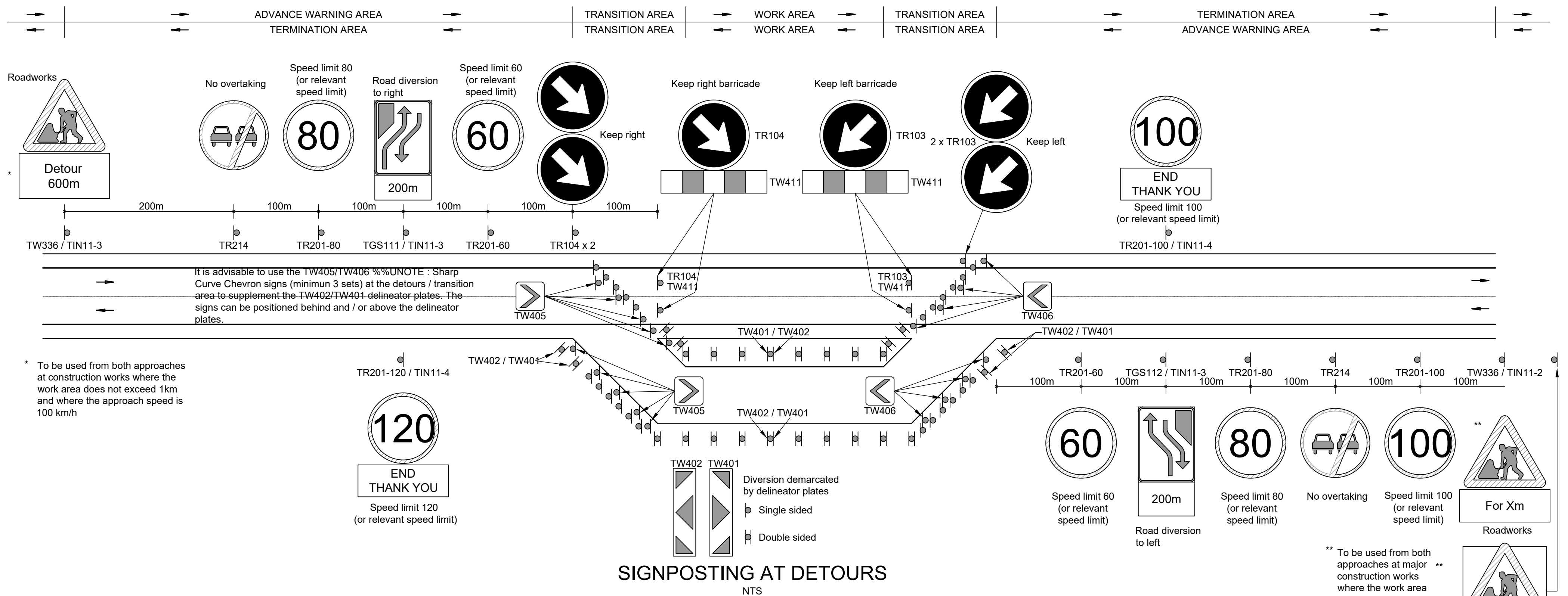
DRAWING No. 3233-7A-907



V:\Water\3233 - Manguzi Town (NB-SM)\03 Drawings\3. Phase 2\For Tender\Zone 7A\6 Standard Details\3233-7A-900 To 911 Rev A.dwg

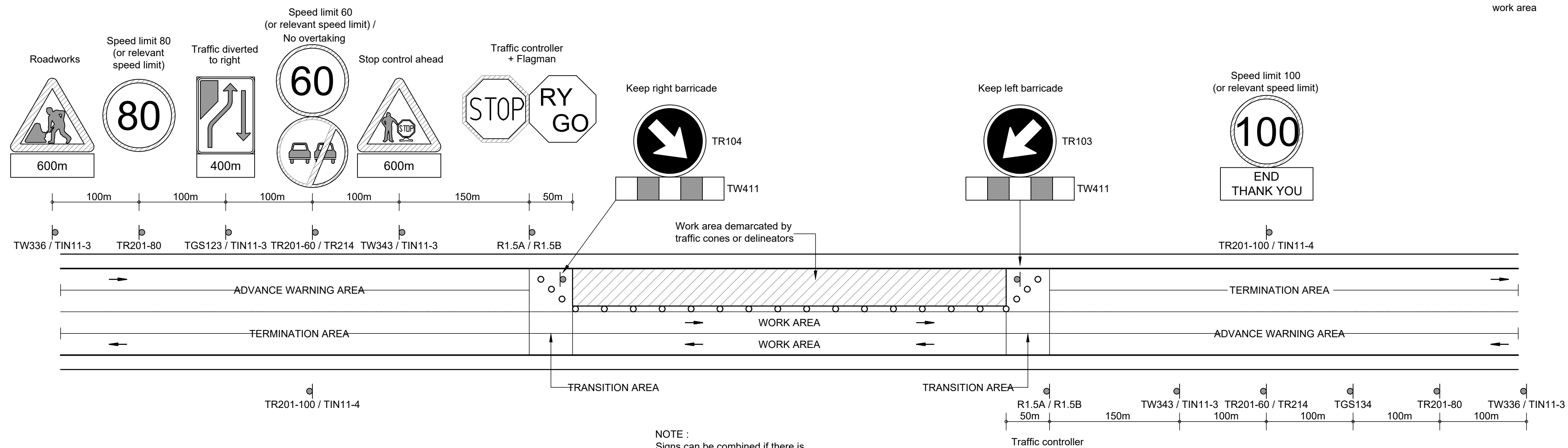
NOTES

- ALL SIGNS TO BE IN ACCORDANCE WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL ROAD WORKS SIGNING CHAPTER B.



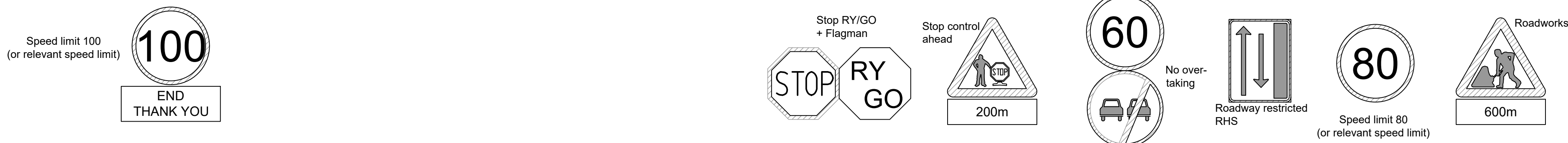
SIGNPOSTING AT DETOURS

NTS



SIGNPOSTING FOR LANE CLOSURES

NTS



mig Municipal Infrastructure Grant

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APPROVED ON BEHALF OF JG AFRIKA:
CAPACITY: TECHNICAL DIRECTOR
DATE: APRIL 2023

ISO 9001
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DEKRA CERTIFIED

PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A
TITLE: TRAFFIC ACCOMMODATION
SIGNAGE
DESCRIPTION: TYPICAL DETAILS

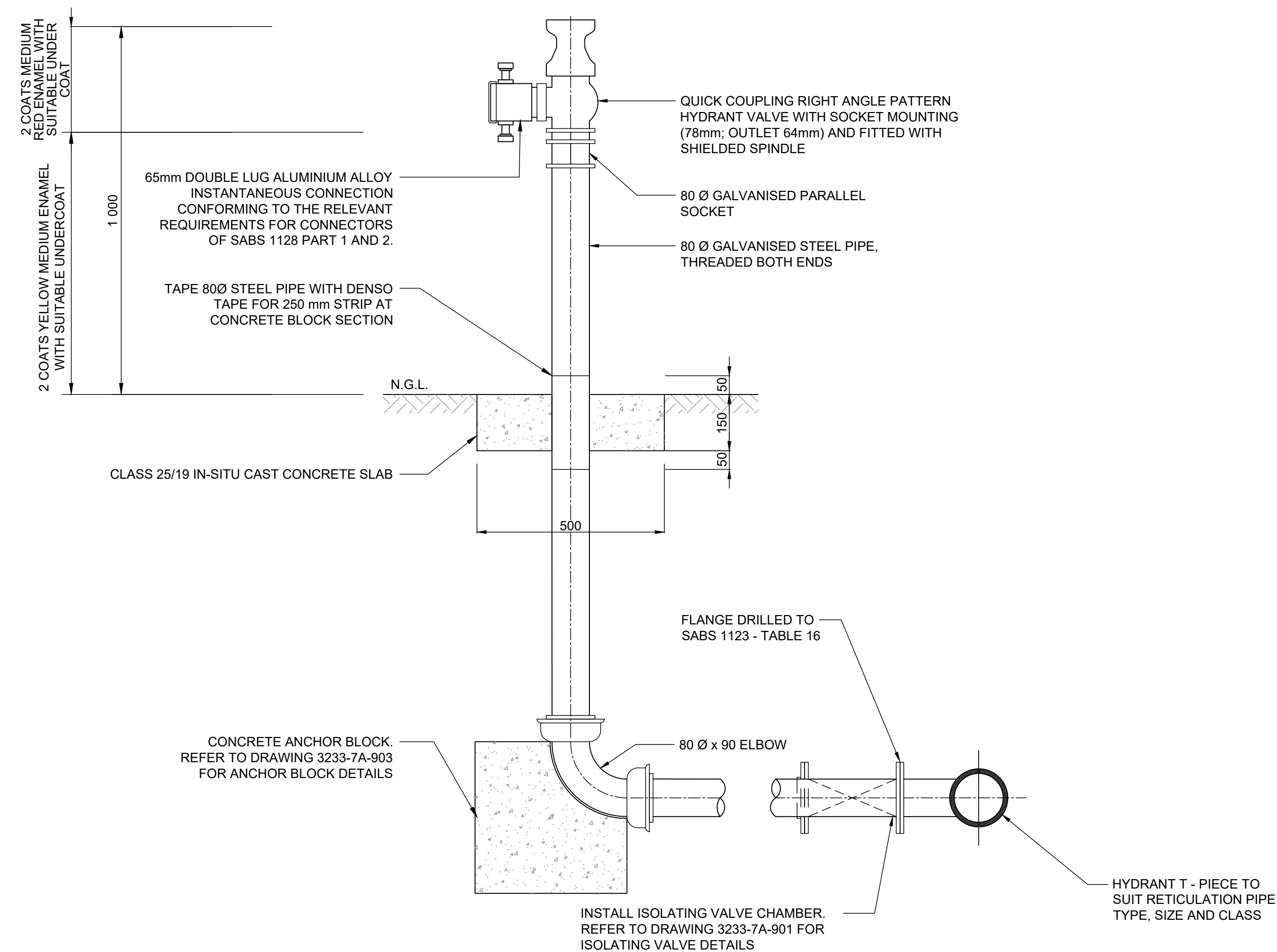
FOR TENDER

DRAWING No. 3233-7A-908

A

NOTES

1. HYDRANTS MUST BE LOCATED IN COLLABORATION WITH THE CITY ELECTRICAL ENGINEERS DEPARTMENT SO THAT THEIR POSITIONS DO NOT COINCIDE WITH THOSE SELECTED FOR ELECTRICAL HOUSE CONNECTION BOXES.
2. ALL THREADED CONNECTIONS BELOW GROUND MUST BE TAPED WITH DENSOTAPE OR SIMILAR APPROVED.
3. ALL HYDRANT HEADS ARE TO BE OF THE WOODLANDS TYPE OR SIMILAR APPROVED.
4. ALL FLANGE DRILLING TO BE SANS 1123: TABLE 1600/3.
5. THE FIRE HYDRANT IS TO BE POSITIONED A MAXIMUM OF 1.0 m FROM THE ROAD RESERVE BOUNDARY FENCE OR WALL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



HYDRANT DETAILS

SCALE 1:10

A	FOR TENDER	QS	APR 23
No.	DESCRIPTION	NAME	DATE

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APPROVED ON BEHALF OF JG AFRIKA

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2023	ISO 9001 QUALITY MANAGEMENT SYSTEM DEKRA CERTIFIED
------	--

PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

TITLE: HYDRANT DETAILS

DESCRIPTION: TYPICAL DETAILS

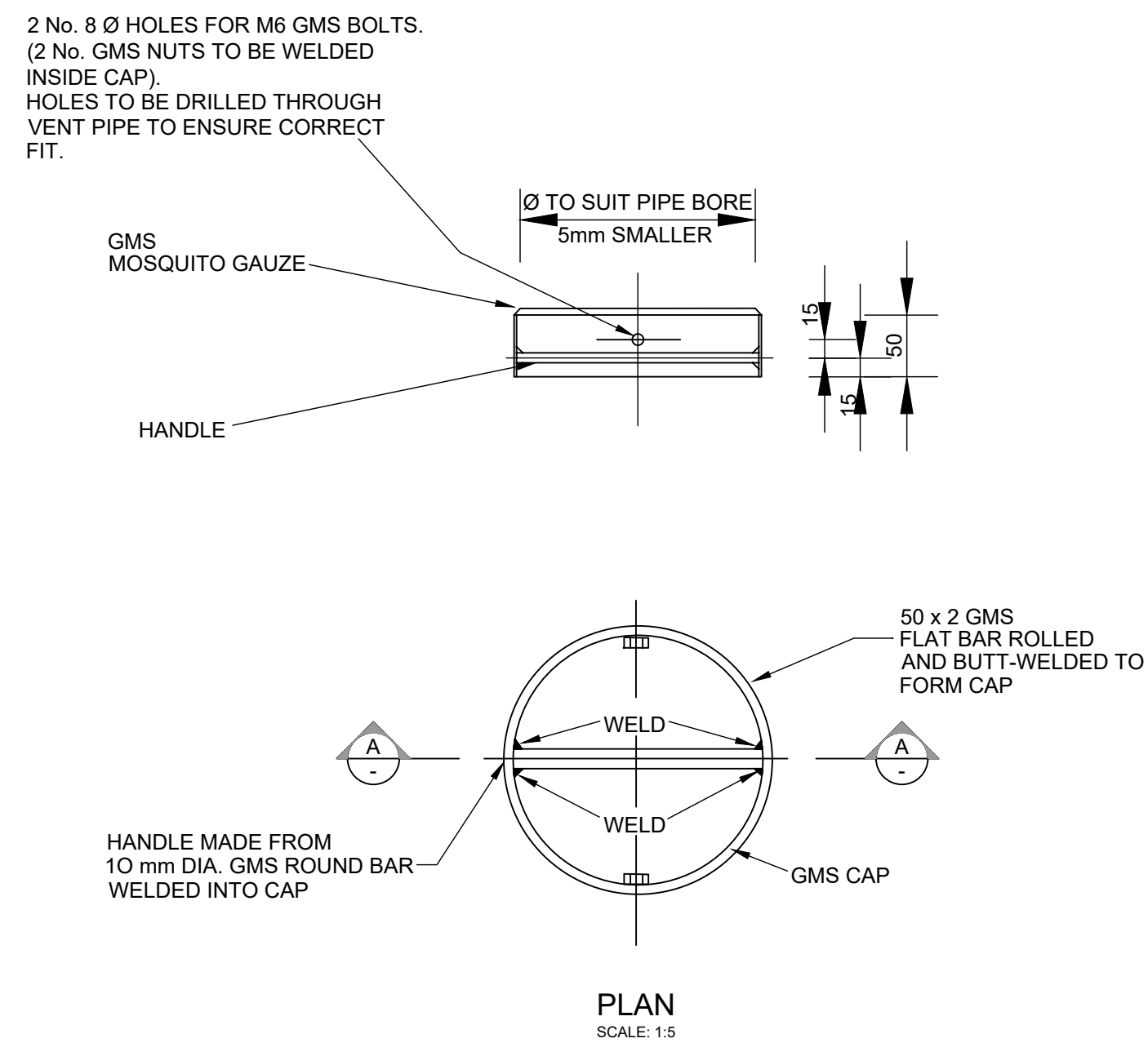
FOR TENDER

DRAWING No. 3233-7A-909

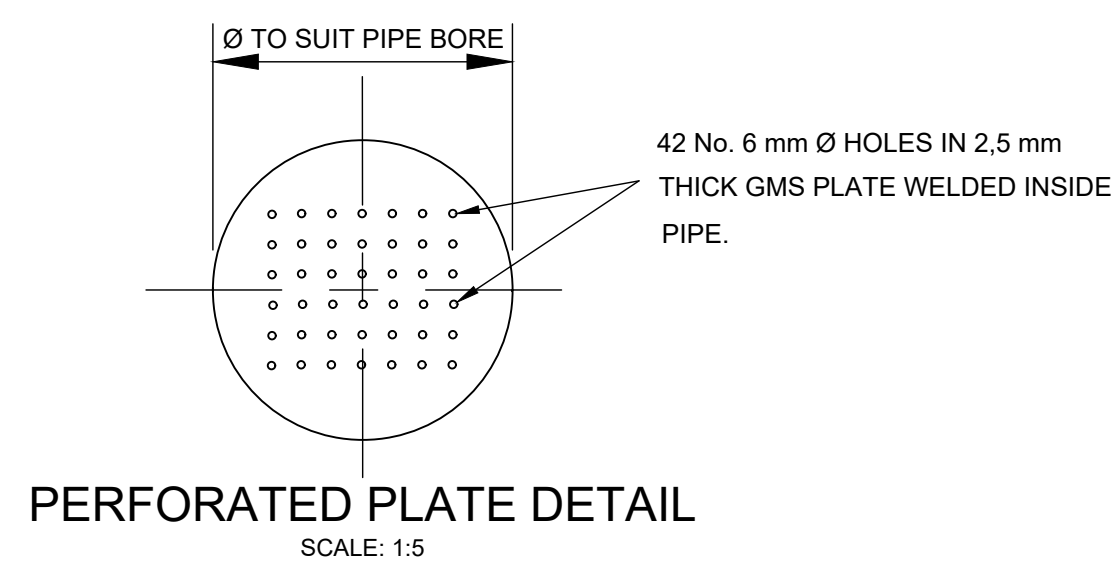


NOTES

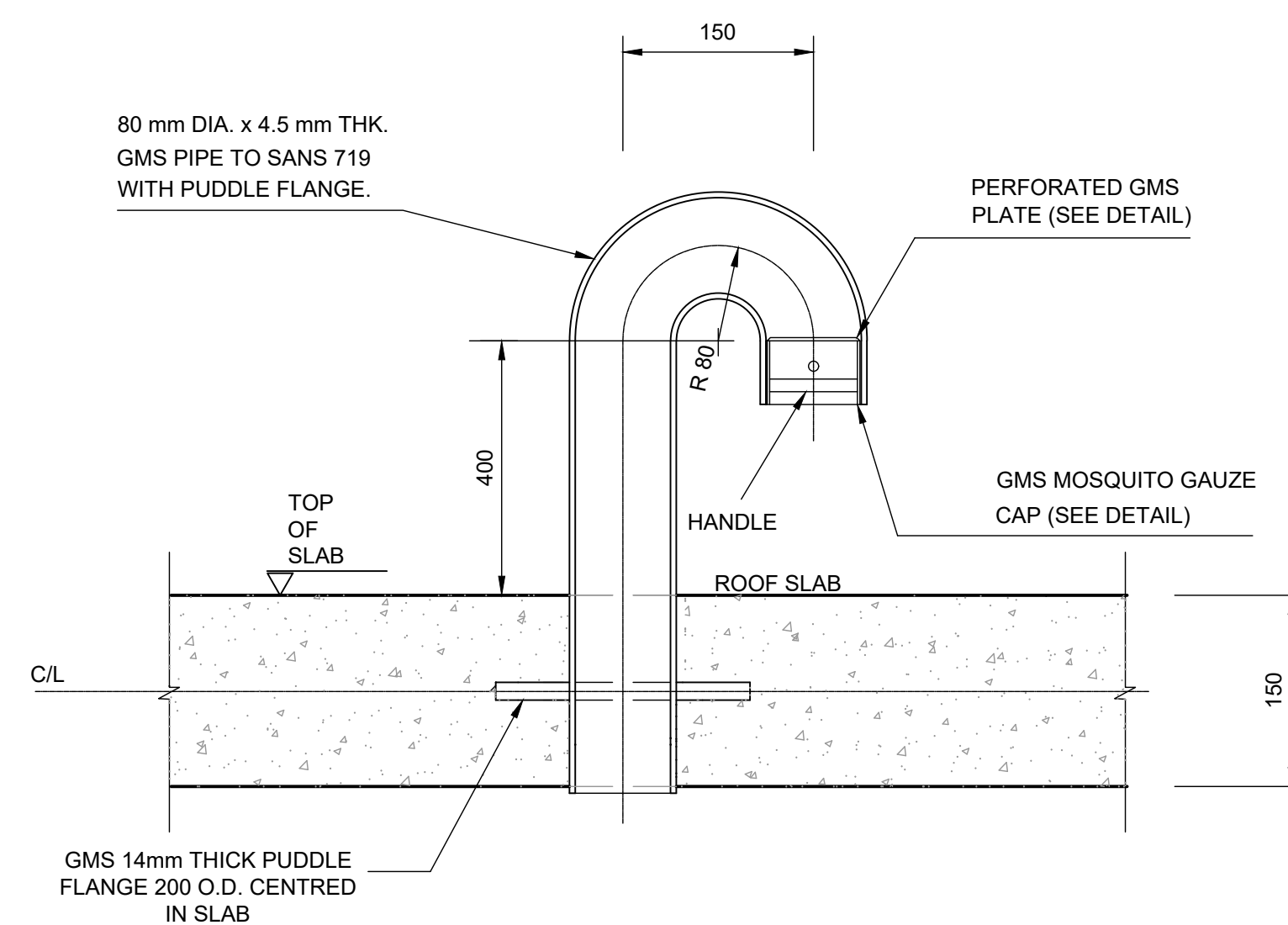
1. ALL STEEL COMPONENTS INCLUDING BOLTS TO BE GALVANISED TO ISO 1461 : 2000. OVER 150Ø TO BE EPOXY COATED (3 COATED TO 250 MICRONS)
2. ALL WELDS TO BE FULL PENETRATION TO BS 534 AND FILLET WELD TO BE 80% OF WALL THICKNESS OR WITH A MINIMUM OF 5mm THICKNESS.



DETAILS OF MOSQUITO GAUZE CAP



PERFORATED PLATE DETAIL



TYPICAL SECTION TROUGH VENTILATOR
SCALE: 1:10

80mm Ø VENTILATOR DETAILS

A	FOR TENDER	QS	APR 23
lo.	DESCRIPTION	NAME	DATE

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DATE: APRIL 2023	

ISO 9001
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PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

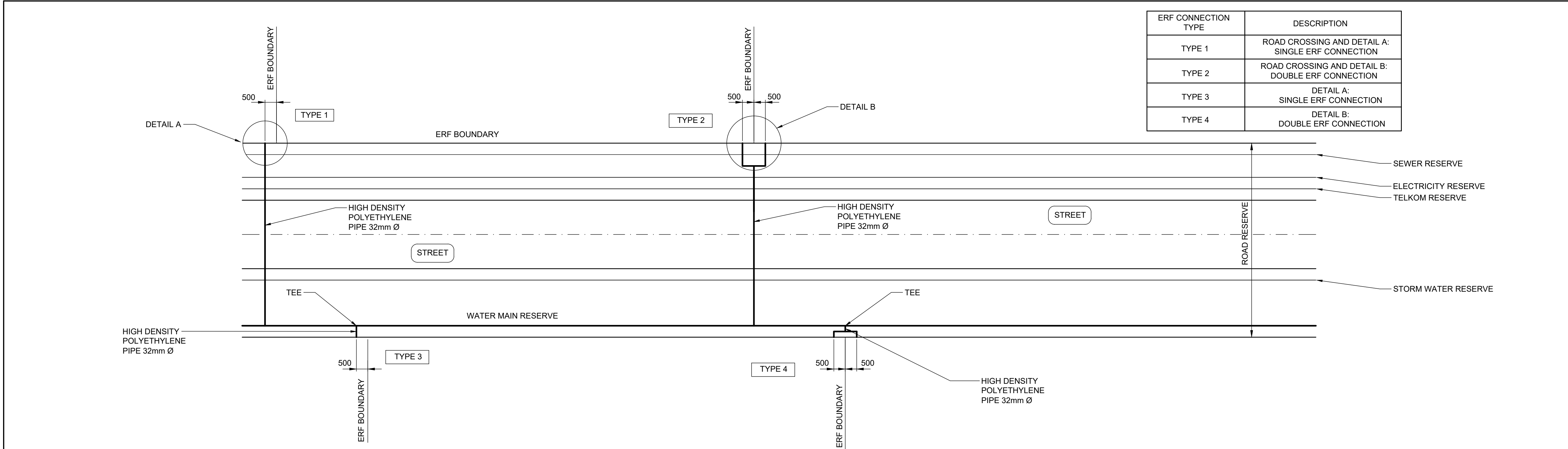
TITLE: VENTILATOR DETAILS

DESCRIPTION: TYPICAL DETAILS

FOR TENDER

DRAWING No. 3233-7A-910

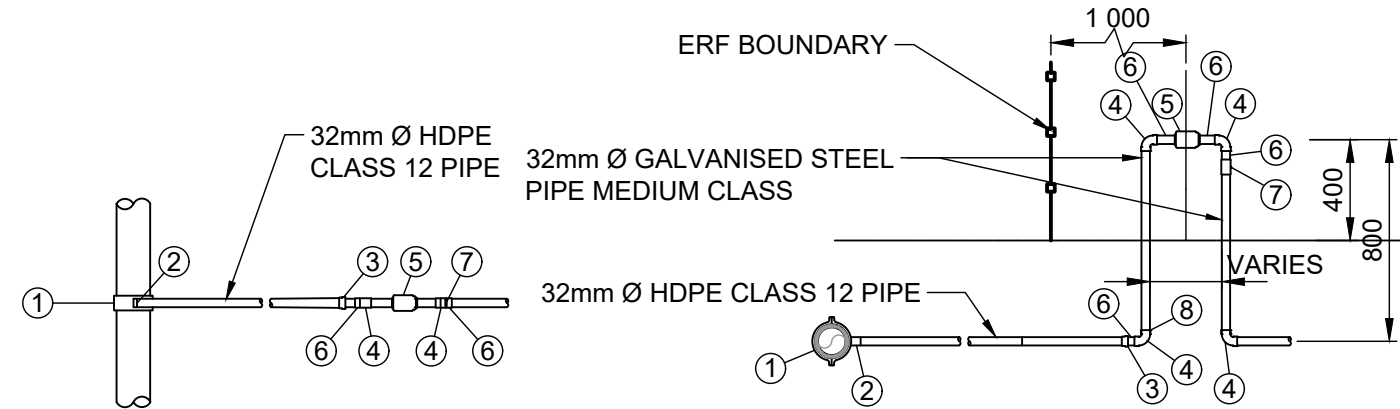




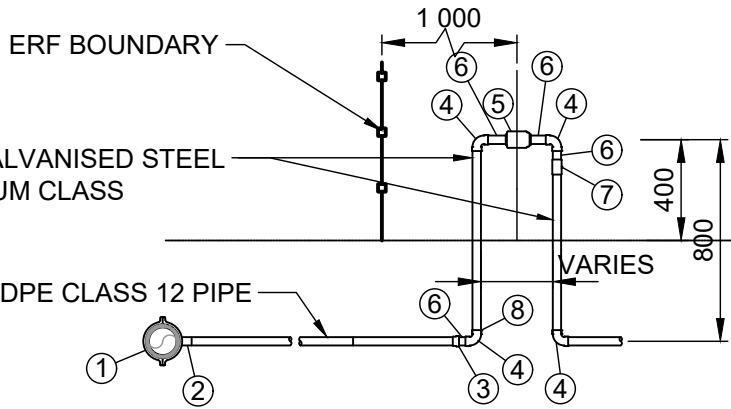
ERF CONNECTION TYPE	DESCRIPTION
TYPE 1	ROAD CROSSING AND DETAIL A: SINGLE ERF CONNECTION
TYPE 2	ROAD CROSSING AND DETAIL B: DOUBLE ERF CONNECTION
TYPE 3	DETAIL A: SINGLE ERF CONNECTION
TYPE 4	DETAIL B: DOUBLE ERF CONNECTION

TYPICAL LAYOUT FOR ERF CONNECTIONS

SCALE 1:100



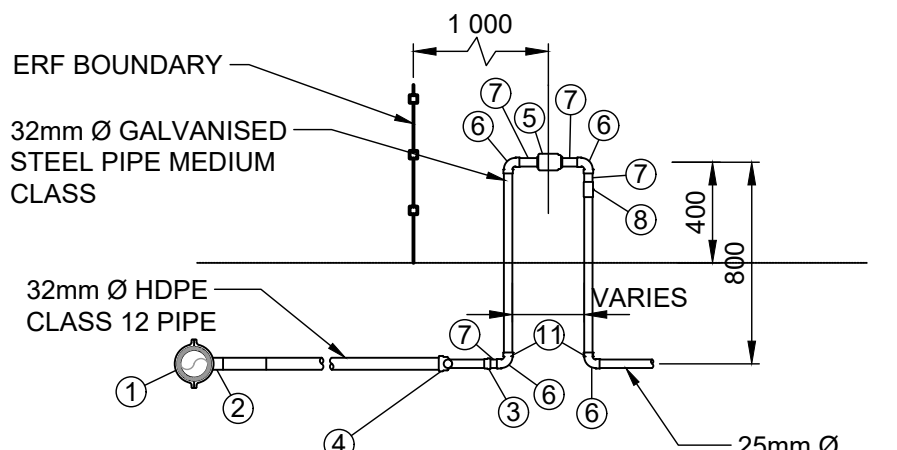
PLAN
N.T.S.



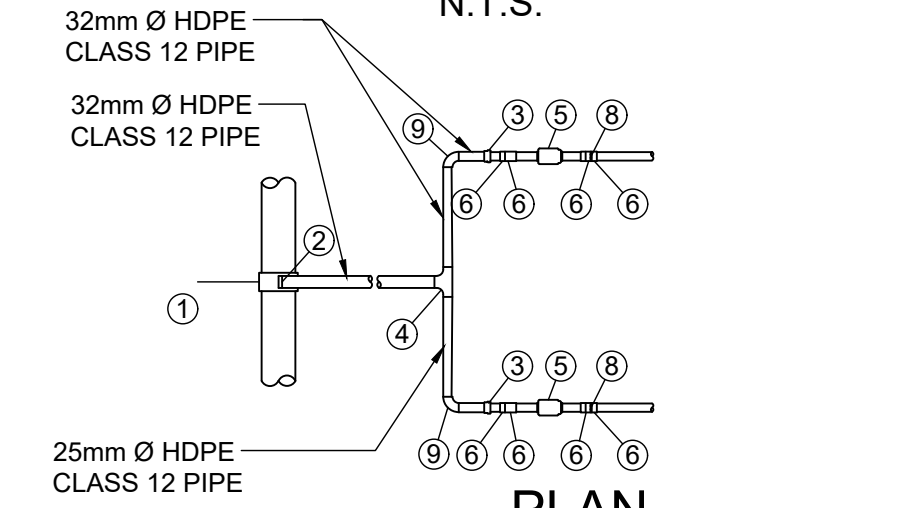
SECTION
N.T.S.

DETAIL A - SINGLE ERF CONNECTION	
ITEM	DESCRIPTION
1	HDPE TEE TO FIT SIZE, TYPE & CLASS OF PIPE
2	32mm Ø PLASSON MALE ADAPTOR
3	32mm Ø MALE ADAPTOR
4	32mm Ø GALVANISED STEEL 90° ELBOW BOTH ENDS FEMALE
5	32mm Ø 620C/620MC SENSUS WATER METER WITH CAP, NUT & LINING ON BOTH SIDES
6	32mm Ø GALVANISED NIPPLE
7	32mm HEXAGON STAINLESS STEEL BALL VALVE - SABS 1056
8	DENSOTAPE

DETAIL B - DOUBLE ERF CONNECTION	
ITEM	DESCRIPTION
1	HDPE TEE TO FIT SIZE, TYPE & CLASS OF PIPE
2	32mm Ø PLASSON MALE ADAPTOR
3	25mm Ø MALE ADAPTOR
4	32 x 32 x 32mm Ø 90° HDPE COMPRESSION T-PIECE
5	32mm Ø 620C/620MC SENSUS WATER METER WITH CAP, NUT & LINING ON BOTH SIDES
6	32mm GALVANISED ELBOW
7	32mm Ø GALVANISED NIPPLE
8	32mm HEXAGON STAINLESS STEEL BALL VALVE - SABS 1056
9	32mm Ø 90° HDPE COMPRESSION ELBOW
10	DENSOTAPE

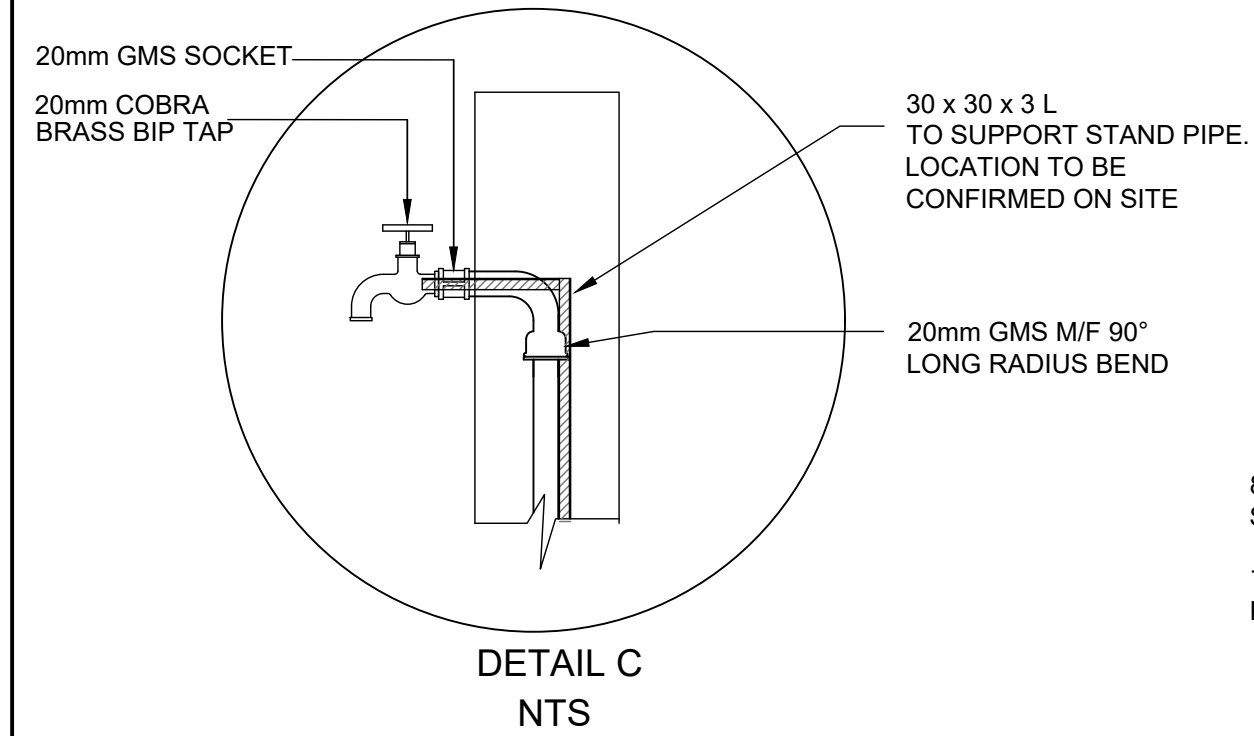


SECTION
N.T.S.

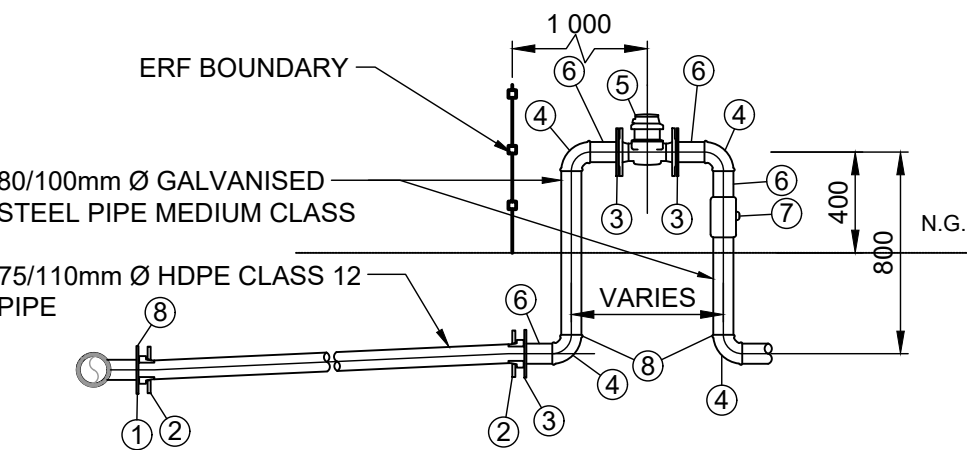


PLAN
N.T.S.

DETAIL A: SINGLE ERF CONNECTION 32mm

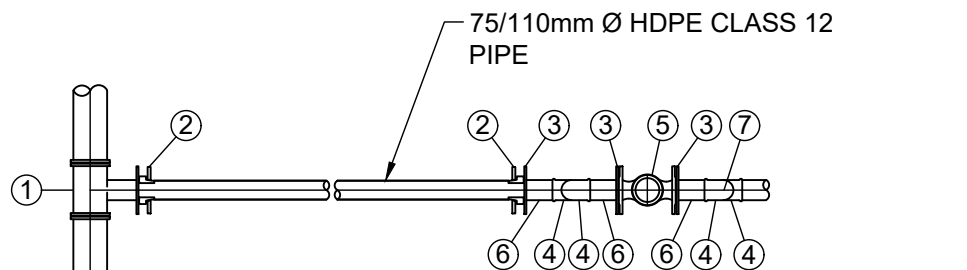


DETAIL C
NTS



SECTION
N.T.S.

DETAIL A - SINGLE ERF CONNECTION 80mm	
ITEM	DESCRIPTION
1	MAIN LINE Ø x 75mm Ø FLANGED T-PIECE
2	75mm Ø HDPE STUB WITH BACKING RING
3	75mm Ø THREADED FLANGED FOR 80mm Ø GALVANISED PIPE
4	80mm Ø GALVANISED STEEL 90° ELBOW BOTH ENDS FEMALE
5	80mm Ø WP-DYNAMIC 50°C / PN16 DN 80 SENSUS WATER METER WITH CAP, NUT & LINING ON BOTH SIDES
6	80mm Ø GALVANISED NIPPLE
7	80mm HEXAGON STAINLESS STEEL BALL VALVE - SABS 1056
8	DENSOTAPE



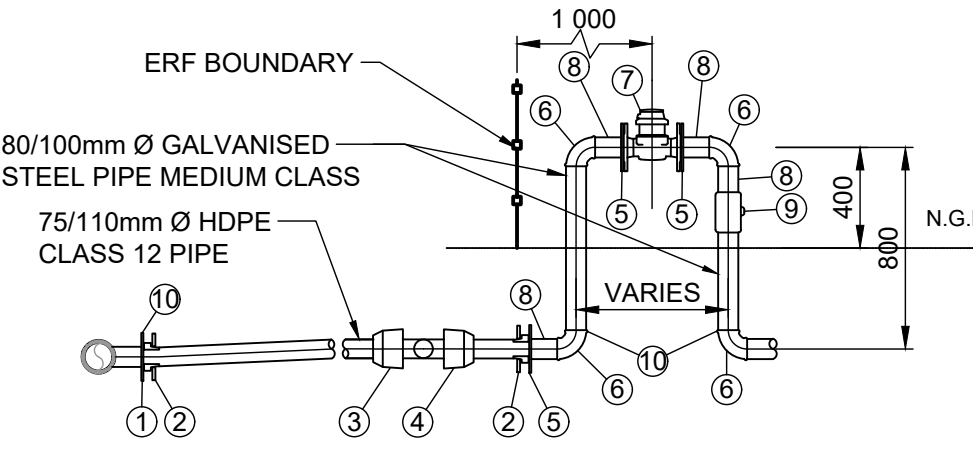
PLAN
N.T.S.

DETAIL A - SINGLE ERF CONNECTION 100mm	
ITEM	DESCRIPTION
1	MAIN LINE Ø x 110mm Ø FLANGED T-PIECE
2	110mm Ø HDPE STUB WITH BACKING RING
3	110mm Ø THREADED FLANGED FOR 100mm Ø GALVANISED PIPE
4	100mm Ø GALVANISED STEEL 90° ELBOW BOTH ENDS FEMALE
5	100mm Ø WP-DYNAMIC 50°C / PN16 DN 100 SENSUS WATER METER WITH CAP, NUT & LINING ON BOTH SIDES
6	100mm Ø GALVANISED NIPPLE
7	100mm HEXAGON STAINLESS STEEL BALL VALVE - SABS 1056
8	DENSOTAPE

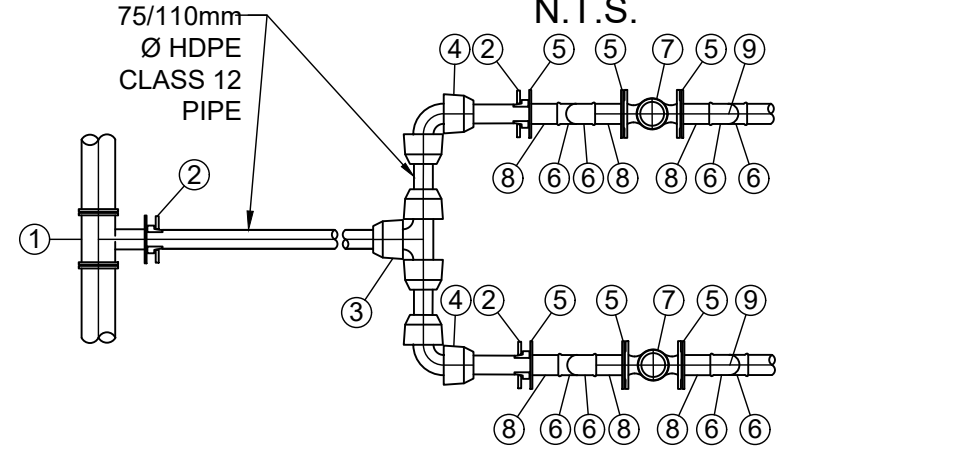


PLAN
N.T.S.

DETAIL B: DOUBLE ERF CONNECTION 32mm



SECTION
N.T.S.



PLAN
N.T.S.

DETAIL B - DOUBLE ERF CONNECTION 80mm	
ITEM	DESCRIPTION
1	MAIN LINE Ø x 75mm Ø FLANGED T-PIECE
2	75mm Ø HDPE STUB WITH BACKING RING
3	75 x 75mm Ø 90° HDPE COMPRESSION T-PIECE
4	75mm Ø 90° HDPE COMPRESSION ELBOW
5	75mm Ø THREADED FLANGED FOR 80mm Ø GALVANISED PIPE
6	80mm Ø GALVANISED STEEL 90° ELBOW BOTH ENDS FEMALE
7	80mm Ø WP-DYNAMIC 50°C / PN16 DN 80 SENSUS WATER METER WITH CAP, NUT & LINING ON BOTH SIDES
8	80mm Ø GALVANISED NIPPLE
9	80mm HEXAGON STAINLESS STEEL BALL VALVE - SABS 1056
10	DENSOTAPE

DETAIL B - DOUBLE ERF CONNECTION 100mm	
ITEM	DESCRIPTION
1	MAIN LINE Ø x 110mm Ø FLANGED T-PIECE
2	110mm Ø HDPE STUB WITH BACKING RING
3	110 x 110 x 110mm Ø 90° HDPE COMPRESSION T-PIECE
4	110mm Ø 90° HDPE COMPRESSION ELBOW
5	110mm Ø THREADED FLANGED FOR 100mm Ø GALVANISED PIPE
6	80mm Ø GALVANISED STEEL 90° ELBOW BOTH ENDS FEMALE
7	100mm Ø WP-DYNAMIC 50°C / PN16 DN 100 SENSUS WATER METER WITH CAP, NUT & LINING ON BOTH SIDES
8	100mm Ø GALVANISED NIPPLE
9	100mm HEXAGON STAINLESS STEEL BALL VALVE - SABS 1056
10	DENSOTAPE

DETAIL B: DOUBLE ERF CONNECTION 80/100mm

FOR TENDER

NOTES

1. POSITION OF ERF CONNECTION AND TYPE TO BE DETERMINED BY THE ENGINEER ON SITE.

FOR TENDER		QS	APR 23
No.	DESCRIPTION	NAME	DATE

REVISION



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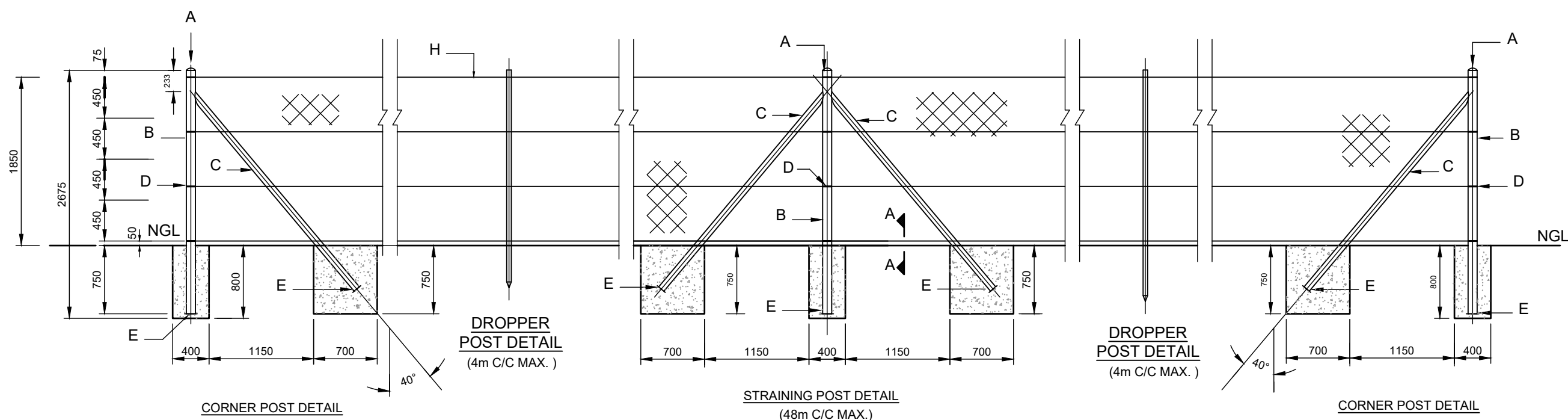
PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

TITLE: TYPICAL ERF CONNECTION

DESCRIPTION: TYPICAL DETAILS

DRAWING No. 3233-7A-911

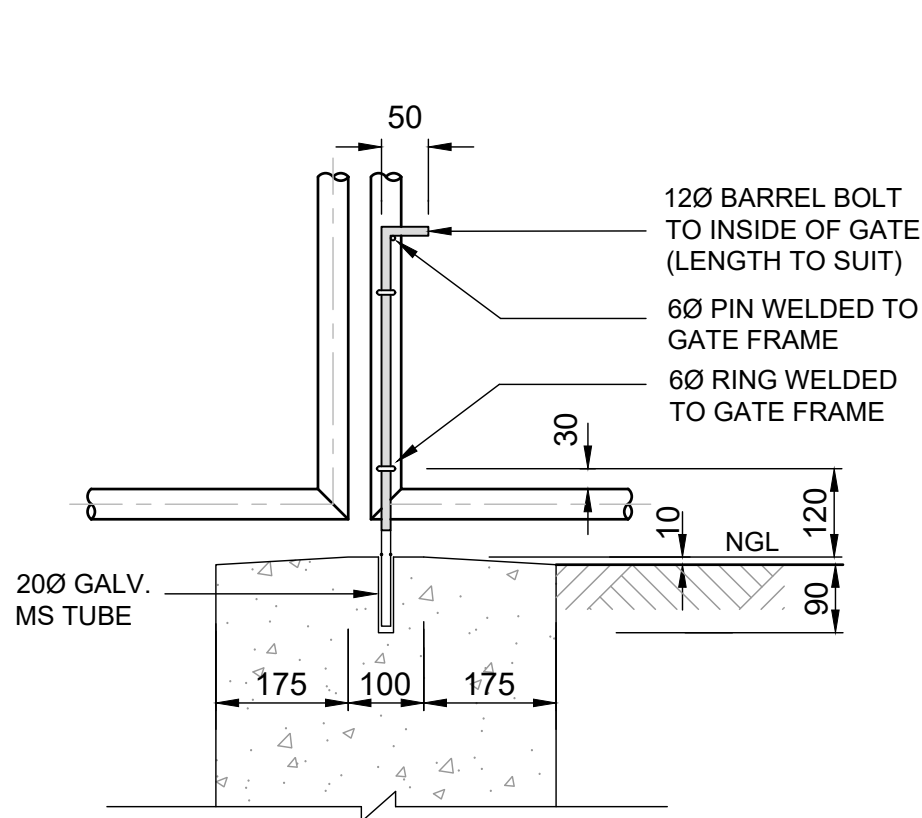
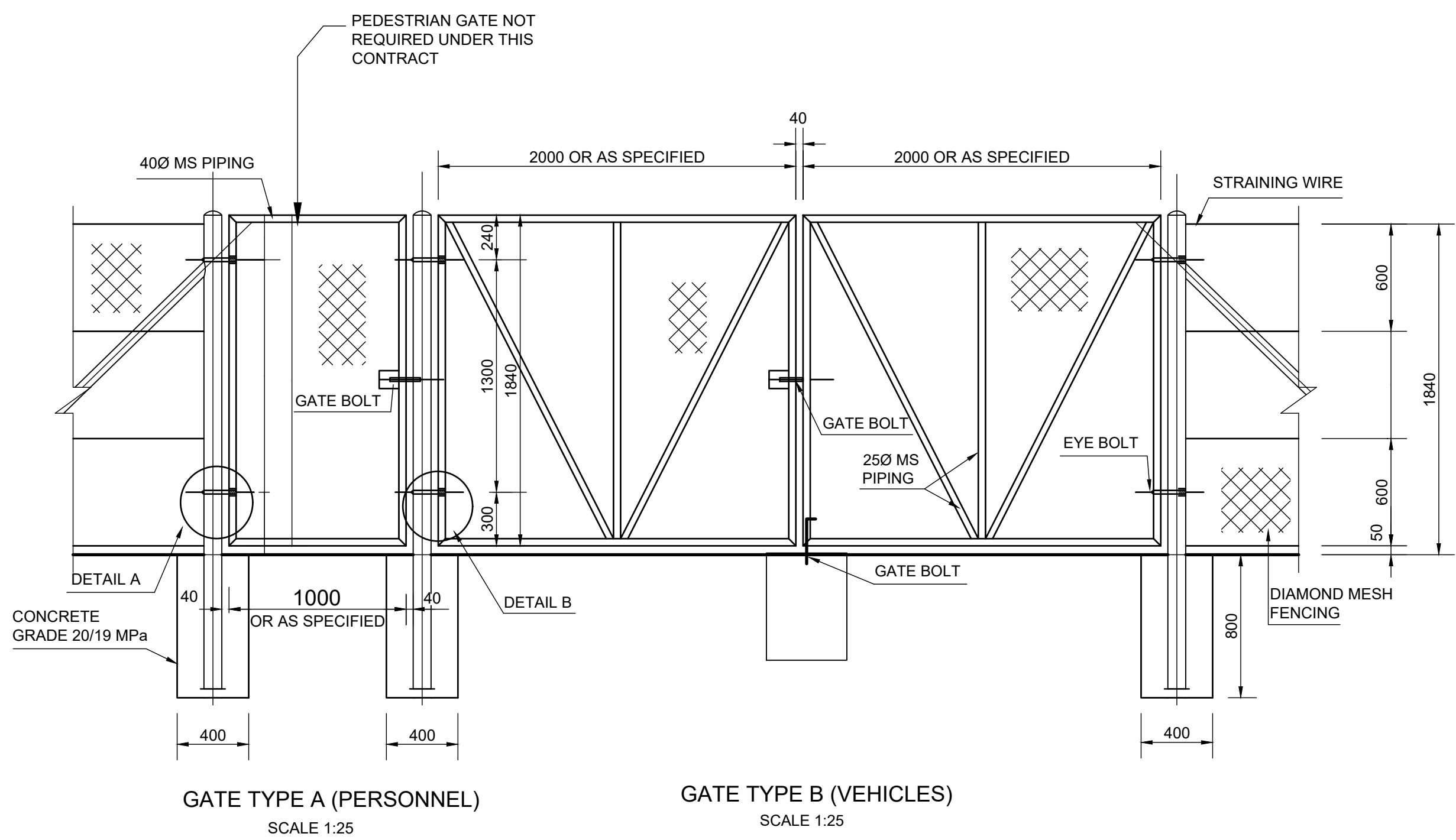




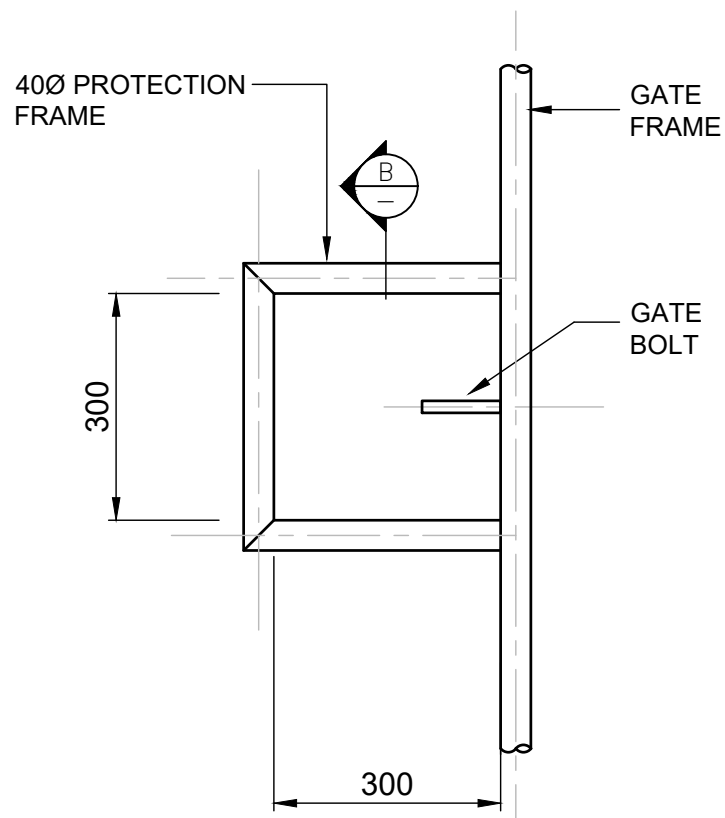
STANDARD FENCING WITH RAZOR MESH - FENCE TYPE A
SCALE 1:50

FENCE TYPE	
A	RAZOR MESH
B	DIAMOND AND FLAT WRAP ON THE TOP
C	FLAT WRAP

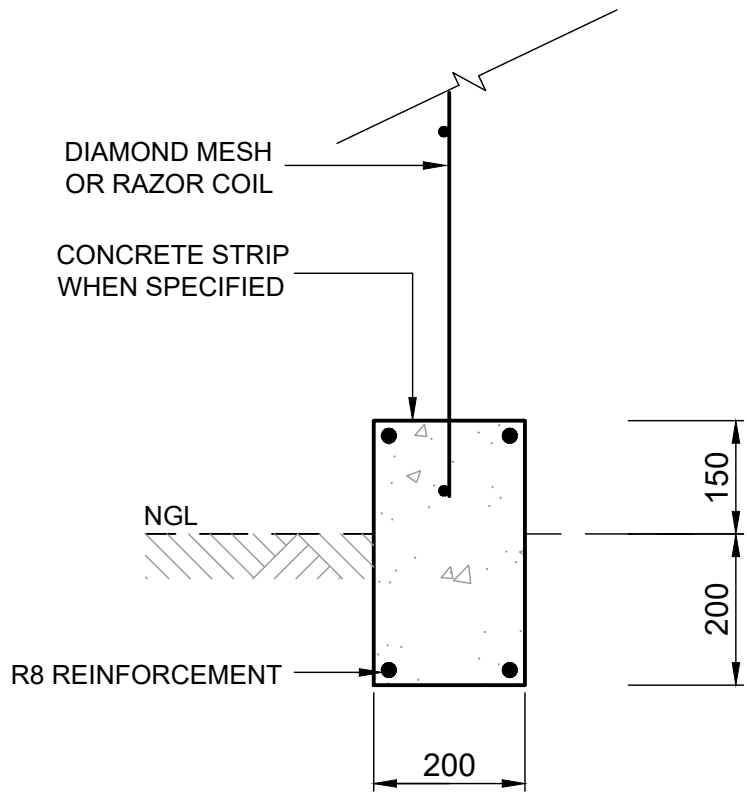
LEGEND	
(A)	4mm PLATE PRESSED STEEL END CAP
(B)	114mm O.D X 3.5mm WALL THICKNESS X 9.9Kg/m PIPE
(C)	88mm O.D X 3.0 mm X 6.8 Kg/m PIPE, 2.8m LONG
(D)	10mm DIAMETER HOLES
(E)	200 X 200 X 5mm THICK BASE PLATES
(F)	2.5Kg/m "Y" SECTION STANDARD X 2.4m LONG
(G)	450mm DIAMETER FLAT-WRAP
(H)	STRAIN WIRE TO BE 4mm DIAMETER MILD STEEL OR 2mm DIAMETER HIGH TENSILE STEEL
(J)	RAZOR DIAMOND MESH: 1800 x 75 x 2.5 mm TO SABS 675



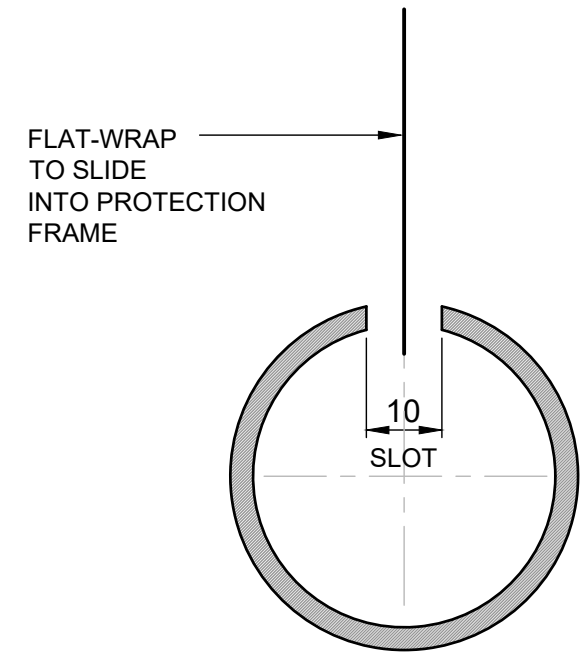
DETAIL A: GATE BOLT
(GATE TYPE B AND D)



DETAIL B: PROTECTION FRAME
FOR FLAT-WRAP TYPE GATES
SCALE 1:10



SECTION A-A



SECTION B-B
SCALE 1:1

FOR TENDER

NOTES

1. POSITION OF ERF CONNECTION AND TYPE TO BE DETERMINED BY THE ENGINEER ON SITE.

A	FOR TENDER	QS	APR 23
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PROJECT: MANGUZI STAR OF THE SEA
ZONE 7A

TITLE: FENCING DETAILS

DESCRIPTION: TYPICAL DETAILS

DRAWING No. 3233-7A-912

A



ITEM	DESCRIPTION
1	PRECAST CONCRETE SLAB - HEAVY DUTY - 150mm THICK ROCLA OR SIMILAR APPROVED
2	PRECAST CONCRETE LID - HEAVY DUTY - 150 mm THICK
3	EPIDERMIX 350 ADHESIVE OR SIMILAR APPROVED
4	ALL PIPE THROUGH BRICKWORK TO BE WRAPPED IN 2000 MICRON PVC SHEET
5	4 COURSES ENGINEERING BRICKWORK - REMOVE BRICKS TO INSERT PIPE AND GROUT OPENING CLOSED
6	150mm THICK CONCRETE GRADE 25/19 SLAB
7	REF. 395 MESH LOCATED CENTRALLY IN SLAB
8	SINGLE MASONRY BRICK PLACED UNDER VALVE.
9	CEMENT MORTAR (1:3 CEMENT:SAND)
10	1250 Ø PRECAST CONCRETE RINGS TO SANS 1294:2006
11	CI FLANGED WEDGE GATE VALVE TO SANS 664:1999
12	STUB FLANGE

A

Manouri, Toussaint, 1999, *Phonetic Tendencies in Standard Dialectal French*, *Zeitschrift für Romanische Linguistik* 25, 1-14.