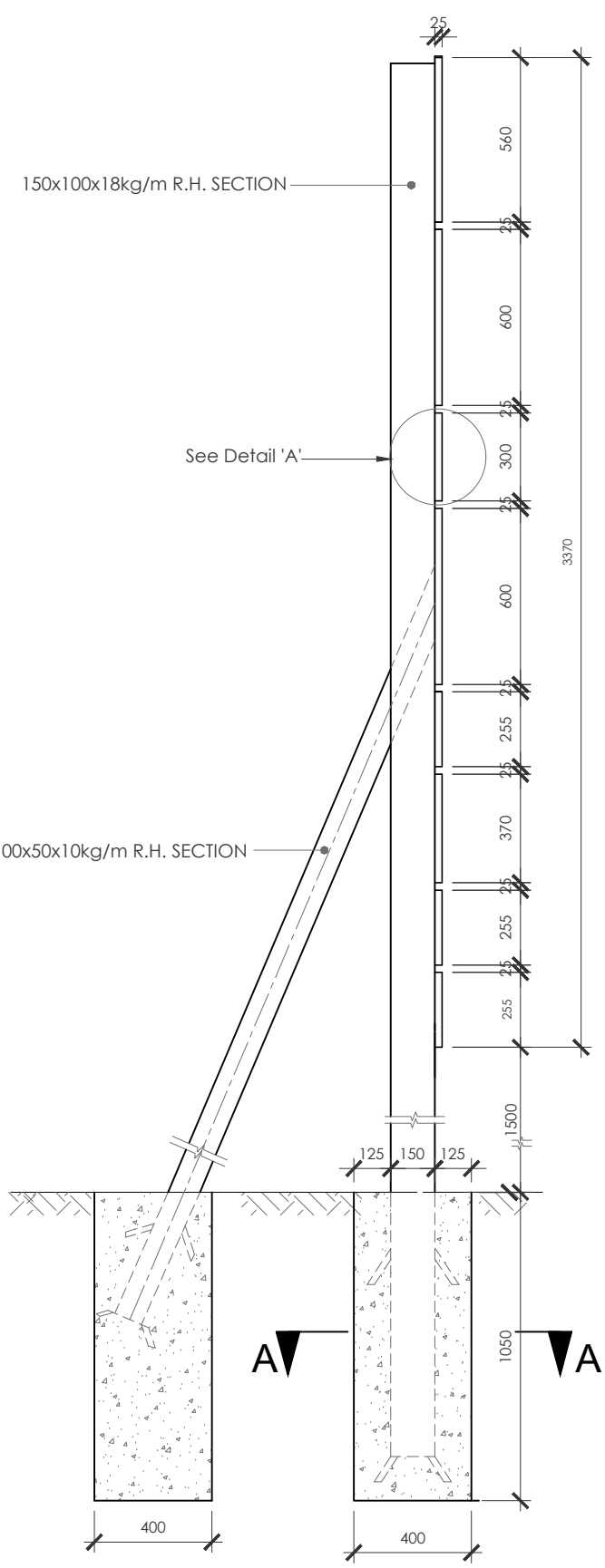
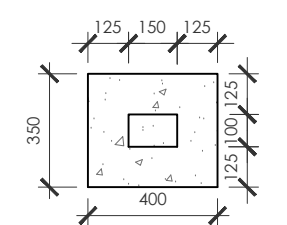
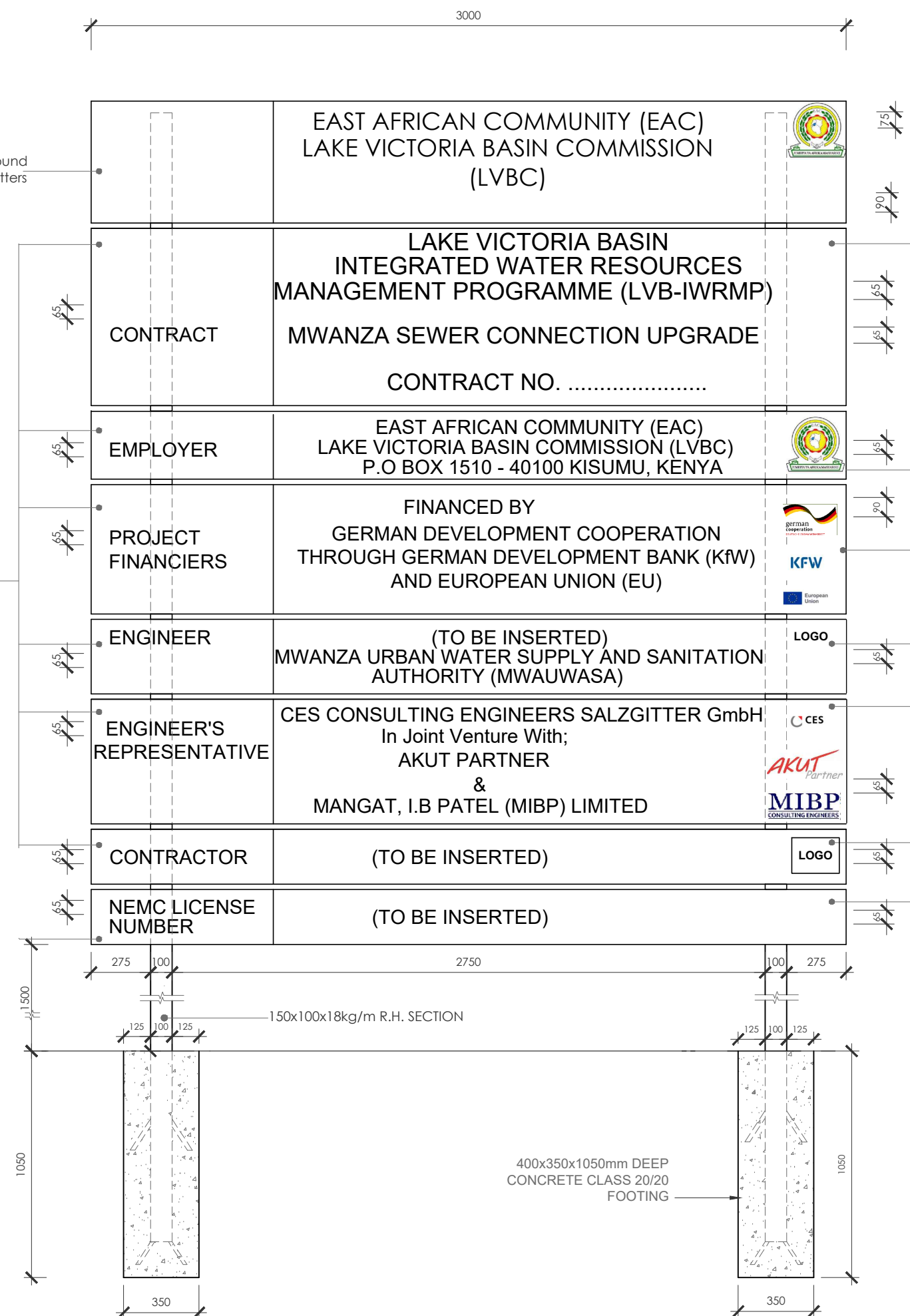


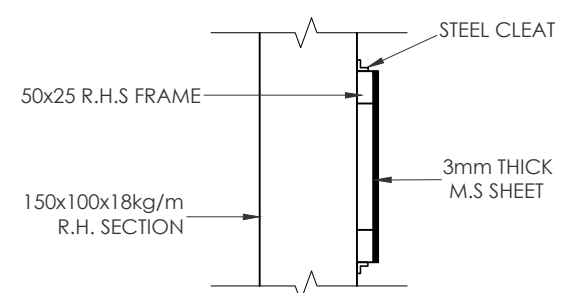
STANDARD DRAWINGS



SIDE ELEVATION



SECTION A - A



DETAIL 'A' N.T.S

- NOTES:**
- DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
 - INSTALLATION LOCATIONS
 - TO BE INSERTED
 - TO BE INSERTED
 - TO BE INSERTED

REVISIONS				SIGN	DATE	APPROVED
	BY	CHECKED				
	BY	CHECKED				
	BY	CHECKED				

CLIENT:

EAST AFRICAN COMMUNITY (EAC) LAKE VICTORIA BASIN COMMISSION (LVBC)
 P.O. BOX 1510 - 40100 KISUMU, KENYA
 TEL: +254 57 202 6344

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 TEL: +254-2-2710500

PROJECT NAME:
LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

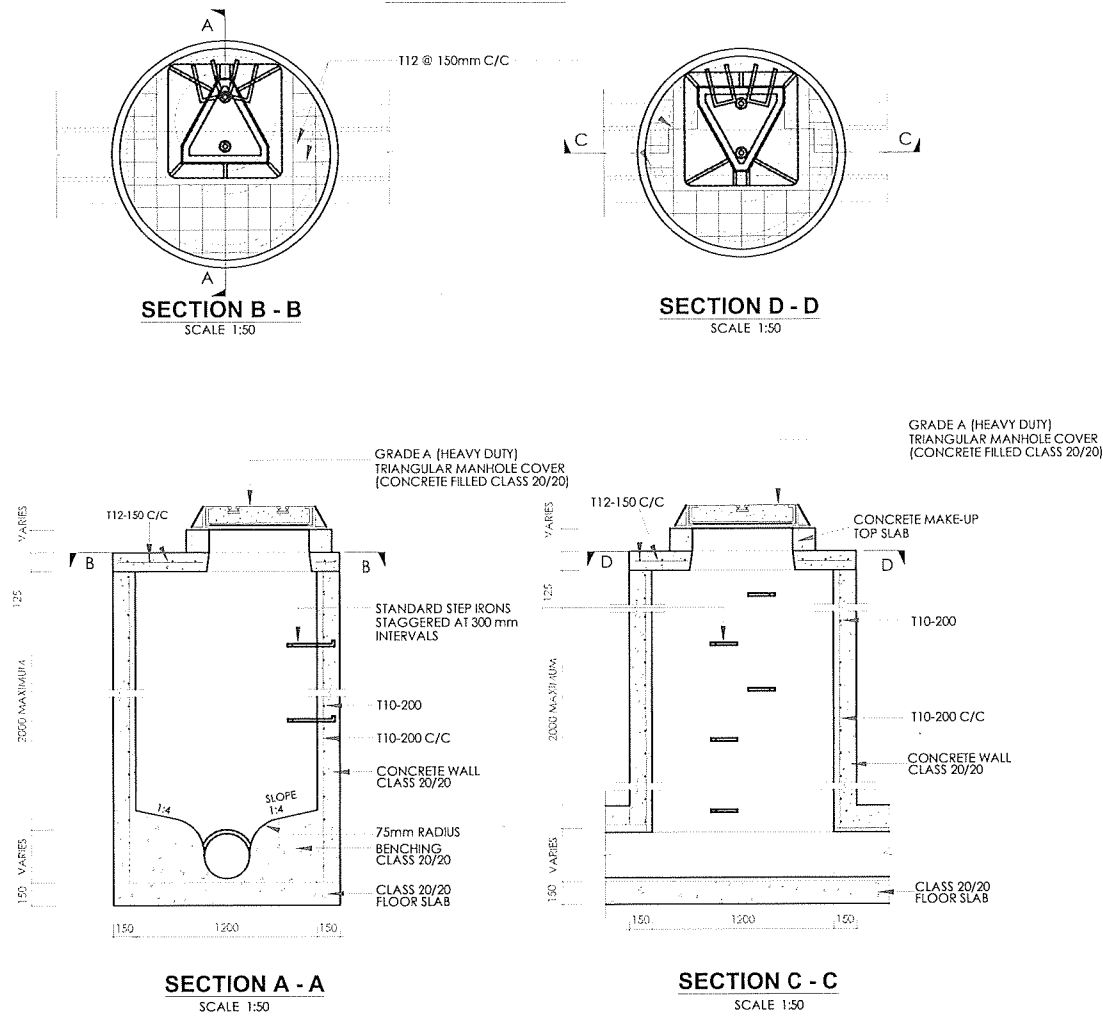
CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

DRAWING TITLE:
PROJECT SIGNBOARD DETAIL

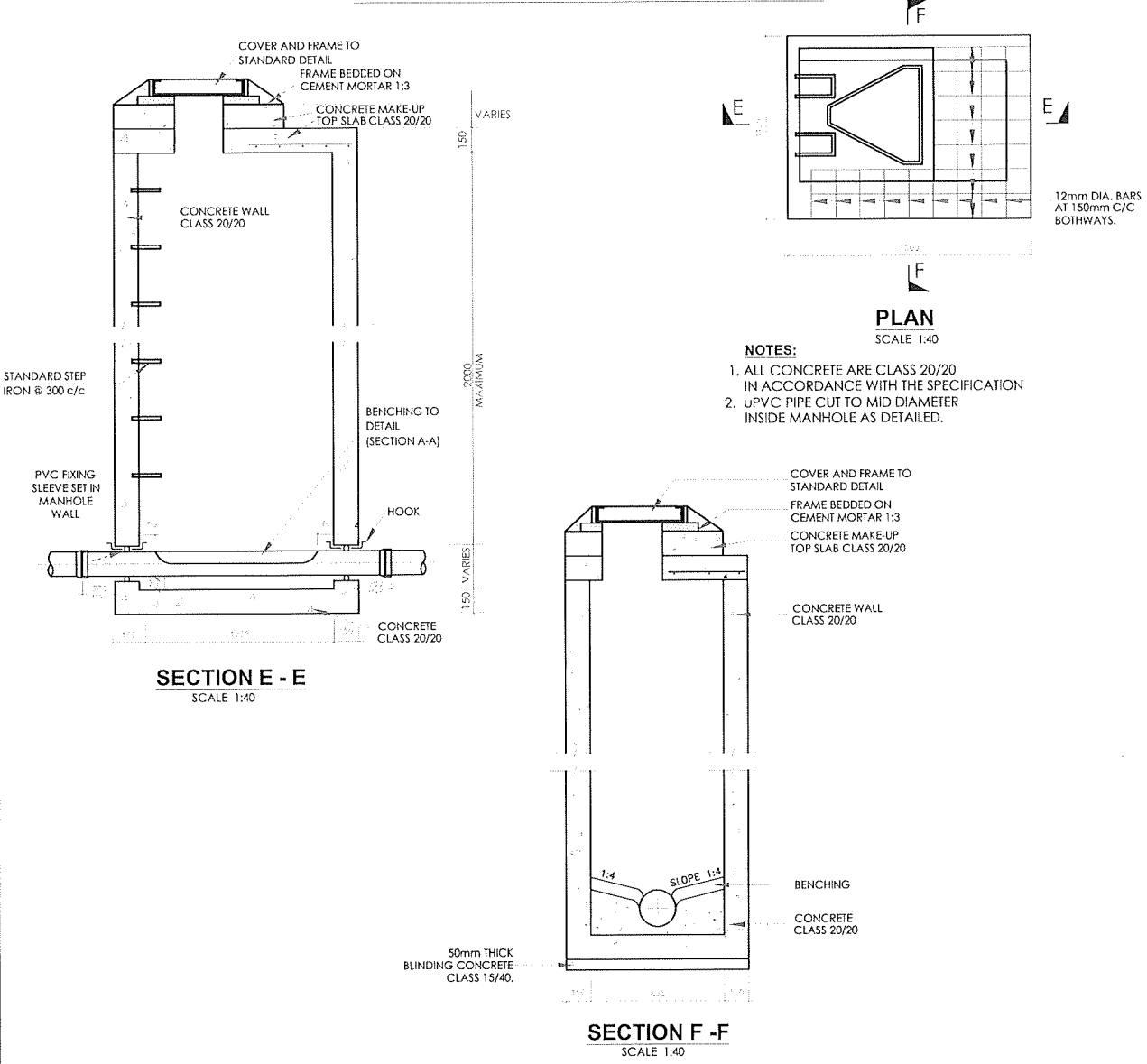
Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: 1:25	Date: MARCH 2024
DRG No. M394(j)/MWZ/SD/01	REV

REINFORCED CONCRETE CIRCULAR MANHOLE & COVER
DEPTH n.e. 2.0m



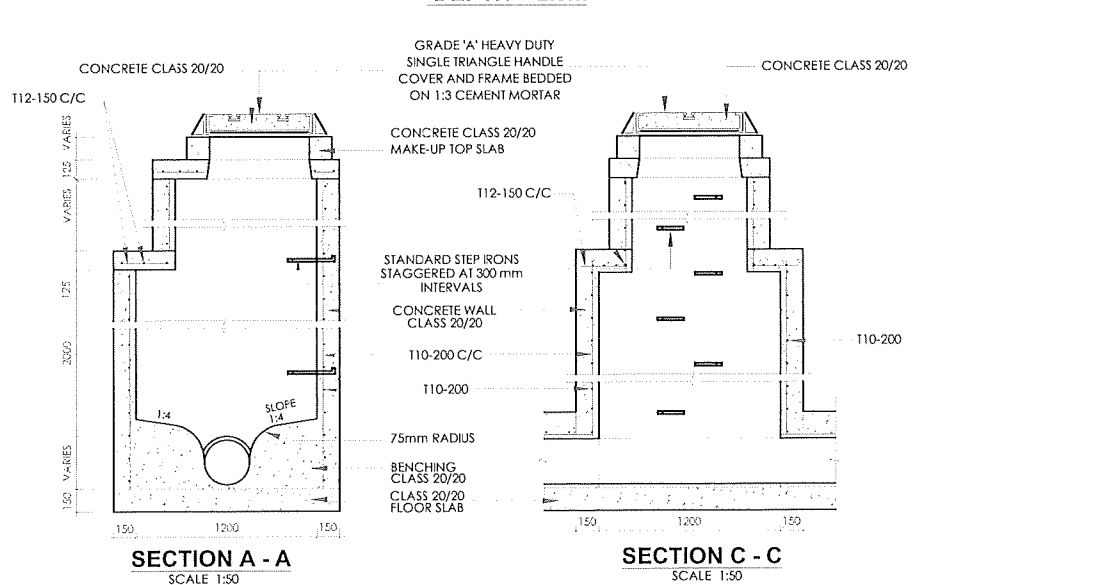
- NOTES:**
1. MANHOLE WIDTH SHOULD BE SIZE 600mm FOR SIMPLIFIED SEWERS.
 2. MANHOLE COVER DETAILS ARE AS SHOWN IN DRAWING NO. M394(j)/MWZ/SD/03

RECTANGULAR MANHOLE FOR DEPTH < 2M

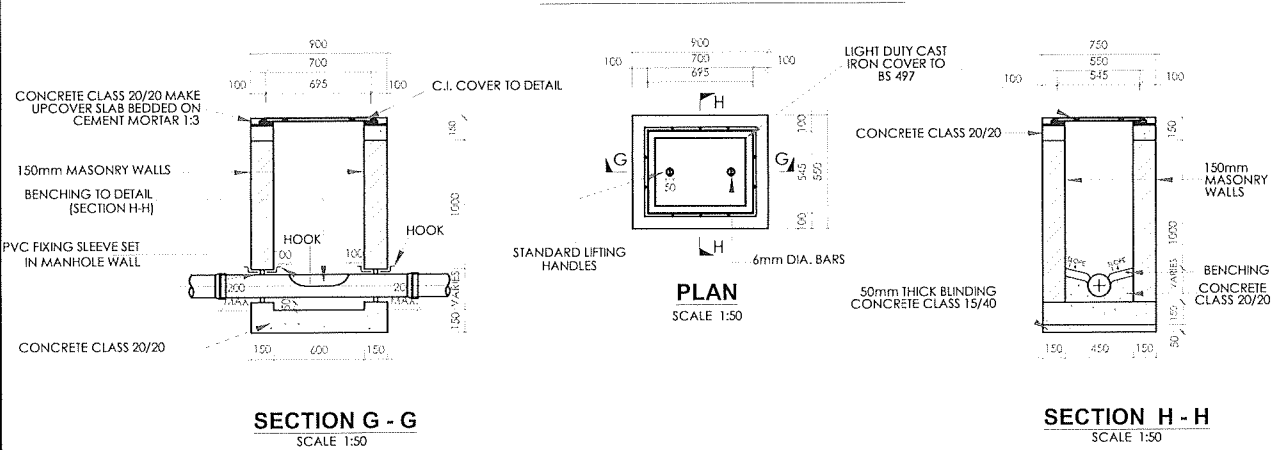


- NOTES:**
1. ALL CONCRETE ARE CLASS 20/20 IN ACCORDANCE WITH THE SPECIFICATION
 2. UPVC PIPE CUT TO MID DIAMETER INSIDE MANHOLE AS DETAILED.

REINFORCED CONCRETE MANHOLE & COVER
DEPTH > 2.0m



INSPECTION CHAMBER DETAILS



- NOTES:**
1. INSPECTION CHAMBER SHOULD BE SIZE 600x450mm UPTO DEPTH OF 1000mm
 2. FOR INSPECTION CHAMBER EXCEEDING DEPTH 1000mm SIZE SHOULD BE 850x1200mm
 3. WALLS OF INSPECTION CHAMBER ARE OF MASONRY

NOTES

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4. CONCRETE FILLING CLASS 25/20 VIBRATED AND CURED IN ACCORDANCE WITH THE APPROPRIATE SPECIFICATION CLAUSES.
5. TOLERANCE ON OVERALL SIZE 3mm
6. ALL HAUNCHES ARE CLASS 15/40 CONCRETE AS INDICATED ON THE SPECIFICATION OVER EXCAVATION ARE MADE GOOD IN CONCRETE CLASS 15/40.

ABBREVIATIONS

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7. EXT. DIA. - EXTERNAL DIAMETER
8. OD - OUTSIDE DIAMETER
9. ND - NOMINAL DIAMETER
10. RC - REINFORCED CONCRETE
11. T10 - TWISTED BAR 10mm SIZE
12. NTS - NOT TO SCALE
13. CU.M PER LIN. METER - CUBIC METER PER LINEAR METER
14. CI - CAST IRON

REVISIONS		SIGN	DATE	APPROVED
BY	CHECKED			
BY	CHECKED			
BY	CHECKED			

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PROJECT NAME:
LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

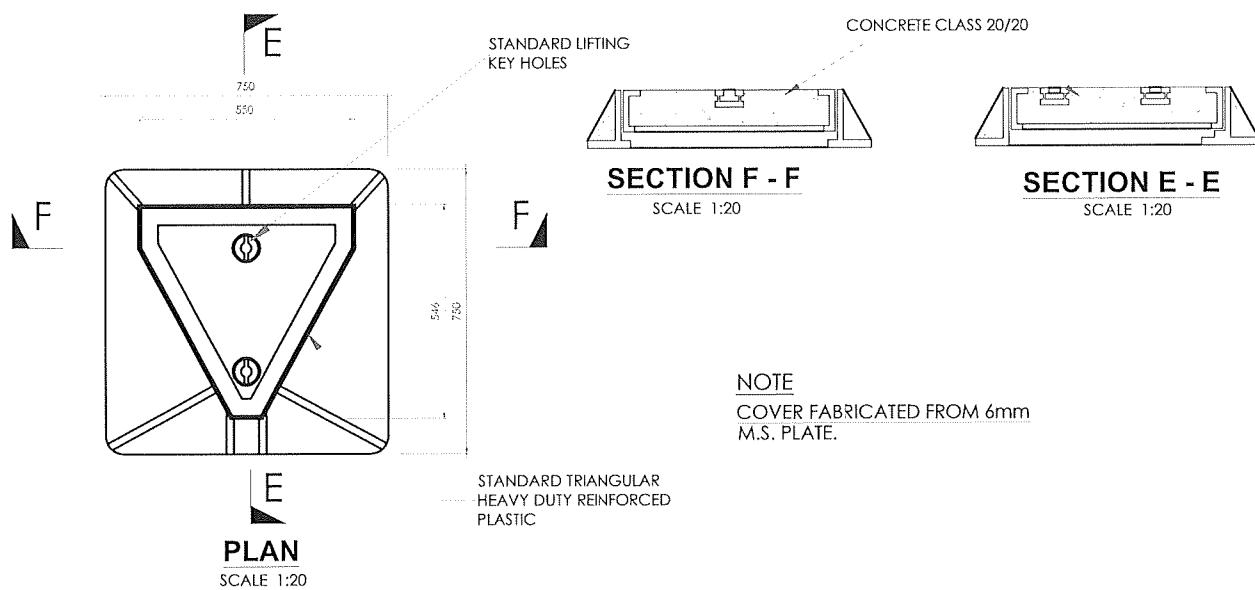
CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

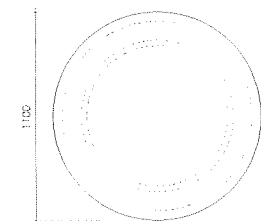
DRAWING TITLE:
DETAILS OF MANHOLES AND INSPECTION CHAMBERS
SHEET 1 OF 1

Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024

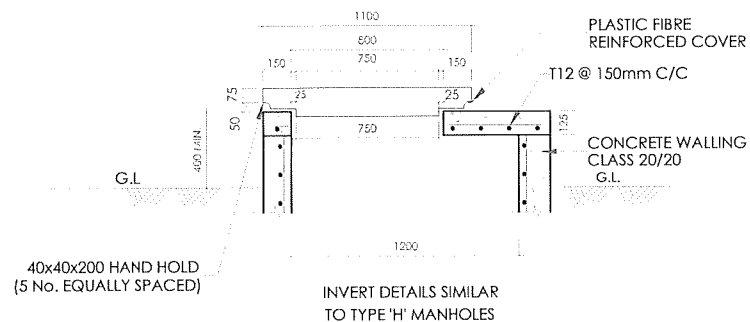
DETAILS OF TRIANGULAR CONCRETE FILLED MANHOLE COVER FOR FOUL SEWER



PLASTIC FIBRE REINFORCED COVER FOR MANHOLES



SECTIONAL ELEVATION
SCALE 1:40



PLASTIC FIBRE REINFORCED COVER - PLAN
SCALE 1:40

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CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

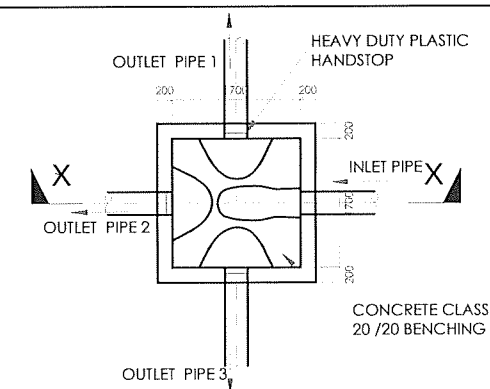
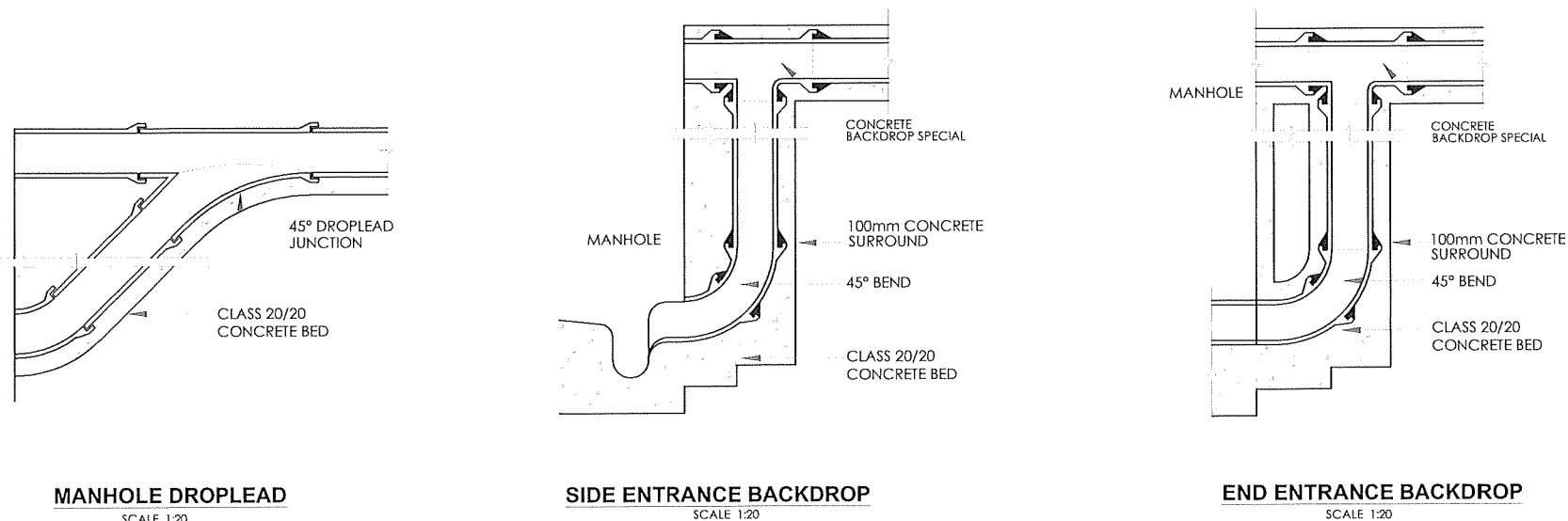
DRAWING TITLE:

DETAILS OF MANHOLE COVERS, BACKDROP FOR MANHOLES AND FLOW SPLITTING CHAMBER
SHEET 1 OF 1

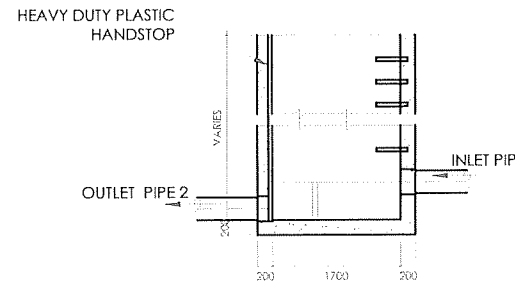
Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/03

DETAILS OF BACKDROPS FOR MANHOLES

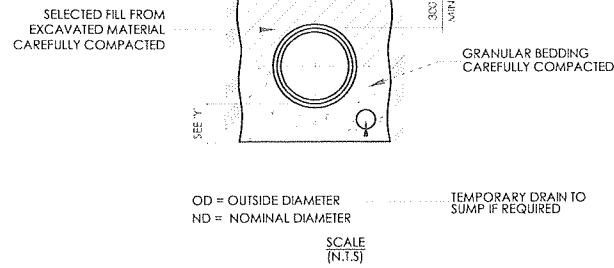


FLOW SPLITTING CHAMBER PLAN
SCALE 1:20



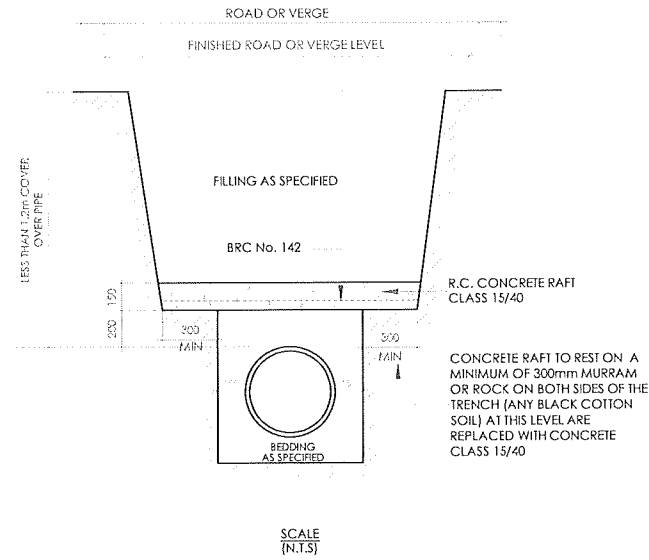
SECTION X-X
SCALE 1:20

BEDDING AND JOINTING OF FLEXIBLE JOINTED PIPES - TYPE 'BO'

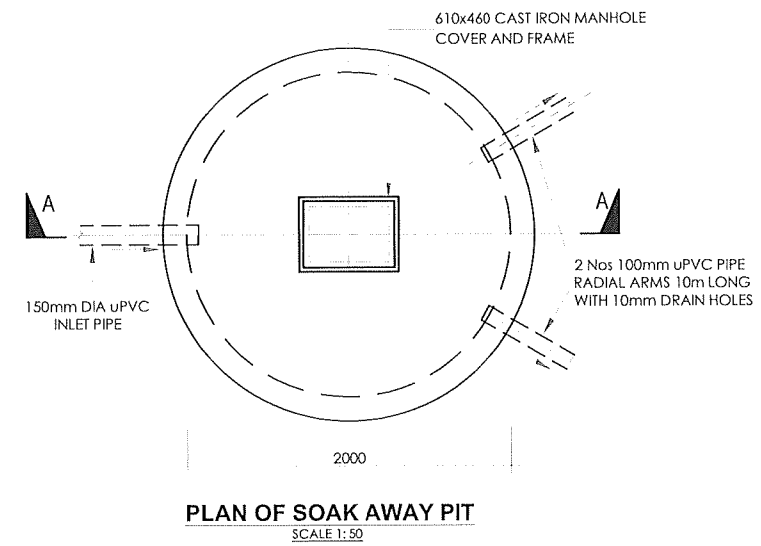


- NOTES:**
- DIMENSION 'Y' IN ROCK OR MIXED SOILS CONTAINING ROCK BANDS BOULDERS OR STONES OR OTHER IRREGULAR HARD SPOTS. Y = 1/4 OD UNDER BARRELS WITH MIN. 150mm (PLUS 12mm PER 300mm OF COVER IN EXCESS OF 4.85m) UNDER BOTH BARRELS AND SOCKETS IN MACHINE DUG UNIFORM SOILS Y = OD UNDER BARRELS WITH MIN. 100mm UNDER BOTH BARRELS AND SOCKETS
 - FOR GRANULAR BED AND SURROUND TO PIPES UNIFORMLY GRADED GRANULAR MATERIAL SUCH AS GRAVEL OR BROKEN STONE ARE USED. IT SHOULD PASS 12mm SIEVE OR SHALL BE RETAINED ON 5mm SIEVE.
 - TRENCHES MUST BE KEPT TO DESIGN WIDTH

FLEXIBLY JOINTED PIPES UNDER ROAD OR VERGE



DETAILS OF SOAK AWAY PIT



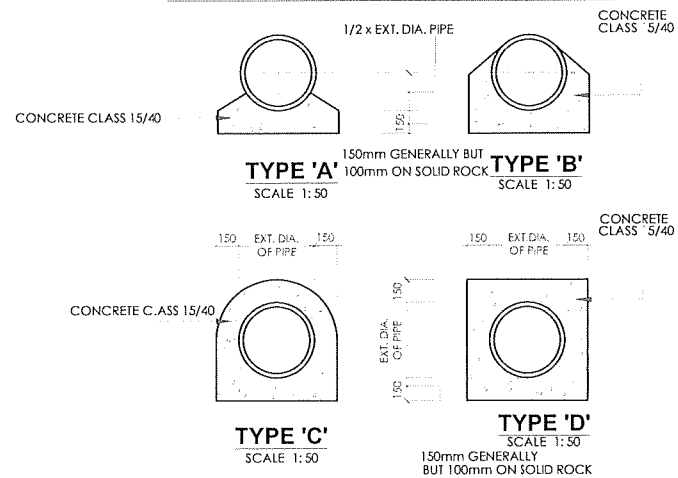
NOTES

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CONCRETE PIPE BEDS AND HAUNCHES



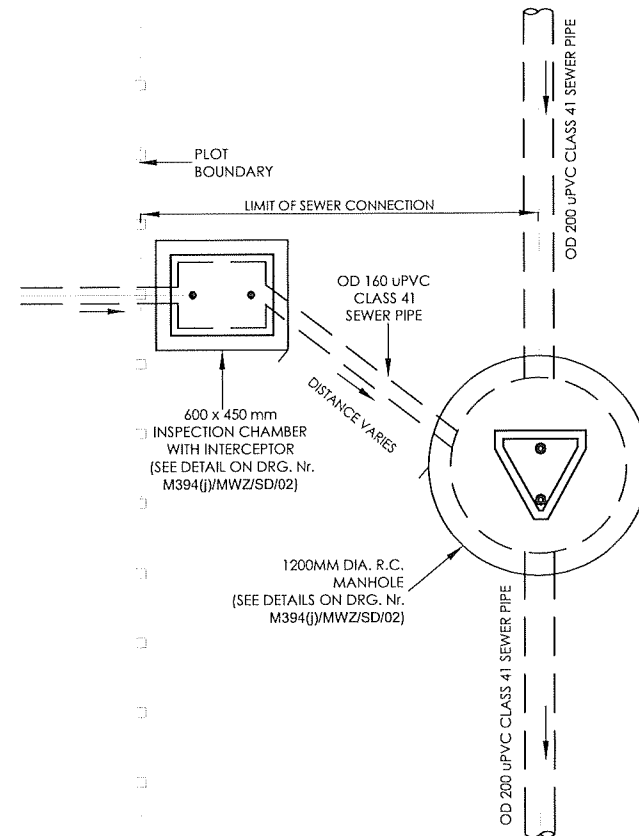
PIPE DIAMETER mm	PIPE WALL THICKNESS mm	HAUNCH TYPE							
		Type 'A'		Type 'B'		Type 'C'		Type 'D'	
		100mm BED	150mm BED	100mm BED	150mm BED	100mm BED	150mm BED	100mm BED	150mm BED
100	25.4	0.0556	0.0791	0.0799	0.1034	0.1431	0.1666	0.1653	0.1888
150	25.4	0.0642	0.0904	0.0845	0.1107	0.1706	0.1948	0.1981	0.2242
225	28.57	0.0783	0.1053	0.1262	0.1557	0.2155	0.2450	0.2525	0.2821
300	31.75	0.0929	0.1277	0.1557	0.1905	0.2617	0.2965	0.3100	0.3448
375	34.92	0.1060	0.1470	0.1864	0.2255	0.3094	0.3485	0.3702	0.4093
450	38.10	0.1253	0.1689	0.2208	0.2644	0.3623	0.4059	0.4382	0.4818
525	44.45	0.1433	0.1916	0.2564	0.3046	0.4169	0.4652	0.5052	0.5536
600	50.80	0.1619	0.2147	0.2943	0.3471	0.4731	0.5259	0.5844	0.6372
675	53.98	0.1804	0.2375	0.3310	0.3880	0.5270	0.5841	0.6570	0.7141
750	57.15	0.1986	0.2600	0.3582	0.4295	0.5823	0.6436	0.7325	0.7938
900	63.50	0.2378	0.3077	0.4479	0.5161	0.6973	0.7672	0.8922	0.9620
1050	69.85	0.2810	0.3605	0.4945	0.5741	0.8181	0.8977	1.0635	1.1431
1200	76.20	0.3291	0.4161	0.6230	0.7101	0.9448	1.0316	1.2466	1.3336

CONCRETE QUANTITIES IN BED AND SURROUNDS FOR PIPES (CU.M.PER LIN. METER)

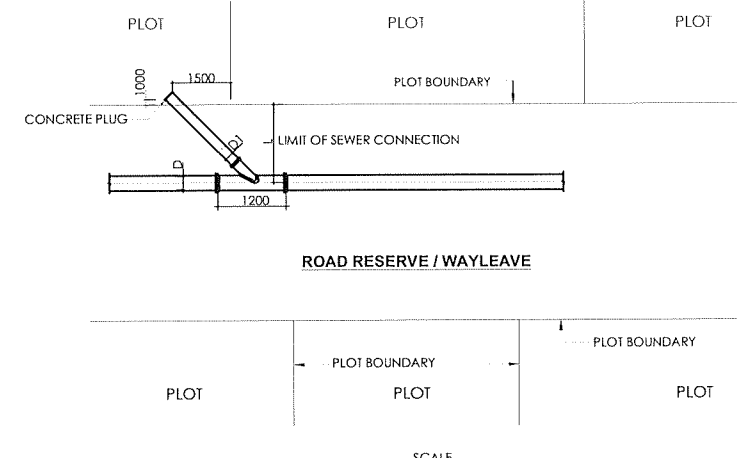
DEPTH TO THE TOP OF PIPE	PIPE DIAMETER IN mm										AS SPECIFIED BY ENGINEER
	150	225	300	375	450	525	600	675	750	>750	
<1.25M IN ROADS <1.00M ELSEWHERE	TYPE 'C'										
<4.00M	TYPE 'A' (CONCRETE BED) MAY BE DELETED AT THE DISCRETION OF THE ENGINEER					TYPE 'B'					
>4.00M	TYPE 'B'										
>6.00M OR IN HEADING	TYPE 'C' OR 'D' AS DIRECTED										

TYPE OF BED AND HAUNCH ARE USED

TYPICAL SEWER CONNECTION DETAIL (WITH MANHOLE CONNECTION)



TYPICAL SEWER CONNECTION WITH Y - JUNCTION



- NOTES:**
- L - ARE DETERMINED ON SITE
 - D - VARIES BETWEEN 160 - 250mm
 - D1 - 160mm DIA uPVC SEWER PIPE

REVISIONS		SIGN	DATE	APPROVED
BY	CHECKED			
BY	CHECKED			
BY	CHECKED			

CLIENT:

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CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

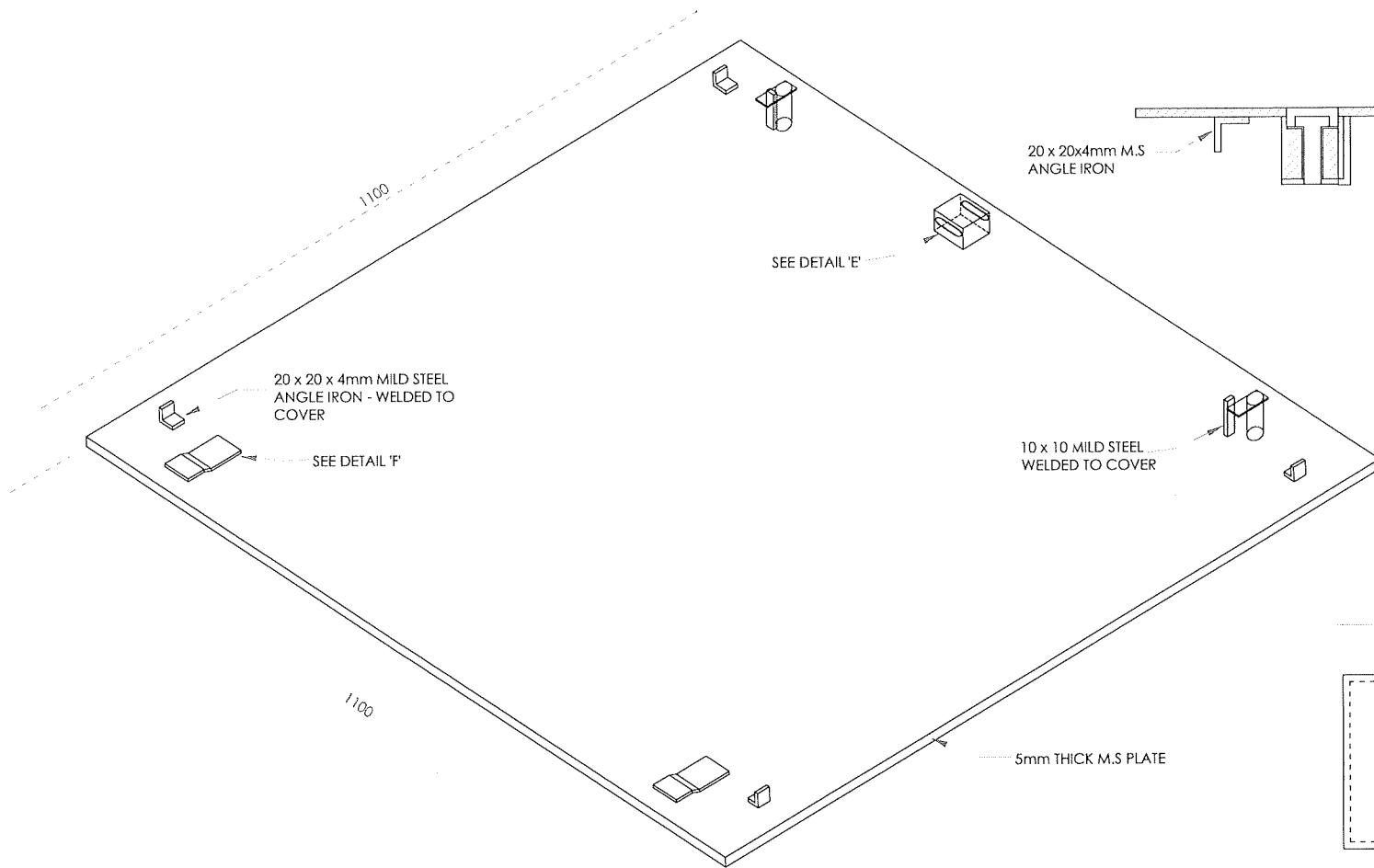
DRAWING TITLE:

BEDDING AND HAUNCHES FOR PIPES, TYPICAL SEWER CONNECTION & SOAK AWAY PIT DETAILS SHEET 1 OF 1

Designed by: E.O.A Drawn by: V.C
 Checked by: N.J.N Approved by: R.S.R
 Scale: AS SHOWN Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/04 REV

- NOTES**
- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE STATED
 - M.S - MILD STEEL
 - mm - Millimeter



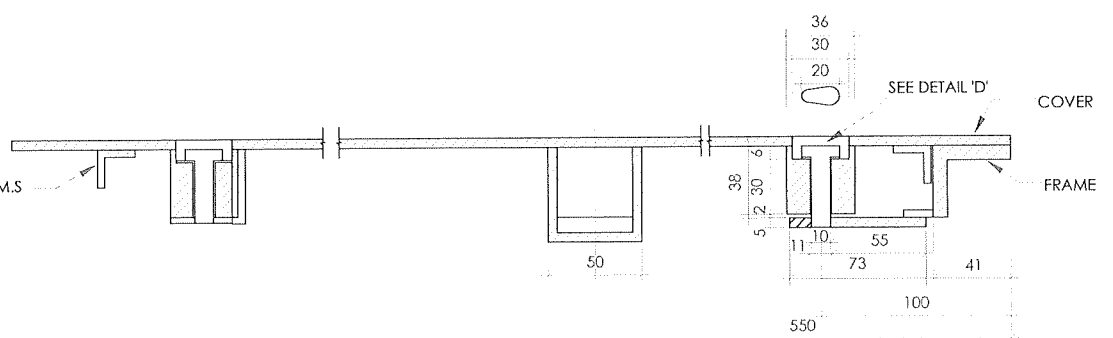
ISOMETRIC VIEW UNDERSIDE OF COVER
SCALE 1:10

20 x 20x4mm M.S ANGLE IRON

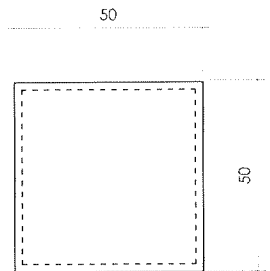
20 x 20 x 4mm MILD STEEL ANGLE IRON - WELDED TO COVER

10 x 10 MILD STEEL WELDED TO COVER

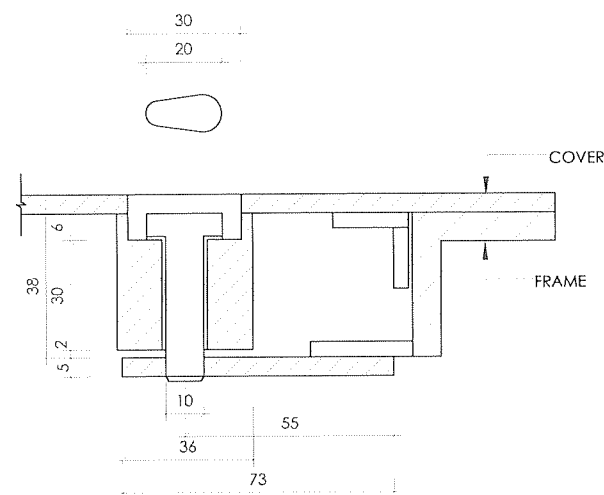
5mm THICK M.S PLATE



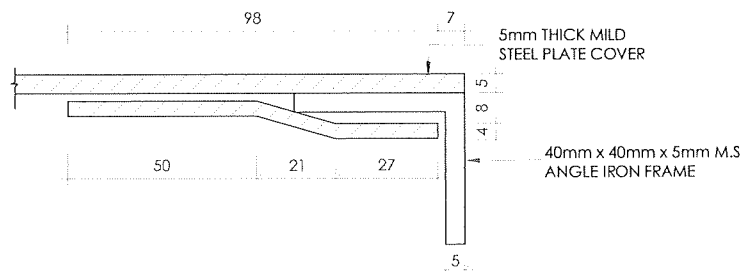
SECTION B-B
SCALE 1:40



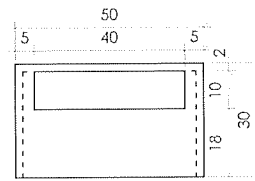
PLAN VIEW OF DETAIL E
SCALE 1:20



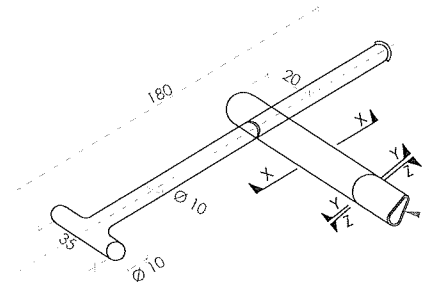
DETAIL 'D'
SCALE 1:20



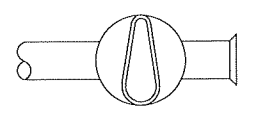
DETAIL 'F'
SCALE 1:20



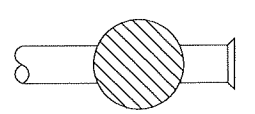
DETAIL 'E'
SCALE 1:20



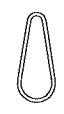
KEY DETAIL
SCALE 1:20



SECTION Y-Y



SECTION X-X



SECTION Z-Z

REVISIONS		SIGN	DATE	APPROVED
BY	CHECKED			
BY	CHECKED			
BY	CHECKED			
BY	CHECKED			

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CONTRACT TITLE:
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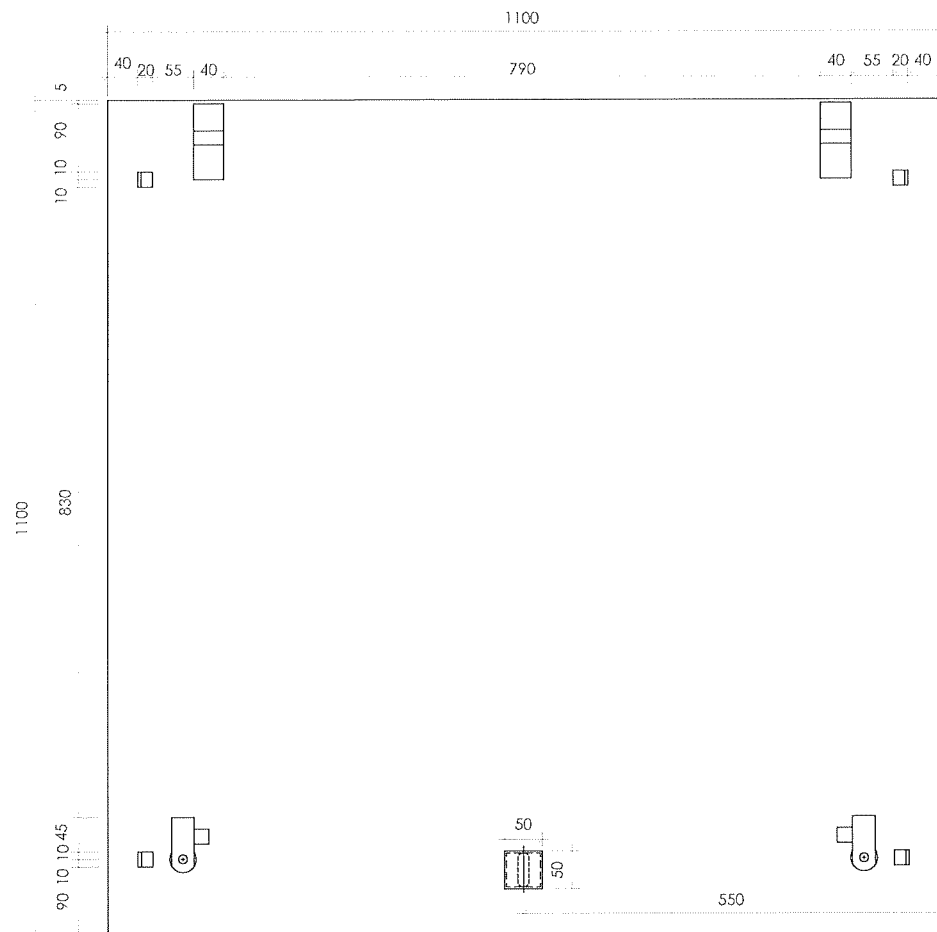
STANDARD DRAWINGS

DRAWING TITLE:
DETAILS OF MILD STEEL SHEET METAL COVER FOR CHAMBERS
SHEET 1 OF 2

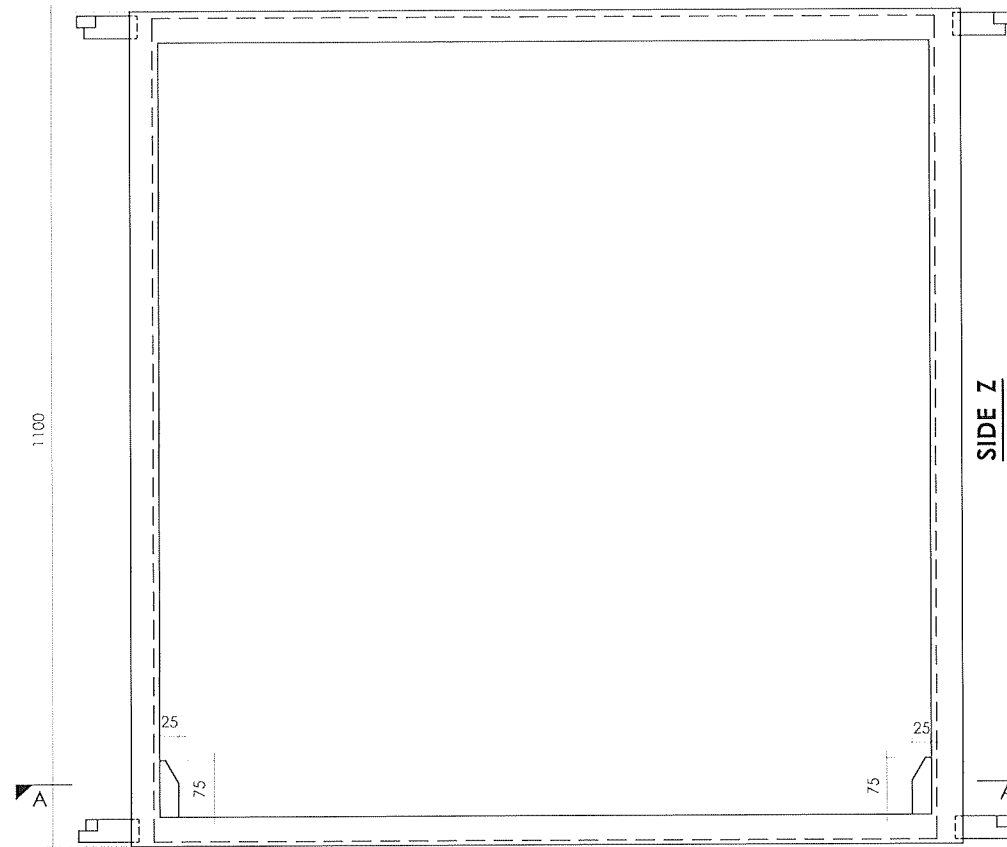
Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024
DRG No. M394(j)/MWZ/SD/05	REV

NOTES

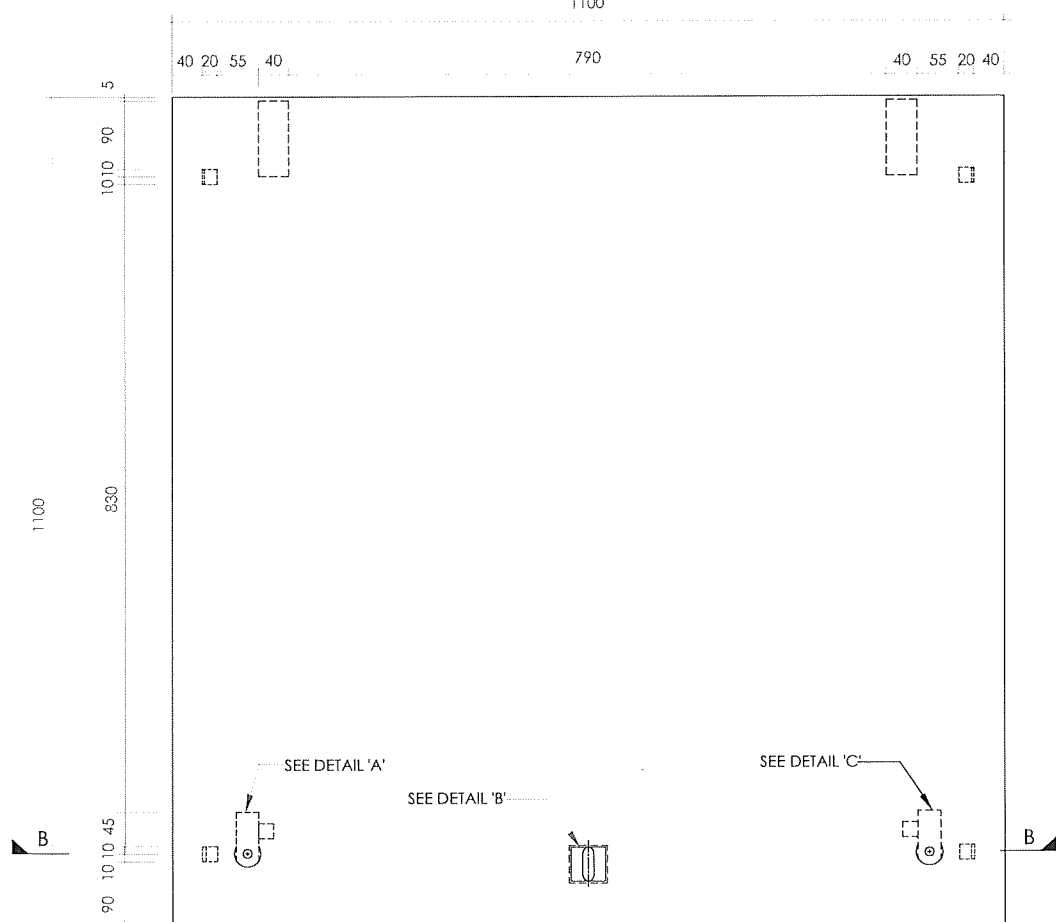
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE STATED
2. M.S - MILD STEEL
3. mm - Millimeter



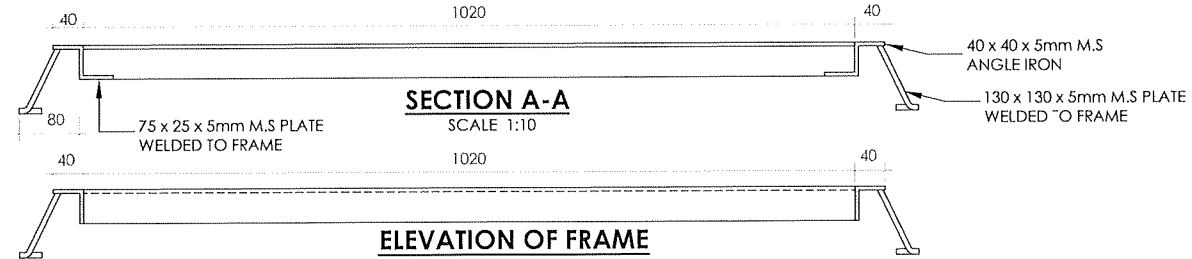
**SIDE X
PLAN - UNDERSIDE OF COVER**
SCALE 1:10



**SIDE Y
PLAN OF FRAME**
SCALE 1:10

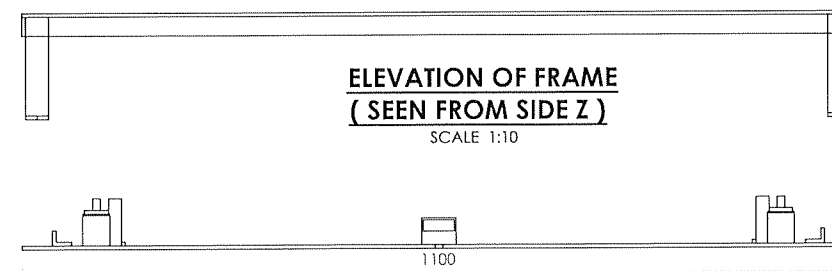


PLAN - OF COVER
SCALE 1:10

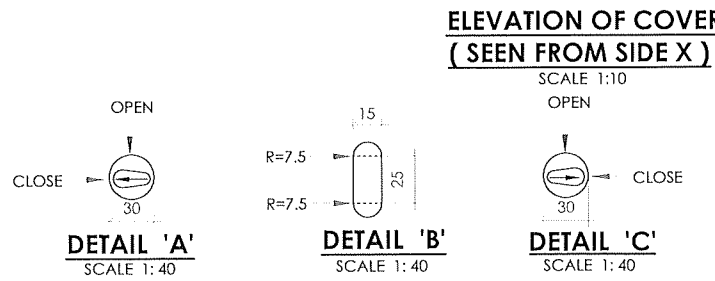


SECTION A-A
SCALE 1:10

**ELEVATION OF FRAME
(SEEN FROM SIDE Y)**
SCALE 1:10



**ELEVATION OF FRAME
(SEEN FROM SIDE Z)**
SCALE 1:10



DETAIL 'A'
SCALE 1:40

DETAIL 'B'
SCALE 1:40

DETAIL 'C'
SCALE 1:40

REVISIONS		SIGN	DATE	APPROVED
BY	CHECKED			
BY	CHECKED			
BY	CHECKED			

CLIENT:
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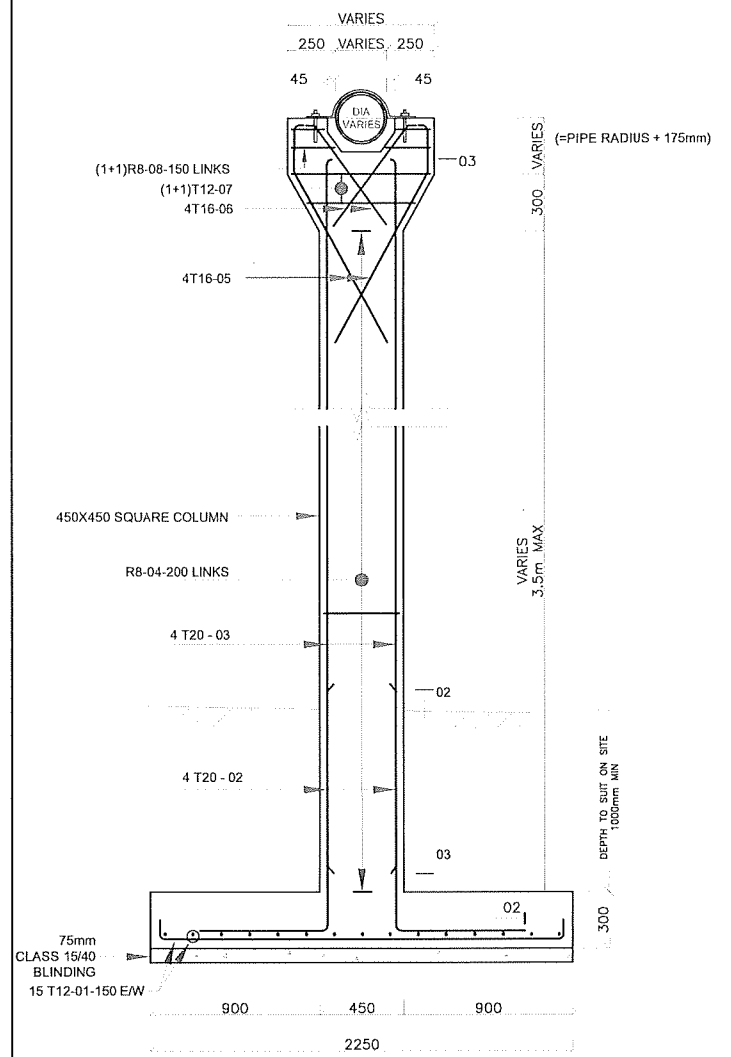
PROJECT NAME:
LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

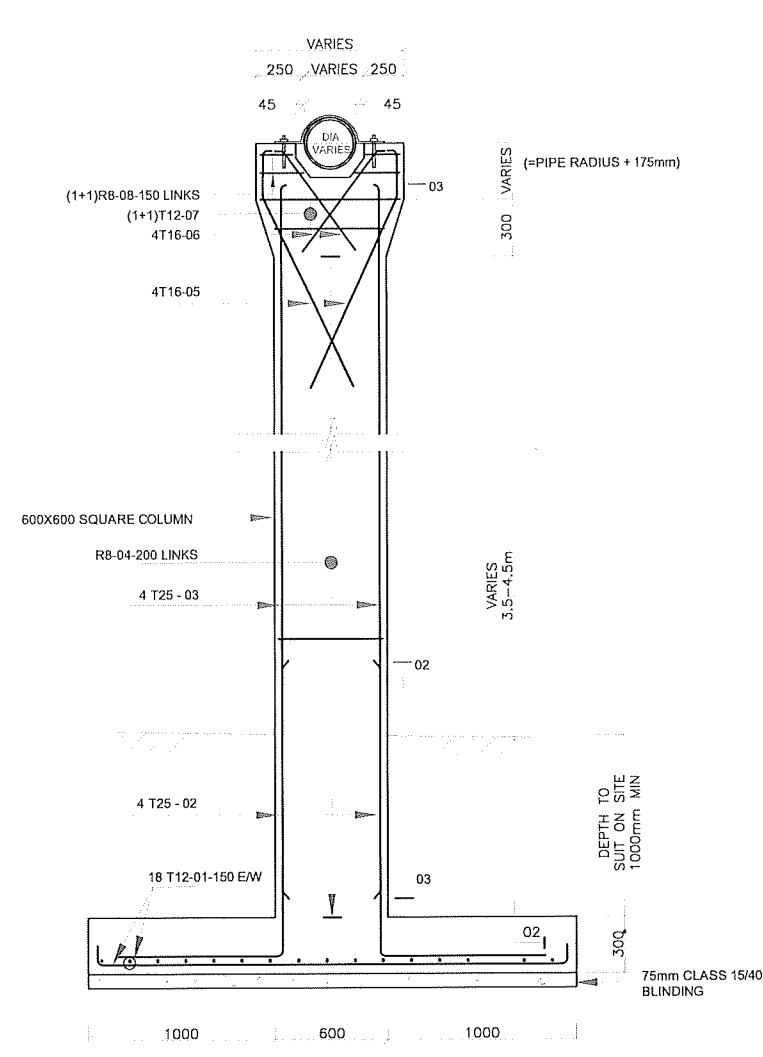
STANDARD DRAWINGS

DRAWING TITLE:
DETAILS OF MILD STEEL SHEET METAL COVER FOR CHAMBERS SHEET 2 OF 2

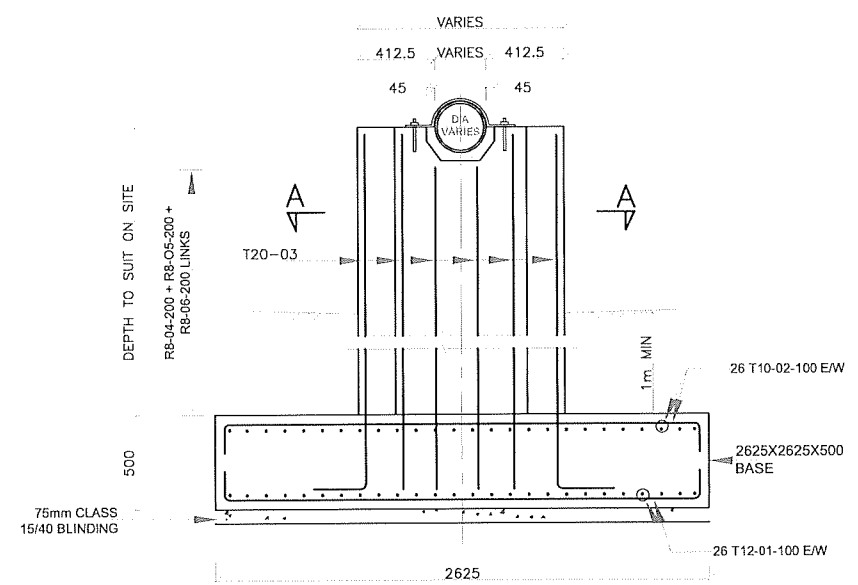
Designed by: E.O.A	Drawn by: V.C
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Scale: AS SHOWN	Date: MARCH 2024
DRG No. M394(J)/MWZ/SD/06	REV



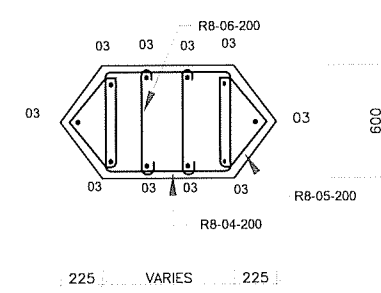
PIER TYPE 'A'
(HEIGHT UPTO 3.5m)
SCALE 1:40



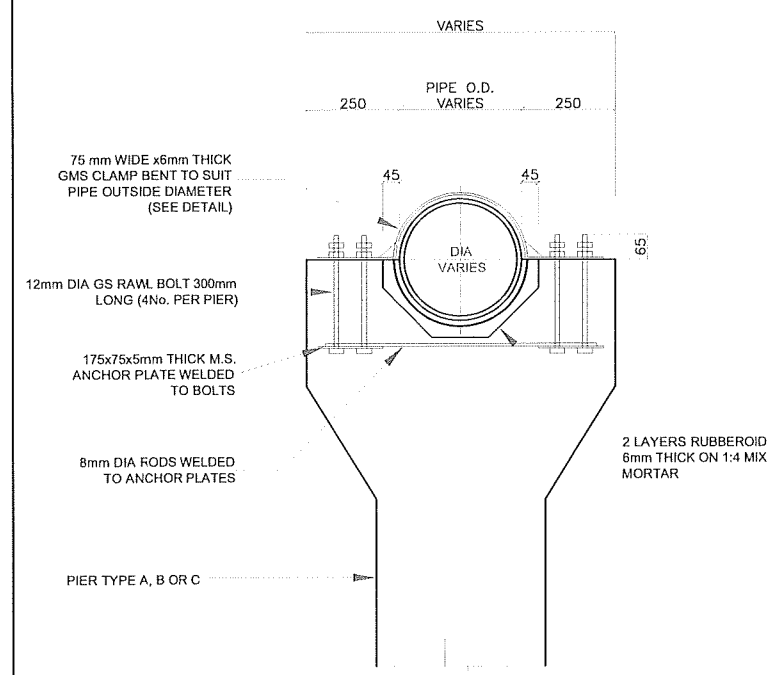
PIER TYPE 'B'
(HEIGHT 3.5-4.5m)
SCALE 1:40



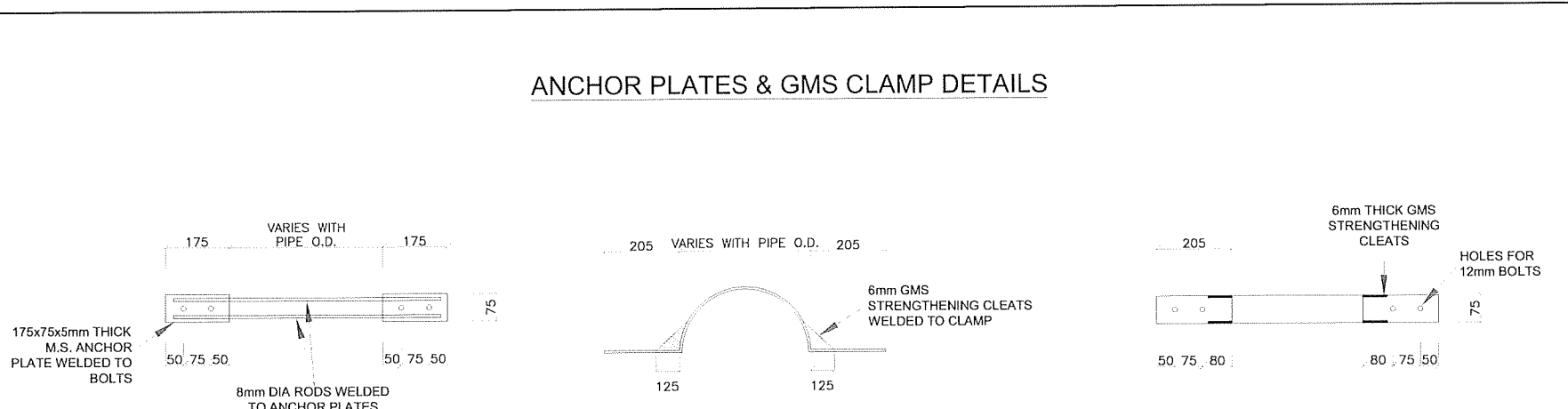
PIER TYPE 'C' (4m HIGH MAX)
(TO BE USED AT RIVER CROSSINGS)
SCALE 1:40



SECTION A-A
PIER TYPE 'C' (4m HIGH MAX)
(TO BE USED AT RIVER CROSSINGS)
SCALE 1:40



TYPICAL PIPE FIXING
DETAIL ON COLUMN HEAD
SCALE 1:20



ANCHOR PLATES & GMS CLAMP DETAILS

ANCHOR PLATE DETAIL
(N.T.S.)

GMS CLAMP - ELEVATION
(N.T.S.)

GMS CLAMP - PLAN
(N.T.S.)

NOTES
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

REVISIONS		SIGN	DATE	APPROVED
BY	CHECKED			
BY	CHECKED			
BY	CHECKED			

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PROJECT NAME:
LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

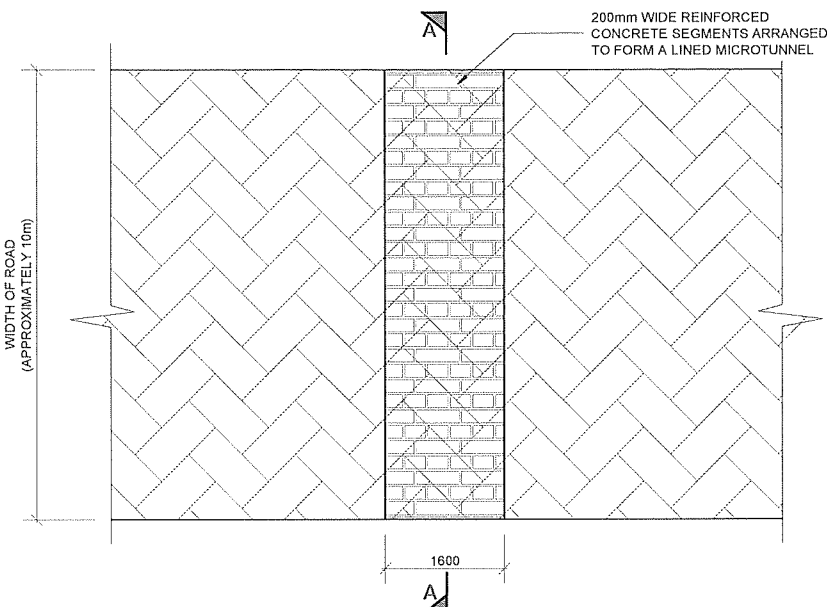
CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

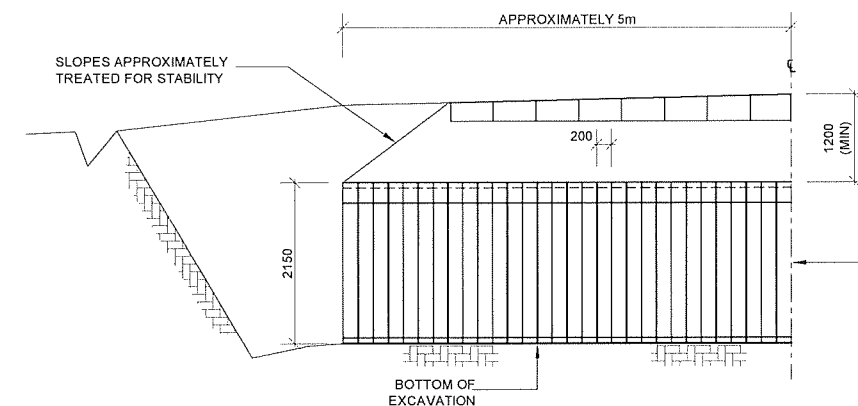
DRAWING TITLE:
DETAILS OF PIERS FOR PIPE AERIAL CROSSINGS
SHEET 1 OF 1

Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024

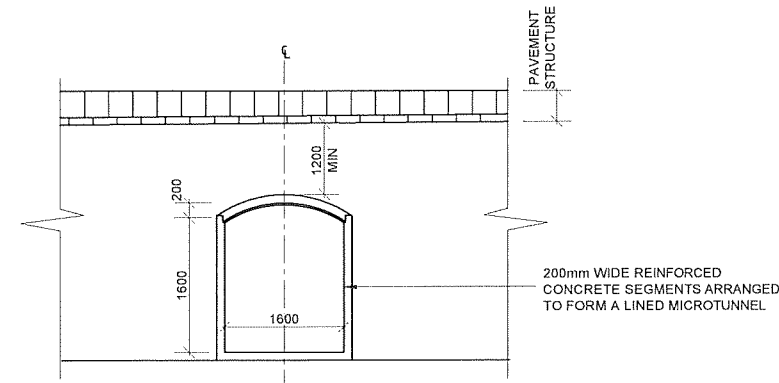
DRG No. M394(j)/MWZ/SD/07 REV



PLAN VIEW ON ROAD
SCALE 1:100

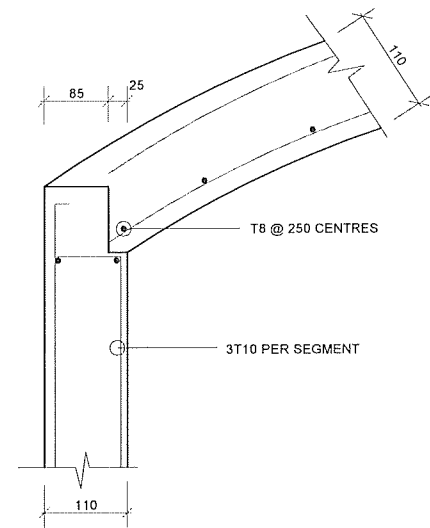


SECTION A-A
SCALE 1:100



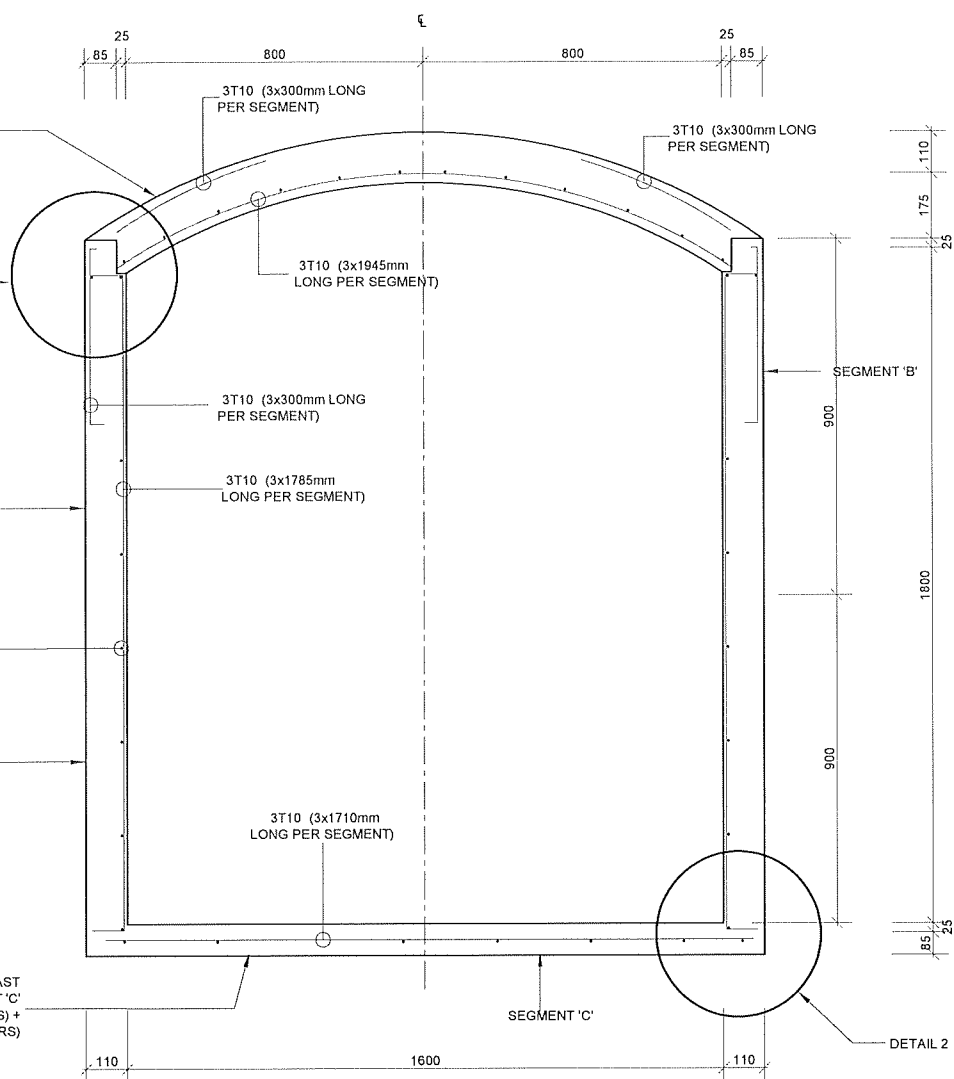
SECTION B-B
SCALE 1:100

200mm WIDE x 75mm THICK PRECAST CONCRETE BOTTOM SEGMENT 'C' REINFORCED WITH 3 T10 (MAIN BARS) + T8 @ 250 CENTRES (DISTRIBUTION BARS)

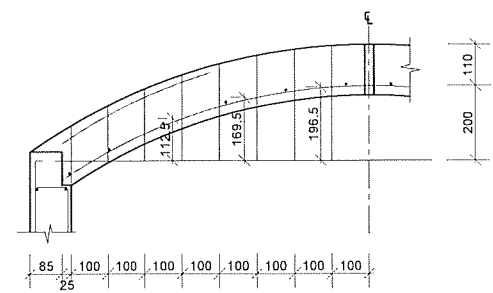


DETAIL 1
SCALE 1:10

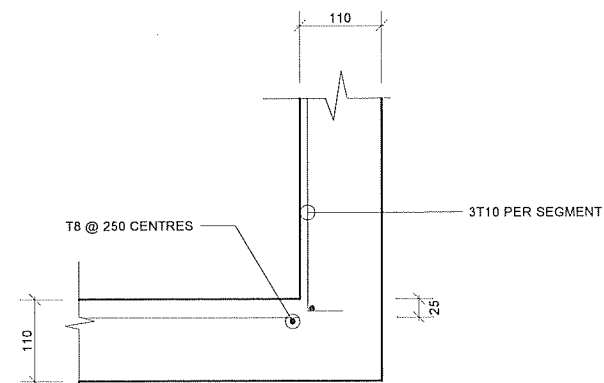
200mm WIDE x 75mm THICK PRECAST CONCRETE SIDE SEGMENT 'B' REINFORCED WITH 3 T10 (MAIN BARS) + T8 @ 250 CENTRES (DISTRIBUTION BARS)



TUNNEL LINING DETAILS
SCALE 1:20



CROWN SEGMENT 'A' DETAIL
SCALE 1:20



DETAIL 2
SCALE 1:10

ABBREVIATIONS

mm	-	MILLIMETRES
FGL	-	FINISHED GROUND LEVEL
EGL	-	EXISTING GROUND LEVEL
PIL	-	PIPE INVERT LEVEL
DIA	-	DIAMETER
R.C.	-	REINFORCED CONCRETE
M.S.	-	MILD STEEL
c/c	-	CENTER TO CENTRE
No.	-	NUMBER

- NOTES:**
1. ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED
 2. ALL REINFORCED CONCRETE IN CLASS 25/20 UNLESS OTHERWISE STATED
 3. ALL HIGH TENSILE (T) BARS IN ACCORDANCE WITH BS 4449
 4. MINIMUM COVER TO ALL REINFORCEMENTS FROM INSIDE FACES IS 20mm

- SPECIFICATIONS**
1. TYPICAL DETAILS ARE SUITABLE FOR SOFT MATERIAL SUCH AS RED COFFEE SOIL, CLAY SOILS AND GRAVELLY SOILS.
 2. PRECAST SEGMENTS DESIGNED FOR THE FOLLOWING LOADING ASSUMPTIONS:
 - TRAFFIC WHEEL LOAD OF 100KN DIRECTLY ABOVE TUNNEL AND APPLIED ON THE PAVEMENT SURFACE WITH A CONTACT AREA OF 300mm x 300mm
 - UNIFORM SURCHARGE LOAD OF 20KN/m² APPLIED ON PAVEMENT SURFACE
 - MINIMUM OVERBURDEN OF 1200mm FROM THE ROAD PAVEMENT SURFACE TO CROWN OF THE SEGMENTS
 - SPACES BEHIND PRECAST CONCRETE LINING AND EXCAVATION GROUTED (BY CONTACT GROUTING) ON COMPLETION OF PLACING THE SEGMENTS.
 - MAXIMUM LENGTH OF THE TUNNEL EXCAVATED EACH TIME BEFORE INSTALLING THE PRECAST SEGMENTS IS 500mm.
 - CROWN SEGMENT OF THE TUNNEL LINING IS OF ARCH PROFILE AS PER THE SETTING OUT DIMENSIONS TABULATED.
 3. TYPICAL WEIGHTS OF THE SEGMENTS:
 - SEGMENT A: 136.8kgs
 - CROWN SEGMENT B: 129.6kgs
 - BOTTOM SEGMENT C: 115.2kgs

REVISIONS	BY	CHECKED	SGN	DATE	APPROVED

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PROJECT NAME:
LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

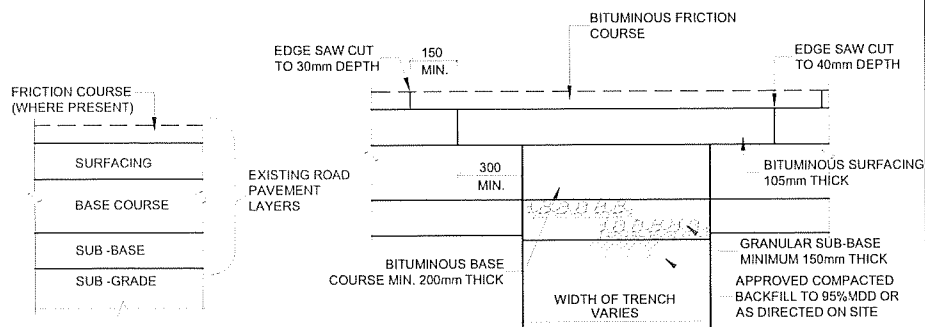
STANDARD DRAWINGS

DRAWING TITLE:
TRENCHLESS ROAD CROSSING

Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/08

1. BITUMINOUS CARRIAGEWAY



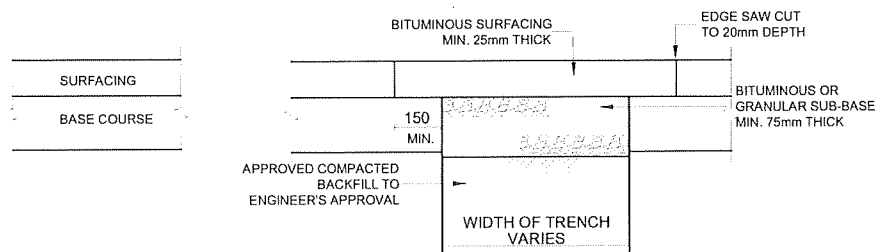
EXISTING CONSTRUCTION
(MAY VARY ON SITE)

PERMANENT
REINSTATEMENT

NOTES:

- THE REINSTATEMENT SUB-BASE MATERIAL TO BE PUT BACK SHALL BE OF THE SAME THICKNESS AS THE ORIGINAL ADJOINING PAVEMENT SUBJECT TO A MINIMUM OF 150mm.
- THE REINSTATEMENT ROAD-BASE TO BE PUT BACK SHALL BE OF APPROVED BITUMINOUS MATERIAL AND OF THE SAME THICKNESS AS THE ADJOINING PAVEMENT SUBJECT TO A MINIMUM OF 200mm.
- THE APPROVED BITUMINOUS SURFACING LAYER TO BE PUT BACK SHALL BE 105mm THICK AND SHALL CONSIST OF A 65mm THICK BASE COURSE AND A 40mm THICK WEARING COURSE.
- FRICTION COURSE MAY BE ABSENT IN MOST URBAN ROADS, BUT WHERE A FRICTION COURSE IS PRESENT IN THE ORIGINAL ROAD PAVEMENT, A FRICTION COURSE LAYER OF THE SAME THICKNESS SHALL BE PUT BACK.
- MATERIAL SPECIFICATION SHALL BE IN ACCORDANCE WITH GENERAL SPECIFICATIONS. A TYPICAL PAVEMENT SECTION CONSTRUCTION MAY CONSIST OF
 - FRICTION COURSE - 10mm NOMINAL SIZE FRICTION COURSE MATERIAL
 - WEARING COURSE - 10 OR 20mm NOMINAL SIZE WEARING COURSE MATERIAL
 - BASE COURSE - 28 OR 37.5mm NOMINAL SIZE BASE COURSE MATERIAL
 - ROAD-BASE - 37.5mm NOMINAL SIZE ROAD-BASE COURSE MATERIAL
 - SUB-BASE - GRANULAR SUB-BASE
- FOR LIMITS OF REINSTATEMENT REFER TO THE RULES IN MIDDLE COLUMN OF THIS DRAWING

2. BITUMINOUS FOOTWAY AND CYCLETRACK



EXISTING CONSTRUCTION
(MAY VARY ON SITE)

PERMANENT
REINSTATEMENT

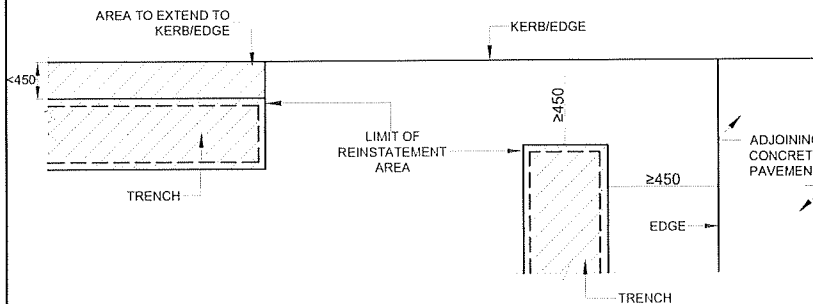
NOTES:

- THE SUB-BASE TO BE PUT BACK SHALL BE OF EITHER APPROVED GRANULAR MATERIAL SPECIFICATIONS OR BITUMINOUS MATERIAL AND SHALL BE OF THE SAME THICKNESS AS THE ADJOINING ORIGINAL FOOTWAY OR CYCLETRACK SUBJECT TO A MINIMUM THICKNESS OF 75mm.
- THE SURFACING TO BE PUT BACK SHALL BE 10mm NOMINAL SIZE WEARING COURSE MATERIAL AND SHALL BE OF THE SAME THICKNESS AS THE ADJOINING ORIGINAL FOOTWAY OR CYCLETRACK SUBJECT TO A MINIMUM OF 25mm.
- FOR LIMITS OF REINSTATEMENT REFER TO THE RULES IN MIDDLE COLUMN OF THIS DRAWING

RULES TO DETERMINE THE LIMIT OF REINSTATEMENT IN BITUMINOUS CARRIAGEWAY, FOOTWAY AND CYCLETRACK

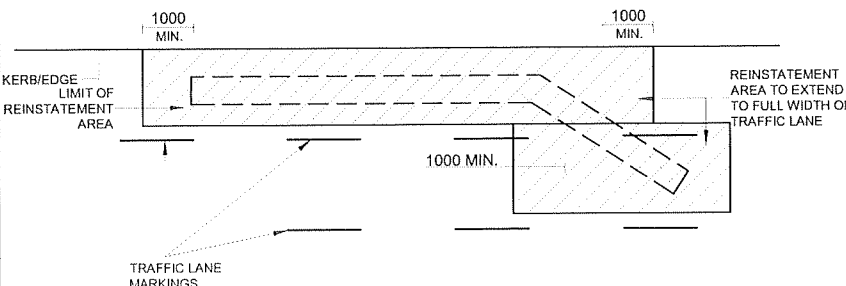
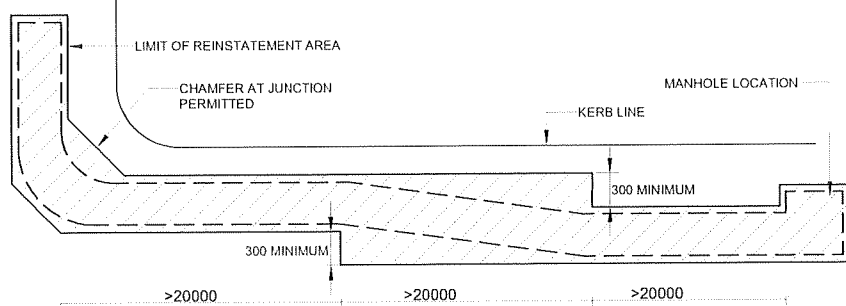
A. CARRIAGEWAY CONSTRUCTED MORE THAN 5 YEARS AGO, CARRIAGEWAY RE-SURFACED MORE THAN 1 YEAR AGO AND FOOTWAY OR CYCLETRACK CONSTRUCTED MORE THAN 1 YEAR AGO

- THE REINSTATEMENT AREA (TRENCH WIDTH SHALL BE OF SUFFICIENT WIDTH TO ALLOW THE USE OF PROPER COMPACTING EQUIPMENT).
- THE REINSTATEMENT AREA SHALL EITHER
 - BE AT AN EDGE (THE KERB LINE, THE BUILDING LINE OR ADJOINING CONCRETE PAVEMENT) OF THE BITUMINOUS PAVEMENT; OR
 - BE AT A MINIMUM DISTANCE (MEASURED FROM ANY PART OF THE REINSTATEMENT AREA AT RIGHT ANGLE TO THE EDGE) OF 450mm FROM AN EDGE

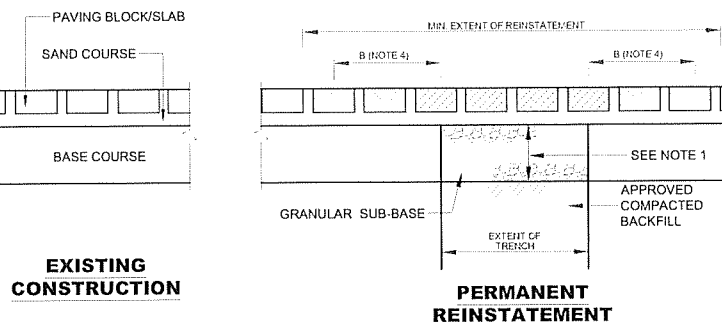
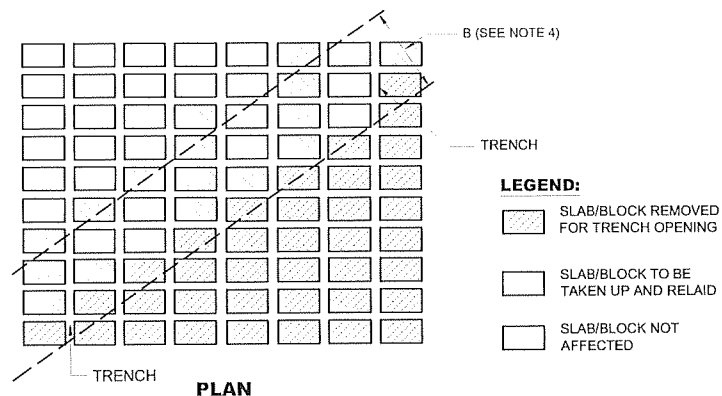


B. CARRIAGEWAY CONSTRUCTED WITHIN THE LAST 5 YEARS, CARRIAGEWAY RE-SURFACED WITHIN THE LAST 1 YEAR AND FOOTWAY OR CYCLETRACK CONSTRUCTED WITHIN THE LAST 1 YEAR

- IN ADDITION TO THE RULES MENTIONED IN A ABOVE, THE REINSTATEMENT AREA SHALL EXTEND TO THE FULL WIDTH OF THE TRAFFIC LANE(S) IN WHICH THE TRENCH IS SITUATED. ANY EXTENSION OF THE REINSTATEMENT AREA BEYOND THE MINIMUM LIMIT CAN BE DONE BY COLD MILLING AND RESURFACING THE WEARING COURSE WITHIN THE EXTENDED AREA.



3. PAVING SLAB/BLOCK CONSTRUCTION



EXISTING CONSTRUCTION

PERMANENT
REINSTATEMENT

NOTES:

- THE SUB-BASE TO BE PUT BACK SHALL BE OF GRANULAR MATERIAL TO GENERAL SPECIFICATIONS AND SHALL BE OF THE SAME THICKNESS AS THE ADJOINING PAVEMENT SUBJECT TO A MINIMUM OF 75mm IN FOOTWAY AND 150mm IN RUN-IN AND CARRIAGEWAY.
- THE SAND COURSE TO BE PUT BACK SHALL EXCEED 20mm AND NOT EXCEED 30mm THICKNESS
- THE PAVING SLABS/BLOCKS SHALL BE OF THE SAME THICKNESS AS THE ADJOINING PAVEMENT SUBJECT TO A MINIMUM OF 60mm IN FOOTWAY AND 80mm IN CARRIAGEWAY OR RUN-IN.
- ALL PAVING SLABS/BLOCKS WITHIN A DISTANCE OF B MILLIMETERS FROM THE SIDE OF A TRENCH OR DISTURBED AS A RESULT OF THE TRENCH WORKS SHALL BE TAKEN UP AND RELAID TOGETHER WITH THE OTHER SLABS/BLOCKS REMOVED FOR THE TRENCHING WORK. B SHALL BE AT LEAST 300mm OR TWICE THE LARGEST LATERAL DIMENSION OF THE PAVING SLABS/BLOCKS USED IN THE PAVING PATTERN (THE PATTERN MAY INVOLVE SLABS/BLOCKS OF A FEW DIFFERENT SIZES), WHICHEVER IS THE GREATER. IF NECESSARY, FURTHER SLABS/BLOCKS SHOULD BE LIFTED AND REINSTATEMENT.
- THE PAVING SLABS/BLOCKS SHALL BE RELAID ACCORDING TO THE ORIGINAL PATTERN. ANY SLABS/BLOCKS DAMAGED OR LOST SHALL BE REPLACED.

NOTES:
1. ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED

ABBREVIATIONS:

mm	-	MILLIMETRES
FGL	-	FINISHED GROUND LEVEL
EGL	-	EXISTING GROUND LEVEL
DIA	-	DIAMETER
L	-	LENGTH
C	-	CENTER LINE

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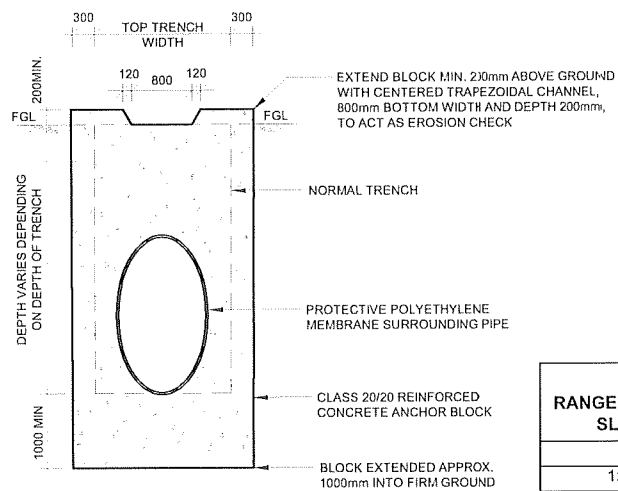
CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

DRAWING TITLE:
PERMANENT REINSTATEMENT OF PAVEMENT

Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/09

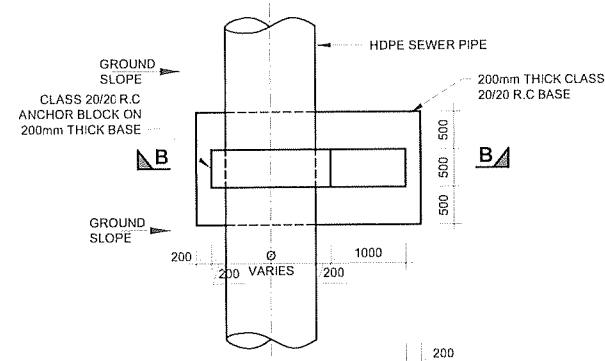


SECTION A-A
SCALE 1:100

RANGE OF GROUND SLOPE 1:n	MAXIMUM DISTANCE BETWEEN ANCHOR BLOCKS TYPE 1 (ALONG SLOPE) (m)
<1:8	-
1:10 - 1:6	36
1:6 - 1:5	24
1:5 - 1:4	18
1:4 - 1:2	12
>1:2	EVERY PIPE LENGTH TO BE ANCHORED (BASED ON PIPE LENGTH OF 6m)

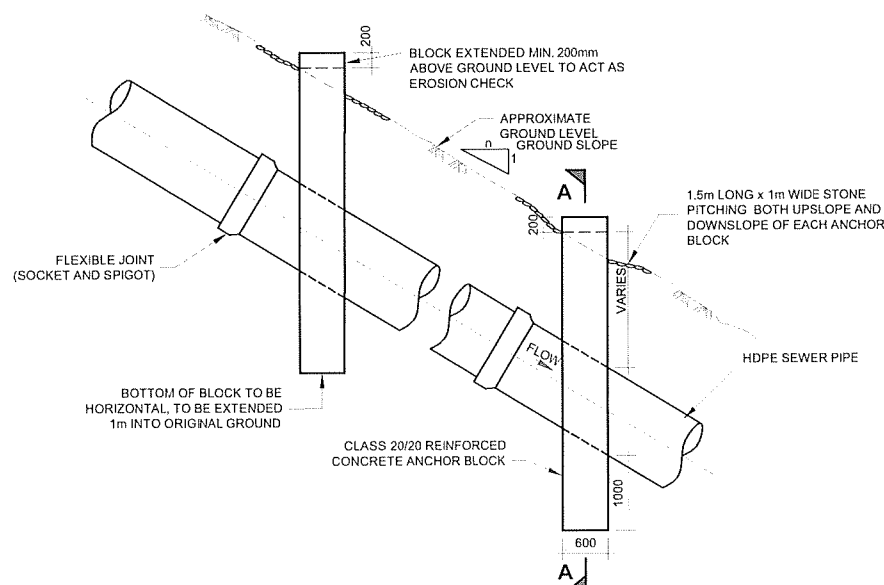
NOTES

- SAME ARRANGEMENT CAN BE USED AS SUPPORTS FOR PIPES LAID IN VERY SOFT GROUND BUT BLOCKS TO BE CAST ONSOUND ROCK OR HARD STRATUM
- ANCHOR BLOCKS TO BE CONSTRUCTED ON LOWER SIDE OF JOINT



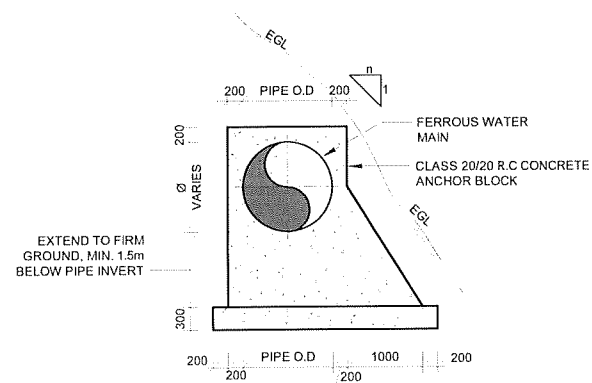
PLAN
SCALE 1:100

RANGE OF GROUND SLOPE 1:n	MAXIMUM DISTANCE BETWEEN ANCHOR BLOCKS TYPE 2 (ACROSS SLOPE) (m)
<1:4	-
1:4 - 1:2	12
>1:2	6



SIDE ELEVATION
SCALE 1:100

ANCHOR BLOCK TYPE 1
PIPE LAID ALONG SLOPE (GRADIENT > 1:8)



SECTION B-B
SCALE 1:100

ANCHOR BLOCK TYPE 2
PIPE LAID ACROSS SLOPE (GRADIENT > 1:4)

NOTES

- ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED
- ANCHOR BLOCKS INSTALLED FOR PIPES LAID AT SLOPES EXCEEDING 1:8 FOR TYPE 1 BLOCKS AND SLOPES EXCEEDING 1:4 FOR TYPE 2 BLOCKS

ABBREVIATIONS

mm	-	MILLIMETRES
FGL	-	FINISHED GROUND LEVEL
EGL	-	EXISTING GROUND LEVEL
PIL	-	PIPE INVERT LEVEL
DIA	-	DIAMETER
O.D	-	OUTER DIAMETER
R.C.	-	REINFORCED CONCRETE
M.S.	-	MILD STEEL
c/c	-	CENTER TO CENTRE
No.	-	NUMBER
m ³	-	CUBIC METER

REVISIONS		SIGN	DATE	APPROVED
	BY			
	CHECKED			
	BY			
	CHECKED			
	BY			
	CHECKED			

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PROJECT NAME:
 LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:
 MWANZA SEWER CONNECTION UPGRADE

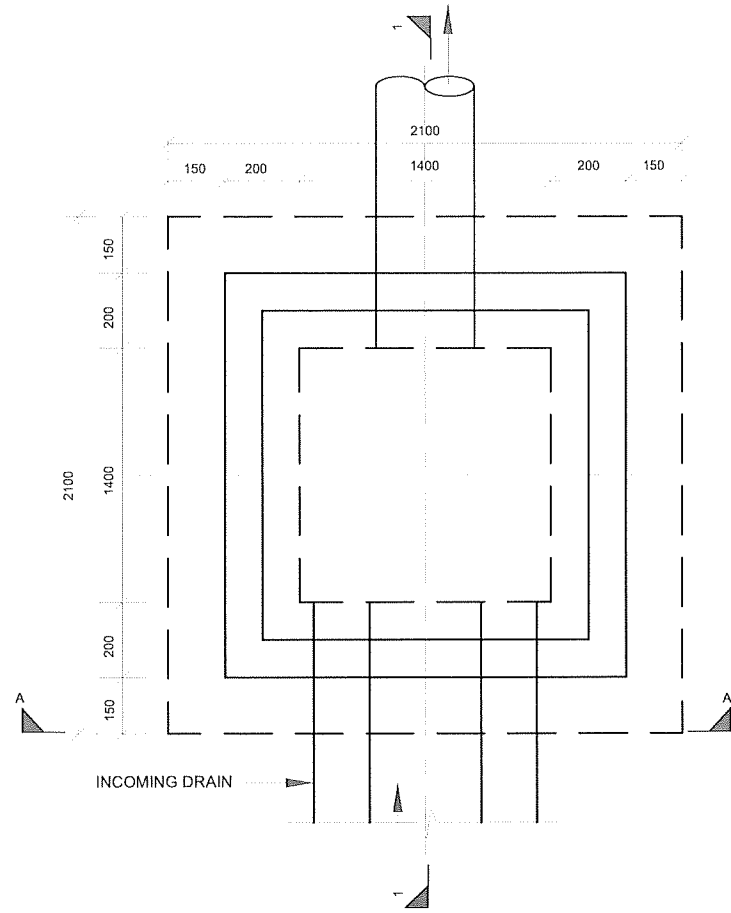
STANDARD DRAWINGS

DRAWING TITLE:
 ANCHOR BLOCKS

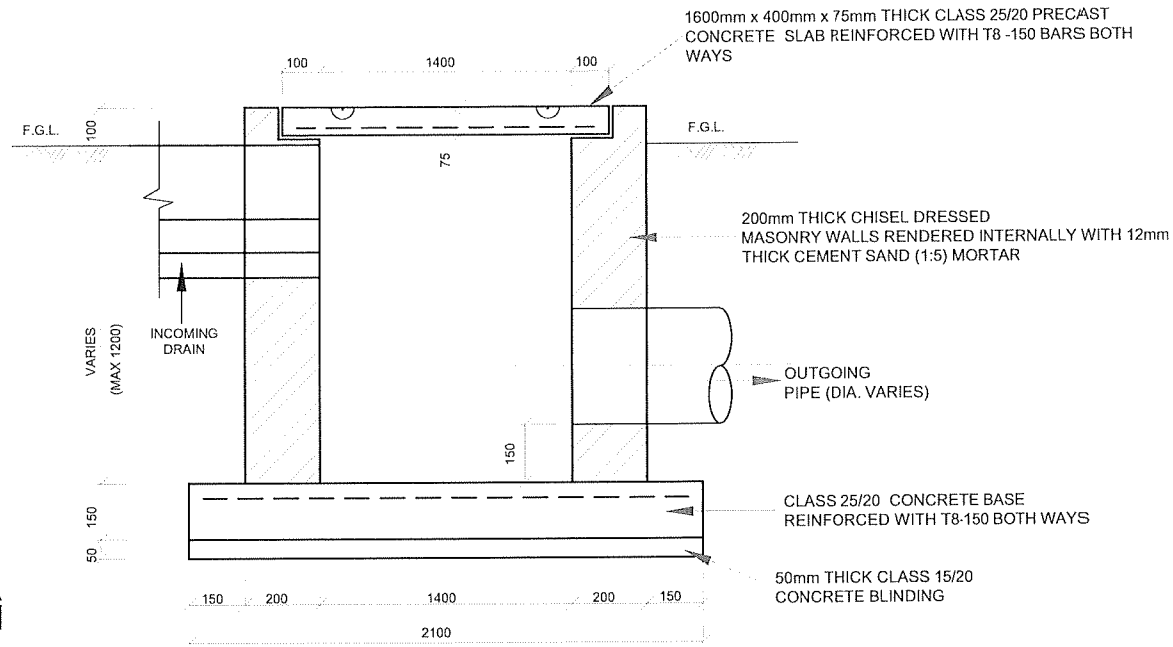
Designed by: E.O.A Drawn by: V.C
 Checked by: N.J.N Approved by: R.S.R
 Scale: AS SHOWN Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/10 REV

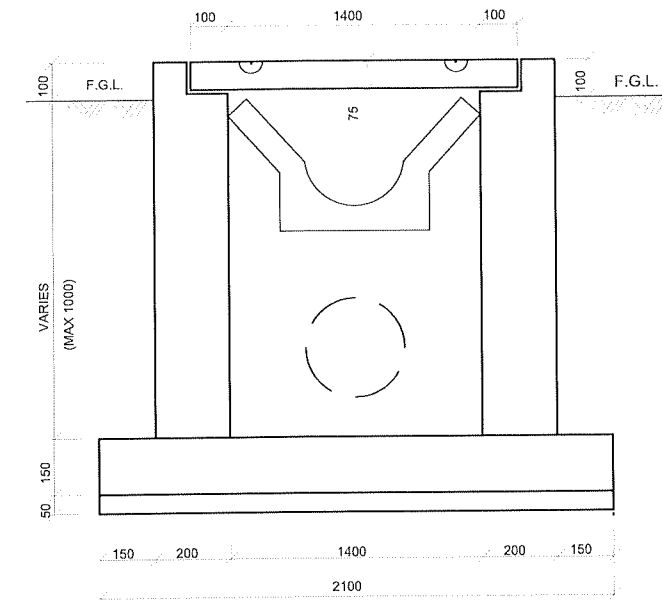
DETAILS OF STORM WATER CATCHPIT



PLAN
TYPICAL STORM WATER CATCHPIT
SCALE 1:20



SECTION 1-1
SCALE 1:20



ELEVATION A-A
SCALE 1:20

NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED
2. LENGTH OF EACH CASCADE IS 1000mm

ABBREVIATIONS

- I.B - INVERT BLOCK
I.B.D - INVERT BLOCK DRAIN
DIA - DIAMETER
mm - MILLIMETER
F.G.L - FINISHED GROUND LEVEL

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPROVED
		CHECKED		
		BY		
		CHECKED		
		BY		
		CHECKED		

CLIENT:

EAST AFRICAN COMMUNITY (EAC)
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PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

DRAWING TITLE:

DETAILS OF STORMWATER CATCH PIT AND EARTH DRAINS

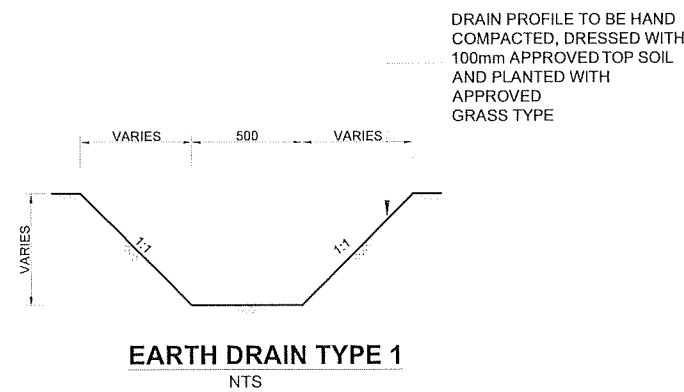
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Checked by: N.J.N Approved by: R.S.R

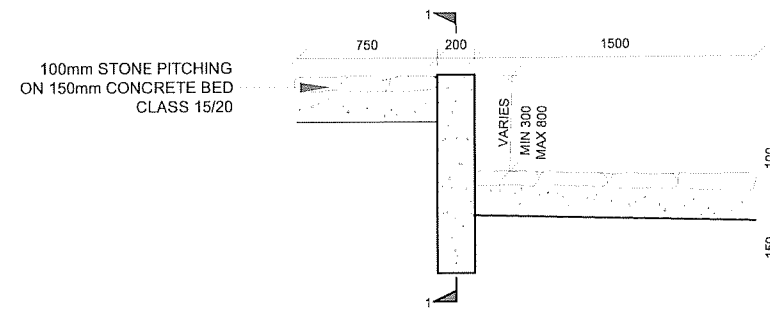
Scale: AS SHOWN Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/11

DETAILS OF EARTH DRAIN TYPE '1'

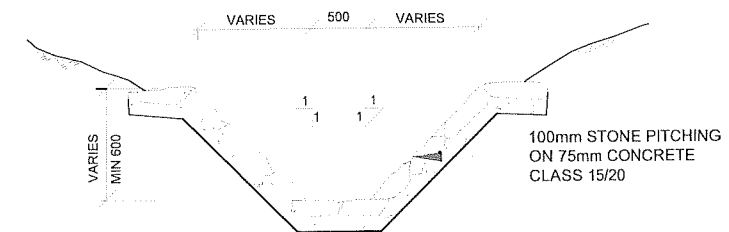


EARTH DRAIN TYPE 1
NTS

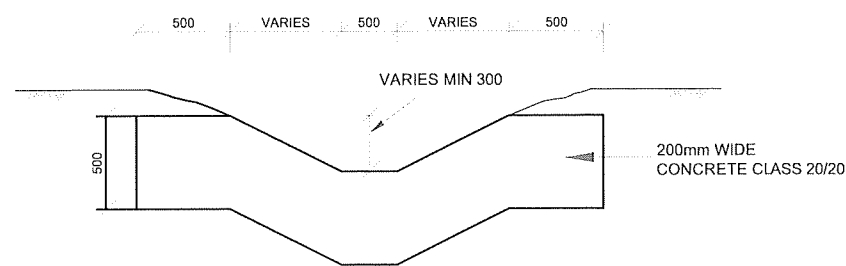


SECTION SILL FOR DRAIN TYPE 1
SCALE 1:40

DETAILS OF DRAIN TYPE '2' (STONE PITCHED DRAIN)

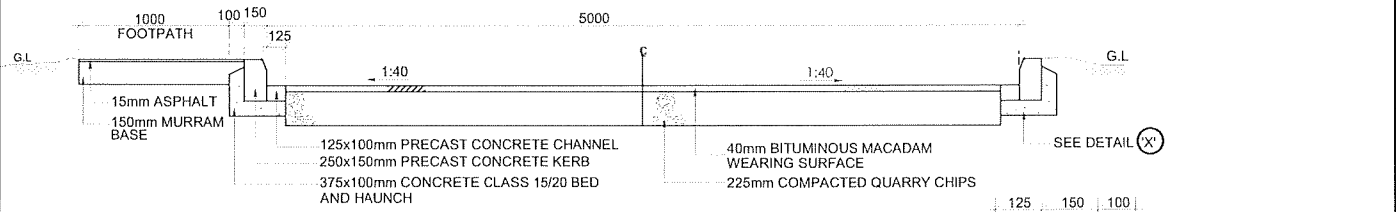


DRAIN TYPE 2 (STONE PITCHED DRAIN)
SCALE 1:40



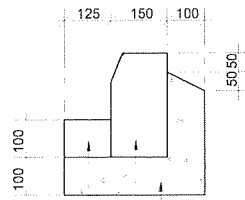
ELEVATION 1-1
SCALE 1:40

TYPICAL BITUMINOUS ROAD DETAILS



TYPICAL SECTION OF BITUMINOUS ROAD

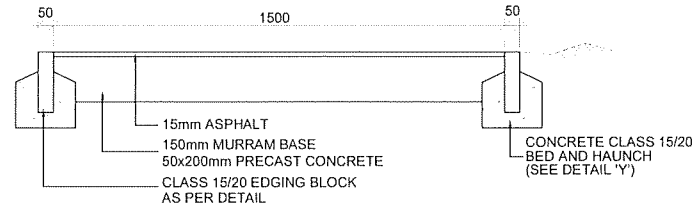
SCALE 1:50



DETAIL 'X'

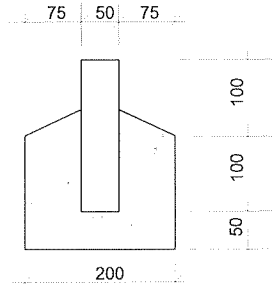
SCALE 1:20

375x100mm CONCRETE CLASS 15/20 BED AND HAUNCH
250x150mm PRECAST CONCRETE KERB
125x100mm PRECAST CONCRETE CHANNEL



TYPICAL SECTION OF FOOTPATH

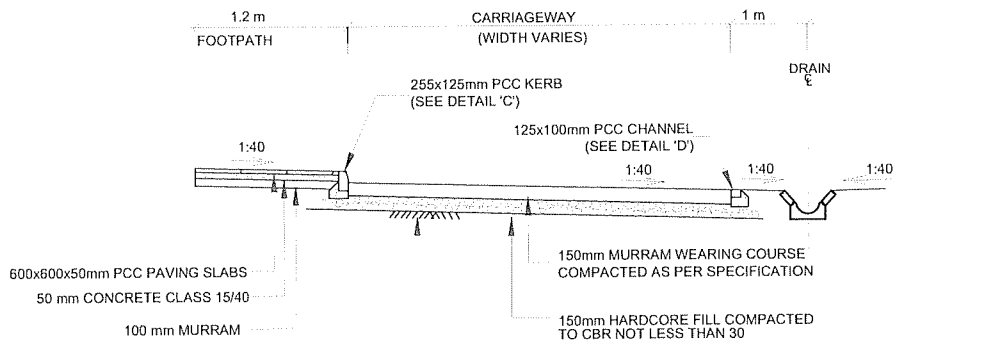
SCALE 1:25



DETAIL 'Y'

SCALE 1:10

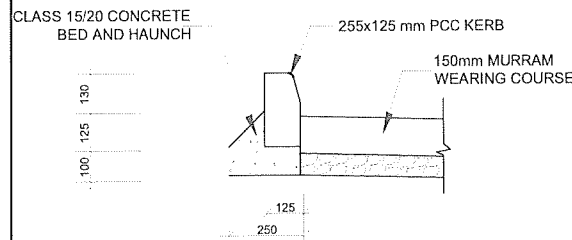
TYPICAL MURRAM ROAD DETAILS



TYPICAL SECTION OF MURRAM ROAD

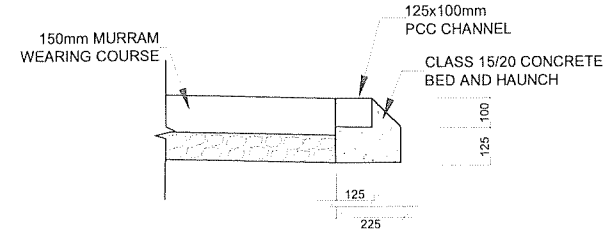
SCALE 1:50

EXISTING FORMATION COMPACTED TO ENGINEER'S APPROVAL



DETAIL 'C'
TYPICAL DETAIL OF KERB

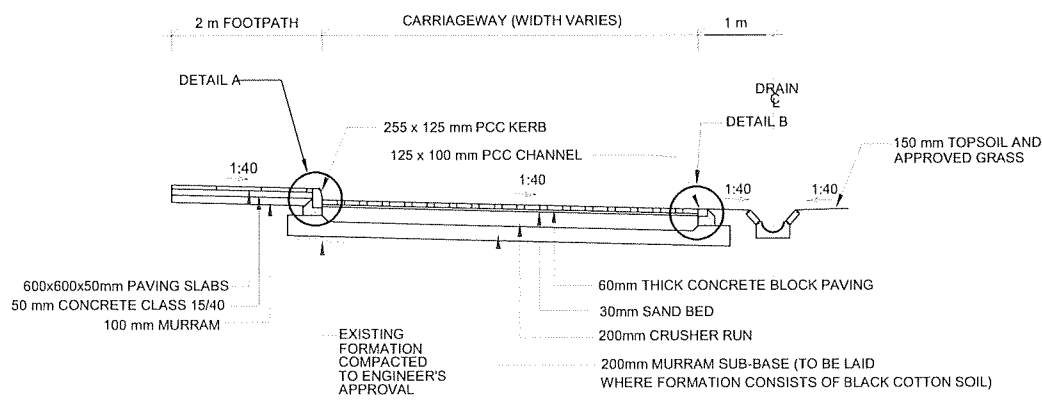
SCALE 1:25



DETAIL 'D'
TYPICAL DETAIL OF CHANNEL

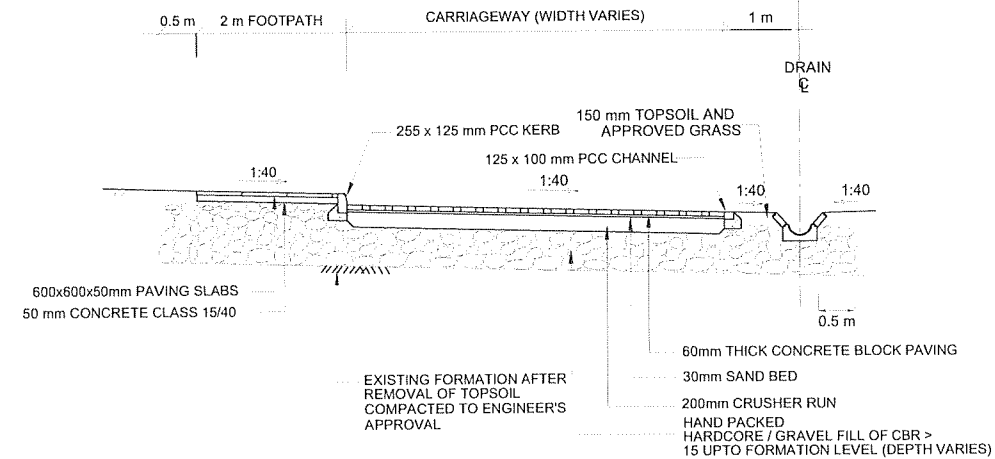
SCALE 1:25

TYPICAL CONCRETE BLOCKS SURFACE ROAD DETAILS



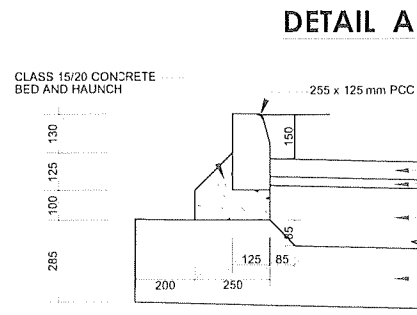
TYPICAL CROSS SECTION FOR CARRIAGEWAY IN CUT

SCALE 1:100



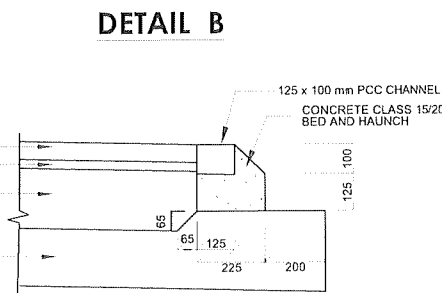
TYPICAL CROSS SECTION FOR CARRIAGEWAY IN FILL

SCALE 1:100



DETAIL OF KERB

SCALE 1:25



DETAIL OF CHANNEL

SCALE 1:25

NOTES:

- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED

ABBREVIATIONS

mm	-	MILLIMETRES
FGL	-	FINISHED GROUND LEVEL
PIL	-	PIPE INVERT LEVEL
DIA	-	DIAMETER
Ø	-	DIAMETER
R.C.	-	REINFORCED CONCRETE
G.M.S	-	GALVANIZED MILD STEEL
M.S.	-	MILD STEEL
c/c	-	CENTRE TO CENTRE
No.	-	NUMBER
L	-	LENGTH
C	-	CENTRE LINE
G.L.	-	GROUND LEVEL
PCC	-	PRECAST CEMENT

REVISIONS	BY	SIGN	DATE	APPROVED
	CHECKED			
	BY			
	CHECKED			
	BY			
	CHECKED			

CLIENT:

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PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

DRAWING TITLE:

TYPICAL ROAD CROSS SECTION DETAILS

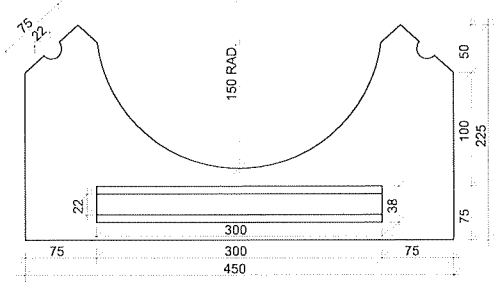
Designed by: E.O.A Drawn by: V.C

Checked by: N.J.N Approved by: R.S.R

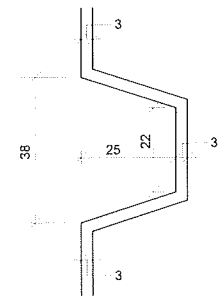
Scale: AS SHOWN Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/12

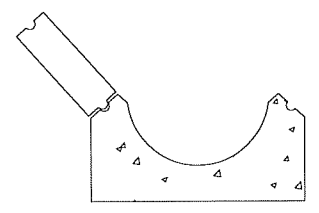
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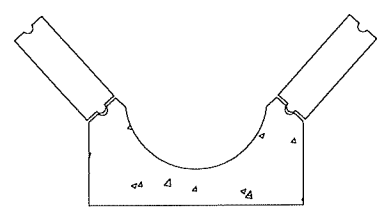
**PRECAST CONCRETE
TYPE 'A' INVERT BLOCK**
SCALE 1:4



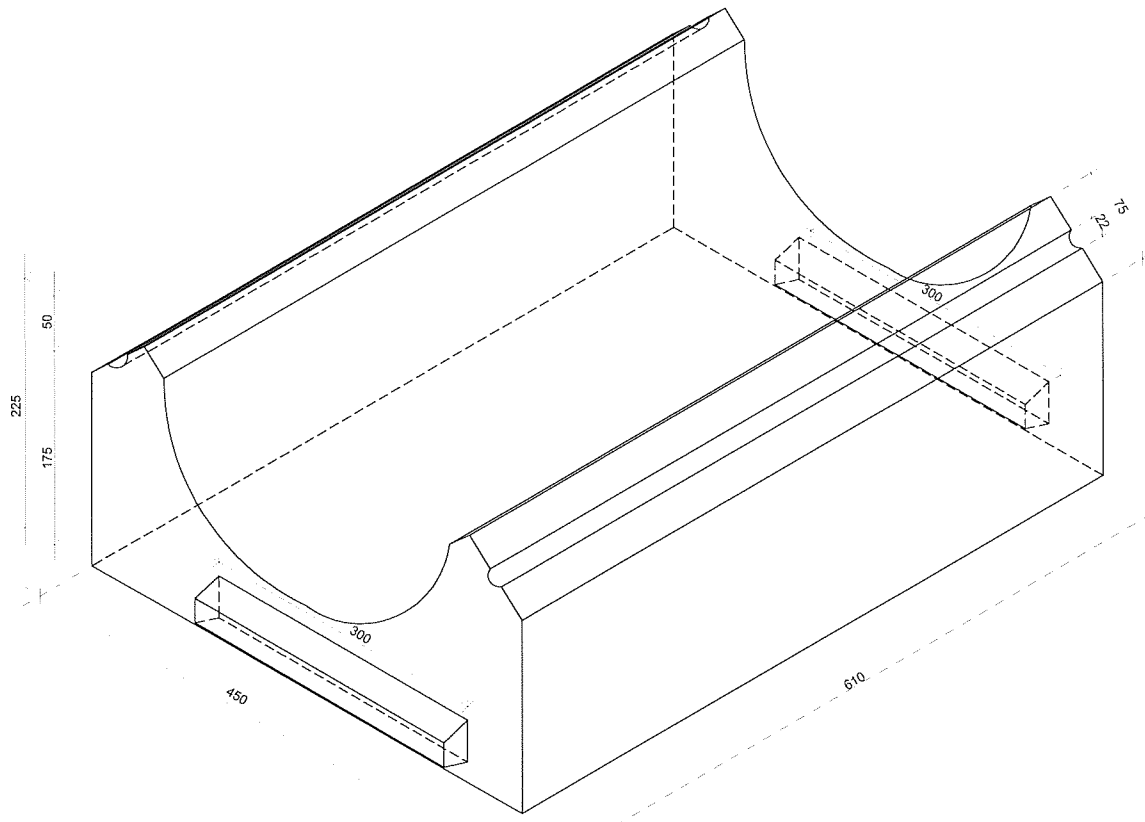
DETAIL OF JOINT
SCALE 1:1



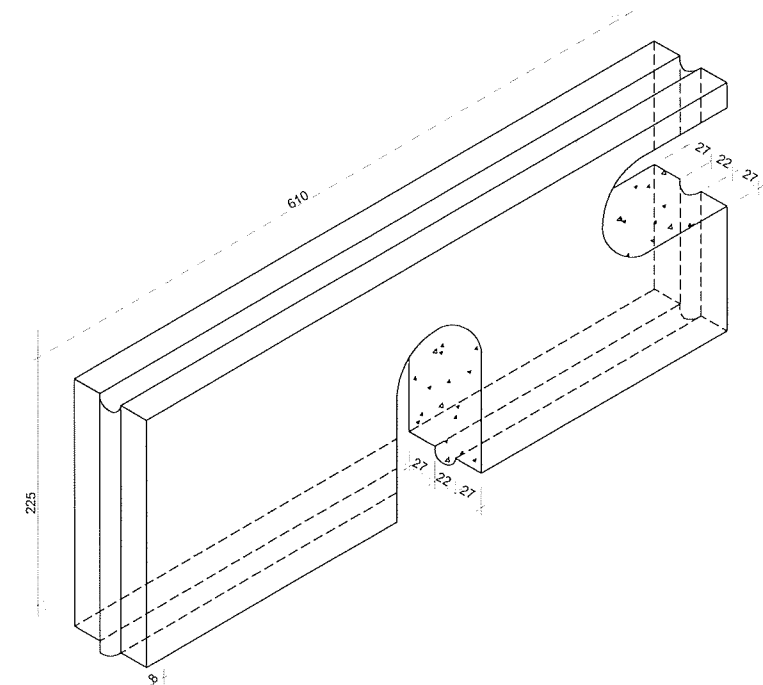
**TYPE 'A' INVERT BLOCK
AND ONE COURSE**
SCALE 1:8



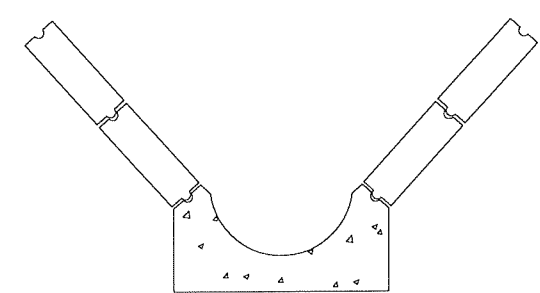
**INVERT BLOCK TYPE 'A'
AND TWO COURSES**
SCALE 1:8



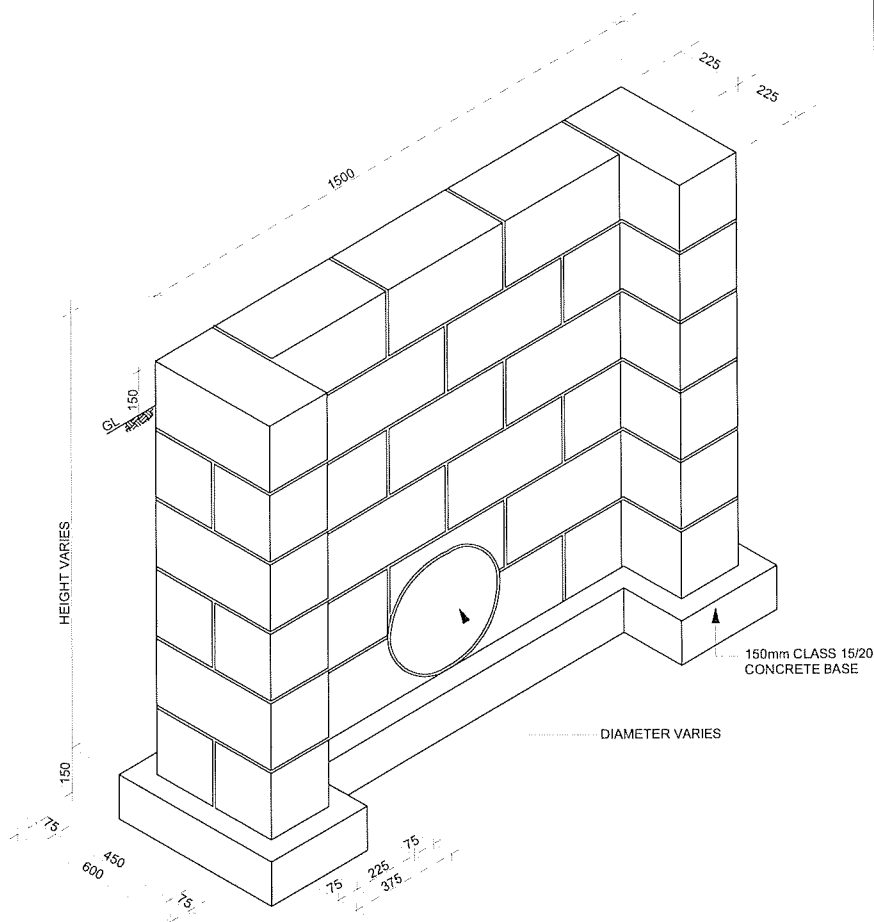
ISOMETRIC VIEW OF INVERT BLOCK TYPE 'A'
NTS



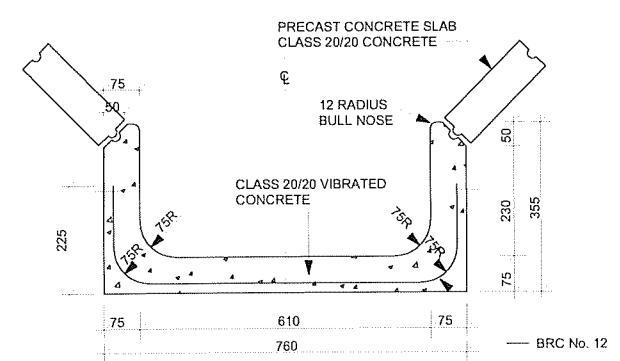
**PRECAST CONCRETE
SLAB DETAIL**
NTS



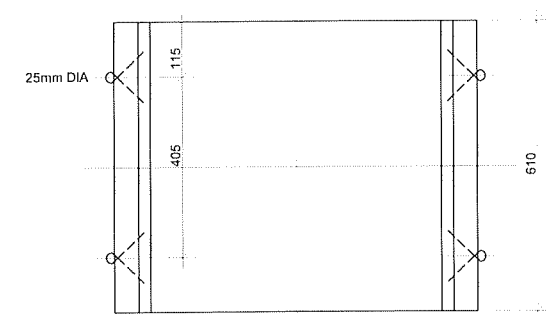
**INVERT BLOCK TYPE 'A'
AND FOUR COURSES**
SCALE 1:16



DETAIL OF HEAD WALL
SCALE 1:30



SECTION - I.B.D. TYPE 'B'
SCALE 1:8



**PLAN
DETAILS OF INVERT BLOCK TYPE 'B'**
SCALE 1:8

NOTES:

- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED

ABBREVIATIONS

- mm - MILLIMETRES
- G.L - GROUND LEVEL
- RAD - RADIUS
- R - RADIUS

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPROVED
		CHECKED		
		BY		
		CHECKED		
		BY		
		CHECKED		

CLIENT:

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PROJECT NAME:

**LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)**

CONTRACT TITLE:

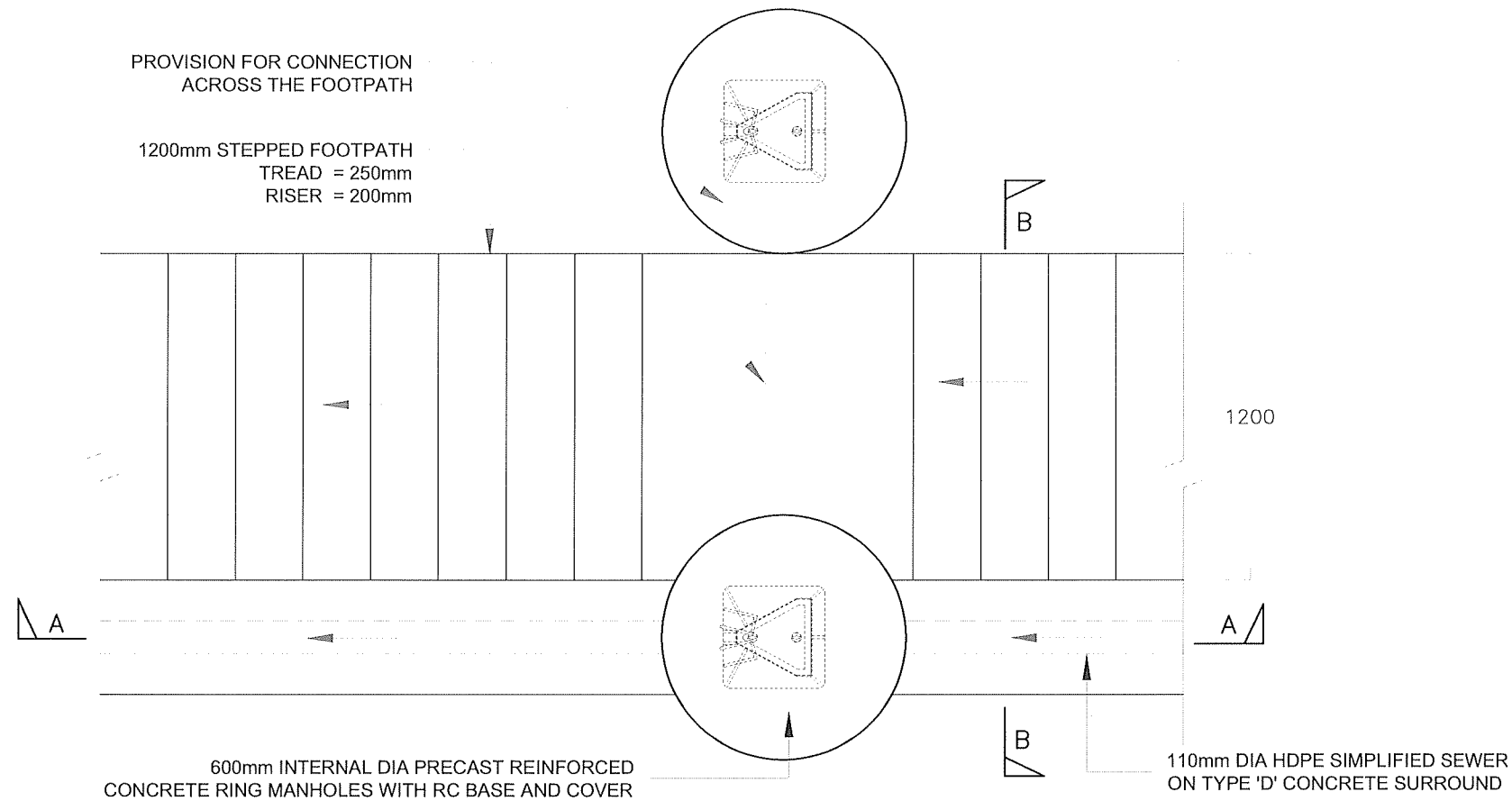
MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

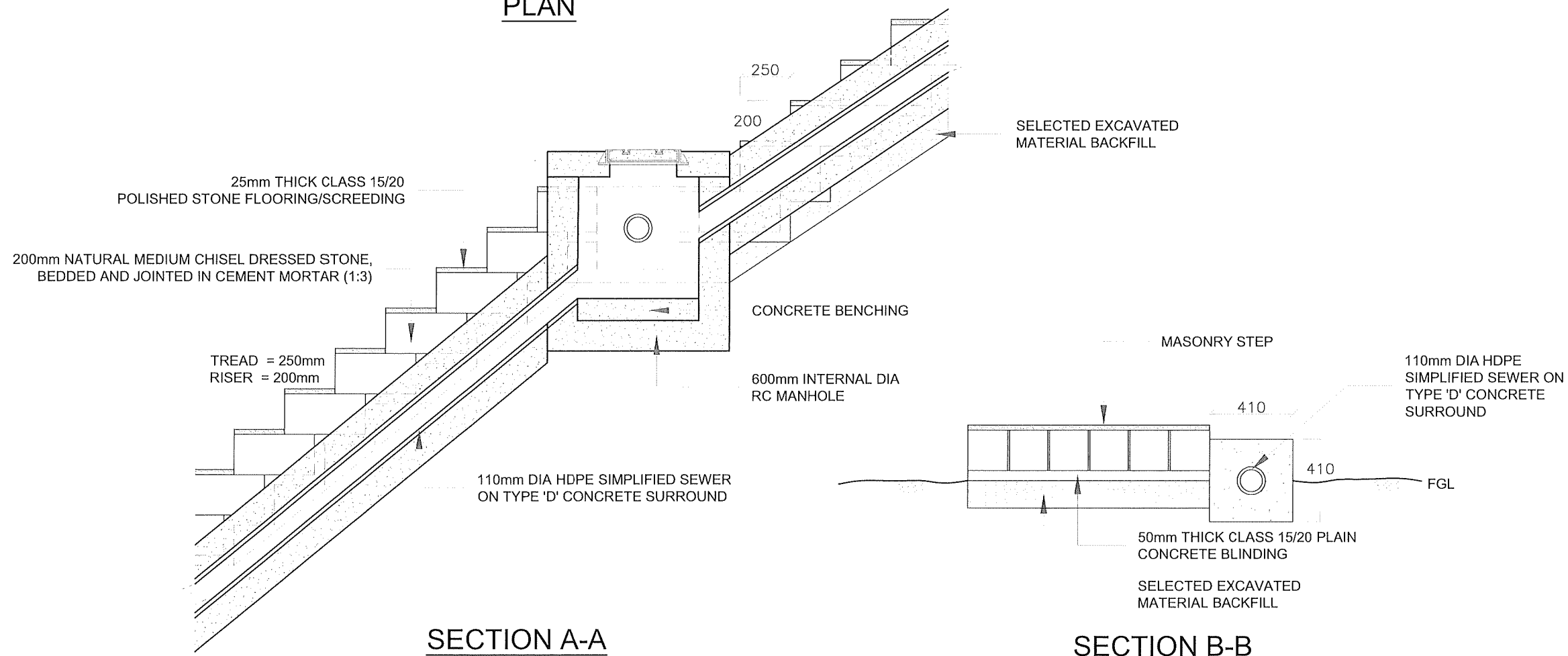
DRAWING TITLE:

**INVERT BLOCK DRAINS AND
HEADWALL DETAILS**

Designed by: E.O.A	Drawn by: V.C
Checked by: N.J.N	Approved by: R.S.R
Scale: AS SHOWN	Date: MARCH 2024
DRG No. M394(j)/MWZ/SD/13	



**TYPICAL DETAILS FOR SIMPLIFIED SEWER
ADJOINED TO MASONRY STEPPED FOOTPATH**
PLAN



NOTES

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED
2. STEPPED FOOTPATHS ADJOINING PROPOSED SIMPLIFIED SEWERS TO BE INCLUDED IN THE CONSTRUCTION OF PROTECTIVE WORKS ON STEEP SECTIONS

REVISIONS		SIGN	DATE	APPROVED
	BY			
	CHECKED			
	BY			
	CHECKED			
	BY			
	CHECKED			

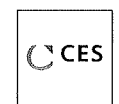
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LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

STANDARD DRAWINGS

DRAWING TITLE:

DETAILS OF PIERS FOR PIPE AERIAL
CROSSINGS
AND STEPPED FOOTPATH
SHEET 1 OF 1

Designed by: E.O.A Drawn by: V.C

Checked by: N.J.N Approved by: R.S.R

Scale: 1:25 Date: MARCH 2024

DRG No. M394(j)/MWZ/SD/14