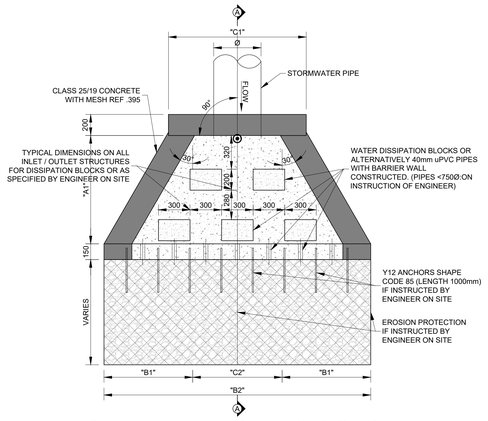
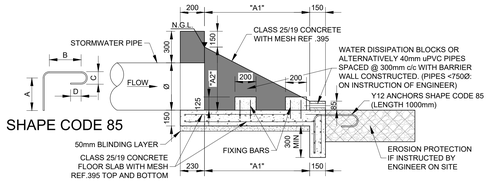


PLAN VIEW: INLET & OUTLET STRUCTURE

SCALE 1:20



SHAPE CODE 85

SECTION A-A: INLET & OUTLET STRUCTURE

SCALE 1:20

DIMENSIONS TO STANDARD STORMWATER STRUCTURES

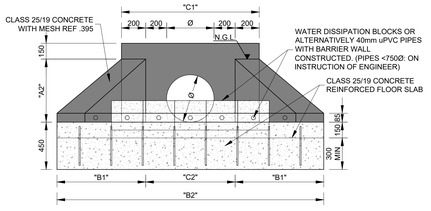
TABLE 1: INLET OR OUTLET DIMENSION (mm) FOR 90° STRUCTURES			
PIPE NOMINAL DIAMETER	450mmØ	600mmØ	750mmØ
A1	1000	1300	1600
A2	600	750	900
B1	843	1016	1189
B2	2536	3032	3529
C1	1310	1460	1610
C2	850	1000	1150

LEGEND:

⊙ SETTING OUT NODE

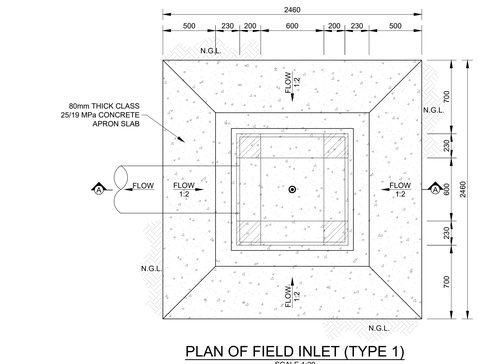
NOTES:

1. ALL CONCRETE FLOOR SLABS TO BE CLASS 25/19 MPa CONCRETE.
2. ALL CONCRETE BENCHING TO BE CLASS 20/13
3. ALL STORMWATER PIPES TO BE A MINIMUM NOMINAL DIAMETER OF 450mm.
4. ALL EXPOSED CONCRETE EDGES TO BE ROUNDED WITH A NOSING TOOL.
5. BLINDING LAYER TO BE A MINIMUM THICKNESS OF 50mm.
6. MINIMUM COVER OF REINFORCING TO BE 40mm.
7. POSITION OF MANHOLES SHALL BE DIRECTLY ABOVE THE PI OF ADJOINING STORMWATER PIPES.
8. STORMWATER STRUCTURE IN ACCORDANCE WITH SABS 1200LE.
9. DISSIPATION BLOCKS OR BARRIER WITH 40mm PVC PIPES TO BE CONSTRUCTED ON OUTLET STRUCTURES FOR PIPE DIAMETER >750mm Ø AS INSTRUCTED BY THE ENGINEER ON SITE.
10. GABION & RENO MATTRESSES MUST BE PLACED AS INSTRUCTED BY THE ENGINEER ON SITE.



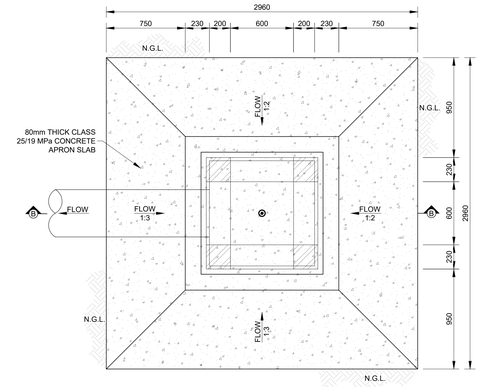
ELEVATION: INLET & OUTLET STRUCTURE

SCALE 1:20



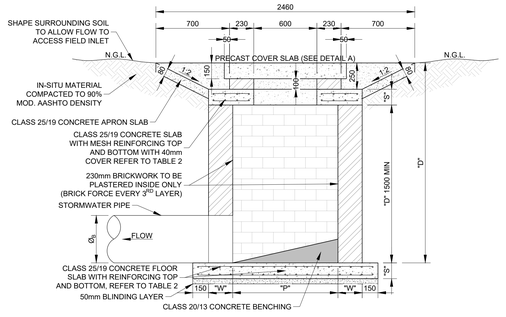
PLAN OF FIELD INLET (TYPE 1)

SCALE 1:20



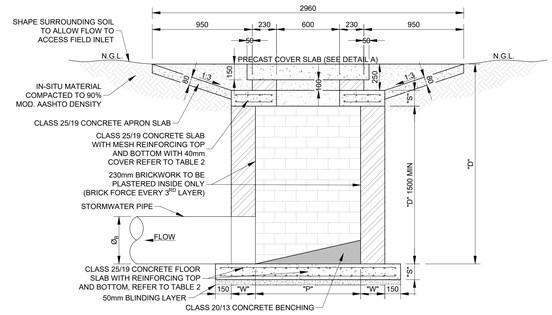
PLAN OF FIELD INLET (TYPE 2)

SCALE 1:20



SECTION A-A: FIELD INLET (TYPE 1)

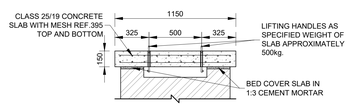
SCALE 1:20



SECTION B-B: FIELD INLET (TYPE 2)

SCALE 1:20

DIMENSIONS TO STANDARD STORMWATER STRUCTURES



DETAIL A: PRECAST COVER SLAB

SCALE 1:20

TABLE 1 JUNCTION BOX DIMENSIONS		
$Ø_o$*	DISTANCE "P"**	1.25 x "P"
450	1000	1250
525	1000	1250
600	1000	1250
750	1100	1380
825	1300	1630
900	1400	1750
1050	1500	1880
1200	1700	2130
1350	1800	2250
1500	2000	2500
* DIAMETER OF OUTGOING PIPE		
** EFFECTIVE WIDTH WITHIN JUNCTION BOX		

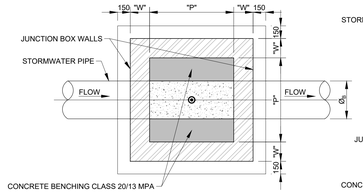
TABLE 2 WALL AND SLAB DIMENSIONS AT 1m DEPTH INTERVALS				
DEPTH ("D")	WALL THICKNESS ("W")	SLAB THICKNESS ("S")	MESH REF	WIRE SIZE
< 1.5m	230mm	150mm	395	8mm
1.5 - 2.5m	230mm	150mm	395	8mm
2.5 - 3.5m	250mm RC	200mm	617	10mm
3.5 - 4.5m	250mm RC	200mm	617	10mm
4.5 - 5.5m	250mm RC	300mm	888	12mm
> 5.5m	250mm RC	300mm	888	12mm

LEGEND:

⊙ SETTING OUT NODE

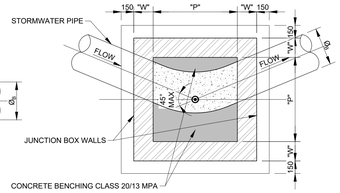
NOTES:

1. THE SOFFITS OF PIPES ARE TO BE LAID EITHER LEVEL OR LOWER IN THE DOWNSTREAM DIRECTION.
2. REFER TO TABLE 2 FOR STRUCTURAL DETAILS ACCORDING TO DEPTH OF STRUCTURE.
3. ALL CONCRETE FLOOR AND COVER SLABS TO BE CLASS 25/19 MPa CONCRETE.
4. ALL CONCRETE BENCHING TO BE CLASS 20/13
5. ALL BRICKWORK TO BE PLASTERED ON THE INSIDE.
6. REFER TO SECTION 502 OF THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS.
7. ALL STORMWATER PIPES TO BE A MINIMUM NOMINAL DIAMETER OF 450mm.
8. ALL EXPOSED CONCRETE EDGES TO BE ROUNDED WITH A NOSING TOOL.
9. BRICK FORCE TO BE PLACED IN EVERY THIRD COURSE.
10. BLINDING LAYER TO BE A MINIMUM THICKNESS OF 50mm.
11. MINIMUM COVER OF REINFORCING TO BE 40mm.
12. ALL PRECAST MANHOLE SECTIONS AND LIDS TO COMPLY WITH THE REQUIREMENTS OF SABS 1294.
13. POSITION OF MANHOLES SHALL BE DIRECTLY ABOVE THE PI OF ADJOINING STORMWATER PIPES.
14. ALL CONCRETE MANHOLE COVERS SHALL HAVE THE LETTERS "SW" FORMED OR ENGRAVED ON TOP. EACH LETTER SHALL BE 50mm WIDE AND 75mm HIGH.
15. HEAVY DUTY TYPE 1A CAST IRON COVERS TO BE PLACED IN TRAFFICKED AREAS



TYPE A: PLAN VIEW

SCALE 1:25

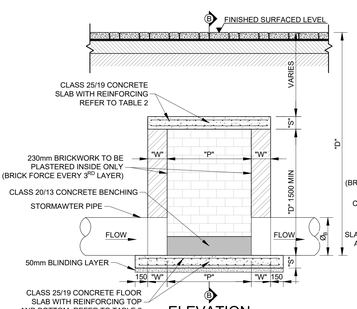


TYPE B: PLAN VIEW

SCALE 1:25

TABLE 1 JUNCTION BOX DIMENSIONS		
$Ø_o$*	DISTANCE "P"**	1.25 x "P"
450	1000	1250
525	1000	1250
600	1000	1250
750	1100	1380
825	1300	1630
900	1400	1750
1050	1500	1880
1200	1700	2130
1350	1800	2250
1500	2000	2500
* DIAMETER OF OUTGOING PIPE		
** EFFECTIVE WIDTH WITHIN JUNCTION BOX		

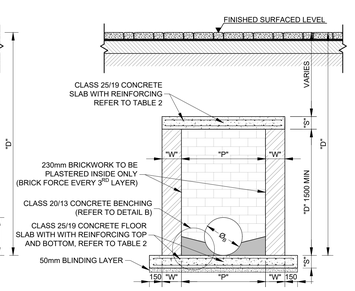
TABLE 2 WALL AND SLAB DIMENSIONS AT 1m DEPTH INTERVALS				
DEPTH ("D")	WALL THICKNESS ("W")	SLAB THICKNESS ("S")	MESH REF	WIRE SIZE
< 1.5m	230mm	150mm	395	8mm
1.5 - 2.5m	230mm	150mm	395	8mm
2.5 - 3.5m	250mm RC	200mm	617	10mm
3.5 - 4.5m	250mm RC	200mm	617	10mm



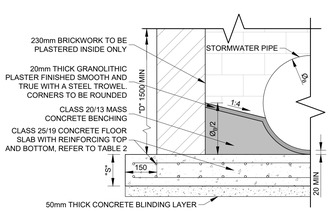
ELEVATION

TYPICAL DETAIL OF AN SUBMERGED JUNCTION BOX

SCALE 1:25

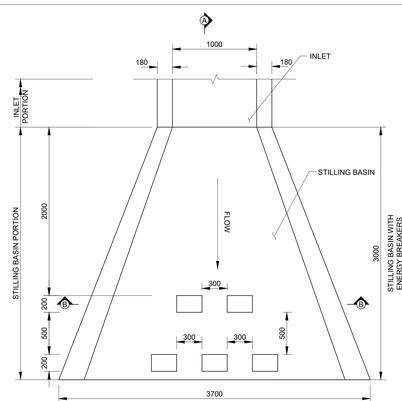


SECTION B-B



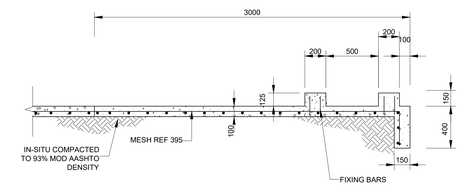
DETAIL B: CONCRETE BENCHING

SCALE 1:10



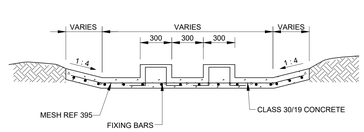
PLAN LAYOUT: STILLING BASIN

SCALE 1:25



SECTION A-A

SCALE 1:20



SECTION B-B

SCALE 1:20

LEGEND:

⊙ SETTING OUT NODE

NOTES:

1. ALL CONCRETE FLOOR SLABS TO BE CLASS 25/19 MPa CONCRETE.
2. ALL CONCRETE BENCHING TO BE CLASS 20/13
3. ALL EXPOSED CONCRETE EDGES TO BE ROUNDED WITH A NOSING TOOL.
4. BLINDING LAYER TO BE A MINIMUM THICKNESS OF 50mm.
5. MINIMUM COVER OF REINFORCING TO BE 40mm.
6. STORMWATER STRUCTURE IN ACCORDANCE WITH SABS 1200LE.
7. DISSIPATION BLOCKS OR BARRIER WITH 40mm PVC PIPES TO BE CONSTRUCTED ON OUTLET STRUCTURES FOR PIPE DIAMETER >750mm Ø AS INSTRUCTED BY THE ENGINEER ON SITE.
8. GABION & RENO MATTRESSES MUST BE PLACED AS INSTRUCTED BY THE ENGINEER ON SITE.
9. GABION & RENO MATTRESSES TO BE GALVANISED.

REVISIONS			
REV	BY	DATE	DESCRIPTION
0	V.N	11/2022	FOR APPROVAL

CLIENT:

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

PROJECT:

MATSAFENI KAAPSCHEHOOP BUS ROUTE

TITLE:

DETAILS:
TYPICAL STORMWATER STRUCTURES (SHEET 1 OF 2)

LIHUZU PROJECTS(LTD) LTD
UNIT NO.45.2
CENTRAL PARK
12 SUIKERRIET STREET NELSPRUIT 1201
TEL: 013 744 6070
Email: lihuzuprojects@gmail.com

Lihuzu PROJECTS (PTY) LTD

SCALE	AS SHOWN
DATE	NOVEMBER 2022
DESIGNED:	S.T NKABINDE
DRAWN:	V.M NKOSI
CHECKED:	L.S MTHETHWA
APPROVED:	S.T NKABINDE

DRAWING NUMBER	REV
LIH202223/SW/031	00