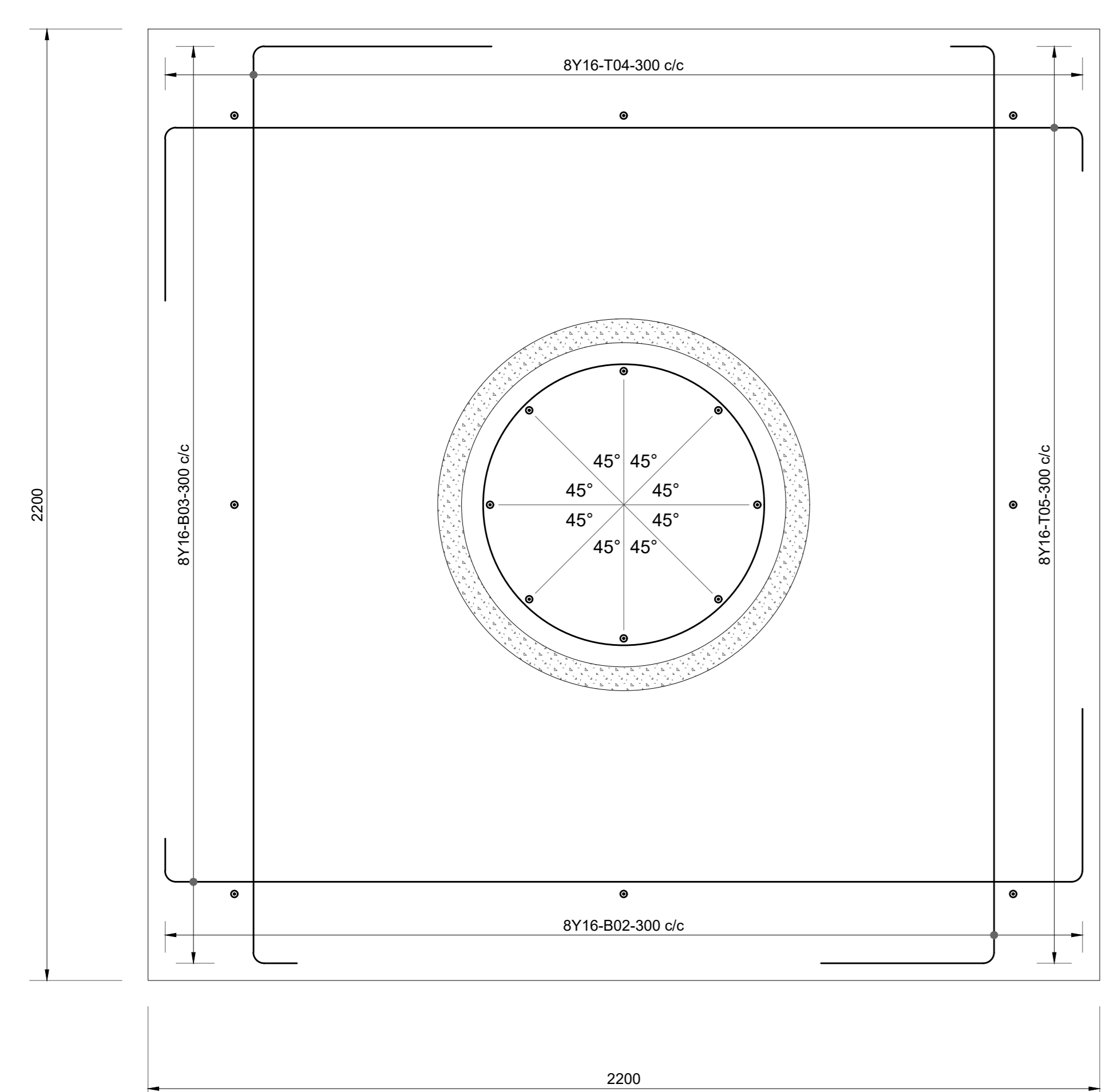
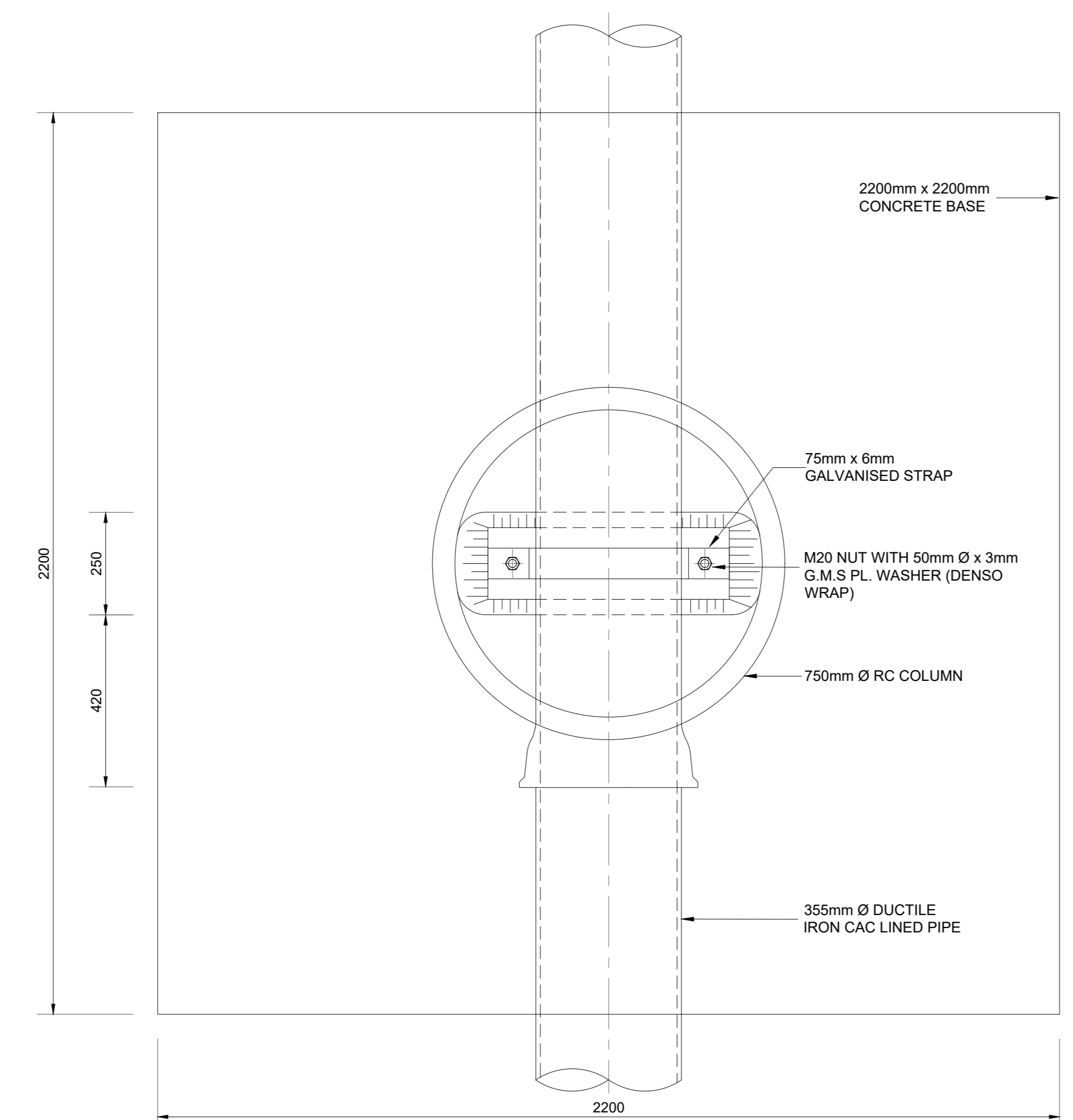


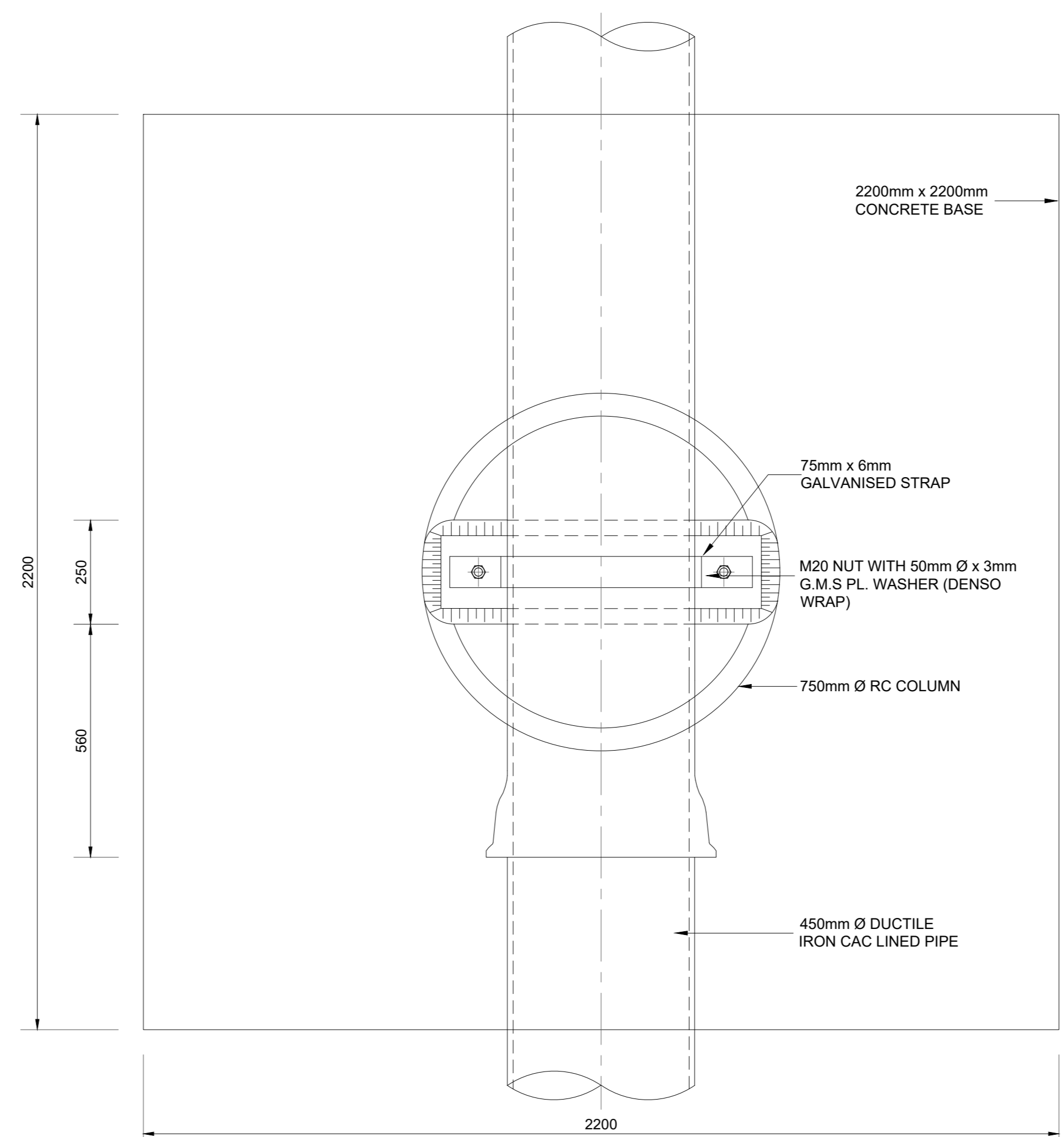
750mm Ø CONCRETE PIER - DETAIL "A"
SCALE 1:10



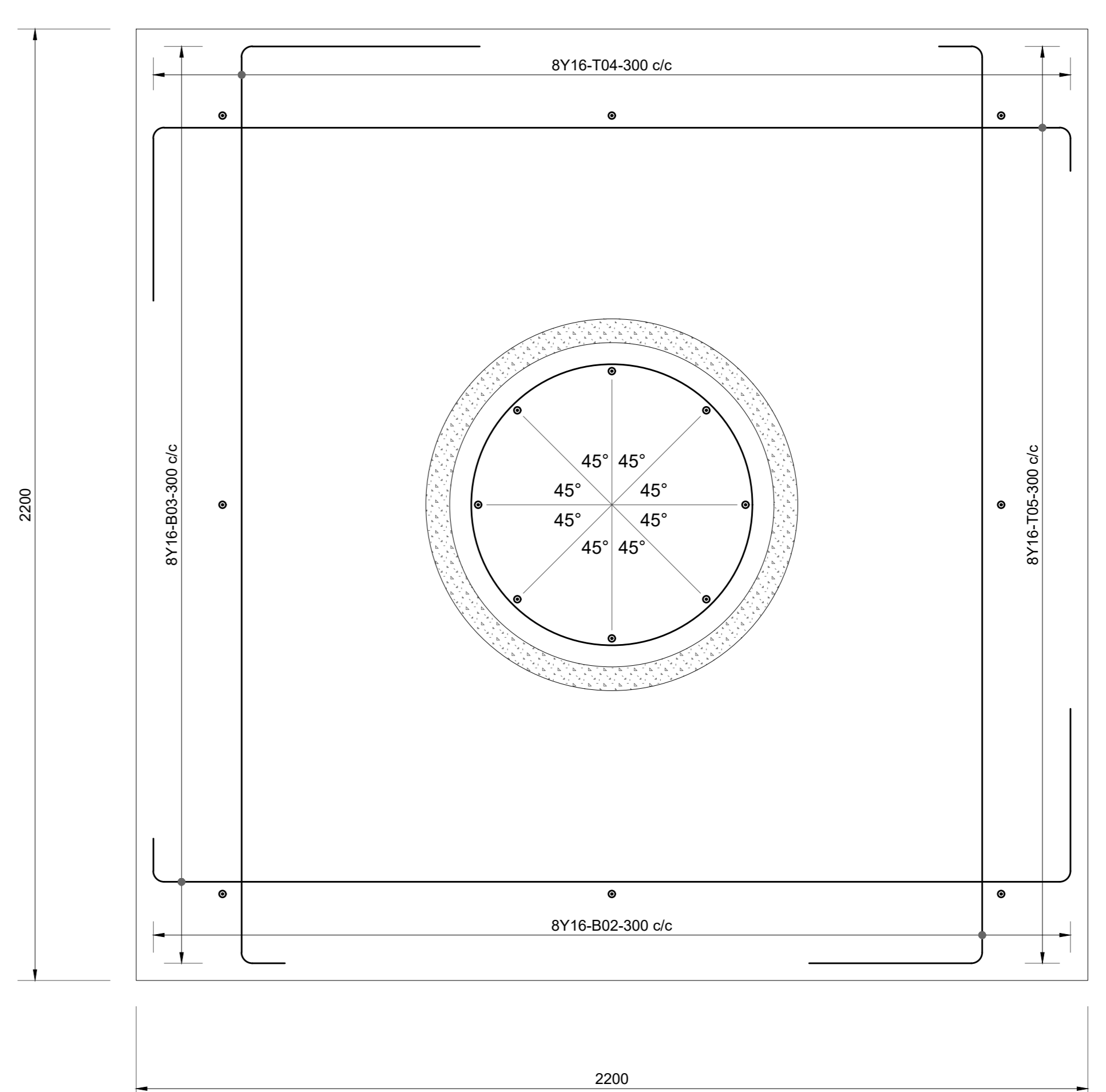
TYPE A CONCRETE COLUMN SECTION A-A
SCALE 1:10



PLAN TYPE "A"
SCALE 1:10

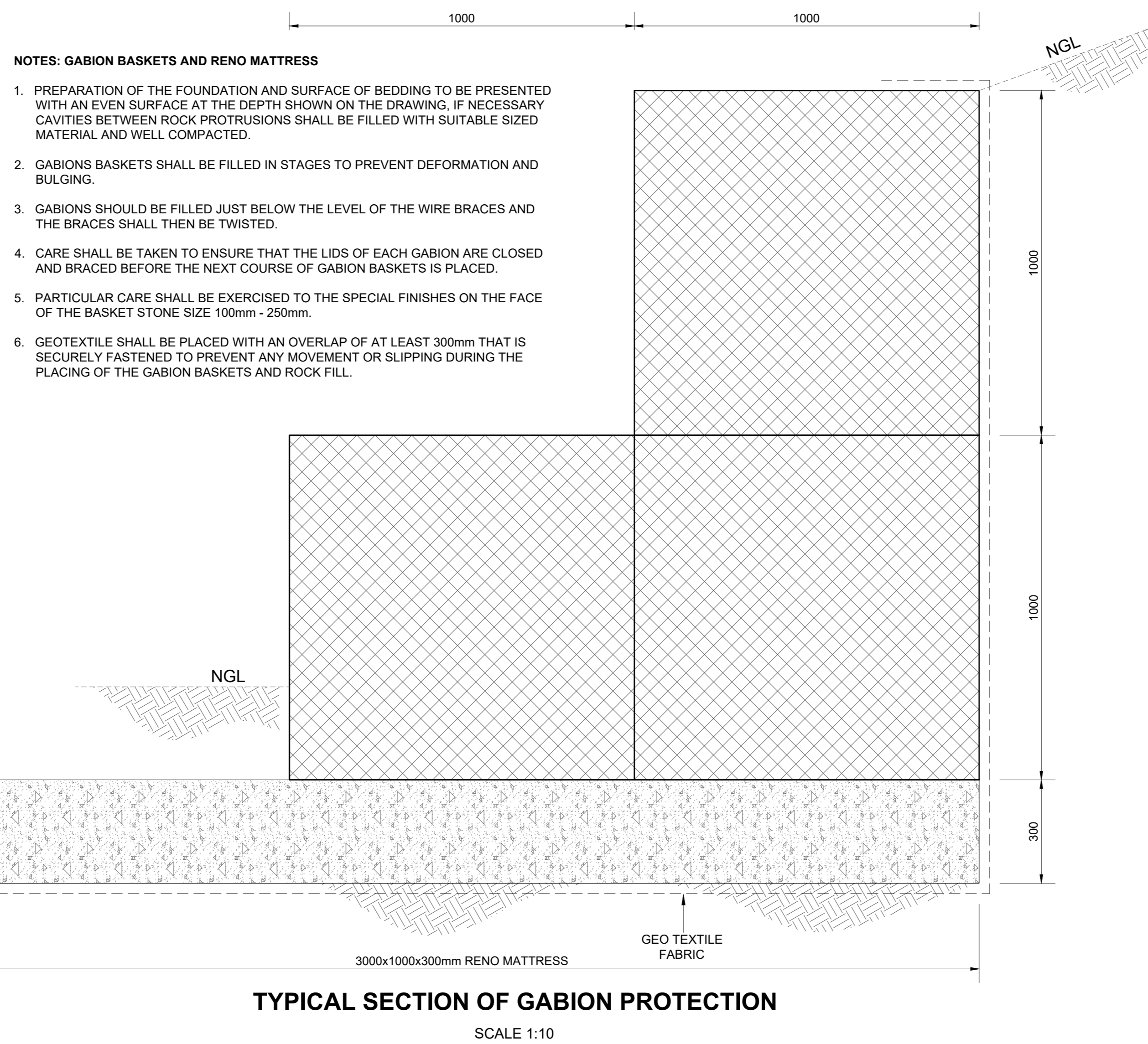


PLAN TYPE "B"
SCALE 1:10

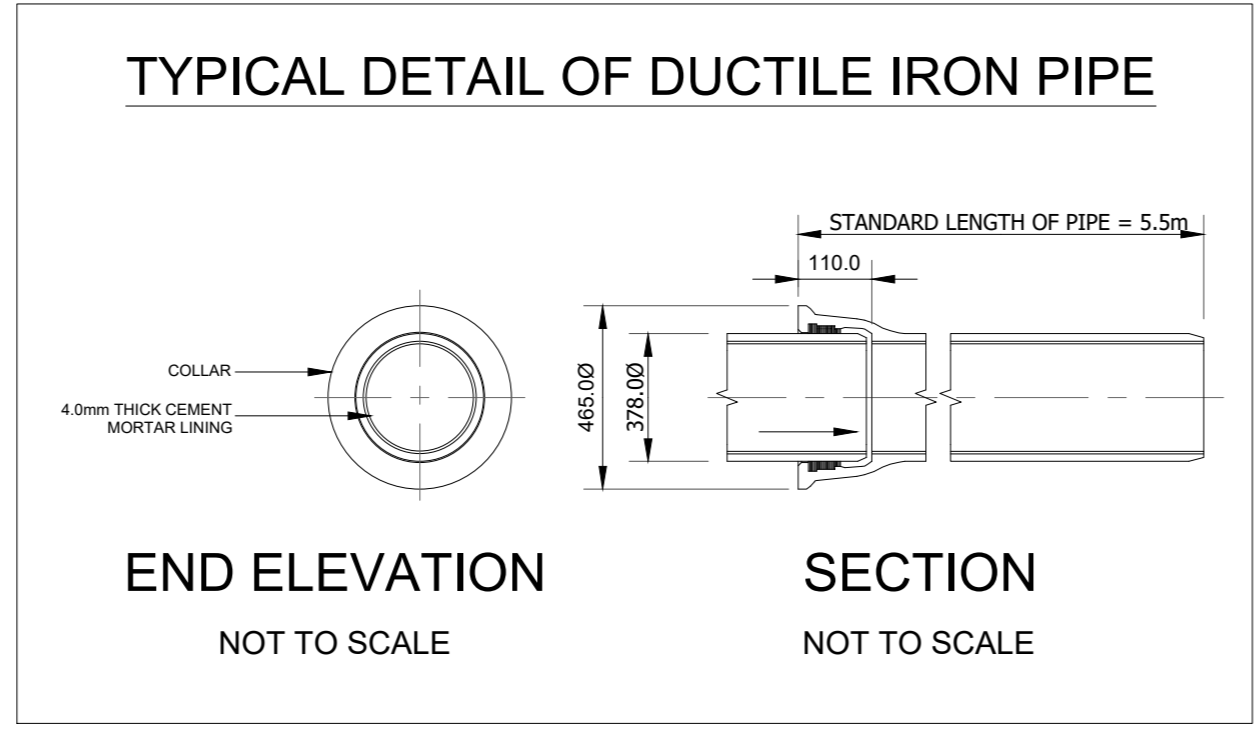


TYPE B CONCRETE COLUMN SECTION B-B
SCALE 1:10

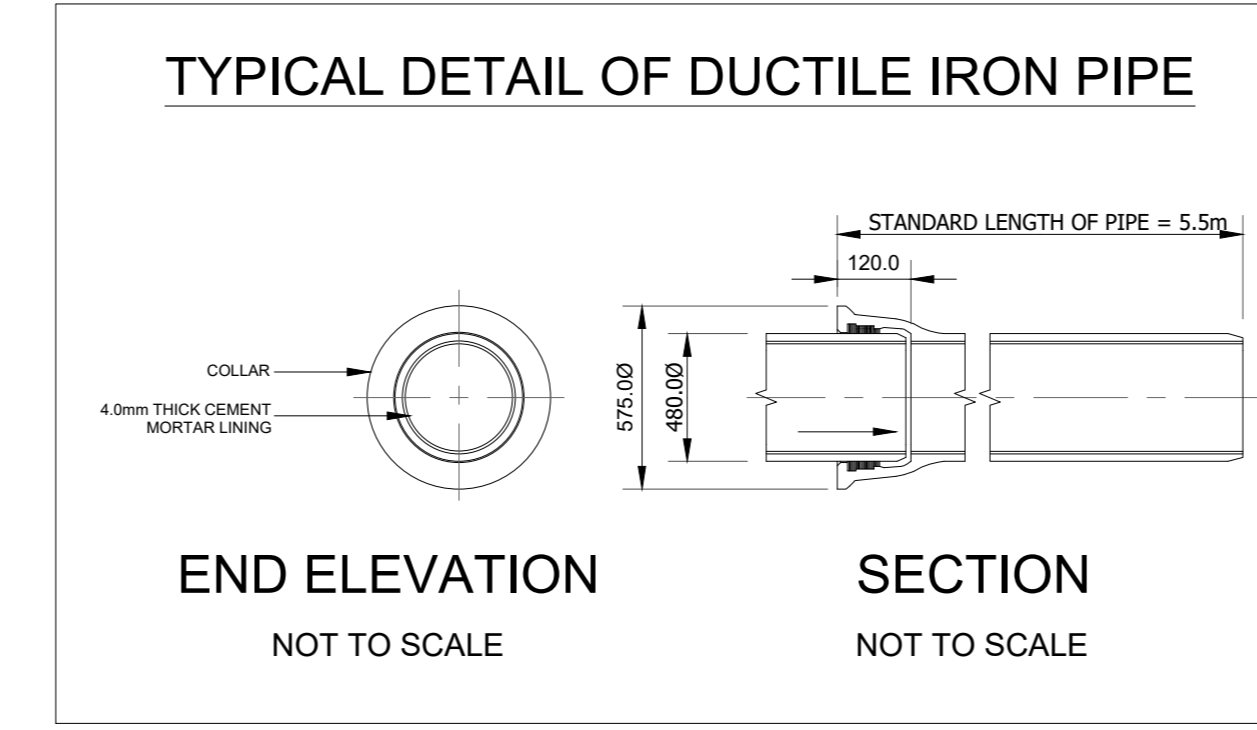
Bending Schedule													
Unit No.	Diameter (Y) Bar Mark	No. of Bars	Unit	Total	LENGTH (m)	SHAPE CODE	A (mm)	B (mm)	C (mm)	D (mm)	r	WEIGHT (kg/m)	Kg
31	Y20	1	6	186	2300	427.8	37	300	2000			1056.67	2.47
31	Y16	2	8	248	2900	719.2	38	400	2100	400		1136.34	1.58
31	Y16	3	8	248	2900	719.2	38	400	2100	400		1136.34	1.58
31	Y16	4	8	248	2900	719.2	38	400	2100	400		1136.34	1.58
31	Y16	5	8	248	2900	719.2	38	400	2100	400		1136.34	1.58
31	Y12	6	4	124	1380	171.12	83	400	340	150		151.95	0.89
31	R12	7	1	31	8850	274.35	86	340	150	450		244.17	0.89
31	Y20	8	8	248	1500	372	37	300	1200			918.84	2.47
31	Y20	9	8	248	6100	1512.8	20	550				3736.62	2.47
1	Y20	10	10	100	1500	15	37	300	1500			37.95	2.47
1	Y20	11	10	100	6100	61	20	550				150.67	2.47
31	R8	12	3	93	2710	252.03	60	640	640	640		99.55	0.40
												10841.31	kg/m
												10.84	Tonnage



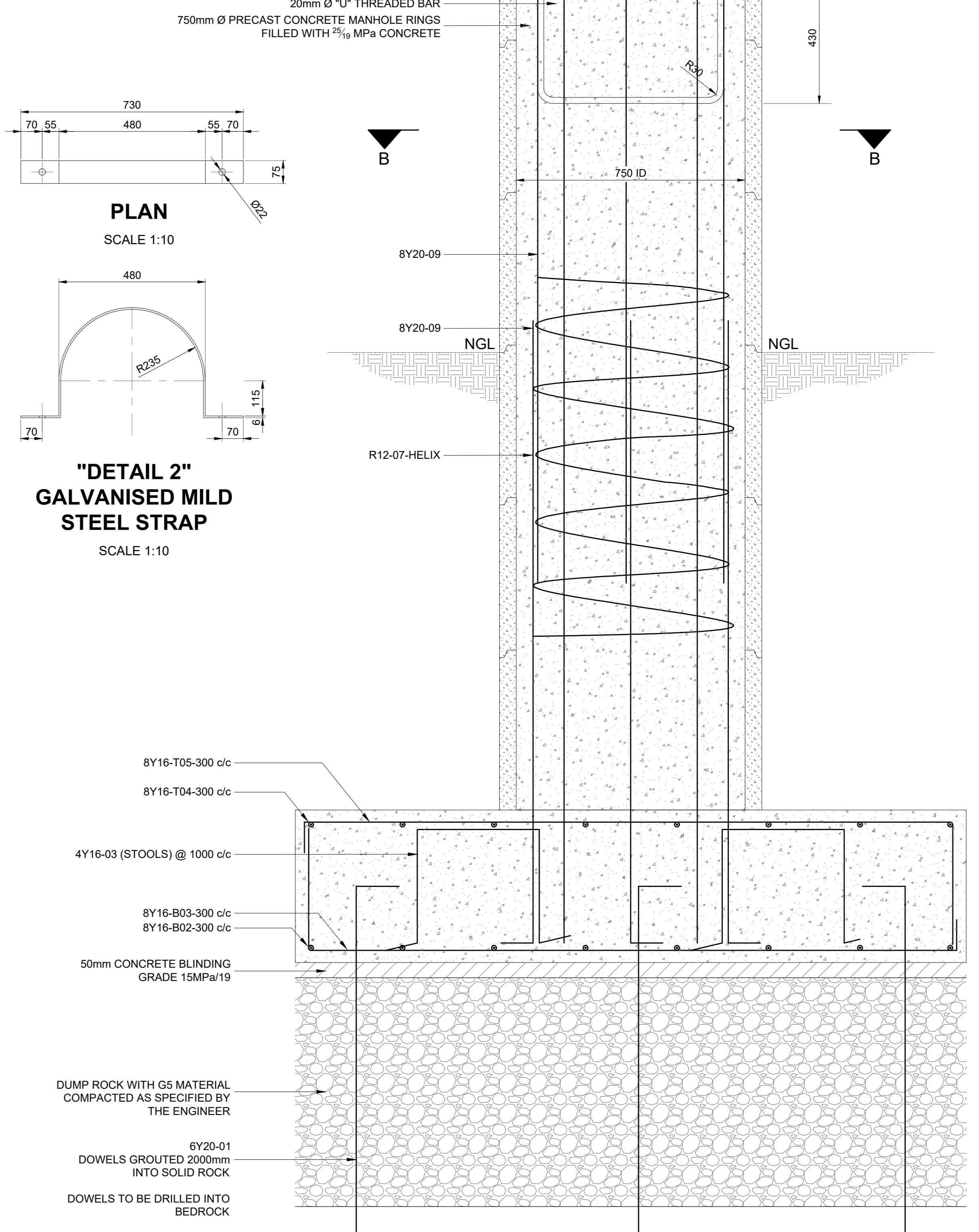
TYPICAL SECTION OF GABION PROTECTION
SCALE 1:10



END ELEVATION
NOT TO SCALE



SECTION
NOT TO SCALE



750mm Ø CONCRETE PIER - DETAIL "B"
SCALE 1:10

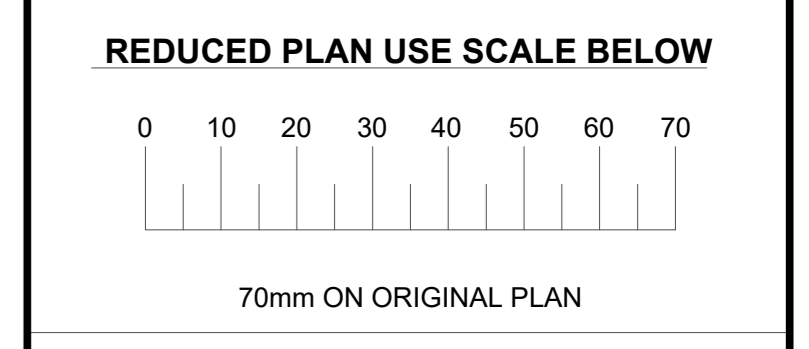
- NOTES: GABION BASKETS AND RENO MATTRESS**
- PREPARATION OF THE FOUNDATION AND SURFACE OF BEDDING TO BE PRESENTED WITH AN EVEN SURFACE AT THE DEPTH SHOWN ON THE DRAWING. IF NECESSARY CAVITIES BETWEEN ROCK PROTRUSIONS SHALL BE FILLED WITH SUITABLE SIZED MATERIAL AND WELL COMPACTED.
 - GABIIONS BASKETS SHALL BE FILLED IN STAGES TO PREVENT DEFORMATION AND BULGING.
 - GABIIONS SHOULD BE FILLED JUST BELOW THE LEVEL OF THE WIRE BRACES AND THE BRACES SHALL THEN BE TWISTED.
 - CARE SHALL BE TAKEN TO ENSURE THAT THE LIDS OF EACH GABION ARE CLOSED AND BRACED BEFORE THE NEXT COURSE OF GABION BASKETS IS PLACED.
 - PARTICULAR CARE SHALL BE EXERCISED TO THE SPECIAL FINISHES ON THE FACE OF THE BASKET STONE SIZE 100mm - 250mm.
 - GEOTEXTILE SHALL BE PLACED WITH AN OVERLAP OF AT LEAST 300mm THAT IS SECURELY FASTENED TO PREVENT ANY MOVEMENT OR SLIPPING DURING THE PLACING OF THE GABION BASKETS AND ROCK FILL.

- NOTES:**
- Manholes to be in accordance with drawing No. 38570 and 38574.
 - Pipe bedding to be in accordance with SABS 1200-LB.
 - All dimension are to be checked on site prior to any fabrication and commencement to work.
 - Positions and levels of all services in the vicinity of the new sewer to be checked and proved prior to commencement of construction.
 - Sewer pipe shall be class 34 heavy duty uPVC 160mmØ and 315mmØ on flexible bedding unless otherwise stated.
 - Where new sewers tie into existing sewers, all inverts to be confirmed on site prior to any excavation taking place.
 - All manholes within road carriageway to have heavy duty cast iron cover and frame unless otherwise indicated.
 - The minimum cover to all pipes shall be :
A) Midblock - 800mm
B) Sidewalk - 1000mm
C) Roadway - 1200mm
 - Road reinstatements to be made up as follows :
A) 150mm Sub base - G5 To 95% MOD AASHTO
B) 150mm Base course - G2 To 95% MOD AASHTO
C) 80mm Asphalt wearing course - D Mix
 - All manhole benching is to be Type A, except where Type B benching is required which will be shown on the table and on the long section.
 - All manhole covers to be heavy duty cover and frame except where heavy duty cover and frame is required which will be shown on the long section.
A) HD concrete in road side walk
B) Polymer cover and frame HD CI in road cattergways.

REVISIONS		
Revision	Date	Description
A	DEC-2024	ISSUED FOR TENDER

AS BUILT

DATE : _____ SIGN : _____



- LEGEND OF SERVICES**
- NEW SEWERS AND M.H.'S
 - EXISTING SEWERS AND M.H.'S
 - EX. SEWER TO BE ABANDONED
 - STORM WATER DRAINS AND M.H.'S
 - WATER MAINS AND VALVES
 - ELECTRICITY CABLES
 - TELKOM / TELECOM CABLES
 - FIBRE OPTIC CABLES
 - ROAD EDGE
 - RIVERS & STREAMS
 - EXISTING SERVITUDE
 - FENCE

UNDERGROUND SERVICES CHECKED

SERVICE	DATE	SIGNATURE
S/W DRAINING		
SEWERS		
WATER MAINS		
TELKOM CABLES		
ELECTRIC CABLES		
SPOORNET CABLES		
E.S.C. CABLES		
OIL PIPE LINE		

NOTE: Only underground services affected by new construction work are shown.
Care must be taken during excavations for road reinstatements, benching, etc. and dimensions of underground services such as sewers, drains, cables, water mains and connectors. Wherever possible these must be located before work proceeds.

NOTE: No construction work to commence until land and servitude acquisitions have been completed.
All services shown on this drawing are to be confirmed on site.
Date: _____ Engineer: _____ NORTH POINT

ENGINEERING WASTEWATER DESIGN
ETHEKWINI MUNICIPALITY

ETHEKWINI WATER & SANITATION

Contract No. **5W-30554**
Project Title **GWALA FARM TONGAAT : TRUNK SEWER PROJECT PHASE 1**

Project No. (16983)
Drawing Title **750mm Ø CONCRETE PIER DETAILS AND TYPICAL GABION PROTECTION**
Reference Drgs. Scales : 1:10
Surveyed : S. ZULU Date : DEC 2024
Drawn : M. GOOLAM Date : DEC 2024
Checked : M. GOOLAM Date : DEC 2024
S.B KHAMBULE
Area Project Manager: Manager: P. MBHELE (Design)
Deputy Head: B.SONI (Engineering)
Head: (Water & Sanitation) E. MSWELI
Drawing No. **60550** Sheet **10** Rev. **A**

FOR TENDER PURPOSES