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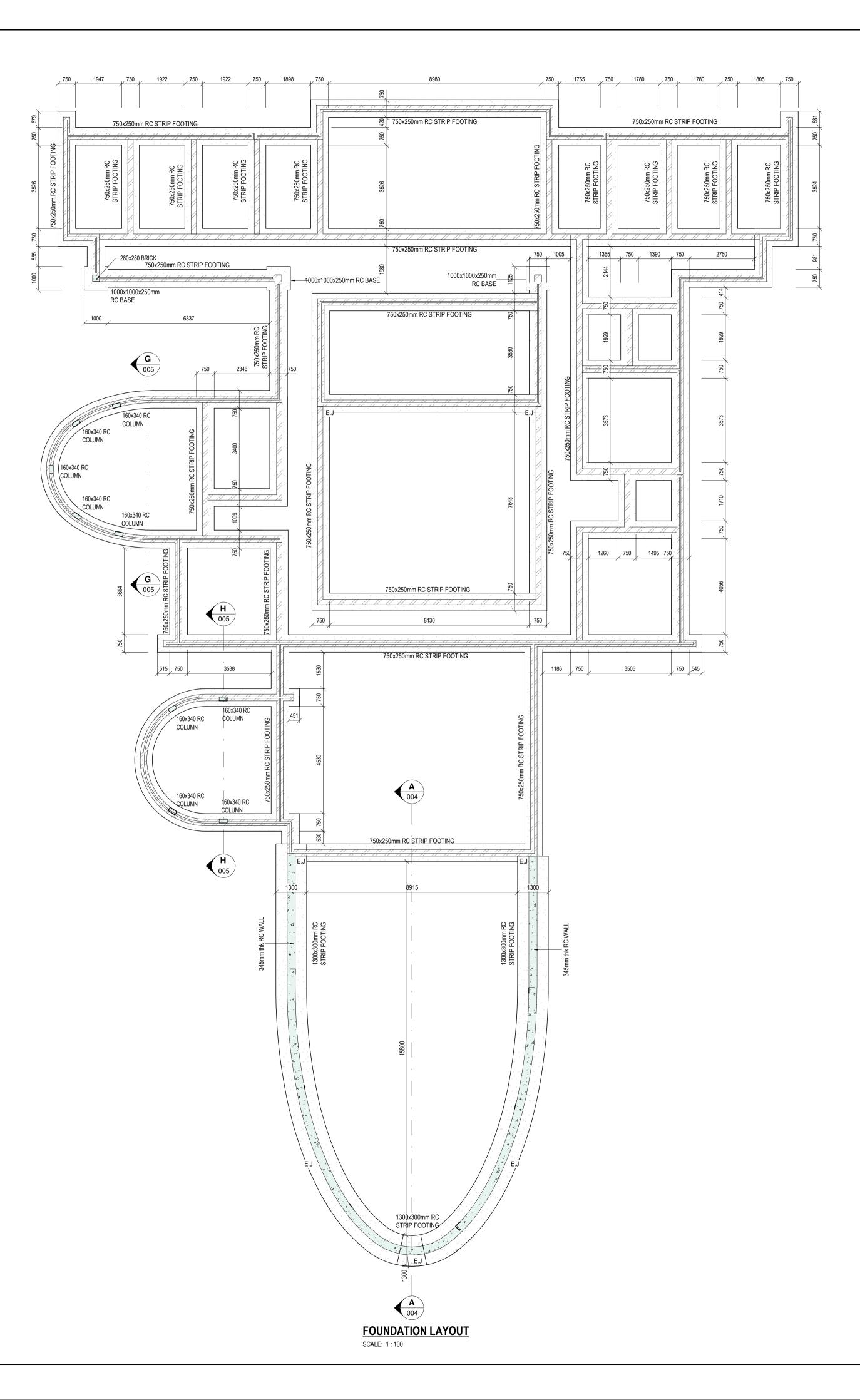
The position and method of forming all construction joints shall be submitted to the Engineer for approval prior to construction.

Refer to Architect, Electrical and Mechanical Eng downpipes, duct penetrations, recesses ect. as r discrepancies shall immediately be referred to th	equired by them prior to casting. Any	• All suspended slabs are to be adequately surveyed at intervals as agreed with the Engineer before and after removal of support work. Results to be forwarded to the engineer for his records.	• The contractor to submit in writing his proposed erection method of the engineer. it remains the contractors responsibility to produce accordance with the engineers design drawings.
Depth of RC beams (downstand and inverted) is	the second dimension and includes the slab	• Sawn joints in surface beds shall be cut within 48 hours after casting concrete.	All drawings are design drawings. Workshop drawings are to be
thickness.		MASONRY	and submitted to the engineer for approval prior to commencing contractor must also prepare drawings showing all positions, lev
No kickers to be cast for columns and walls.		All brickwork or blockwork to be laid to the requirements and tolerances of SANS 10164 Appendix B.	plates and bolts.
Concrete Cover:		Class II mortar shall be used throughout as per SANS 10164.	 Contractor to allow a minimum of 2 weeks for checking and appr drawings by the Engineer, the contractor should also allow for point
ELEMENT	Min Cover (mm)	• All structural brickwork or blocks shall have a nominal compressive strength of 14 MPa.	workshop drawings.
Foundations Columns	75 40	 Water absorption of clay bricks not to exceed 12%. Clay bricks shall comply with SANS 227 and shall be well saturated 2 hours before being used. 	All dimensions and levels to be checked on site by the contracto workshop drawings and manufacture. Any discrepancies shall be
Beams Walls	25 40	 No clay bricks shall be laid within 6 weeks from removal from kiln. 	the engineer in writing.
Slabs	25	 Calcium silicate bricks shall comply with SANS 285; bricks shall be laid slightly wetted but not saturated. 	 For structural steel fixed to concrete allow 20mm tolerance for lin Approved non-shrink structural grout shall be provided under all
The contractor is responsible for checking and en	nsuring that the reinforcement is fixed and	Concrete blocks shall comply with SANS 1215 and shall be laid dry.	concrete.
maintained in the correct position before and dur	ing the casting of concrete.	• For cavities smaller than 75mm galvanized butterfly ties complying with SANS 28 or approved polypropylene ties shall be built into cavity walls at a rate of 5 ties per m2 minimum.	 All design shall be accordance with SANS 10160 and SANS 101 All connections to be adequate to develop the full tensile capacit
Reinforcement allowances for concrete work are	as follow for Tender purposes:	• For cavities bigger than 75mm galvanised vertical twist type ties shall be used at a rate of 5 ties	All truss and girder members to be welded all round both sides.
Foundations / Slab Edge Concrete Columns	65 Kg/m³ 150 Kg/m³	per m2.	necessary to ensure adequate welding length to develop full tens
Concrete Beams	120 Kg/m ³	Adjacent to columns, wall ties to be built into every second layer of brickwork.	
Concrete Slabs RC Surface Bed Ground Level	100 Kg/m³ 100 Kg/m³ 100 Kg/m3	 In concrete blockwork brickforce shall be installed continuous throughout in every second course as well as in two courses below and above all windows and above all doors, extending 600mm 	Centroids of all members to intersect, no eccentricities except fo Engineers design drawings shall be allowed.
Concrete Walls	120 Kg/m³	past such openings.	• All connection details to be approved by the engineer in writing p
All reinforcement must be inspected by the Engir shall be given 24 hours advance notice of an ins	5	 In clay brickwork brickforce shall be installed continuously throughout in every third course as well as in two courses below and above all windows and above all doors, extending at least 600mm past such openings. 	 Use Class E70XX electrodes for all welding. All welding shall be done in accordance with AWS D1.1 Structur
once all the relevant reinforcement has been pro	perly fixed, the spacer blocks have been		
positioned, the shuttering has been cleaned out a the reinforcement.	and the contractor has checked and approved	 Galvanized hoop iron anchors (min 60 mm2 section) shall be installed every 4th course between RC columns and brickwalls and extend min 600mm into masonry. Use 6mm nail plugs, no shot fixing will be allowed. 	 Minimum weld size to be 6mm continuous fillet welds. Throat thi 0.7 x the thinner material thickness welded to.
No alterations may be made to the structure or the the Engineer.	he reinforcement without prior approval from	All brickforce shall be galvanized and comprise of hard drawn steel wire comprising two main	 All butt welds to be full penetration butt welds of full strength. All welders shall be coded welders.
-		diameter wires of diameter not less than 2.8mm spaced a constant distance apart and 2.5mm	The contractor shall produce evidence acceptable to the engine
Bending dimensions and scheduling of steel rein denotes mild steel bars (fy - 250 Mpa) ; (Y) - den		diameter cross wires spaced at longitudinal intervals of 300mm in ladder type brickforce.	and welders have been tested in accordance with the requireme and IV
Mill certificates for reinforcement bars to be subr	nitted to the engineer for his records.	A slip joint of 2 layers 3-ply malthoid must be provide between all loadbearing brickwork and concrete structure.	 Post-fixing using mechanical or chemical anchors to be approve commencing with installation. All fixings to be strictly in accordar
Welding of high-yield (Y) reinforcement is not allo welded only if instructed in writing by the Engine	· · · ·	A 10mm soft joint (jointex) must be provided between all non-loadbearing brickwork and concrete structure.	specifications.
Concentrations of a large number of sleeves or s		Joints to be sealed in accordance with Architect's specification.	Penetrations and holes required in galvanized steel shall be pre- galvanized. No drilling is allowed on site in any galvanised steel
not be allowed. position and spacing to be agree		 All brick walls to be set out according to Architect's drawing. All brick walls to be built on centrally strip footings unless noted otherwise. 	 No holes may be made in any structural members without the pr No site cutting or welding will be allowed unless approved or specified.
No chasing of services into the concrete structure No core drilling will be allowed without prior appr		 Brick- or blockwork built on suspended slabs to be built only once the concrete slab has reach its required design strength and all the props have been removed. 	 Allow 10% of light and medium steelwork (excluding purlins and splices, column cap and base plates, plus 1% for Grade 8.8 bolt
Any penetrations not shown on the drawings mu	-		bolts.
prior to casting.		Brick- or blockwork built on suspended slabs to have no brick- or blockwork above internal door openings.	CORROSION PROTECTION SPECIFICATION
The standard of concrete finish shall be to the Ar All exposed corners of concrete elements to have	•	Precast lintols to be propped during brickwork over, and to remain propped for a minimum period	Pre-fabrication preparation:
specification.		of 7 days.	Commercial blast steel to remove rust and mill scale Duplex system:
Removal of formwork in normal to hot conditions (Refer to SANS 2001:CC1-Table 2)	i	STRUCTURAL STEEL	Post-fabrication & trial assembly: hot dipped galvanized to SANS un-passivated. Micro-blast with garnet slag to achieve a water brea
		All Structural steelwork shall comply with SANS 2001-CS1: 2005	Surface & rough profile:
TYPE OF STRUCTURAL MEMBER OR FORM WORK	TIME TO REMOVAL	All structural steelwork shall be fabricated and erected in accordance with the latest edition of SANS 1200 H excluding clause 8.	Apply one coat of epoxy primer to a dft of 60 microns. Apply one coat of re-coatable polyurethane finishing to a dft of 3
Beam sides, walls & unloaded columns.	1 day	 The steel structure shall be manufactured and erected according to SANS 1200 H degree of accuracy II. 	architect's specification).
Slabs with props left underneath.	4 days	The contractor shall at the common common of the preject accurate himself with the sucilability and	Cladding to be done in accordance with SANS 1200 HB
Beam soffits & coffer slab soffits with props left u Slab props.	underneath. 7 days 10 days	The contractor shall at the commencement of the project acquaint himself with the availability and delivery time of the products and steel profiles specified on the drawings so that such material can	 All roof and side cladding to be as per architect's specification. Cladding to only commence once all bracing is installed, inspect
Beam props, slab cantilever props and beam car	ntilever props. 14 days	be ordered ahead of time.	 Engineer. Cladding contractor to ensure purlins and girts remain straight due
Extent of back propping and sequence to be disc	cussed with the Engineer before	All hot roll sections to be grade S355 JR.	and insulation material.
commencement of works. The contractor shall be responsible for the design	n and maintenance of all temporary structures,	 All cold-formed steel sections - Min yield stress of 200 MPa All bolts to be Grade 8.8 	 Fixing of services to the roof structure - fixing to purlins to be do through the vertical leg (web) of the purlin. purlin clamps shall no
including formwork and support work. One set of concrete test cubes shall be prepared		All cold-formed steel sections and bolts to be hot-dipped galvanized unless noted otherwise.	 hanging off the purlins until the roof sheeting has been installed. No fixing of services to longitudinal ties at truss bottom chords w
daily of every type cast.		A certificate from the steel manufacturer verifying the grade of the structural steel shall be	Main pipe runs and other heavy items are to be suspended from
•	sted at 7 days and three cubes at 28 days.	 submitted to the engineer for his records. The sequence of the erection of the structure is the responsibility of the contractor. The contractor 	 and never further than 100mm from a node point. approved flang Feeder pipes and other lightweight elements:
•	left on the cast slab to simulate actual curing bes are to be protected to prevent excessive	shall ensure the stability of the structure during erection. Where temporary bracing or propping is necessary, the contractor shall be responsible for the design, erection, maintenance and removal	Running perpendicular to the purlins are to be suspended from Running parallel to the purlins have to be suspended from two
drying out.	שיש ערבייני אין איריייניט איריאיניון בארבאואב	(where necessary) of such supports.	1250mm c/c max.
The cube results are to be forwarded to the Engi results should be clearly labeled and referenced, and specific elements were cast with the relevan	, indicating the cast date, which element type		

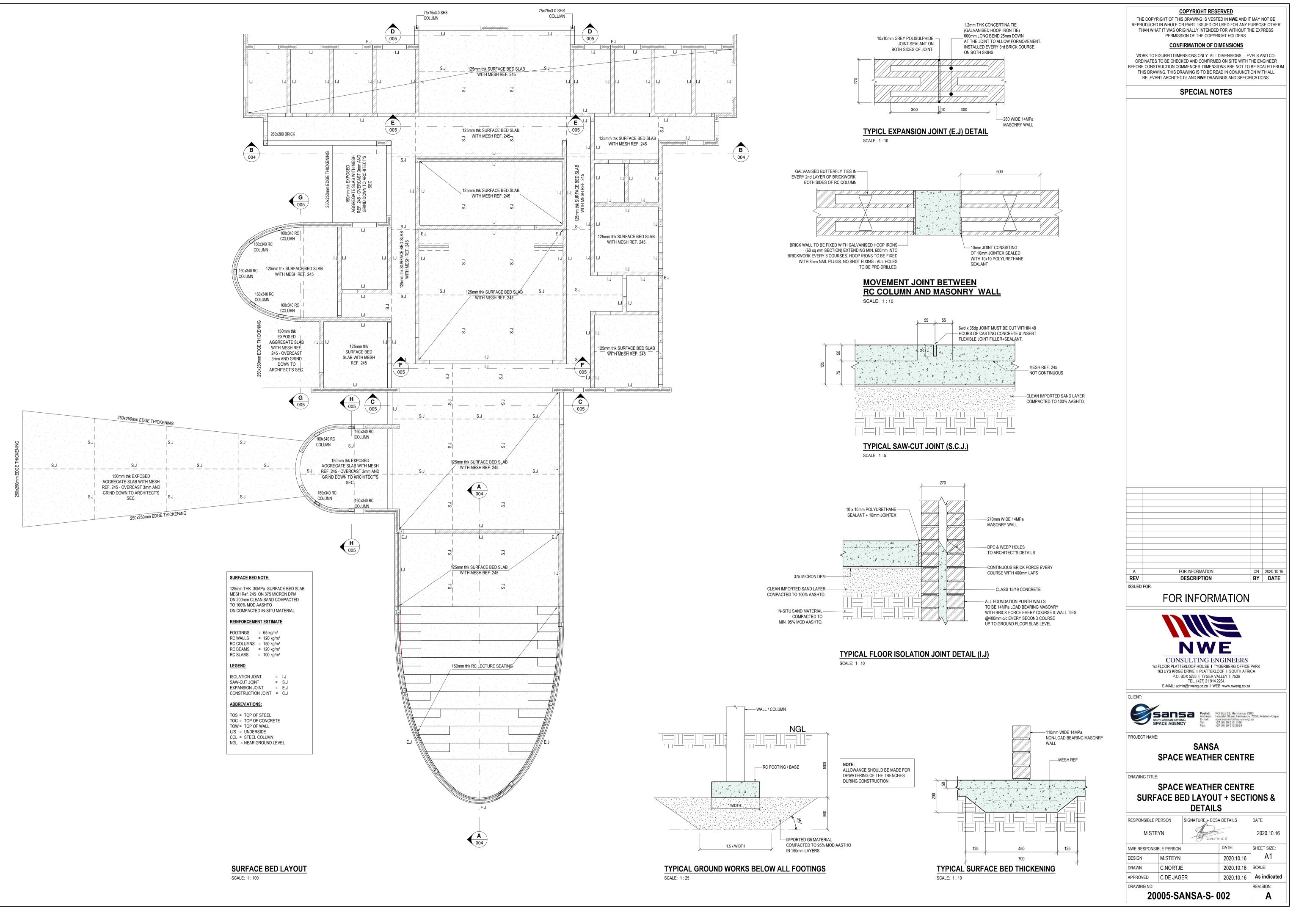
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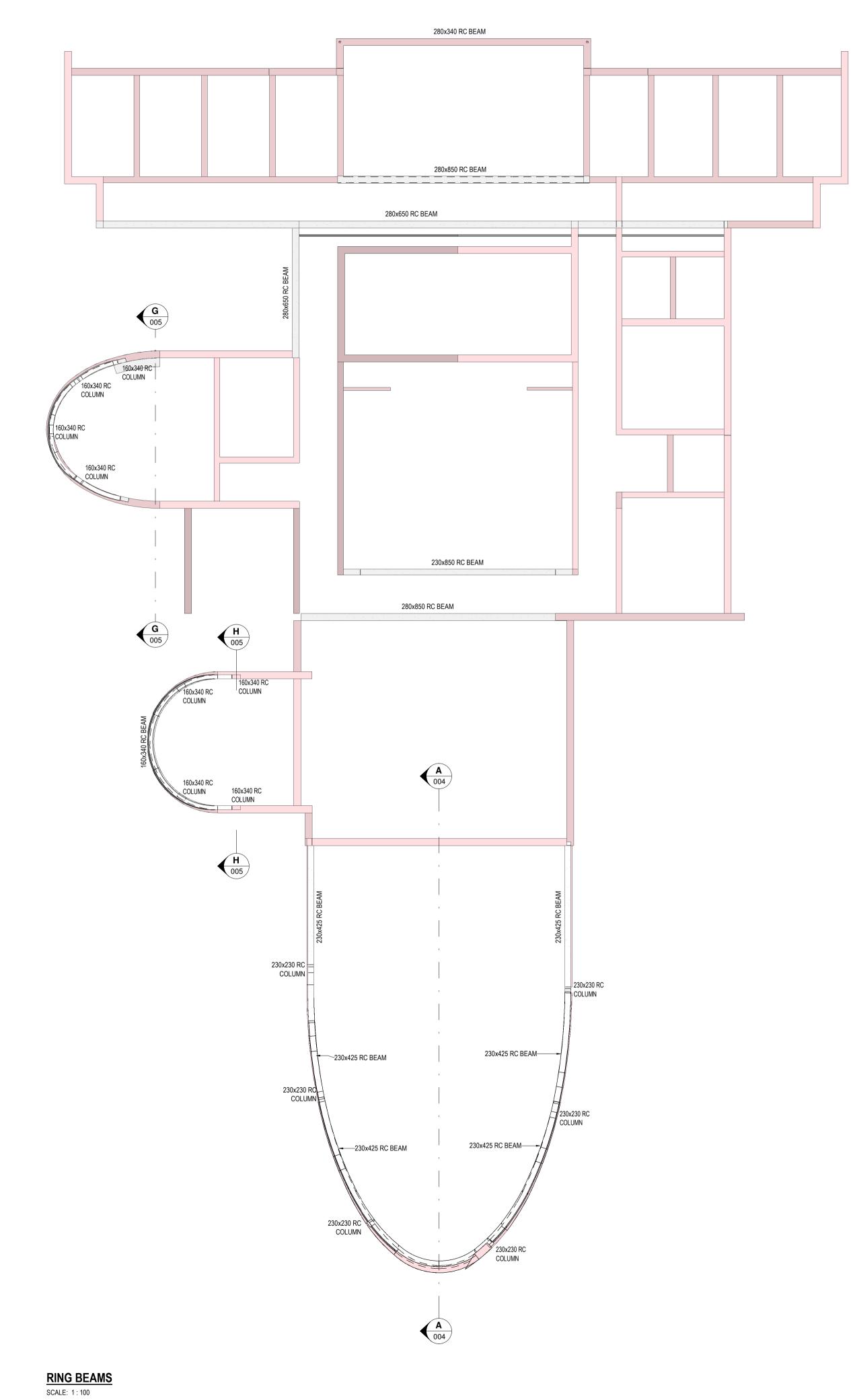
and specific elements were cast with the relevant concrete.

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ting his proposed erection method statement for the comment contractors responsibility to produce the final product in design drawings.					
igs. Workshop drawings are to be prepared by the contractor for approval prior to commencing with fabrication. The lrawings showing all positions, levels and orientation of cast in					
of 2 weeks for checking and approval of the workshop contractor should also allow for possible changes to					
e checked on site by the contractor before commencing with facture. Any discrepancies shall be brought to the attention of					
ncrete allow 20mm tolerance for lining up. I grout shall be provided under all steel supported on					
with SANS 10160 and SANS 10162. To develop the full tensile capacity of the members.					
o be welded all round both sides. Allow for gusset plates if welding length to develop full tensile capacity of the					
tersect, no eccentricities except for those shown on the allowed.					
proved by the engineer in writing prior to fabrication.					
or all welding. cordance with AWS D1.1 Structural Welding Code-Steel.					
continuous fillet welds. Throat thickness not to be less than ness welded to.					
ation butt welds of full strength.					
ders. vidence acceptable to the engineer that welding procedures in accordance with the requirements of SANS 044, parts III					
r chemical anchors to be approved by the Engineer prior to All fixings to be strictly in accordance with the manufacturer's					
ed in galvanized steel shall be pre-drilled before the steel is ed on site in any galvanised steel members. structural members without the prior consent of the Engineer. be allowed unless approved or specified by the Engineer. In steelwork (excluding purlins and girts) for connections, plates, plus 1% for Grade 8.8 bolts and 0,5% for Grade 4.8					
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ove rust and mill scale	ISSUED FOR:				
ly: hot dipped galvanized to SANS 121:2000 (heavy duty) - slag to achieve a water break free		FOR INFO			
r to a dft of 60 microns. polyurethane finishing to a dft of 30 microns (colour to					
ance with SANS 1200 HB as per architect's specification. nce all bracing is installed, inspected and approved by the		CONSULTING st FLOOR PLATTEKLOOF HOUSE 163 UYS KRIGE DRIVE I PLAT P.O. BOX 5263 I TYG TEL. (+27) 2 E-MAIL: admin@nweng.co.za	E I TYGERBERG OFFICE ITEKLOOF I SOUTH AFRI GER VALLEY I 7536 1 914 2264	ICA	
purlins and girts remain straight during installation of cladding	CLIENT:				
ructure - fixing to purlins to be done by screwing or bolting of the purlin. purlin clamps shall not be allowed anywhere. No e roof sheeting has been installed. dinal ties at truss bottom chords will be allowed. y items are to be suspended from trusses and girders only	PROJECT NAM		 Hospital Street, Hermanus spacesol-info@sansa.org +27 (0) 28 312 1196 +27 (0) 28 312 2039 	. 7200. We	stern Cape
from a node point. approved flange clamps may be used. eight elements:		SAN SPACE WEAT		E	
burlins are to be suspended from every purlin it crosses. have to be suspended from two adjacent purlins and at	DRAWING TITI	EE GENERAL SPE		IS	
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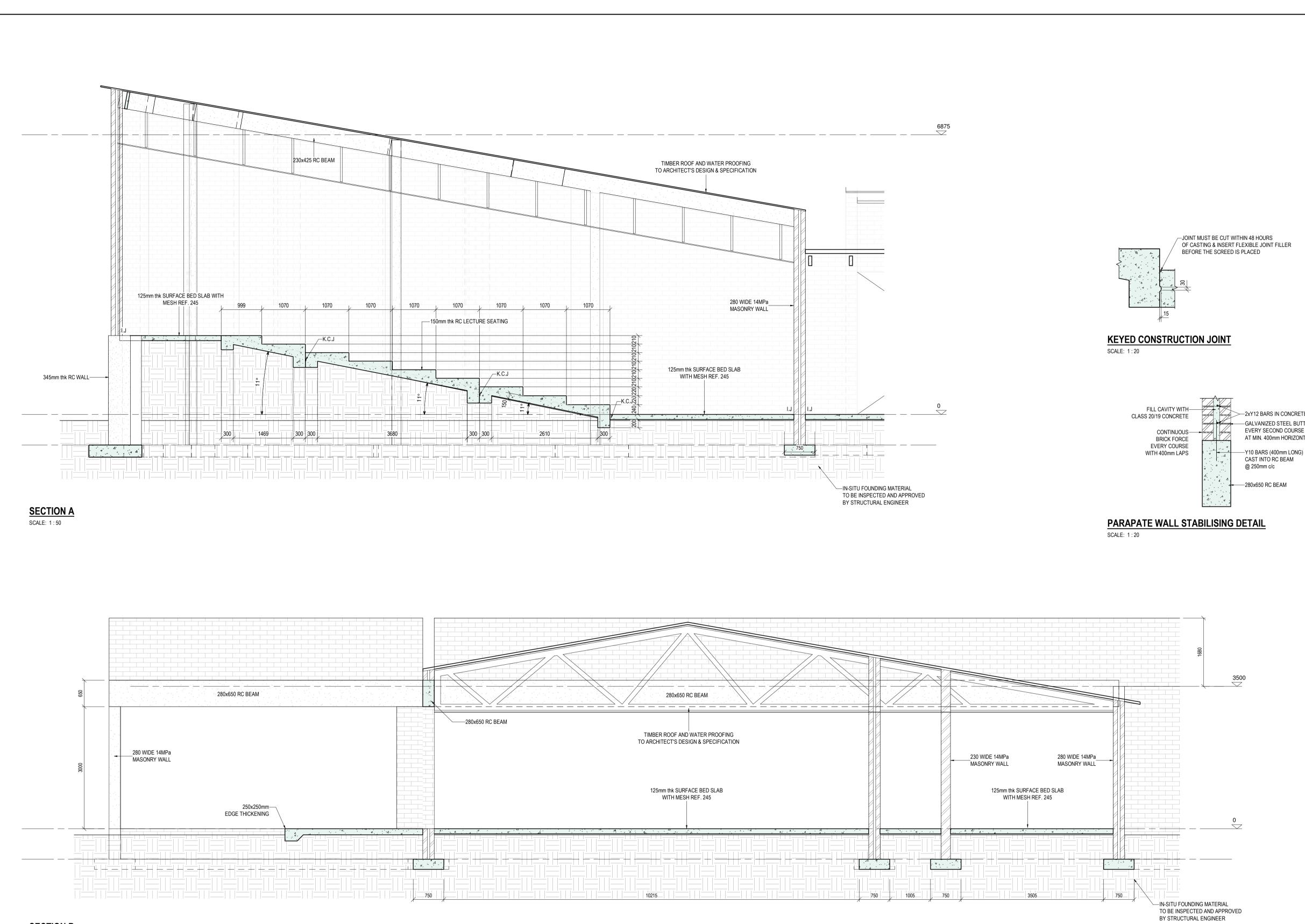


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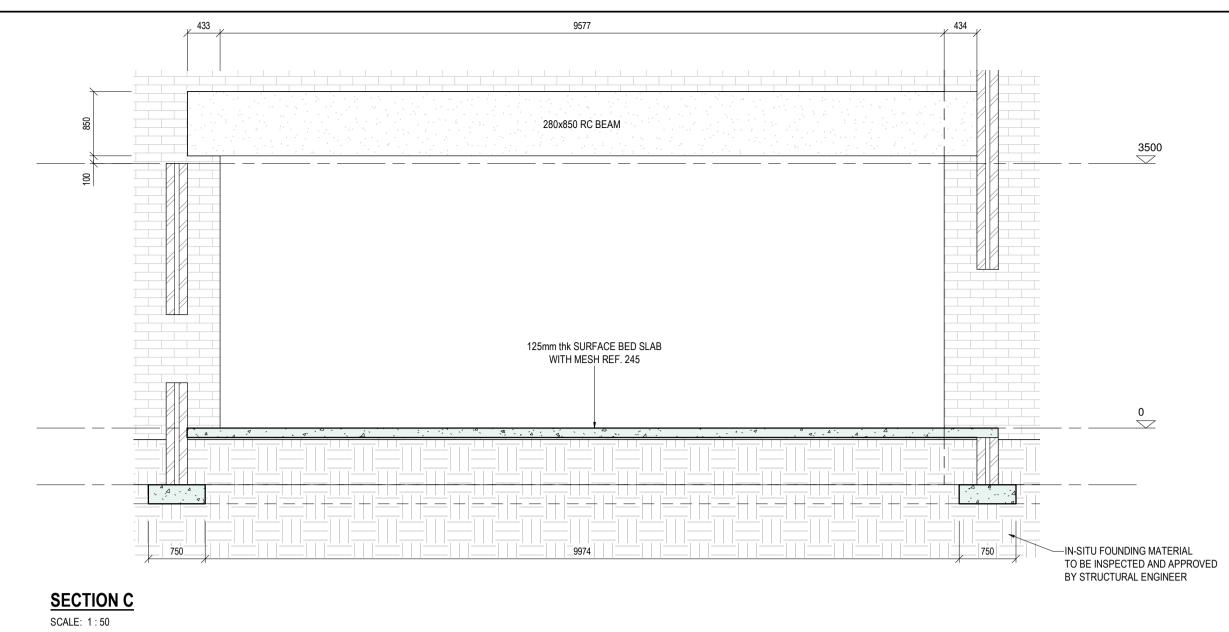
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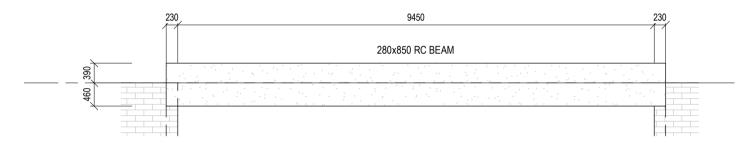


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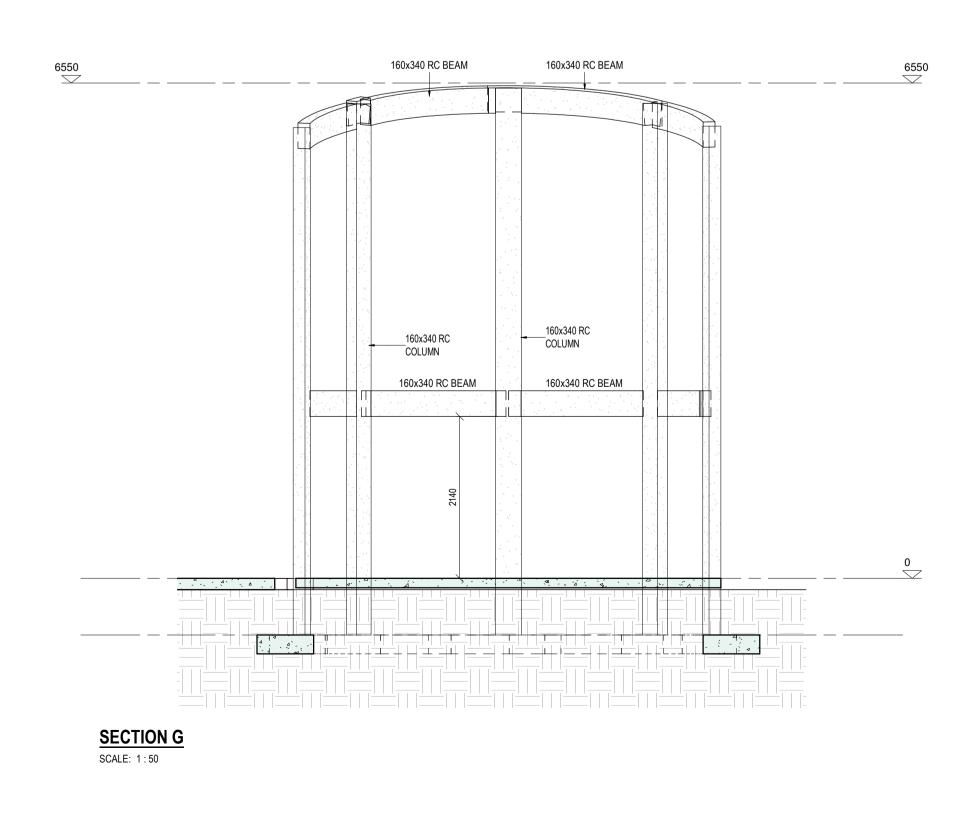
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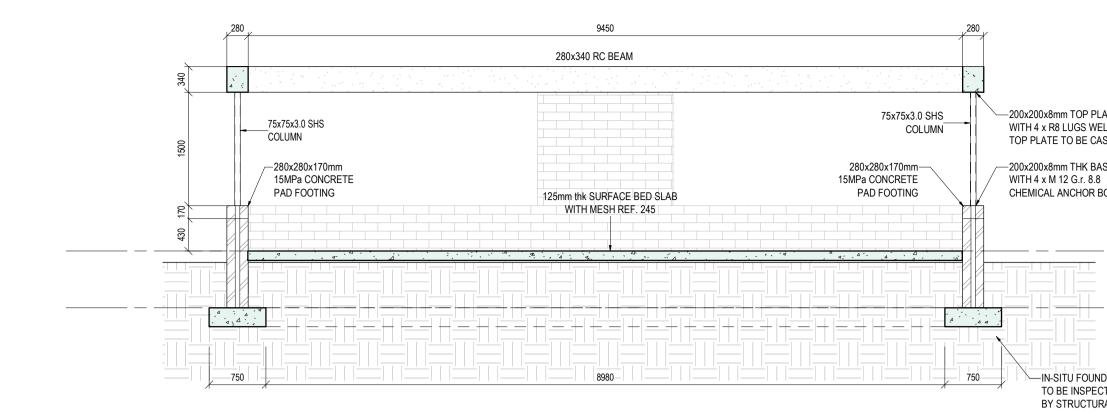
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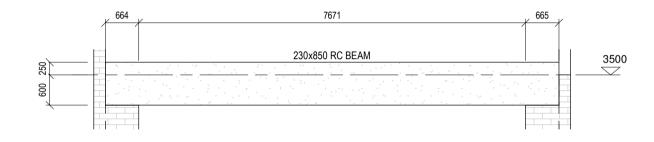


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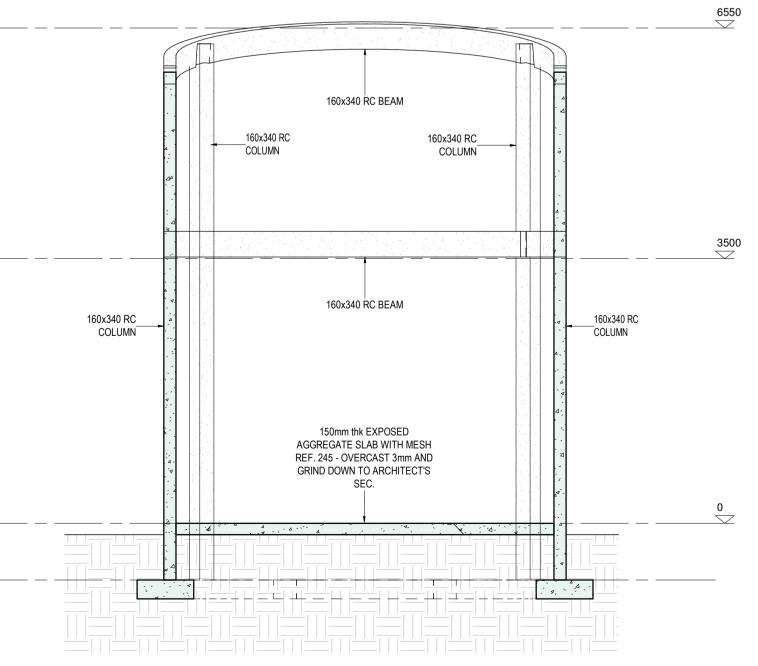
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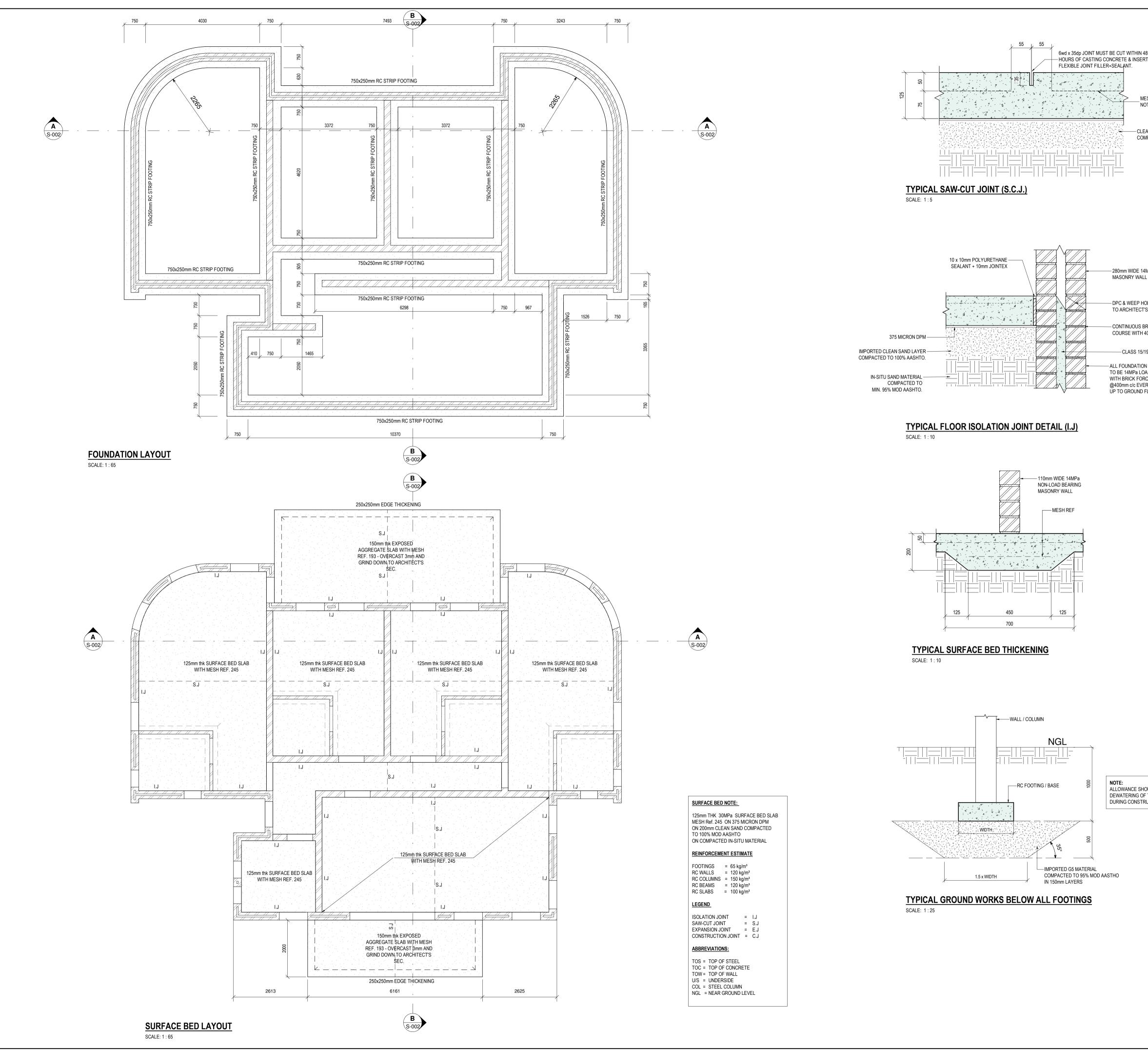




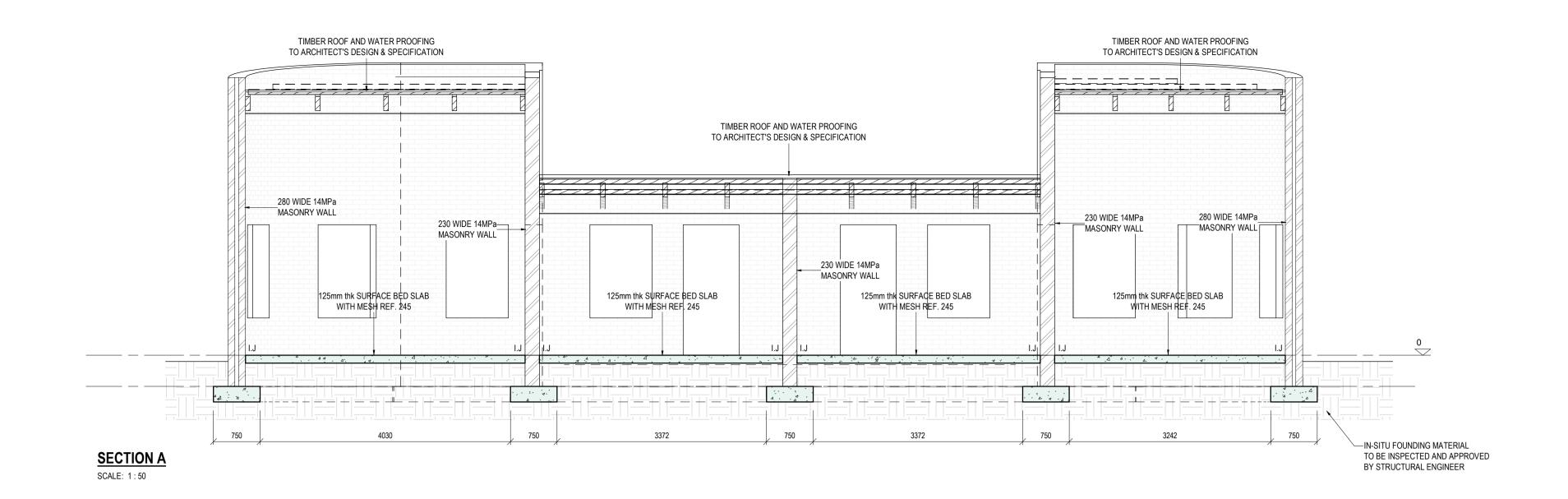


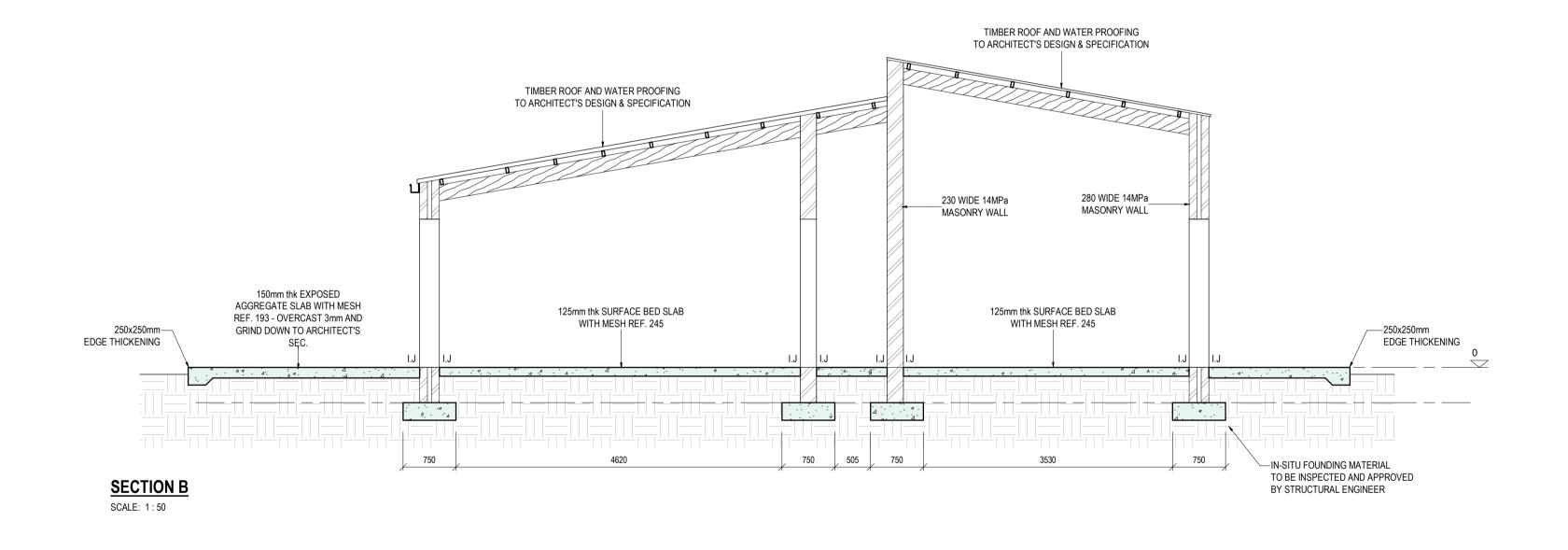
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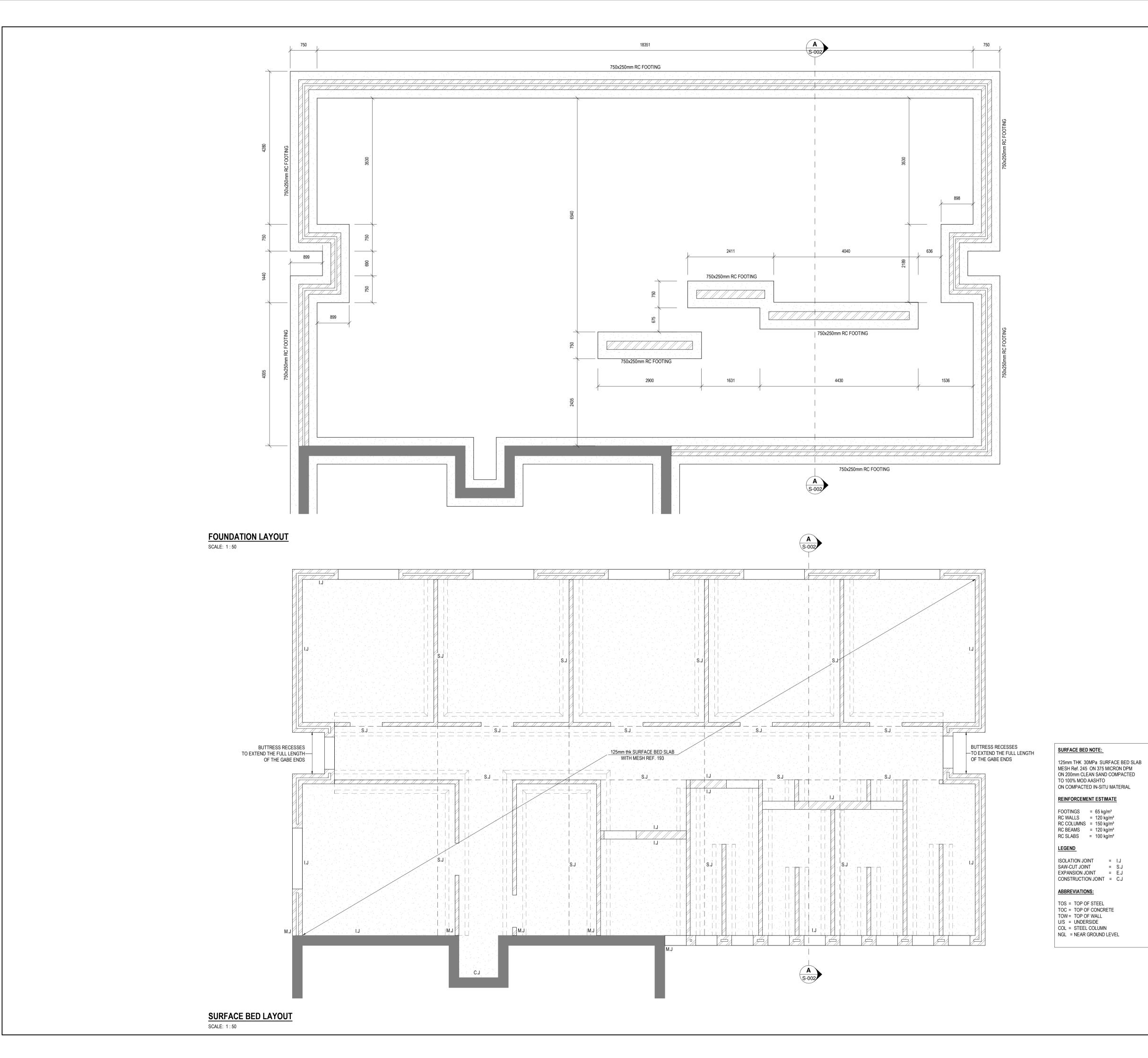


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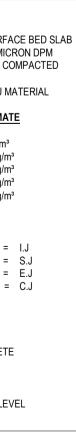


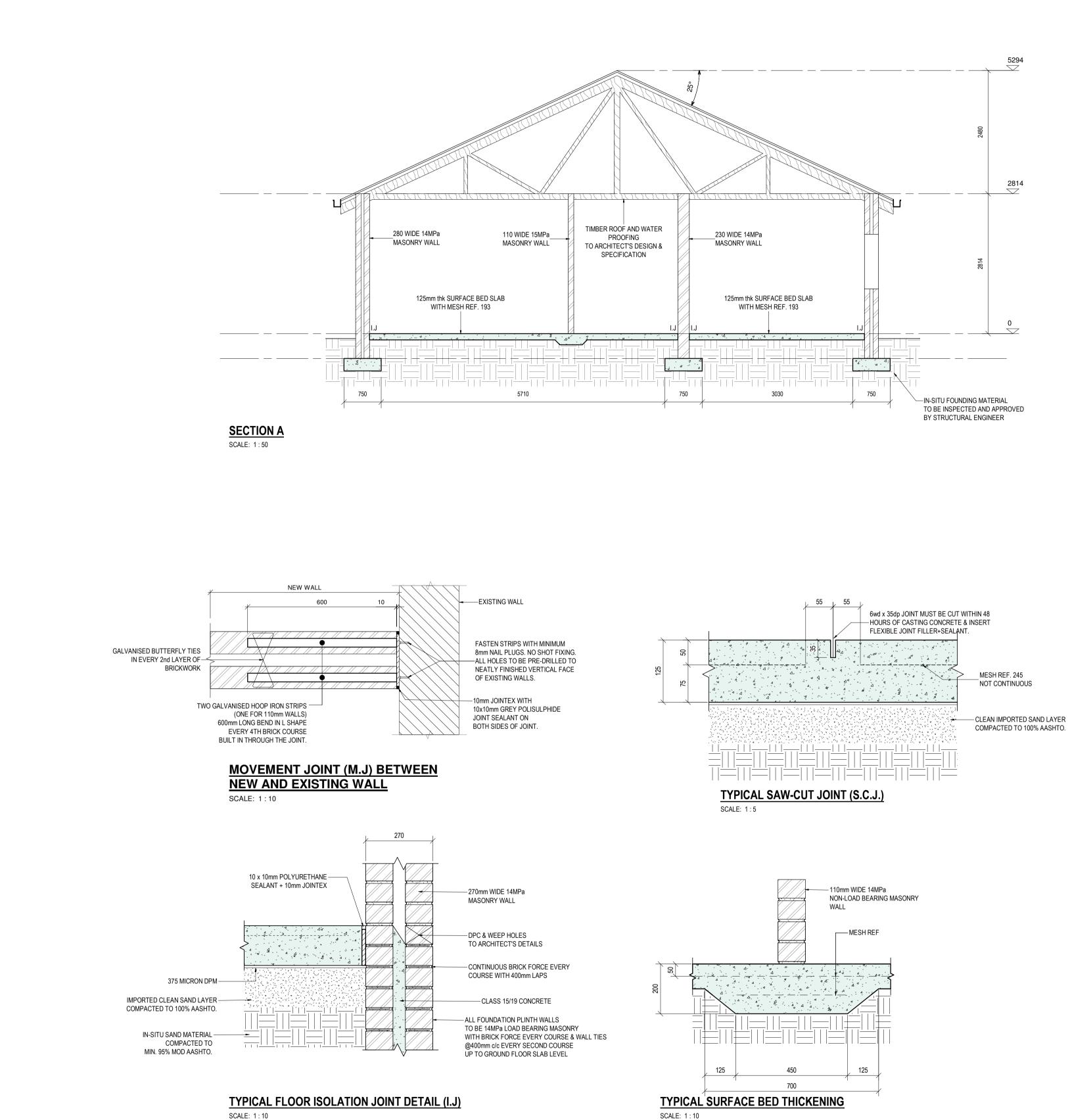
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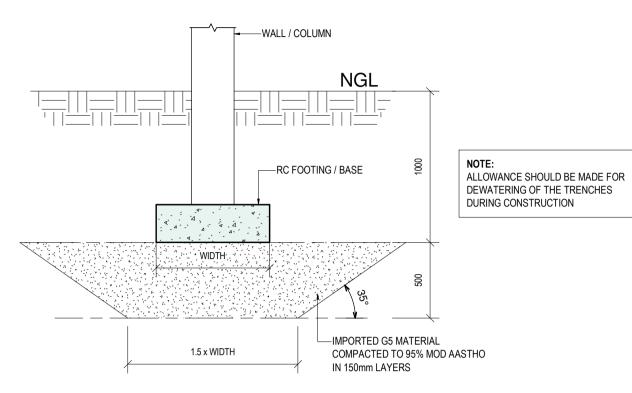


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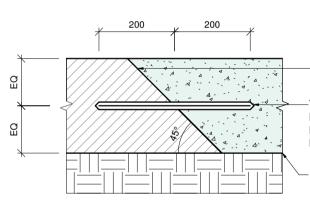
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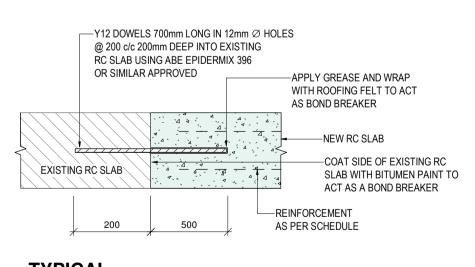


TYPICAL GROUND WORKS BELOW ALL FOOTINGS SCALE: 1:25



-CHIP AND ROUGHEN EXISTING FACE OF STRIP FOOTING/BASE Y12 BARS 400mm LONG DOWELED EVERY 200mm c/c 200mm DEEP INTO EXISTING STRIP FOOTING USING ABE EPIDERMIX 396 OR SIMILAR APPROVED - NEW STRIP FOOTING

CONNECTION DETAIL BETWEEN NEW & EXISTING STRIP FOOTINGS SCALE: 1:10



TYPICAL CONSTRUCTION JOINT (C.J) SCALE: 1:10

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TEL. (+27) 21 914 2264 E-MAIL: admin@nweng.co.za I WEB: www.nweng.co.za							
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