

DURABILITY INDICES REQUIREMENTS	
<9mm/hr	SUPPLY INDEX
> 10	OXYGEN PERMEABILITY INDEX (OPI)
<0.75mS/cm	CHLORIDE CONDUCTIVITY INDEX (CCI)

NOTE: CONCRETE MIX TO MEET THE ABOVE DI CRITERIA FOR ACCEPTANCE.

CONCRETE DIS CRITERIA  
1:20

REVISION HISTORY

NO.	DATE	DESCRIPTION	INITIALS
A	03/07/2024	PRELIMINARY COSTING	HT
B	28/08/2024	PRELIMINARY COSTING	HT
C	28/03/2025	TENDER COSTING	HT

GENERAL

- All building works to comply with Local & National Building Regulations.
- This drawing to be read in conjunction with Architect's Drawings and verified against the same. Discrepancies to be promptly reported to Professional Team.
- Drawing to be read in conjunction with Works Specifications' Document DRPM 001/24.
- No alterations to be done without Engineer's Consent.
- Contractor to keep full Drawing set on site always.

CONCRETE

- Compressive strengths to be as follows (28 days)
  - Bases 30MPa/19mm
  - Columns 30MPa/19mm
  - Blinding 10MPa/19mm
  - Slabs 30MPa/19mm
  - Beams 30MPa/19mm
- All exposed concrete to have smooth off-shutter finish.

CONCRETE COVER

- Bases 50mm
- Columns 40mm
- Slabs 30mm
- Beams 30mm

CONSTRUCTION

- No concrete to be cast until the reinforcement has been completed by Contractor, inspected & approved by Project Engineer.
- Shipping times of formwork and de-propping to be as per stipulations in Specifications Document DRPM 001/24 unless otherwise indicated by the Project Engineer.
- All concrete to be adequately vibrated.
- Contractor to use approved cover blocks of adequate strength to withstand working conditions/min strength to be equal to concrete strength specified.
- Construction joints' positions to be approved by Project Engineer.
- Exposed concrete to be carefully cured for minimum 14 days.
- All cast concrete shall be thoroughly inspected by Project Engineer for any defects/no defects shall be attended to by the Contractor before Engineer's inspection and without consent of the Project Engineer.

FOUNDATIONS' CONSTRUCTION

- Founding conditions to be thoroughly inspected and approved by Project Engineer prior casting.
- Founding Levels indicated are approximate. They need to be confirmed by Project Engineer on site.
- All reinforced foundations to be laid on blinding layer of C15/19 otherwise cover to be enhanced to 75mm.

BRICKWORK

- All bricks to be in strict accordance to SABS 0148.
- Load bearing crushing strength shall be minimum 15MPa and substantiated by test results from manufacturer.
- Mortar shall be Class II (1:3) unless indicated otherwise.
- No void joints shall be accepted in brickwork.
- All brickwork on suspended surfaces to be reinforced in bottommost 3 layers.
- Brickforce reinforcement shall be as stipulated below:
  - Foundations Every course
  - Superstructure Every 3 courses

CONCRETE CUBE TESTS

- Concrete cube tests must be done by and independent accredited (SANAS) laboratory and submitted to Engineer for approval. At least one set of 9 cubes shall be taken from each day of casting and from every 50m3 of placed concrete.
- 3 cubes must be crushed at 7, 14 and 28 days.
- Mix design must be submitted to the Project Engineer for prior approval.
- All results submitted and approved by Project Engineer must be kept on site in Quality File and must contain the sampling date and all requirements as stipulated in SANS 10100.2.

CLIENT:

GA-SEGONYANA LOCAL MUNICIPALITY

ARCHITECT:

RMD ATELIER

STRUCTURAL ENGINEER:

ATPRO PROJECTS

DISCIPLINE:

STRUCTURAL

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITIONS TO KURUMAN BUS & TAXI

PROJECT NUMBER:

RPM001/2024

DRAWING TITLE:

FOUNDATIONS LAYOUTS & DETAILS

DESIGNED BY:

H.T

CHECKED BY:

PVEC

DATE:

28-03-2025

PAPER SIZE:

A0

SCALE:

As Shown

DRAWN BY:

H.T

APPROVED BY:

PVEC

PURPOSE:

TENDER

DRAWING NUMBER:

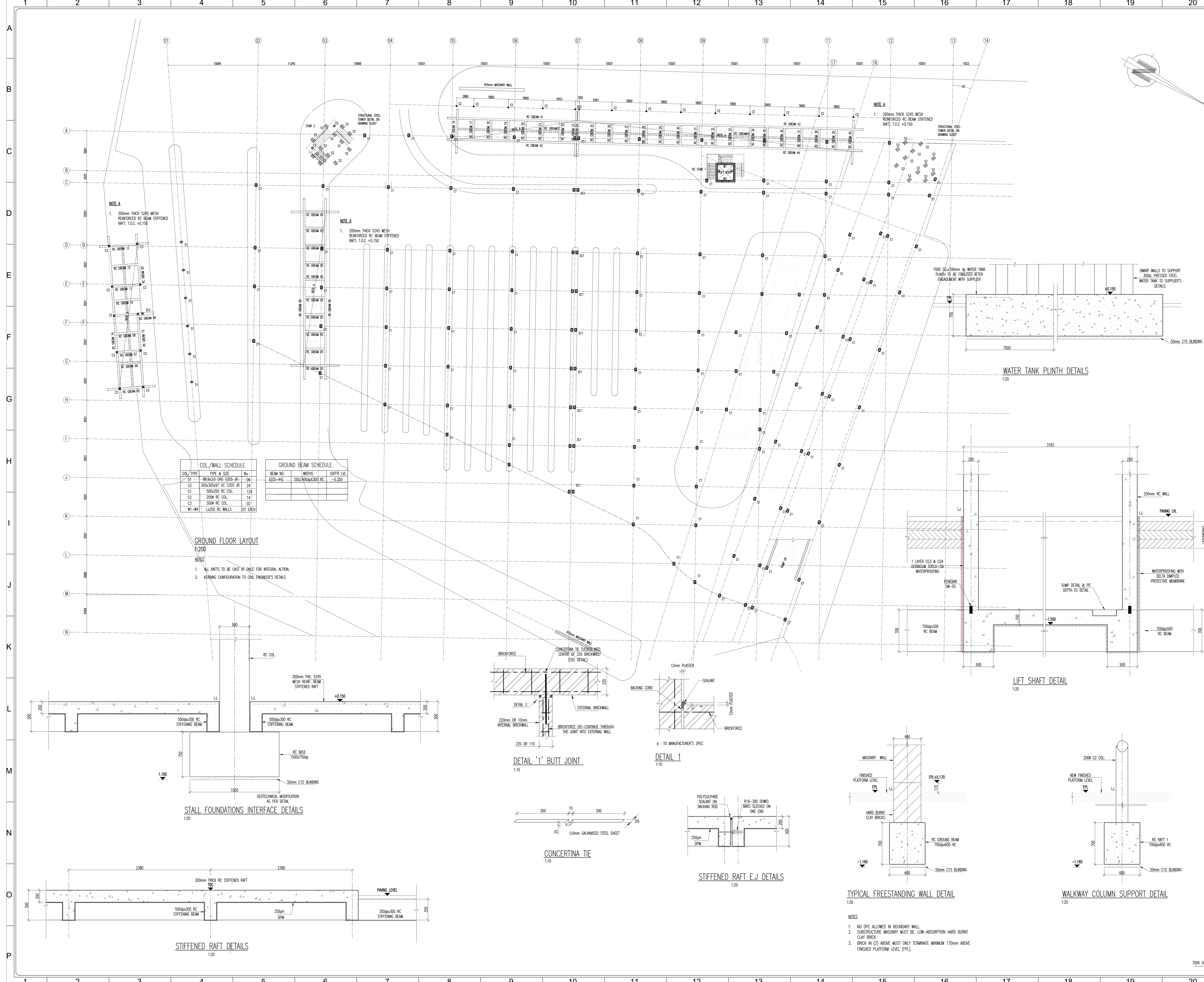
RPM0011/2024-SL001

SHEET NUMBER:

01

REVISION NUMBER:

C



REVISION HISTORY

NO.	DATE	DESCRIPTION	INITIALS
A	03/07/2024	PRELIMINARY COSTING	HT
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CONCRETE

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ARCHITECT:

RMD ATELIER

STRUCTURAL ENGINEER:

ATPRO PROJECTS

DISCIPLINE:

STRUCTURAL

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITIONS TO KURUMAN BUS & TAXI

PROJECT NUMBER:

RPM001/2024

DRAWING TITLE:

SURFACE BED LAYOUTS & DETAILS

DESIGNED BY:

H.T

DRAWN BY:

H.T

CHECKED BY:

PVEC

APPROVED BY:

PVEC

DATE:

28-03-2025

PURPOSE:

TENDER

PAPER SIZE:

A0

DRAWING NUMBER:

RPM0011/2024-SL002

SCALE:

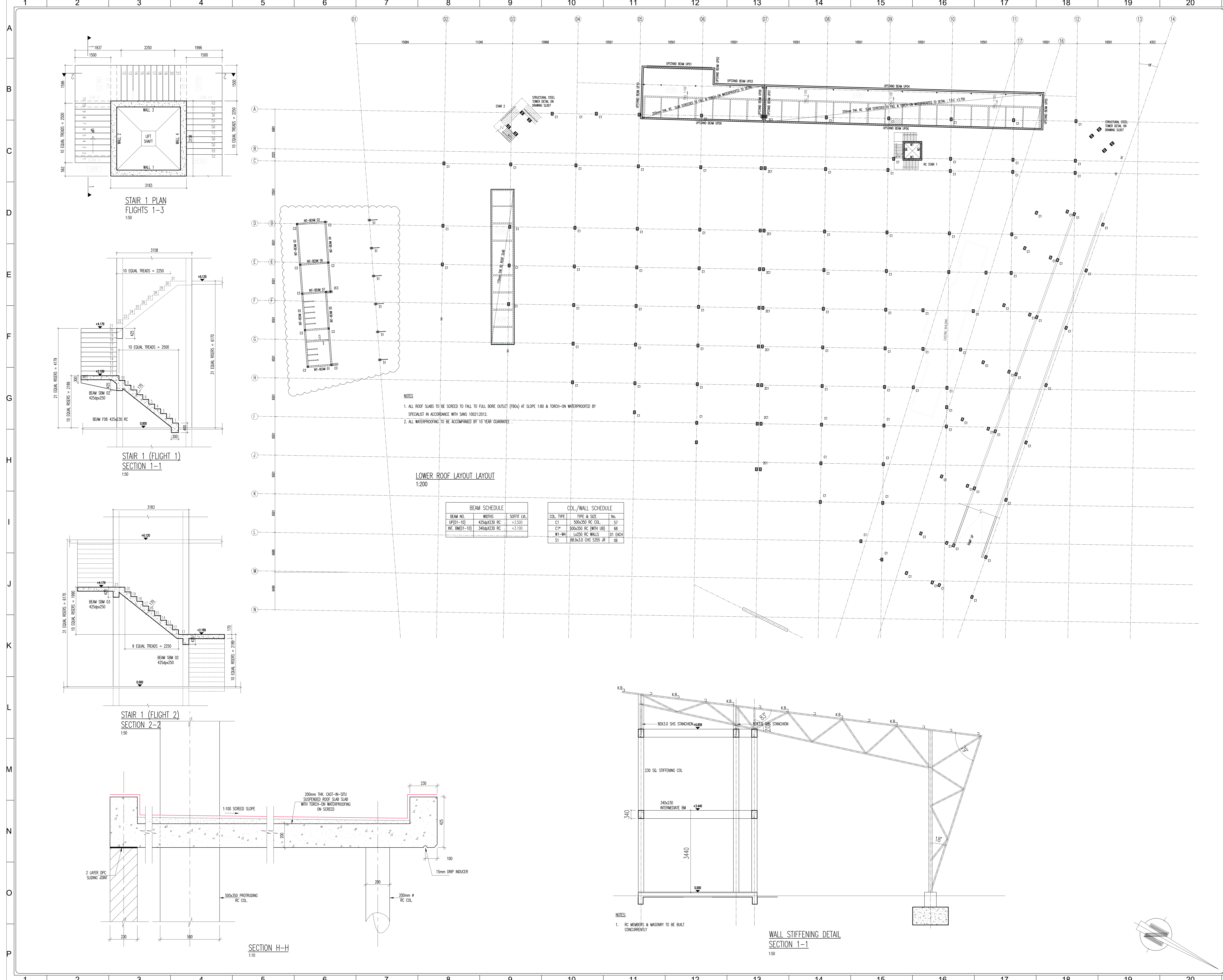
As Shown

SHEET NUMBER:

01

REVISION NUMBER:

C



REVISION HISTORY		
NO.	DATE	DESCRIPTION
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CONCRETE		
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• Slabs 30MPa/19mm		
• Beams 30MPa/19mm		
7. All exposed concrete to have smooth off-shutter finish.		
CONCRETE COVER		
• Bases 50mm		
• Columns 40mm		
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• Beams 30mm		
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BRICKWORK		
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19. Load bearing crushing strength shall be minimum 15MPa and substantiated by test results from manufacturer.		
20. Mortar shall be Class II (1:3) unless indicated otherwise.		
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22. All brickwork on suspended surfaces to be reinforced in bottom 3 layers.		
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25. 3 cubes must be crushed at 7, 14 and 28 days		
26. Mix design must be submitted to the Project Engineer for prior approval.		
27. All results submitted and approved by Project Engineer must be kept on site in Quality File and must contain the sampling date and all requirements as stipulated in SANS 10100:2.		
CLIENT: GA-SEGONYANA LOCAL MUNICIPALITY		
ARCHITECT: RMD ATELIER		
STRUCTURAL ENGINEER: ATPRO PROJECTS		
DISCIPLINE: STRUCTURAL		
PROJECT NAME: PROPOSED ALTERATIONS & ADDITIONS TO KURUMAN BUS & TAXI		
PROJECT NUMBER: RPM001/2024		
DRAWING TITLE: LOWER ROOF (STALL CANOPY) & STAIR 1 LAYOUTS & DETAILS		
DESIGNED BY: H.T		DRAWN BY: H.T
CHECKED BY: PVEC		APPROVED BY: PVEC
DATE: 28-03-2025		PURPOSE: TENDER
PAPER SIZE: A0		DRAWING NUMBER: RPM0011/2024-SL003
SCALE: As Shown		SHEET NUMBER: 01
		REVISION NUMBER: C

STRUCTURAL STEEL NOTES

1. ALL WORK IN ACCORDANCE WITH SANS 1200 H.
2. ALL WELDS TO BE MIN. 6mm CONTINUOUS FILLET WELDS (U.O.N.)
3. ALL STRUCTURAL STEELWORK TO BE GRADE S355JR (UNLESS OTHERWISE NOTED).
4. ALL PURLINS AND GIRTS TO BE COMMERCIAL GRADE AND TO BE GALVANISED IN ACCORDANCE WITH SANS 4998 / ISO 4998:1999 FOR 'STRUCTURAL QUALITY'.
5. ALL BOLTS TO BE GRADE 8.8 BOLTS AND TO BE HOT DIPPED GALVANISED TO SANS 121/2011 (ISO 1461:2009(E)).
6. ALL COMMERCIAL QUALITY H.D. BOLTS, PURLINS AND GIRTS TO HAVE A MIN. GRADE STRESS OF 200 MPa.
7. ALL STRUCTURAL STEELWORK, H.D. BOLTS, NUTS AND WASHERS TO BE HOT DIPPED GALVANISED TO SANS 121/2011 (ISO 1461:2009(E)). ALL STRUCTURAL STEEL TUBES ARE TO BE HOT-DIPPED GALVANISED TO SANS 32 / EN 10240.
8. IF THE GALVANISING IS DAMAGED OR SCRATCHED DURING THE INSTALLATION PROCESS, IT MUST BE TOUCHED UP WITH PLASCON PLASCOZINC POLY GALV PRIMER OR EQUALLY APPROVED.
9. 2 SETS OF FABRICATION SHOP DRAWINGS (HARDCOPIES) ARE TO BE DELIVERED TO THE ENGINEER'S OFFICES FOR REVIEW AND APPROVAL BEFORE COMMENCING WITH ANY FABRICATION. NOTE: EMAIL SUBMISSION OF ELECTRONIC (PDF) COPIES OF SHOP DRAWINGS WILL NOT BE ACCEPTED.
10. CERTIFICATES CONFIRMING THE GRADE STRESS OF ALL STEELWORK, PURLINS, GIRTS, H.D. BOLTS AND BOLTS SPECIFIED IS TO BE SUBMITTED TO THE ENGINEER ON COMPLETION.
11. THE STRUCTURAL STEELWORK CONTRACTOR IS TO VERIFY ALL SETTING OUT DIMENSIONS ON SITE PRIOR TO FABRICATION.

**FABRICATION**

1. ALL CONNECTIONS ARE TO BE SIMPLE TO TRANSFER THEM ONLY EXCEPT WHERE INDICATED OTHERWISE.
2. ALL CONNECTIONS SHALL BE STANDARD & ALIGNED TO LATEST SOUTHERN AFRICAN STEEL CONSTRUCTION HANDBOOK.
3. FABRICATION TO DESIGN CONNECTIONS IN LINE WITH LOAD SCHEDULES TO BE PROVIDED BY STRUCTURAL ENGINEER.

FIRST FLOOR LAYOUT (COMPOSITE DECK CONCEPT)

1:200

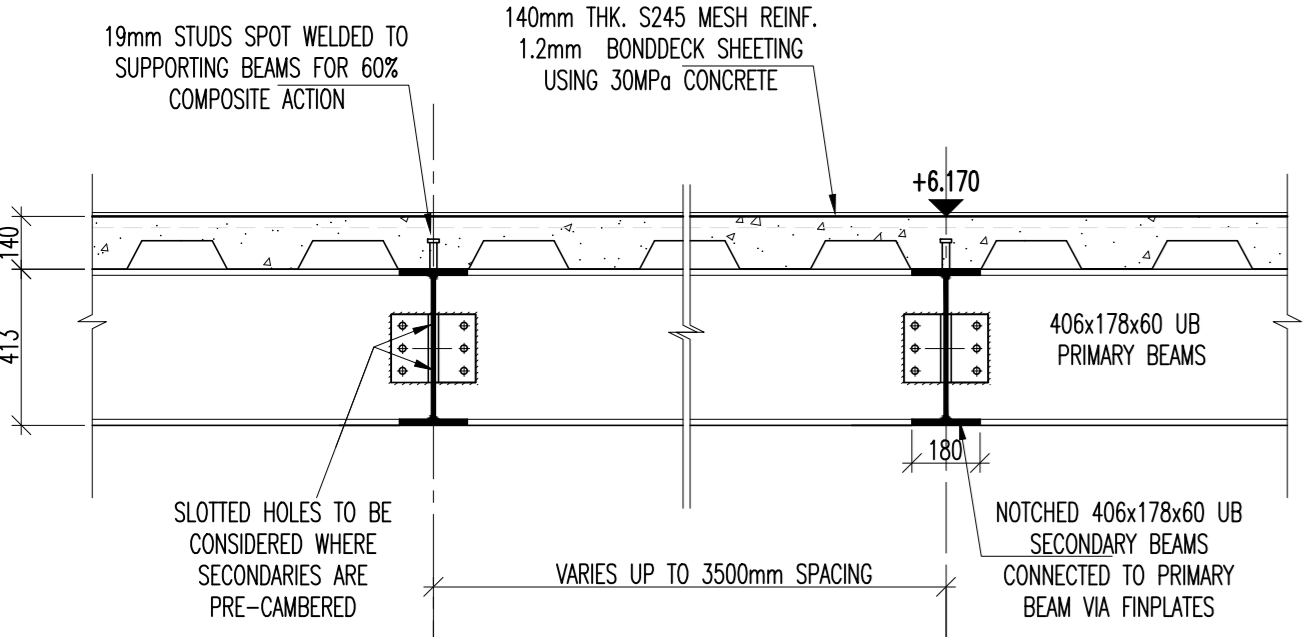
NOTES

1. LIVE LOADS LIMITED TO : 2.6kPa CATEGORY C3 (SERVICE) & 1.5kPa (CONSTRUCTION).
2. DRAINAGE & WATERPROOFING DETAILS TO BE FINALISED WITH ARCHITECT.
3. EDGE BARRIERS NOT SHOWN FOR CLARITY OF DECK SYSTEM.
4. CONCEPT ALLOWS FOR PROPPING OF BEAMS AT HALF POINTS DURING WORKS' EXECUTION OR PRE-CAMBERING.
5. SKALASTIC 8800 TO BE APPLIED ON CONCRETE SUBSTRATE TO MANUFACTURE'S SPECIFICATION BY SKA ACCREDITED APPLICATOR.

FIRST FL. STRUCTURAL BEAM/STANCHION SCHEDULE				
BEAM TYPE	SIZE & TYPE	PRE-CAMBER(mm)	TONNAGE (T)	
PRIMARY 1	406x178x60 UB S355 JR	12	25	
PRIMARY 2	533x170x122 UB S355 JR	45	25	
PRIMARY 3	356x171x51 UB S355 JR	N/A	3	
SECONDARY 1	406x178x60 UB S355 JR	N/A	30	
SECONDARY 2	407x191x67 UB S355 JR	N/A	30	
SECONDARY 3	396x171x51 UB S355 JR	35	18	
HDR BRACING	80x80x6 S355 JR		3	
STUB UB	356x171x45 UB S355 JR	N/A	2	
ESTIMATED TOTAL TONNAGE			201	

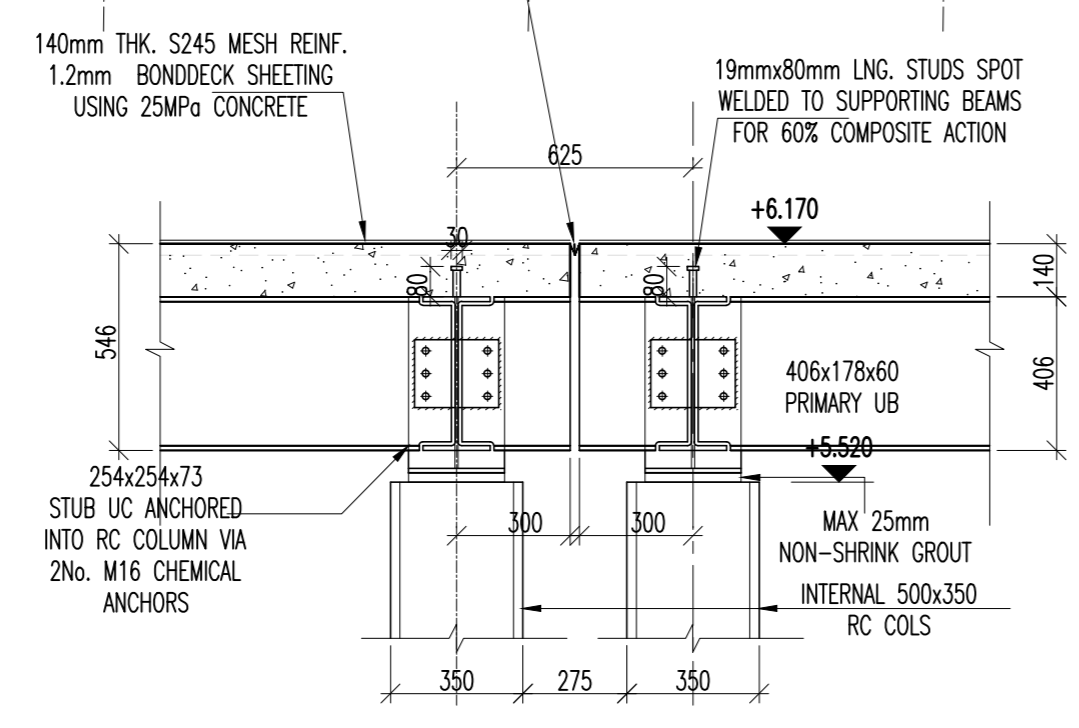
80mm SHEAR STUD SCHEDULE		
BEAM	SPACING	
PRIMARY	1/CONSECUTIVE FLUTE	
SECONDARY	300mm SPACING	

COL./WALL SCHEDULE		
COL. TYPE	TYPE & SIZE	No.
C1	500x350 RC COL.	57
C1*	500x350 RC (WITH UB)	88
W1-W4	Lx250 RC WALLS	01 EACH
S1	88.9x10 CHS S355 JR	06



TYPICAL BEAM CONNECTION DETAIL

1:20

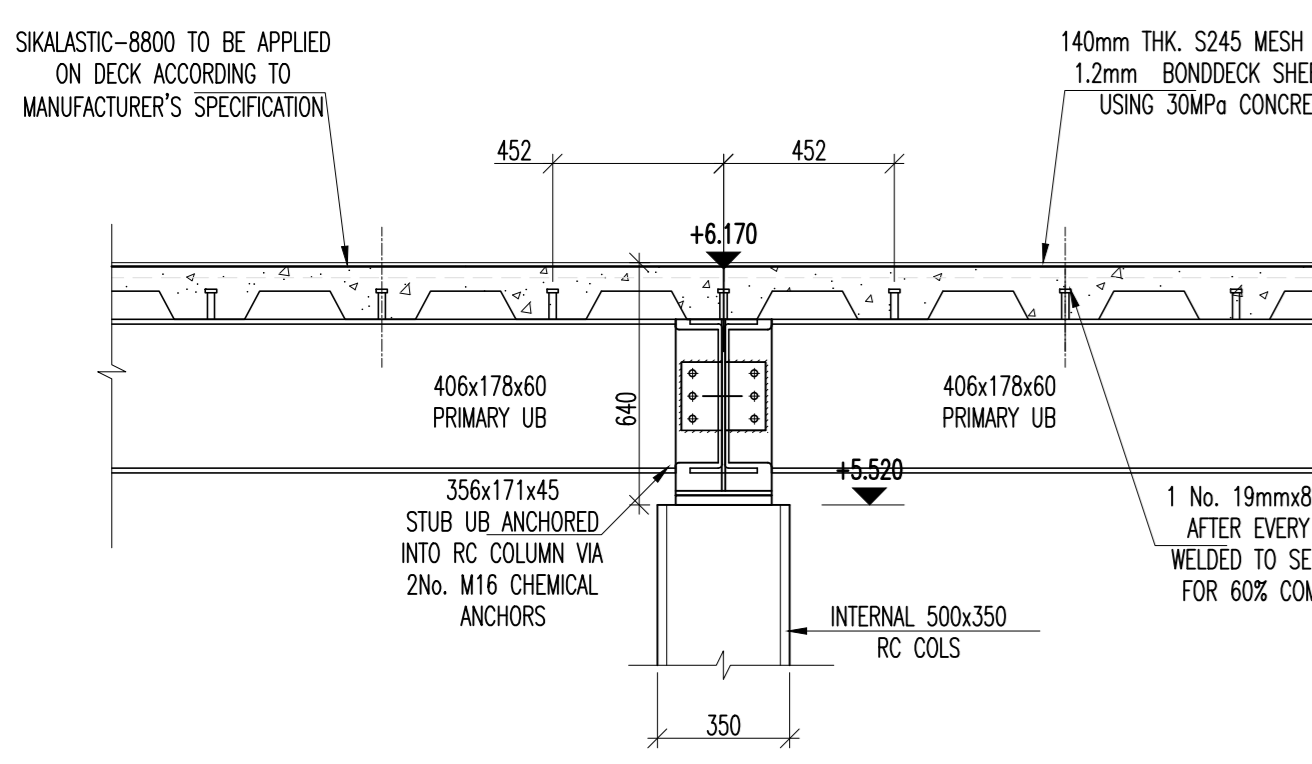


TYPICAL DECK EJ DETAIL

1:20

NOTE:

1. HEADED SHEAR STUDS ACTUAL LENGTH IS 85mm (5mm BURN OFF).
2. BEAMS TO BE CORROSION PROTECTED & 1HR FIRE PROTECTED USING INTUMESCENT COATING PER FIRE ENGINEER SPECIFICATIONS.
3. TOP OF DECK TO BE WATERPROOFED & WEAR PROTECTED USING SKALASTIC-8800 TO MANUFACTURE'S SPECIFICATIONS.
4. BEAMS TO BE PRE-CAMBERED ACCORDING TO SCHEDULE TABLE.



TYPICAL DECK SUPPORT DETAIL

1:20

NOTE:

1. ALL CONNECTIONS TO FABRICATOR'S DETAILS ACCORDING TO LOAD/REACTION SCHEDULE.
2. DETAILS SHOWN IN DETAILS ARE ONLY INDICATIVE.
3. CONNECTIONS TO BE SIMPLE EXCEPT WHERE MOMENT SPLICES ARE REQUIRED.
4. SLOTTED HOLES TO BE USED WHERE SUPPORTED BEAMS ARE PRE-CAMBERED.
5. NO CORROSION PROTECTION IS REQUIRED IN TOP FLANGES RECEIVING HEADED STUDS.

STUB UB STANCHION BASEPLATE

68No.

1:5

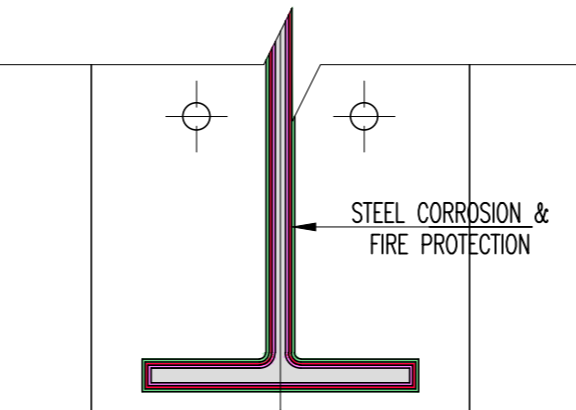
BEAM-STUB UB COL. CONNECTION DETAIL 1

68 No.

1:20

EDGE BARRIER DETAIL

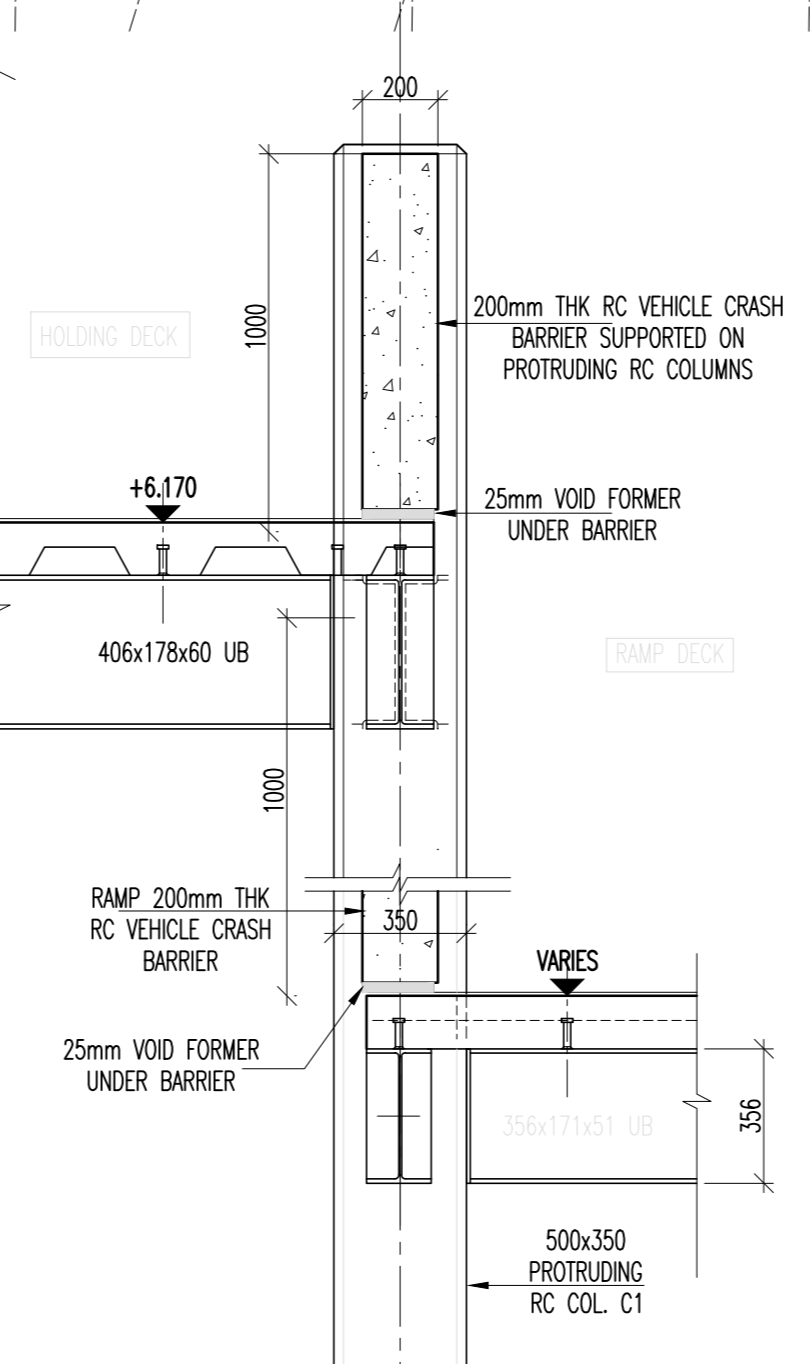
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TYPICAL STEEL PROTECTION

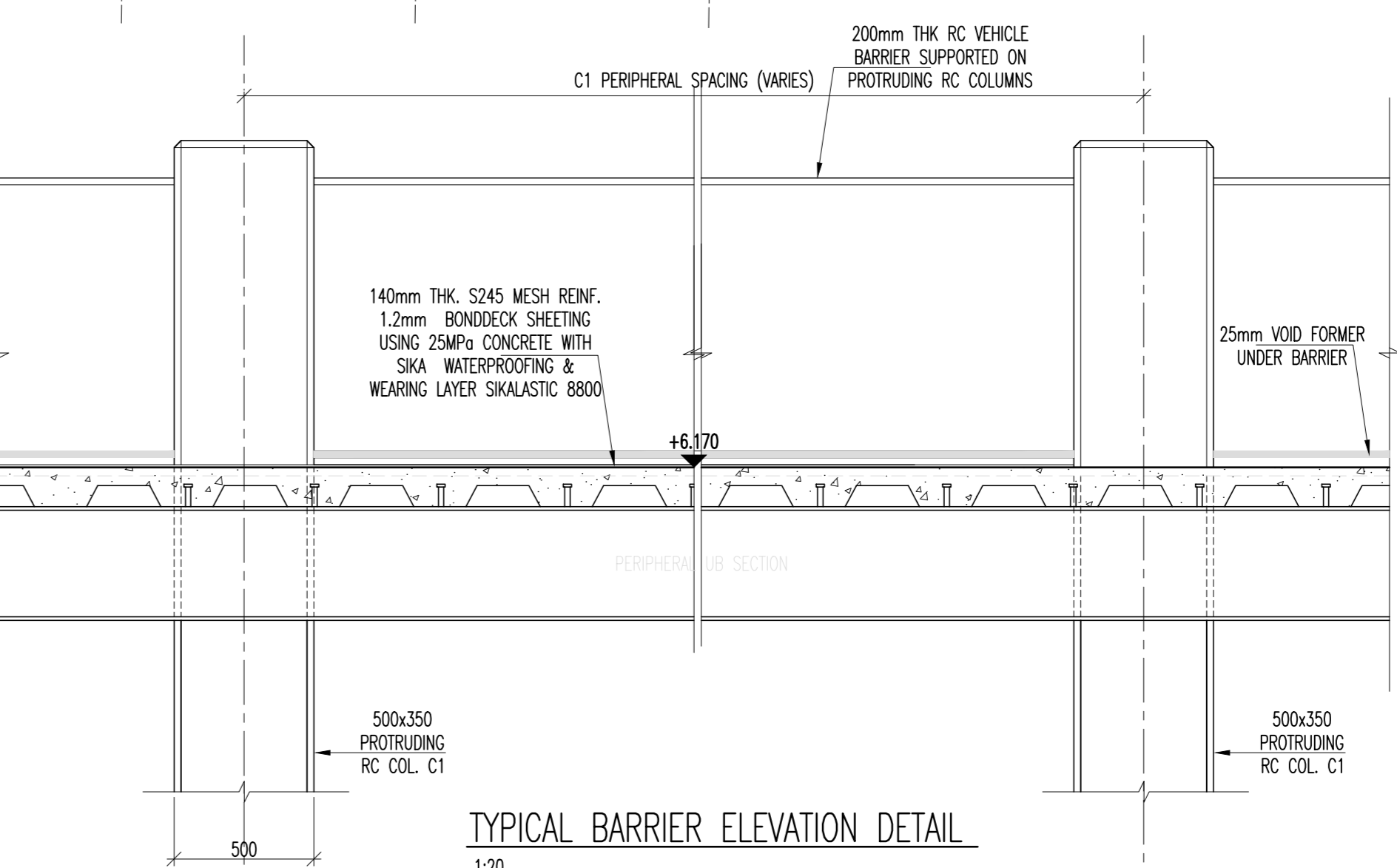
1:5

NOTE: DETAIL INAPPLICABLE TO STUDDED FLANGES



DECK/RAMP INTERFACE DETAIL

1:20



TYPICAL BARRIER ELEVATION DETAIL

1:20

REVISION HISTORY

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CONCRETE

6. Compressive strengths to be as follows (28 days)
  - Bases 30MPa/19mm
  - Columns 30MPa/19mm
  - Blinding 15MPa/19mm
  - Slabs 30MPa/19mm
  - Beams 30MPa/19mm
7. All exposed concrete to have smooth off-shutter finish.

CONCRETE COVER

- Bases 50mm
- Columns 40mm
- Slabs 30mm
- Beams 30mm

CONSTRUCTION

8. No concrete to be cast until the reinforcement has been completed by Contractor, inspected & approved by Project Engineer.
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BRICKWORK

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CONCRETE CUBE TESTS

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CLIENT : GA-SEGONYANA LOCAL MUNICIPALITY

ARCHITECT : RMD ATELIER

STRUCTURAL ENGINEER : ATPRO PROJECTS

DISCIPLINE : STRUCTURAL

PROJECT NAME : PROPOSED ALTERATIONS & ADDITIONS TO KURUMAN BUS & TAXI

PROJECT NUMBER : RPM001/2024

DRAWING TITLE : FIRST FLOOR LAYOUTS & DETAILS (COMPOSITE DECK)

DESIGNED BY : H.T. DRAWN BY : H.T.

CHECKED BY : PVEC APPROVED BY : PVEC

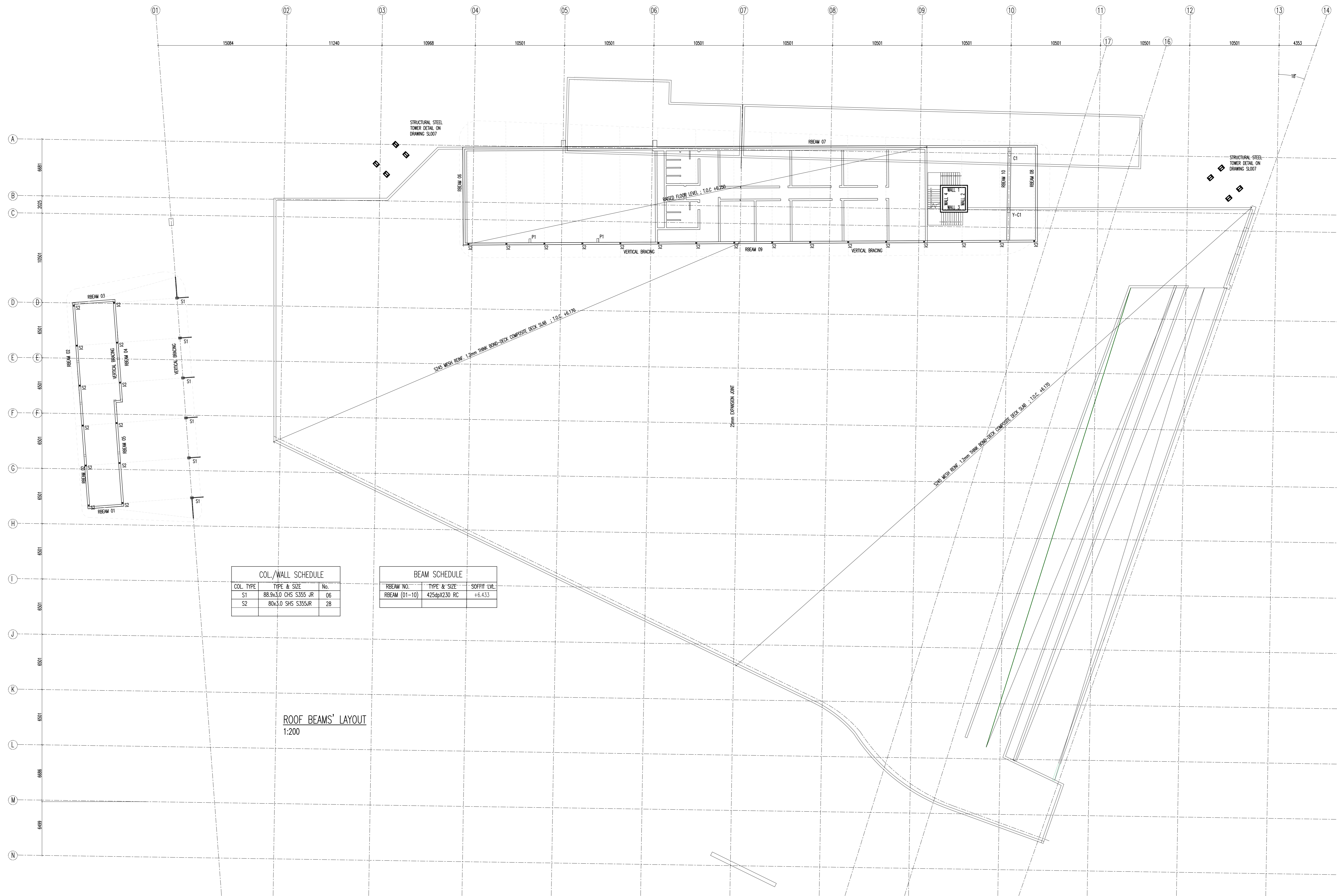
DATE : 28-03-2025 PURPOSE : TENDER

PAPER SIZE : A0 DRAWING NUMBER : RPM0011/2024-SL004

SCALE : As Shown SHEET NUMBER : 01 REVISION NUMBER : C

## STRUCTURAL STEEL NOTES

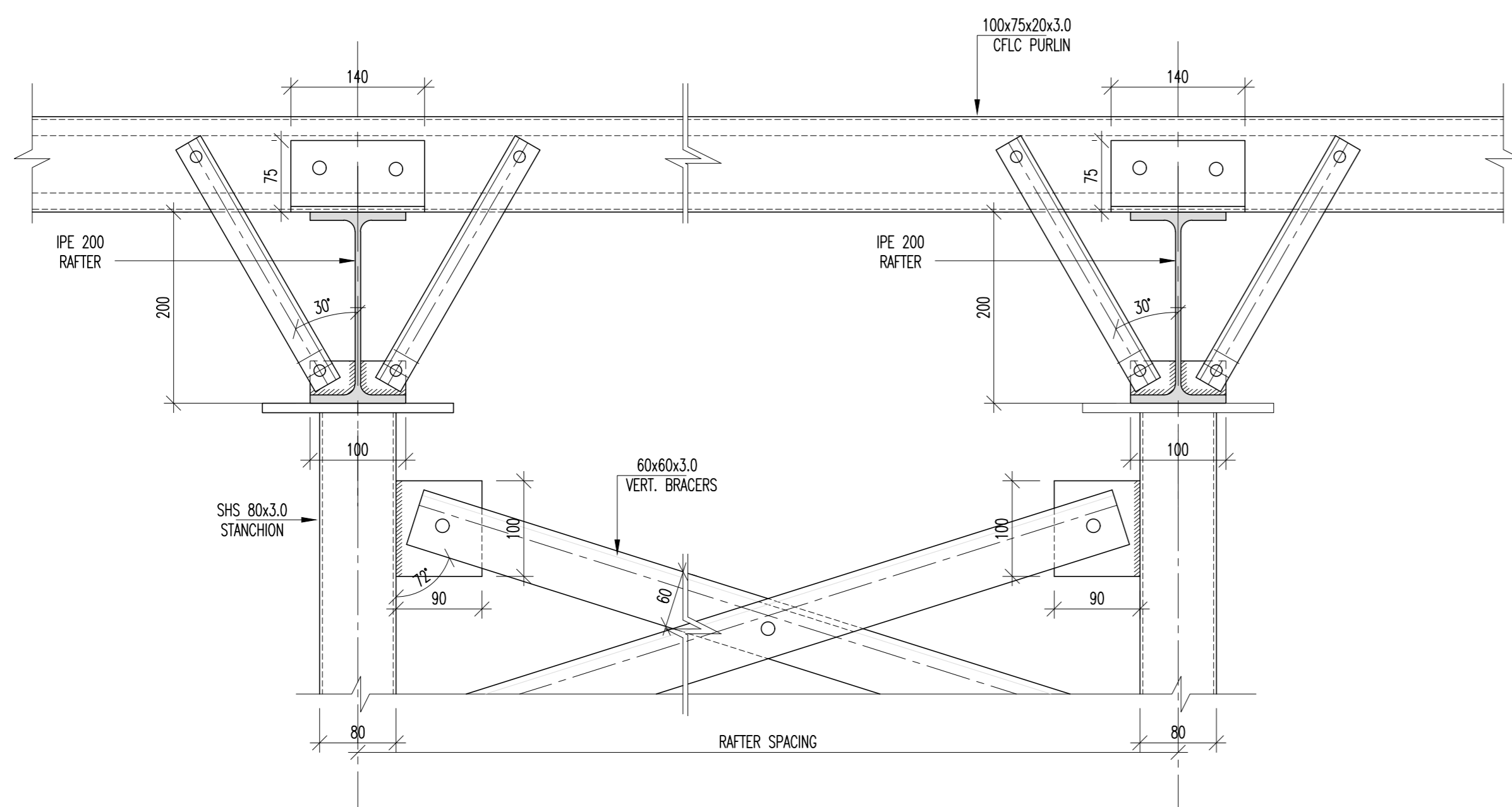
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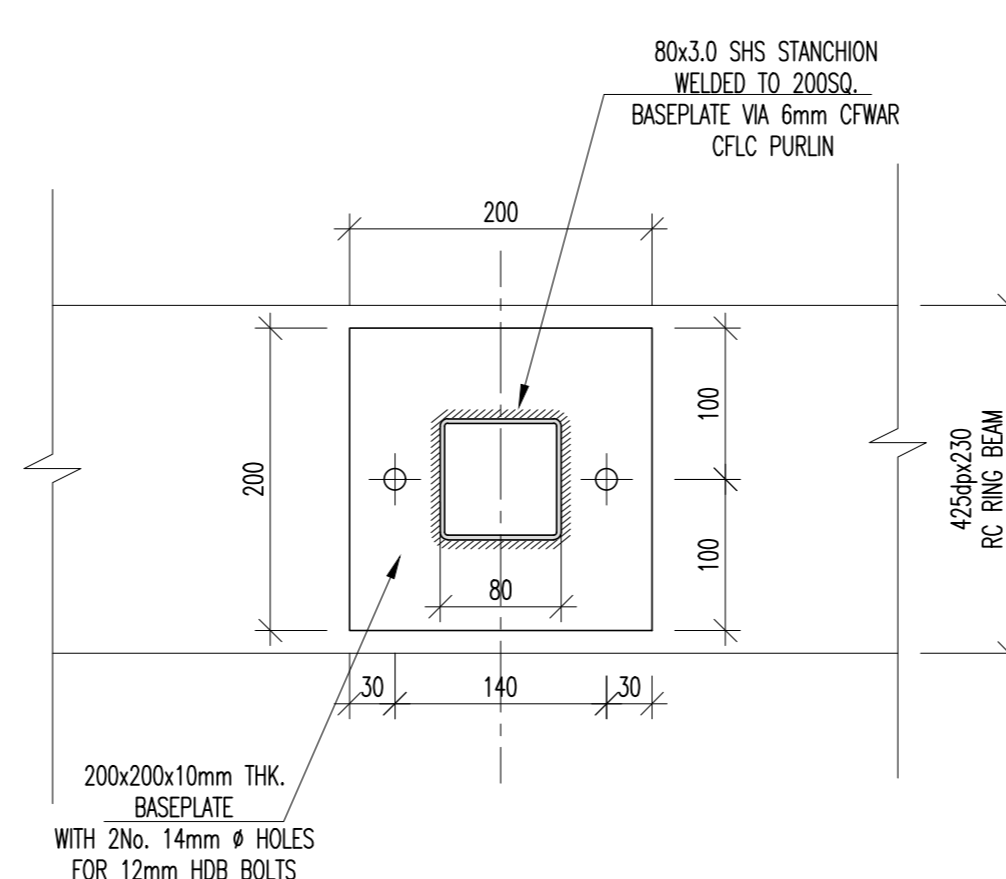
COL./WALL SCHEDULE		
COL. TYPE	TYPE & SIZE	No.
S1	88.9x3.0 CHS S355 JR	06
S2	80x3.0 SHS S355JR	28

BEAM SCHEDULE		
RBEAM NO.	TYPE & SIZE	SOFFIT LVL.
RBEAM (01-10)	425dpX230 RC	+6.433

ROOF BEAMS' LAYOUT  
1:200

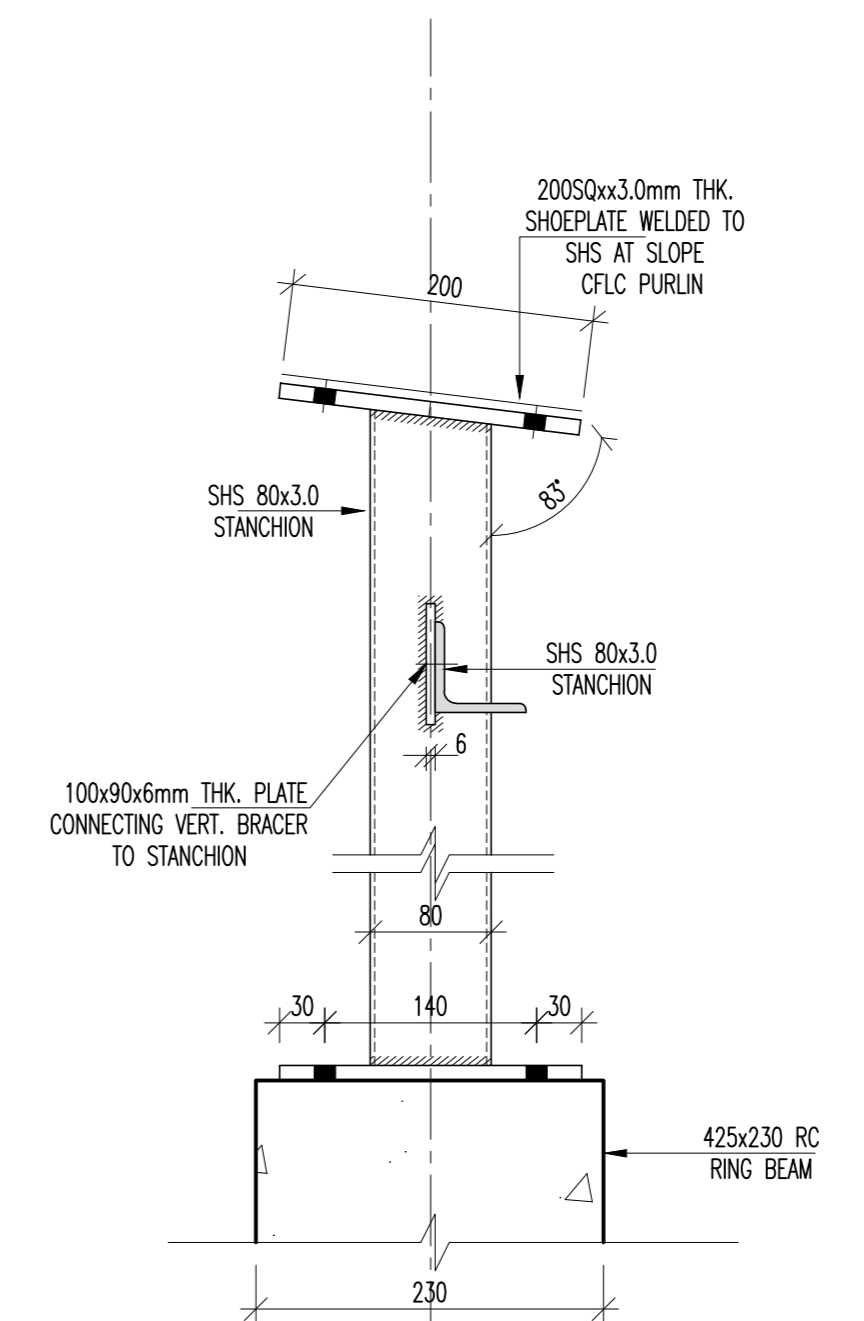


STANCHION VERT BRACING  
ELEVATION  
1:5



SHS STANCHION BASEPLATE  
28No.  
1:5

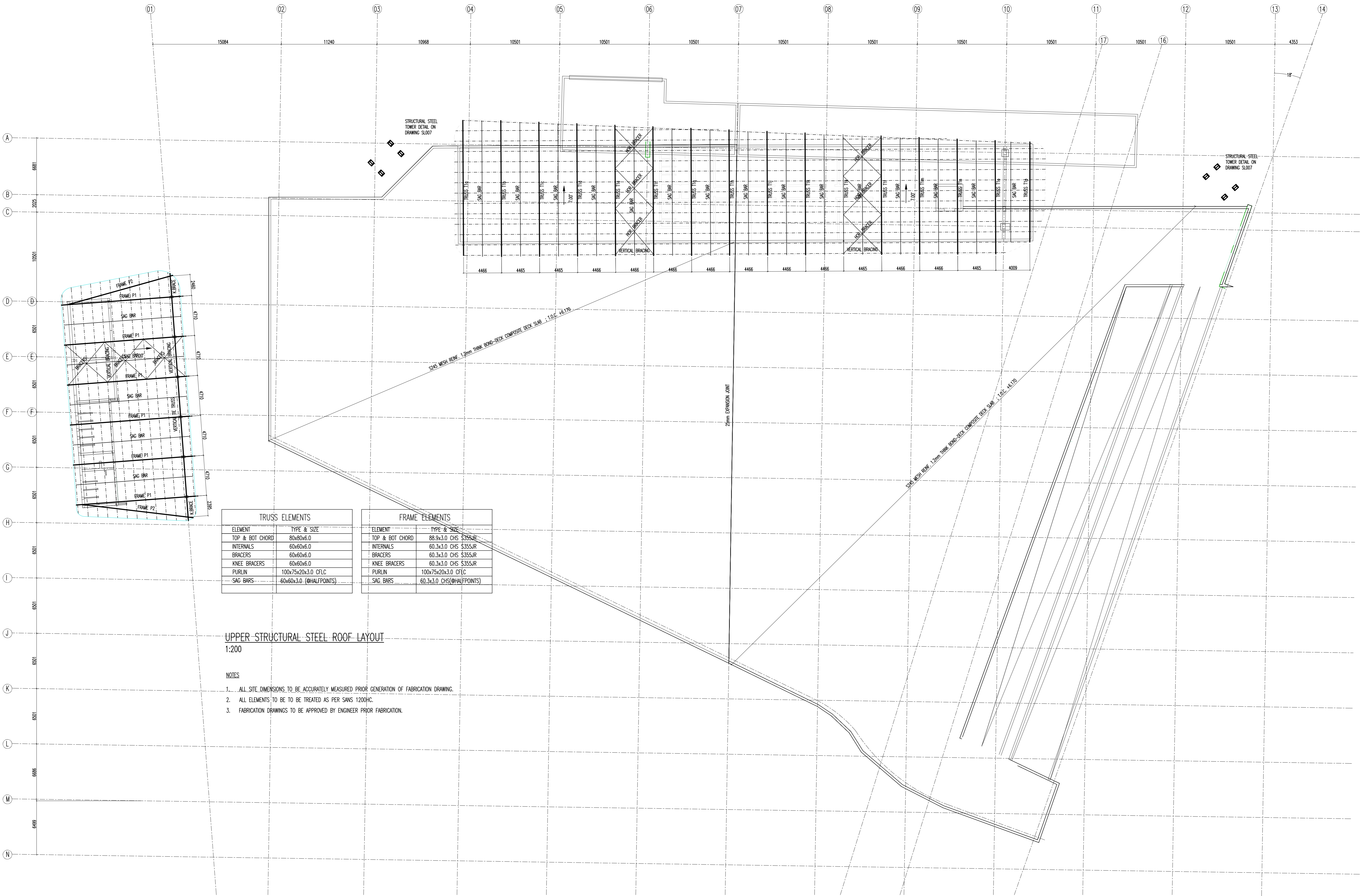
- NOTES**
1. ALL HDB BOLTS TO BE CHEMICALLY ANCHORED INTO BEAM.
  2. TEMPORARY SUPPORT PACKINGS TO BE SUITABLE STEEL SHIMS PLACED CONCENTRICALLY W.R.T BASEPLATE.  
IF LEFT IN PLACE, THEY SHALL BE POSITIONED TO ENSURE THEY ARE TOTALLY ENCLOSED BY THE MINIMUM 30mm GROUT.
  3. GROUTING TO BE CARRIED OUT ONLY AFTER STRUCTURE IS FINALLY ADJUSTED AND SECURED.
  4. GROUT TO HAVE MINIMUM STRENGTH 30MPa.

SHS STANCHION CONNECTION DETAILS  
15

REVISION HISTORY			
NO.	DATE	DESCRIPTION	INITIALS
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<ul style="list-style-type: none"> <li>• Bases 50mm</li> <li>• Columns 40mm</li> <li>• Beams 30mm</li> <li>• Beams 30mm</li> </ul>			
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8. No concrete to be cast until the reinforcement has been completed by Contractor. Inspected & approved by Project Engineer 9. Stripping times of formwork and de-propping to be as per stipulations in Specifications Document D/RPM 001/24 unless otherwise indicated by the Project Engineer. 10. All concrete to be adequately vibrated 11. Contractor to use approved cover blocks of adequate strength to withstand working conditions; min strength to be equal to concrete strength specified. 12. Construction joints' positions to be approved by Project Engineer. 13. Exposed concrete to be carefully cured for minimum 14 days. 14. All cast concrete shall be thoroughly inspected by Project Engineer for any defects; no defects shall be attended to by the Contractor before Engineer's inspection and without consent of the Project Engineer.			
<b>FOUNDATIONS/ CONSTRUCTION</b>			
15. Founding conditions to be thoroughly inspected and approved by Project Engineer prior casting. 16. Founding Levels indicated are approximate. They need to be confirmed by Project Engineer on site. 17. All reinforced foundations to be laid on blinding layer of C15/19 otherwise cover to be enhanced to 75mm.			
<b>BRICKWORK</b>			
18. All bricks to be in strict accordance to SABS 0148. 19. Load bearing crushing strength shall be minimum 15MPa and substantiated by test results from manufacturer. 20. Mortar shall be Class II (1:3) unless indicated otherwise. 21. No void joints shall be accepted in brickwork. 22. All brickwork on suspended surfaces to be reinforced in bottommost 3 layers. 23. Brickface reinforcement shall be as stipulated below: <ul style="list-style-type: none"> <li>• Foundations Every course</li> <li>• Superstructure Every 3 courses</li> </ul>			
<b>CONCRETE CUBE TESTS</b>			
24. Concrete cube tests must be done by and independent accredited (SANS) laboratory and submitted to Engineer for approval. At least one set of 9 cubes shall be taken from each day of casting and from every 50m3 of placed concrete. 25. 3 cubes must be crushed at 7, 14 and 28 days. 26. Mix design must be submitted to the Project Engineer for prior approval. 27. All results submitted and approved by Project Engineer must be kept on site in Quality File and must contain the sampling date and all requirements as stipulated in SANS 10100-2.			
<b>CLIENT :</b>  			
<b>ARCHITECT :</b> 			
<b>STRUCTURAL ENGINEER :</b> 			
<b>DISCIPLINE :</b>			
<b>STRUCTURAL</b>			
<b>PROJECT NAME :</b>			
<b>PROPOSED ALTERATIONS &amp; ADDITIONS TO KURUMAN BUS &amp; TAXI</b>			
<b>PROJECT NUMBER :</b>			
<b>RPM001/2024</b>			
<b>DRAWING TITLE :</b>			
<b>ROOF EAVES LEVEL LAYOUTS &amp; DETAILS</b>			
<b>DESIGNED BY :</b>		<b>DRAWN BY :</b>	
<b>H.T</b>		<b>H.T</b>	
<b>CHECKED BY :</b>		<b>APPROVED BY :</b>	
<b>PVEC</b>		<b>PVEC</b>	
<b>DATE :</b>		<b>PURPOSE :</b>	
<b>28-03-2025</b>		<b>TENDER</b>	
<b>PAPER SIZE :</b>		<b>DRAWING NUMBER :</b>	
<b>A0</b>		<b>RPM001/2024-SL.005</b>	
<b>SCALE :</b>		<b>SHEET NUMBER / REVISION NUMBER :</b>	
<b>As Shown</b>		<b>01 C</b>	

STRUCTURAL STEEL NOTES

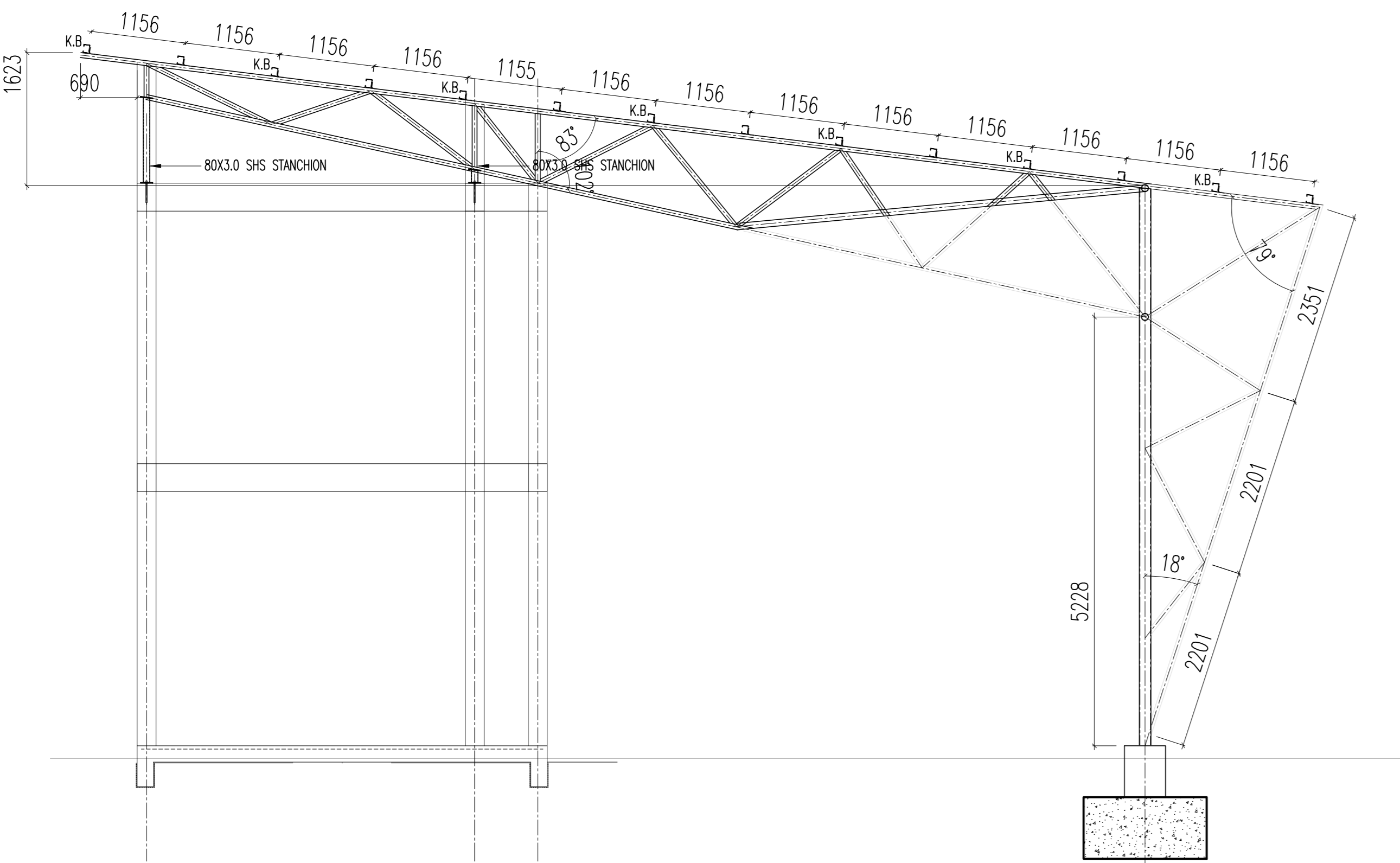
1. ALL WORK IN ACCORDANCE WITH SANS 1200 H.
2. ALL WELDS TO BE MIN. 6mm CONTINUOUS FILLET WELDS (U.O.N.)
3. ALL STRUCTURAL STEELWORK TO BE GRADE S355JR (UNLESS OTHERWISE NOTED).
4. ALL PURLINS AND GIRTS TO BE COMMERCIAL GRADE AND TO BE GALVANISED IN ACCORDANCE WITH SANS 4998 / ISO 4998:1999 FOR 'STRUCTURAL QUALITY'
5. ALL BOLTS TO BE GRADE 8.8 BOLTS AND TO BE HOT DIPPED GALVANISED TO SANS 121:2011 (ISO 1461:2009(E)).
6. ALL COMMERCIAL QUALITY H.D. BOLTS, PURLINS AND GIRTS TO HAVE A MIN. GRADE STRESS OF 200 MPa.
7. ALL STRUCTURAL STEELWORK, H.D. BOLTS, NUTS AND WASHERS TO BE HOT DIPPED GALVANISED TO SANS 121:2011 (ISO 1461:2009(E)). ALL STRUCTURAL STEEL TUBES ARE TO BE HOT-DIPPED GALVANISED TO SANS 32 / EN 10240.
8. GALVANISING CERTIFICATE FOR ALL STEELWORK IS TO BE SUBMITTED TO THE ENGINEER ON COMPLETION.
9. IF THE GALVANISING IS DAMAGED OR SCRATCHED DURING THE INSTALLATION PROCESS, IT MUST BE TOUCHED UP WITH PLASCON PLASCOZINC POLY GALV PRIMER OR EQUALLY APPROVED.
10. 2 SETS OF FABRICATION SHOP DRAWINGS (HARDCOPIES) ARE TO BE DELIVERED TO THE ENGINEER'S OFFICES FOR REVIEW AND APPROVAL BEFORE COMMENCING WITH ANY FABRICATION. NOTE: EMAIL SUBMISSION OF ELECTRONIC (PDF) COPIES OF SHOP DRAWINGS WILL NOT BE ACCEPTED.
11. CERTIFICATES CONFIRMING THE GRADE STRESS OF ALL STEELWORK, PURLINS, GIRTS, H.D. BOLTS AND BOLTS SPECIFIED IS TO BE SUBMITTED TO THE ENGINEER ON COMPLETION.
12. THE STRUCTURAL STEELWORK CONTRACTOR IS TO VERIFY ALL SETTING OUT DIMENSIONS ON SITE PRIOR TO FABRICATION.



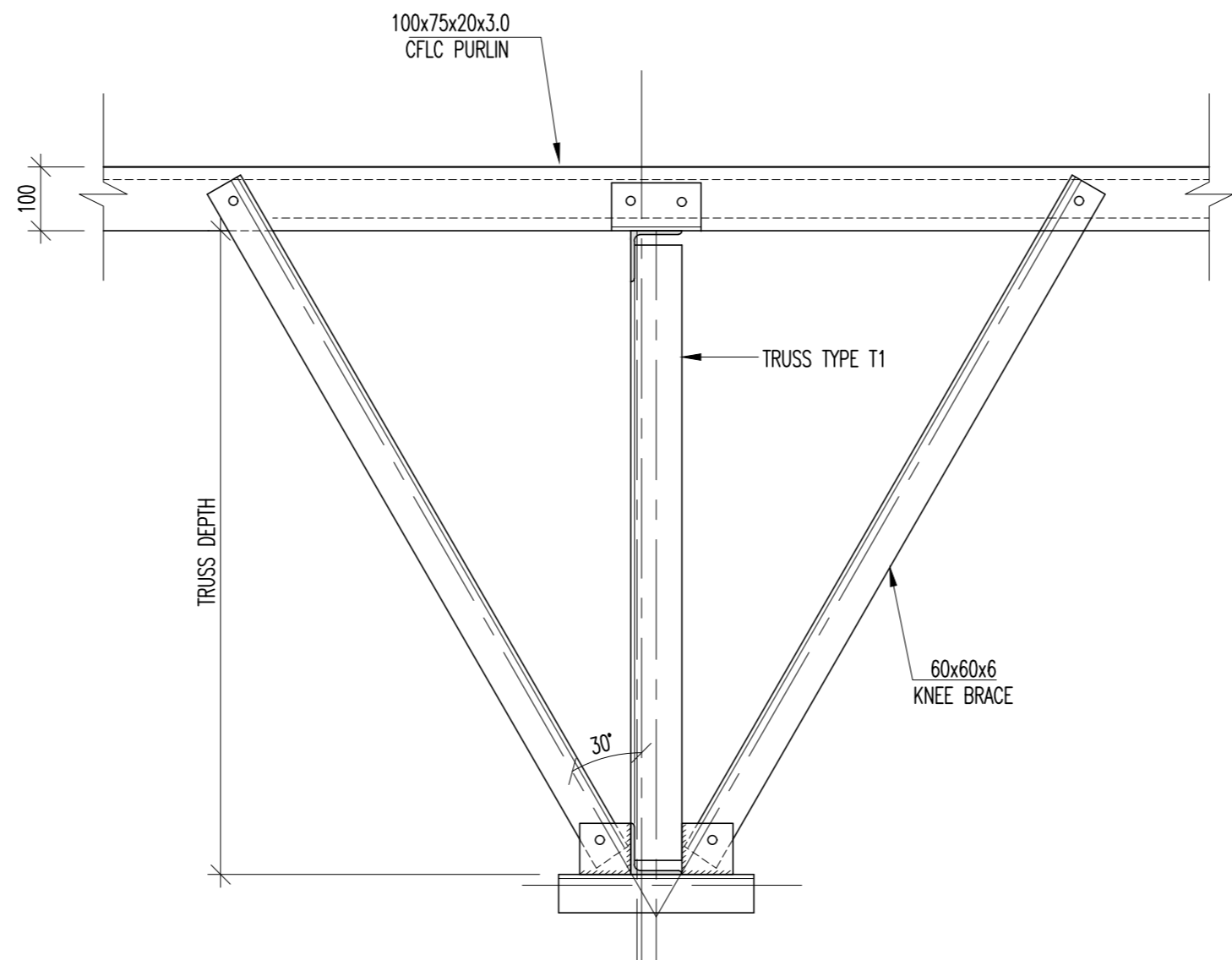
UPPER STRUCTURAL STEEL ROOF LAYOUT  
1:200

NOTES

1. ALL SITE DIMENSIONS TO BE ACCURATELY MEASURED PRIOR GENERATION OF FABRICATION DRAWING.
2. ALL ELEMENTS TO BE TO BE TREATED AS PER SANS 1200HC.
3. FABRICATION DRAWINGS TO BE APPROVED BY ENGINEER PRIOR FABRICATION.



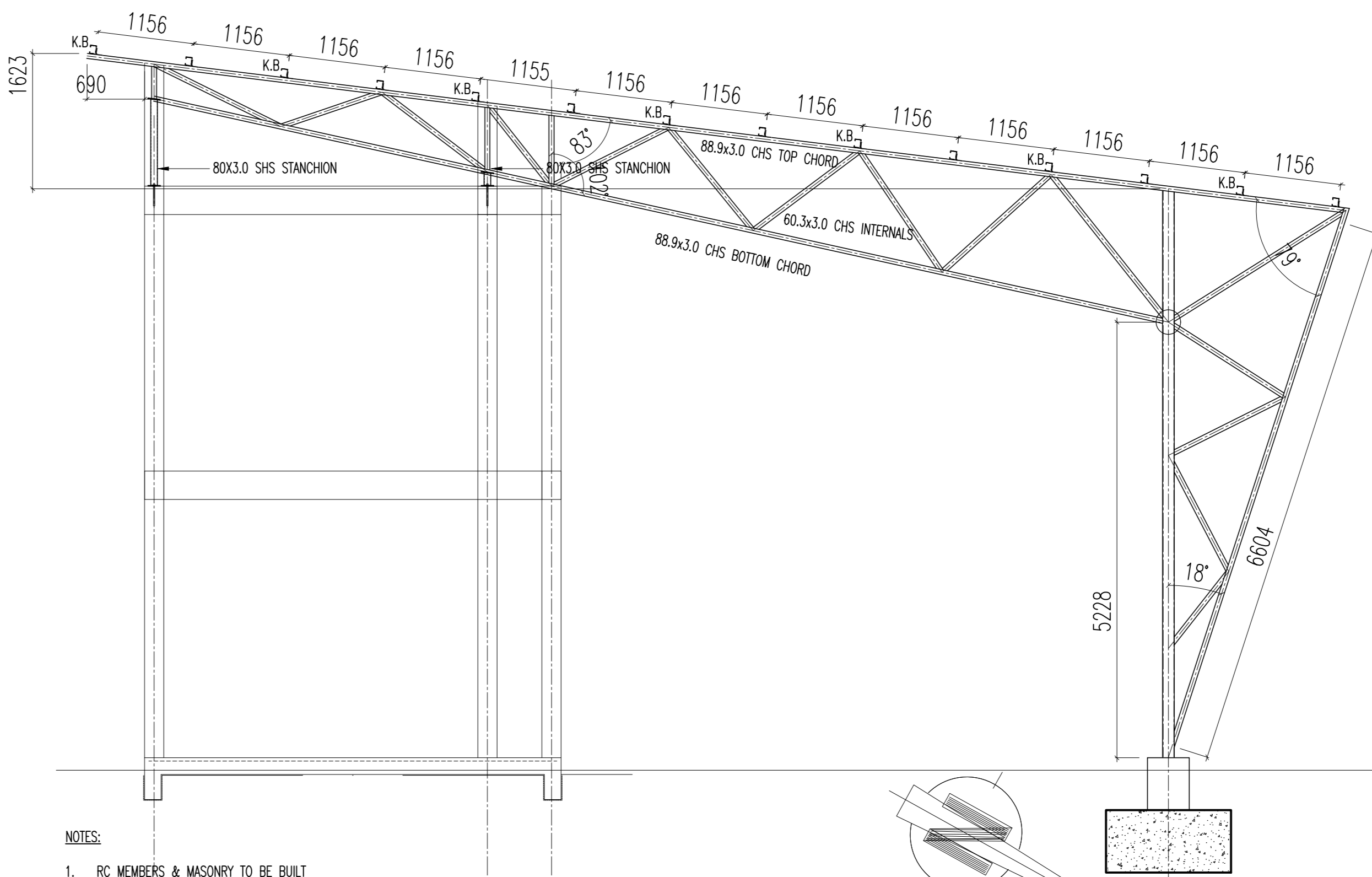
PORTAL 2 DETAIL  
2No.  
1:50



TRUSS FLY BRACE DETAIL  
1:10

NOTE

1. KNEE BRACING TO BE ADOPTED DUE TO SUSPENDED CEILINGS FOR BOTTOM CHORD RESTRAINT.



PORTAL 1 DETAIL  
6No.  
1:50

NOTES

1. RC MEMBERS & MASONRY TO BE BUILT CONCURRENTLY

REVISION HISTORY

NO.	DATE	DESCRIPTION	INITIALS
A	03/07/2024	PRELIMINARY COSTING	HT
B	28/08/2024	PRELIMINARY COSTING	HT
C	28/03/2025	TENDER COSTING	HT

GENERAL

1. All building works to comply with Local & National Building Regulations.
2. This drawing to be read in conjunction with Architect's Drawings and verified against the same. Discrepancies to be promptly reported to Professional Team.
3. Drawing to be read in conjunction with Works Specifications' Document DIRPM 00124.
4. No alterations to be done without Engineer's Consent.
5. Contractor to keep full Drawing set on site always.

CONCRETE

6. Compressive strengths to be as follows (28 days)
  - Bases 30MPa/19mm
  - Columns 30MPa/19mm
  - Blinding 15MPa/19mm
  - Slabs 30MPa/19mm
  - Beams 30MPa/19mm
7. All exposed concrete to have smooth off-shutter finish.

CONCRETE COVER

- Bases 50mm
- Columns 40mm
- Slabs 30mm
- Beams 30mm

CONSTRUCTION

8. No concrete to be cast until the reinforcement has been completed by Contractor, inspected & approved by Project Engineer.
9. Shipping times of formwork and de-propping to be as per stipulations in Specifications Document DIRPM 00124 unless otherwise indicated by the Project Engineer.
10. All concrete to be adequately vibrated.
11. Contractor to use approved cover blocks of adequate strength to withstand working conditions/min strength to be equal to concrete strength specified.
12. Construction joints' positions to be approved by Project Engineer.
13. Exposed concrete to be carefully cured for minimum 14 days.
14. All cast concrete shall be thoroughly inspected by Project Engineer for any defects/no defects shall be attended to by the Contractor before Engineer's inspection and without consent of the Project Engineer.

FOUNDATIONS' CONSTRUCTION

15. Founding conditions to be thoroughly inspected and approved by Project Engineer prior casting.
16. Founding Levels indicated are approximate. They need to be confirmed by Project Engineer on site.
17. All reinforced foundations to be laid on blinding layer of C15/19 otherwise cover to be enhanced to 75mm.

BRICKWORK

18. All bricks to be in strict accordance to SABS 0148.
19. Load bearing crushing strength shall be minimum 15MPa and substantiated by test results from manufacturer.
20. Mortar shall be Class II (1:3) unless indicated otherwise.
21. No void joints shall be accepted in brickwork.
22. All brickwork on suspended surfaces to be reinforced in bottom 3 layers.
  - Foundations Every course
  - Superstructure Every 3 courses

CONCRETE CUBE TESTS

24. Concrete cube tests must be done by and independent accredited (SANAS) laboratory and submitted to Engineer for approval. At least one set of 9 cubes shall be taken from each day of casting and from every 50m3 of placed concrete.
25. 3 cubes must be crushed at 7, 14 and 28 days.
26. Mix design must be submitted to the Project Engineer for prior approval.
27. All results submitted and approved by Project Engineer must be kept on site in Quality File and must contain the sampling date and all requirements as stipulated in SANS 10100:2.

CLIENT :



ARCHITECT :



STRUCTURAL ENGINEER :



DISCIPLINE :

STRUCTURAL

PROJECT NAME :

PROPOSED ALTERATIONS & ADDITIONS TO KURUMAN BUS & TAXI

PROJECT NUMBER :

RPM001/2024

DRAWING TITLE :

STRUCTURAL STEEL ROOF LAYOUT LEVEL 01 & DETAILS

DESIGNED BY :

H.T

CHECKED BY :

PVEC

DATE :

28-03-2025

PAPER SIZE :

A0

SCALE :

As Shown

DRAWN BY :

H.T

APPROVED BY :

PVEC

PURPOSE :

TENDER

DRAWING NUMBER :

RPM0011/2024-SL006

SHEET NUMBER :

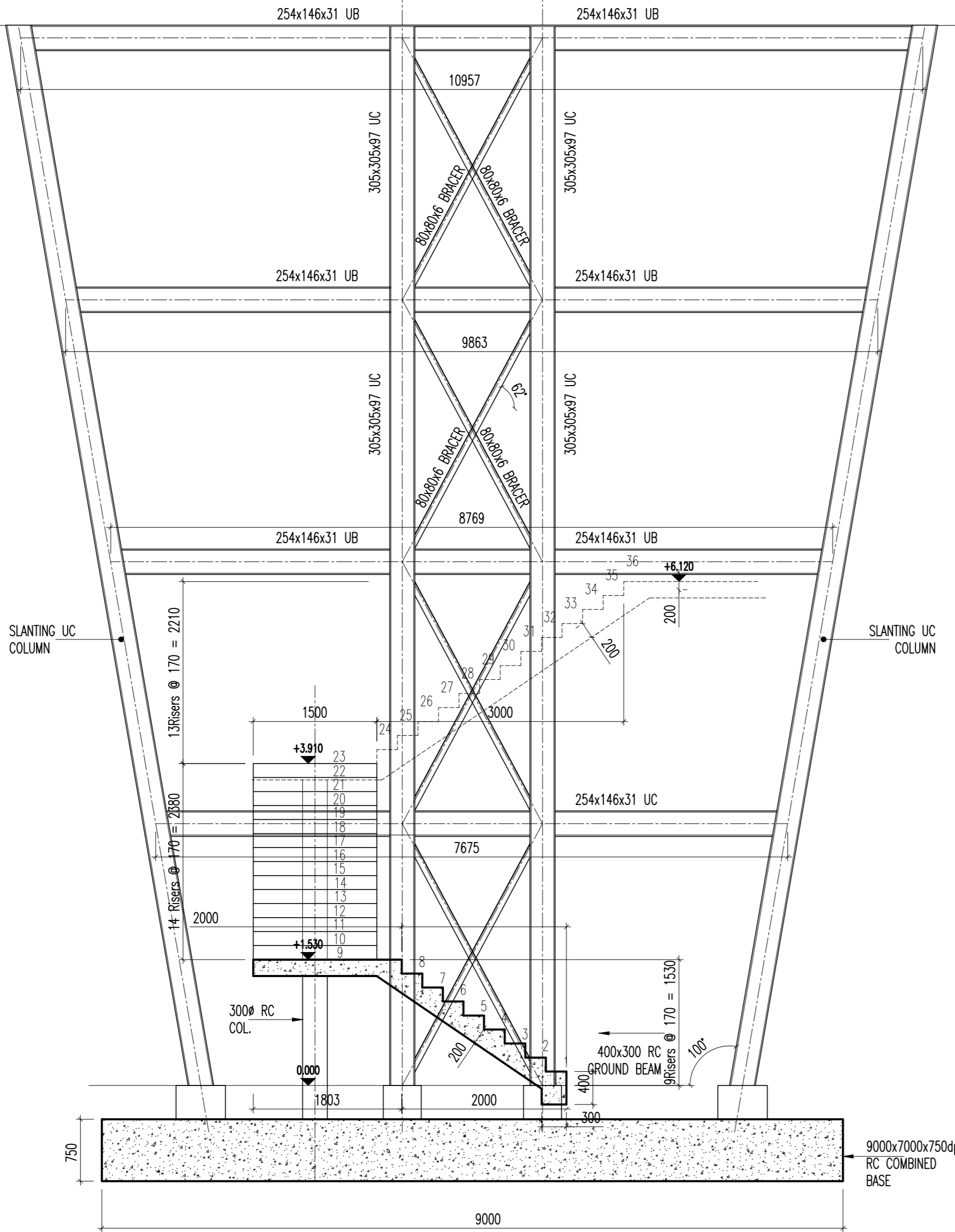
01

REVISION NUMBER :

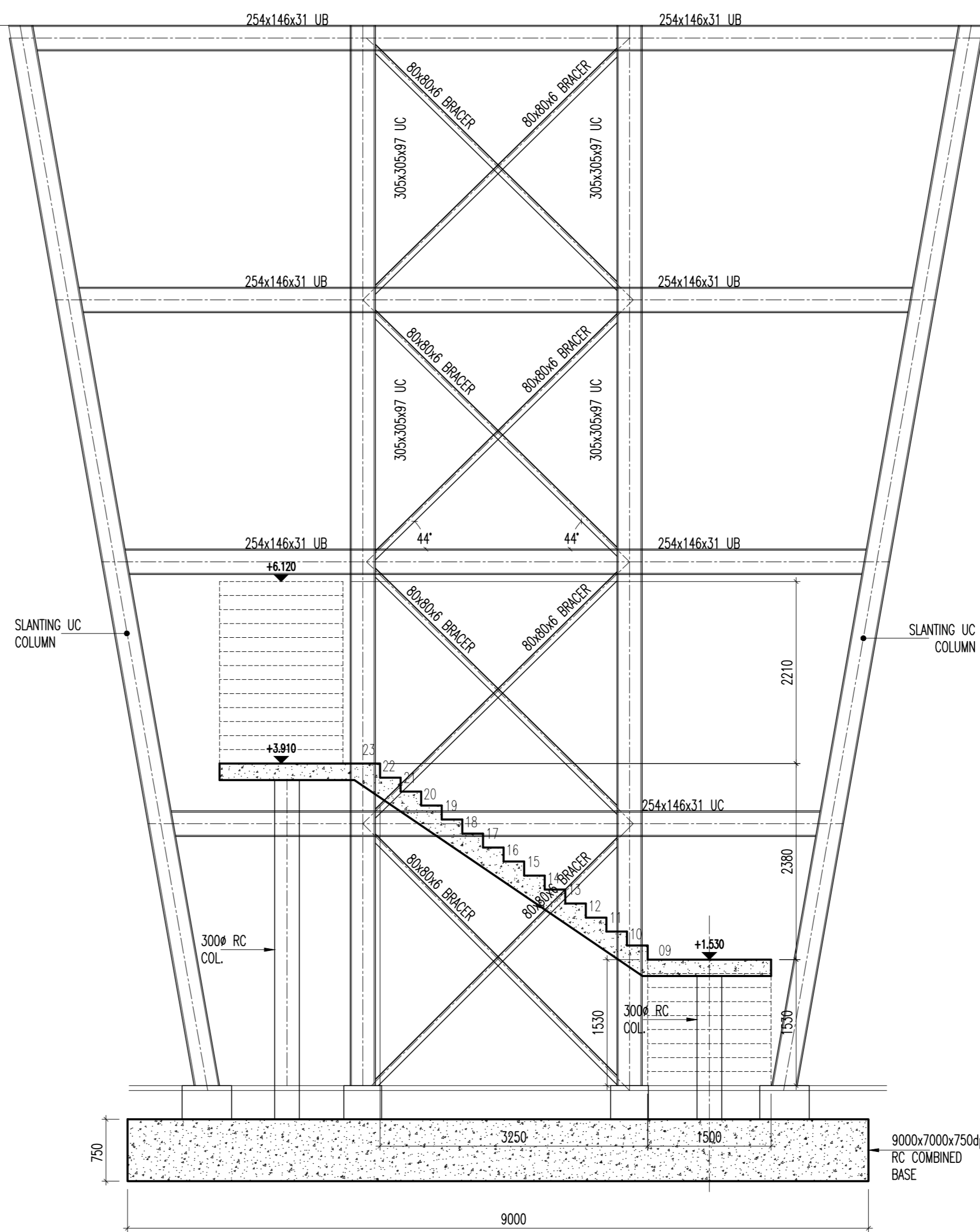
C

STRUCTURAL STEEL NOTES

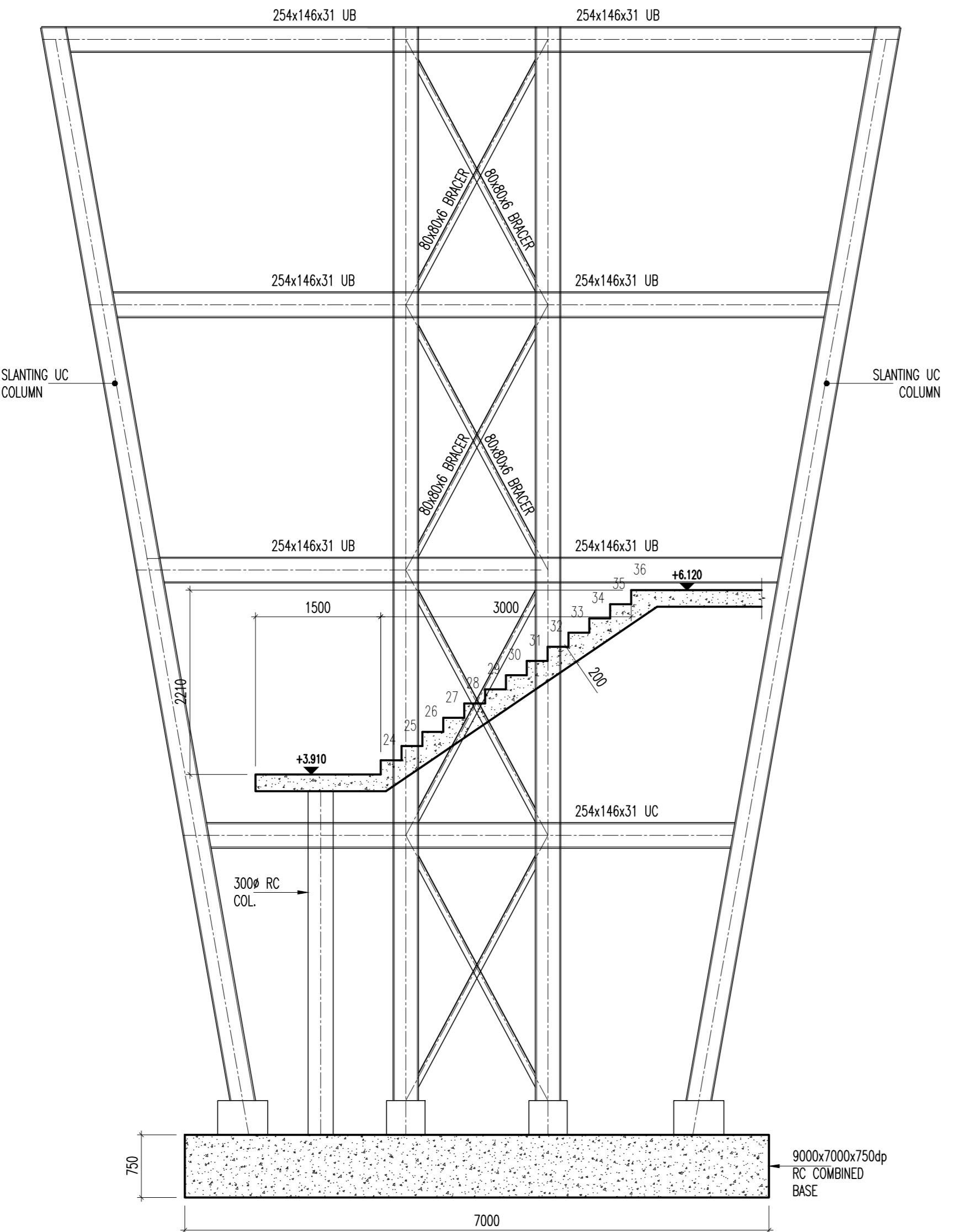
1. ALL WORK IN ACCORDANCE WITH SANS 1200 H.
2. ALL WELDS TO BE MIN. 6mm CONTINUOUS FILLET WELDS (U.O.N.)
3. ALL STRUCTURAL STEELWORK TO BE GRADE S355JR (UNLESS OTHERWISE NOTED).
4. ALL PURLINS AND GRTS TO BE COMMERCIAL GRADE AND TO BE GALVANISED IN ACCORDANCE WITH SANS 4998 / ISO 4998:1999 FOR 'STRUCTURAL QUALITY'
5. ALL BOLTS TO BE GRADE 8.8 BOLTS AND TO BE HOT DIPPED GALVANISED TO SANS 121:2011 (ISO 1461:2009(E)).
6. ALL COMMERCIAL QUALITY H.D. BOLTS, PURLINS AND GRTS TO HAVE A MIN. GRADE STRESS OF 200 MPa.
7. ALL STRUCTURAL STEELWORK, H.D. BOLTS, NUTS AND WASHERS TO BE HOT DIPPED GALVANISED TO SANS 121:2011 (ISO 1461:2009(E)). ALL STRUCTURAL STEEL TUBES ARE TO BE HOT-DIPPED GALVANISED TO SANS 32 / EN 10248.
8. IF THE GALVANISING IS DAMAGED OR SCRATCHED DURING THE INSTALLATION PROCESS, IT MUST BE 'TOUCHED UP' WITH PLASCON PLASCOZINC POLY GALV PRIMER OR EQUALLY APPROVED.
9. 2 SETS OF FABRICATION SHOP DRAWINGS (HARDCOPIES) ARE TO BE DELIVERED TO THE ENGINEER'S OFFICES FOR REVIEW AND APPROVAL BEFORE COMMENCING WITH ANY FABRICATION. NOTE: EMAIL SUBMISSION OF ELECTRONIC (PDF) COPIES OF SHOP DRAWINGS WILL NOT BE ACCEPTED.
10. CERTIFICATES CONFIRMING THE GRADE STRESS OF ALL STEELWORK, PURLINS, GRTS, H.D. BOLTS AND BOLTS SPECIFIED IS TO BE SUBMITTED TO THE ENGINEER ON COMPLETION.
11. THE STRUCTURAL STEELWORK CONTRACTOR IS TO VERIFY ALL SETTING OUT DIMENSIONS ON SITE PRIOR TO FABRICATION.



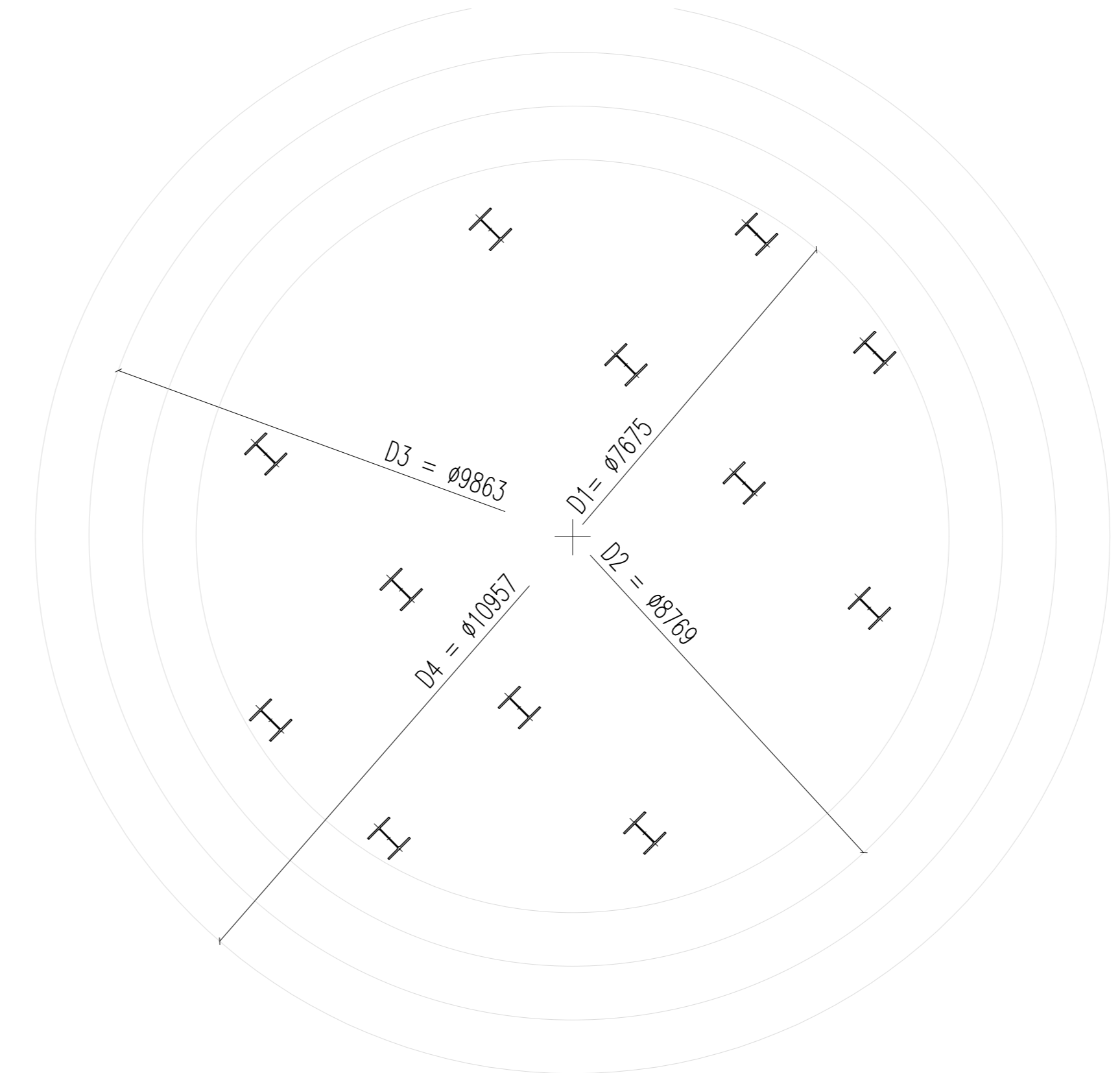
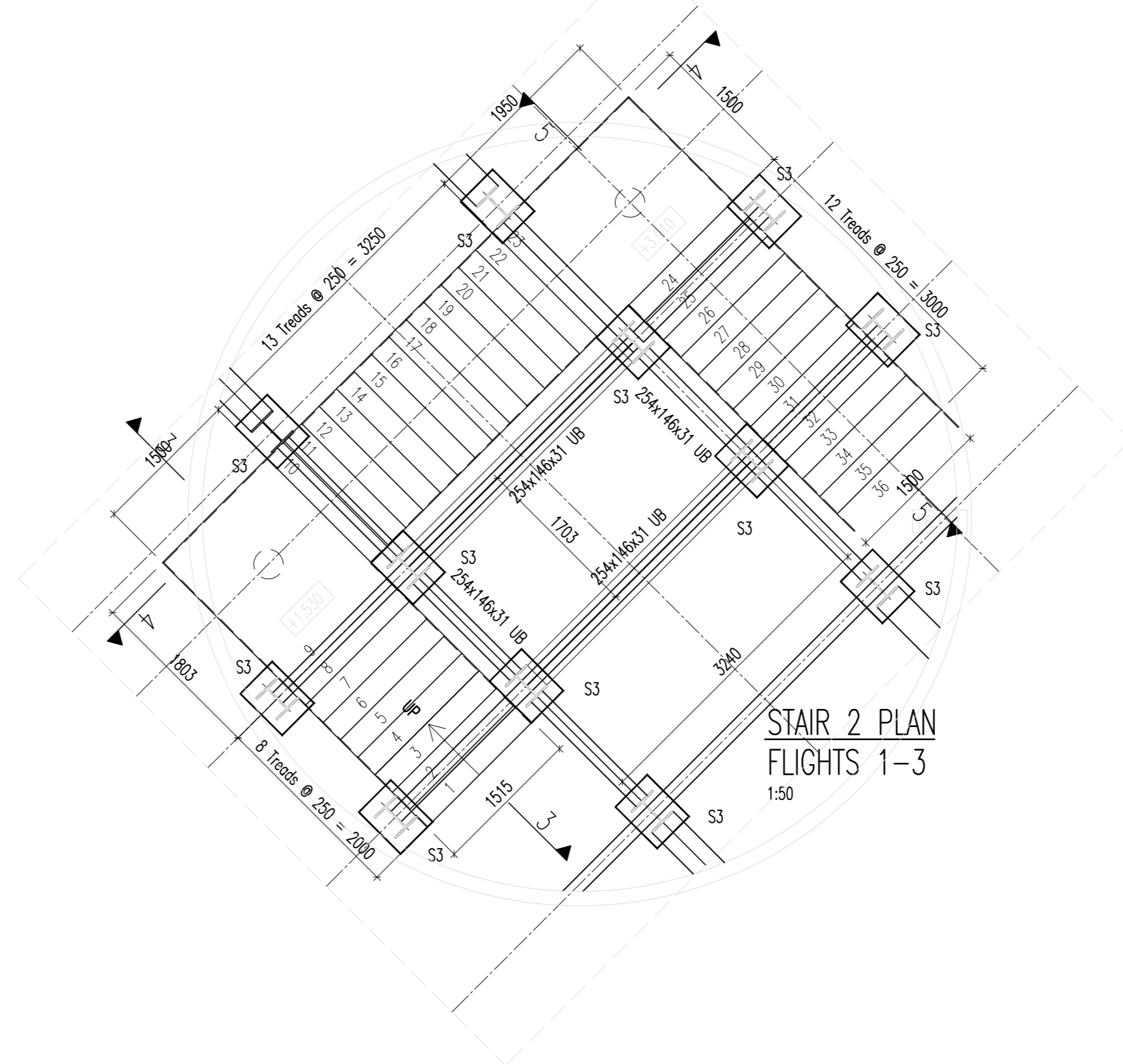
STAIR 2 SECTION 3-3  
1:50



STAIR 2 SECTION 4-4  
1:50



STAIR 2 SECTION 5-5  
1:50



TOWER SETTING OUT DIAMETERS  
1:50

REVISION HISTORY

NO.	DATE	DESCRIPTION	INITIALS
A	03/07/2024	PRELIMINARY COSTING	HT
B	28/08/2024	PRELIMINARY COSTING	HT
C	28/03/2025	TENDER COSTING	HT

GENERAL

1. All building works to comply with Local & National Building Regulations.
2. This drawing to be read in conjunction with Architect's Drawings and verified against the same. Discrepancies to be promptly reported to Professional Team.
3. Drawing to be read in conjunction with Works Specifications' Document DRPM 001/24.
4. No alterations to be done without Engineer's Consent.
5. Contractor to keep full Drawing set on site always.

CONCRETE

6. Compressive strengths to be as follows (28 days)
  - Bases 30MPa/19mm
  - Columns 30MPa/19mm
  - Blinding 15MPa/19mm
  - Slabs 30MPa/19mm
  - Beams 30MPa/19mm
7. All exposed concrete to have smooth off-shutter finish.

CONCRETE COVER

- Bases 50mm
- Columns 40mm
- Slabs 30mm
- Beams 30mm

CONSTRUCTION

8. No concrete to be cast until the reinforcement has been completed by Contractor, inspected & approved by Project Engineer.
9. Shipping times of formwork and de-propping to be as per stipulations in Specifications Document D/RPM 001/24 unless otherwise indicated by the Project Engineer.
10. All concrete to be adequately vibrated.
11. Contractor to use approved cover blocks of adequate strength to withstand working conditions/min strength to be equal to concrete strength specified.
12. Construction joints' positions to be approved by Project Engineer.
13. Exposed concrete to be carefully cured for minimum 14 days.
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BRICKWORK

18. All bricks to be in strict accordance to SABS 0148.
19. Load bearing crushing strength shall be minimum 15MPa and substantiated by test results from manufacturer.
20. Mortar shall be Class II (1:3) unless indicated otherwise.
21. No void joints shall be accepted in brickwork.
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23. Brickforce reinforcement shall be as stipulated below:
  - Foundations Every course
  - Superstructure Every 3 courses

CONCRETE CUBE TESTS

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25. 3 cubes must be crushed at 7, 14 and 28 days.
26. Mix design must be submitted to the Project Engineer for prior approval.
27. All results submitted and approved by Project Engineer must be kept on site in Quality File and must contain the sampling date and all requirements as stipulated in SANS 10100:2.

CLIENT : 

ARCHITECT : 

STRUCTURAL ENGINEER : 

DISCIPLINE : STRUCTURAL

PROJECT NAME : PROPOSED ALTERATIONS & ADDITIONS TO KURUMAN BUS & TAXI

PROJECT NUMBER : RPM001/2024

DRAWING TITLE : STRUCTURAL STEEL TOWER & STAIR 02 LAYOUT & DETAILS

DESIGNED BY : H.T	DRAWN BY : H.T
CHECKED BY : PVEC	APPROVED BY : PVEC
DATE : 28-03-2025	PURPOSE : TENDER
PAPER SIZE : A0	DRAWING NUMBER : RPM0011/2024-SL007
SCALE : As Shown	SHEET NUMBER : 01
	REVISION NUMBER : C