

GENERAL REQUIREMENTS

- All structural drawings are to be read in conjunction with all other current drawings and specifications.
- Any discrepancies within all relevant drawings are to be reported to QuadConsult Ltd immediately.
- All dimensions are in millimetres. All levels are in metres, U.N.O.
- Do not scale from this drawing - use figured dimensions only.
- Throughout the following, reference to British Standards shall be deemed to include reference to equivalent European standards where such exist.

STEELWORK

- Structural steelwork shall be grade S355 in accordance with BS EN10025, U.N.O.
- Specification for structural steelwork to be in accordance with the latest edition of the national structural steelwork specification for building construction by BS5950.
- Steelwork fabricator to be solely responsible for temporary work and erection of structural steelwork.
- Unless noted otherwise:
 - all steel columns are positioned central on grid line,
 - all welds to be 6mm continuous fillet welds,
 - all bolts to be grade 8.8 to BS 5.992,
 - all bolted connections to have a min 2no. M16 bolts.
- All steelwork to be fire protected in accordance with architect's specifications. As a minimum, the steelwork is to be painted with intumescent coating to achieve a minimum 60 minute fire protection.
- The fabricator is to include for other items of secondary steel that may be inferred from the engineer's and/or the architect's details.
 - Corrosion protection specification:
 - surface preparation - blast clean to sa 2½,
 - prefabrication primer - 25 microns (d.f.t) epoxy zinc phosphate,
 - post fabrication primer - 75 microns (d.f.t) high build phosphate,
 - all damaged steelwork to be made good to engineer's approval.

TEMPORARY WORKS

- Temporary works associated with the construction of the project shall be the responsibility of the principal contractor, but should consult the structural engineer with any sequence or overall building stability queries.
- Design of all temporary works - propping, bracing and the like shall be the responsibility of the principal contractor and should appoint a suitably experienced temporary works contractor (twc), refer to BS5975:2019 or BS EN12810 to 12813 for guidance.

CONNECTION FORCES (ULS)

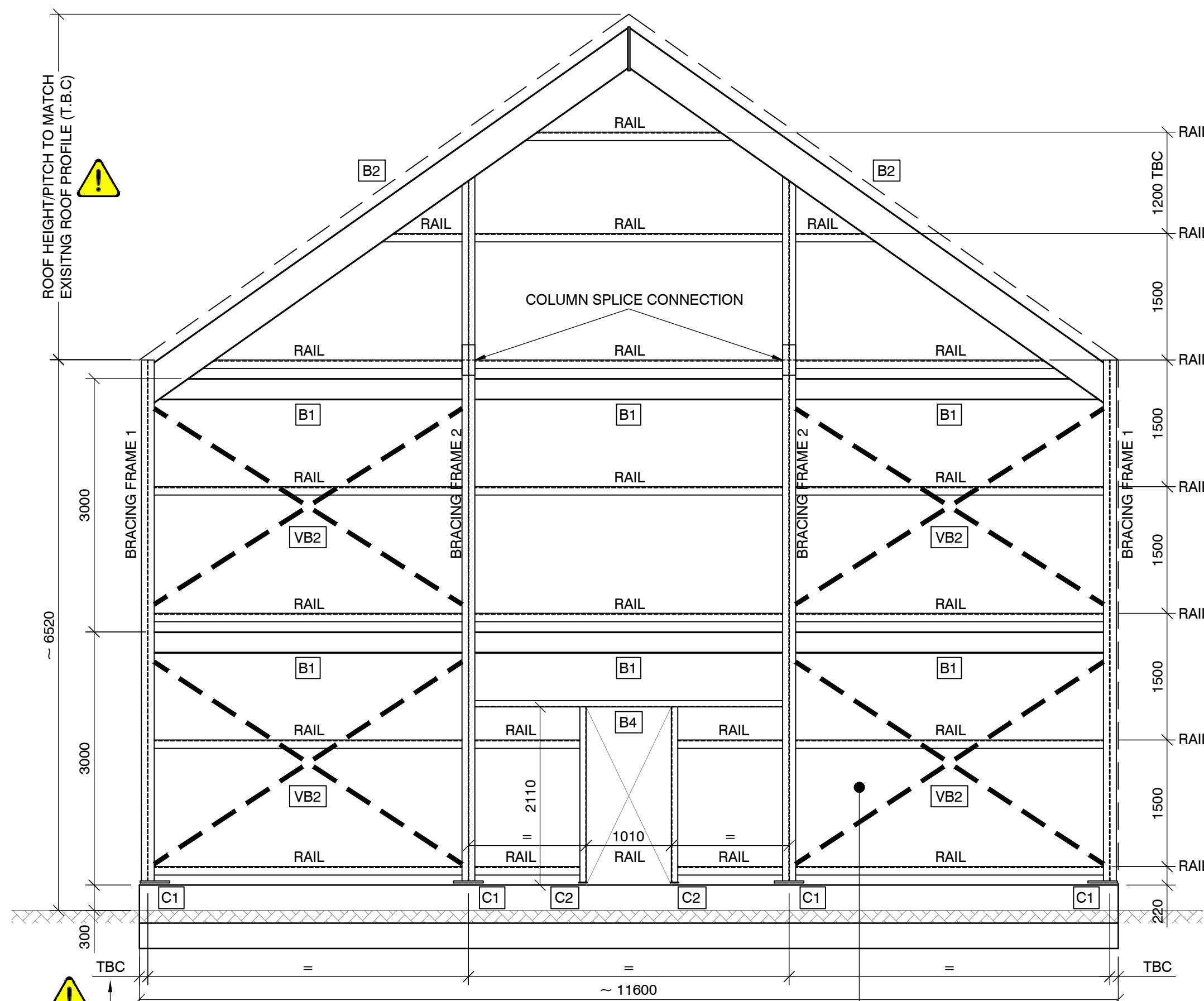
ALL CONNECTION FORCES TO BE DESIGNED FOR THE FOLLOWING MINIMUM FORCES (UNO)

VERTICAL SHEAR = +/-25kN
MINOR SHEAR = +/-10kN
AXIAL LOAD = +/-25kN

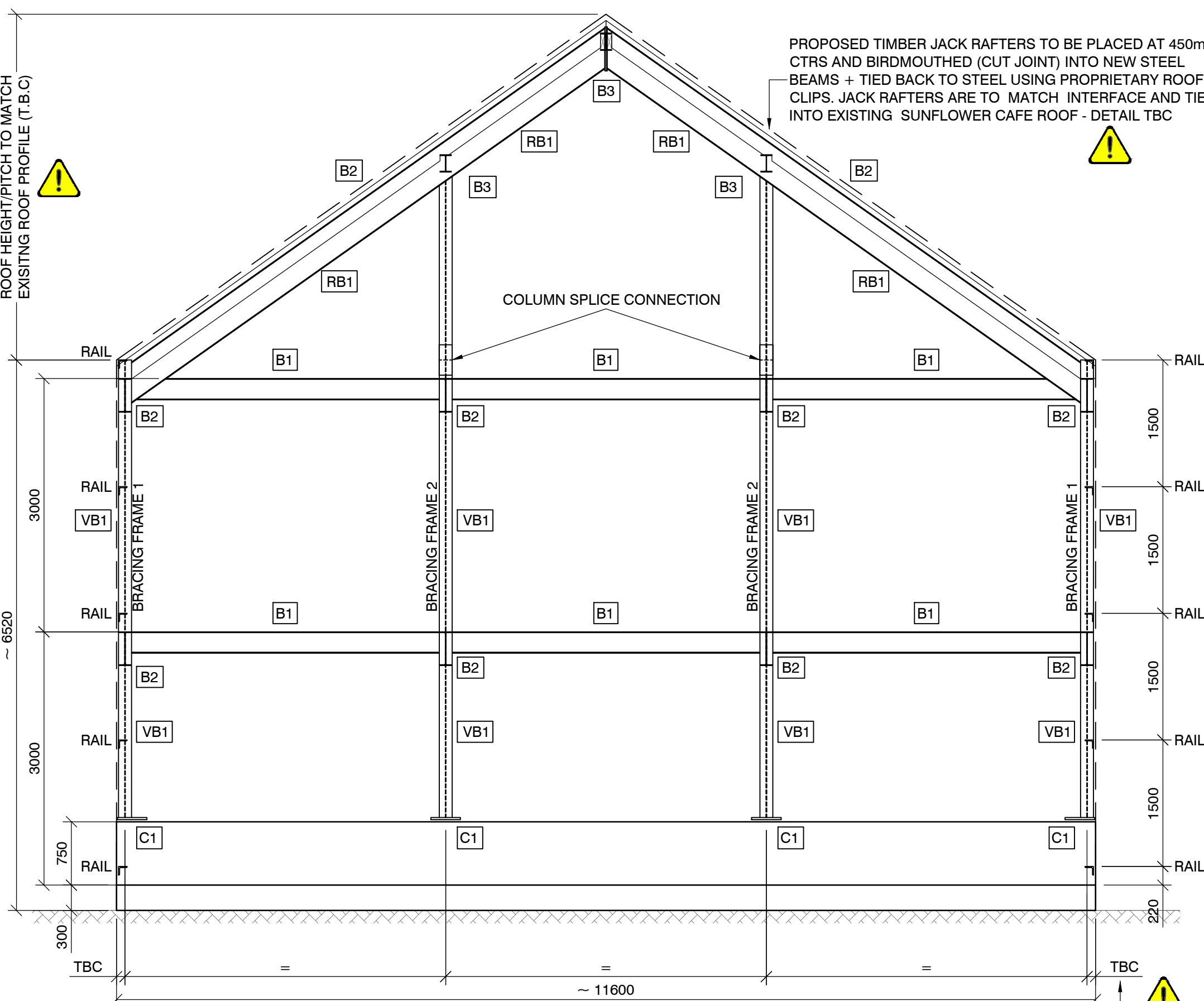
CONNECTION FORCES (ULS)

V_z = MAJOR SHEAR (+ve = Down)
H_x/H_y = HORIZONTAL SHEAR (H_x AND H_y DO NOT ACT COINCIDENTALLY)
M_y = MAJOR MOMENT (+ve = SAGGING)
N = AXIAL FORCE (+ve = COMPRESSION; -ve = TENSION)

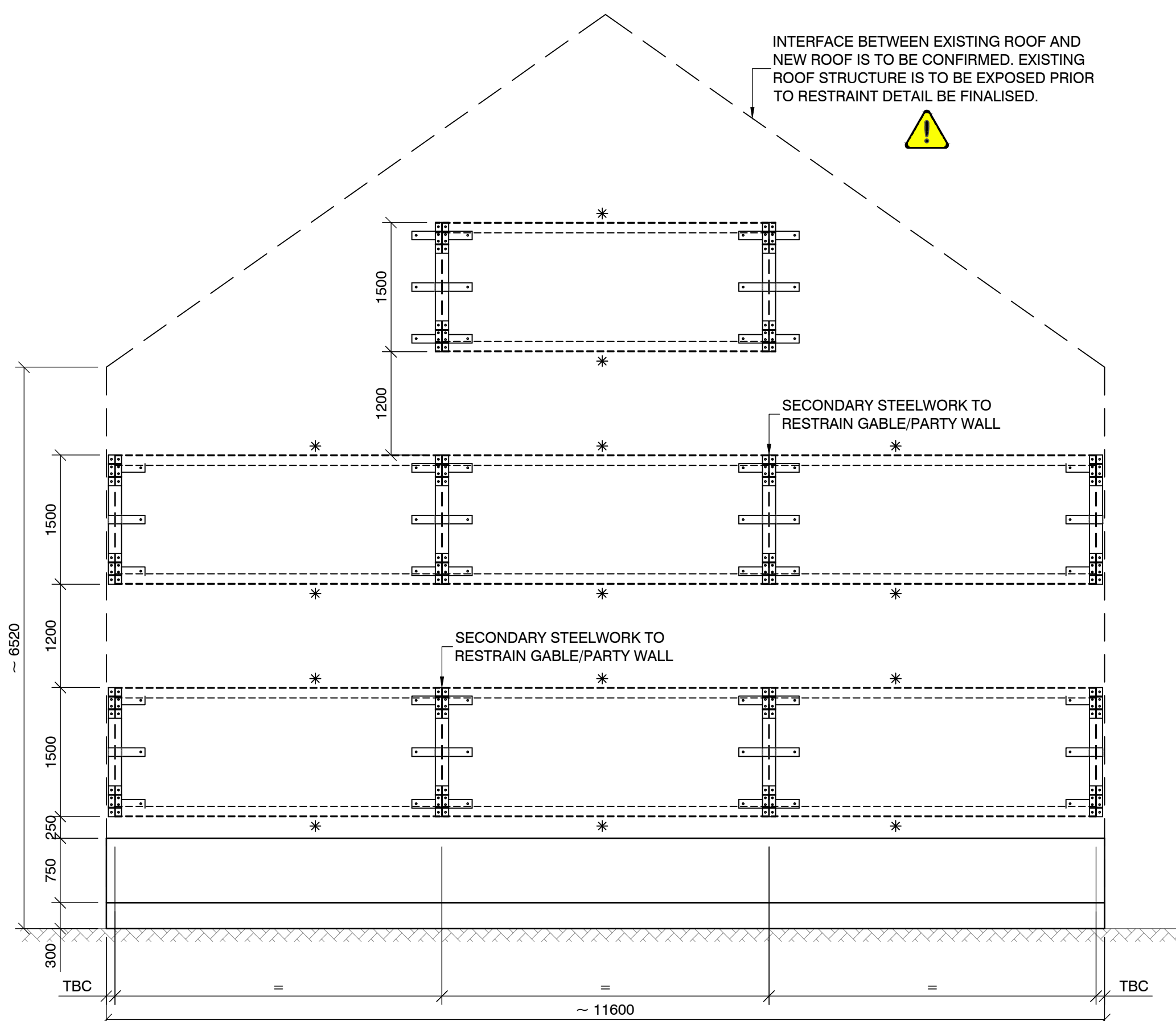
REFERENCE	STEEL MEMBER	V _z (kN)	H _x /H _y (kN)	M _y (kNm)	N (kN)	N (kN)
					Compression	Tension
C1 (BASE PLATE)	152x152x30 UC	-	+/-50	+/-10	+180	+150
C2 (BASE PLATE)	150x75x18 PFC	-	+/-10	-	-	-
B1	25x145x31 UB	+/-25	-	-	+75	+75
B2 (FLOOR)	40x8140x38 UB	+/-25	-	+/-10	+75	+75
B2 (ROOF)	40x8140x38 UB	+/-25	-	+/-15	+25	+25
B3	20x153x25 UB	+/-25	-	-	+75	+75
B4	150x75x18 PFC	+/-25	-	-	+50	+50
VB1/VB2	100x10 PLATS	-	-	-	+75	+75
RB1/RB2	114.3x5.0 CHS	-	-	-	+75	+75
TYP. COLUMN SPLICE	152x152x30 UC	-	+/-15	+/-10	+180	+150



STEEL FRAME - VIEW A-A
SCALE 1:50



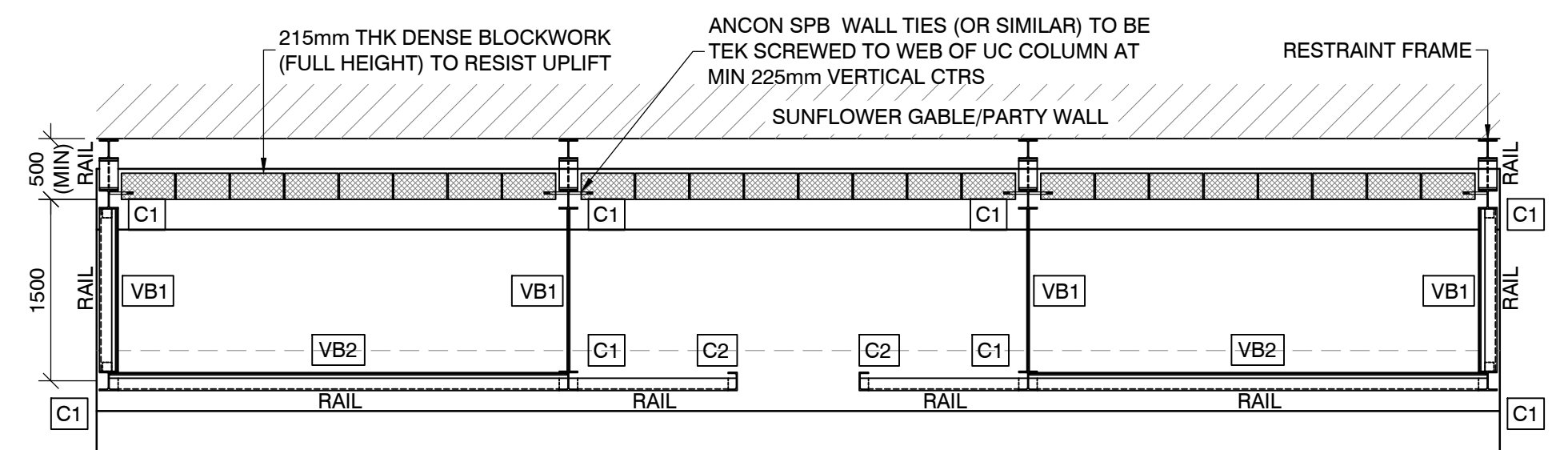
STEEL FRAME - VIEW B-B
SCALE 1:50



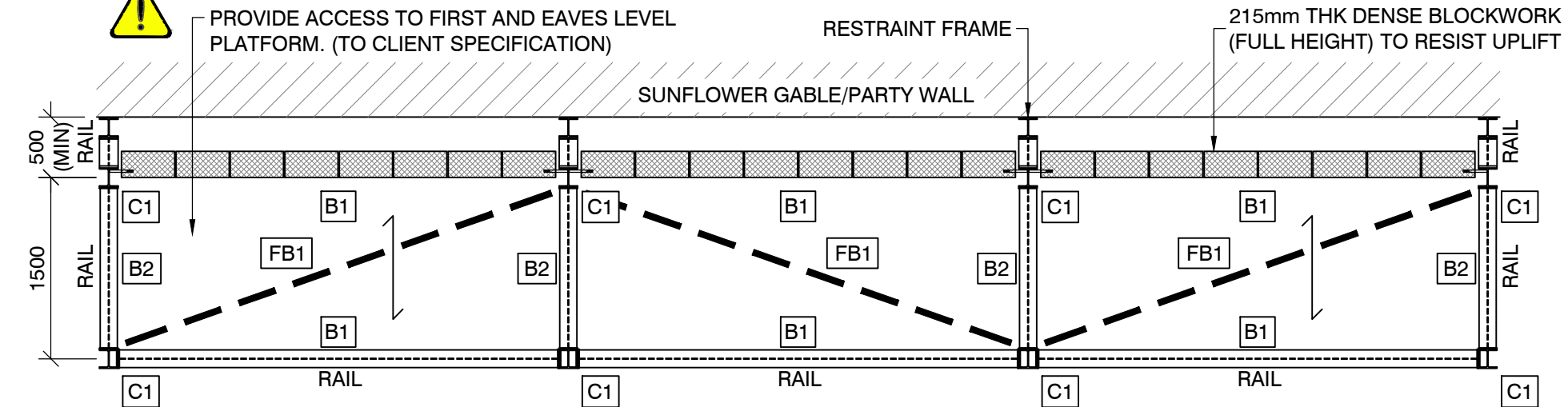
STEEL RESTRAINT FRAME - VIEW C-C
SCALE 1:50

- GENERAL NOTES
- ALL DIMENSIONS TO BE SITE MEASURED BY CONTRACTOR AND PROFILE OF FRAME IS TO MATCH EXISTING BUILDING GABLE END. SITE DIMENSIONS AND ROOF PITCH TO BE DETERMINED PRIOR TO FABRICATION AND REPORTED BACK TO THE STRUCTURAL ENGINEER FOR REVIEW.
 - FOLLOWING STABILISATION OF GABLE WALL A 300mm WIDE STRIP OF GROUND TO BE EXPOSED TO CONFIRM UNDERLYING GROUND CONDITIONS AND VALIDATE PRESENCE OF POTENTIAL SUB WALL BASEMENT. ASSESSMENT TO BE COMPLETED BY STRUCTURAL ENGINEER AND IS CARRIED OUT BY THE CONTRACTOR PRIOR TO FABRICATION OF ANY STEELWORK AND ISSUE OF CONSTRUCTION DRAWINGS.

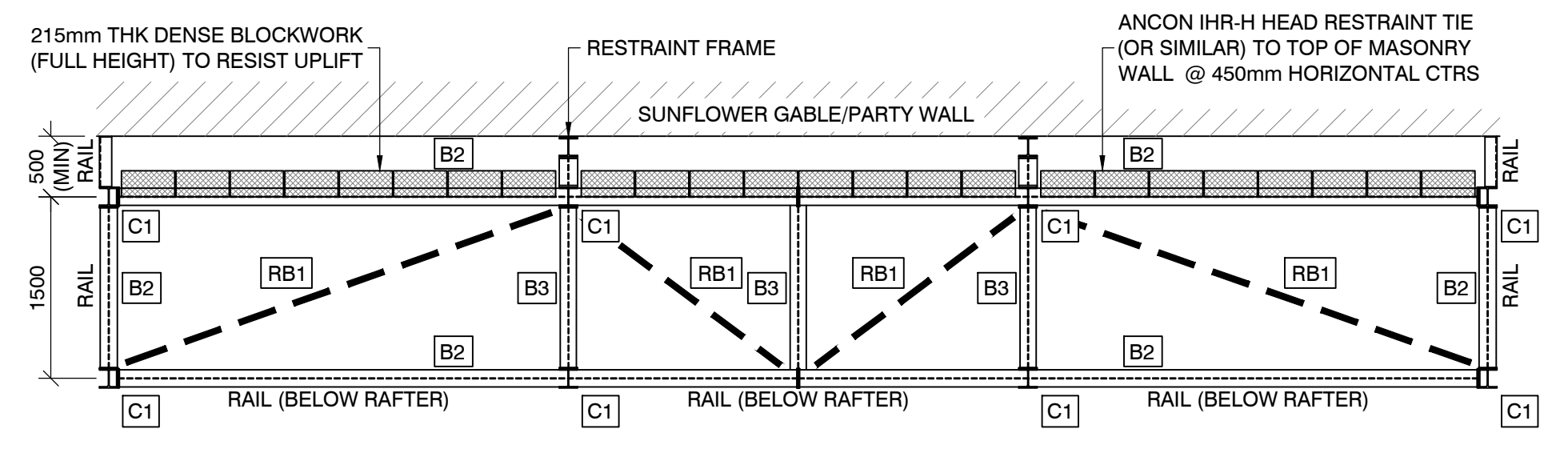
REF	STEEL MEMBER	REMARKS
C1	152x152x30 UC	COLUMN (Gr. S355)
C2	150x75x18 PFC	DOOR POST (Gr. S355)
B1	25x145x31 UB	BEAM (Gr. S355)
B2	40x8140x38 UB	BEAM + RAFTER (Gr. S355)
B3	20x153x25 UB	BEAM (Gr. S355)
B4	150x75x18 PFC	BEAM (Gr. S355)
VB1	100x10 PLATS	CROSS FLAT BRACING (Gr. S275)
VB2	100x10 PLATS	CROSS FLAT BRACING (Gr. S275)
RB1	114.3x5.0 CHS	ROOF BRACING (COLD FORMED - Gr. S355)
RB2	114.3x5.0 CHS	ROOF BRACING (COLD FORMED - Gr. S355)
RAIL	100x100x12 RSA	CLADDING RAILS (Gr. S355)
		NOTE: RAILS TO BE PLACED BETWEEN COLUMNS AND FLUSH WITH EXTERNAL FACE OF COLUMN
	120x120x8 RSA	MAY BE REQUIRED TO ALLOW FURTHER RESIN ANCHORS



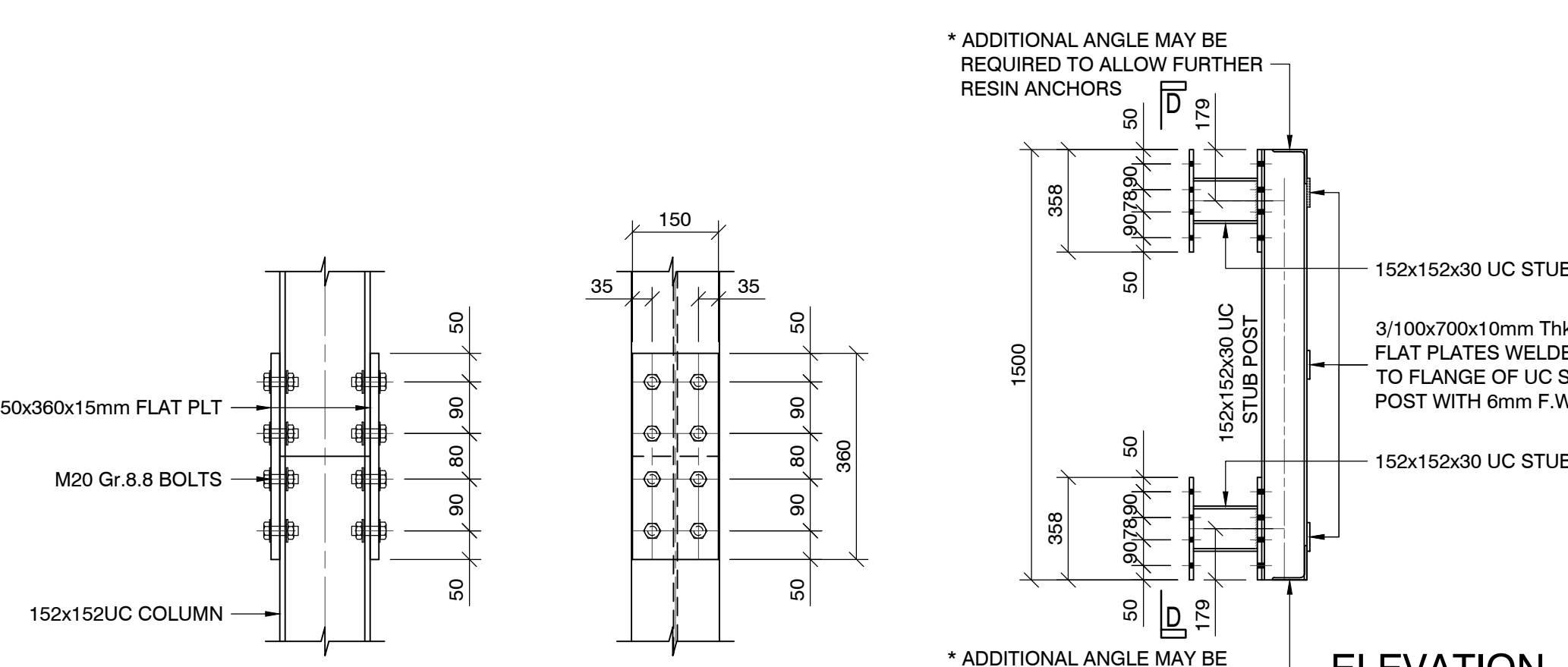
PLAN AT GROUND LVL
SCALE 1:50



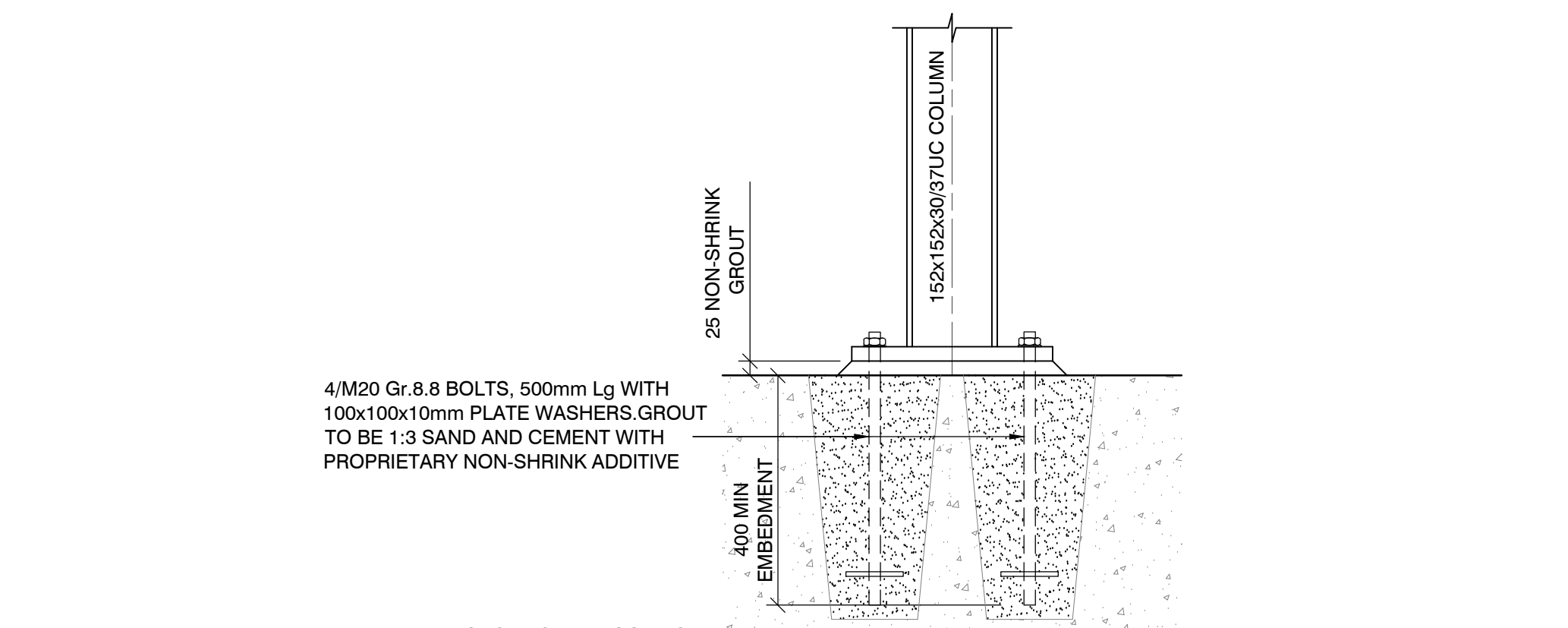
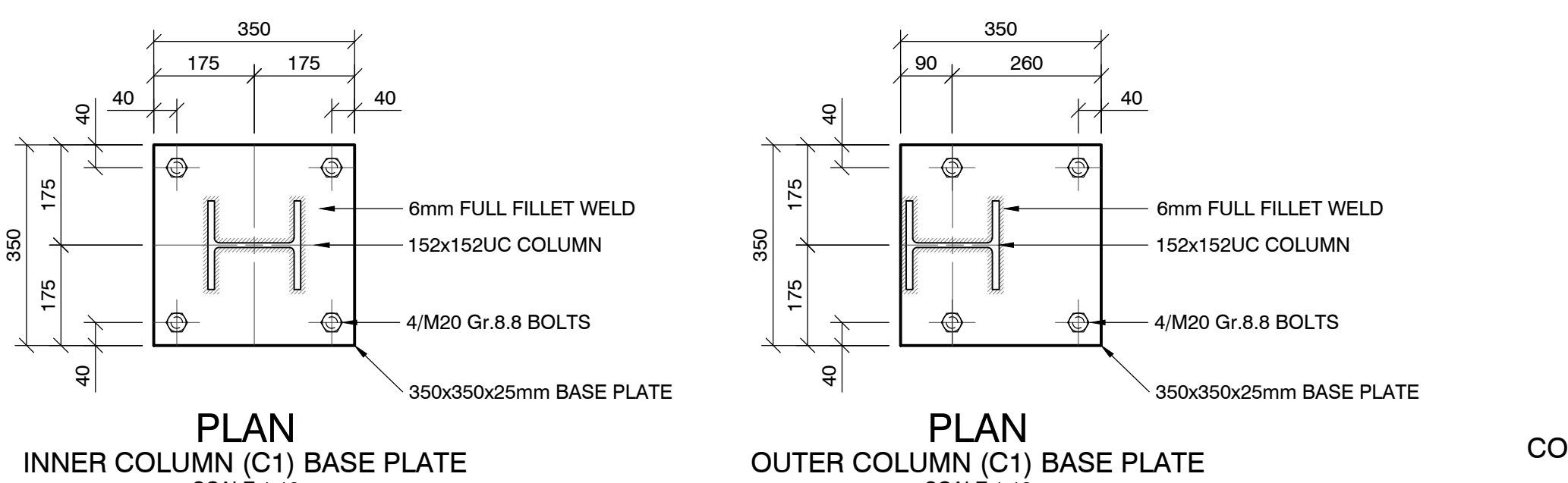
PLAN AT FLOOR LVL
(FLOOR PLAN IS REPLICATED AT EAVES LEVEL)
SCALE 1:50



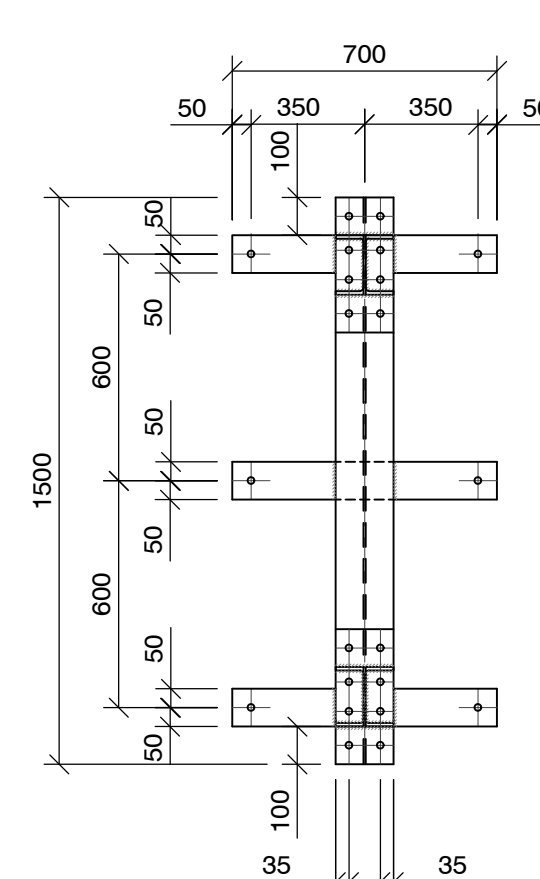
ROOF PLAN
SCALE 1:50



TYP COLUMN SPLICE CONNECTION DETAIL
SCALE 1:10
MASONRY RESTRAINT FRAME
(10No OF)
SCALE 1:20



TYP HOLDING DOWN BOLT DETAIL
SCALE 1:10



VIEW D-D

Rev	Date	Description	By
1	23.04.26	ISSUED FOR CONSTRUCTION	JW
2	23.04.26	CLADDING NOTE ADDED	JW

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Consulting Civil & Structural Engineers
Office in Cardiff, Gloucester and Cross Hands

Client: PRICHARD HOLDINGS

Project: SUNFLOWER CAFE

Title: STEEL BRACING FRAME
STEELWORK ELEVATIONS
GA'S AND DETAILS

Drawing No: 26053S-001-B