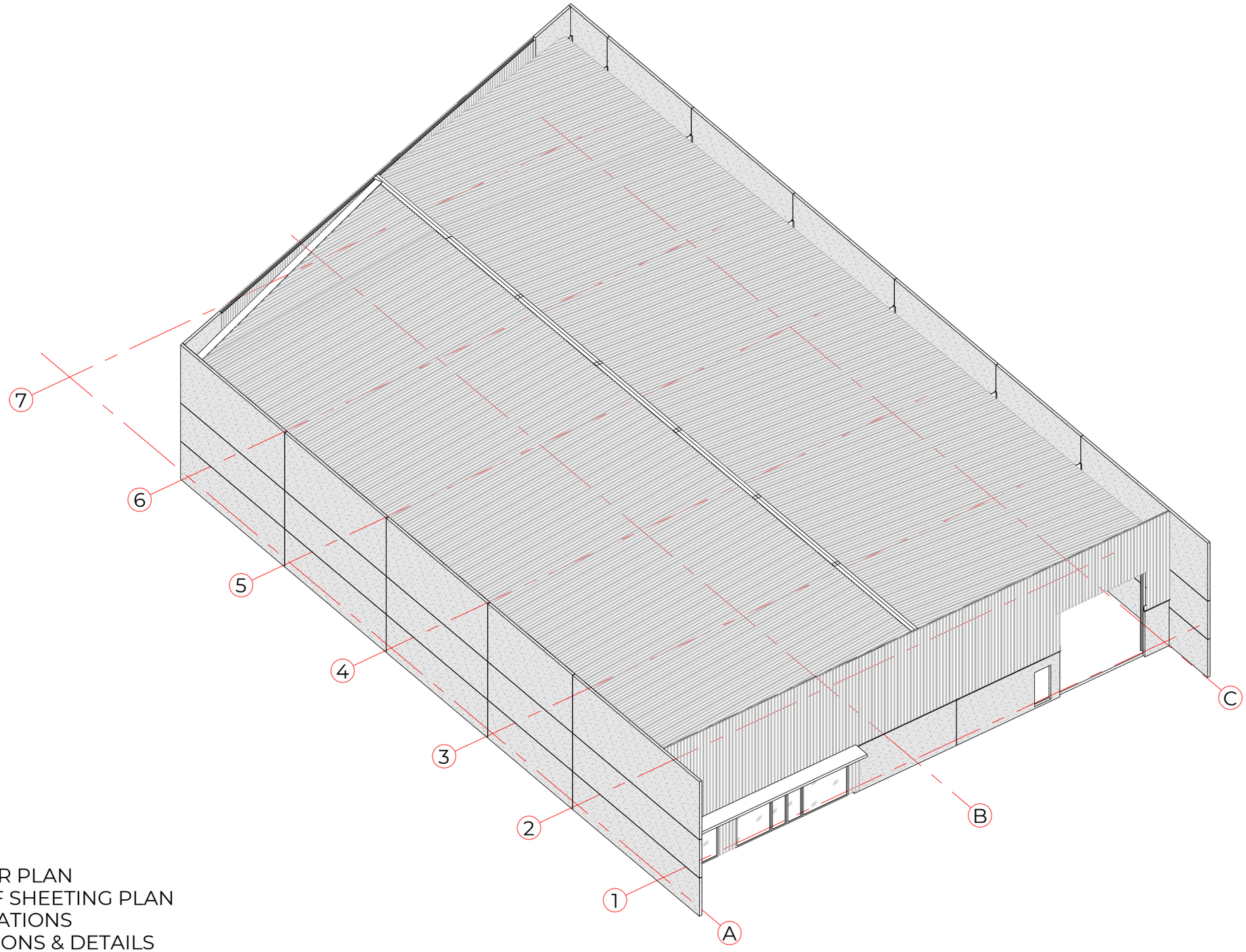
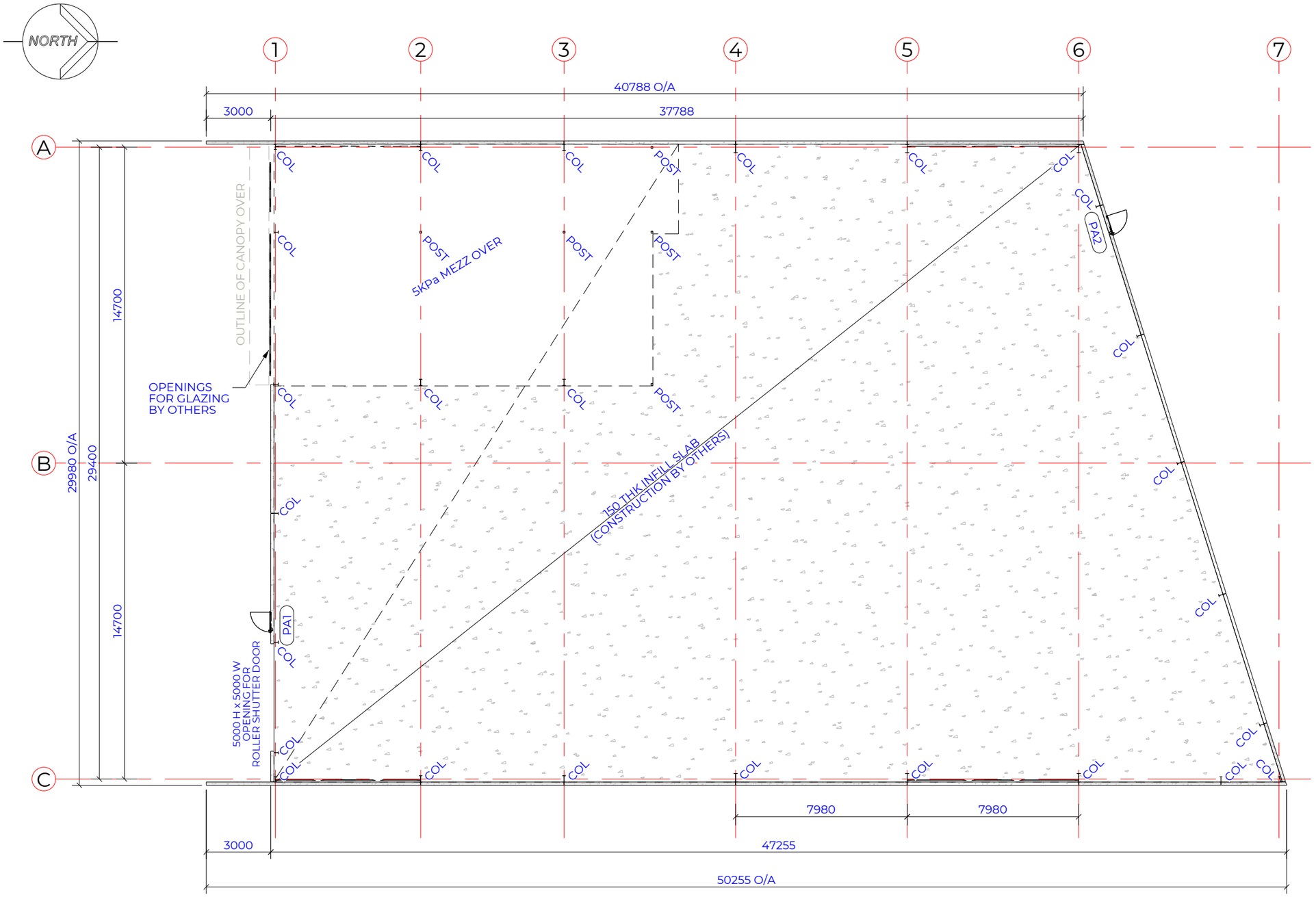
PROPOSED WAREHOUSE 12
FOR GLENN BRAGANZA
28 PLATINUM COURT THURGOONA, NSW 2640



JOB: 21065

A1.01 - FLOOR PLAN
A1.02 - ROOF SHEETING PLAN
A2.01 - ELEVATIONS
A3.01 - SECTIONS & DETAILS

Central Industrial



DOOR SCHEDULE			
ITEM	SIZE	QTY	COMMENTS
PA1	920 w x 2040 h	1	920x2040 HD PA DOOR CBOND (TBC) DUTY: HEAVY DUTY
PA2	920 w x 2040 h	1	920x2040 HD PA DOOR CBOND (TBC) DUTY: HEAVY DUTY

NOTE:
MEZZANINE FLOOR RATED AT 5kpa SWL (SIGNAGE BY OTHERS)
HANDRAIL AND STAIRWAY (BY OTHERS) TO MEET BCA PART D
& AS 1428.1-2009

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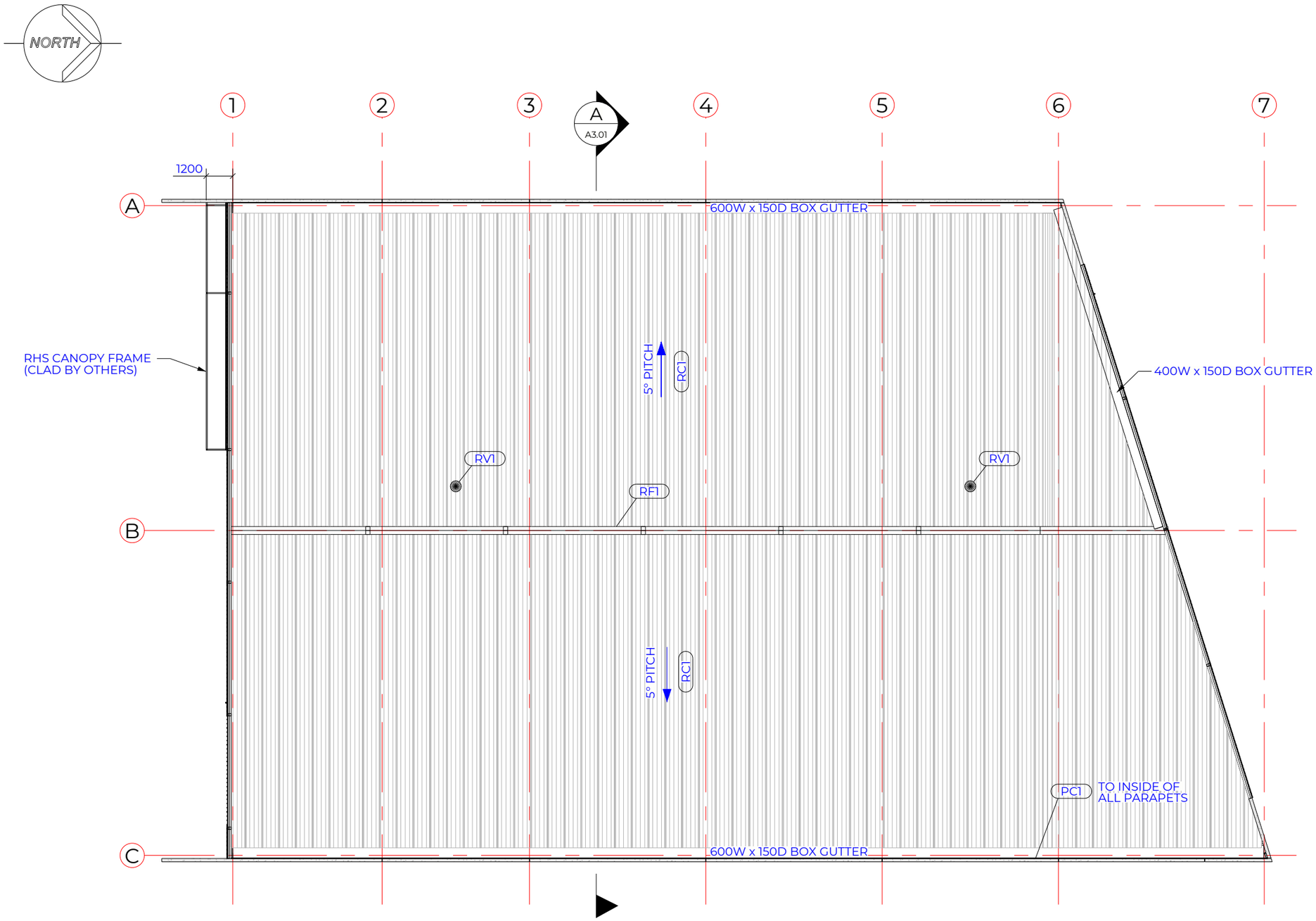
FLOOR PLAN **JOB 21065** **SHEET A1.01** **REV A**

THESE DRAWINGS ARE TO SHOW THE DESIGN INTENT OF THE BUILD. FOR ALL STRUCTURAL ELEMENTS REFER TO THE ENGINEERING DRAWINGS SUPPLIED BY CSB

REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:200 **PAGE** 2 OF 5

Central Steel build



SOLAR NOTE:
ALLOWANCE MADE FOR 15kg PER SQM

NOTE:
55mm BLANKET & SAFETY MESH
INCLUDED IN MAIN ROOF ONLY

CLADDING SCHEDULE			
ITEM	NAME	PROFILE	FINISH
RF1	V-RIDGE		C/BOND TBC
RV1	500mm WHIRLY BIRD		C/BOND TBC
TF1	TOE FLASHING		MONUMENT
RC1	ROOF CLADDING	0.47-TCT-5RIB	C/BOND TBC
GC1	BOX GUTTER CLADDING	0.47-TCT-CORRY	ZINC
PC1	PARAPET CLADDING	0.47-TCT-CORRY	ZINC
WC1	WALL CLADDING	0.47-TCT-5RIB	MONUMENT

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ROOF SHEETING PLAN

JOB 21065 **SHEET** A1.02 **REV** A

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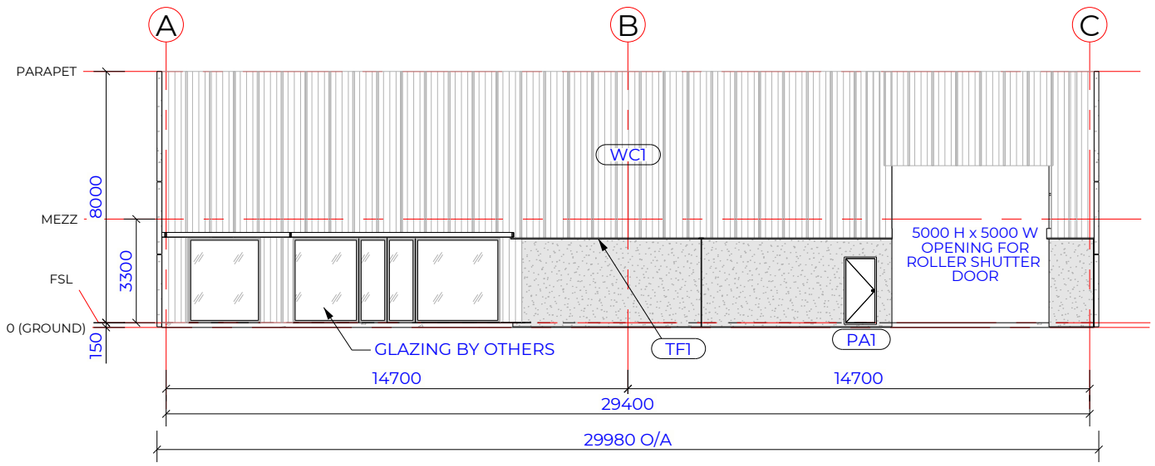
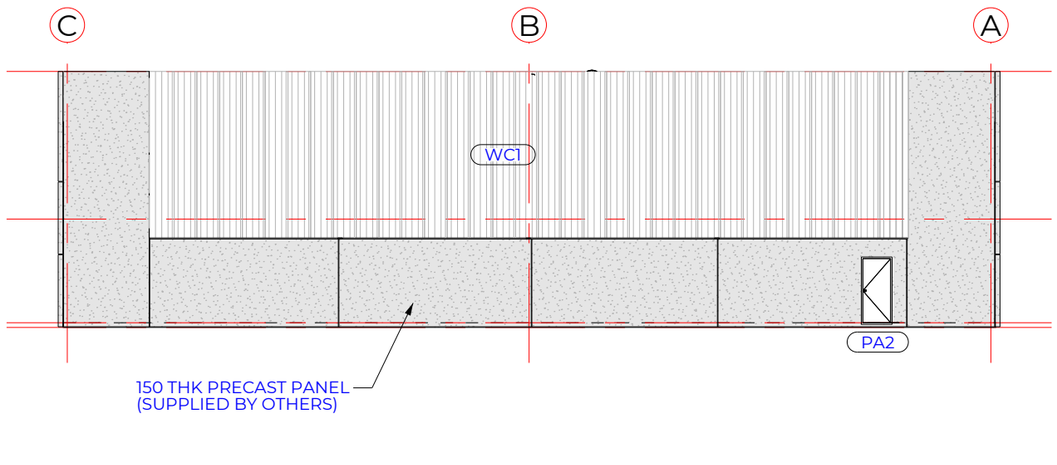
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:200 **PAGE** 3 OF 5

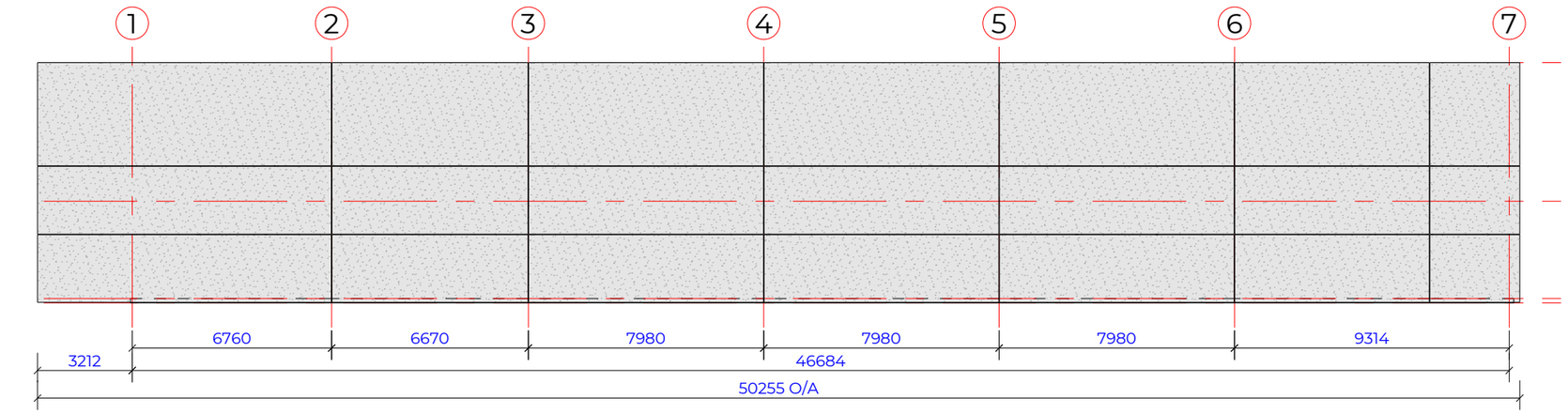
Central Steel build



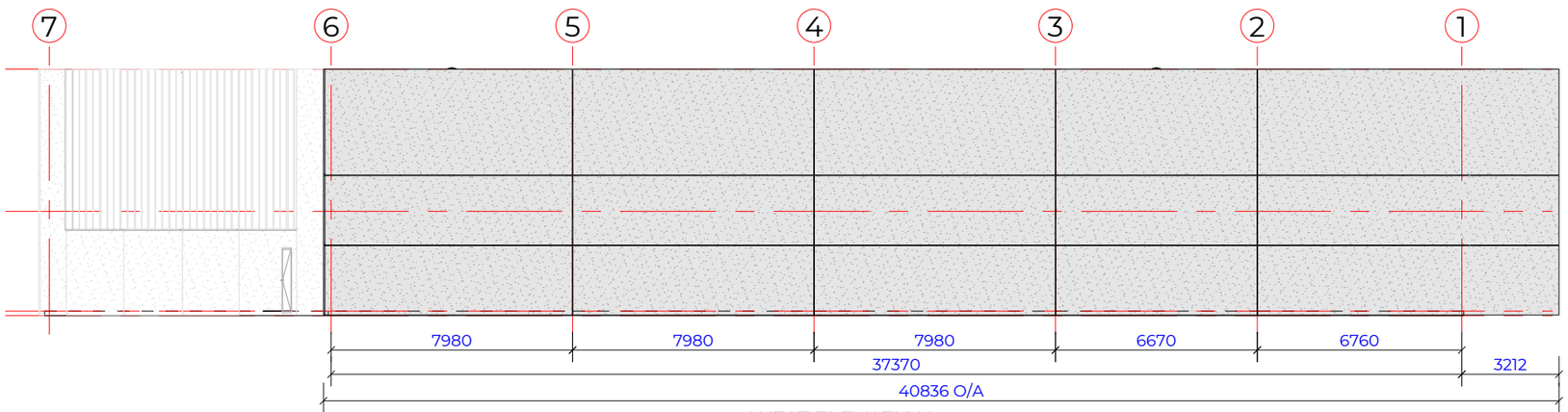
SOUTH ELEVATION



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION

NOTE:
ALL CORNER AND BARGE FLASHINGS TO BE ORDERED ON SITE

CLADDING SCHEDULE			
ITEM	NAME	PROFILE	FINISH
RF1	V-RIDGE		C/BOND TBC
RV1	500mm WHIRLY BIRD		C/BOND TBC
TF1	TOE FLASHING		MONUMENT
RC1	ROOF CLADDING	0.47-TCT-5RIB	C/BOND TBC
GC1	BOX GUTTER CLADDING	0.47-TCT-CORRY	ZINC
PC1	PARAPET CLADDING	0.47-TCT-CORRY	ZINC
WC1	WALL CLADDING	0.47-TCT-5RIB	MONUMENT

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ELEVATIONS **JOB 21065** **SHEET A2.01** **REV A**

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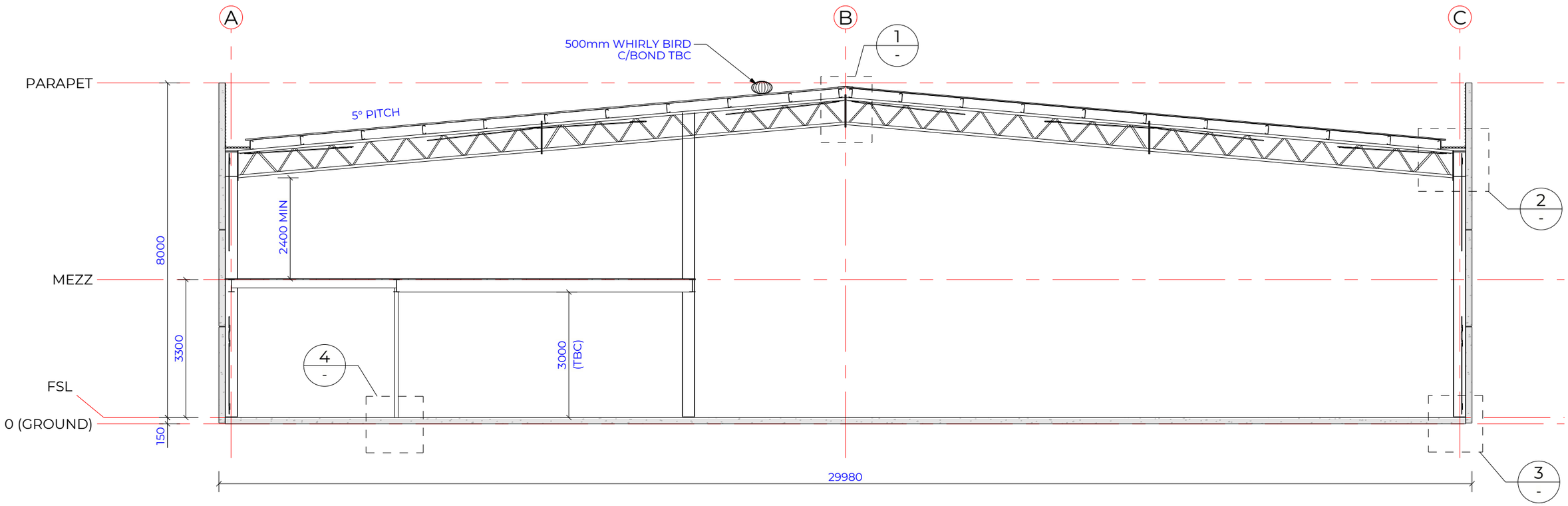
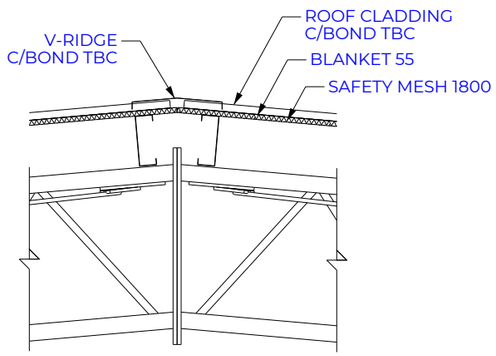
SIZE A3 **SCALE** 1:200 **PAGE** 4 OF 5

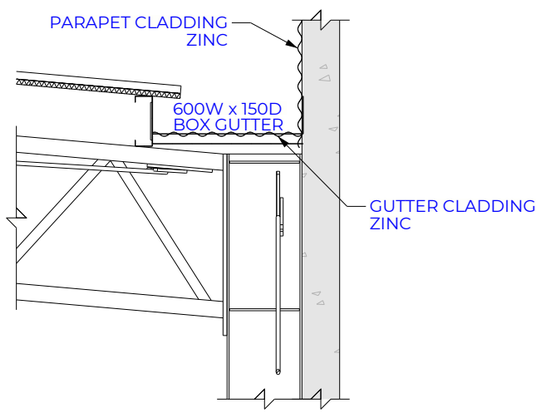
Central Steel build



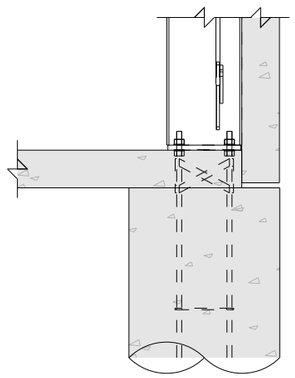
SECTION A
1:100 A1.02



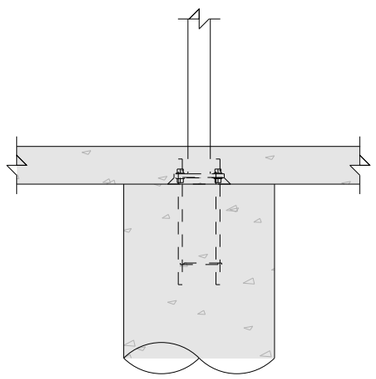
DETAIL 1
1:25 A3.01



DETAIL 2
1:25 A3.01



DETAIL 3
1:25 A3.01



DETAIL 4
1:25 A3.01

PROPOSED WAREHOUSE 12

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SECTIONS & DETAILS **JOB 21065** **SHEET A3.01** **REV A**

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SIZE A3 **SCALE** 1:100 **PAGE** 5 OF 5

Central Steel build

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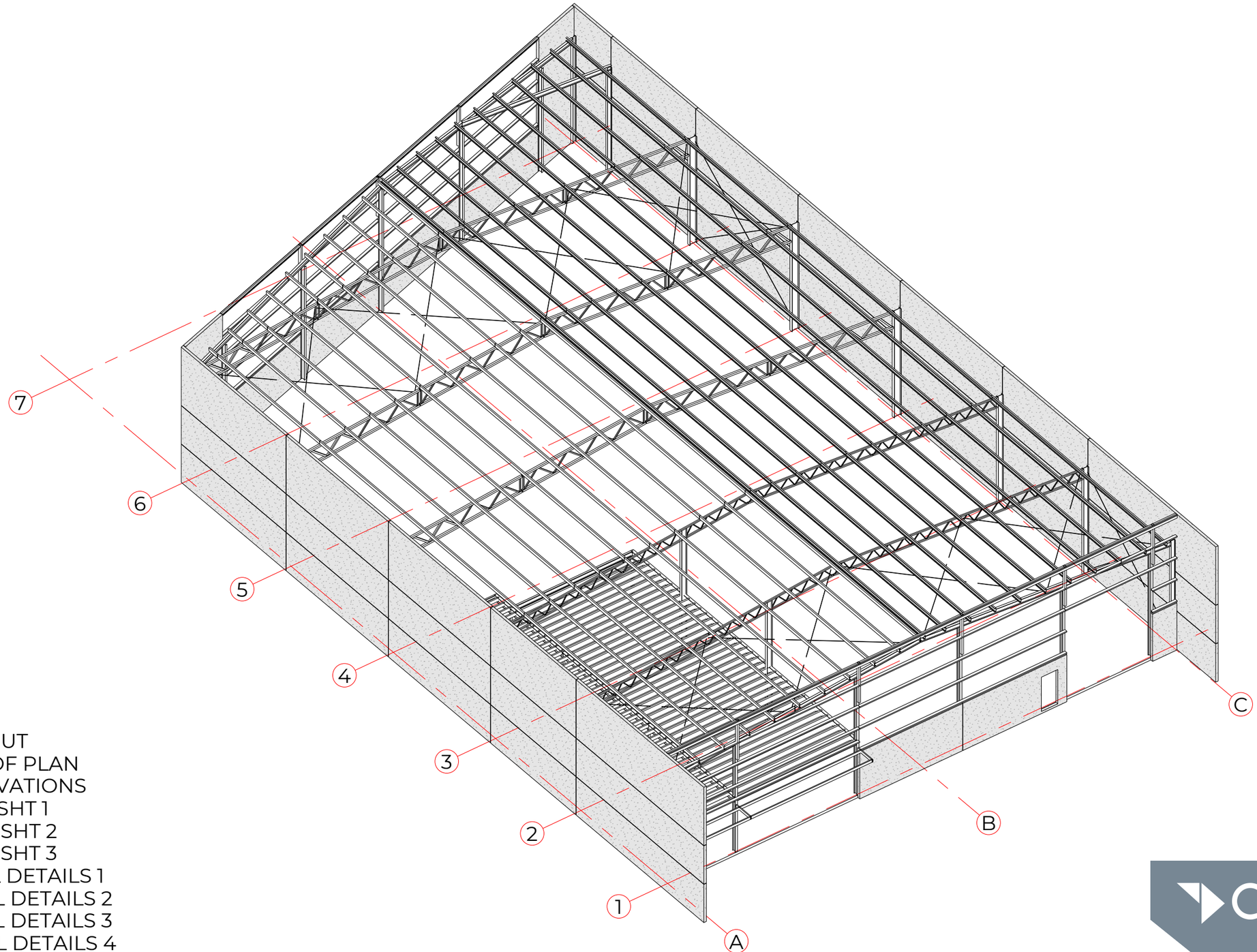


JOB: 21065

S0.01 - GENERAL NOTES
S1.01 - FOOTING PLAN
S1.02 - MEZZANINE LAYOUT
S1.03 - STRUCTURAL ROOF PLAN
S2.01 - STRUCTURAL ELEVATIONS
S3.01 - TYPICAL DETAILS SHT 1
S3.02 - TYPICAL DETAILS SHT 2
S3.03 - TYPICAL DETAILS SHT 3
S4.01 - STANDARD STEEL DETAILS 1
S4.02 - STANDARD STEEL DETAILS 2
S4.03 - STANDARD STEEL DETAILS 3
S4.04 - STANDARD STEEL DETAILS 4
S5.01 - TYPICAL PANEL DETAILS

Central Industrial

GENERAL

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS WITH SUCH OTHER WRITTEN INSTRUCTIONS OR SKETCHES AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT, ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH WORK.

G2. DIMENSIONS AND LEVELS ARE TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND ARE TO BE VERIFIED ON-SITE PRIOR TO COMMENCEMENT OF WORKS OR FABRICATION.

G3. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT AUSTRALIAN STANDARDS INCLUDING ALL AMENDMENTS CURRENT AT THE TIME OF CONTRACT AWARD, BUILDING REGULATIONS, THE NATIONAL CONSTRUCTION CODE AND ANY OTHER RELEVANT STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

G4. THESE DRAWINGS MUST NOT BE SCALED.

G5. 3D AND ISOMETRIC VIEWS IN THESE DOCUMENTS ARE INDICATIVE ONLY AND SHOULD ONLY BE USED AS A VISUAL AID TO ASSIST IN THE INTERPRETATION OF THE ORTHOGRAPHIC DRAWINGS.

G6. DO NOT COMMENCE CONSTRUCTION USING THESE DRAWINGS UNTIL IT'S "ISSUED FOR CONSTRUCTION".

G7. THE FOUNDATION MATERIAL MUST HAVE A SAFE BEARING PRESSURE OF NOT LESS THAN 150KPA, FOUNDED ON NATURAL GROUND (UNO.). ALL FOOTINGS MUST BE FOUNDED AT SPECIFIED DEPTH AND MIN. 100mm INTO NATURAL GROUND (UNO.)

G8. UNLESS NOTED OTHERWISE, ALL LEVELS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS.

G9. THE METHOD OF CONSTRUCTION AND THE MAINTENANCE OF SAFETY DURING CONSTRUCTION ARE THE RESPONSIBILITY OF THE PRINCIPAL CONTRACTOR. IF ANY STRUCTURAL ELEMENT PRESENTS DIFFICULTY IN RESPECT OF CONSTRUCTABILITY OR SAFETY, THE MATTER SHALL BE REFERRED TO THE STRUCTURAL ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

G10. DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERLOADED. THE BUILDER SHALL PROVIDE TEMPORY BRACING, SHORING AND PROPPING IN ORDER TO KEEP THE BUILDING WORKS AND EXCAVATIONS STABLE AT ALL TIMES.

G11. CENTRAL STEEL BUILD'S ENGAGEMENT IS TO PROVIDE DOCUMENTED DESIGN FOR THE PERMANENT CONDITION SUITABLE FOR THE DOCUMENTED INTENDED OCCUPANCY USE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE AND ANY ADJACENT STRUCTURES IN A SAFE AND STABLE CONDITION AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS TO DEVELOP A DETAILED SAFE WORK METHOD STATEMENT OUTLINING THE CONSTRUCTION SEQUENCE AND METHODOLOGY. THE CONTRACTOR IS TO ENGAGE A QUALIFIED AND SUITABLY EXPERIENCED ERECTION ENGINEER TO REVIEW THE CONSTRUCTION METHODOLOGY AND PROVIDE DESIGN OF TEMPORARY WORKS (SUCH AS PROPPING AND TEMPORARY BRACING) TO SUIT THE CONSTRUCTION SEQUENCE AND METHODOLOGY CHOSEN BY THE PRINCIPAL CONTRACTOR.

G12. CENTRAL STEEL BUILD HAS NOT BEEN ENGAGED TO UNDERTAKE DESIGN OF LATERAL STABILITY RESTRAINTS FOR NON-STRUCTURAL PARTS AND COMPONENTS IN ACCORDANCE WITH AS1170.4 SECTION 8 (E.G. SERVICES, PLANT & EQUIPMENT, CEILINGS, FIXED AND AND NON-FIXED NON-STRUCTURAL ELEMENTS), SUCH DESIGN SHALL BE COMPLETED BY THE INSTALLATION CONTRACTORS, WHO MUST ENGAGE A SUITABLY QUALIFIED STRUCTURAL ENGINEER TO PROVIDE ALL RELEVANT CALCULATIONS, CERTIFICATION DOCUMENTATION AND AS-CONSTRUCTED DRAWINGS DEMONSTRATING COMPLIANCE TO AS1170.4 SECTION 8 TO THE SATISFACTION OF THE BUILDING CERTIFIER

G13. IMPORTED/LOCAL FILL SHOULD BE PLACED ONTO A COMPETENT BASE IN MAXIMUM 200mm LIFTS WITH EACH LIFT BEING COMPACTED TO 98% STANDARD COMPACTION DENSITY.

G14. CLADDING WEIGHT AND PROFILE AS SPECIFIED ON ARCHITECTURAL DRAWINGS. CLADDING IS TO BE INSTALLED TO AS1562(2018).

G15. PLASTERBOARD LINING - ARTICULATION JOINTS ARE TO BE PLACED IN PLASTERBOARD AT ROOF BEAM LOCATIONS FOR CEILINGS AND AT MAIN COLUMN LOCATIONS FOR WALLS, AT MAX 3000mm CENTRES. ADEQUATE APPROVED INSULATION PRODUCT AND EXPANSION/CONTRACTION ROOF/WALL SHEETING SCREWS TO BE ADOPTED BETWEEN ANY METAL ROOF/WALL SHEETING AND SUPPORTING PURLINS/GIRTS.

G16. WIRE ROPE BRACING TO BE IN ACCORDANCE WITH AS2759(2004). 3 GRIPS PER END. WIRE ROPE TO BE RE-TENSIONED AT COMPLETION OF CONSTRUCTION.

G17. ROOF PLUMBER TO ENSURE BOX GUTTERS ARE IN COMPLIANCE WITH AS3500.3(2021) AND TO DESIGN TO SUIT ON SITE DETERMINED DRAINAGE LOCATIONS.
THE FOLLOWING DESIGN AND INSTALLATION PARAMETERS MUST BE ACHIEVED TO SATISFY THE REQUIREMENTS OF AS3500.3(2021).
A BOX GUTTER MUST HAVE:
- A MINIMUM SOLE WIDTH OF 200mm FOR DOMESTIC CLASS 1 BUILDINGS AND 300mm FOR OTHER BUILDING CLASSES.
- A MINIMUM DEPTH OF 75mm AT THE HIGH END.
- THE SOLE MUST BE SMOOTH TO PREVENT PERMANENT PONDING WITH THE GRADIENT BETWEEN THE RANGE OF 1:40 TO 1:200.
- DISCHARGE AT THE DOWNSTREAM END WITHOUT CHANGE IN DIRECTION (IE. NOT TO THE SIDE).
- BE STRAIGHT (WITHOUT CHANGE OF DIRECTION).
- THE BOX GUTTER MUST BE SEALED TO THE RAINHEAD OR SUMP.
- THE SOLE WIDTH MUST NOT BE REDUCED TOWARDS THE OUTLET WITHOUT A PROPORTIONAL INCREASE IN DEPTH.
- WHERE SARKING IS INSTALLED, IT MUST BE A MIN. 25mm INTO THE BOX GUTTER.
- NO PART OF THE OUTLET IS ABOVE THE SOLE OF THE SUMP OR RAINHEAD
- LAP JOINTS TO HAVE 25mm LAPS, SEALED AND FASTENED IN THE DIRECTION OF FALL.

CONCRETE

C1. CONCRETE SIZES DO NOT INCLUDE FINISHES.

C2. NO HOLES, CHASES OR EMBEDMENTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT ENGINEER'S APPROVAL

C3. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS, SLAB AND C3 BEAMS SHALL BE CAST TOGETHER UNLESS OTHERWISE NOTED.

C4. CONCRETE SHALL BE KEPTS FREE OF SUPPORTING MASONRY WITH TWO LAYERS OF SUITABLE MEMBRANE (MALTHOID OR EQUIV). VERTICAL FACES SHALL BE SEPARATED BY 12mm BITUMINOUS CANITE.

C5. CONSTRUCTION JOINTS SHALL BE LOCATED TO THE SATISFACTION OF THE ENGINEER. BUILDER SHALL ALLOW FOR ALL NECESSARY CONSTRUCTION JOINTS.

C6. CAMBER TO SUSPENDED SLAB AND BEAMS SHALL BE 5 FOR EVERY 2500 OF SPAN UNLESS OTHERWISE NOTED.

C7. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND IS NOT NECESSARILY IN TRUE PROJECTION. SPLICES TO REINFORCEMENT SHALL BE MADE ONLY AT THE LOCATION SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER.

C8. THIS TABLE IS TO ONLY BE USED WHERE CONCRETE STRENGTHS AND COVERS ARE NOT NOTED ON STRUCTURAL DRAWINGS.

ELEMENT		COVER mm SURFACES CAST AGAINST GROUND	FORMED or FINISHED	MINIMUM GRADE U.N.O.	EXPOSURE CLASSIFICATION U.N.O.
FOOTINGS		75	50	N32	A2
BLINDING		-	-	N15	A2
COLUMNS	INTERNAL	50	40	N32	A1
	EXTERNAL	50	40	S32	A2
WALLS	INTERNAL	50	30	N32	A1
	EXTERNAL	50	40	S32	A2
BEAMS	INTERNAL	50	30	N32	A1
	EXTERNAL	50	40	S32	A1
SLAB/BAND BEAMS	INTERNAL	50	20	N32	A1
	EXTERNAL	50	40	S32	A1

NOTES

i. COVER IS THE CLEAR DISTANCE BETWEEN ANY REINFORCING (INCLUDING FITMENTS) AND THE FACE OF THE STUCTURAL ELEMENT.
ii. FOR ALL EXTERNAL SURFACES, PROVIDE FULLY PLASTIC BAR CHAIRS. TIE WIRE SHALL NOT BE NAILED TO THE FORMS. REINFORCING BARS SHALL NOT BE USED TO KEEP FORMS APART AND A THROUGH TIE SYSTEM SHALL BE USED TO TIE FORMS.
iii. PROVIDE AN APPROVED VAPOUR BARRIER FOR SLABS, BEAMS AND THICKENING CAST AGAINST THE GROUND.
iv. THE COVERS SHALL BE MAINTAINED USING APPROVED BAR CHAIRS. IN SLABS THE BAR CHAIRS SHALL BE AT 800 x 800mm MAXIMUM CENTERS. BAR CHAIRS SHALL BE PROVIDED ALONG THE EDGES OF ALL CONSTRUCTION JOINTS. STOP ENDS SHALL NOT BE USED TO MAINTAIN THE COVERS.
v. EXTERNAL ELEMENTS ARE THOSE EXPOSED TO WEATHER, RAIN AND WATER PENETRATION AND ARE CLASSIFIED B1 UNLESS NOTED OTHERWISE.

C9. CONCRETE SHALL BE HANDLED AND PLACED IN ACCORDANCE WITH SECTION 19 OF AS3600. CONCRETE SLUMP SHALL BE BETWEEN 60mm AND 80mm. PUMPED CONCRETE SLUMP MAY INCREASE TO 100mm. AGGREGATE SHALL BE DENSE AGGREGATE TO AS2758 (UNLESS OTHERWISE INDICATED) FROM AN APPROVED SOURCE. THE MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE 20mm.

C10. EXTERNAL/EXPOSED CONCRETE ELEMENTS, GRADE S32 MINIMUM, SHALL MEET THE FOLLOWING REQUIREMENTS: MINIMUM PORTLAND CEMENT CONTENT 330 kg/m³ MAXIMUM WATER/CEMENT RATIO 0.5, SHRINKAGE LIMIT 700 MICRO-STRAIN AFTER 56 DAYS, AND CHLORIDE CONTENT RESTRICTED AS PER CLAUSE 4.9 OF AS3600. NO OTHER SALT SHALL BE ADDED.

C11. CONDUITS AND PIPES WHEN CAST IN SLABS OR WALLS ARE TO BE PLACED BETWEEN THE TWO REINFORCEMENT LAYERS. WHERE THERE IS ONLY ONE LAYER OF REINFORCEMENT, PROVIDE 50mm COVER TO CONDUIT. PROVIDE MINIMUM 3 x DIAMETER CLEARANCE BETWEEN CONDUITS.

C12. WHERE DISTRIBUTION BARS TO MAIN REINFORCEMENT ARE NOT SHOWN ON DRAWINGS PROVIDE MINIMUM N16 AT 400 CENTERS, LAPPED 500mm AT SPLICES.

C13. STRIPPING AND BACKPROPPING OF SOFFITS SHALL NOT OCCUR UNTIL CONCRETE HAS REACHED 75% OF SPECIFIED STRENGTH. NO MASONRY WALLS SHALL BE BUILT ON SUSPENDED ELEMENTS UNTIL REMOVAL OF ALL FORMS AND PROPS.

C14. ALL PULL-OUT BARS SHALL BE TEMPCORE OR QUENCHED AND TEMPERED PRODUCT. ALL BENDING AND REBENDING OF REINFORCEMENT SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF AS 3600.

C15. WHERE DRILL & EPOXY GROUT IS CALLED UP ON THE DRAWINGS USE RAMSET CHEMSET REO 502 INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS OR AN APPROVED EQUIVALENT UNLESS NOTED OTHERWISE.

C16. REINFORCEMENT AND POST TENSIONING RATES NOTED IN THE DOCUMENTATION ARE AN ESTIMATE OF THE QUANTITIES REQUIRED FOR STUCTURAL ELEMENTS IN THE FINAL CASE ONLY. THE CONTRACTOR SHOULD MAKE APPROPRIATE ALLOWANCES FOR NON-STRUCTURAL ELEMENTS [e.g. TRIMMING OF SERVICES PENETRATIONS, KERBS, PLINTHS, SCREEDS ETC.] ROLLING MARGINS, WASTE AND ADDITIONAL QUANTITIES REQUIRED FOR CONSTRUCTION ACTIVITIES.

C17. REINFORCEMENT
- ALL REINFORCEMENT TO BE IN ACCORDANCE WITH AS4671.
- ALL REINFORCEMENT BARS AND MESH TO BE DEFORMED AND STRENGTH GRADE 500 (I.E. D500) UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL SHALL COMPLY TO AS4100 & AS1538

S1. THE FABRICATOR SHALL BE RESPONSIBLE FOR THE SHOP DRAWINGS WHICH SHALL COMPLY WITH THESE DRAWINGS. ANY VARIATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.

S2. WHERE CONNECTION FORCES (IN KILONEWTONS) ARE SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE PROVIDED TO TRANSMIT THESE FORCES. CONNECTIONS SHALL PROVIDE FOR A MINIMUM FORCE OF 40kN.

S3. UNLESS OTHERWISE NOTED: WELDS TO BE 6mm CONTINUOUS FILLETS LAID DOWN WITH APPROVED WELDING CONSUMABLES. GUSSET PLATES TO BE 10mm THICK. BOLTS TO BE M20-8.8/S IN 22mm DIAMETER HOLES. PROVIDE A MINIMUM OF TWO BOLTS PER CONNECTION.

S4. FABRICATOR SHALL PROVIDE ALL FIXINGS FOR ARCHITECTURAL ELEMENTS ETC. WITHOUT WEAKENING STRUCTURAL MEMBERS IN ANY WAY.

S5. UNLESS OTHERWISE NOTED CAMBER SHALL BE PROVDED TO ALL ROOF BEAMS, TRUSSES, PORTALS, ETC. AT 5 PER 2000 OF SPAN. NO MEMBER SHALL BE ERECTED WITH NEGATIVE CAMBER.

S6. ALL STEELWORK BELOW GROUND SHALL BE ENCASED BY 75mm OF CONCRETE.

S7. CONCRETE ENCASED STRUCTURAL STEEL TO BE WRAPPED WITH FGW.41 PLACED 25mm CLEAR OF STEEL. PROVIDE 50mm MINIMUM ENCASING.

S8. ALL STRUCTURAL STEELWORK (UB/UC/PFC/EA/UA/SHS/RHS/CHS/PLT) SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS4680, AS1214 & AS2312. MINIMUM COATING THICKNESS OF 85 MICRONS.

S9. PURLINS TO BE GALVANISED HIGH STRENGTH STEEL STRIP COMPLYING WITH AS1397. MINIMUM STRESS YIELD OF 450MPa. ZINC COATING OF Z350 (350g/m² MINIMUM COATING MASS.) PURLINS TO COMPLY WITH AS4600(2005) AND MANUFACTURER'S INSTALLATION RECOMMENDATIONS.

S10. THE BOLTING PROCEDURE IS DESIGNATED AS FOLLOWS:
- ☐4.6/S - REFERS TO COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS1111 TIGHTENED USING A STANDARD WRENCH TO SNUG-TIGHT CONDITION.
- ☐8.8/S - REFERS TO HIGH STRENGTH BOLTS OF STRENGTH GRADE 8.8 TO AS1252 TIGHTENED USING A STANDARD WRENCH TO A SNUG-TIGHT CONDITION.
- ☐8.8/TF - REFERS TO HIGH STRENGTH BOLTS OF STRENGTH GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS1511, DESIGNED AS A FRICTION TYPE JOINT.
- ☐8.8/TB - REFERS TO HIGH STRENGTH BOLTS OF STRENGTH GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100, DESIGNED AS A BEARING TYPE JOINT.

S11. ALL BOLTS SHALL BE OF SUCH A LENGTH THAT AT LEAST ONE FULL THREAD IS EXPOSED BEYOND THE NUT AFTER THE NUT HAS BEEN TIGHTENED.

S12. ALL FOOTING BOLTS TO HAVE A MINIMUM THREAD PROTRUSION OF 3 THREADS. FOOTING BOLTS TO HAVE MINIMUM 500 EMBEDMENT ON MAIN COLUMNS, 250 EMBEDMENT ON ALL OTHER FOOTINGS.

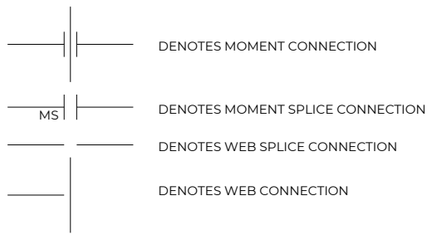
S13. MINIMUM ONE WASHER SHALL BE USED UNDER THE NUT IN ALL SITUATIONS. IF TIGHTENING IS CARRIED OUT AT THE HEAD, AN ADDITIONAL WASHER SHALL BE USED UNDER THE HEAD. FOR SLOTTED HOLES USE HARDENED WASHER UNDER THE NUT AND BOLT HEAD.

S14. UNLESS NOTED OTHERWISE, ALL MATERIAL TO BE:
- ☐GRADE 300 PLUS HOT ROLLED PLATES, FLATS, ANGLES TO AS/NZS 2679.
- ☐GRADE 300 PLUS UB, UC, PFC AND ANGLES.
- ☐GRADE 300 WB, WC.
- ☐GRADE C350L0 SHS, RHS, CHS.
- ☐GRADE 350L0 FOR ALL BENT PLATES AND MEMBERS.

S15. ALL WELDS SHALL BE STRUCTURAL PURPOSE WELDS IN ACCORDANCE WITH AS4100, AS1554.1 AND AS1554.2. SHEAR STUDS SHALL BE WELDED IN ACCORDANCE WITH AS1554.2. ALL WELDS SHALL BE GAS METAL ARC-WELDED USING B-G49 GRADE WELDING CONSUMABLES UNLESS NOTED OTHERWISE.

S16. BUILDER TO ALLOW FOR TRIMMING PURLINS TO HIPS, VALLEYS, OPENINGS, ETC. NOT SHOWN ON PLANS.

S17. CFW: DENOTES CONTINUOUS FILLET WELD.
FSBW: DENOTES FULL STRENGTH BUTT WELD.
FPBW: DENOTES FULL PENETRATION BUTT WELD.
PPBW: DENOTES PARTIAL PENETRATION BUTT WELD.
STEELWORK SYMBOLOGY:



S18. REFER TO ARCHITECTURAL SPECIFICATIONS FOR DURABILITY AND PAINT TREATMENT OF ALL EXPOSED STEELWORK.

S19. STEELWORK FIRE RATING REQUIREMENTS ARE TO MEET THOSE SPECIFIED BY THE BUILDING SURVEYOR.

S20. THE STRUCTURE HAS BEEN DESIGNED FOR THE FINAL CONDITIONS ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT DURING CONSTRUCTION THE STRUCTURE IS MAINTAINED IN A STABLE CONDITION AND NO PART OF THE STRUCTURE IS OVERSTRESSED.

S21. SAFETY MESH IS TO BE INSTALLED IN ACCORDANCE WITH AS 4389 SAFETY MESH OVER PURLINS IN ANY AREA WITH RISK OF FALLS FROM HEIGHT BEFORE ANY ROOF ACCESS BY PERSONNEL UNLESS OTHER SUITABLE MEANS OF FALL PROTECTION ARE EMPLOYED AT THE DISCRETION OF THE PRINCIPAL CONTRACTOR.

LAKER GROUP

STRUCTURAL CERTIFICATION
CHRISTOPHER AKERS
REGISTRATION NO: PE0000845

SIGNED: DATE:

STRUCTURAL DESIGN DATA

L1. CONSTRUCTION CATEGORY IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 5131. THE CONSTRUCTION CATEGORIES FOR THIS PROJECT ARE OUTLINED IN THE TABLE BELOW.

ELEMENT	ALL STRUCTURAL STEELWORK UNO	LIST OF EXCEPTIONS TO CC
IMPORTANCE LEVEL	-	
SERVICE CATEGORY	SC1	
FABRICATION CATEGORY	FC1	
CONSTRUCTION CATEGORY	CC -	

L2. THE STRUCTURAL COMPONENTS DETAILED ON THESE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT STANDARDS AUSTRALIA CODES AND THE BUILDING CODE OF AUSTRALIA FOR THE FOLLOWING LOADINGS. PLEASE REFER TO THE ARCHITECTURAL DRAWINGS PROPOSED FLOOR USAGE (IF ANY).

L3. SUPERIMPOSED LOADS

FLOOR USAGE	LIVE LOAD (kPa)	SUPERIMPOSED DEAD LOAD (kPa)
ROOF	-	-
MEZZ. FLOOR	-	-
SLAB	-	-
CRANE	-	

L4. WIND LOADS IN ACCORDANCE WITH AS1170.2

BASIC WIND SPEED (m/s)	-
REGION	-
TERRAIN CATEGORY	-
STRUCTURAL IMPORTANCE LEVEL	-

L5. SNOW LOADS IN ACCORDANCE WITH AS1170.3

SNOW REGION	-
GROUND SNOW LOAD Sg (kN/m²)	-

L6. EARTHQUAKE DESIGN PARAMETERS TO AS1170.4

STRUCTURAL IMPORTANCE LEVEL AS DEFINED IN BCA PART B1	-
PROBABILITY FACTOR kp	-
HAZARD FACTOR Z	-
SITE SUB-SOIL CLASS	-
EARTHQUAKE DESIGN CATEGORY	-

PROPOSED WAREHOUSE 12
FOR GLENN BRAGANZA
28 PLATINUM COURT THURGOONA, NSW 2640

GENERAL NOTES

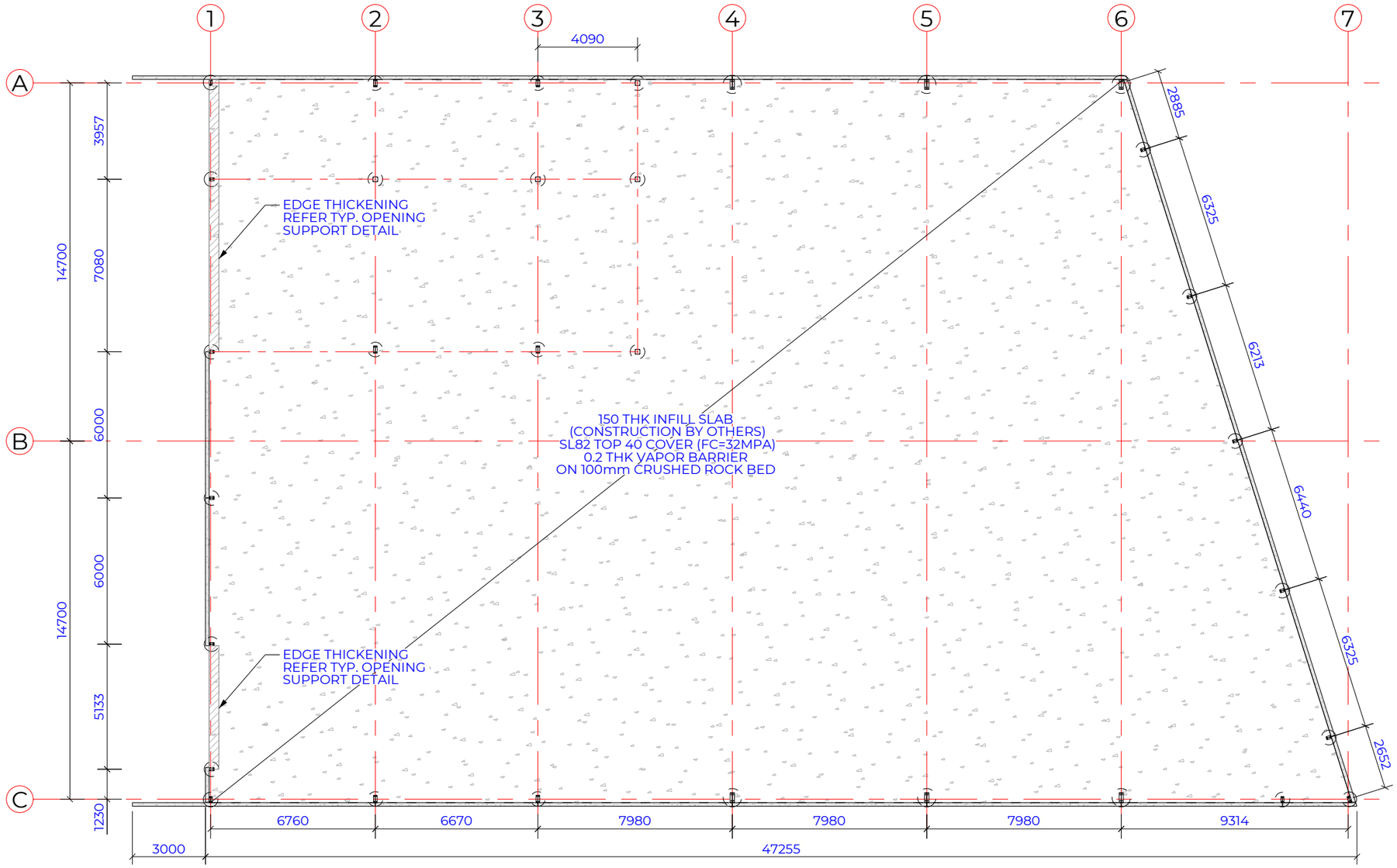
JOB 21065 **SHEET** S0.01 **REV** A

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL COMPUTATIONS SUPPLIED BY LAKER

REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** **PAGE** 2 OF 14

Central Steel build



NORTH

LAKER GROUP	STRUCTURAL CERTIFICATION
	CHRISTOPHER AKERS
	REGISTRATION NO: PE0000845
SIGNED:	DATE:

FOUNDATION NOTES:

1. FOR ALL SLAB AND FOUNDATION PREPARATION REQUIREMENTS REFER TO GEOTECHNICAL ENGINEERS REPORT REF. XXXXXXXX BY XXXXXXXXX DATED XXXXXXX.
2. ALL BORED PIERS TO BE FOUNDED MIN. DEPTH SHOWN OR XXXX INTO NATURAL XXXXX (WHICHEVER IS GREATER) WITH XXXkPa MIN ALLOWABLE BEARING CAPACITY AND XXkPA SKIN FRICTION AS PER GEOTECHNICAL ENGINEERS REPORT.
3. REFER GEOTECHNICAL REPORT FOR SLAB PREPARATION REQUIREMENTS. ANY EXISTING UNCONTROLLED FILL TO BE REMOVED AND REPLACED WITH ENGINEERED CONTROLLED FILL IN ACCORDANCE WITH AS3798-2007 AND GEOTECHNICAL ENGINEERS SPECIFICATIONS.

CONCRETE PAVEMENT / SLAB ON GROUND

THE FOLLOWING PREPARATION PROCEDURES ARE SUGGESTED FOR A SILTY CLAY SUBGRADE EXPOSED BENEATH TOPSOIL AND STRIPPING OF ANY UNSUITABLE FILL.

- STRIP TOPSOIL, COMPRESSIBLE MATERIAL AND UNCONTROLLED FILLING FROM BENEATH THE PROPOSED SLAB AREAS TO THE REQUIRED DEPTH.

- PROOF ROLL THE SUBGRADE USING A ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT EQUIVALENT TO 6 TONNES PER METRE WIDTH TO OBSERVE THE SUBGRADE DEFLECTION AND DETECT WHETHER ANY SOFT SPOTS EXIST. ANY UNSTABLE ZONES THAT DO NOT IMPROVE AFTER FURTHER COMPACTION OR TREATMENT NEED TO BE EXCAVATED AND REPLACED WITH COMPACTED SUITABLE FILL. THE EXTENT OF TREATMENT IS BEST ASSESSED AT THE TIME OF CONSTRUCTION. PROOF ROLLING SHOULD BE WITNESSED BY A DP ENGINEER AND HOLD POINT PUT ON THE PLACEMENT OF FILL UNTIL THE STRIPPED SURFACE IS APPROVED. WHERE A ROCK SUBGRADE IS EXPOSED A VISUAL ASSESSMENT OF SUBGRADE CONDITION BY A GEOTECHNICAL ENGINEER SHOULD BE SUFFICIENT IN LIEU OF A PROOF ROLL.

- ANY SELECT FILLING SHOULD COMPRISE MATERIAL OF LOW REACTIVITY SUCH AS LOW PLASTICITY CLAY, RIPPED SEDIMENTARY ROCK, SLIGHTLY CLAYEY SAND OR A PROCESSED CRUSHED ROCK WITH A SMOOTH GRADING CURVE. THE MAXIMUM PARTICLE SIZE AFTER COMPACTION SHOULD BE 40mm TO ENABLE ROUTINE COMPACTION CONTROL TESTING.

ENGINEERED FILLING SHOULD BE PLACED IN HORIZONTAL LAYERS NO GREATER THAN 200mm LOOSE THICKNESS AND UNIFORMLY COMPACTED TO THE MINIMUM DRY DENSITY RATIOS OF 98% STANDARD FOR COHESIVE SOILS AND 100% STANDARD FOR GRANULAR MATERIALS.

MATERIALS SHOULD BE COMPACTED AT A PLACEMENT MOISTURE CONTENT OF 80% TO 115% OF STANDARD OPTIMUM MOISTURE CONTENT. CARE SHOULD BE TAKEN NOT TO OVER COMPACT OR PLACE CLAYEY FILLING TOO DRY OF STANDARD OPTIMIUM TO MINIMISE THE EFFECTS OF POST CONSTRUCTION SWELLING.

TYPICAL RHS CENTRAL COLUMN ISOLATION JOINT

(RECOMENDED TO AVOID CRACKING AROUND COLUMNS) "CONNOLLY" OR SIMILAR CF JOIN SYSTEM 150mm FORMER WITH 2-R16 DOWELS 300 LONG BONDBREAKER ON ONE END, MIN 100mm CLEAR OF FLANGE, TYPICAL JOINT TO ALL COLUMNS

TYPICAL RHS PERIMETER COLUMN ISOLATION JOINT

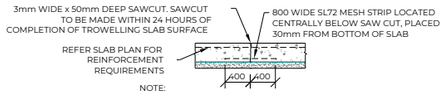
(RECOMENDED TO AVOID CRACIKING AROUND COLUMNS) "CONNOLLY" OR SIMILAR CF JOIN SYSTEM 150mm FORMER WITH 2-R16 DOWELS 300 LONG BONDBREAKER ON ONE END, MIN 100mm CLEAR OF FLANGE, TYPICAL JOINT TO ALL COLUMNS

TYPICAL UB/UC CENTRAL COLUMN ISOLATION JOINT

(RECOMENDED TO AVOID CRACKING AROUND COLUMNS) "CONNOLLY" OR SIMILAR CF JOIN SYSTEM 150mm FORMER WITH 2-R16 DOWELS 300 LONG BONDBREAKER ON ONE END, MIN 100mm CLEAR OF FLANGE, TYPICAL JOINT TO ALL COLUMNS

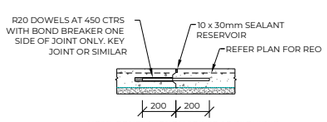
TYPICAL UB/UC PERIMETER COLUMN ISOLATION JOINT

(RECOMENDED TO AVOID CRACKING AROUND COLUMNS) "CONNOLLY" OR SIMILAR CF JOIN SYSTEM 150mm FORMER WITH 2-R16 DOWELS 300 LONG BONDBREAKER ON ONE END, MIN 100mm CLEAR OF FLANGE, TYPICAL JOINT TO ALL COLUMNS



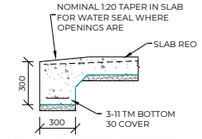
NOTE:
1. SAW CUT JOINTS AT COLUMN CTRS AND WHERE SPECIFIED
2. MARK SAWCUT ON EDGE OR ON GROUND AT EACH END OF SLAB FOR ACCURATE LOCATION OF SUBSEQUENT CUT
3. CONTINUE SAWCUTS TO ADJACENT VERTICAL SURFACES AS APPLICABLE WITH HANDSAW
4. SAW CUTS TO BE FILLED WITH SUITABLE SEALANT

TYPICAL SAW CUT JOINT (S.J.)
N.T.S



NOTE: CONSTRUCTION JOINTS AS REQUIRED

TYPICAL CONSTRUCTION JOINT (C.J.)
N.T.S



TYPICAL OPENING SUPPORT
N.T.S

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH INSTALLER DWG. D1.01 FOOTING CAGE LAYOUT
2. 0 DATUM POINT IS TAKEN FROM TOP OF FOOTING AND/OR UNDERSIDE OF SLAB UNLESS NOTED OTHERWISE
3. IN THE EVENT OF CONFLICTING SETOUT INFORMATION INSTALLER DRAWINGS ARE TO TAKE PRECEDENCE

FOOTING SCHEDULE

ITEM	SIZE	QTY	VOLUME (m3)	COMMENTS
	D600 x 900 DEEP	2	0.25 EACH	BORED PIER
F1	D600 x 1500 DEEP	10	0.42 EACH	BORED PIER
F2	D750 x 1500 DEEP	4	0.66 EACH	BORED PIER
F3	D750 x 1500 DEEP	10	0.66 EACH	BORED PIER
F4	D600 x 1200 DEEP	5	0.34 EACH	BORED PIER
	TOTAL		12.41	DESIGNED FOOTING ALLOWANCE

PROPOSED WAREHOUSE 12
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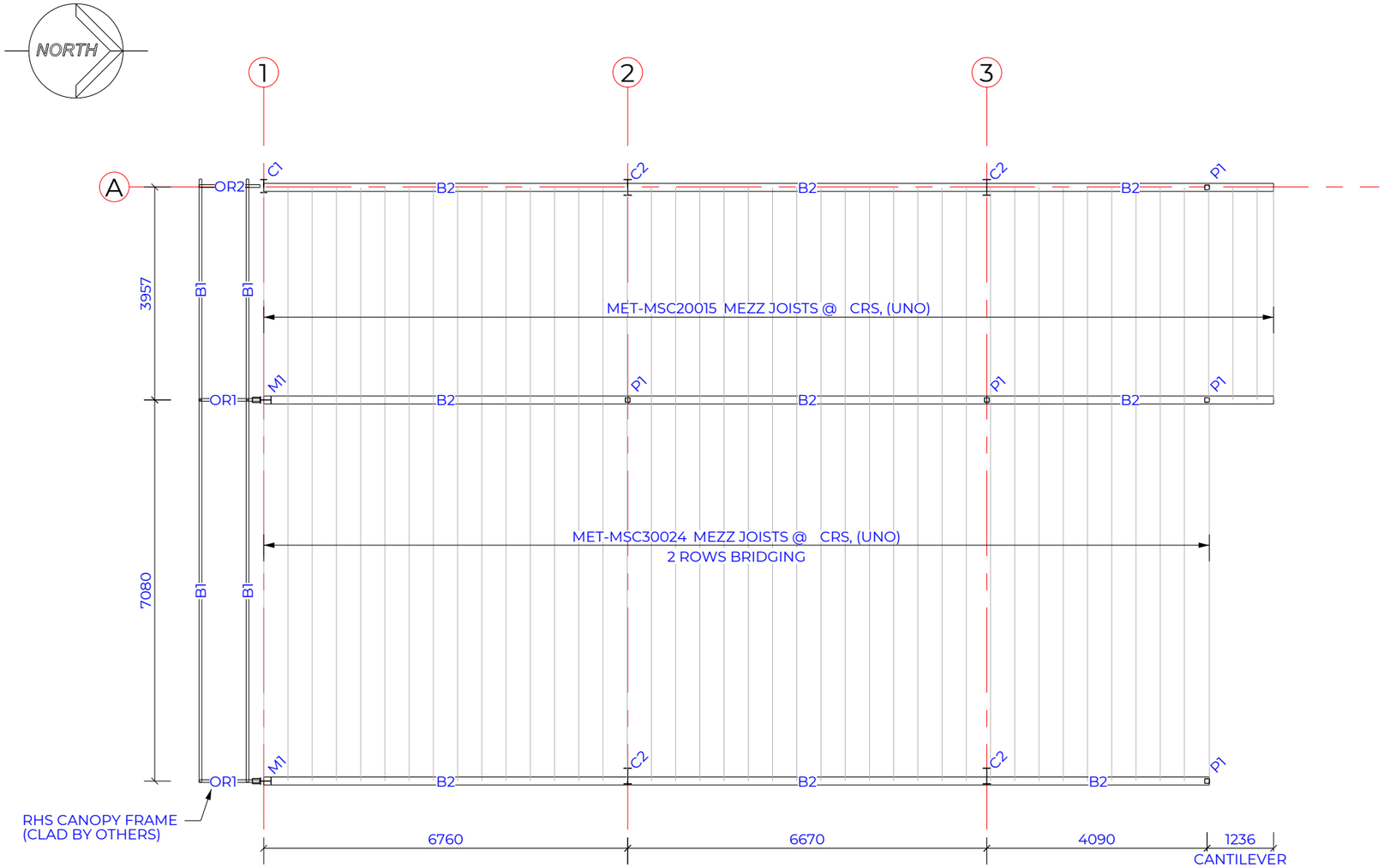
FOOTING PLAN **JOB 21065** **SHEET S1.01** **REV A**

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL COMPUTATIONS SUPPLIED BY LAKER

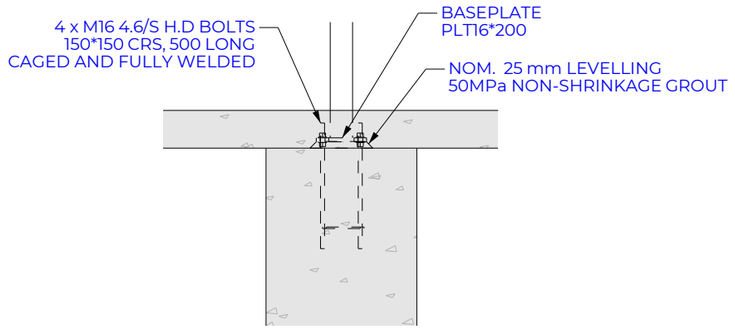
REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:200 **PAGE** 3 OF 14

Central Steel build



NOTE:
MEZZANINE FLOOR RATED AT 5kpa SWL (SIGNAGE BY OTHERS)
HANDRAIL AND STAIRWAY (BY OTHERS) TO MEET BCA PART D & AS 1428.1-2009



MEZZ POST BASE PL DETAIL

MEMBER SCHEDULE		
ITEM	**SIZE**	**COMMENTS**
B1	RHS150*50*2.0	CANOPY BEAM S3.01
B2	UB310*32	BEARER
C1	UB250*26	COLUMN
C2	UB310*32	COLUMN
M1	UB200*22	MULLION
OR1	RHS150*100*4.0	OUTRIGGER
OR2	RHS150*50*2.0	OUTRIGGER S3.01
P1	SHS89*89*3.5	MEZZ POST
T1	WEB TRUSS	FOR DETAILS, REFER TO PAGE S3.01

LAKER GROUP

STRUCTURAL CERTIFICATION
CHRISTOPHER AKERS
REGISTRATION NO: PE0000845
SIGNED: DATE:

PROPOSED WAREHOUSE 12
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MEZZANINE LAYOUT **JOB 21065** **SHEET S1.02** **REV A**

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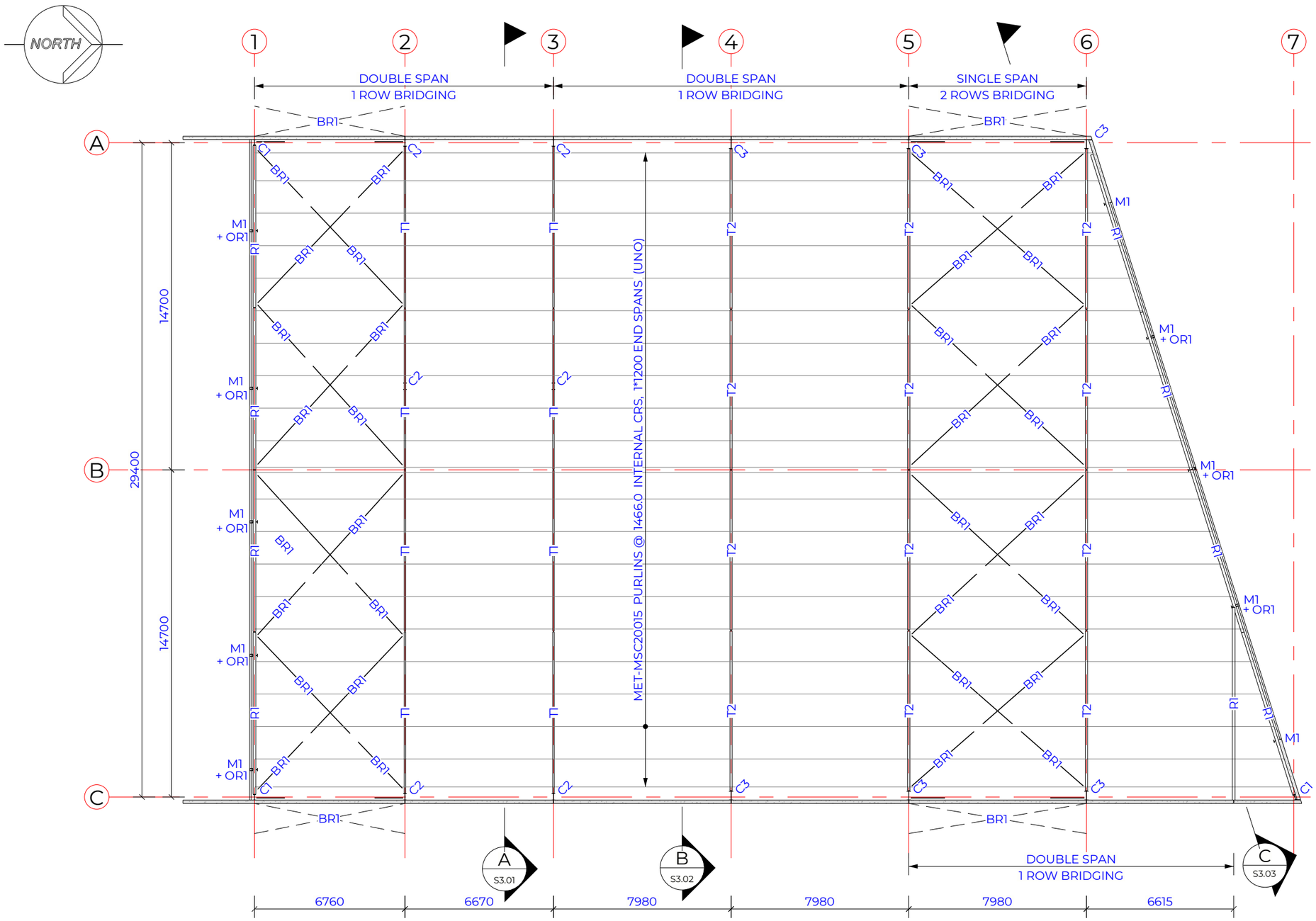
SIZE A3 **SCALE** 1:200 **PAGE** 4 OF 14

Central Steel build



SOLAR NOTE:
ALLOWANCE MADE FOR 15kg PER SQM

MEMBER SCHEDULE

ITEM	SIZE	COMMENTS
BR1	D16	D16 ROD
C1	UB250*26	COLUMN
C2	UB310*32	COLUMN
C3	UB410*54	COLUMN
M1	UB200*22	MULLION
OR1	RHS150*100*4.0	OUTRIGGER
R1	UB250*26	RAFTER S3.01
T1	WEB TRUSS	FOR DETAILS, REFER TO PAGE S3.01
T2	WEB TRUSS	FOR DETAILS, REFER TO PAGE S3.02

LAKER GROUP

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PROPOSED WAREHOUSE 12
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28 PLATINUM COURT THURGOONA, NSW 2640

STRUCTURAL ROOF PLAN **JOB 21065** **SHEET S1.03** **REV A**

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REV	DESCRIPTION	DATE	DRAWN
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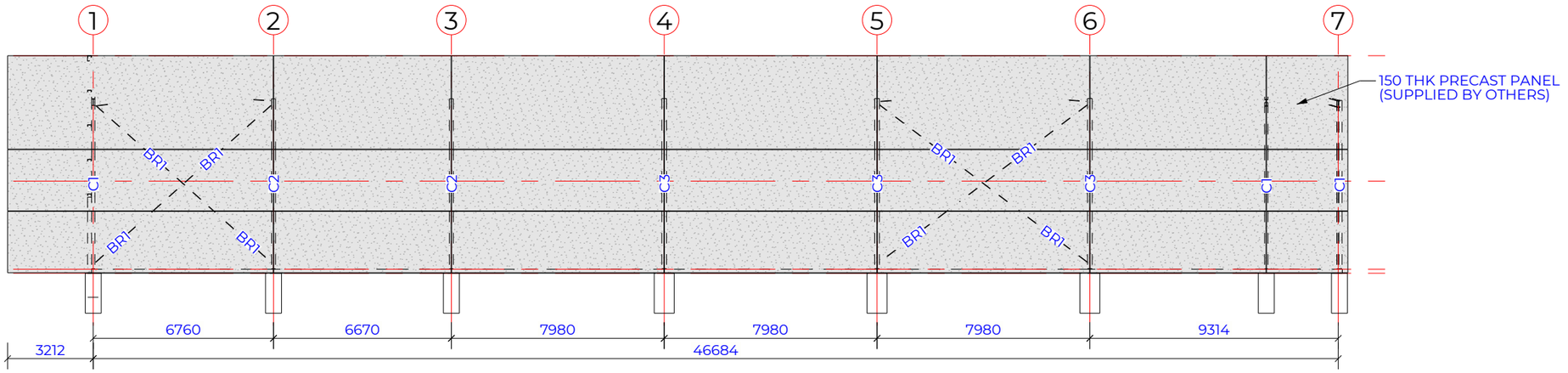
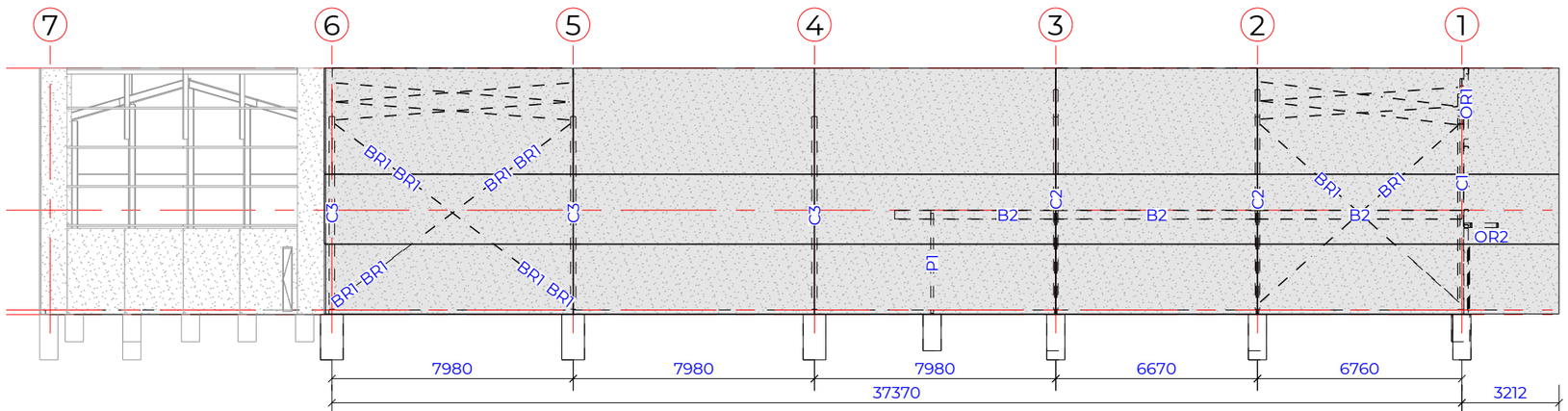
SIZE A3 **SCALE** 1:200 **PAGE** 5 OF 14

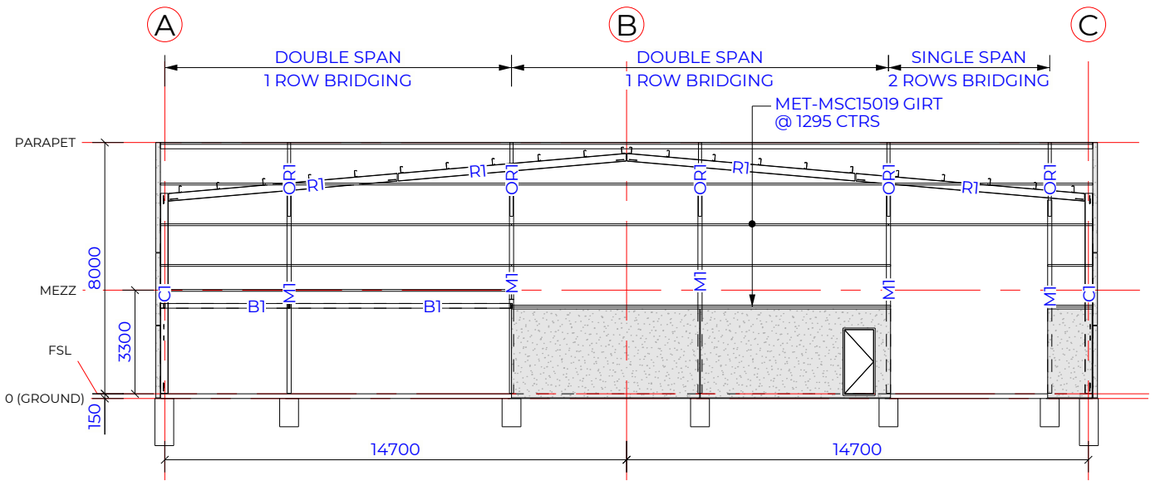
Central Steel build



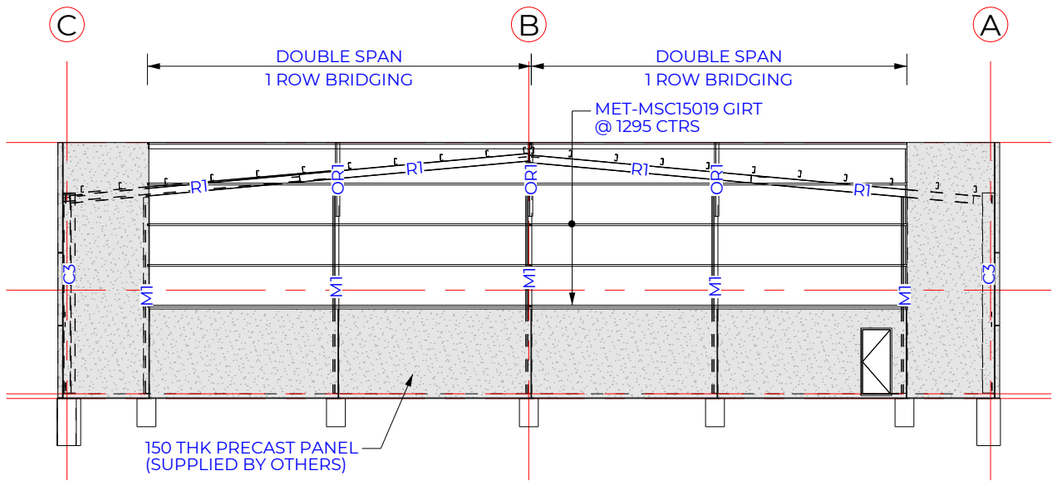
EAST ELEVATION



WEST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION

LAKER GROUP

STRUCTURAL CERTIFICATION

CHRISTOPHER AKERS

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SIGNED: DATE:

PROPOSED WAREHOUSE 12

FOR GLENN BRAGANZA

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STRUCTURAL ELEVATIONS **JOB 21065** **SHEET S2.01** **REV A**

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SIZE A3 **SCALE** 1:200 **PAGE** 6 OF 14

Central Steel build

LAKER GROUP

STRUCTURAL CERTIFICATION
CHRISTOPHER AKERS
REGISTRATION NO: PE0000845

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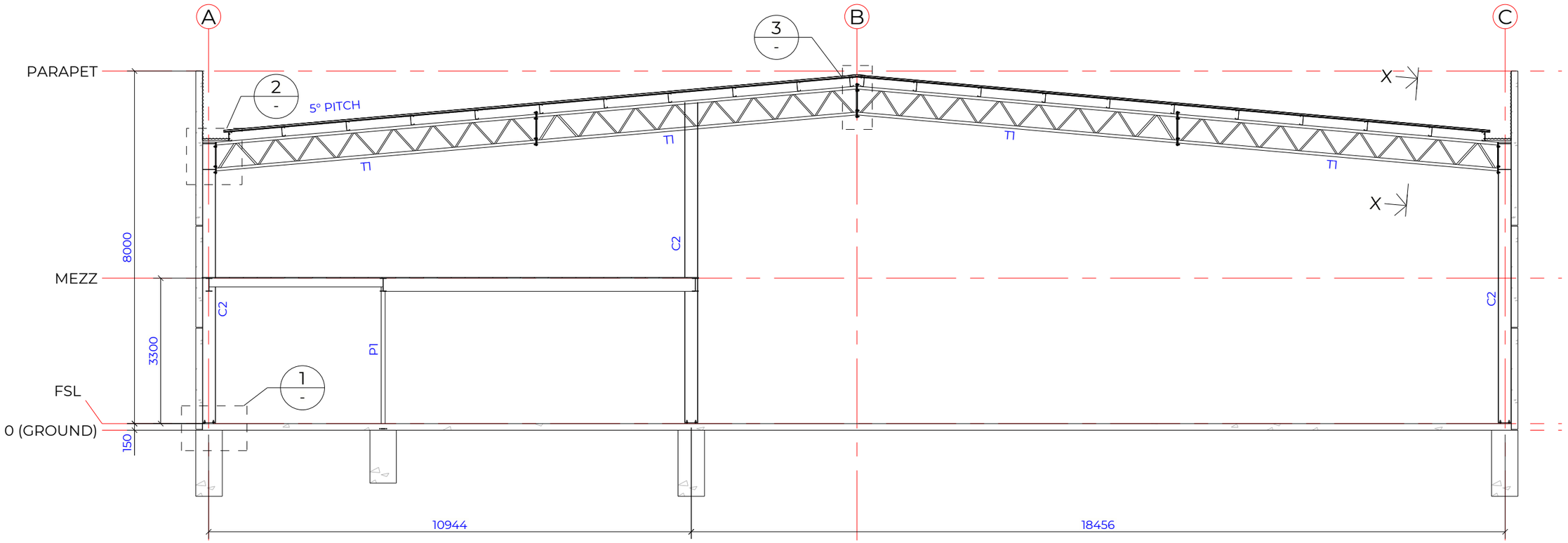
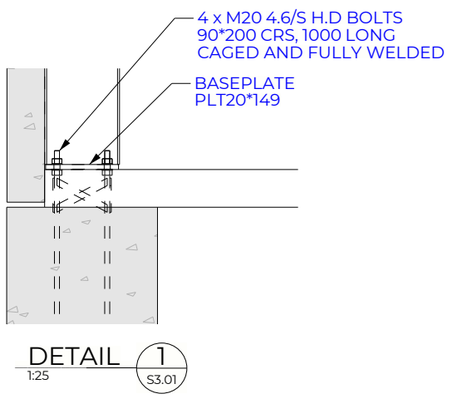
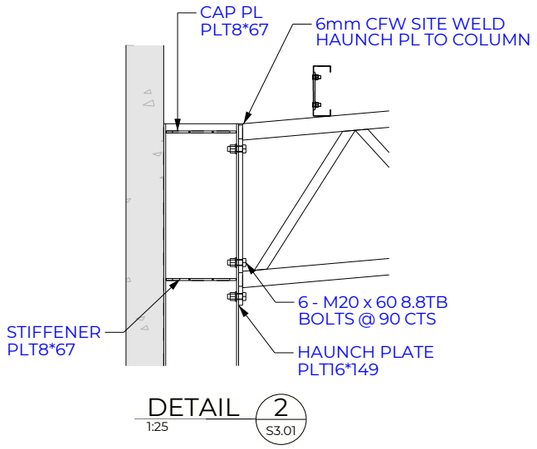


SECTION A 1:100 S1.03



DETAIL 1 1:25 S3.01



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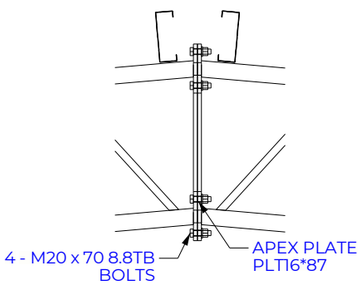

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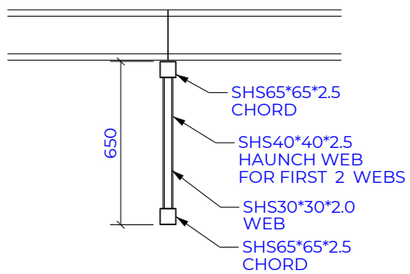

SECTION X 1:25 -

PROPOSED WAREHOUSE 12
FOR GLENN BRAGANZA
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TYPICAL DETAILS SHT 1 **JOB 21065** **SHEET S3.01** **REV A**

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SIZE A3 **SCALE** 1:100 **PAGE** 7 OF 14

Central Steel build

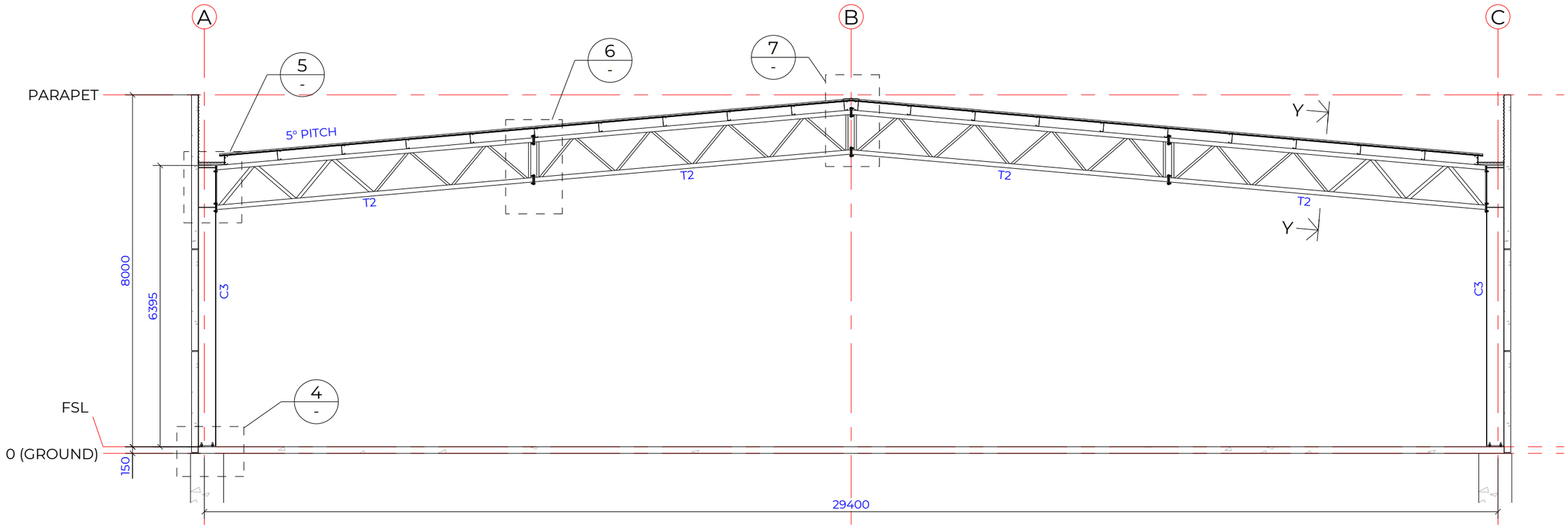
LAKER GROUP

STRUCTURAL CERTIFICATION

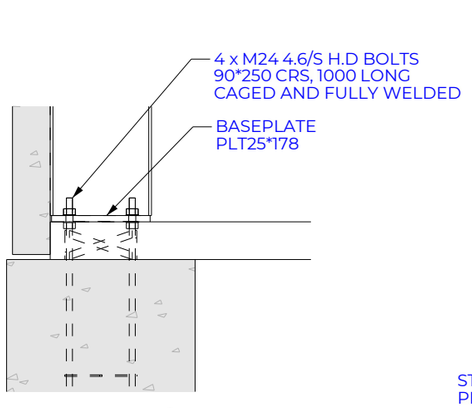
CHRISTOPHER AKERS

REGISTRATION NO: PE0000845

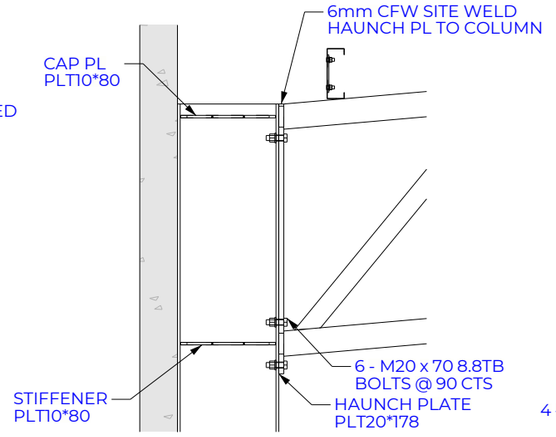
SIGNED: DATE:



SECTION B 1:100 S1.03



DETAIL 4 1:25 S3.02



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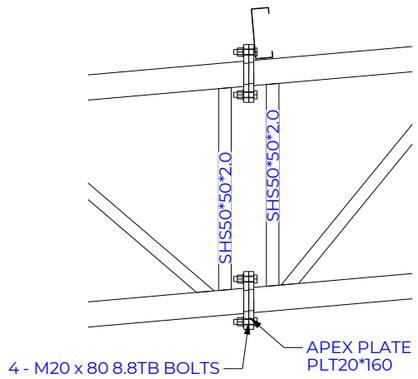
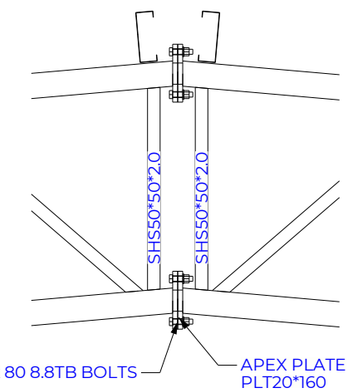
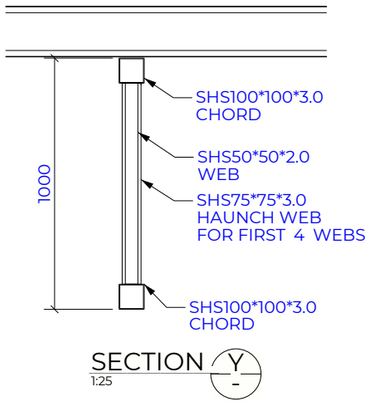


DETAIL 6 1:25 S3.02



DETAIL 7 1:25 S3.02



SECTION Y 1:25 -

PROPOSED WAREHOUSE 12

FOR GLENN BRAGANZA

28 PLATINUM COURT THURGOONA, NSW 2640

TYPICAL DETAILS SHT 2 **JOB 21065** **SHEET S3.02** **REV A**

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SIZE A3 **SCALE** 1:100 **PAGE** 8 OF 14

Central Steel build

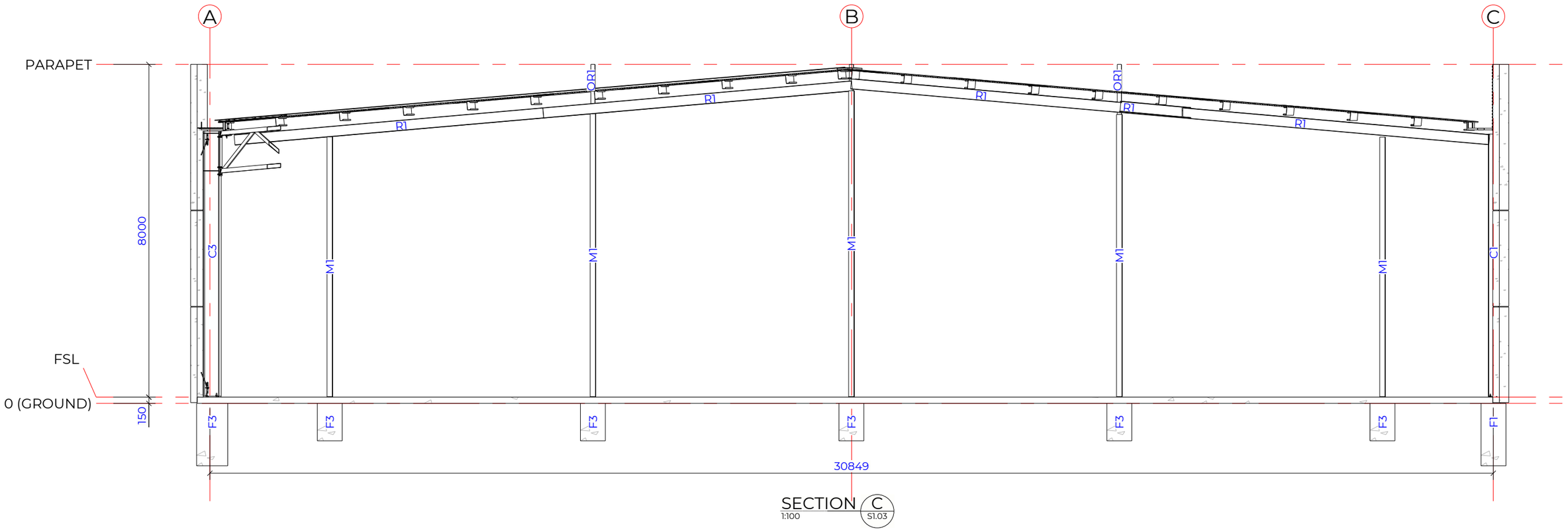
LAKER GROUP

STRUCTURAL CERTIFICATION

CHRISTOPHER AKERS

REGISTRATION NO: PE0000845

SIGNED: DATE:



SECTION C
1:100 S1.03

(REAR WALL NOT SHOWN FOR CLARITY)

PROPOSED WAREHOUSE 12
FOR GLENN BRAGANZA
28 PLATINUM COURT THURGOONA, NSW 2640

TYPICAL DETAILS SHT 3 **JOB 21065** **SHEET S3.03** **REV A**

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SIZE A3 **SCALE** 1:100 **PAGE** 9 OF 14

Central Steel build

LAKER GROUP
STRUCTURAL CERTIFICATION
CHRISTOPHER AKERS
REGISTRATION NO: PE0000845
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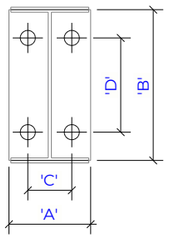
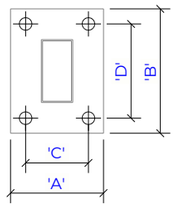


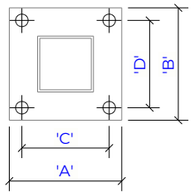
UB/UC BASEPLATE DETAIL

TEKLA COMPONENT = CSB_BASE_AND_CAGE



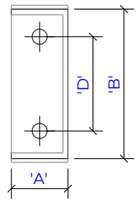
RHS BASEPLATE DETAIL

TEKLA COMPONENT = CSB_BASE_AND_CAGE



SHS/CHS BASEPLATE DETAIL

TEKLA COMPONENT = CSB_BASE_AND_CAGE



PFC BASEPLATE DETAIL

TEKLA COMPONENT = CSB_BASE_AND_CAGE

BASE PLATE & FOOTING CAGE DETAILS

	STEEL MEMBER SIZE	'A' BASE PLATE WIDTH	'B' BASE PLATE WIDTH	'T' BASE PLATE THICKNESS	'C' BOLT HOLE CENTRES	'D' BOLT HOLE CENTRES	'BS' HOLD DOWN BOLT SIZE
UB PROFILES	UB150*14	110	138	16	70	70	M16 4.6S
	UB150*18	110	143	16	70	70	M16 4.6S
	UB180*16	110	161	16	70	100	M16 4.6S
	UB180*18	110	163	16	70	100	M16 4.6S
	UB180*22	110	167	16	70	100	M16 4.6S
	UB200*18	110	186	16	70	120	M16 4.6S
	UB200*22	133	190	16	70	120	M16 4.6S
	UB200*25	133	191	16	70	120	M16 4.6S
	UB200*30	134	195	16	70	120	M16 4.6S
	UB250*26	130	240	16	70	150	M20 4.6S
	UB250*31	146	243	16	70	150	M20 4.6S
	UB250*37	146	245	16	70	150	M20 4.6S
	UB310*32	149	286	20	90	200	M20 4.6S
	UB310*40	165	292	20	90	200	M20 4.6S
	UB310*46	166	295	20	90	200	M20 4.6S
	UB360*45	171	340	20	90	250	M20 4.6S
	UB360*51	171	344	20	90	250	M20 4.6S
	UB360*57	172	347	20	90	250	M20 4.6S
	UB410*54	178	391	25	90	250	M24 4.6S
	UB410*60	178	394	25	90	250	M24 4.6S
	UB460*67	190	442	25	120	300	M24 4.6S
	UB460*75	190	445	25	120	300	M24 4.6S
	UB460*82	191	448	25	120	300	M24 4.6S
	UB530*82	209	516	25	120	350	M30 4.6S
	UB530*92	209	521	25	120	350	M30 4.6S
	UB610*101	228	590	25	120	400	M30 4.6S
	UB610*113	228	595	25	120	400	M30 4.6S
	UB610*125	229	600	25	120	400	M30 4.6S

1. WELDS TO BASE PLATES TO BE 6mm CFW (UNO)

BASE PLATE & FOOTING CAGE DETAILS

	STEEL MEMBER SIZE	'A' BASE PLATE WIDTH	'B' BASE PLATE WIDTH	'T' BASE PLATE THICKNESS	'C' BOLT HOLE CENTRES	'D' BOLT HOLE CENTRES	'BS' HOLD DOWN BOLT SIZE
UC PROFILES	UC150*23	152	140	16	90	90	M16 4.6S
	UC150*30	153	146	16	90	90	M16 4.6S
	UC150*37	154	150	16	90	90	M16 4.6S
	UC200*46	203	191	16	120	120	M16 4.6S
	UC200*52	204	194	16	120	120	M16 4.6S
	UC200*60	205	198	16	120	120	M16 4.6S
	UC250*73	254	242	16	150	150	M20 4.6S
	UC250*90	256	248	16	150	150	M20 4.6S
	UC310*97	305	296	20	180	180	M20 4.6S
	UC310*118	307	303	20	180	180	M20 4.6S
	UC310*137	309	309	20	180	180	M20 4.6S
	UC310*158	311	315	20	180	180	M20 4.6S
RHS PROFILES	RHS250*150	260	360	20	200	300	M20 4.6S
	RHS200*100	198	298	20	150	250	M20 4.6S
	RHS150*100	198	248	20	150	200	M16 4.6S
	RHS150*50	148	248	20	100	200	M16 4.6S
	RHS125*75	173	223	16	125	175	M16 4.6S
	RHS100*50	148	198	12	100	150	M16 4.6S
SHS/ CHS PROFILES	SHS250 OR CHS219	360	360	20	300	300	M20 4.6S
	SHS200 OR CHS165	310	310	20	250	250	M20 4.6S
	SHS150 OR CHS140	248	248	20	200	200	M16 4.6S
	SHS125 OR CHS114	223	223	16	175	175	M16 4.6S
	SHS100 OR CHS100	198	198	12	150	150	M16 4.6S
	SHS89 OR CHS89	187	187	12	139	139	M16 4.6S
	SHS75 OR CHS75	173	173	12	125	125	M16 4.6S
PFC PROFILES	PFC380	100	368	20	-	250	M20 4.6S
	PFC300	90	288	12	-	200	M20 4.6S
	PFC250	90	238	12	-	150	M20 4.6S
	PFC230	75	218	12	-	150	M20 4.6S
	PFC200	75	188	12	-	120	M16 4.6S
	PFC180	75	169	12	-	100	M16 4.6S
	PFC150	75	140.5	12	-	70	M16 4.6S

1. WELDS TO BASE PLATES TO BE 6mm CFW (UNO)

PROPOSED WAREHOUSE 12
FOR GLENN BRAGANZA
28 PLATINUM COURT THURGOONA, NSW 2640

STANDARD STEEL DETAILS 1 **JOB 21065** **SHEET S4.01** **REV A**

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL COMPUTATIONS SUPPLIED BY LAKER

REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:1 **PAGE** 10 OF 14

Central Steel build

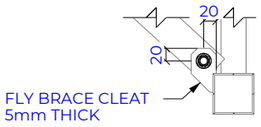
LAKER GROUP

STRUCTURAL CERTIFICATION

CHRISTOPHER AKERS

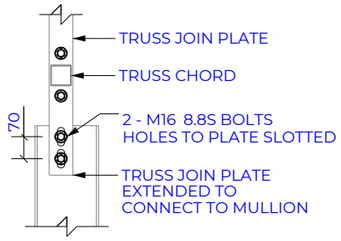
REGISTRATION NO: PE0000845

SIGNED: DATE:



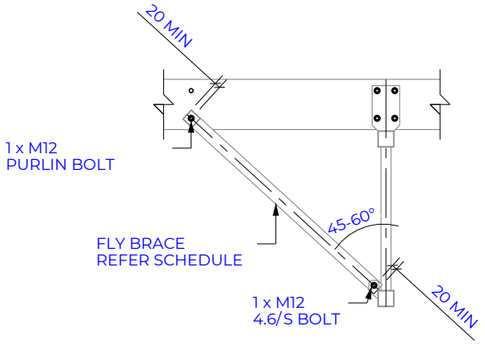
ROOF FLY BRACE CONNECTION PLATE DETAIL

TEKLA COMPONENT = CSB FLY BRACE



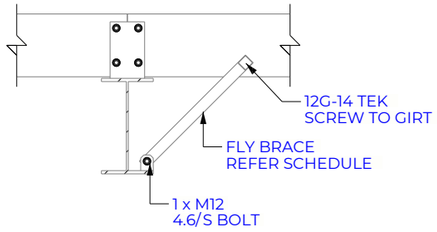
UB MULLION TO TRUSS JOIN PLATE

TEKLA COMPONENT = CSB_APEX_MULLION



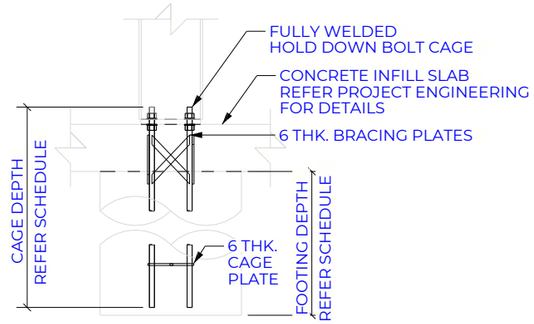
ROOF FLY BRACE DETAIL

TEKLA COMPONENT = CSB FLY BRACE



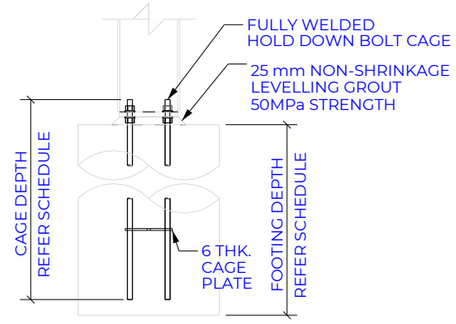
WALL FLY BRACE DETAIL

TEKLA COMPONENT = CSB_FLYBRACE_WALL



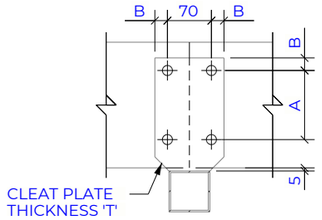
BASE AND CAGE WITH SLAB DETAIL

TEKLA COMPONENT = CSB_BASE_AND_CAGE



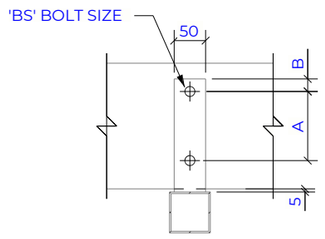
BASE AND CAGE WITHOUT SLAB DETAIL

TEKLA COMPONENT = CSB_BASE_AND_CAGE



DOUBLE PURLIN CLEAT DETAIL

TEKLA COMPONENT = CSB CLEAT

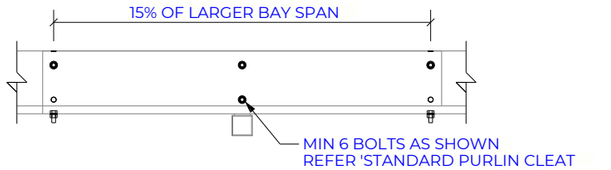


SINGLE PURLIN CLEAT DETAIL

TEKLA COMPONENT = CSB CLEAT

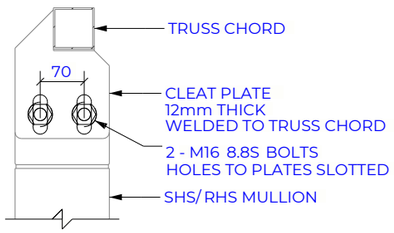
STANDARD PURLIN CLEAT DETAILS				
PURLIN DEPTH	**'T' PLATE THICKNESS**	**'A' BOLT HOLE CENTRES**	**'B' EDGE DIST. MINIMUM**	**'BS' BOLT SIZE**
100	6	40	1.5 x 'BS'	M12
150	6	70	1.5 x 'BS'	M12
200	6	110	1.5 x 'BS'	M12
250	8	160	1.5 x 'BS'	M12
300	8	210	1.5 x 'BS'	M16
350	8	260	1.5 x 'BS'	M16
400	8	310	1.5 x 'BS'	M16

1. SINGLE CLEAT TO BE A MINIMUM OF 8mm FOR ALL PURLIN SIZES
2. SEE SUPPLIER DOCUMENTATION FOR BOLT GRADE REQUIREMENTS



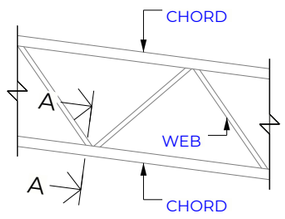
Z PURLIN LAP DETAIL

TEKLA COMPONENT = CSB CLEAT



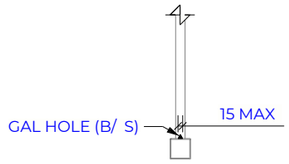
RHS/ SHS MULLION TO TRUSS

TEKLA COMPONENT = CSB_TRUSS_RHS_MULLION

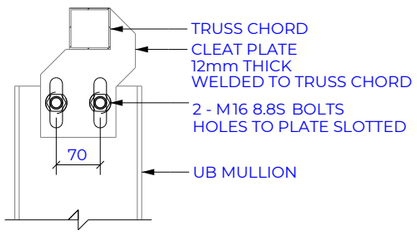


TRUSS WEB GAL HOLE DETAIL

TEKLA COMPONENT = NF_A



SECTION A-A



UB MULLION TO TRUSS

TEKLA COMPONENT = CSB_TRUSS_MULLION

PROPOSED WAREHOUSE 12

FOR GLENN BRAGANZA

28 PLATINUM COURT THURGOONA, NSW 2640

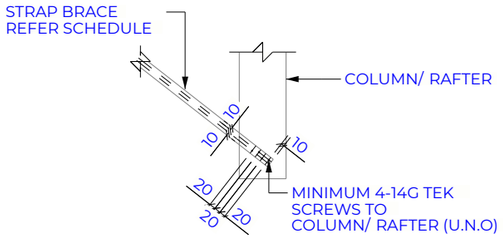
STANDARD STEEL DETAILS 2 **JOB 21065** **SHEET S4.02** **REV A**

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL COMPUTATIONS SUPPLIED BY LAKER

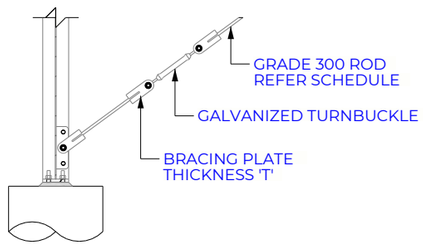
REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:1 **PAGE** 11 OF 14

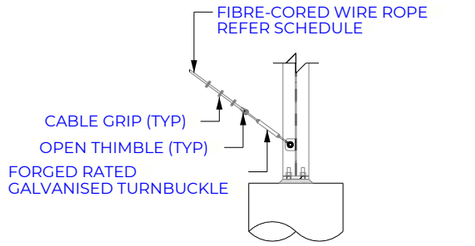
Central Steel build



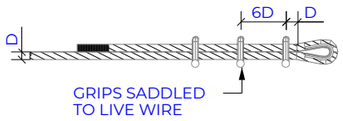
STRAP BRACE CONNECTION DETAIL



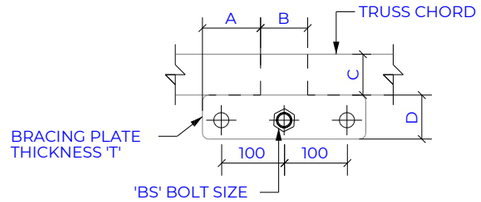
ROD BRACE DETAIL



WIRE ROPE BRACE DETAIL



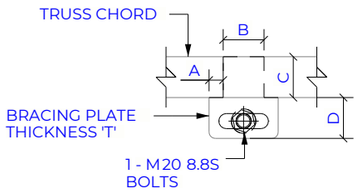
WIRE ROPE GRIP DETAIL



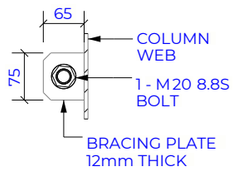
ROD ROOF BRACE CONNECTION PLATE DETAIL

ROD ROOF BRACE CLEAT DETAILS							
ROD DIA	TURNBUCKLE SIZE	CLEAT DIMENSIONS				'T' PLATE THICKNESS	'BS' BOLT SIZE
		'A'	'B'	'C'	'D'		
16	M16	30	50	50	65	12	M16 8.8S
20	M20	30	50	50	65	16	M20 8.8S
24	M22	30	50	50	65	20	M24 8.8S
30	M28	30	50	50	65	25	M30 8.8S

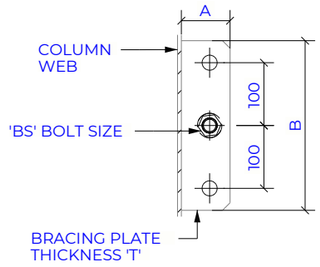
1. DIMENSION 'C' TO BE A MINIMUM OF CHORD WIDTH OR LISTED VALUE, WHICHEVER IS GREATER
2. DIMENSION 'B' TO BE EQUAL TO OR LARGER THAN DIMENSION 'C'



WIRE ROPE ROOF BRACE CONNECTION PLATE DETAIL



WIRE ROPE WALL BRACE CONNECTION PLATE DETAIL



ROD WALL BRACE CONNECTION PLATE DETAIL

WIRE ROPE AND BRACE CLEAT DETAILS								
ROPE DIA	TURNBUCKLE SIZE FORGE-RATED	MIN NO. OF GRIPS	TIGHTENING TORQUE (N.m)	CLEAT DIMENSIONS				'T' PLATE THICKNESS
				'A'	'B'	'C'	'D'	
8	M16	3	6	30	50	50	65	12
10	M16	3	16	30	50	50	65	12
12	M16	3	24	30	50	50	65	12
14	M16	4	35	5	100	75	65	12
16	M20	4	50	5	100	75	65	12

1. DIMENSION 'C' TO BE A MINIMUM OF CHORD WIDTH OR LISTED VALUE, WHICHEVER IS GREATER
2. DIMENSION 'B' TO BE EQUAL TO OR LARGER THAN DIMENSION 'C'
3. 16 DIA ROPE REQUIRES M24 8.8S BOLT CONNECTIONS

ROD WALL BRACE CLEAT DETAILS							
ROD DIA	TURNBUCKLE SIZE	CLEAT DIMENSIONS				'T' PLATE THICKNESS	'BS' BOLT SIZE
		'A'	'B'	'C'	'D'		
16	M16	70	260	-	-	12	M16 8.8S
20	M20	82	272	-	-	16	M20 8.8S
24	M22	82	272	-	-	20	M24 8.8S
30	M28	100	290	-	-	25	M30 8.8S

LAKER GROUP

STRUCTURAL CERTIFICATION

CHRISTOPHER AKERS

REGISTRATION NO: PE0000845

SIGNED: DATE:

PROPOSED WAREHOUSE 12

FOR GLENN BRAGANZA

28 PLATINUM COURT THURGOONA, NSW 2640

STANDARD STEEL DETAILS 3 **JOB 21065** **SHEET S4.03** **REV A**

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL COMPUTATIONS SUPPLIED BY LAKER

REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:1 **PAGE** 12 OF 14

Central Steel build

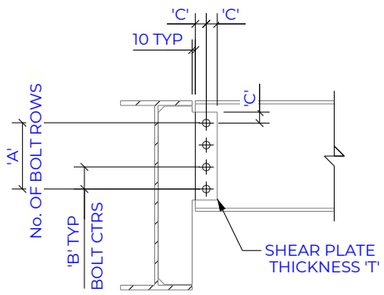
LAKER GROUP

STRUCTURAL CERTIFICATION

CHRISTOPHER AKERS

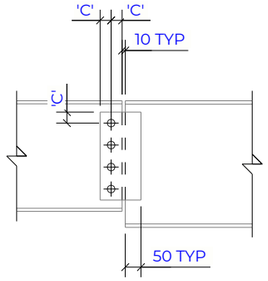
REGISTRATION NO: PE0000845

SIGNED: DATE:



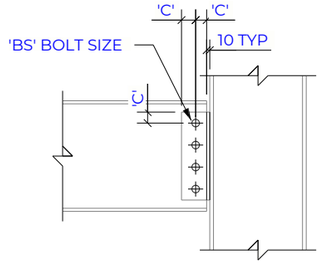
BEAM TO BEAM DETAIL - TYPE 1

TEKLA COMPONENT = HE_V SHEAR PL (64)



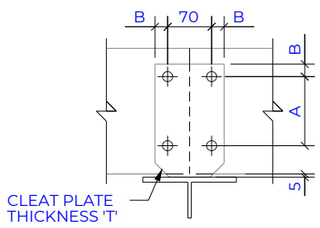
BEAM TO BEAM DETAIL - TYPE 2

TEKLA COMPONENT = TAB PLATE (83)



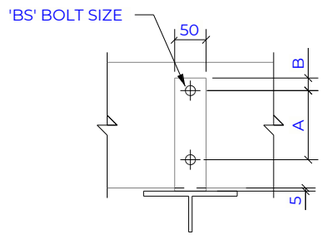
BEAM TO COLUMN DETAIL

TEKLA COMPONENT = SHEAR PLATE SINGLE (146)



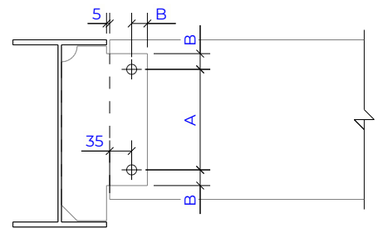
DOUBLE JOIST CLEAT DETAIL

TEKLA COMPONENT = CSEI CLEAT



SINGLE JOIST CLEAT DETAIL

TEKLA COMPONENT = CSEI CLEAT



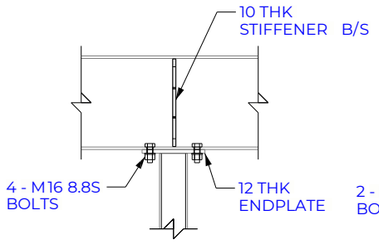
INTERNAL JOIST CLEAT DETAIL

TEKLA COMPONENT = HEV SHEAR PL (64)

STANDARD SHEAR PLATE CONNECTION DETAILS - UB & PFC BEAMS							
MEMBER SIZE		'A' # OF BOLT ROWS	'B' BOLT HOLE CENTRES	'C' EDGE DIST. MINIMUM	'BS' BOLT SIZE	'T' PLATE THICKNESS	'W' WELD SIZE
UB	PFC						
150UB	150PFC	2	50	1.5 x 'BS'	M12 8.8S	10	6 CFW
180UB	180 PFC	2	70	1.5 x 'BS'	M16 8.8S	12	6 CFW
200UB	200PFC 230PFC	2	70	1.5 x 'BS'	M16 8.8S	12	6 CFW
250UB	250PFC	3	70	1.5 x 'BS'	M16 8.8S	12	6 CFW
310UB	300PFC	3	70	1.5 x 'BS'	M20 8.8S	12	6 CFW
360UB	380PFC	4	70	1.5 x 'BS'	M20 8.8S	16	6 CFW
410UB	-	4	70	1.5 x 'BS'	M20 8.8S	16	6 CFW
460UB	-	5	70	1.5 x 'BS'	M20 8.8S	16	6 CFW
530UB	-	6	70	1.5 x 'BS'	M20 8.8S	16	6 CFW
610UB	-	7	70	1.5 x 'BS'	M20 8.8S	16	6 CFW

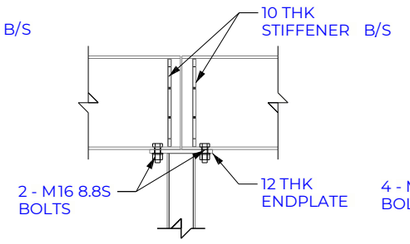
STANDARD JOIST CLEAT DETAILS				
JOIST DEPTH	'T' PLATE THICKNESS	'A' BOLT HOLE CENTRES	'B' EDGE DIST. MINIMUM	'BS' BOLT SIZE
100	6	40	1.5 x 'BS'	M12 8.8S
150	6	70	1.5 x 'BS'	M12 8.8S
200	6	110	1.5 x 'BS'	M12 8.8S
250	8	160	1.5 x 'BS'	M12 8.8S
300	8	210	1.5 x 'BS'	M16 8.8S
350	8	260	1.5 x 'BS'	M16 8.8S
400	8	310	1.5 x 'BS'	M16 8.8S

1. SINGLE CLEAT TO BE A MINIMUM OF 8mm THICK FOR ALL PURLIN SIZES



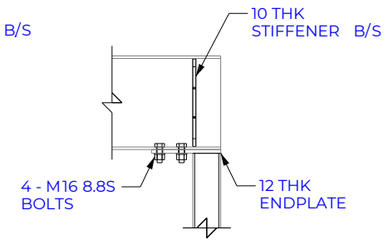
SINGLE BEARER DETAIL

TEKLA COMPONENT = END PLATE (29)



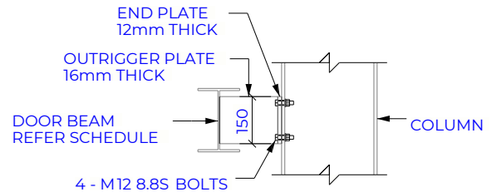
DOUBLE BEARER DETAIL

TEKLA COMPONENT = END PLATE (29)



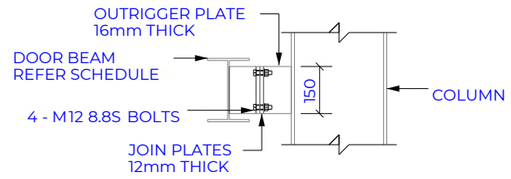
END OF BEARER DETAIL

TEKLA COMPONENT = END PLATE (29)



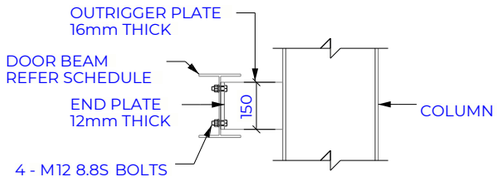
DOOR BEAM OUTRIGGER DETAIL - TYPE 1

TEKLA COMPONENT = SD HEADER - COLUMN



DOOR BEAM OUTRIGGER DETAIL - TYPE 3

TEKLA COMPONENT = SD HEADER - COLUMN



DOOR BEAM OUTRIGGER DETAIL - TYPE 2

TEKLA COMPONENT = SD HEADER - COLUMN

PROPOSED WAREHOUSE 12

FOR GLENN BRAGANZA

28 PLATINUM COURT THURGOONA, NSW 2640

STANDARD STEEL DETAILS 4 **JOB 21065** **SHEET S4.04** **REV A**

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL COMPUTATIONS SUPPLIED BY LAKER

REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:1 **PAGE** 13 OF 14

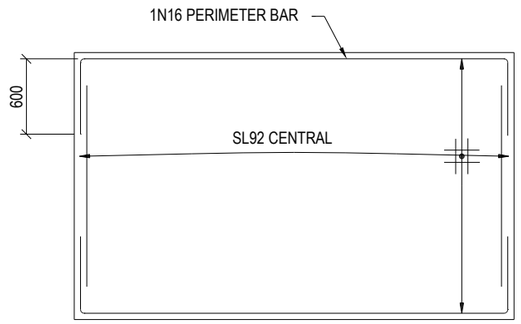
Central Steel build

CONCRETE PANEL NOTES

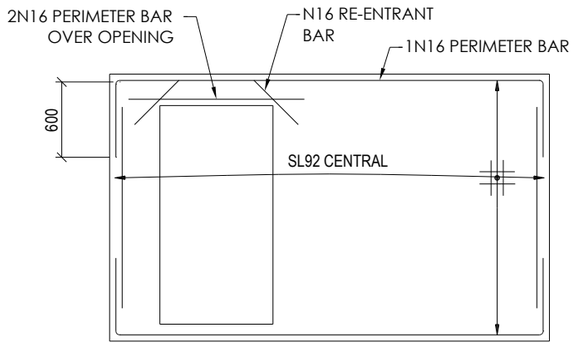
ALL PANELS ARE TO BE 150mm THICK UNLESS NOTED OTHERWISE.
REINFORCEMENT OF PANELS AS SHOWN ON TYPICAL PANEL ELEVATIONS.
PANELS MUST NOT BE LIFTED UNTIL A CONCRETE STRENGTH OF 32MPa HAS BEEN ACHIEVED. (CONCRETE STRENGTH USED 40 MPa, SLUMP 60mm).
THE CASTING BED IS TO BE COATED WITH AN APPROVED BOND BREAKER TO LIMIT ANY SUCTION WHEN LIFTED.
THE CRANE USED FOR LIFTING PANELS IS TO HAVE A MINIMUM CAPACITY OF 3 TIMES THE WEIGHT OF PANEL BEING LIFTED.
ALL PANELS TO BE POSITIONED ON "KOROLATH" SHIMPAKS (OR SIMILAR APPROVED) AT EACH END OF PANELS.
ON SITE THE CRANE IS TO HOLD THE PANELS UNTIL SHIMPAKS AND ALL FIXINGS ARE IN POSITION, INCLUDING TEMPORARY PROPS.
FOR FILLING AND OR FIRE RATING OF ALL GAPS AND FIRE RATING OF PANEL FIXINGS (NOT CONC. ENCASED) REFER DETAILS.
THE PANEL MANUFACTURER IS TO ALLOW FOR SHRINKAGE OF PANELS TO ACHIEVE DIMENSIONS REQUIRED BY ARCHITECT.
ALL PANEL FIXINGS ARE TO BE HOT DIPPED GALVANISED EXCEPT WHERE WELDING IS REQUIRED. THESE FIXINGS ARE TO BE COATED WITH AN APPROVED PAINT ON SITE.
THE PANEL MANUFACTURER IS TO PROVIDE THE ENGINEER WITH THE TYPE OF ALL LIFTING AND FIXING EQUIPMENT FOR APPROVAL.
BOTH THE STEEL AND PANEL DETAILERS ARE TO WORK IN CONJUNCTION WITH EACH OTHER TO DETERMINE BLOCKOUT SITES ETC.
THE BUILDER IS TO SYNCHRONIZE THE ERECTION OF BOTH THE PANELS AND STEELWORK ON BOUNDARIES OR WHERE CRANE ACCESS IS LIMITED AND INFORM THE ENGINEER OF PROPOSED ERECTION SEQUENCE.
PRECAST MANUFACTURER TO PROVIDE TWO SETS OF FULLY DETAILED SHOP DRAWINGS OF ALL PANELS, INSERTS, FIXINGS, ANCHORS, BOLTS, FERRULES, PENETRATIONS, LIFTING DEVICES ETC. TO ENGINEER FOR APPROVAL.
STRUCTURAL DESIGN : THE CONSULTING ENGINEER HAS DESIGNED THE PRECAST UNITS FOR IN-SERVICE CONDITIONS ONLY. (IE LOADS THE PRECAST PANELS ARE SUBJECTED TO AFTER ERECTION ON SITE).
THE PRECAST MANUFACTURER IS TO PROVIDE COMPUTATIONS FOR APPROVAL FOR STRESSES DUE TO REMOVAL FROM MOULD, HANDLING, LIFTING, TRANSPORTATION AND ERECTION.

CSB TAKES NO RESPONSIBILITY FOR THE FOLLOWING
- OVERALL SIZE / DIMENSIONS OF PRECAST PANELS
- PENETRATION LOCATIONS
- FERRULE LOCATIONS
- CAST IN PLATE LOCATIONS
- LIFTING DEVICES
- ANY OTHER FIXINGS / INSERTS

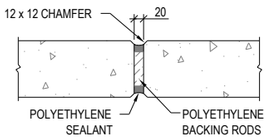
PRECAST PANELS SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE ONLY. IT IS THE PANEL MANUFACTURER'S RESPONSIBILTY TO ENSURE PANELS CONFORM TO BOTH STRUCTURAL AND ARCHITECTURAL DESIGN REQUIREMENTS.



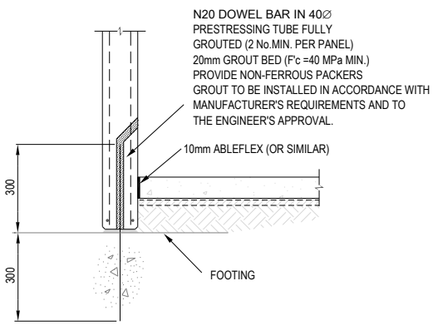
TYPICAL 150 THK PANEL
N.T.S



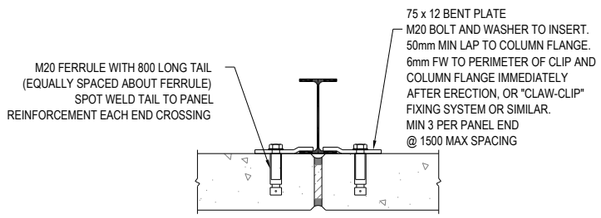
TYPICAL 150 THK PANEL
WITH DOOR OPENING
N.T.S



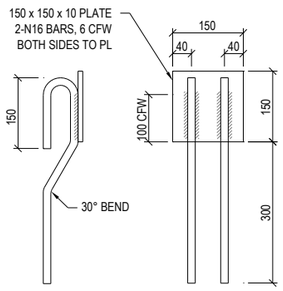
TYPICAL PANEL JOINT DETAIL
N.T.S



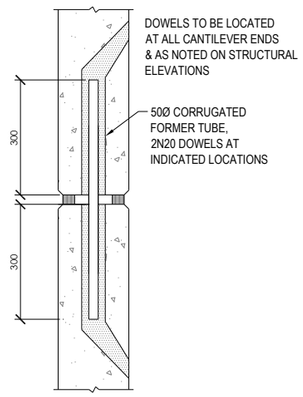
TYPICAL PRECAST WALL - FOOTING DETAIL
N.T.S



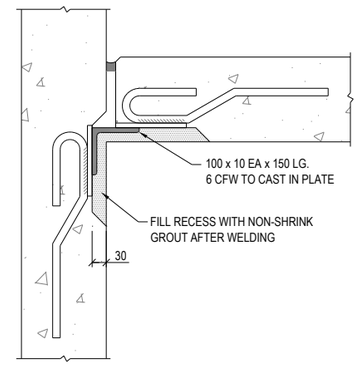
TYPICAL PANEL TO COLUMN DETAIL
N.T.S



TYPICAL CAST IN PLATE DETAIL
N.T.S



TYPICAL PANEL TO PANEL DOWEL
CONNECTION DETAIL
N.T.S



TYPICAL PANEL TO PANEL DETAIL
N.T.S

LAKER GROUP

STRUCTURAL CERTIFICATION
CHRISTOPHER AKERS
REGISTRATION NO: PE0000845

SIGNED: DATE:

PROPOSED WAREHOUSE 12
FOR GLENN BRAGANZA
28 PLATINUM COURT THURGOONA, NSW 2640

TYPICAL PANEL DETAILS **JOB 21065** **SHEET S5.01** **REV A**

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REV	DESCRIPTION	DATE	DRAWN
A	PRELIMINARY	02/05/2025	AK

SIZE A3 **SCALE** 1:1 **PAGE** 14 OF 14

Central Steel build