STRUCTURAL DRAWINGS – GENERAL NOTES

GENERAL

- TECHNICAL SPECIFICATIONS OR SPECIFIC INSTRUCTIONS ON DRAWINGS TAKE PRECEDENCE OVER THESE NOTES.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. CONSTRUCTION FROM THESE DRAWINGS IS NOT TO COMMENCE UNTIL THE DRAWINGS ARE "ISSUED FOR CONSTRUCTION"
- UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL LEVELS ARE IN METRES (m) TO AUSTRALIAN HEIGHT DATUM (AHD).
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH BY BY–LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- DURING CONSTRUCTION THE STRUCTURE, AND ANY ASSOCIATED EXCAVATIONS, SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.

DESIGN DATA

- THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT STANDARDS AUSTRALIA CODES AND LOCAL GOVERNMENT ORDINANCES FOR THE FOLLOWING LOADINGS. REFER TO ARCHITECTURAL DRAWINGS FOR PROPOSED FLOOR USAGE.
- LIVE LOADS ARE IN ACCORDANCE WITH AS 1170.1.

FLOOR USAGE	SUPERIMPOSED DEAD LOADS (kPa)	LIVE LOAD (kPa)
RESIDENTIAL		
– INTERNAL	0.5	1.5
– BALCONIES	0.5	2.0
– WET AREAS	1.0	1.5

- WIND LOADS ARE IN ACCORDANCE WITH AS 1170.2–2002 AS FOLLOWS:

  REGIONAL WIND SPEED: V_R = 45 m/s

  ANNUAL PROBABILITY OF EXCEEDANCE = 1:500

  REGION: A2

  TERRAIN CATEGORY: 3

- THE CONCRETE ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING EXPOSURE CLASSIFICATIONS IN ACCORDANCE WITH AS 3600.

ELEMENT	CLASSIFICATION
EXTERIOR CONCRETE	B1
INTERNAL CONCRETE	A1

BULK EARTHWORKS

- ALL EXCAVATION WORK TO BE CARRIED OUT TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT INCLUDING INSPECTION OF STRIPPING, APPROVAL OF FILL MATERIAL AND APPROVAL OF COMPACTION.
- REFER TO THE GEOTECHNICAL REPORT FOR EXCAVATION CONDITIONS, INCLUDING NATURAL WATER LEVELS AND GROUND CONDITIONS.
- REFER TO SURVEY DRAWINGS FOR EXISTING SERVICES AND LEVELS.

FOUNDATIONS

- THE FOUNDATION MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER FOR THIS BEARING CAPACITY BEFORE PLACING ANY MEMBRANE, REINFORCEMENT OR CONCRETE. WHERE NECESSARY, THE FOOTING DESIGN MAY BE ALTERED TO SUIT.
- SITE CLASSIFICATION IS ASSUMED CLASS 'M' IN ACCORDANCE WITH AS2870. THIS IS TO BE CONFIRMED ON SITE BY A GEOTECHNICAL ENGINEER AFTER EXCAVATION HAS TAKEN PLACE.
- THE BUILDER SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXCAVATIONS IN A STABLE CONDITION WITHOUT ADVERSELY AFFECTING SURROUNDING PROPERTIES INCLUDING SERVICES.
- FOOTINGS NEAR BOUNDARIES MUST NOT BE LOCATED HIGHER OR LOWER THAN FOOTINGS OF ADJACENT PROPERTIES UNLESS APPROVED. IF THEY ARE TO BE LOWER, UNDERPINNING OF ADJACENT PROPERTY FOOTINGS MAY BE REQUIRED.
- FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE PRESSURES:

ELEMENT	BEARING PRESSURE (kPa)	SHAFT ADHESION (kPa)
WAFFLE SLAB, PAD & STRIP FOOTINGS	150	–
PILES	400	25

- DO NOT EXCEED A RISE OF 1000mm IN A RUN OF 3000mm FOR THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS.

REINFORCEMENT

- REINFORCEMENTS SYMBOLS:

  S DENOTES GRADE 250 S HOT ROLLED DEFORMED BARS TO AS 4671

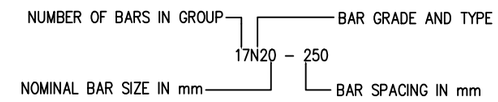
  N DENOTES GRADE D 500 N BARS TO AS 4671 GRADE N DENOTES GRADE 250

  SL & RL HOT ROLLED PLAIN BARS TO AS 4671 SQUARE & RECTANGULAR MESH RESPECTIVELY

  R DENOTES GRADE 250 HOT ROLLED PLAIN BARS TO AS 4671 DENOTES

  W HARD–DRAWN PLAIN WIRE TO AS 4671

  DW DENOTES COLD ROLLED RIBBED WIRE TO A.S 4671



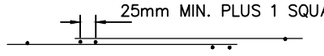
- THE FIGURES FOLLOWING THE FABRIC SYMBOL IS THE REFERENCE NUMBER FOR FABRIC TO AS 4671
- ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METRE CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. IN EXPOSURE CONDITIONS GREATER THAN B1 USE ONLY PLASTIC CHAIRS.
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
- SLAB REINFORCEMENT SHALL EXTEND AT LEAST 75mm ONTO MASONRY SUPPORT WALLS AND 50 PERCENT OF BOTTOM REINFORCEMENT SHALL BE COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS.
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE THE FOLLOWING:

LAPS IN REINFORCEMENT SHALL BE U.N.O.

	N12	N16	N20	N24	N28	N32
TOP *	600	800	1000	1400	1800	2100
ALL OTHER BARS	500	650	800	1200	1400	1700

* DENOTES HORIZONTAL BARS WITH 300MM OR MORE CONCRETE CAST BELOW.

- FABRIC SHALL BE LAPPED SUCH THAT THE TWO OUTERMOST WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST WIRES OF THE OTHER SHEET BY 25mm MINIMUM.



A MAXIMUM OF THREE SHEETS OF FABRIC SHALL BE LAPPED AT ANY POINT.

CONCRETE

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- PRE–MIXED CONCRETE SUPPLY SHALL COMPLY WITH AS 1379.
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- CONCRETE MIX DESIGNS TO BE SUBMITTED FOR REVIEW PRIOR TO USE OF CONCRETE.
- ENSURE CLEAR COVER TO REINFORCEMENT IS AS FOLLOWS UNLESS DETAILED OTHERWISE.

ELEMENT	COVER (mm)		
	FORMED – EXPOSED TO WEATHER (B1)	FORMED – NOT EXPOSED TO WEATHER (A1)	NOT FORMED – CAST AGAINST GROUND
FOOTINGS & PILES	–	–	50
SLABS ON GROUND (TOP COVER)	40	20	–

- DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT. APPROVED SPRAYED ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURER'S SPECIFICATION). POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC.
- CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. NO MASONRY OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL ALL PROPPING IS REMOVED AND THE SLAB HAS ABSORBED ITS DEAD LOAD DEFLECTION.
- THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL OBTAINED.
- CONDUITS, PIPES, ETC. SHALL ONLY BE LOCATED IN THE MIDDLE THIRD OF THE SLAB DEPTH. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.
- SLABS AND BEAMS SHALL BE CONSTRUCTED TO BEAR ONLY ON THE BEAMS, WALLS, COLUMNS, ETC. SHOWN ON THE DRAWINGS. ALL OTHER BUILDING ELEMENTS SHALL BE KEPT 20mm MINIMUM CLEAR FROM SOFFITS OF STRUCTURE.
- CONCRETE QUALITY TO BE AS PER THE CONCRETE MIX DESIGN TABLE SHOWN BELOW U.N.O

CONCRETE MIX TABLE

ELEMENT	EXPOSURE CLASSIFICATION (AS 3600)	STRENGTH (MPa) U.N.O.	
		F'c AT 28 DAYS	OTHER
FOOTINGS	A1	32	–
WALLS/COLUMNS	A1	32	–
SLABS ON GROUND	A1	32	–
INTERNAL SUSPENDED SLABS	A1	32	–
PILES	A1	32	–

NO.	AMENDMENTS	DATE
1	ISSUED FOR APPROVAL	29/01/24

DRAWING TITLE: GENERAL NOTES SHEET 1

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DRAWN: PB | DESIGNED: PB

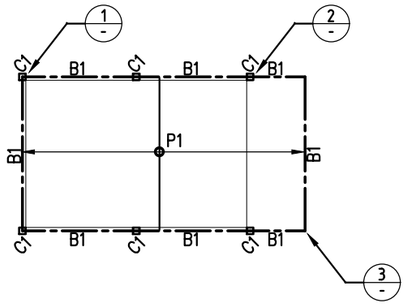
structa Consulting Engineers

SCALE AT A3: 1:100

JOB REF NO. C08022

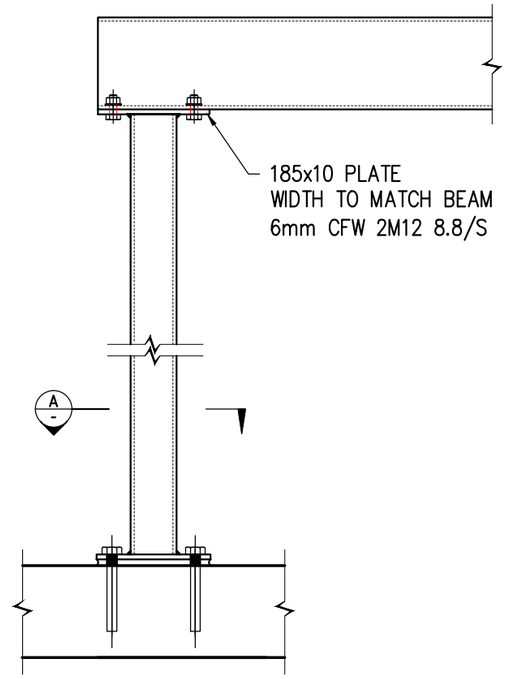
DRAWING NO. S01

FRAMEWORK MEMBER SCHEDULE		
MARK	SIZE	NOTES
P1	C10019 PURLINS	AT 600 CTRS
B1	150x100x4 RHS	–
C1	100x100x4 SHS	–

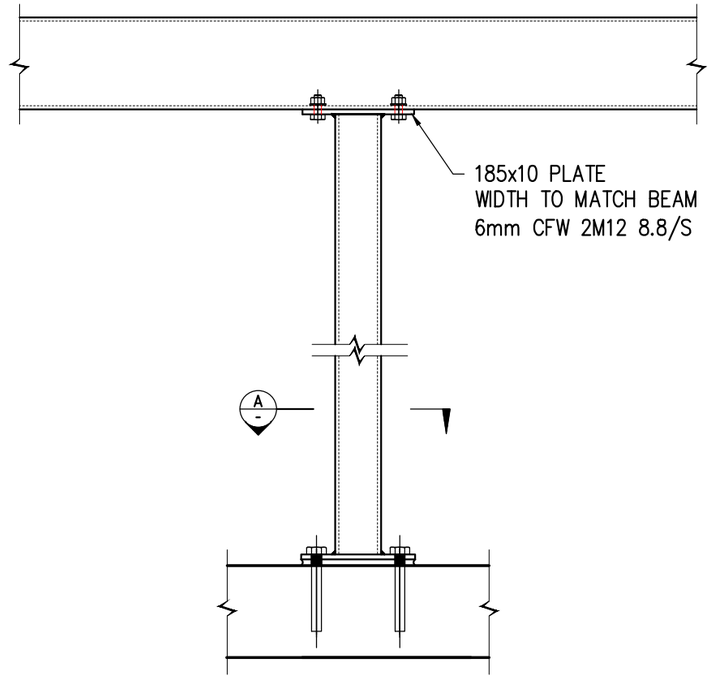


ROOF FRAMING PLAN

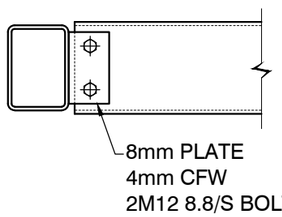
SCALE 1:100

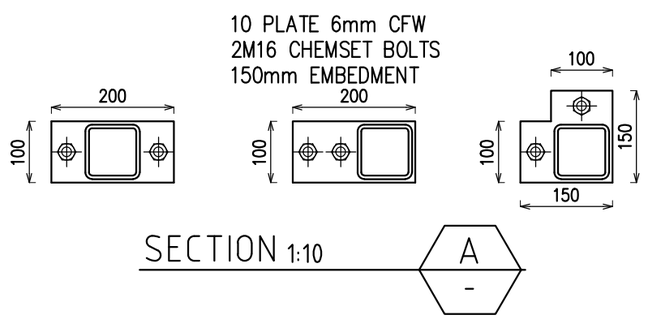


DETAIL 1:10 — 1

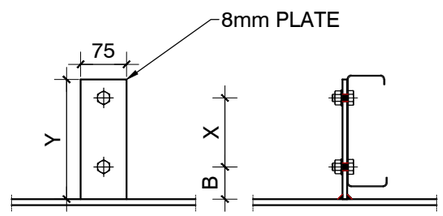


DETAIL 1:10 — 2





SECTION 1:10 — A



TYPICAL 'Z' PURLIN CLEAT CONNECTION DETAIL

SCALE 1:10

PURLIN CLEAT NOMINAL DIMENSIONS				
SECTION SIZE	X (mm)	B (mm)	Y (mm)	BOLTS
100	40	40	105	2M12 4.6/S
150	60	55	145	2M12 4.6/S
200	110	55	195	2M16 4.6/S
250	160	55	245	2M16 4.6/S

NO.	AMENDMENTS	DATE
1	ISSUED FOR APPROVAL	29/01/24

DRAWING TITLE:
FRAMING PLAN

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SCALE AT A3: 1:100
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