Lysaght Building Solutions trading as Ranbuild
ABN 61 103 232 444
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Enquiries to: Alexander Filonov

2nd December 2025

The Manager
Ranbuild
PO Box 170
HAMILTON NSW 2303

Dear Sir/Madam,

Re: STRUCTURAL ADEQUACY OF STEEL FRAMED BUILDING

Client: Lance Booth
Ranbuild Job No.: 441451
Type: Big G
Location: 56 McInness St MOORINE ROCK WA 6425
Plans: ENG1/1-441451, ENG2/1-441451, ENG3/1-441451, ENG3/2-441451, ENG4/1-441451, ENG4/2-441451, ENG5/1-441451, ENG5/2-441451, ENG6/1-441451, ENG6/2-441451, ENG7/1-441451, 441451-GA

Being a professional engineer within the meaning of NCC 2022 Volume Two, Part A5G3 with Ranbuild Sheds we have undertaken a structural analysis of the steel framed building as described above. These plans were analysed in accordance with NCC 2022 Volume Two, Under Part A5G3 as Evidence of Suitability, Schedule 2 Referenced Documents : AS/NZS 1170.1, AS/NZS 1170.2, AS/NZS 1170.4, AS 4100, AS 2870, AS 1562 Part 1 and AS/NZS 4600.

Building Class: 10a

Based on our structural analysis, we are satisfied that the standard engineering drawings attached can be used for the above site.

The following modifications are required and supersede where applicable any standard engineering drawings:

- All bracing shall be 68x1.6mm straps cross bracing
- Roof shall be braced in both end bays incl TS96100 struts.
- One bracing unit required on each perimeter wall
- Fascia =C15019
- Footings option with isolated bored piers shall be certified separately subject to availability of Geotechnical Report

Yours faithfully,

Alexander Filonov
MIEAust, CPEng, NPER, RPEQ 8094, CC4719P, PE0017560
Engineering Manager
Lysaght Building Solutions

STRUCTURAL STEELWORK SCHEDULE			CONNECTIONS		
MARK	DESCRIPTION	SECTION	BASE	EAVES	TOP
C1	COLUMN - MAIN	C25024	FB3	KN3	
C2	COLUMN - CORNER	C15012	FB1	KN1	
C3	COLUMN - E/W, PARTITON	C20019	EB2	ER1	
R1	RAFTER - MAIN	C25019		KN3	AP3
R2	RAFTER - END WALL	C15010		KN1	AP1
DM1	MULLION - ROLLER DOOR	C25016	MB3	MF1	
RH1	HEAD - ROLLER DOOR	TS6175+TS96075			
Set	BRACING - END WALL	35x1.5 strap	SB1		
Br	BRACING - ROOF	DIAPHRAGM			
Bw	BRACING - SIDE WALL	DIAPHRAGM			
SS1	BRACE - LATERAL FLY	100x0.4 STRAP +	SS1		
LB1	BRACE - LATERAL FLY	100x0.4 STRAP	LB1		
FB1	BEARER - MEZZANINE	2@C25019	MC5,6		
FP1	POST - MEZZANINE	2@C20019	MPB1		2,3,MP1
FJ1	JOIST - MEZZANINE	C15019 @ 450	MJ1,2,5		
MBR	BRACING - MEZZANINE	M12 ROD	MBR2		
MBRa		M12 ROD	MBR1		
F1	FASCIA	C15012		FK1	
P1	PURLIN - PERIPHERY	TS96075 @ 1400	BC1, 2		
P2	PURLIN - INTERNAL	TS96075 @ 1400	BC1, 2		
P3	PURLIN - END	TS96075 @ 1400	BC1, 2		
G1	GIRT - END BAY	TS96075 @ 1600	BC1, 2		
G2	GIRT - END WALL / INT. BAY	TS96075 @ 1600	BC1, 2		

GENERAL

- THIS IS A STANDARDISED DESIGN SUITABLE FOR LIGHT INDUSTRIAL, COMMERCIAL & RURAL BUILDINGS TO STANDARDS & REQUIREMENTS PROVIDED BY RANBUILD.
- THESE DRAWINGS WILL BE READ IN CONJUNCTION WITH ALL ARCHITECHTURAL & OTHER CONSULTANTS DRAWINGS & SPECIFICATIONS & WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- ANY DISCREPANCY SHALL BE REFERED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
- ALL MATERIALS & WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT & CURRENT SAA CODES & WITH BY-LAWS & ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS SHOWN SHOULD BE VERIFIED BY THE BUILDER ON SITE. ENGINEERS DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION & NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS & EXCAVATIONS STABLE AT ALL TIMES.
- UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES & ALL DIMENSIONS ARE IN MILLIMETRES.
- THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT SAA CODES & NORMAL ENGINEERING PRACTICE.
- ARCHITECTURAL ELEMENTS TO HAVE A MINIMUM OF 20mm CLEARANCE OF THE STRUCTURE & ARE TO BE ARTICULATED.
- IT IS COMMON SENSE TO WORK SAFELY AND TO PROTECT YOURSELF AND OTHERS FROM ACCIDENTS ON SITE. TO DO THIS, YOU MUST ENSURE YOU HAVE IN PLACE SAFE WORK PRACTICES AND APPROPRIATE EQUIPMENT. SAFETY INVOLVES PERSONAL PROTECTION OF EYES, OF SKIN(FROM SUNBURN) AND OF HEARING(FROM NOISE). FALL PROTECTION MUST ALSO BE IN PLACE AS APPLICABLE INCLUDING SAFETY MESH, PERSONAL HARNESSES AND PERIMETER GUARDRAILS. IT IS RECOMMENDED THAT YOU FAMILIARIZE YOURSELF WITH APPLICABLE LAWS, REGULATIONS, RULES, GUIDELINES, CODES OF PRACTICE AND STANDARDS AND THAT YOU ADHERE STRICTLY TO THEM.

STRUCTURAL STEEL SPECIFICATION

- ALL STRUCTURAL STEELWORK TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING SAA CODES & SPECIFICATIONS.
  AS4100 STEEL STRUCTURES CODE
  AS/NZS 4600 COLD FORMED STEEL STRUCTURES CODE.
  AS1111 COMMERCIAL BOLTS & SCREWS.
  AS2867 FARM STRUCTURES (WHERE APPLICABLE).
- PROPRIETARY PRODUCTS ARE TO BE IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURERS INSTRUCTIONS.

HIGH STRENGTH BOLTS

- CONNECTIONS WITH 8.8S BOLTS SPECIFIED ARE DESIGNED AS FRICTION TYPE JOINTS & BOLTS, NUTS & WASHERS SHALL COMPLY WITH THE RELEVANT REQUIREMENTS OF AS1252.
- HIGH STRENGTH FRICTION GRIP BOLTS TO BE INSTALLED IN ACCORDANCE WITH AS4100 & TENSIONED BY AN APPROVED METHOD TO PRODUCE THE FOLLOWING SHANK TENSIONS.

BOLT SIZE	SHANK TENSION (kN)
M12	50
M16	93

- FOR THIS DESIGN AN ACCEPTABLE TENSIONING METHOD IS SNUG TIGHT (PODGER SPANNER TIGHT) PLUS HALF A TURN.

COLD FORMED STEEL FRAMING

- ALL STRUCTURAL STEEL FRAMING TO BE MANUFACTURED FROM HOT DIP ZINC COATED STEEL CONFORMING TO AS1397 U.N.O.
- MATERIAL GRADES SHALL BE AS FOLLOWS:-

1.0 BMT	- GRADE G350, Z350
1.2 BMT	- GRADE G500, Z350
1.5 BMT TO 3.0 BMT	- GRADE G450, Z350

- PURLIN/GIRT ARRANGEMENT - TOPHAT TYPE BATTENS TEK SCREWED DIRECTLY TO THE FRAME SECTIONS WITH FLY BRACES AS SPECIFIED.

FRAME ASSEMBLY

- CORRECT FRAME ASSEMBLY IS IMPORTANT TO ACHIEVE OPTIMUM PERFORMANCE OF THE STRUCTURE.
- FULLY TENSION BOLTS AT KNEE & APEX JOINTS AS SPECIFIED BEFORE STANDING FRAMES.
- FULLY TENSION BOLTS AT BASE CONNECTIONS AS SPECIFIED IMMEDIATELY AFTER STANDING THE FRAME.
- ROOF & WALL BRACING PROVIDE STRUCTURAL STABILITY WHERE SPECIFIED & MUST BE INSTALLED BEFORE THE CLADDING.

ROOF & WALL CLADDING

- ROOF & WALL CLADDING TO BE INSTALLED IN ACCORDANCE WITH AS1562 & THE MANUFACTURERS INSTRUCTIONS TO THE SAME WIND LOAD RATING AS THE BUILDING STRUCTURE.
- THE ROOF & WALL CLADDING FORMS AN INTEGRAL PART OF THE STRUCTURE & SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF A STRUCTURAL ENGINEER WHO ASSUMES FULL RESPONSIBILITY FOR THE DESIGN.

DOORS & WINDOWS

ALL DOORS AND WINDOWS SHALL HAVE THE SAME CYCLONIC WIND LOAD RATING AS THE REST OF THE BUILDING ENVELOPE, INCLUDING RESISTANCE TO FLYING DEBRIS AS SPECIFIED IN AS1170.2:2021 AND AS/NZS 4505-2012. DOORS AND WINDOWS SHALL BE CLOSED DURING STORMS. DOORS SHALL BE INSTALLED WITH WIND LOCKS IN CYCLONIC AREAS. SUPPORTING DOCUMENTATION INCLUDING TEST REPORTS SHALL BE AVAILABLE FROM DOORS AND WINDOWS MANUFACTURERS TO CONFIRM LOAD RATING AND ENSURE COMPLIANCE WITH ABOVE MENTIONED STANDARDS AND BCA. DOORS ARE ALSO REQUIRED TO BE SUPPLIED WITH A STICKER THAT SHOWS A RANGE OF INFORMATION INCLUDING THE DESIGN PRESSURE OF THE DOOR ACCORDING TO AS/NZS 4505-2012 REQUIREMENTS.

DESIGN LOADING

- THE STRUCTURAL COMPONENTS SHOWN ON THESE DRAWINGS HAVE BEEN DESIGNED FOR THE FOLLOWING LOAD CONDITIONS IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS: 1170.0 2002, AS/NZS: 1170.1 2002 AND AS/NZS: 1170.4 2007

IMPORTANCE LEVEL	2
AS 1170.2 REGION	A0
TERRAIN CATEGORY	2
Ma	1.0
Mi	1.0
INTERNAL PRESSURE Cpi	+0.0 or -0.3 (ENCLOSED)
ROOF DEAD LOAD	SELF WEIGHT ONLY
ROOF LIVE LOAD	0.25 kPa PLUS 1.4 kN
FLOOR LIVE LOAD	LIGHT INDUSTRIAL 5kPa
ELEVATED FLOOR OCCUPANCY	GENERAL - NON OFFICE
ELEVATED FLOOR PERMANENT ACTIONS	LESS THAN AND UP TO 1.0kPa
ELEVATED FLOOR IMPOSED ACTIONS	3.0 kPa OR 1.8kN CONCENTRATED LOAD
SITE CLASS	M (CLAY)
COASTAL DISTANCE	N/A

EARTHQUAKE LOADING

IMPORTANCE LEVEL	2
HAZARD FACTOR	Z = 0.12
SITE SUB-SOIL CLASS	C_e, D_e, E_e

EXCLUSION OF DESIGN

THE DESIGN OF MEZZANINE FLOOR STRUCTURES EXCLUDES THE FOLLOWING COMPONENTS:-

- STAIR CASE
- SERVICES
- ELECTRICALS
- SAFETY BARRIERS/RAILS
- PLUMBING
- CEILING
- FLOOR SHEATHING
- BALUSTRADES

FIRE RATING

MEZZANINE FLOOR STRUCTURE DOES NOT REQUIRE FIRE RATING UNDER THE FOLLOWING CONDITION:-

- FOR BUILDING UNDER BCA CLASS 2 ~ 9: MEZZANINE BOUNDARY MUST BE AT LESS 3m FROM ALLOTMENT BOUNDARY AND OTHER FIRE SOURCES
- FOR BUILDING UNDER BCA CLASS 1 & 10a: FIRE RATING REQUIREMENT SHOULD BE CONFIRMED BY LOCAL COUNCILS

IF FIRE RATING IS REQUIRED FOR THE BUILDING, FIRE DESIGN MUST BE DONE AND CERTIFIED BY OTHERS.

FLOOR SHEATHING

FLOOR SHEATHING MUST BE CORRECTLY FASTENED TO THE MEZZANINE STRUCTURE AS PER THE MANUFACTURER'S SPECIFICATION. FLOOR SHEATHING AND ITS FASTENING MUST BE STRUCTURALLY ADEQUATE TO WITH STAND THE COMBINATION OF DESIGN LOADINGS AS LISTED ABOVE FOR STRENGTH AND SERVICEABILITY LIMIT STATE CRITERIA THROUGH DIAPHRAGM ACTIONS AND TO PROVIDE ADEQUATE ROTATIONAL AND LATERAL RESTRAINT TO MEZZANINE JOISTS.

DRAWING SCHEDULE

RANBUILD

ACCREDITED PRACTITIONER
Alexander Filonov
MIEAust, CPEng, NPER
Level 1, 12 Beaumont St Hamilton NSW 2303
+61 2 4962 4311
2/12/2025

CLIENT: Lance Booth

SITE: 56 McInnes St MOORINE ROCK WA 6425

BUILDING TYPE: Big G

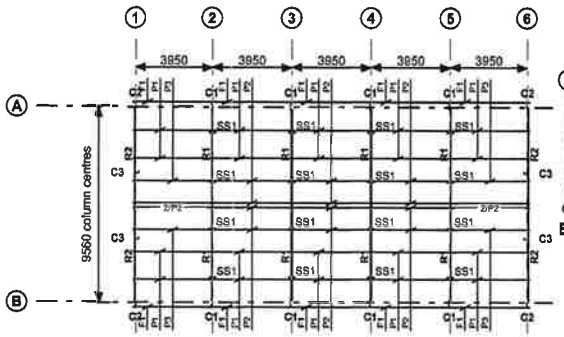
BUILDING DIMENSION: 10000S x 4800E x 20000L

TITLE: STEEL FRAME SCHEDULE, NOTES & COVER PAGE

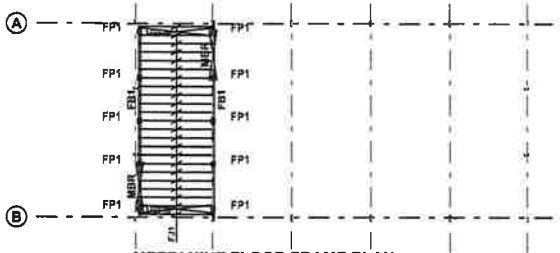
DRAWING NUMBER: ENG1/1-441451

FOR BUILDING PERMIT STAGE

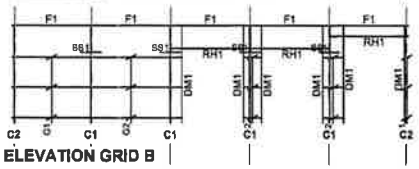
DRAWN	REV	SCALE	PAGE
RDS	A	NTS A3	1/13



ROOF PLAN



MEZZANINE FLOOR FRAME PLAN



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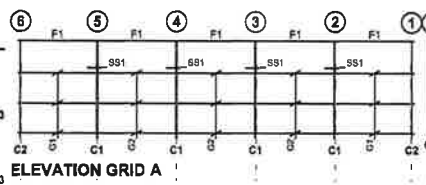

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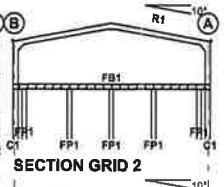

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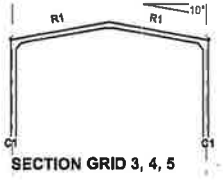
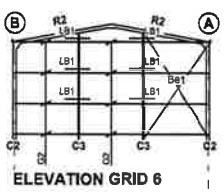


SECTION GRID 3, 4, 5



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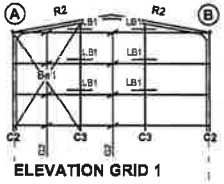

ELEVATION GRID 1

ACCREDITED PRACTITIONER
Alexander Filonov
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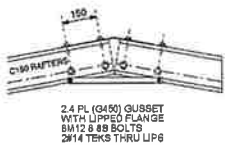
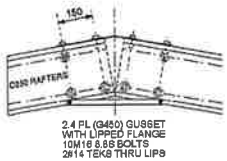
Level 1, 12 Beaumont St Hamilton NSW 2303
+61 2 4962 4311
2/12/2025

CLIENT	Lance Booth
SITE	56 McInnes St MOORINE ROCK WA 6425
BUILDING TYPE	Big G
BUILDING DIMENSION	10000S x 4800E x 20000L
TITLE	STEEL FRAME DIAGRAMS
DRAWING NUMBER	ENG2/1-441451
	FOR BUILDING PERMIT STAGE
DRAWN	RDS
REV	A
SCALE	1:250 A3
PAGE	2/13



APEX CONNECTION - AP1



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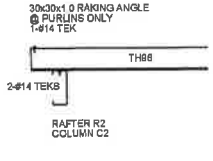
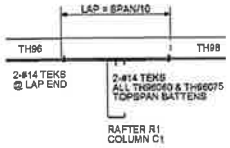


BATTEN CONNECTION - BC1



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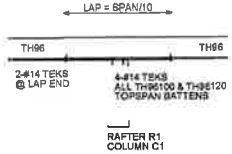

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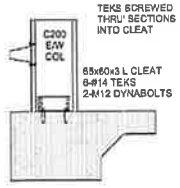
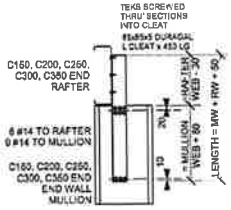
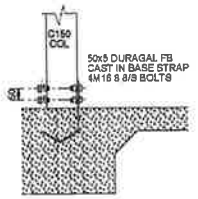


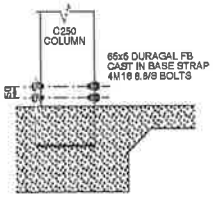
E/W COLUMN BASE - EB2



E/W COLUMN TO RAFTER CONNECTION ER1



FIXED BASE - FB1



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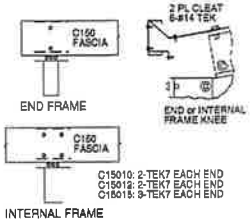
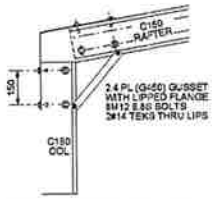
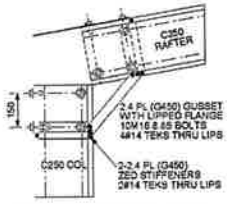


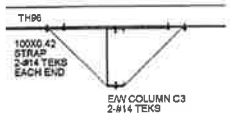
FASCIA CONNECTION - FK1



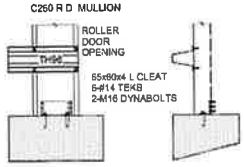
KNEE CONNECTION - KN1



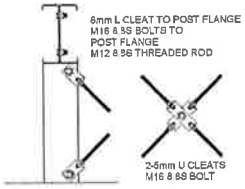
KNEE CONNECTION - KN3



LATERAL BRACE DET - LB1



RD MULLION BASE - MB3



LONGNITUDINAL BRACING DETAIL - MBR1

ACCREDITED PRACTITIONER
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Level 1, 12 Beaumont St Hamilton NSW 2303
+61 2 4962 4311
2/12/2026

CLIENT: Lance Booth

SITE: 56 McInnes St
MOORINE ROCK WA 6425

BUILDING TYPE: Big G

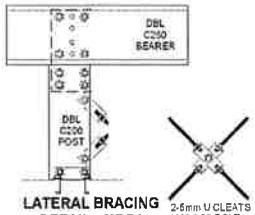
BUILDING DIMENSION: 10000S x 4800E x 2000H

TITLE: CONNECTION DETAILS

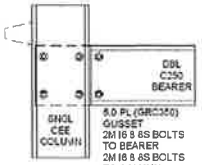
DRAWING NUMBER: ENG3/1-441451

FOR BUILDING PERMIT STAGE

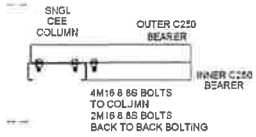
DRAWN	REV	SCALE	PAGE
RDS	A	1:20 A3	3/13



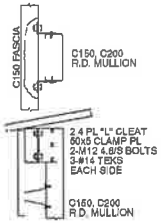
LATERAL BRACING DETAIL - MBR2



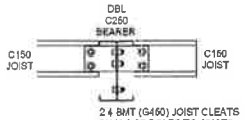
BEARER TO COLUMN - MC5



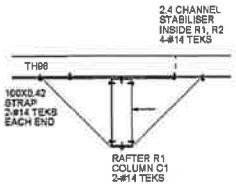
BEARER TO COLUMN - MC8



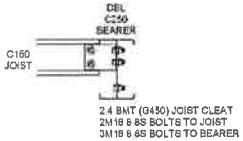
RD MULLION/FASCIA - MF1



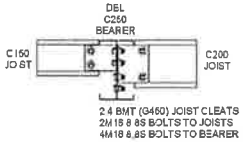
DOUBLE C150 JOIST CONNECTION - MJ1



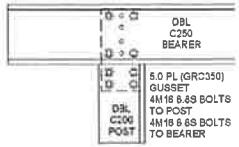
SECTION STABILISER DET - SS1



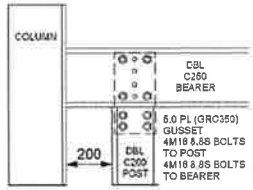
SINGLE C150 JOIST CONNECTION - MJ2



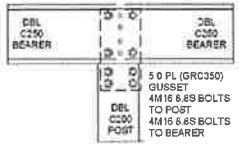
SINGLE C150 / SINGLE C200 JOIST CONNECTION - MJ5



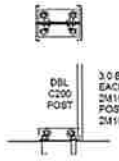
POST CONNECTION TO CONTINUOUS BEARER - MP1



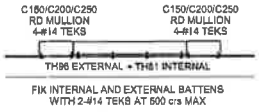
POST CONNECTION TO BEARER AT END - MP2



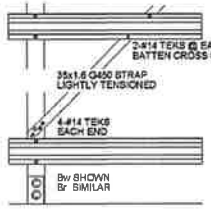
POST CONNECTION TO NON-CONTINUOUS BEARER - MP3



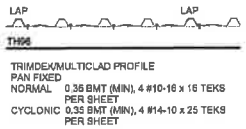
POST CONNECTION AT POST BASE - MPB1



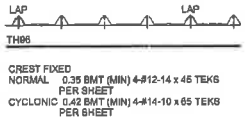
RH HEAD - RH1



STRAP BRACING - SB1



WALL CLADDING SHEAR DIAPHRAGM - SD1



ROOF CLADDING SHEAR DIAPHRAGM - SD2

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2/12/2025

CLIENT: Lance Booth

SITE: 56 McInnes St MOORINE ROCK WA 6425

BUILDING TYPE: Big G

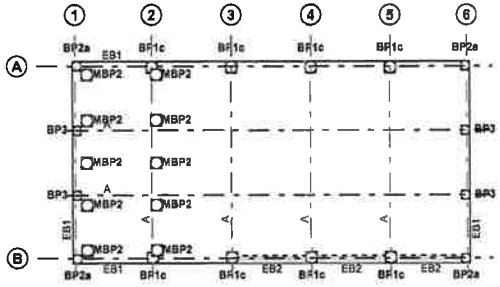
BUILDING DIMENSION: 10000S x 4800E x 20000L

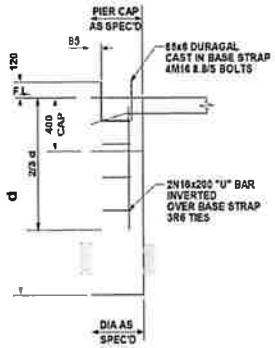
TITLE: CONNECTION DETAILS

DRAWING NUMBER: ENG3/2-441451

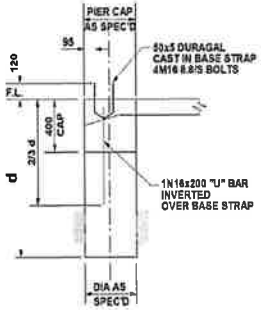
FOR BUILDING PERMIT STAGE

DRAWN	REV	SCALE	PAGE
RDS	A	1:20 A3	4/13





TYP DET BP1c



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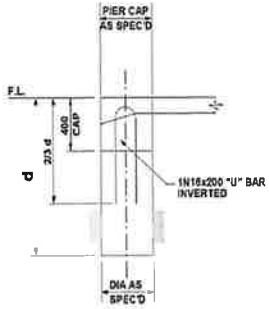
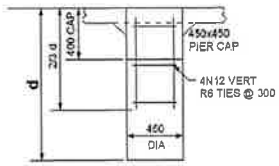


TYP DET BP3



TYP DET MBP1, MBP2 SIMILAR

BORED PIERS WITH RC FLOOR

BORED PIERS CAST WITH RC FLOOR AND EDGE BEAM, AND ARE ECONOMICALLY SUITED FOR SHEDS ON CLAYEY GROUND. THE DESIGNS SHOWN ARE SUITABLE ONLY WITH THE CONCRETE FLOOR AND EDGE BEAMS, AND ARE NOT SUITABLE FOR ISOLATED PIERS WITH AN EARTH FLOOR OR SIMILAR.

- PIERS TO BE TAKEN THROUGH ANY FILL MATERIAL AND FOUNDED IN STIFF CLAY WITH A MINIMUM SAFE BEARING CAPACITY OF 100 kPa AND A SHAFT ADHESION OF 20 kPa.
- PROVIDE REINFORCEMENT AS SPECIFIED AND LOCATE COLUMN BASE CONNECTORS ACCURATELY AS SHOWN.

REFERENCE

SEE SLAB DETAIL DRAWING FOR:-

- SITE FOUNDATION CLASSIFICATION NOTES
- MINIMUM SITE PREPARATION NOTES
- CONCRETE SPECIFICATION NOTES
- CONCRETE REINFORCEMENT NOTES
- SLAB ON GRADE NOTES
- DETAIL S1/EB1 - SLAB EDGE TYPE 1
- DETAIL S1/EB2 - SLAB EDGE TYPE 2
- DETAIL S1/A - SLAB CONTROL JOINT
- DETAIL S1/C - SLAB CONSTRUCTION JOINT

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CLIENT: Lance Booth	BUILDING TYPE: Big G	DRAWING NUMBER: ENG4/1-441451	
	BUILDING DIMENSION: 10000S x 4800E x 20000L	FOR BUILDING PERMIT STAGE	
SITE: 56 McInnes St MOORINE ROCK WA 6425	TITLE: RC FLOOR PLAN & BORED PIER DETAILS	DRAWN: RDS / REV: A / SCALE: 1:40, 1:250 A3 / PAGE: 6/13	

BORED PIER WITH RC FLOOR SCHEDULE

CENTRE LINE REFERENCE	FRAME REFERENCE(S)	LABEL	STRAP	PIER CAP (b x b)	DIA x DEPTH
A	1, 6	BP2a	SGBS15	450 x 450	300 x 600
A	2, 3, 4, 5	BP1c	SGBS25	450 x 450	300 x 750
AB	1, 6	BP3		450 x 450	300 x 600
AB	1, 2	MBP2		REFER DET	450 x 1275
B	1, 6	BP2a	SGBS15	450 x 450	300 x 600
B	2, 3, 4, 5	BP1c	SGBS25	450 x 450	300 x 750

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CLIENT: Lance Booth

BUILDING TYPE: Big G

BUILDING DIMENSION: 10000S x 4800E x 2000OL

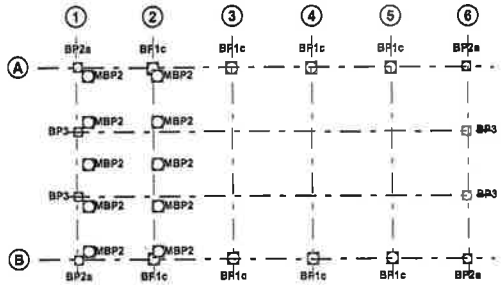
SITE: 56 McInnes St
MOORINE ROCK WA 6425

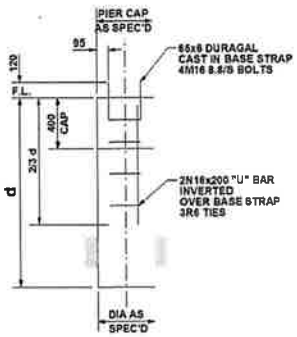
TITLE: RC FLOOR PLAN & BORED PIER DETAILS

DRAWING NUMBER: ENG4/2-441481

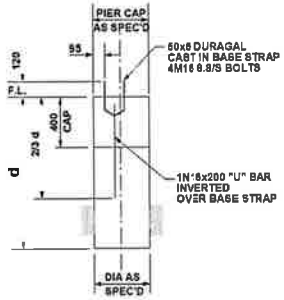
FOR BUILDING PERMIT STAGE

DRAWN	REV	SCALE	PAGE
RDB	A	1:40, 1:250 A3	6/13

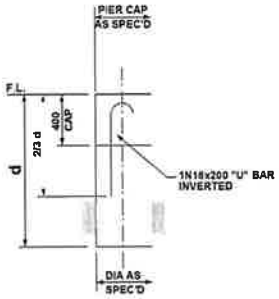




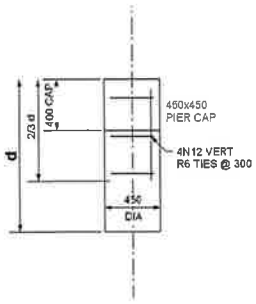
TYP DET BP1c



TYP DET BP2a



TYP DET BP3



TYP DET MBP1, MBP2 SIMILAR

ISOLATED BORED PIERS

ISOLATED BORED PIERS ARE ECONOMICALLY SUITED FOR SHEDS ON CLAYEY GROUND. THE DESIGNS SHOWN ARE SUITABLE FOR ISOLATED PIERS WITH AN EARTH FLOOR OR SIMILAR.

- PIERS TO BE TAKEN THROUGH ANY FILL MATERIAL AND FOUNDED IN STIFF CLAY WITH A MINIMUM SAFE BEARING CAPACITY OF 100 kPa AND A SHAFT ADHESION OF 20 kPa.
- PROVIDE REINFORCEMENT AS SPECIFIED AND LOCATE COLUMN BASE CONNECTORS ACCURATELY AS SHOWN.

REFERENCE

REFER TO THE FOLLOWING NOTES:-
- SITE FOUNDATION CLASSIFICATION NOTES
- MINIMUM SITE PREPARATION NOTES
- CONCRETE SPECIFICATION NOTES
- CONCRETE REINFORCEMENT NOTES

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CLIENT: Lance Booth

SITE: 56 McInnes St MOORINE ROCK WA 6425

BUILDING TYPE: Big G

BUILDING DIMENSION: 10000S x 4800E x 20000L

TITLE: ISOLATED BORED PIER DETAILS

DRAWING NUMBER: ENGS/1-441461

FOR BUILDING PERMIT STAGE

DRAWN	REV	SCALE	PAGE
RDS	A	1:40, 1:250 A3	7/13

ISOLATED BORED PIER SCHEDULE

CENTRE LINE REFERENCE	FRAME REFERENCE(S)	LABEL	STRAP	PIER CAP (b x b)	DIA x DEPTH
A	1, 6	BP2a	SGBS15	450 x 450	300 x 750
A	2, 3, 4, 5	BP1c	SGBS25	450 x 450	300 x 900
AB	1, 6	BP3		450 x 450	300 x 600
AB	1, 2	MBP2		REFER DET	450 x 1275
B	1, 6	BP2a	SGBS15	450 x 450	300 x 750
B	2, 3, 4, 5	BP1c	SGBS25	450 x 450	300 x 900

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CLIENT: Lance Booth

SITE: 56 McInnes St
MOORINE ROCK WA 8425

BUILDING TYPE: Big G

BUILDING DIMENSION: 10000S x 4800E x 20000L

TITLE: ISOLATED BORED PIER DETAILS

DRAWING NUMBER: ENG5/2-441451

FOR BUILDING PERMIT STAGE

DRAWN	REV	SCALE	PAGE
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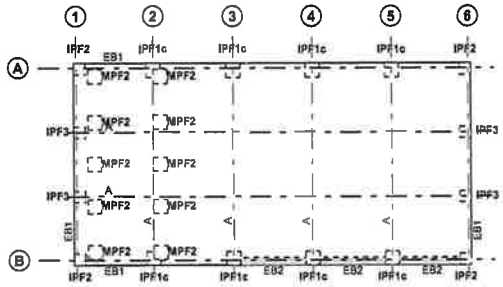
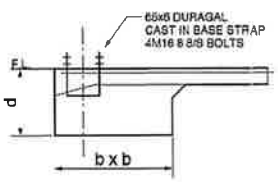
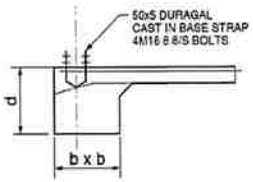
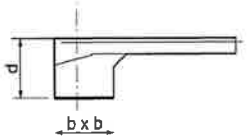




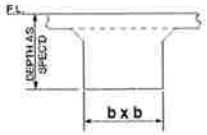
TYP DET IPF1c



TYP DET IPF2



TYP DET IPF3



TYP DET MPF1, MPF2 SIMILAR

INTEGRAL PAD FOOTINGS

MASS CONCRETE FOOTINGS CAST INTEGRAL WITH FLOOR & EDGE BEAM ARE ECONOMICALLY SUITED FOR SHEDS ON SANDY GROUND.

- THIS DESIGN MAY ALSO BE USED FOR CLAYEY SOIL OR WHERE ROCK IS ENCOUNTERED.
- ALL PAD FOOTINGS TO BE FOUNDED IN NATURAL GROUND WITH A SAFE BEARING CAPACITY OF 100 kPa AT DEPTH INDICATED.

THE DEPTH "d" MAY BE REDUCED TO A MINIMUM OF 400mm PROVIDED THAT "b" DIMENSIONS ARE AJUSTED TO MAINTAIN THE SAME VOLUME OF CONCRETE.

REFERENCE

SEE SLAB DETAIL DRAWING FOR:-

- MINIMUM SITE PREPARATION NOTES
- MINIMUM SITE PREPARATION NOTES
- CONCRETE SPECIFICATION NOTES
- CONCRETE REINFORCEMENT NOTES
- SLAB ON GRADE NOTES
- DETAIL S1/EB1 - SLAB EDGE TYPE 1
- DETAIL S1/EB2 - SLAB EDGE TYPE 2
- DETAIL S1/A - SLAB CONTROL JOINT
- DETAIL S1/C - SLAB CONSTRUCTION JOINT

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CLIENT: Lance Booth	BUILDING TYPE: Big G	DRAWING NUMBER: ENG0/1-441451			
	BUILDING DIMENSION: 10000S x 4800E x 20000L	FOR BUILDING PERMIT STAGE			
SITE: 56 McInnes St MOORINE ROCK WA 6425	TITLE: RC FLOOR PLAN & INTEGRAL PAD FOOTING DETAILS	DRAWN: RDS	REV: A	SCALE: 1:40, 1:250 A3	PAGE: 9/13

INTEGRAL PAD FOOTING SCHEDULE

CENTRE LINE REFERENCE	FRAME REFERENCE(S)	LABEL	STRAP	d x b x b
A	1, 6	IPF2	SGBS15	400 x 400 x 400
A	2, 3, 4, 5	IPF1c	SGBS25	300 x 450 x 450
AB	1, 6	IPF3		300 x 400 x 400
AB	1, 2	MPF2		525 x 525 x 525
B	1, 6	IPF2	SGBS15	400 x 400 x 400
B	2, 3, 4, 5	IPF1c	SGBS25	300 x 450 x 450

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CLIENT: Lance Booth

SITE: 56 McInnes St
MOORINE ROCK WA 6425

BUILDING TYPE: Big G

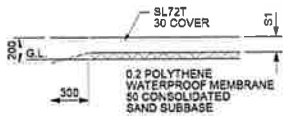
BUILDING DIMENSION: 10000S x 4800E x 20000L

TITLE: RC FLOOR PLAN & INTEGRAL PAD FOOTING DETAILS

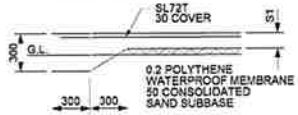
DRAWING NUMBER: ENG6/2-441451

FOR BUILDING PERMIT STAGE

DRAWN	REV	SCALE	PAGE
RDS	A	1:40, 1:250 A3	10/13



DET S1/EB1
NOT SUITABLE AT OPENINGS
SUBJECT TO VEHICLE TRAFFIC



DET S1/EB2
REQUIRED AT OPENINGS
SUBJECT TO VEHICLE TRAFFIC

DEPRESS FABRIC
CUT EVERY 2nd WIRE

DET S1/A
CONTROL JOINT

APPROVED DEFORMED
STEEL KEY JOINT

DET S1/C
CONSTRUCTION JOINT

SLAB THICKNESS (S1) = 120mm

PROVIDE CONSTRUCTION JOINTS SO THAT THE MAXIMUM UNBROKEN RUN OF CONCRETE IS 20m IN EITHER DIRECTION

SITE FOUNDATION CLASSIFICATION

TWO COMMON FOUNDATION CONDITIONS & SITE CLASSIFICATIONS IN ACCORDANCE WITH AS2870 ARE USED FOR THE STANDARDISED FOOTING DESIGNS AS FOLLOWS:-

- STIFF CLAY CONFORMING TO AS2870 CLASS M.
  MINIMUM SAFE BEARING CAPACITY - 100 kPa.
  SHAFT ADHESION - 20 kPa
- DENSE SAND CONFORMING TO AS2870 CLASS A/S.
  MINIMUM SAFE BEARING CAPACITY - 100 kPa.
- A SITE SPECIFIC GEOTECHNICAL INVESTIGATION IS RECOMMENDED & IF CONDITIONS OTHER THAN ASSUMED ARE ENCOUNTERED A DIFFERENT FOOTING DESIGN MAY BE REQUIRED & SHOULD BE REFERED TO A QUALIFIED LOCAL ENGINEER.
- ALL FOOTINGS TO BE FOUNDED IN NATURAL GROUND.
- NO FOOTING TO BE FOUNDED ON FILL MATERIAL.
- REFERENCE SHOULD BE MADE TO CSIRO PUBLICATION 10.91 GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE & FOOTING PERFORMANCE

MINIMUM SITE PREPARATION

- STRIP SITE OF ALL TOP SOIL & DISCARD TO SPOIL. THE EXPOSED SURFACE TO BE PROOF ROLLED & AREAS REMAINING SOFT OR SPONGY ARE TO BE EXCAVATED TO SPOIL.
- PLACE APPROVED GRANULAR FILL MATERIAL TO THE REQUIRED BUILDING PLATFORM LEVEL IN LAYERS NOT EXCEEDING 200mm AND COMPACT BY ROLLING WITH SUITABLE EQUIPMENT TO ACHIEVE A DRY DENSITY RATIO OF 98% STANDARD COMPACTION TO AS1289 - E1.1 AT OPTIMUM MOISTURE CONTENT. THE TOP 200mm TO BE COMPACTED TO 100% STANDARD DRY DENSITY.
- THE COMPACTION OF ALL FILL MATERIAL TO BE INSPECTED AND APPROVED BY A RESPONSIBLE GEOTECHNICAL CONSULTANT.

CONCRETE REINFORCEMENT

- REINFORCEMENT IS REPRESENTED DIAGRAMATICALLY & NOT NECESSARILY IN TRUE PROJECTION.
- REINFORCEMENT NOTATION:-

  N DENOTES HOT ROLLED DEFORMED BAR.

  SL DENOTES HARD DRAWN WELDED WIRE FABRIC. THE NUMBER IMMEDIATELY FOLLOWING BAR NOTATION IS THE NOMINAL DIAMETER IN mm.

- PROVIDE BAR SUPPORTS OR SPACERS TO GIVE THE FOLLOWING COVER TO ALL RIENFORCEMENT UNLESS NOTED OTHERWISE.

FOOTINGS	80 BOTTOM, 65 TOP & SIDES
SLABS	30 BOTTOM, 20 TOP
BEAMS	40 BOTTOM & SIDES TO STIRRUPS. TOP COVER AS DETAILED

- PROVIDE 2N12 DIAGONAL CORNER BARS 900 LONG AT ALL RE-ENTRANT CORNERS OF OPENINGS IN SLABS AND THESE BARS TO BE POSITIONED 30mm FROM THE CORNER.

CONCRETE SPECIFICATION

- CARRY OUT ALL WORK IN ACCORDANCE WITH THE CURRENT ISSUE OF AS3600 & THE SPECIFICATION.
- CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH & MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT THE ENGINEERS APPROVAL. DEPTH OF BEAMS INCLUDE SLAB THICKNESS.
- SLABS & BEAMS ARE TO BE POURED TOGETHER.
- CONSOLIDATE BY VIBRATION.
- SLAB CONCRETE TO BE AS SHOWN IN SLAB ON GRADE CRITERIA.
- BORED PIER CONCRETE SHALL HAVE F'c = 25 MPa. MAXIMUM AGGREGATE SIZE = 20 mm, SLUMP = 100 mm, EXCEPT FOR BCA CLASSES 2 TO 9 BUILDINGS CONCRETE SHALL HAVE F'c = 32MPa.

SLABS ON GRADE

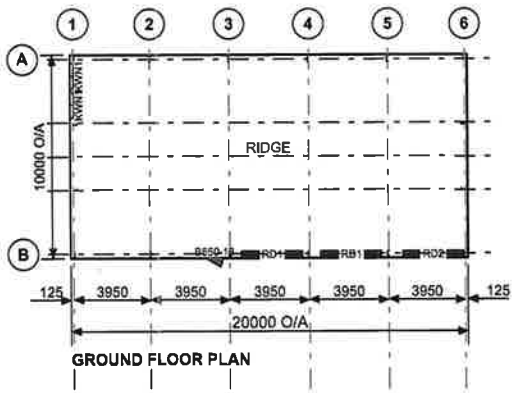
- SLABS TO BE PLACED OVER 25 CONSOLIDATED SAND OVER PREPARED SUBGRADE.
- PROVIDE 0.2 POLYTHENE FORTICON WATERPROOF MEMBRANE UNDER ALL SLABS WITH LAPPED & TAPED JOINTS.
- PLACE PUMP MIX CONCRETE AS SPECIFIED BELOW TO ACCURATE LEVELS AS PER ARCHITECTS SPECIFICATION.
- PROVIDE CONTROL JOINTS AS INDICATED BY NEATLY SAW CUTTING 40 x 6 GROOVES WITHIN 12 HOURS OF THE FINAL FLOAT OF THE CONCRETE.
- CURE SLAB FOR 7 DAYS AFTER PLACEMENT BY MAINTAINING A CONTINUOUSLY WET SURFACE BY APPROVED METHODS. FLOODING & COVERING WITH POLYTHENE IMMEDIATLY AFTER FINISHING IS AN APPROVED METHOD.
- SEALING OF JOINTS TO BE CARRIED OUT ONE MONTH MINIMUM AFTER CURING IS COMPLETE.
- PROVIDE PROPER STORMWATER DRAINAGE AWAY FROM THE BUILDING.

SLAB ON GRADE CRITERIA	
CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (MPa)	25
FLEXURAL STRENGHT AT 90 DAYS (MPa)	5
SLUMP (mm)	100
AGGREGATE MAXIMUM SIZE (MM)	20
CEMENT TYPE	SL
CEMENT CONTENT (kg/cubic metre) MIN	320
FLY ASH CONTENT (kg/cubic metre) MAX	70
WATER / CEMENT RATIO (MAX)	0.45
MICROSTRAIN AT 56 DAYS	600
FLOOR FINISH - BURNISHED STEEL TROWEL	NON SLIP
FLOOR TOLERANCE	CLASS S

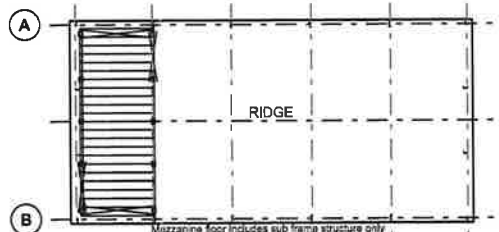
- FOR OTHER LOAD CONDITIONS A DESIGN VARIATION IS REQUIRED & SHOULD BE REFERED TO A QUALIFIED LOCAL ENGINEER.

ACCREDITED PRACTITIONER
Alexander Filonov
MIEAust. CPEng. NPER
Level 1, 12 Beaumont St Hamilton NSW 2303
+61 2 4862 4311
2/12/2025

CLIENT: Lance Booth	BUILDING TYPE: Big G	DRAWING NUMBER: ENG7/1-441451	
	BUILDING DIMENSION: 10000S x 4800E x 20000L	FOR BUILDING PERMIT STAGE	
SITE: 56 McInes St MOORINE ROCK WA 6425	TITLE: RC SLAB PLAN	DRAWN: RDS / REV: A / SCALE: 1:40 A3 / PAGE: 11/13	

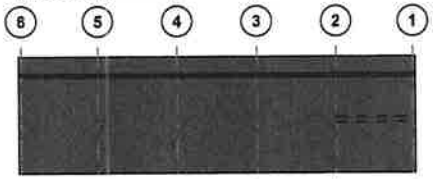


GROUND FLOOR PLAN

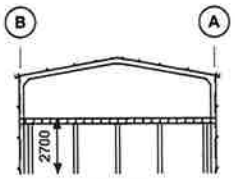


FIRST FLOOR PLAN

ELEVATION GRID B

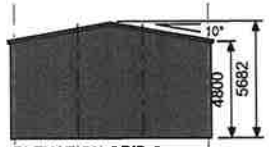


ELEVATION GRID A

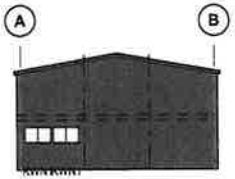


SECTION GRID 2

SECTION GRID 3, 4, 5



ELEVATION GRID 6



ELEVATION GRID 1

Cont. on page 2

RANBUILD

CLADDING

ITEM	PROFILE (min)	FINISH	COLOUR
ROOF	TRIMDEK 0.42 BMT	CB	AA
WALLS	TRIMDEK 0.42 BMT	CB	AA
CORNERS	-	CB	AA
BARGE	-	CB	AA
GUTTER	SHEERLINE	CB	AA
DOWNPIPE	100x75	CB	AA

0.36bmt=0.40tct; 0.42bmt=0.47tct; 0.48bmt=0.53tct

ACCESSORY SCHEDULE & LEGEND

QTY	MARK	DESCRIPTION
2	RD1	S/Line R.D - W/Lock C2. B 3800 high x 3050 wide Clear Opening C/B
1	RD2	S/Line R.D - W/Lock C2. B 4200 high x 3050 wide Clear Opening C/B
1	B850-13	Lysaght PA Door & Pre-Hung Frame 180 Deg, Std. 2040 x 920 C/Bond (G)
2	KWN1	AMI - Reg A & B, 790x1274 CLR + FG Barrier Screen, Window Kit (BG)

ARCHITECTURAL DRAWING ONLY, FOR BUILDING PERMIT STAGE

ELEVATED FLOOR LIVE LOAD = 3.0 kPa

CLIENT
Lance Booth

SITE
56 McInnes St
MOORINE ROCK WA 6425

BUILDING
BIG G
10000 SPAN x 4800 EAVE x 20000 LONG

ACCREDITED PRACTITIONER
Alexander Filonov
Level 1, 12 Beaumont St Hamilton NSW 2303
+61 2 4962 4311
2/12/2025

TITLE
GENERAL ARRANGEMENT

SCALE	DRAWING NUMBER	REV	PAGE
A3 SHEET 1:250	441451-GA	A	12/13

WARNING: ACCESSORY LOCATION AS SELECTED MAY VIOLATE SOME MEZZANINE FLOOR FRAMING AND/OR BRACING. IN THIS INSTANCE, RE-LOCATE THESE ACCESSORIES TO A SUITABLE LOCATION ON THE BUILDING ON-SITE.

Cont. on page 1

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Executive Summary - Site Specific Analysis

The design analysis of the building has not been considered for each of the 4 orthogonal directions. Hence the maximum wind speed in any of the 8 cardinal directions has been used as the design wind speed. This is a conservative approach.

Each cardinal direction has been considered and the results are summarised below

Factor	N	NE	E	SE	S	SW	W	NW
Wind Region	A0							
Importance level (IL)	2							
Distance from Smoothed Coastline	N/A							
Regional Wind Speed (Vr)	45.0							
Climate Change Factor (Mc)	1							
Terrain Category (TC)	2	2	2	2	2	2	2	2
Terrain Category Multiplier (Mz)	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shielding Multiplier (Ms)	1	1	1	1	1	1	1	1
Topographic Multiplier (Mt)	1	1	1	1	1	1	1	1
Wind Direction Multiplier 1 (Md1)	0.9	0.85	0.85	0.9	0.9	0.95	1	0.95
Site specific design wind speed (Vsite1)	37	35	35	37	37	39.1	41.1	39.1

Wind Direction Multiplier 2 (Md2)	0.9	0.85	0.85	0.9	0.9	0.95	1	0.95
Site specific design wind speed (Vsite2)	37	35	35	37	37	39.1	41.1	39.1

Design Wind Speed (Vsite1)	41.1 m/s	for the resultant forces and overturning moments on the complete building and wind actions on major structural elements.
Design Wind Speed (Vsite2)	41.1 m/s	for cladding and immediate supporting structures (Purlins and Girts)
Snow Load	Nil	
Earthquake	0.08	Hazard Design Factor (Z)
Durability Alert	Yes	It is likely that the building is subject to a Marine Influence and Industrial Influence. You should satisfy yourself that any BlueScope or other warranties specific for your site are satisfactory for your purpose. Amongst other sources, you should contact BlueScope on 1800 800 789.
Rainfall Intensity	127mm/hr	5% AEP
Rainfall Intensity	186mm/hr	1% AEP

SITE SPECIFIC DESIGN CRITERIA ANALYSIS

Issued:
03/12/2025

Prepared for:
Lance Booth
56 McIness St
MOORINE ROCK WA 6425

Supplier:
Tompkin Engineering

Assessment Ref:
BSC25113099DO

Building Details:
Span: 10
Length: 20
Avg. Height: 5.241

Assesment basis:
NCC 2022
AS/NZS 1170.2:2021
AS/NZS 1170.3:2003
AS1170.4:2007
AS/NZS 3500.3:2021

Certified by:

Alex Filonov